NEW ISSUE
BOOK ENTRY ONLY

RATINGS: MOODY'S: "A2"
S&P: "A"
FITCH: "A"
(SEE "RATINGS" HEREIN)

In the opinion of Bond Counsel, under existing statutes, regulations, rulings and court decisions, interest on the Series 2023C Bonds will not be includible in gross income of the holders thereof for federal income tax purposes, assuming continuing compliance by the Monroeville Finance Authority (the "Authority") and UPMC (the "Corporation") with the requirements of the Internal Revenue Code of 1986, as amended. Interest on the Series 2023C Bonds will not be a specific preference item for purposes of computing the federal alternative minimum tax on individuals. Under the laws of the Commonwealth of Pennsylvania, as enacted and construed on the date hereof, the Series 2023C Bonds are exempt from Pennsylvania personal income tax and Pennsylvania corporate net income tax. See "TAX EXEMPTION AND OTHER TAX MATTERS."

UPMC
LIFE CHANGING MEDICINE

$36,815,000
MONROEVILLE FINANCE AUTHORITY
UPMC Revenue Bonds, Series 2023C

DATED: Date of Delivery **MATURITY: May 15, as shown herein**

The $36,815,000 UPMC Revenue Bonds, Series 2023C (the "*Series 2023C Bonds*"), being issued by the Monroeville Finance Authority (the "*Authority*"), will be issued as fully registered bonds and initially registered in the name of Cede & Co., as nominee for The Depository Trust Company ("*DTC*"), New York, New York, which will act as securities depository therefor. Purchasers will not receive certificates representing their ownership interests in the Series 2023C Bonds. So long as Cede & Co. is the registered owner, as nominee of DTC, references herein to "Owners," "registered owners" or "Bondholders" shall mean Cede & Co., as aforesaid, and shall not mean the beneficial owners of the Series 2023C Bonds. Beneficial ownership of the Series 2023C Bonds may be acquired in denominations of $5,000 and any multiple thereof.

Principal of and interest on the Series 2023C Bonds will be paid by The Bank of New York Mellon Trust Company, N.A., Pittsburgh, Pennsylvania, as trustee and paying agent (the "*Bond Trustee*"). So long as DTC or its nominee, Cede & Co., is the registered owner, such payments will be made directly to Cede & Co. Disbursements of such payments to the DTC Participants are the responsibility of DTC and disbursements of such payments to the beneficial owners are the responsibility of the DTC Participants and the Indirect Participants, as more fully described herein. Interest will be payable semiannually on each May 15 and November 15, commencing November 15, 2023.

Maturities, Principal Amounts, Interest Rates,
Prices, Yields and CUSIP© numbers are set forth on the inside cover page hereof.

The Series 2023C Bonds will be issued pursuant to a Trust Indenture, dated as of April 1, 2023 (the "*Bond Indenture*"), between the Authority and the Bond Trustee. The principal of, premium, if any, and interest on the Series 2023C Bonds will be payable solely from, and secured by, the Authority's pledge and assignment to the Bond Trustee of the Trust Estate, which includes payments to be made under a Loan Agreement, dated as of April 1, 2023 (the "*Loan Agreement*"), between the Authority and UPMC (the "*Corporation*"), a Pennsylvania nonprofit corporation. The payment obligations of the Corporation under the Loan Agreement will be evidenced and secured by, among other things, a promissory note (the "*Series 2023C MTI Note*") issued by the Corporation to the Authority and assigned to the Bond Trustee, pursuant to the terms of a Master Trust Indenture, dated as of May 1, 2007, as supplemented and amended (the "*Master Indenture*"), between the Corporation and The Bank of New York Mellon Trust Company, N.A., as master trustee (the "*Master Trustee*"). The Corporation, UPMC Presbyterian Shadyside, UPMC Magee-Womens Hospital, UPMC Passavant and UPMC St. Margaret are the current members of the obligated group under the Master Indenture (each such member is hereinafter referred to individually as a "*Member*", such obligated group of Members, together with future Members of such obligated group, as the "*Obligated Group*"). Under the Master Indenture, the Series 2023C MTI Note will be secured by a pledge of the Obligated Group's Gross Revenues (as defined herein).

The Series 2023C Bonds are subject to optional redemption, mandatory sinking fund redemption and optional purchase in lieu of redemption prior to maturity, as described herein. See "THE SERIES 2023C BONDS — Redemption of the Series 2023C Bonds" herein.

THE SERIES 2023C BONDS ARE LIMITED OBLIGATIONS OF THE AUTHORITY, PAYABLE SOLELY FROM THE TRUST ESTATE. NEITHER THE COMMONWEALTH OF PENNSYLVANIA NOR ANY POLITICAL SUBDIVISION THEREOF IS OBLIGATED TO PAY THE PRINCIPAL OR REDEMPTION PRICE OF OR THE INTEREST ON THE SERIES 2023C BONDS, AND NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE COMMONWEALTH OF PENNSYLVANIA OR ANY POLITICAL SUBDIVISION THEREOF IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OR REDEMPTION PRICE OF OR INTEREST ON THE SERIES 2023C BONDS. THE AUTHORITY HAS NO TAXING POWER.

This cover page is for quick reference only and does not summarize the issue. Investors must read the entire Official Statement to obtain information essential to an informed investment decision including the statements under the heading "BONDHOLDERS' RISKS". Capitalized terms used above and not otherwise defined have the meanings ascribed to them herein.

The Series 2023C Bonds are offered when, as and if issued by the Authority and accepted by the Underwriters, subject to prior sale, withdrawal or modification of the offer without notice, and simultaneous delivery of the approving legal opinion of Eckert Seamans Cherin & Mellott, LLC, Pittsburgh, Pennsylvania, Bond Counsel. Certain legal matters will be passed upon for the Authority by the Office of Chief Counsel, Pennsylvania Department of Community and Economic Development, Harrisburg, Pennsylvania; for the Corporation by its special counsel, Hardwick Law Firm, LLC, Pittsburgh, Pennsylvania; and for the Underwriters by their counsel, Chapman and Cutler LLP, Chicago, Illinois. It is expected that the Series 2023C Bonds will be available for delivery through the facilities of DTC on or about April 19, 2023.

Cain Brothers, a division of KeyBanc Capital Markets

RBC Capital Markets **Barclays** **Huntington Capital Markets** **J.P. Morgan**

PNC Capital Markets LLC **BNY Mellon Capital Markets, LLC** **Bancroft Capital** **BofA Securities**

Dated: April 4, 2023

$36,815,000
MONROEVILLE FINANCE AUTHORITY
UPMC REVENUE BONDS, SERIES 2023C

MATURITIES, PRINCIPAL AMOUNTS, INTEREST RATES, PRICES, YIELDS AND CUSIP NUMBERS

MATURITY (MAY 15)	PRINCIPAL AMOUNT	INTEREST RATE	PRICE	YIELD	CUSIP†
2024	$1,550,000	5.000%	102.369	2.740%	611530DR4
2025	1,630,000	5.000	104.582	2.710	611530DS2
2026	1,715,000	5.000	106.887	2.650	611530DT0
2027	1,805,000	5.000	109.012	2.650	611530DU7
2028	1,895,000	5.000	110.882	2.690	611530DV5
2029	1,995,000	5.000	112.680	2.720	611530DW3
2030	2,095,000	5.000	114.093	2.790	611530DX1
2031	2,200,000	5.000	114.937	2.910	611530DY9
2032	2,315,000	5.000	116.038	2.970	611530DZ6
2033	2,435,000	5.000	117.177	3.010	611530EA0
2034	2,560,000	5.000	116.139	3.120*	611530EB8
2035	2,690,000	5.000	114.742	3.270*	611530EC6
2036	2,830,000	5.000	113.000	3.460*	611530ED4
2037	2,975,000	5.000	111.558	3.620*	611530EE2
2038	3,125,000	5.000	110.756	3.710*	611530EF9
2039	3,000,000	5.000	109.962	3.800*	611530EG7

* Yield to first optional redemption date.

† Copyright, American Bankers Association. CUSIP data herein are provided by CUSIP Global Services, which is managed on behalf of the American Bankers Association by FactSet Research Systems Inc. The CUSIP numbers listed above are being provided solely for the convenience of owners of the Series 2023C Bonds only, and the Authority, the Corporation and the Underwriters do not make any representation with respect to such numbers or undertake any responsibility for their accuracy. The CUSIP numbers are subject to being changed after the issuance of the Series 2023C Bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part of the Series 2023C Bonds.

REGARDING USE OF THIS OFFICIAL STATEMENT

This Official Statement does not constitute an offering of any security other than the original offering of the Series 2023C Bonds identified on the cover. No dealer, broker, salesperson, or any other person has been authorized by the Monroeville Finance Authority (the *"Authority"*), UPMC, a Pennsylvania nonprofit corporation (the *"Corporation"* or *"UPMC"*), or the Underwriters (as defined herein), to give any information or to make any representation with respect to the offering of the Series 2023C Bonds other than as contained in this Official Statement. Any other information or representation should not be relied upon as having been given or authorized by the Authority, the Corporation, or the Underwriters. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, and there shall not be any sale of the Series 2023C Bonds, by any person in any state or other jurisdiction to any person to whom it is unlawful to make such offer, solicitation or sale in such state or jurisdiction.

This Official Statement has been approved by the Corporation, and its use and distribution for the purposes of offering and selling the Series 2023C Bonds has been authorized by the Corporation. The information set forth herein under the caption "MONROEVILLE FINANCE AUTHORITY" and "LITIGATION — The Authority" has been provided by the Authority. The information set forth herein under the caption "BOOK-ENTRY ONLY SYSTEM" has been furnished by The Depository Trust Company. All other information set forth herein has been provided by the Corporation or obtained from other sources identified herein that are believed to be reliable. The information and expressions of opinion herein are subject to change without notice, and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances create any implication that there has been no change in the affairs of the Authority, The Depository Trust Company, the Corporation, the Subsidiary Hospitals (as defined herein) or any other entity referred to or described herein since the date hereof or the date as of which particular information is given, if earlier. This Official Statement speaks only as of the date printed on the cover page hereof. No dealer, broker, salesperson or other person has been authorized to give any information or to make any representation other than those contained herein and, if given or made, such other information or representations should not be relied upon and in any case must not be relied upon as having been authorized by the Authority, the Underwriters, the Corporation or any other person. This Official Statement is not to be construed as a contract or agreement between the Authority, the Corporation or the Underwriters and the purchasers or owners of any Series 2023C Bonds.

NEITHER THE SERIES 2023C BONDS NOR ANY OTHER SECURITY RELATING TO THE SERIES 2023C BONDS HAS BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND NEITHER THE BOND INDENTURE NOR THE MASTER INDENTURE HAVE BEEN QUALIFIED UNDER THE TRUST INDENTURE ACT OF 1939, AS AMENDED, IN RELIANCE UPON EXEMPTIONS CONTAINED IN SUCH ACTS. THE EXEMPTIONS FROM REGISTRATION AND FROM QUALIFICATION IN ACCORDANCE WITH APPLICABLE PROVISIONS OF FEDERAL OR STATE SECURITIES LAWS CANNOT BE REGARDED AS A RECOMMENDATION THEREOF. NO STATE NOR ANY AGENCY THEREOF NOR THE SECURITIES AND EXCHANGE COMMISSION HAVE PASSED UPON THE MERITS OF THE SERIES 2023C BONDS OR ANY RELATED SECURITY OR THE ACCURACY OR COMPLETENESS OF THIS OFFICIAL STATEMENT. ANY REPRESENTATION TO THE CONTRARY MAY BE A CRIMINAL OFFENSE.

The Underwriters have provided the following sentence for inclusion in this Official Statement. The Underwriters have reviewed the information in this Official Statement in accordance with, and as part of, their responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information.

IN CONNECTION WITH THE OFFERING OF THE SERIES 2023C BONDS, THE UNDERWRITERS MAY OVER ALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF THE SERIES 2023C BONDS AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME, WITHOUT PRIOR NOTICE.

References to website addresses herein are for informational purposes only and may be in the form of a hyperlink solely for the reader's convenience. Unless specified otherwise, such websites and the information or links contained therein are not incorporated into and are not a part of this Official Statement.

The CUSIP numbers are included in this Official Statement for the convenience of the Holders and potential holders of the Series 2023C Bonds. No assurance can be given that the CUSIP numbers for the Series 2023C Bonds will remain the same after the date of issuance and delivery of such Series 2023C Bonds.

The Series 2023C Bonds may be offered and sold to certain dealers (including dealers depositing the Series 2023C Bonds into investment accounts) and to others at prices lower than the public offering prices and said public offering prices may be changed from time to time by the Underwriters without prior notice to the public, but with prior notice to the Authority and the Corporation.

The order and placement of materials in this Official Statement, including the appendices, are not to be deemed to be a determination of relevance, materiality or importance, and this Official Statement, including the appendices, must be considered in its entirety. The offering of the Series 2023C Bonds is made only by means of this Official Statement.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS IN THIS OFFICIAL STATEMENT

Certain statements included or incorporated by reference in this Official Statement constitute "forward-looking statements" within the meaning of certain federal securities statutes including the Private Securities Litigation Reform Act of 1995, Section 21E of the Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act of 1933. Such statements are generally identifiable by the terminology used such as "plan," "expect," "estimate," "budget" or other similar words. THE ACHIEVEMENT OF CERTAIN RESULTS OR OTHER EXPECTATIONS CONTAINED IN SUCH FORWARD-LOOKING STATEMENTS DEPENDS, AMONG OTHER THINGS, ON KNOWN AND UNKNOWN RISKS, UNCERTAINTIES AND OTHER FACTORS WHICH MAY CAUSE ACTUAL RESULTS, PERFORMANCE OR ACHIEVEMENTS TO BE MATERIALLY DIFFERENT FROM ANY ANTICIPATED FUTURE RESULTS, PERFORMANCE OR ACHIEVEMENTS EXPRESSED OR IMPLIED BY SUCH FORWARD-LOOKING STATEMENTS. THE CORPORATION DOES NOT PLAN TO ISSUE ANY UPDATES OR REVISIONS TO THOSE FORWARD-LOOKING STATEMENTS IF OR WHEN CHANGES IN ITS EXPECTATIONS, OR EVENTS, CONDITIONS OR CIRCUMSTANCES ON WHICH SUCH STATEMENTS ARE BASED, OCCUR.

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OFFICIAL STATEMENT

$36,815,000
MONROEVILLE FINANCE AUTHORITY
UPMC REVENUE BONDS, SERIES 2023C

INTRODUCTION

This Introduction is qualified in all respects by reference to the more detailed information set forth in this Official Statement, including the cover page hereof and Appendices hereto (the *"Official Statement"*). The descriptions and summaries of various documents hereinafter set forth do not purport to be comprehensive or definitive, and reference is made to each such document for the complete details of all terms and conditions. All statements herein regarding any such document are qualified by reference to each such document in its entirety. See APPENDIX C for the definitions of certain capitalized terms used herein. Each of the Appendices hereto is an integral part of this Official Statement and should be read in its entirety.

PURPOSE OF THIS OFFICIAL STATEMENT

The purpose of this Official Statement is to provide certain information with respect to the issuance, sale and delivery by the Monroeville Finance Authority (the *"Authority"*) of its $36,815,000 aggregate principal amount UPMC Revenue Bonds, Series 2023C (the *"Series 2023C Bonds"*).

AUTHORITY FOR ISSUANCE

The Series 2023C Bonds are authorized to be issued pursuant to the Pennsylvania Municipality Authorities Act, Act approved June 19, 2001, P.L. 287, now codified at 53 Pa. C.S.A., Chapter 56 (the *"Authorities Act"*), and a resolution adopted by the Board of the Authority on February 16, 2023.

The Series 2023C Bonds will be issued under and secured by a Trust Indenture, dated as of April 1, 2023 (the *"Bond Indenture"*), by and between the Authority and The Bank of New York Mellon Trust Company, N.A., as trustee (the *"Bond Trustee"*). Proceeds of the Series 2023C Bonds will be loaned by the Authority to UPMC, a Pennsylvania nonprofit corporation (the *"Corporation"* or *"UPMC"*), pursuant to a Loan Agreement, dated as of April 1, 2023 (the *"Loan Agreement"*), by and between the Authority and the Corporation. The payment obligations of the Corporation under the Loan Agreement with respect to the Series 2023C Bonds will be secured by the issuance of a promissory note in an amount equal to the aggregate principal amount of the Series 2023C Bonds issued under the Master Indenture (as defined herein) (the *"Series 2023C MTI Note"*).

PURPOSE OF THE ISSUE

The proceeds of the Series 2023C Bonds, together with other available funds, will be applied to (i) currently refund the Monroeville Finance Authority UPMC Revenue Refunding Bonds, Series 2013B (the *"Series 2013B Bonds"*) issued for the benefit of the Corporation maturing on and after July 1, 2024 (the *"Refunded Series 2013B Bonds"*), and (ii) pay certain costs of issuance related to the Series 2023C Bonds. See "PLAN OF FINANCE" and "ESTIMATED SOURCES AND USES OF FUNDS" herein.

THE CORPORATION AND THE SYSTEM

General. The Corporation is a Pennsylvania nonprofit corporation which was established in 1982 exclusively for charitable, educational and scientific purposes and is exempt from federal income taxation under Section 501(a) of the Internal Revenue Code of 1986, as amended and the regulations promulgated thereunder (the *"Code"*) (except for unrelated trade or business income), as an organization described in Section 501(c)(3) of the Code. The Corporation is not a private foundation within the meaning of Section 509(a) of the Code and is a supporting organization pursuant to Section 509(a)(3) of the Code with respect to its affiliated exempt hospitals and with respect to the University of Pittsburgh, of the Commonwealth System of Higher Education (the *"University"*). The Corporation is the parent corporation of its Subsidiary Hospitals (as defined below) and numerous other owned and controlled entities including various insurance subsidiaries (collectively, the *"System"*). The System is the largest health care system in Pennsylvania, has hospital operations in southwestern New York and western Maryland and provides specialized services to patients from throughout the United States and the world.

The System. The System includes UPMC and more than 40 hospitals including: UPMC Presbyterian Shadyside (five hospitals), UPMC Children's Hospital of Pittsburgh, UPMC Bedford Memorial, UPMC Hamot, UPMC Horizon (two hospitals), UPMC McKeesport, UPMC Mercy, UPMC Northwest, UPMC Passavant (two hospitals), UPMC St. Margaret, UPMC Magee-Womens Hospital, UPMC East, UPMC Altoona, UPMC Jameson, UPMC Cole, Kane Community Hospital, UPMC Susquehanna (five hospitals), UPMC Chautauqua WCA, UPMC Pinnacle (seven hospitals), UPMC Somerset, UPMC Western Maryland, UPMC Whitfield (Waterford, Ireland), UPMC Kildare (Clane, Ireland), Salvator Mundi (Rome, Italy), and ISMETT (Palermo, Italy) (each a *"Subsidiary Hospital"* and, collectively, the *"Subsidiary Hospitals"*); and a number of other corporations, including several insurance subsidiaries, more fully described in APPENDIX A hereto.

The Obligated Group. The Corporation, UPMC Presbyterian Shadyside, UPMC Magee-Womens Hospital, UPMC Passavant and UPMC St. Margaret constitute the current Members of the obligated group under the Master Indenture described below under the subheading "INTRODUCTION — Sources of Payment and Security for the Series 2023C Bonds" (each such member is hereinafter occasionally referred to individually as a *"Member"*, such obligated group of Members, together with future Members of such obligated group, as the *"Obligated Group"*; and sometimes, collectively, as *"Members"*).

See APPENDICES A and B hereto for additional information regarding the Corporation and the System.

THE AUTHORITY

The Authority is a body politic and corporate, constituting a public instrumentality of the Commonwealth, and organized and existing under the Authorities Act, pursuant to resolutions of the Municipality of Monroeville adopted April 10, 2012, and June 12, 2012. See "MONROEVILLE FINANCE AUTHORITY" herein for certain information concerning the Authority.

SOURCES OF PAYMENT AND SECURITY FOR THE SERIES 2023C BONDS

The Series 2023C Bonds are limited obligations of the Authority, payable solely from the Trust Estate created under the Bond Indenture, which consists principally of payments to be made by the Corporation under the Loan Agreement. Under the Loan Agreement, the Corporation is obligated to make loan payments which have been scheduled to be sufficient to pay, *inter alia*, the principal of and interest on the Series 2023C Bonds, when due, and certain other obligations. The obligation of the Corporation to make payments under the Loan Agreement will be evidenced and secured by the Series 2023C MTI Note.

The Series 2023C MTI Note will be issued pursuant to a Master Trust Indenture, dated as of May 1, 2007, as previously supplemented and amended, and as supplemented by a Supplemental Master Trust Indenture No. 50, dated as of April 1, 2023 (collectively, the *"Master Indenture"*), between the Corporation, on behalf of itself and as Obligated Group Agent, as defined therein, and The Bank of New York Mellon Trust Company, N.A., as master trustee (the *"Master Trustee"*). The Series 2023C MTI Note shall be an obligation of the Obligated Group, issued in favor of the Authority, assigned to the Bond Trustee and secured by a lien upon the Gross Revenues (as defined herein) of the Members of the Obligated Group. The current Members of the Obligated Group are the Corporation, UPMC Presbyterian Shadyside, UPMC Magee-Womens Hospital, UPMC Passavant and UPMC St. Margaret. See "SOURCES OF PAYMENT AND SECURITY FOR THE SERIES 2023C BONDS" herein.

See APPENDIX C hereto for summaries of certain provisions of the Master Indenture.

PLAN OF FINANCE

The UPMC Taxable Bonds. Shortly prior to the issuance of the Series 2023C Bonds, the Corporation expects to issue its $800,000,000 aggregate principal amount UPMC Taxable Revenue Bonds, Series 2023 (the *"Series 2023 Taxable Bonds"*). The proceeds of the Series 2023 Taxable Bonds will be used (i) for working capital and other general corporate purposes of the Corporation and its affiliates and (ii) to pay costs of issuance.

Pennsylvania Economic Development Financing Authority Series 2023A Bonds. Concurrently with the issuance of the Series 2023C Bonds, the Pennsylvania Economic Development Financing Authority (*"PEDFA"*) expects to issue its $445,230,000 aggregate principal amount UPMC Revenue Bonds, Series 2023A (the *"Series 2023A Bonds"*) and loan the proceeds thereof to the Corporation. The Corporation expects to use the proceeds of the Series 2023A Bonds, together with certain other moneys, to (i) finance various capital expenditures for the Corporation (the *"2023A Tax-Exempt Capital Project"*), and (ii) pay certain costs of issuance related to the Series 2023A Bonds.

Pennsylvania Economic Development Financing Authority Series 2023B Bonds. Concurrently with the issuance of the Series 2023C Bonds, PEDFA expects to issue its $89,275,000 aggregate principal amount UPMC Revenue Bonds, Series 2023B (the *"Series 2023B Bonds"*) and loan the proceeds thereof to the Corporation. The Corporation expects to use the proceeds of the Series 2023B Bonds, together with certain other moneys, to (i) currently refund the Pennsylvania Economic Development Financing Authority UPMC Revenue Bonds, Series 2013A (the *"Series 2013A Bonds"*) issued for the benefit of the Corporation maturing on and after July 1, 2024 (the *"Refunded Series 2013A Bonds"*), and (ii) pay certain costs of issuance related to the Series 2023B Bonds.

Pennsylvania Economic Development Financing Authority Series 2023D Bonds. Concurrently with the issuance of the Series 2023C Bonds, the Authority expects to issue its $250,000,000 aggregate principal amount UPMC Revenue Bonds, Series 2023D (the *"Series 2023D Bonds"* and, together with the Series 2023 Taxable Bonds, the Series 2023A Bonds, the Series 2023B Bonds and the Series 2023C Bonds, the *"Series 2023 Bonds"*) and loan the proceeds thereof to the Corporation. The Corporation expects to use the proceeds of the Series 2023D Bonds to (i) finance various capital expenditures for the Corporation (the *"2023D Tax-Exempt Capital Project"* and, together with the 2023A Tax-Exempt

Capital Project, the *"Tax-Exempt Capital Projects"*), (ii) refinance an outstanding term loan (the *"Term Loan"*) the proceeds of which were allocated to capital projects, and (iii) pay certain costs of issuance related to the Series 2023D Bonds. UPMC anticipates that the Series 2023D Bonds will be purchased directly by JPMorgan Chase Bank, N.A. (the *"Series 2023D Purchaser"*).

The Series 2023 Taxable Bonds, the Series 2023A Bonds, the Series 2023B Bonds and the Series 2023D Bonds are <u>not</u> being offered by this Official Statement, which relates to only the Series 2023C Bonds. Prospective purchasers of the Series 2023 Taxable Bonds, the Series 2023A Bonds, the Series 2023B Bonds and the Series 2023D Bonds should read the offering document which relates to the specific series of Series 2023 Taxable Bonds, Series 2023A Bonds, Series 2023B Bonds and Series 2023D Bonds, as applicable, and should not rely on this Official Statement.

As the Series 2023A Bonds, the Series 2023B Bonds and the Series 2023D Bonds are being sold at the same time, are part of the same plan of financing and are secured by the same security as the Series 2023C Bonds, the Series 2023A Bonds, the Series 2023B Bonds, the Series 2023C Bonds and the Series 2023D Bonds (collectively, the *"Series 2023 Tax-Exempt Bonds"*) constitute a single issue for federal income tax purposes for purposes of determining compliance with certain tax covenants.

AMENDMENT TO SYNDICATED REVOLVING LINE OF CREDIT

UPMC expects to amend its existing revolving credit agreement (the *"RCA"*), pursuant to which a syndicate of financial institutions agree to provide a revolving line of credit to UPMC, to increase the maximum available amount thereunder from $600 million to $1.0 billion. The amendment to the RCA and increase of the maximum available amount thereunder is expected to be executed and become effective prior to the end of the quarter ending June 30, 2023.

ADDITIONAL OBLIGATIONS

The Series 2023C MTI Note is being issued on a parity basis with (i) Obligations under the Master Indenture that will be issued to secure (a) the Series 2023 Taxable Bonds (the *"Series 2023 Taxable MTI Note"*), (b) the Series 2023A Bonds (the *"Series 2023A MTI Note"*), (c) the Series 2023B Bonds (the *"Series 2023B MTI Note"*), and (d) the Series 2023D Bonds (the *"Series 2023D MTI Note"* and, together with the Series 2023 Taxable MTI Note, the Series 2023A MTI Note, the Series 2023B MTI Note and the Series 2023C MTI Note, the *"Series 2023 MTI Notes"*), (ii) outstanding Obligations issued to secure certain other outstanding indebtedness of the Corporation (and other Members of the Obligated Group), and (iii) outstanding Obligations issued to secure the Corporation's (and other Members' of the Obligated Group) obligations under certain interest rate swap agreements, continuing covenant agreements, credit agreements, guaranty agreements or similar agreements with financial institutions that hold directly placed bonds issued for the benefit of the Obligated Group or are term loan or revolving line of credit lenders to the Obligated Group or affiliates thereof. Upon the issuance of the Series 2023 Bonds and the application of the proceeds thereof as described under the heading "PLAN OF FINANCE" herein, there will be approximately $6. 352 billion of outstanding Obligations under the Master Indenture. This excludes Obligations that secure interest rate or other swap transactions. See "SOURCES OF PAYMENT AND SECURITY FOR THE SERIES 2023C BONDS" herein.

LIMITED NATURE OF OBLIGATIONS

THE SERIES 2023C BONDS ARE LIMITED OBLIGATIONS OF THE AUTHORITY, PAYABLE SOLELY FROM THE TRUST ESTATE. NEITHER THE COMMONWEALTH OF PENNSYLVANIA NOR ANY POLITICAL

SUBDIVISION THEREOF IS OBLIGATED TO PAY THE PRINCIPAL OR REDEMPTION PRICE OF OR THE INTEREST ON THE SERIES 2023C BONDS, AND NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE COMMONWEALTH OF PENNSYLVANIA OR ANY POLITICAL SUBDIVISION THEREOF IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OR REDEMPTION PRICE OF OR INTEREST ON THE SERIES 2023C BONDS. THE AUTHORITY HAS NO TAXING POWER.

AVAILABILITY OF DOCUMENTS

The descriptions and summaries of various documents set forth in this Official Statement do not purport to be conclusive or definitive and reference is made to each such document for the complete details of all terms and conditions hereof. Further descriptions of the Master Indenture, the Bond Indenture and the Loan Agreement are set forth in APPENDIX C hereto. All references herein to the Master Indenture, the Bond Indenture, the Loan Agreement, the Series 2023C Bonds and the Series 2023C MTI Note are qualified in their entirety by such documents, copies of which are available from Cain Brothers (as defined herein) prior to the delivery of the Series 2023C Bonds and thereafter may be examined or obtained at the expense of the person requesting the same at the designated corporate trust office of the Bond Trustee in Pittsburgh, Pennsylvania.

MONROEVILLE FINANCE AUTHORITY

The Authority is a body corporate and politic, constituting a public instrumentality of the Commonwealth of Pennsylvania (the *"Commonwealth"*), created pursuant to the Authorities Act. The Authority was incorporated July 6, 2012. The Authority is empowered under the Pennsylvania Municipalities Authorities Act, among other things, to acquire, finance, construct, improve, maintain, own, operate, and lease, in the capacity as lessor or lessee, hospitals and health centers and other projects acquired, constructed or improved for hospital purposes. The Authority's address is 2700 Monroeville Boulevard, Monroeville, Pennsylvania 15146. A resolution authorizing the issuance of the Series 2023C Bonds was adopted by the Authority on February 16, 2023.

The governing body of the Authority is a board consisting of up to five members (the *"Authority Board"*), presently appointed by the Council of the Municipality of Monroeville. Members of the Authority Board are appointed for staggered terms and may be reappointed. The current members of the Authority Board are as follows:

NAME	TITLE	TERM EXPIRES (12/31)
Andrew Kennedy	Chairman	2024
Dan Marston	Vice Chairman and Secretary	2025
R.J. Mycka	Treasurer	2023
Amy Capcara	Member	2026
Timothy Joyce	Member	2027

The Authority has not prepared or assisted in the preparation of this Official Statement except for the statements under this section captioned "MONROEVILLE FINANCE AUTHORITY" and the statements under the section captioned "LITIGATION – The Authority" and, except as aforesaid, the Authority is not responsible for any statements made herein, and will not participate in or otherwise be responsible for the offer, sale or distribution of the Series 2023C Bonds. Accordingly, except as aforesaid, the Authority disclaims responsibility for the disclosure set forth herein in connection with the offer, sale and distribution of the Series 2023C Bonds.

THE SERIES 2023C BONDS ARE LIMITED OBLIGATIONS OF THE AUTHORITY, PAYABLE SOLELY FROM THE TRUST ESTATE. NEITHER THE COMMONWEALTH OF PENNSYLVANIA NOR ANY POLITICAL SUBDIVISION THEREOF IS OBLIGATED TO PAY THE PRINCIPAL OR REDEMPTION PRICE OF OR THE INTEREST ON THE SERIES 2023C BONDS, AND NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE COMMONWEALTH OF PENNSYLVANIA OR ANY POLITICAL SUBDIVISION THEREOF IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OR REDEMPTION PRICE OF OR INTEREST ON THE SERIES 2023C BONDS. THE AUTHORITY HAS NO TAXING POWER.

THE SERIES 2023C BONDS

The following is a summary of certain provisions of the Series 2023C Bonds. This summary of the Series 2023C Bonds is not intended to be an exhaustive discussion of the Series 2023C Bonds. Reference is made to the Bond Indenture for the complete text thereof and to the Bond Indenture for all of the provisions relating to the Series 2023C Bonds. The discussion herein is qualified by such reference. See APPENDIX C — "DEFINITIONS OF TERMS AND SUMMARIES OF CERTAIN PROVISIONS OF THE PRINCIPAL DOCUMENTS" hereto. All capitalized terms used under this caption that are not defined in the body of this Official Statement are defined in APPENDIX C.

GENERAL DESCRIPTION

The Series 2023C Bonds are scheduled to mature on the dates and in the principal amounts set forth on the inside front cover page of this Official Statement. The Series 2023C Bonds are issuable only as fully registered bonds without coupons in denominations of $5,000 and any integral multiple thereof. The Series 2023C Bonds will bear interest (computed on the basis of a 360-day year with twelve 30-day months) at the rates set forth on the inside front cover page of this Official Statement. Interest on the Series 2023C Bonds will be payable on May 15 and November 15 of each year, commencing November 15, 2023 (each an "*Interest Payment Date*"). Interest on each Series 2023C Bond shall accrue from the Interest Payment Date which immediately precedes the date of authentication unless (1) such Series 2023C Bond is authenticated as of an Interest Payment Date, in which event it will bear interest from such Interest Payment Date, (2) such Series 2023C Bond is authenticated on or prior to November 15, 2023, in which event it will bear interest from the date of issuance and delivery of the Series 2023C Bonds, or (3) interest on the Series 2023C Bonds shall be in default, in which event such Series 2023C Bond will bear interest thereon from the date on which interest thereon was last paid or provided for.

The Series 2023C Bonds, when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("*DTC*"). Principal and redemption premium, if any, and interest payments on the Series 2023C Bonds will be made to Cede & Co. so long as it is the registered owner of the Series 2023C Bonds. So long as the Series 2023C Bonds are registered in the name of Cede & Co., as nominee of DTC, individual purchases of the Series 2023C Bonds will be made in book entry form only through DTC Participants and Beneficial Owners of any Series 2023C Bonds will not receive physical delivery of Series 2023C Bond certificates, but will receive a credit balance on the books of the nominees of such Beneficial Owners. Disbursement of payments to Cede & Co. is the responsibility of the Bond Trustee, disbursement of such payments to DTC Participants is the responsibility of DTC and disbursement of such payments to the Beneficial Owners is the responsibility of DTC Participants or Indirect Participants as more fully described under the caption "BOOK-ENTRY ONLY SYSTEM" herein.

In the event that the Series 2023C Bonds are no longer held in a book entry only system, the following provisions would apply. The principal or redemption price of the Series 2023C Bonds will be payable upon presentation and surrender thereof at the designated corporate trust office of the Bond Trustee as the same shall become due and payable. Interest will be paid by check mailed on each Interest Payment Date to the persons appearing as registered owners on the registration books (the "*Bond Register*") kept by the Bond Trustee on each Regular Record Date, which is the first (1st) day of each month (whether or not such day is a Business Day) containing an Interest Payment Date; *provided, however*, that if funds on an Interest Payment Date are insufficient to pay the interest then due, any defaulted interest will cease to be payable to the registered owner as of the relevant Regular Record Date but will instead be payable on a special interest payment date established by the Bond Trustee for payment of such defaulted interest when sufficient funds are available to the registered owners as of a Special Record Date established by the Bond Trustee in accordance with the provisions of the Bond Indenture. Upon written request to the Bond Trustee on file at least one Business Day prior to a Regular Record Date, registered owners of one million dollars ($1,000,000) or more in aggregate principal amount of Series 2023C Bonds may elect to receive payments of interest by wire transfer to a designated account of a member bank of the Federal Reserve System commencing on the first Interest Payment Date following such Regular Record Date or in such other manner as is agreed upon between the registered owner and the Bond Trustee.

REDEMPTION OF THE SERIES 2023C BONDS

Optional Redemption of the Series 2023C Bonds. The Series 2023C Bonds maturing May 15, 2034, and thereafter, are subject to optional redemption prior to maturity, in whole at any time or in part from time to time, at the written request of the Corporation, on and after May 15, 2033, at a redemption price equal to 100% of the principal amount thereof, plus accrued interest to the redemption date.

Notice of Redemption. Notice of any redemption shall be given at least 30 days and not more than 60 days prior to the redemption date by mailing by first class mail a notice to the registered owners of the Series 2023C Bonds to be redeemed as provided in the Bond Indenture, but failure to mail any such notice and any defect in any such notice or the mailing thereof, as it affects any particular Series 2023C Bond, shall not affect the validity of the proceedings for such redemption of any other Series 2023C Bond. Each such notice shall (i) identify the Series 2023C Bonds to be redeemed (specifying the complete name and original issue date of the Series 2023C Bonds to be redeemed, the interest rate and maturity date of such Series 2023C Bonds, certificate numbers and called amount for each certificate if redemption is in part, and CUSIP numbers, if any, assigned to the Series 2023C Bonds), (ii) specify the date of mailing of the notice of redemption, the date fixed for redemption and the redemption price, and (iii) state that on the date fixed for redemption the Series 2023C Bonds called for redemption will be payable at the designated agency office of the Bond Trustee (and shall include the name and address of the Bond Trustee or other redemption agent and a contact person and telephone number), that from that date interest will cease to accrue and that no representation is made as to the accuracy or correctness of the CUSIP numbers printed therein or on the Series 2023C Bonds.

If at the time of mailing of any notice of optional redemption, the Authority shall not have deposited with the Bond Trustee monies sufficient to redeem all the Series 2023C Bonds called for redemption, such notice shall state that it is subject to the deposit of such monies with the Bond Trustee not later than the opening of business on the redemption date and shall be of no effect unless such monies are so deposited.

Upon the happening of the above conditions and if sufficient moneys are on deposit with the Bond Trustee on the applicable date fixed for redemption to redeem the Series 2023C Bonds to be redeemed and to pay interest due thereon, the Series 2023C Bonds thus called shall not, after the applicable date fixed for redemption, bear interest, be protected by the Bond Indenture or be deemed to be Outstanding under the provisions of the Bond Indenture.

So long as DTC or its nominee is the registered owner of the Series 2023C Bonds, any failure on the part of DTC or failure on the part of a nominee of a beneficial owner (having received notice from a DTC Participant or otherwise) to notify the beneficial owner affected by any redemption of such redemption shall not affect the validity of the redemption. So long as DTC or its nominee is the registered owner of the Series 2023C Bonds, if less than all of the Series 2023C Bonds of any one maturity shall be called for redemption, the particular Series 2023C Bonds or portions of Series 2023C Bonds of such maturity to be redeemed shall be selected by lot by DTC, the DTC Participants and Indirect Participants (as both such terms are hereinafter defined) in such manner as they may determine.

Selection of Series 2023C Bonds for Partial Redemption. In the event of a redemption of less than all of the Series 2023C Bonds or less than all of the Series 2023C Bonds of any maturity, the Series 2023C Bonds to be redeemed shall be selected by the Bond Trustee by lot in a manner which the Bond Trustee, in its sole discretion, deems appropriate and fair. Notwithstanding the foregoing, in the case of the optional redemption of less than all of the Series 2023C Bonds at the request of the Corporation, the Corporation shall select the order of maturity and principal amount within a maturity in which the Series 2023C Bonds are to be redeemed and the particular Series 2023C Bonds to be redeemed within such maturity shall be selected by the Bond Trustee by lot in a manner determined by the Bond Trustee.

Effect of Redemption. On the redemption date, provided the Bond Trustee is holding funds sufficient to pay the redemption price (including interest accrued to the redemption date) of the Series 2023C Bonds to be redeemed on such redemption date, interest on the Series 2023C Bonds (or portions thereof) duly called for redemption shall cease to accrue, such Series 2023C Bonds (or portions thereof) shall cease to be entitled to any benefit or security under the Bond Indenture, and the Beneficial Owners of Series 2023C Bonds shall have no rights in respect thereof except to receive payment of such redemption price and interest accrued to the redemption date; *provided,* that, if the Bond Trustee shall not have the funds in its possession on the redemption date sufficient to pay the redemption price of all of the Series 2023C Bonds to be so redeemed (including accrued interest), for any reason (including, but not limited to, failure to issue any refunding obligations intended for such purpose on or prior to the redemption date), then, in any such case, the purported redemption shall be void and any notice thereof shall be void and such occurrence shall not constitute a default or Event of Default.

Cancellation of Redemption. If the Corporation shall have delivered to the Bond Trustee no later than the fifth Business Day prior to the redemption date for any Series 2023C Bonds scheduled for optional redemption, written notice of its decision to cancel its prior request for redemption, then the purported redemption shall be canceled and any prior notice thereof shall be void. Within one Business Day upon receipt of such cancellation notice with respect to any Bonds, the Bond Trustee is required to give or cause to be given written notice of such cancellation to the Authority and each Rating Agency and the respective Owners of any Bonds which were to have been redeemed. Such notice shall be given by the Bond Trustee, at the expense of the Corporation, by first-class mail, postage prepaid; *provided, however,* that such notice of cancellation shall be effective to cancel such redemption whether or not it is received by any Rating Agency or such Owners and such occurrence shall not constitute a default or an Event of Default under the Bond Indenture. See "BOOK-ENTRY ONLY SYSTEM" herein.

Partial Redemption of Series 2023C Bonds. No redemption of less than all of the Series 2023C Bonds at the time Outstanding shall be made unless the aggregate principal amount of Series 2023C Bonds to be redeemed is equal to at least an Authorized Denomination. In the event of a redemption of less than all of the Series 2023C Bonds or less than all of the Series 2023C Bonds of any maturity, the Series 2023C Bonds to be redeemed shall be selected by the Bond Trustee by lot in a manner which the Bond Trustee, in its sole discretion, deems appropriate and fair. Notwithstanding the foregoing, in the case of the optional redemption of less than all of the Series 2023C Bonds pursuant to the provisions of the Bond Indenture summarized under the sub-caption "Redemption of the Series 2023C Bonds — Optional Redemption of the Series 2023C Bonds" above, the Corporation shall select the order of maturity in which the Series 2023C Bonds are to be redeemed and the principal amount within a maturity, and the particular Series 2023C Bonds to be redeemed within such maturity shall be selected by the Bond Trustee by lot. The method of selecting Series 2023C Bonds for redemption by lot shall be determined by the Bond Trustee. Particular Series 2023C Bonds or portions thereof shall be redeemed only in Authorized Denominations. Upon surrender of any Series 2023C Bond redeemed in part only, the Bond Trustee shall authenticate and deliver to the Bondholder thereof, at the expense of the Corporation, a new Series 2023C Bond or Series 2023C Bonds (at the option of such holder) of Authorized Denominations, equal in aggregate principal amount to the unredeemed portion of the Series 2023C Bond surrendered.

Optional Purchase in Lieu of Redemption. The Authority and, by their acceptance of the Series 2023C Bonds, the Bondholders, irrevocably grant to the Corporation and any assigns of the Corporation with respect to this right, the option to purchase, at any time and from time to time, any Series 2023C Bond which is redeemable pursuant to the provisions of the Bond Indenture summarized under the sub-caption "Redemption of the Series 2023C Bonds — Optional Redemption of the Series 2023C Bonds" above at a purchase price equal to the redemption price therefor. To exercise such option, the Corporation, at its expense, shall deliver a Written Request to the Bond Trustee exercising such option, and the Bond Trustee shall thereupon give the Issuer and the Bondholders of the Series 2023C Bonds to be purchased notice of such purchase in the manner specified in the provisions of the Bond Indenture summarized under the sub-caption "Redemption of the Series 2023C Bonds — Notice of Redemption" above as though such purchase were a redemption, and the purchase of such Series 2023C Bonds shall be mandatory and enforceable against the Bondholders. On the date fixed for purchase pursuant to any exercise of such option, the Corporation shall pay the purchase price of the Series 2023C Bonds then being purchased to the Bond Trustee in immediately available funds, and the Bond Trustee shall pay the same to the sellers of such Series 2023C Bonds against delivery thereof. Following such purchase, the Bond Trustee shall cause such Series 2023C Bonds to be registered in the name of the Corporation or its nominee and shall deliver them to the Corporation or its nominee. In the case of the purchase of less than all of the Series 2023C Bonds, the particular Series 2023C Bonds to be purchased shall be selected in accordance with the provisions of the Bond Indenture summarized under the sub-caption "Redemption of the Series 2023C Bonds — Partial Redemption of Series 2023C Bonds" above. No purchase of the Series 2023C Bonds pursuant to the provisions of the Bond Indenture summarized in this paragraph shall operate to extinguish the indebtedness of the Issuer evidenced thereby. Notwithstanding the foregoing, no purchase shall be made pursuant to the provisions of the Bond Indenture summarized in this paragraph unless the Corporation shall have delivered to the Bond Trustee and the Issuer concurrently therewith a Favorable Opinion of Bond Counsel with respect to such purchase.

TRANSFERS AND EXCHANGES

Subject to the provisions described under "BOOK-ENTRY ONLY SYSTEM" below, a Series 2023C Bond may be transferred only upon surrender thereof to the Bond Trustee. Such Series 2023C Bond must be accompanied by a satisfactory written instrument of transfer duly executed by the registered owner or a duly appointed attorney. Upon surrender of any Series 2023C Bonds to be transferred or exchanged, the Bond Trustee shall record the transfer or exchange in its Bond Register and shall authenticate and deliver new Series 2023C Bonds of the same maturity appropriately registered and in appropriate Authorized Denominations. The Bond Trustee shall not be required to effect or register any transfer or exchange of any Series 2023C Bond between the Record Date and the related Interest Payment Date or during a period beginning at the opening of business 15 days before the date of mailing of notice of redemption of Series 2023C Bonds selected for redemption and ending at the close of business on the day of such mailing or for any Series 2023C Bonds so selected for redemption in whole or in part, except that Series 2023C Bonds properly surrendered for partial redemption may be exchanged for new Series 2023C Bonds in Authorized Denominations equal in the aggregate to the unredeemed portion. No transfer or exchange made other than as described above and in the Bond Indenture shall be valid or effective for any purpose under the Bond Indenture.

DEFEASANCE

If moneys or obligations of the type described in the Bond Indenture sufficient to pay the principal or redemption price of any particular Series 2023C Bonds becoming due, either at maturity or by call for redemption or otherwise, together with all interest accruing thereon to the due date, shall have been deposited with the Bond Trustee, interest on such Series 2023C Bonds shall cease to accrue on the due date and all liability of the Authority and the Corporation with respect to such Series 2023C Bonds shall likewise cease. Thereafter such Series 2023C Bonds shall be deemed not to be Outstanding under the Bond Indenture and the holder or holders shall be restricted exclusively to the funds so deposited for any claim of whatsoever nature with respect to such Series 2023C Bonds, and the Bond Trustee shall hold such funds in trust for such holder or holders. See "THE BOND INDENTURE — Defeasance" and "— Deposit of Funds for Payment of 2023C Bonds" in APPENDIX C hereto.

BOOK-ENTRY ONLY SYSTEM

THE INFORMATION PROVIDED UNDER THIS CAPTION CONCERNING DTC AND DTC'S BOOK-ENTRY SYSTEM HAS BEEN PROVIDED BY DTC. NO REPRESENTATION IS MADE BY THE AUTHORITY, THE CORPORATION OR THE UNDERWRITERS AS TO THE ACCURACY OR ADEQUACY OF SUCH INFORMATION PROVIDED BY DTC OR AS TO THE ABSENCE OF MATERIAL ADVERSE CHANGES IN SUCH INFORMATION SUBSEQUENT TO THE DATE HEREOF.

DTC, the Depository Trust Company, New York, New York, will act as securities depository for the Series 2023C Bonds. The Series 2023C Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered Series 2023C Bond certificate will be issued for each maturity of the Series 2023C Bonds set forth on the inside front cover page of this Official Statement, each in the aggregate principal amount of such maturity and will be deposited with DTC.

DTC, the world's largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC participants (*"Direct Participants"*) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation (*"DTCC"*). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (*"Indirect Participants"*). DTC has a Standard & Poor's rating of AA+. The DTC rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of the Series 2023C Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series 2023C Bonds on DTC's records. The ownership interest of each actual purchaser of each Series 2023C Bond (*"Beneficial Owner"*) is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Series 2023C Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the Series 2023C Bonds, except in the event that use of the book-entry only system for the Series 2023C Bonds is discontinued.

To facilitate subsequent transfers, all Series 2023C Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Series 2023C Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Series 2023C Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Series 2023C Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of Series 2023C Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Series 2023C Bonds, such as redemptions, tenders, defaults, and proposed amendments to the Series 2023C Bond documents. For example, Beneficial Owners of Series 2023C Bonds may wish to ascertain that the nominee holding the Series 2023C Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of the notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the Series 2023C Bonds within a maturity are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such maturity to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to Series 2023C Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Authority as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Series 2023C Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Payments of principal of and interest on the Series 2023C Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts, upon DTC's receipt of funds and corresponding detail information from the Bond Trustee on the payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Bond Trustee, the Authority or the Corporation, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Bond Trustee; disbursement of such payments to Direct Participants will be the responsibility of DTC and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as securities depository with respect to the Series 2023C Bonds at any time by giving reasonable notice to the Authority or the Bond Trustee. Under such circumstances, in the event that a successor securities depository is not appointed, Series 2023C Bond certificates are required to be printed and delivered in accordance with the Bond Indenture.

The Authority may, at the written request of the Corporation, decide to discontinue use of the system of book-entry-only transfers through DTC (or successor securities depository). In that event Series 2023C Bond certificates will be printed and delivered to DTC.

The information set forth hereinabove in this section concerning DTC and DTC's book-entry system has been obtained from DTC, and the Authority and Corporation take no responsibility for the accuracy thereof.

Neither the Authority nor the Bond Trustee nor the Corporation will have any responsibility or obligation to participants, Beneficial Owners or other nominees of such Beneficial Owners for (1) sending transaction statements; (2) maintaining, supervising or reviewing, or the accuracy of, any records maintained by DTC or any participant or other nominees of such Beneficial Owners; (3) payment or the timeliness of payment by DTC to any participant, or by any participant or other nominees of Beneficial Owners to any Beneficial Owner, of any amount due in respect of the principal of or redemption premium, if any, or interest on Book-Entry Bonds; (4) delivery or timely delivery by DTC to any participant, or by any participant or other nominees of Beneficial Owners to any Beneficial Owners, of any notice (including notice of redemption) or other communication which is required or permitted under the terms of the Bond Indenture to be given holders or owners of Book-Entry Bonds; (5) the selection of the Beneficial Owners to receive payment in the event of any partial redemption of Book-Entry Bonds; or (6) any action taken by DTC or its nominee as the registered owner of Book-Entry Bonds.

SOURCES OF PAYMENT AND SECURITY FOR THE SERIES 2023C BONDS

LIMITED OBLIGATIONS

The Series 2023C Bonds are limited obligations of the Authority, equally and ratably secured under the Bond Indenture, and payable solely from the Trust Estate created and pledged under the Bond Indenture. For a more detailed description of the Trust Estate, see APPENDIX C — "DEFINITIONS OF TERMS AND SUMMARIES OF CERTAIN PROVISIONS OF THE PRINCIPAL DOCUMENTS" hereto. The Authority has pledged and assigned to the Bond Trustee its interest in the Trust Estate as security for the payment of the Series 2023C Bonds and the performance and observance of the covenants in the Bond Indenture.

THE SERIES 2023C BONDS ARE LIMITED OBLIGATIONS OF THE AUTHORITY, PAYABLE SOLELY FROM THE TRUST ESTATE. NEITHER THE COMMONWEALTH OF PENNSYLVANIA NOR ANY POLITICAL SUBDIVISION THEREOF IS OBLIGATED TO PAY THE PRINCIPAL OR REDEMPTION PRICE OF OR THE INTEREST ON THE SERIES 2023C BONDS, AND NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE COMMONWEALTH OF PENNSYLVANIA OR ANY POLITICAL SUBDIVISION THEREOF IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OR REDEMPTION PRICE OF OR INTEREST ON THE SERIES 2023C BONDS. THE AUTHORITY HAS NO TAXING POWER.

SECURITY AND SOURCES OF PAYMENT FOR THE SERIES 2023C BONDS

In connection with the issuance of the Series 2023C Bonds, the Authority and the Corporation will enter into the Loan Agreement under which the Corporation will agree to make installment payments sufficient to pay the principal of, interest on, and redemption price of the Series 2023C Bonds as and when due.

The payment obligations of the Corporation under the Loan Agreement with respect to the Series 2023C Bonds will be secured by the Series 2023C MTI Note. The Series 2023C MTI Note will be issued pursuant to the Master Indenture, in favor of the Authority and assigned to the Bond Trustee. The Loan Agreement is an obligation of the Corporation and is not an obligation of the Subsidiary Hospitals or other affiliates. **The Series 2023C MTI Note is an obligation of the Obligated Group and is not an obligation of any Subsidiary Hospital or other affiliate that is not a Member of the Obligated Group and no such Subsidiary Hospital or other affiliate is contractually obligated to make payments on the Series 2023C MTI Note, the Loan Agreement or the Series 2023C Bonds.** See APPENDIX C hereto for a description of the Master Indenture.

THE MASTER INDENTURE

The following is a summary of certain provisions of the Master Indenture. Reference is made to the Master Indenture for the complete text thereof. The discussion herein is qualified by such reference. A summary of certain provisions of the Master Indenture is set forth in APPENDIX C hereto.

Obligated Group. The Master Indenture creates an Obligated Group, which is comprised of the Members of the Obligated Group. Each Member, jointly and severally, unconditionally and irrevocably guarantees and promises to pay, any and all payments on any Obligation, according to the terms thereof, when due. If for any reason any payment required pursuant to the terms of any Obligation issued under the Master Indenture has not been timely paid by the Member which incurred such Obligation, all other Members shall be obligated to make such payment. The Corporation, UPMC Presbyterian Shadyside, UPMC Magee-Womens Hospital, UPMC Passavant and UPMC St. Margaret constitute the current Members of the Obligated Group under the Master Indenture.

Entities may be added to and withdrawn from the Credit Obligated from time to time. The Master Indenture imposes minimum conditions on the right of any Obligated Group Member or to enter or withdraw from the Obligated at any time. For a more detailed discussion of entry into or withdrawal from the Obligated Group, see "THE MASTER INDENTURE — Membership in and Withdrawal from the Obligated Group" in APPENDIX C hereto.

Security Interest in Gross Revenues for Obligations Issued Under the Master Indenture. The Series 2023C MTI Note is an obligation of the Obligated Group secured by a lien upon the Gross Revenues of the Obligated Group. "*Gross Revenues*" means all revenues of the Obligated Group whether in the form of accounts receivables, contract rights or general intangibles, including income therefrom and all proceeds thereof, but excluding specifically restricted gifts, grants, pledges, bequests, donations, legacies and contributions (including income therefrom or proceeds from the sale thereof) made to a Member, to the extent that such property may not be pledged or applied to the payment of any Debt Service Requirements as a result of restrictions or designation imposed by the donor or maker of the gift, grant, pledge, bequest, donation, contribution or other sums in question. See "BONDHOLDERS' RISKS — Enforceability of Security Interest in Gross Revenues May Be Limited" herein and "THE MASTER INDENTURE — Cross Guaranties; Security Therefor" in APPENDIX C hereto.

Additional MTI Debt and Outstanding Obligations. The Series 2023C MTI Note is being issued on a parity basis with the other Series 2023 MTI Notes and with certain other indebtedness of the Obligated Group including, without limitation, notes that have been issued under the Master Indenture prior to the date of issuance of the Series 2023C Bonds and notes to be issued in the future under the Master Indenture, if any. See "THE MASTER INDENTURE — Additional MTI Debt" and "— Subordinated Debt and Non-MTI Debt" in APPENDIX C hereto.

The Corporation, its Subsidiary Hospitals and other owned and controlled entities had approximately $5.522 billion in outstanding long-term debt as of December 31, 2022, on a consolidated basis, approximately $5.125 billion of which was secured by the Master Indenture. Upon the issuance of the Series 2023 Bonds and the application of the proceeds thereof as described under the heading "PLAN OF FINANCE" herein, there will be approximately $6.352 billion of outstanding Obligations under the Master Indenture.

Master Indenture Covenants. In addition to the security and other provisions described above, the Master Indenture contains provisions, covenants and restrictions related to debt service coverage; liquidity; mergers and other corporate combinations; divestitures, sales, leases or other dispositions or assets; limitations on liens; and other matters. See "THE MASTER INDENTURE — Financial Covenants," "— Merger, Consolidation, Sale or Conveyance," "— Sale or Other Disposition of Property" and "— Liens on Property" in APPENDIX C hereto.

REPLACEMENT MASTER INDENTURE AND SUBSTITUTION OF OBLIGATIONS

The Master Indenture provides that the Obligated Group Agent and the Master Trustee, may, without the consent of any of the Holders of any Obligations or any Related Bonds, enter into a replacement master indenture and provide for the replacement of existing Obligations, including the Series 2023C MTI Obligation, with new notes issued pursuant to such replacement master indenture under certain circumstances and upon the satisfaction of the conditions described in the Master Indenture, including without limitation, delivery of written evidence from each Rating Agency then maintaining a rating on any Related Bonds that as a result of implementation of the Substitution Transaction, the rating on the Related Bonds will be no less than the lower of: (A) the lowest of the then-current long-term rating on the Related Bonds, or (B) a rating of "A" (in the case of Standard & Poor's and Fitch) or "A2" (in the case of Moody's), in each case without regard to gradations or subcategories within a rating category (such requirement being referred to herein as the *"Credit Rating Test"*). See "THE MASTER INDENTURE — Note and Document Substitution" in APPENDIX C hereto. The Master Indenture is being amended concurrently with the issuance of the Series 2023 Taxable Bonds to add the Credit Rating Test to the Master Indenture pursuant to the provisions of the Master Indenture summarized in paragraph (i) under the heading "THE MASTER INDENTURE — Supplemental Master Indentures without Consent of Holders" in APPENDIX C hereto.

PLAN OF FINANCE

GENERAL

The issuance of the Series 2023C Bonds is part of a plan of finance to finance the Tax-Exempt Capital Projects, refund the Refunded Series 2013A Bonds and Refunded Series 2013B Bonds, refinance the Term Loan and finance working capital and other general corporate purposes of the Corporation and its affiliates, which may include capital expenditures of the Corporation and its affiliates. See "MANAGEMENT DISCUSSION AND ANALYSIS — Capital Expenditures and Liquidity" in APPENDIX A hereto for information regarding certain of UPMC's capital expenditures. The Corporation expects that PEDFA will issue the Series 2023A Bonds, the Series 2023B Bonds and the Series 2023D Bonds for the benefit of the Corporation, all concurrently with the issuance of the Series 2023C Bonds. The Corporation also expects to issue the Series 2023 Taxable Bonds on April 12, 2023, shortly prior to the issuance of the Series 2023C Bonds. The Corporation's overall financing plan involves the issuance of bonds in the total principal amount of $1,621,320,000.

PURPOSE OF THE SERIES 2023C BONDS

A portion of the proceeds from the sale of the Series 2023C Bonds will be applied to payment of certain costs of issuance of the Series 2023C Bonds. The remaining proceeds, together with other available funds, will be transferred to The Bank of New York Mellon Trust Company, N.A., as bond trustee for the Series 2013B Bonds and as escrow agent (the *"Series 2013B Escrow Agent"*), under the Escrow Deposit Agreement dated as of April 1, 2023 (the *"Series 2013B Escrow Agreement"*) among the Authority, the Corporation and the Series 2013B Escrow Agent. Funds on deposit pursuant to the Series 2013B Escrow Agreement will be held in an irrevocable escrow fund related to the Refunded Series 2013B Bonds (the *"Series 2013B Escrow Fund"*) established pursuant to the Series 2013B Escrow Agreement. The funds deposited in the Series 2013B Escrow Fund will be in an amount sufficient to pay when due the interest on the Refunded Series 2013B Bonds on July 1, 2023 and to redeem all of the outstanding Refunded Series 2013B Bonds on July 1, 2023 at a redemption price equal to 100% of the principal amount thereof. Amounts on deposit in the Series 2013B Escrow Fund will not be available to pay principal of or interest on the Series 2023C Bonds.

PURPOSE OF THE OTHER SERIES 2023 BONDS

The proceeds from the sale of the Series 2023 Taxable Bonds will be used to finance working capital and other general corporate purposes of the Corporation, including but not limited to financing costs of issuance related to the Series 2023 Bonds.

The proceeds from the sale of the Series 2023A Bonds, together with certain other moneys, will be used to finance the 2023A Tax-Exempt Capital Project and pay certain costs of issuance of the Series 2023A Bonds.

A portion of the proceeds from the sale of the Series 2023B Bonds will be applied to payment of certain costs of issuance of the Series 2023B Bonds. The remaining proceeds, together with other available funds, will be transferred to The Bank of New York Mellon Trust Company, N.A., as bond trustee for the Series 2013A Bonds and as escrow agent (the *"Series 2013A Escrow Agent"*), under the Escrow Deposit Agreement dated as of April 1, 2023 (the *"Series 2013A Escrow Agreement"*) among PEDFA, the Corporation and the Series 2013A Escrow Agent. Funds on deposit pursuant to the Series 2013A Escrow Agreement will be held in an irrevocable escrow fund related to the Refunded Series 2013A Bonds (the *"Series 2013A Escrow Fund"*) established pursuant to the Series 2013A Escrow Agreement. The funds deposited in the Series 2013A Escrow Fund will be in an amount sufficient to pay when due the interest on the Refunded Series 2013A Bonds on July 1, 2023 and to redeem all of the outstanding Refunded Series 2013A Bonds on July 1, 2023 at a redemption price equal to 100% of the principal amount thereof.

The proceeds from the sale of the Series 2023D Bonds will be used to finance the 2023D Tax-Exempt Capital Project, refinance the Term Loan on the date of issuance of the Series 2023D Bonds, and pay certain costs of issuance of the Series 2023D Bonds.

AMENDMENT TO SYNDICATED REVOLVING CREDIT AGREEMENT

UPMC expects to amend its existing RCA, pursuant to which a syndicate of financial institutions agree to provide a revolving line of credit to UPMC, to increase the maximum available amount thereunder from $600 million to $1.0 billion. The amendment to the RCA and increase of the maximum available amount thereunder is expected to be executed and become effective prior to the end of the quarter ending June 30, 2023.

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ESTIMATED SOURCES AND USES OF FUNDS

The estimated sources and uses of the proceeds from the sale of the Series 2023 Bonds and certain other moneys are as follows:

SOURCES OF FUNDS:	SERIES 2023A BONDS	SERIES 2023B BONDS	SERIES 2023C BONDS	SERIES 2023D BONDS	SERIES 2023 TAXABLE BONDS	TOTAL
Par Amount of Series 2023 Bonds	$445,230,000	$89,275,000	$36,815,000	$250,000,000	$800,000,000	$1,621,320,000
Plus Net Original Issue Premium	32,192,725	6,952,370	4,421,220	--	--	43,566,316
UPMC Equity Contribution	--	6,665,401	986,525	--	--	7,651,926
TOTAL SOURCES:	$477,422,725	$102,892,771	$42,222,745	$250,000,000	$800,000,000	$1,672,538,242
USES OF FUNDS:						
General Corporate Purposes	--	--	--	--	$792,698,186	$792,698,186
Tax-Exempt Capital Projects	$475,000,000	--	--	$49,687,500	--	524,687,500
Refund the Series 2013A Bonds	--	$102,394,036		--	--	102,394,036
Refund the Series 2013B Bonds	--		$42,023,365	--	--	42,023,365
Refinance the Term Loan	--	--	--	200,000,000	--	200,000,000
Costs of Issuance(1)	2,422,725	498,736	199,381	312,500	7,301,814	10,735,155
TOTAL USES:	$477,422,725	$102,892,771	$42,222,745	$250,000,000	$800,000,000	$1,672,538,242

Includes de minimis rounding adjustments.

(1) Includes Underwriters' discount, estimated legal and accounting fees and expenses, fees and expenses of the Authority, PEDFA, the Bond Trustee and the Master Trustee, rating agencies' fees, printing costs and miscellaneous expenses.

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ANNUAL DEBT SERVICE REQUIREMENTS OF THE SERIES 2023C BONDS

The following table sets forth, for each year ending December 31, the amount required for the payment of principal of and interest on the Series 2023C Bonds. (All amounts are rounded to the nearest whole dollar; totals may not sum due to rounding.)

YEAR (DECEMBER 31)	SERIES 2023C BONDS PRINCIPAL	SERIES 2023C BONDS INTEREST	SERIES 2023C BONDS TOTAL DEBT SERVICE
2023	--	$1,053,318	$1,053,318
2024	$1,550,000	1,802,000	3,352,000
2025	1,630,000	1,722,500	3,352,500
2026	1,715,000	1,638,875	3,353,875
2027	1,805,000	1,550,875	3,355,875
2028	1,895,000	1,458,375	3,353,375
2029	1,995,000	1,361,125	3,356,125
2030	2,095,000	1,258,875	3,353,875
2031	2,200,000	1,151,500	3,351,500
2032	2,315,000	1,038,625	3,353,625
2033	2,435,000	919,875	3,354,875
2034	2,560,000	795,000	3,355,000
2035	2,690,000	663,750	3,353,750
2036	2,830,000	525,750	3,355,750
2037	2,975,000	380,625	3,355,625
2038	3,125,000	228,125	3,353,125
2039	3,000,000	75,000	3,075,000
TOTAL	$36,815,000	$17,624,193	$54,439,193

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BONDHOLDERS' RISKS

The business of the System is subject to a number of risks and uncertainties, many of which are beyond its control. Such risks may cause actual operating results or financial performance to be materially different from expectations, thereby affecting payments to be made with respect to the Series 2023C Bonds. The following briefly describes certain risks that could affect payments with respect to the Series 2023C Bonds. This discussion of risk factors is not, and is not intended to be, exhaustive. Prospective purchasers of the Series 2023C Bonds should analyze carefully the information contained in the entirety of this Official Statement, including the Appendices hereto, and additional information in the form of the complete documents summarized herein, copies of which are available as described in this Official Statement.

To varying degrees, all of the risk factors described below, and others, may apply to the System, which is comprised of the Corporation and its operating divisions, including the Subsidiary Hospitals and the insurance subsidiaries described in APPENDIX A hereto under the heading "Operating Structure – Insurance Services" (the "Insurance Subsidiaries"). However, not all of the Subsidiary Hospitals and other affiliates of the Corporation have a direct obligation with respect to the Series 2023C Bonds.

REALIZATION OF REVENUES SUFFICIENT TO PAY DEBT SERVICE IS NOT GUARANTEED

The Series 2023C Bonds do not constitute a debt, liability or obligation of the Authority, the State, or any political subdivision thereof and are not payable in any manner from taxation. The Series 2023C Bonds will be payable by the Authority solely from the Trust Estate, including amounts payable under the Loan Agreement and the Series 2023C MTI Note issued to the Authority and assigned to the Bond Trustee. None of the provisions of the Loan Agreement or the Master Indenture provide any assurance that the obligations of the Members of the Obligated Group will be paid as and when due if Members of the Obligated Group become unable to pay their debts as they come due or Members of the Obligated Group otherwise become insolvent. See "SOURCES OF PAYMENT AND SECURITY FOR THE SERIES 2023C BONDS" above for more information.

The Obligated Group's ability to realize revenues sufficient to pay outstanding obligations, including debt service when due on the Series 2023C Bonds, is affected by and subject to many conditions that may change in the future to an extent and with effects that cannot be determined. The Obligated Group's receipt of future revenues is subject to, among other factors: (1) federal and state laws and regulations, particularly those targeting the health care industry, (2) the policies of third-party payors, including governmental payors (*e.g.*, Medicare and Medicaid) and commercial payors, (3) relationships with third-party payors, including the Obligated Group's ability to maintain favorable third-party payor contracts, (4) future economic conditions, including as impacted by the Novel Coronavirus 2019 ("*COVID-19*") pandemic, (5) the duration and scope of a pandemic and governmental, business, and public responses to such pandemic, (6) health care reform efforts, including any laws that significantly alter the health care delivery system or insurance markets, (7) increased competition from other health care providers, and (8) the capability of management of the Corporation ("*Management*"). There is no assurance that the Obligated Group's future revenues will be sufficient to pay debt service on the Series 2023C Bonds when due.

Future Legislation Could Adversely Affect Operation, Financial Condition or Tax-Exempt Status

Legislation is periodically introduced in the U.S. Congress and in applicable state legislatures that could adversely affect the operations or financial condition of the Obligated Group. In addition to legislative proposals specifically discussed herein, examples of legislative proposals that could have an adverse effect on the Members of the Obligated Group if they were to become law include: (1) laws limiting hospital revenues, reimbursement, costs or charges, (2) laws requiring an increase in the quantity of indigent care required to maintain federal or state tax-exempt status, (3) any changes in the taxation of nonprofit corporations or in the scope of their exemption from income or property taxes, (4) limitations on the amount or availability of tax-exempt financing for corporations described in Section 501(c)(3) of the Code, (5) limitations on the Obligated Group's ability to undertake capital projects or develop new services, (6) elimination of the exclusion of interest on tax-exempt bonds from gross income for all or some taxpayers, or (7) laws subjecting all or a portion of an Obligated Group Member's income to federal or state income taxes or other tax penalties. The scope and effect of future legislation cannot be predicted but may adversely affect the Obligated Group's operation, financial condition or tax-exempt status.

Tax Treatment of the Series 2023C Bonds Could Be Adversely Affected by Failure to Comply with Legal Requirements or Future Legislation

As described above under the caption "INTRODUCTION — Plan of Finance," the Series 2023 Tax-Exempt Bonds are considered a single issue of bonds for purposes of determining compliance with certain tax covenants. The tax-exempt status of the Series 2023 Tax-Exempt Bonds is based on the continued compliance by the Authority and the Obligated Group with certain covenants relating generally, among other things, to the use of the facilities refinanced with the proceeds of the Series 2023 Tax-Exempt Bonds, arbitrage limitations and rebate of certain excess investment earnings to the federal government. Failure to comply with such covenants with respect to the Series 2023 Tax-Exempt Bonds could cause interest on all of the Series 2023 Tax-Exempt Bonds to become subject to federal income taxation retroactive to the applicable date of issuance of the Series 2023 Tax-Exempt Bonds. The Bond Indenture does not provide for the payment of any additional interest or penalty in the event of the taxability of interest on the Series 2023C Bonds.

Although the Internal Revenue Service (*"IRS"*) has only infrequently taxed the interest received by holders of bonds that were represented to be tax-exempt, the IRS has examined a number of bond issues and concluded that such bond issues did not comply with applicable provisions of the Code and related regulations. The IRS has typically entered into closing agreements with issuers and beneficiaries of such bond issues under which potentially substantial payments have been made to the IRS to settle the issue of whether the interest on such bond issues could be treated as tax-exempt. No assurance can be given that the IRS will not examine a Bondholder, the Obligated Group or the Series 2023C Bonds. If such an examination were to occur, it could have an adverse impact on the marketability and price of the Series 2023C Bonds and could lead to claims by the IRS for payment of substantial amounts by the Obligated Group to resolve any issue.

Legislative proposals to eliminate or limit the benefit of tax-exempt interest on bonds such as the Series 2023C Bonds have been made in the past, may currently be under consideration, and may be made again in the future. If adopted, any such proposal could alter the federal and/or state tax treatment described under the heading "TAX EXEMPTION AND OTHER TAX MATTERS" or could adversely affect the market value or marketability of the Series 2023C Bonds and the financial condition of the Obligated

Group. In addition, the adoption of any such legislation could increase the cost to the Obligated Group of financing future capital needs.

COVID-19 OR OTHER PANDEMIC OR PUBLIC HEALTH EMERGENCY COULD ADVERSELY IMPACT OPERATIONS AND FINANCIAL CONDITION

General. The occurrence of a public health emergency, including a widespread outbreak of an infectious disease, including, but not limited to, COVID-19, Ebola, Zika, or H1N1, may put stress on the capacity of all or a part of the Obligated Group's health care facilities, could result in an abnormally high demand for health care services, require that resources be diverted from one part of operations of the Obligated Group to another part, disrupt the supply chain for equipment and supplies necessary for the operation of the Obligated Group's facilities or impair the operation of part or all of the Obligated Group's facilities. In addition, unaffected individuals may decide to defer elective procedures or otherwise avoid medical treatment, resulting in reduced patient volumes and operating revenues at the Obligated Group's outpatient facilities. The effect of any future public health emergency or crisis on the Obligated Group's operations and finances could be material and cannot be predicted at this time.

COVID-19 Pandemic. The widespread outbreak of COVID-19 in 2020 globally and in the United States caused significant volatility in global and U.S. markets, negative economic growth, substantially increased unemployment and disruption to health care operations, including those of the Obligated Group. A public health emergency ("*PHE*") with respect to the COVID-19 outbreak was declared in January of 2020 and a national emergency ("*NE*") was declared in March of 2020. The NE and PHE are currently set to expire on March 1, 2023 and April 11, 2023, respectively. The Biden administration has announced its plan to extend both the NE and PHE to May 11, 2023, and then end both emergency declarations on that date.

Like other health systems across the nation, the System experienced a substantial slowdown in patient and operational volumes beginning in March 2020, including, in particular, the patient volumes related to elective procedures. As federal, state and local officials issued guidelines to avoid hospitalization for non-emergency issues, patient appointment volume, especially for specialty practices, fell and emergency department volume declined. Furthermore, in response to the potential for additional patients requiring hospitalization due to the significant increase in coronavirus cases, the Obligated Group's facilities experienced, and may continue to experience, issues related to the necessary capacity needed to address increased COVID-19 patient volume. Staff productivity was, and may continue to be, negatively affected due to additional training and preparatory costs and deployment/reassignment of additional resources or personnel to other facilities or units. Additionally, due to the decline in outpatient volumes and elective procedures, the Obligated Group reduced, and may continue to reduce, active staff at its hospital and outpatient facilities. Due to the worldwide shortage of certain medical equipment necessary for the operation of the Obligated Group's facilities, including personal protective equipment and respirators, the Obligated Group incurred higher supply and equipment costs, which may continue in the future.

The Centers for Medicare & Medicaid Services ("*CMS*") issued an Interim Final Rule mandating vaccination for health care workers in hospitals, nursing facilities, and other institutions that receive Medicare and Medicaid reimbursement (the "*Healthcare Sector Vaccine Mandate*"). Compliance with the Healthcare Sector Vaccine Mandate may increase operating costs or affect the Obligated Group's ability to recruit and retain employees. Failure to comply with the vaccination mandate may result in exclusion from the Medicare or Medicaid programs.

The COVID-19 pandemic has had significant negative effects on the economy generally as well as direct healthcare related consequences. The pandemic has resulted in volatility in equity markets and the public markets for the issuance and trading of all securities. The outbreak has caused business failures and cutbacks attributable to "social distancing" practices and changes in market behavior, the complete effects of which cannot be predicted at this time. Though the full effect cannot be ascertained or predicted at this time, the COVID-19 pandemic has materially and adversely affected the Obligated Group's operations and finances, and some negative effects are likely to continue.

CARES Act Compliance. The federal Coronavirus Aid, Relief, and Economic Security Act ("*CARES Act*") created a Public Health and Social Services Emergency Fund, commonly known as the Provider Relief Fund, with a direction to the U.S. Department of Health and Human Services ("*DHHS*") to distribute funds through grants or other mechanisms to eligible providers for healthcare related expenses or lost revenues that are attributable to coronavirus. DHHS distributed funding from the Provider Relief Fund as grants, not as loans, and did so automatically without requiring an application. However, all Provider Relief Fund recipients must attest to the programs "Terms and Conditions", which among other things, require the submission and maintenance of documentation to substantiate that funds were used for allowable expenses. To be an allowable expense under the program, the funds must have been used to prevent, prepare for and respond to COVID-19. All allowable expenses must be supported by adequate documentation in accordance with the Terms and Conditions.

DHHS is expected to maintain a robust audit program to ensure compliance with the terms and conditions of the CARES Act. Violations may be pursued as false claims under the Federal False Claims Act and may occur as a result of an audit by DHHS or by the filing of a whistleblower complaint under the Federal False Claims Act. There can be no assurance that the Obligated Group will not be the subject of an audit, what the penalties for even minor and inadvertent violations might be, or that the Obligated Group will not be the subject of false claims actions, whether arising as a result of DHHS oversight activities or in response to whistleblower filings. For a discussion of Provider Relief Fund distributions and other COVID-19 relief obtained by the Obligated Group to date, see "UPMC Audited Consolidated Financial Statements for the Fiscal Year Ended December 31, 2022", Note 2 in APPENDIX B hereto.

AN ECONOMIC DOWNTURN OR OTHER UNFAVORABLE ECONOMIC CONDITIONS COULD NEGATIVELY IMPACT FINANCIAL CONDITION

The U.S. economy is unpredictable. Economic downturns and other unfavorable economic conditions have previously impacted the health care industry and health care providers' business and financial condition, and as described above, the COVID-19 pandemic has and continues to adversely impact the U.S. economy. If general economic conditions worsen the Obligated Group may not be able to sustain future profitability, and its liquidity and ability to repay outstanding debt, including debt service on the Series 2023C Bonds, may be adversely affected. Broad economic factors—such as inflation, unemployment rates or instabilities in consumer demand and consumer spending—could affect the Obligated Group's volumes and its ability to collect outstanding receivables. Other economic conditions that from time to time may adversely affect Obligated Group revenues and expenses, and consequently, its ability to make payments on the Obligations, include but are not limited to: (1) an inability to access financial markets on acceptable terms at a desired time, (2) significant investment portfolio losses, (3) increased business failures and consumer and business bankruptcies, (4) federal and state budget challenges resulting in reduced or delayed Medicare and Medicaid reimbursement, (5) a reduction in the demand for health care services or patient decisions to postpone or cancel elective and non-emergency health care procedures, (6) increased malpractice, casualty and other insurance expenses, (7) reduced availability or affordability of health insurance, (8) a shortage of physician, nursing, or other professional personnel, (9) a shortage of medical supplies and critical care unit beds caused by public health emergency, (10) increased operating costs, (11) a reduction in the receipt of grants and charitable contributions, (12) unfavorable demographic developments in the Obligated Group's service areas, (13) unavailability of liquidity during periods of economic stress caused by delayed reimbursement or payment, or increased costs of liquidity facilities, or (14) increased competition from other health care institutions.

Currently the United States is experiencing high levels of inflation and supply chain issues which is having an impact on the cost of goods and services needed by the Obligated Group to operate its facilities. Such issues may increase costs and otherwise adversely impact operations.

HEALTH CARE REFORM LAWS OR CHALLENGES TO THE AFFORDABLE CARE ACT COULD NEGATIVELY IMPACT FINANCIAL CONDITION

General. The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010 (the *"Affordable Care Act"* or *"ACA"*), significantly changed, and continues to change, how health care services are covered, delivered, and financed in the United States. The primary goal of the ACA—extending health coverage to millions of uninsured legal U.S. residents—has taken place through a combination of private sector health insurance reforms and Medicaid program expansion (discussed below). To fund Medicaid expansion, the ACA includes a broad array of quality improvement programs, cost-efficiency incentives, and enhanced fraud and abuse enforcement measures, each designed to generate savings within the Medicare and Medicaid programs. Additionally, the ACA created health insurance exchanges—competitive markets for individuals and small employers to purchase health insurance—and financial programs designed to encourage insurance companies to offer plans on the health insurance exchanges.

Due to the controversial nature of health care reform generally, implementation of the ACA has been, and remains, politically controversial. Since its enactment, the ACA has faced a stream of opposition from Republican lawmakers calling for its repeal and/or replacement, along with a string of lawsuits challenging various aspects of the law. The ACA has survived three major Supreme Court challenges and no bills wholly repealing the ACA have passed both chambers of Congress. Accordingly, the majority of the ACA remains law. However, a tax reform bill passed in late 2017 (the *"Tax Cuts and Jobs Act of 2017"*) effectively eliminated a key provision of the ACA – a tax penalty associated with failing to maintain health coverage (the "*Individual Mandate Tax Penalty*") by reducing the penalty to zero dollars effective 2019. New legal or legislative challenges to the ACA may occur in the future.

In addition to actual and possible legislative changes or legal challenges, executive branch actions and policies could impact the viability of the ACA. For example, executive branch action has the potential to significantly impact the ACA insurance exchange market by causing a reduction in the number of healthy individuals in the ACA health insurance exchanges, a reduction in the number of plans available on the health insurance exchanges, and/or an increase in insurance premiums. President Biden has taken, and is expected to continue to undertake, executive actions that will strengthen and build on the ACA and may reverse certain policies of the prior administration that are seen as undermining the ACA.

Management cannot predict the likelihood of any future ACA repeal bills or other health care reform bills becoming law, or the subsequent effects of any such legislative actions, legal decisions, or current or future executive actions, though such effects could materially impact the Obligated Group's business or financial condition. In particular, any legal, legislative or executive action that (1) reduces federal health care program spending, (2) increases the number of individuals without health insurance,

(3) reduces the number of people seeking health care, or (4) otherwise significantly alters the health care delivery system or insurance markets could have a material adverse effect on the Obligated Group's business or financial condition.

Certain key provisions of the law are briefly described below:

Private Health Insurance Coverage Expansion/Insurance Market Reforms. As originally drafted, the ACA's Individual Mandate Tax Penalty (discussed above) required most Americans to maintain "minimum essential" health insurance coverage or pay a yearly tax penalty to the federal government. Non-exempt uninsured individuals were expected to satisfy the mandate by purchasing insurance from a private company or through a "health insurance exchange." ACA health insurance exchanges are government-established organizations that provide competitive markets for buying health insurance by offering individuals and small employers a choice of different health plans, certifying plans that participate, and providing information to help consumers better understand their options. Although the Tax Cuts and Jobs Act of 2017 effectively eliminated the Individual Mandate Tax Penalty by reducing the penalty to zero dollars effective 2019, individuals may still purchase insurance on the exchanges. Health insurance exchanges may have a negative financial impact on health care providers to the extent (1) insurance plans purchased on the exchanges reimburse providers at lower rates or (2) high-deductible plans offered on the exchanges become more prevalent and lead to lower inpatient volumes as patients choose to forgo medical treatment.

The ACA also includes an "employer mandate" which imposes penalties on employers having 50 or more employees that do not offer qualifying health insurance coverage to those working 30 or more hours per week. The ACA also established a number of other health insurance market reforms, including bans on lifetime limits and pre-existing condition exclusions, new benefit mandates, and increased dependent coverage (until the age of 26). Management cannot predict the future of the health insurance markets or the effects of current and future health reform efforts on such markets, though such effects may materially affect the Obligated Group's business or financial condition.

Federally Funded Medicaid Expansion. Prior to the passage of the ACA, the Medicaid program offered federal funding to states to assist limited categories of low-income individuals (including children, pregnant women, the blind and the disabled) in obtaining medical care. The ACA permits states to expand Medicaid program eligibility to virtually all individuals under 65 years old with incomes up to 138% of the federal poverty level, and provides enhanced federal funding to states that opt to expand. There is no deadline for a state to undertake expansion and qualify for the enhanced federal funding available under the ACA. The net positive effect of ACA reforms has been significantly reduced for states that choose not to participate in the federally funded Medicaid expansion. Each of the states in which the Obligated Group does business – Pennsylvania, New York, and Maryland (collectively, the "*States*") – have accepted federal Medicaid expansion.

Spending Reductions. The ACA contains a number of provisions designed to significantly reduce Medicare and Medicaid program spending, including: (1) negative adjustments to the "market basket" updates for Medicare's inpatient, outpatient, long-term acute and inpatient rehabilitation prospective payment systems, and (2) reductions to Medicare and Medicaid disproportionate share hospital ("*DSH*") payments. Any reductions to reimbursement under the Medicare and Medicaid programs could adversely affect the Obligated Group's business or financial condition to the extent such reductions are not offset by increased revenues from providing care to previously uninsured individuals.

Quality Improvement and Clinical Integration Initiatives. The ACA mandated the creation of a number of payment reform measures designed to incentivize or penalize hospitals based on quality, efficiency and clinical integration measures and authorizes the Center for Medicare & Medicaid Innovation within CMS to develop and test new payment methodologies designed to improve quality of care and lower costs. Other ACA provisions encourage the creation of new health care delivery programs, such as the Medicare Shared Savings Program—a program offering providers the opportunity to create accountable care organizations (*"ACOs"*) that can share in the cost savings they achieve for the Medicare program if certain quality metrics are met. The outcomes of these projects and programs, including their effect on payments to providers and financial performance, cannot be predicted. See also "— Industry Trend Towards Alternative Payment Models and Clinically Integrated Delivery Systems Carries Regulatory Risks and May Negatively Affect Revenues" below.

Fraud and Abuse Enforcement Enhancements. In an attempt to reduce unnecessary health care spending, the ACA includes a number of provisions aimed at combating fraud and abuse within the Medicare and Medicaid programs. Such provisions provide increased federal funding to fight health care fraud and abuse, provide government agencies with additional enforcement tools and investigation flexibility, facilitate cooperation between agencies by establishing mechanisms for information sharing, and enhance criminal and administrative penalties for non-compliance with the federal fraud and abuse laws (*e.g.*, the Anti-Kickback Statute, the Stark Law and the False Claims Act, each as defined and discussed below).

Full Impact of ACA Difficult to Predict. To the extent the ACA remains law, it is difficult to predict the full impact of the ACA on the Obligated Group's future revenues and operations at this time due to uncertainty regarding a number of material factors, including: (1) the number of uninsured individuals to ultimately obtain and retain insurance coverage as a result of the ACA, (2) the percentage of any newly insured patients covered by Medicaid versus a commercial plan, (3) the pace at which insurance coverage expands, (4) changes in delivery system models and the corresponding changes in reimbursement rates and methods, (5) the percentage of individuals in the exchanges who select the high-deductible plans, (6) the extent to which the enhanced program integrity and fraud and abuse provisions lead to a greater number of civil or criminal actions, (7) the extent to which the ACA tightens health insurers' profits, causing the plans to reduce reimbursement rates, (8) the extent of lost revenues, if any, resulting from ACA quality initiatives, (9) the success of any clinical integration efforts or programs in which the Obligated Group participates, and (10) changes in executive-branch policy implementing provisions of the ACA.

OBLIGATED GROUP IS DEPENDENT UPON THIRD PARTY PAYOR REIMBURSEMENT AND COULD BE ADVERSELY AFFECTED BY REIMBURSEMENT REDUCTIONS, DELAYS, OR FAILURE TO NEGOTIATE FAVORABLE CONTRACTS

Medicare and Medicaid Reimbursement. Generally, the Medicare program is the federally funded government health insurance program for individuals over 65 regardless of income and individuals with permanent disabilities or with end-stage renal disease. The Medicaid program is the joint federal and state health insurance program that, together with the Children's Health Insurance Program ("*CHIP*"), provides health coverage to certain low-income individuals and children and individuals with disabilities. The Obligated Group is highly dependent on the receipt of reimbursement from the Medicare and Medicaid programs and could be adversely affected by changes to federal or state policy or funding relating to these programs. For fiscal years ended December 31, 2022 and 2021, respectively, approximately 48% and 47% of the Subsidiary Hospitals' gross patient service revenues were derived from the Medicare program, and approximately 17% and 18% were derived from the Medicaid program. See "SOURCE OF REVENUES" in APPENDIX A hereto.

Government health care programs may make payments to the Obligated Group in amounts that do not reflect the direct and indirect costs to the Obligated Group in providing services to patients. Health care providers have been and continue to be affected significantly by changes made in the last several years to federal and state health care laws and regulations, particularly those pertaining to Medicare and Medicaid. The purpose of much of this statutory and regulatory activity has been to reduce the rate of increase in health care costs, particularly costs paid under the Medicare and Medicaid programs. In addition to ongoing and future payment reform measures resulting from the ACA and other health care reform efforts, the Medicare and Medicaid programs are subject to: (1) other statutory and regulatory changes, administrative rulings, interpretations and determinations concerning patient eligibility requirements, funding levels, and the method of calculating payments or reimbursement rates, (2) requirements for utilization review, and (3) federal and state funding restrictions and challenges. Any of these factors could materially decrease payments from these government programs in the future, as well as affect the cost of providing services to patients and the timing of reimbursement. Any resulting material adverse effect to the Obligated Group's business or financial condition could be exacerbated if Management is not able to effectively manage operating costs.

<u>Children's Health Insurance Program</u>. CHIP is a joint federal and state program that provides health coverage to uninsured children in families with incomes too high to qualify for Medicaid, but too low to afford private coverage. CMS administers CHIP, but each state creates its own program based upon minimum federal guidelines. Each state must periodically submit its CHIP plan to CMS for review to determine if it meets federal requirements. If a state does not meet the federal requirements it can lose its federal funding for the program. From time to time the federal government may seek to expand or contract the CHIP program. Federal legislation has extended CHIP funding and authorization through federal fiscal year 2027. When any CHIP funding or authorization expires there can be no assurance that such funding or authorization will be reestablished at either a state or federal level, or that professional facility reimbursement rates will not subsequently be amended in an effort to manage costs. If CHIP is not extended or if it is extended with reduced funding, the financial condition and financial performance of children's health care providers could be materially affected.

<u>Federal and State Budget Challenges</u>. The effect of future government health care funding or federal or state deficit policy changes on the Obligated Group's business or financial condition is unpredictable. If reimbursement rates paid by governmental payors are reduced or if the scope of services covered by governmental payors is limited, there could be a material adverse effect on the Obligated Group's business or financial condition.

Medicare Sequestration. Past federal legislation and policies aimed at federal deficit reduction have resulted in across-the-board federal program spending reductions, including a yearly 2% reduction in Medicare reimbursement rates (known as "*Medicare sequestration*") required by the Budget Control Act of 2011. Another federal statutory sequester, the "*Pay-As-You-Go*" or "*PAYGO*" sequester, may be triggered in future years. Further, with no long-term resolution in place for federal deficit reduction, Medicare and Medicaid reimbursement may continue to be targets for interim and long-term federal reduction efforts. It is possible that Congress could act to extend or increase Medicare and Medicaid spending reductions in the future and such actions could have a material adverse effect on the Obligated Group's business or financial condition.

Federal Debt Limit. The federal government is subject to a debt "ceiling" established by Congress. In the past several years political disputes concerning authorization of a federal debt ceiling increase have led to shutdowns of substantial portions of the federal government and other federal budget authorization delays have occurred. Federal budget delays and federal government shutdowns are unpredictable and may occur in the future. Failure by Congress to increase the federal debt ceiling, federal budget authorization delays, federal government shutdowns, or other political challenges may cause Medicare or Medicaid reimbursements to be further reduced or paid late, which may have a material adverse effect on the Obligated Group's business or financial condition.

State Budgets. Many states face budgetary challenges that have resulted, and likely will continue to result, in reduced Medicaid funding levels to hospitals and other health care providers. Because most states are required to operate with balanced budgets, and the Medicaid program is generally a significant portion of a state's budget, states can be expected to adopt or consider adopting future legislation designed to reduce or freeze Medicaid expenditures. In addition, some states delay issuing Medicaid payments to providers to manage state expenditures. Continuing pressure on state budgets, state budget authorization delays, and other factors could result in future reductions to Medicaid payments, payment delays or additional taxes on hospitals. In addition, Executive branch efforts or Congressional proposals to cap the federal share of Medicaid expenditures or "block grant" the Medicaid program would further shift rising cost risk to the states, exacerbating state budget challenges, and potentially resulting in decreased payments to providers or a reduction in the services covered by Medicaid. Each of these situations may have a material adverse effect on a provider's business or financial condition.

<u>Conditions of Participation</u>. CMS develops certain health and safety standards known as Conditions of Participation and Conditions for Coverage (collectively, "*Conditions of Participation*") that health care facilities must meet in order to begin and continue participating in the Medicare and Medicaid programs. CMS is responsible for ensuring that health care facilities meet these regulatory Conditions of Participation. Facilities accredited by CMS-approved accrediting organizations, such as The Joint Commission, are deemed to meet the Conditions of Participation. Failure to maintain accreditation or to otherwise comply with the Conditions of Participation could materially adversely affect the financial condition of the Obligated Group.

<u>Site-Neutral Reimbursement</u>. Medicare services performed at off-campus hospital outpatient departments ("*HOPDs*") have traditionally been reimbursed under the Medicare Hospital Outpatient Prospective Payment System ("*OPPS*"), while services performed in freestanding clinics (*e.g.*, free standing ambulatory surgery centers or physician offices) have been reimbursed at the lower Medicare Physician Fee Schedule rate. In 2017, Congress mandated a "site-neutral" reimbursement policy to reduce payment discrepancies for identical services performed at HOPDs opened or acquired after November 2, 2015 and other facilities. Pursuant to the 2019 OPPS final rule, CMS implemented a policy expanding the site neutral payment policy to "grandfathered" HOPDs (HOPDs opened or acquired before November 2, 2015) as well. Although the American Hospital Association and others have challenged the expansion of the site-neutral payment policy, a federal appeals court has ruled that CMS may apply the site-neutral payment policy to the grandfathered HOPDs and the U.S. Supreme Court has declined to hear an appeal of that ruling. Implementation of a site-neutral payment policy for grandfathered HOPDs is likely to have a significant financial impact on hospitals in the form of reduced OPPS payments.

<u>Medicare and Medicaid Audits</u>. Providers that participate in the federal health care programs, such as Medicare and Medicaid, are subject from time to time to audits and other investigations relating to various aspects of their operations and billing practices, as well as to retroactive audit adjustments with respect to reimbursements claimed under these programs. Medicare and Medicaid regulations also

provide for withholding reimbursement payments in certain circumstances. New billing rules and reporting requirements for which there is no clear guidance from federal or state agencies could result in claims submissions being considered inaccurate. The penalties for violations may include an obligation to refund money to the Medicare or Medicaid program, payment of criminal or civil fines and, for serious or repeated violations, exclusion from participation in federal health programs.

Disproportionate Share Hospital Payments. Medicare and Medicaid provide additional payments to hospitals that serve a disproportionate share of certain low-income and uninsured individuals. The Obligated Group has qualified for disproportionate share hospital (*"DSH"*) payments in the past, but there can be no assurance that it will qualify for DSH status in the future. While the ACA substantially reduces Medicare and Medicaid payments to disproportionate share hospitals, the 2021 Appropriations Act eliminates $4 billion in Medicaid disproportionate share hospital payments cuts that were scheduled to go into effect in fiscal years 2021, 2022 and 2023, but added cuts for fiscal years 2024 through 2027. There can be no assurance that payments to disproportionate share hospitals will not be further decreased or eliminated. Loss or reduction of funding for the DSH program could adversely affect the Obligated Group.

Medical Education Payments. Medicare currently pays for a portion of the costs of medical education at hospitals that have teaching programs. These payments are vulnerable to reduction or elimination. The direct and indirect medical education reimbursement programs have repeatedly emerged as targets in the legislative efforts to reduce the federal budget deficit. There can be no assurance that medical education payments will remain at current levels or that amounts received will be sufficient to cover costs associated with medical education programs.

340B Drug Pricing Program. Hospitals that participate in the prescription drug discount program established under Section 340B of the federal Public Health Service Act (the *"340B Program"*) are able to purchase certain outpatient drugs for patients at a reduced cost. Manufacturers must offer 340B discounts to covered entities to have their drugs covered under Medicaid. Congressional and administrative efforts may be made seeking to tighten 340B Program eligibility requirements, reduce the scope of the program, or reduce related payments. Future legal, legislative, or administrative changes to the 340B Program which result in a loss of 340B eligibility, or further decreases in 340B Program drug discounts, or a narrowing of drug manufacturer obligations, could have a material adverse effect on the Obligated Group. In addition, the rules and regulations applicable to participation in the 340B Program are technical, complex, and numerous. Failure to comply with the 340B Program requirements or rules could result in exclusion from the 340B Program thus significantly increasing costs for drugs as well as creating a repayment obligation, which in either case could have a material adverse effect on the operations or financial condition of the Obligated Group.

State Medicaid Programs. From time to time, the State legislatures may change policies relating to Medicaid eligibility, services, and reimbursement. Any reductions in eligibility, covered services, or reimbursement rates could have a material adverse effect on the operations or financial condition of the Obligated Group. Examples of state health care reimbursement policies and programs that may affect Medicaid reimbursement are described below:

State Medicaid Managed Care Programs. Certain states, including States, have transitioned all or a portion of their state Medicaid programs to Medicaid managed care programs. Medicaid managed care provides for the delivery of Medicaid health benefits and additional services through contracted arrangements between state Medicaid agencies and managed care organizations that accept a set per member per month (capitation payment) payment for these services. Providers serving Medicaid managed care beneficiaries may be reimbursed at a rate which does not adequately reflect the cost of care provided and may experience increased administrative burdens.

State Medicaid Waivers; Supplemental and Directed Payments. The States have previously entered into, and may in the future enter into, one or more *"State Medicaid Waivers"* with the federal government. A State Medicaid Waiver is a request that the federal government waive certain Medicaid program requirements so that the state can test new ways to deliver or pay for care in its Medicaid program. Hospitals may receive a material amount of supplemental payments or enhanced reimbursement through State Medicaid Waiver programs. Management cannot predict whether a State will apply for any new State Medicaid Waivers in the future, whether any existing State Medicaid Waivers will be rescinded or allowed to expire, or whether any such event will materially adversely affect the business or financial condition of the Obligated Group. Any loss or reduction of supplemental or enhanced funding received through a State Medicaid Waiver program could adversely affect the Obligated Group.

State Provider Fee Programs. Certain states have created programs that impose a fee or tax on health care providers, the proceeds of which are intended to be used as a mechanism to generate new in-state funds that can be matched with federal funds so that the state receives additional federal Medicaid funding. In many cases, the cost of the tax is paid back to providers through an increase in the Medicaid reimbursement rate for their patient services. Congress has considered proposals to limit the use of provider taxes. This would restrict states' ability to generate increased federal matching funds for Medicaid, shifting additional costs to states. If a State were not able to find additional funds to replace provider tax funding with other state sources, limits on provider taxes could result in Medicaid program cuts. The Obligated Group has received a net gain overall from State provider fee programs. If any State provider fee program or other supplemental reimbursement mechanisms or programs are discontinued, or are continued but with reduced funding, the financial condition and financial performance of health care providers receiving a net gain from such programs could be materially affected.

<u>Managed Care Plans and Other Commercial Payors</u>. The Obligated Group also derives a large percentage of its revenue from commercial third-party payors, including the Insurance Subsidiaries. For fiscal years ended December 31, 2022 and 2021, respectively, approximately 27% and 27% of the Subsidiary Hospitals' gross patient service revenues were derived from commercial insurers, including HMOs, PPOs, and other managed care plans. Gross patient services revenues specifically derived from the Insurance Subsidiaries represented approximately 11% and 12%, respectively, of the Subsidiary Hospitals' gross patient service revenue for the fiscal years ended December 31, 2022 and 2021. See "SOURCE OF REVENUES" in APPENDIX A hereto.

The Obligated Group's ability to negotiate and renew contracts on competitive terms with commercial insurers significantly affects the Obligated Group's revenues and operating results. The Obligated Group's business or financial condition could be adversely affected if (1) it is unable to enter into and maintain commercial insurance contracts, including managed care contracts, on acceptable terms, (2) if it experiences material reductions in the contracted rates from commercial insurers, or (3) if it has difficulty collecting from commercial payors. Additionally, commercial third-party payors are increasingly attempting to control health care costs through increased utilization reviews, greater enrollment in managed care programs, such as HMOs and PPOs, and directly contracting with hospitals to provide services on a discounted basis. The trend toward consolidation among private managed care payors tends to increase their bargaining power over prices and fee structures. Other health care providers, including some with greater financial resources, greater geographic coverage or a wider range of services, may compete with the Obligated Group for opportunities with commercial insurers. For example, competitors may negotiate exclusivity provisions with certain managed care plans or otherwise restrict the ability of managed care companies to contract with Obligated Group providers. There can be no assurance that the Obligated Group will be able to continue to attract commercial third-party payors, or that it will be able to contract with such payors on advantageous terms.

LOSS OF ACCREDITATION, LICENSURE OR OTHER APPROVAL MAY NEGATIVELY AFFECT OPERATIONS OR FINANCIAL CONDITION

The Obligated Group's medical facilities are subject to periodic review by licensing and/or accrediting organizations to determine compliance with various legal, regulatory, professional and private licensing, certification, accreditation standards or requirements. These standards or requirements include but are not limited to the requirements of state licensing agencies, CMS, CMS-approved accrediting organizations (*e.g.,* The Joint Commission), and private payors. Renewal and continuance of certain of these licenses, certifications, and accreditations are based on inspections, surveys, audits, investigations or other reviews, some of which may require or include affirmative action or response by the Members of the Obligated Group. Loss of accreditation or licensure could impair the ability of the Obligated Group to operate all or a portion of its health care facilities and have a material adverse impact on the Obligated Group's business or financial condition. Management does not currently anticipate difficulty renewing or continuing currently held licenses, certifications or accreditations. See "OPERATING STRUCTURE — Health Services" in APPENDIX A.

Many states, including New York and Maryland, have certificate of need (*"CON"*) laws, which laws, among other things, may require that a health care facility obtain state approval before constructing a health care facility, expanding a health care facility, or changing a health care facility's bed capacity. The general intent of a state CON law is to restrain health care facility costs and allow coordinated planning of new services and construction. Failure to obtain necessary state CON approval can result in the inability to expand facilities, add services, acquire a facility or change ownership. Violation of such laws may result in the imposition of civil sanctions or the revocation of a facility's license. CON applications may be, and often are, opposed by competing health care providers. Failure to obtain a CON for a project a Member of the Obligated Group deems necessary could have an adverse financial effect on the Members of the Obligated Group. From time to time, state legislatures consider eliminating CON programs. If an applicable CON program is phased-out or eliminated, the Obligated Group Members could face increased competition from other providers.

FAILURE TO COMPLY WITH COMPLEX AND EVOLVING HEALTH CARE REGULATIONS COULD RESULT IN SUBSTANTIAL LIABILITIES OR PENALTIES

General. Health care businesses are subject to complex and extensive federal, state and local regulation relating to, among other things, licensure, contractual arrangements, conduct of operations, privacy of patient information, ownership of facilities, physician relationships, addition of facilities and services and reimbursement rates for services. Under these laws, individuals and organizations can be penalized for a wide variety of conduct, including submitting claims for services that are not provided, that are billed in a manner other than as actually provided, that are not medically necessary, that are provided by an improper person or accompanied by an illegal inducement to utilize or refrain from utilizing a service or product, or that are billed in a manner that does not otherwise comply with applicable legal requirements. The laws governing fraud and abuse apply to all individuals and health care enterprises with which a health system does business, including other hospitals, home health agencies, long term care entities, infusion and pharmaceutical providers, insurers, health maintenance organizations, preferred provider organizations, third-party administrators, physicians, physician groups, and physician practice management companies. The laws, rules and regulations are often evolving, and in many cases, the industry has little or no regulatory or judicial interpretation for guidance. Additionally, both federal and state government agencies continue to pursue heightened and coordinated civil and criminal enforcement efforts against perceived violations of health care laws. In the current regulatory climate, it is anticipated that many hospitals and physician groups may be subject to an audit, investigation or other enforcement action regarding a potential health care fraud laws violation.

As discussed in more detail below, violations may result in the imposition of severe consequences, including exclusion of the provider from participation in the Medicare and Medicaid programs, criminal fines, civil monetary penalties, payment suspension pending fraud allegations, and in the case of individuals, imprisonment. The cost of defending such an action, the time and management attention consumed, and the facts of a case may dictate settlement. Regardless of the merits of a particular case, a health care provider could experience materially adverse settlement costs, as well as materially adverse costs associated with implementation of any settlement agreement or corporate integrity agreement. Prolonged and publicized investigations could also damage the reputation and business of a health care provider, regardless of outcome.

The Members of the Obligated Group maintain health care compliance policies and procedures aimed at complying with health care regulations and Management conducts the System's operations and enters into business arrangements in a manner that it believes is materially compliant with existing health care laws and regulations. Nevertheless, governmental entities responsible for enforcing these laws and regulations may take the position that an Obligated Group Member or other System entity is in violation of these laws. In addition, because health care regulations are particularly complex, such regulations may be interpreted and enforced in a manner that is inconsistent with Management's interpretation. The Obligated Group's business or financial condition could be harmed if a Member is alleged to have violated existing health care regulations or fails to comply with new or changed health care regulations. Furthermore, because the health care industry is one of the largest industries in the United States, it continues to attract much legislative interest and public attention. Further changes in the health care regulatory framework increasing burdens on health care providers could have a material adverse effect on the Obligated Group's business or financial condition.

Certain key health care regulations are briefly discussed below:

<u>Civil Monetary Penalties Law</u>. The federal Civil Monetary Penalties Law authorizes civil monetary penalties for a variety of health care fraud violations (such as Anti-Kickback Statute, Stark Law, False Claims Act, or EMTALA violations, each discussed below). Different amounts of penalties and assessments may be authorized based on the type of violation, and the amounts are adjusted yearly for inflation. Civil monetary penalties also may include an assessment of up to three times the amount claimed for each item or service, or up to three times the amount of remuneration offered, paid, solicited or received. Actions subject to penalties include: (1) presenting fraudulent claims, (2) presenting claims for which a provider knows Medicare will not pay, (3) "gainsharing" arrangements which induce providers to limit or reduce medically necessary services, (4) providing benefits to Medicare or Medicaid beneficiaries that a provider knows or should know are likely to induce the beneficiaries to choose the provider for their care, and (5) violating the Anti-Kickback Statute or the Stark Law. Health care providers may be found liable under the Civil Monetary Penalties Law even when they did not have actual knowledge of the action being improper; knowingly undertaking the action is sufficient. Civil monetary penalties can add up quickly and result in multi-million-dollar judgments or settlements, materially adversely impacting a provider's business or financial condition.

Anti-Kickback Statute. The federal Anti-Kickback Statute is a felony criminal law that prohibits the knowing and willful payment of "remuneration" to induce or reward patient referrals or the generation of business involving any item or service payable by the federal health care programs (*e.g.,* drugs, supplies, or health care services for Medicare or Medicaid patients). Actual knowledge and specific intent to violate the statute are not required. Remuneration includes anything of value and can take many forms besides cash (*e.g.,* free rent, free hotel stays and meals, and excessive compensation for medical directorships or consultancies). The Anti-Kickback Statute applies to both the payors of kickbacks (those who offer or pay remuneration) as well as the recipients of kickbacks (those who solicit or receive remuneration). Anti-Kickback "safe harbors" described in federal regulations protect certain payment and business arrangements that could otherwise implicate the Anti-Kickback Statute from criminal and civil prosecution (*e.g.,* personal services and rental agreements, investments in ambulatory surgical centers, and payments to bona fide employees), but in order to be protected by a safe harbor, an arrangement must squarely meet each safe harbor element. Failure to squarely meet all the required elements of a safe harbor does not necessarily render the conduct or business arrangement illegal under the Anti-Kickback Statute. Rather, such conduct or business arrangement may be subject to increased regulatory scrutiny. Criminal penalties, civil monetary penalties and administrative sanctions for violating the Anti-Kickback Statute include substantial fines per kickback plus monetary penalties up to three times the amount of damages sustained by the government, jail terms, and exclusion from participation in the federal health care programs. In addition, under the ACA, submission of a claim for services or items generated in violation of the Anti-Kickback Statute constitutes a false or fraudulent claim subject to additional penalties under the federal False Claims Act (discussed below).

In addition to the federal Anti-Kickback Statute, many states, including the States, have anti-kickback and/or fee-splitting statutes designed to prohibit inducements or improper remuneration for the referral of patients. In some cases, state statutes are broader or carry larger fines than corresponding federal law. Management believes its policies, procedures and business arrangements are in material compliance with the Anti-Kickback Statute and applicable state anti-kickback and fee-splitting laws and regulations but no assurance can be given that a violation will not be found. Any sanctions imposed as a result of an Anti-Kickback Statute or similar state law violation could have a material adverse effect on the Obligated Group's business or financial condition.

Stark Law. The federal Physician Self-Referral Law (commonly known as the Stark Law) prohibits a physician from referring Medicare or Medicaid patients for certain "designated health services" to an entity in which the physician (or an immediate family member) has an ownership/investment interest or with which the physician has a compensation arrangement, unless an exception applies. *"Designated health services"* includes clinical laboratory, physical therapy, radiology, inpatient and outpatient hospital, and other services. Importantly, the Stark Law is a strict liability statute, meaning that one can violate the law without any intent to do so. Statutory and regulatory exceptions to the Stark Law's referral prohibition can protect a broad range of common financial relationships between referring physicians and a designated health services provider such as a hospital (*e.g.,* employment relationships, relocation arrangements, leases, group practice arrangements, or medical directorships). If the relationship does not squarely meet the elements of a Stark Law exception, it will result in violation of the law. A Stark Law violation may result in a denial of Medicare reimbursement, required refunds to patients and the Medicare program, substantial civil monetary penalties and exclusion from participation in the Medicare and Medicaid programs and other federal programs. In addition, the submission of a claim for services or items generated in violation of the Stark Law may constitute a false or fraudulent claim, and thus create additional penalties under the federal False Claims Act.

Many states, including the States, have adopted self-referral prohibitions similar to the Stark Law, some of which may be broader in scope and carry larger fines than the federal statute. Management believes its policies, procedures and business arrangements are in material compliance with the Stark Law and applicable state physician referral laws, but no assurance can be given that a violation will not be found. Any sanctions imposed as a result of a Stark Law or similar state law violation could have a material adverse effect on the Obligated Group's business or financial condition.

The Obligated Group's participation in and development of joint ventures and other financial relationships with physicians could be adversely affected by the Stark Law and similar state laws. Moreover, new payment structures promoted by the ACA, such as ACOs and other arrangements involving combinations of hospitals, physicians and other providers who share payment savings, could potentially be seen as implicating the Anti-Kickback Statute or the Stark Law.

CMS has established a voluntary self-disclosure program under which hospitals and other entities may report Stark Law violations and seek a reduction in potential refund obligations. The Obligated Group Members may make self-disclosures under this program as appropriate from time to time. Any submission pursuant to the self-disclosure program does not waive or limit the ability of the DHHS Office of the Inspector General or the U.S. Department of Justice to seek or prosecute violations of the Anti-Kickback Law or impose civil monetary penalties.

<u>False Claims Act and Whistleblower Lawsuits</u>. The federal False Claims Act (*"FCA"*) prohibits knowingly submitting a false or fraudulent claim to the federal government (*e.g.*, the Medicare or Medicaid programs) for reimbursement. Because the term "knowingly" is defined broadly under the law to include not only actual knowledge but also deliberate ignorance or reckless disregard of the facts, the FCA can be used to punish a wide range of conduct. Accordingly, FCA investigations and cases have become common in the health care industry and may cover a range of activity from intentionally inflated billings to highly technical billing infractions, to allegations of unnecessary or inadequate care. Additionally, a claim connected to a Stark Law or Anti-Kickback Statute violation may be deemed a false claim in violation of the FCA. The ACA further expanded the reach of the FCA to include, among other things, failure to report and return known overpayments within statutory limits. Filing false claims in violation of the FCA can result in civil fines, substantial per-claim penalties and monetary penalties up to three times the amount of damages sustained by government (*e.g.*, the amount falsely billed to the Medicare or Medicaid program). These fines can add up quickly and result in multimillion-dollar judgments or settlements. Additionally, violation or alleged violation of the FCA can result in payment suspension pending investigation, the imposition of corporate integrity agreements, or exclusion from Medicare and Medicaid.

The *qui tam* or "whistleblower" provisions of the FCA allow a private individual to bring an FCA action on behalf of the government. As part of the resolution of a *qui tam* case, the whistleblower may share in a portion of any FCA settlement or judgment. *Qui tam* actions can also be filed under certain state false claims laws if the fraud involves Medicaid funds or funding from state and local agencies. In recent years, there has been a large increase in the number of FCA *qui tam* actions. Because *qui tam* lawsuits are kept under seal while the federal government evaluates whether the United States will join the lawsuit, it is difficult to determine whether any such actions are pending.

The Deficit Reduction Act provides financial incentives to states that pass similar false claims statutes or amend existing false claims statutes that track the FCA more closely with regard to penalties and rewards to *qui tam* relators. Accordingly, many states have passed similar false claims statutes, some of which expand the prohibition against false claims submitted to non-government third-party payors. No assurance can be given that an FCA action will not be filed and a violation found. Any sanctions imposed as a result of an FCA or state false claims law violation could have a material adverse effect on the Obligated Group's business or financial condition.

UPMC recently settled an FCA qui tam with DOJ and the Office of Inspector General for the United States Department of Health and Human Services (*"OIG"*). Although the settlement agreement included a corrective action plan, OIG nevertheless included UPMC on its High Risk – Heightened Scrutiny List website for refusing to sign OIG's standard corporate integrity agreement. Being included on this list could cause UPMC to be subject to increased government scrutiny. Management of UPMC disagrees with its placement on the list and is currently evaluating its options.

For additional information, see "ADDITIONAL INFORMATION — Litigation" in APPENDIX A hereto.

HIPAA and State Privacy Laws. The Health Insurance Portability and Accountability Act, as amended by the Health Information Technology for Economic and Clinical Health Act and as it may further be amended from time to time, and its implementing regulations (collectively, "*HIPAA*") provide data privacy and security requirements for safeguarding medical information. HIPAA, which applies to health plans, health care clearinghouses, and health care providers who conduct the standard health care transactions electronically, includes both (1) a "privacy rule," which sets forth national standards for the protection of individually identifiable protected health information (*"PHI"*), and (2) a "security rule," which sets forth national standards for protecting the confidentiality, integrity, and availability of electronic PHI. Failure to comply with HIPAA can result in both criminal and civil fines and penalties. Mandatory breach notification and reporting requirements increase the risk of government enforcement as well as class action lawsuits, especially if large numbers of individuals are affected by a breach. Additionally, states may have privacy or consumer protection laws that are broader than HIPAA and, unlike HIPAA, authorize a private right of action. Management believes the Obligated Group Members are in material compliance with HIPAA and similar state privacy laws and regulations but no assurance can be given that a violation will not be found. Any sanctions imposed as a result of a HIPAA or state privacy law violation could have a material adverse effect on the Obligated Group's business or financial condition.

Health care providers are increasingly analyzing or partnering or contracting with others to analyze health care "Big Data," *i.e.*, datasets of such volume or breadth that cannot be analyzed using ordinary database software tools. In particular, large hospitals may analyze health care Big Data for operational purposes such as to measure value based performance. Hospitals may also enter into research collaborations with technology companies to analyze health care Big Data for research purposes. Although HIPAA permits the use and disclosure of individually identifiable health information held by covered entities for operational or research purposes, both the covered entity and its business associate must comply with stringent privacy and security requirements which, if not met, can lead to significant exposure both with respect to the government and civil litigants. For example, to share individually identifiable health information with a research partner, a hospital may choose to de-identify such information which would be a permissible use or disclosure under HIPAA. However, the failure to properly de-identify could result in significant financial exposure particularly due to the volume of patients affected. The Obligated Group Members may use or share health care Big Data for operational and research purposes and due to the complexity of HIPAA's requirements, non-compliance in this context in the future could result in a material adverse impact.

<u>EMTALA</u>. The federal Emergency Medical Treatment and Active Labor Act (*"EMTALA"*) requires that hospitals and other facilities with emergency departments provide "appropriate medical screening" to patients who come to the emergency department to determine if an emergency medical condition exists regardless of a patient's ability to pay. If an emergency medical condition exists, the facility must stabilize the patient within its capabilities and only transfer the patient once stabilized. Failure to comply with EMTALA may result in the imposition of civil monetary penalties or a hospital's exclusion from the Medicare and/or Medicaid programs. EMTALA and its implementing regulations are complex, and a hospital's compliance is dependent, in part, upon the volition of medical staff members. Over the last few years, the federal government has increased its enforcement of EMTALA. Management believes its policies and procedures are in material compliance with EMTALA, but no assurance can be given that a violation of EMTALA will not be found. Any failure of a Member of the Obligated Group to meet its responsibilities under EMTALA could have a material adverse effect on the Obligated Group's business or financial condition.

<u>Clinical Research Laws</u>. The DHHS Food and Drug Administration (*"FDA"*) and the Office for Human Research Protections have authority over clinical trials and federally funded research. The FDA's inspection of facilities has increased significantly in recent years. These agencies' enforcement powers range from substantial fines and penalties to exclusions of researchers and suspension or termination of entire research programs.

<u>Price Transparency Rule</u>. The CMS Price Transparency Rule requires hospitals to publish gross charges, discounted cash prices, payor-specific negotiated charges, and minimum and maximum negotiated charges for all items and services provided by the hospital. Hospitals are also required to publish a consumer-friendly list of standard charges for at least 300 shoppable services—generally, non-emergency services that patients can schedule in advance. Failure to comply with these requirements may result in daily monetary penalties to the hospital. The availability of competitively sensitive rate information among hospitals, insurers, and employer sponsors of group health plans could lead to market distortions and possible anti-competitive effects that could impact hospital rates and revenue. Additionally, the publication of hospital standard charges, including negotiated charges, could result in changes to patient choice that may negatively impact the Obligated Group.

<u>No Surprises Act</u>. The No Surprises Act establishes federal protections against surprise medical bills that could arise from out-of-network emergency care, certain ancillary services provided by out-of-network providers at in-network facilities, and for out-of-network care provided at in-network facilities without the patient's informed consent. Patients are required to pay only the in-network cost-sharing amount, which will be determined through a formula established by the DHHS Secretary and will count toward the patient's health plan deductible and out-of-pocket cost-sharing limits. Providers are not permitted to balance bill patients beyond this cost-sharing amount. Both providers and health plans are required to inform patients about these protections. Violations could result in enforcement action or substantial federal civil monetary penalties. Although surprise billing laws are important for protecting patients, they can reduce the bargaining power of hospitals with payers and ultimately have a negative impact on hospitals. The ultimate effect of the No Surprises Act on the Obligated Group's operations and financial condition cannot be predicted at this time.

INSURANCE SUBSIDIARY OPERATIONS CARRY CERTAIN RISKS

The Corporation owns the Insurance Subsidiaries, which entities offer a range of commercial insurance and governmental insurance products, including HMOs, PPOs, and other managed care plans. See "OPERATING STRUCTURE — Insurance Services*"* in APPENDIX A hereto for more detail. The insurance industry is a highly regulated industry. Such regulations may be enforced in ways or change from time to time in ways that can have material adverse consequences for the Insurance Subsidiaries. While the Insurance Subsidiaries are subject to many of the same or similar risks as other health care organizations as described herein, they are also subject to insurance-specific rules imposed by state departments of insurance, such as licensure and minimum capital requirements established by the Department of Insurance of the Commonwealth of Pennsylvania ("*DOI*"). The Insurance Subsidiaries are not Members of the Obligated Group. However, if the Insurance Subsidiaries do not produce sufficient revenues to maintain their respective capital requirements, the Corporation and the other Members of the Obligated Group may have to transfer funds to Insurance Subsidiaries in order to maintain required capital levels.

The insurance industry is also a highly competitive industry. The Insurance Subsidiaries depend significantly for revenue on enrollment by corporations and other employers. Failure to maintain employer contracts generally could have the effect of reducing an Insurance Subsidiary's enrollment base and associated premium revenue.

Certain of the Insurance Subsidiaries provide products or services to government agencies, and these relationships are subject to the terms of contracts held with the government agencies and to laws and regulations regarding government contracts. Among others, certain laws and regulations restrict or prohibit companies from performing work for government agencies that might be viewed as an actual or potential conflict of interest. These laws may limit an Insurance Subsidiary's ability to pursue and perform certain types of work, thereby materially impacting the operations and financial condition of the Insurance Subsidiaries.

Failure to Comply with Other Governmental Laws and Regulations Could Result in Substantial Fines or Penalties

In addition to laws and regulations specific to the health care industry, as discussed above, the Obligated Group Members and other System entities are subject to a wide variety of laws and regulations in the ordinary course of business. Violation of these laws or regulations could result in various penalties, demands, or substantial defense costs, any of which could have a material adverse effect on the Obligated Group's business or financial condition. Some of these laws are briefly described below.

<u>Environmental and Occupational Health and Safety Laws and Requirements</u>. Typical health care facility operations include the handling, use, storage, transportation, disposal and/or discharge of hazardous, infectious, toxic, radioactive, flammable and other hazardous materials, wastes, pollutants and contaminants. As such, health care facility operations are particularly susceptible to the practical, financial and legal risks associated with compliance with environmental and occupational health and safety laws and regulations. These risks may result in (1) damage to individuals, property or the environment, (2) the interruption of operations and/or increased operating costs, (3) legal liability, damages, injunctions, citations, or fines, and (4) investigations, administrative proceedings, civil litigation, criminal prosecution, penalties or other governmental agency actions. Such actions may not be covered by insurance. There is no assurance that the Obligated Group will not encounter such problems in the future and such problems may result in material adverse consequences to the Obligated Group's business or financial condition. In addition to the environmental and occupational health and safety laws and regulations that typically apply to the Obligated Group, compliance with COVID-19-related occupational health and safety laws, such as the Healthcare Sector Vaccine Mandate discussed above, may increase operating costs or affect the Obligated Group's ability to recruit and retain employees.

At the present time, Management is not aware of any pending or threatened claim, investigation or enforcement action regarding environmental, occupational or other health and safety issues which, if determined adversely to the Members of the Obligated Group, would have a material adverse effect on the Obligated Group's business or financial condition.

Antitrust Laws. Enforcement of the antitrust laws against health care providers is becoming more common and antitrust liability may arise in a wide variety of circumstances, including medical staff privilege disputes, third-party contracting, physician relations and joint venture, merger, affiliation and acquisition activities. The Federal Trade Commission has publicly acknowledged increasing enforcement action in the areas of hospital and physician combinations, and enforcement in the health care sector continues to be active. The most common areas for potential liability are joint activities among providers with respect to payor contracting, medical staff credentialing, hospital and physician mergers and acquisitions, and allegations of exclusion of competitors from market opportunities. From time to time, an Obligated Group Member may be involved in joint contracting activity or affiliation discussions with other hospitals or providers. Violation of the antitrust laws can result in criminal and civil enforcement by federal and state agencies and large financial damages. At various times, a Member of the Obligated Group may be subject to an investigation by a governmental agency charged with the enforcement of the antitrust laws or may be subject to administrative or judicial action by a federal or state agency or a private party. Liability may be substantial, depending on the facts and circumstances of each case and may have a material adverse impact on the Obligated Group. See also "— Various Employer-Related Risks Could Adversely Affect Operations and Financial Condition — Medical Staff Disputes," below.

Professional Liability Lawsuits and Other Claims. Professional liability and other actions alleging wrongful conduct and seeking punitive damages are often filed against hospitals and other health care providers. Litigation also arises from the corporate and business activities of hospitals, from a hospital's status as an employer, as a result of medical staff or provider network peer review, or the denial of medical staff or provider network privileges. Professional and general liability insurance does not cover all claims and is subject to policy limitations. If the aggregate limit of any of the Obligated Group's professional and general liability policies is exhausted, in whole or in part, it could deplete or reduce the limits available to pay any other material claims applicable to that policy period. Any losses not covered by or in excess of the amounts maintained under insurance policies will be funded from the Obligated Group's working capital. Furthermore, there is no assurance that hospitals will be able to maintain the coverage amounts currently in place in the future, that the coverage will be sufficient to cover malpractice judgments rendered against a hospital or that such coverage will be available at a reasonable cost in the future. Additionally, one or more of the Obligated Group's insurance carriers could become insolvent and unable to fulfill obligations to defend, pay or reimburse the Obligated Group when those obligations become due. In that case, or if payments of claims exceed Management's estimates, or are not covered by the Obligated Group's insurance, it could have a material adverse effect on the Obligated Group's business or financial condition.

INDUSTRY TREND TOWARDS ALTERNATIVE PAYMENT MODELS AND CLINICALLY INTEGRATED DELIVERY SYSTEMS CARRIES REGULATORY RISKS AND MAY NEGATIVELY AFFECT REVENUES

It is generally expected that alternative payment models, such as value-based purchasing programs that condition reimbursement on patient outcome measures, will become more common and involve a higher percentage of reimbursement amounts. As discussed above, the ACA contains a number of health care delivery reform measures intended to promote value-based purchasing in the federal health care programs and commercial third-party payors are increasingly implementing value-based purchasing and other alternative payment models. This rapid volume-to-value reimbursement shift could present financial challenges for the Obligated Group and the employed or contracted clinicians with whom the Obligated Group partners to deliver care, particularly to the extent they are unable to meet targeted measures.

To keep pace with industry trends, many hospitals and health systems are pursuing clinical integration strategies or other joint ventures with physician groups in order to offer an integrated package of health care services to patients and health care insurers. These integration strategies may take many forms, including (1) ACOs, organizations typically composed of a hospital and certain other health care providers that coordinate patient care and tie payment for that care to the achievement of quality metrics, (2) management service organizations, organizations that provide physicians or physician groups with a combination of financial and managed care contracting services, office and equipment, office personnel and management information systems, (3) physician-hospital organizations, organizations that are typically jointly owned or controlled by a hospital and physician group for the purpose of managed care contracting, implementation and monitoring, and (4) hospital-based clinics or medical practice foundations, which may purchase and operate physician practices as well as provide all administrative services to physicians. Often the start-up capitalization for such structures, as well as operational deficits, is funded by the sponsoring hospital or health system. Depending on the size and organizational characteristics of a particular strategy, these capital requirements may be substantial. In some cases, the sponsoring hospital or health system may be asked to provide a financial guarantee for the debt of a related entity that is carrying out an integrated delivery strategy. In certain of these structures, the sponsoring hospital or health system may have an ongoing financial commitment to support operating deficits, which may be substantial on an annual or aggregate basis. In addition, participating physicians may seek their independence for a variety of reasons, thus putting the hospital or health system's investment at risk and potentially reducing its managed care leverage and/or overall utilization. If an integrated delivery system structure is not functionally successful, it may produce materially adverse results that are counterproductive to some or all of its goals.

Joint venture and integrated delivery strategies carry with them the potential for legal or regulatory risks in varying degrees. Such ventures or strategies may call into question compliance with the federal fraud and abuse laws, relevant antitrust laws and federal or state tax exemption. Such risks will turn on the facts specific to the implementation, operation or future modification of any integrated delivery system. In addition, depending on the type of structure, a wide range of governmental billing and other issues may arise, including questions of the authorization of the entity to bill for or on behalf of the physicians involved. Other related legal and regulatory risks may arise, including employment, pension and benefits, requirements for risk-bearing organizations and corporate practice of medicine, particularly in the current atmosphere of frequent and often unpredictable changes in federal and state legal requirements regarding health care and medical practice. The ability of hospitals or health systems to conduct integrated physician operations may also be altered or eliminated in the future by legal or regulatory interpretation or changes or by health care fraud enforcement. Management believes its current joint ventures and integrated care arrangements are in material compliance with applicable state and federal health care regulatory laws. Nevertheless, there can be no assurance that the Obligated Group's joint ventures or integrated delivery models will not be subject to investigation or otherwise found to be in violation of applicable health care rules and regulations.

Competition and Consumer Transparency Could Adversely Affect Patient Volume and Financial Condition

The health care business is highly competitive. Competition for patients among hospitals and other health care providers has intensified in recent years. Increased competition from this wide variety of sources (*e.g.,* specialty hospitals, other hospitals and health care systems, outpatient facilities, long-term care and skilled nursing services facilities, physician groups, urgent care clinics, telehealth providers, and home health providers) may adversely affect the utilization and revenues of hospitals. If the Obligated Group Members' competitors are better able to attract patients, deliver services, recruit physicians, expand or integrate services, or obtain favorable managed care contracts at their facilities, the Obligated Group may experience an overall decline in patient volumes and revenues. Additionally, quality measures and future trends toward clinical transparency may have an unanticipated impact on the Obligated Group's competitive position and patient volumes. Health care consumers are now able to access hospital performance data on quality measures and patient satisfaction, as well as standard charges for services, to compare competing providers. If any of the Obligated Group's health care facilities achieve poor results (or results that are lower than competitors') on quality measures or patient satisfaction surveys, or if its standard charges are higher than their competitors', the Obligated Group may attract fewer patients. The CMS Price Transparency Rule (discussed above) which requires the publication of hospital standard charges (including negotiated charges), could also result in market distortion or changes to patient choice that may negatively impact the Obligated Group.

Future competition may arise from new sources not currently anticipated or prevalent. Additionally, scientific and technological advances, new procedures, drugs and devices, preventive medicine, and a trend toward outpatient or home health care delivery may reduce utilization and revenues of hospitals in the future or otherwise lead the way to new avenues of competition. Efforts to reduce hospital readmissions and costs in the overall care continuum will further the use of these new and changing technologies.

Costly Information Technology or Medical Technology Improvements May Be Necessary to Remain Competitive

The ability to adequately price and bill health care services and to accurately report financial results depends on the operability of a health care provider's electronic medical record (*"EMR"*) and other information technology ("*IT*") systems and the integrity of the data stored within such systems. EMR and IT systems require an ongoing commitment of significant resources to maintain and protect existing systems and to develop IT systems to keep pace with evolving regulatory standards and technological advances. There can be no assurance that such efforts will be successful or that operational or regulatory issues will not arise. From time to time, providers may choose to change or upgrade EMR systems. Such transfer can be costly and have the potential to disrupt operations and create regulatory issues such as data privacy issues. The implementation of new EMR or IT cannot be predicted but may have a material adverse effect on the Obligated Group's business or financial condition.

Medical discoveries and advancements, including the development of new drugs, devices or procedures, may add significantly to the Obligated Group's cost of providing services, requiring costly new medical technology with no or little offsetting increase in federal reimbursement. Moreover, medical advancements also may render obsolete certain health care services, thereby either increasing expense or reducing revenues. The ability of the Obligated Group to purchase and offer new medical technology and equipment may be subject to the availability of such equipment, specialists trained in such equipment or technology, governmental approval, or the ability to finance such acquisitions or operations. The implementation of new medical technology cannot be predicted but may have a material adverse effect on the Obligated Group's business or financial condition.

FUTURE ACQUISITIONS, DIVESTITURES OR OTHER AFFILIATIONS COULD REQUIRE SIGNIFICANT CAPITAL EXPENDITURES AND CHANGE THE COMPOSITION OF THE OBLIGATED GROUP

The Members of the Obligated Group periodically evaluate and selectively pursue potential merger and affiliation candidates on a consistent basis as part of their overall strategic planning and development process. As a result, it is possible that the entities and assets that currently make up the Obligated Group may change from time to time, subject to provisions in the Master Indenture and other financing documents that apply to merger, sale, disposition or purchase of assets or with respect to joining or withdrawing from the Obligated Group. See "THE MASTER INDENTURE — Merger, Consolidation, Sale or Conveyance" in APPENDIX C hereto. In addition to relationships with hospitals and physicians, the Obligated Group may pursue investments, ventures, affiliations, development and acquisitions of other health care-related entities. These may include providers of home health care, long-term care entities or operations, pharmaceutical providers and other health care enterprises that support the overall operations and mission of the Obligated Group. In addition, the Members of the Obligated Group may pursue transactions with third-party payors, third-party administrators and other health insurance-related businesses. Because of the rapid integration occurring throughout the health care industry, the Obligated Group will consider such arrangements where there is a perceived strategic or operational benefit. All such initiatives may involve significant capital commitments and/or capital or operating risk. There can be no assurance that these projects, if pursued, will not have a material adverse effect on the Obligated Group's business or financial condition.

CYBER ATTACKS COULD ADVERSELY AFFECT OPERATIONS AND REVENUES

The Obligated Group relies on IT systems, including EMRs, to operate its facilities and process, transmit and store sensitive and confidential data, including the PHI and personally identifiable information of its patients and employees, and proprietary and confidential business performance data. Although the Obligated Group routinely monitors and tests the security of its IT systems and processes and implements appropriate security measures, IT systems are often subject to computer viruses, cyber-attacks by hackers (such as malware or ransomware attacks), or breaches due to employee error or malfeasance. Cyber-attacks specifically targeted at health systems have been occurring more frequently, and in some recent cases, have resulted in the disruption or temporary cessation of facility operations. DHHS, the Federal Bureau of Investigation, and the Cybersecurity and Infrastructure Agency have expressed concern that U.S. hospitals and health care providers are a prime target for cyber-attacks and that such cyber-attacks could result in data theft and disruption of health care services.

Any breach or cyber-attack that limits a health facility's ability to access its IT systems or otherwise compromises patient data could result in the disruption or cessation of facility operations, patient safety issues, the loss of patient records, the payment of significant ransoms, negative press, and/or the imposition of substantial fines or penalties for violation of HIPAA or similar state privacy laws (as discussed above), any of which may adversely affect a health facility's business or financial condition. Although Management is not currently aware of having experienced a material security breach, the Obligated Group's IT security measures may not be sufficient to prevent cyber-attacks in the future. As cybersecurity threats continue to evolve, the Obligated Group may not be able to anticipate certain attack methods in order to implement effective protective measures and may be required to expend significant additional resources to continue to modify and strengthen security measures, investigate and remediate any vulnerabilities, or invest in new technology designed to mitigate security risks. Additionally, the

Obligated Group's IT systems routinely interface with and rely on third-party systems that are also subject to the risks outlined above and may not have or use appropriate controls to protect confidential information. A breach or attack affecting a third-party service provider could harm the Obligated Group's business or financial condition. Although the Obligated Group has insurance against some cyber risks and attacks, it may not be sufficient to offset the impact of a material loss event.

FACILITY DAMAGE COULD ADVERSELY AFFECT OPERATIONS AND REVENUES

Health care facilities are highly dependent on the condition and functionality of their physical facilities. Damage from natural or manmade disasters, severe weather, deliberate acts of destruction, terrorism, or various facility system failures may have a material adverse impact on the Obligated Group's business or financial condition, especially if insurance is inadequate to cover resulting property and business losses. No assurance is given as to the continuation of existing insurance coverage, which, among other things, may not be available at a reasonable cost in the future. Climate change may increase the frequency or severity of extreme weather events and other natural disasters.

VARIOUS EMPLOYER-RELATED RISKS COULD ADVERSELY AFFECT OPERATIONS AND FINANCIAL CONDITION

Employee Relationships/Retention. The Obligated Group employs a large number and wide diversity of employees. The ability of the Members of the Obligated Group to employ and retain qualified employees, including any senior management, and their ability to maintain good relations with such employees and employee unions (if any) affect the quality of services to patients and the financial condition of the Members of the Obligated Group. The ability to employ and retain employees has been complicated by the COVID-19 pandemic, as described below under "— Staffing Shortages."

Employees subject to collective bargaining agreements may include essential nursing and technical personnel, as well as food service, maintenance and other trade personnel. Renegotiation of collective bargaining agreements upon expiration may result in significant cost increases. Employee strikes or other adverse labor actions may have an adverse impact on operations, revenue, and facility reputation. Certain Obligated Group employees are represented by labor unions. See "ADDITIONAL INFORMATION — Employees" in APPENDIX A hereto.

Staffing Shortages. The health care industry occasionally experiences a scarcity of clinical and non-clinical personnel, including primary care physicians, nurses, respiratory therapists, radiation technicians, pharmacists, and other trained health care technicians. A current and significant nationwide nursing shortage is particularly affecting the health care sector and various studies have predicted that physician and nurse shortages will become more acute over time as practitioners retire and patient volume exceeds the growth in new practitioners. Additionally, the COVID-19 pandemic has exacerbated staffing shortages, with practitioners and other personnel deciding to leave the health care sector, or retire early. In addition, a number of COVID-19 related factors, such as fear of workplace exposure, vaccination mandates, and difficulties in finding child and elder care, has led to a tight job market, generally. Many employers in a variety of sectors continue to struggle to fill available positions. Personnel shortages may result in increased costs and lost revenues due to the need to hire agency staffing personnel at higher rates, increased compensation levels to retain and recruit personnel, and the inability to operate at capacity due to the staff shortage, any of which could materially adversely impact the Obligated Group's business or financial condition.

Physician Relationships and Supply. The success of the Obligated Group's business depends in significant part on the number, quality, specialties, and admitting and scheduling practices of admitting physicians. Accordingly, it is essential to the Obligated Group's ongoing business that it attract an appropriate number of quality physicians in the specialties required to support its services and that it maintain good relationships with those physicians. A shortage of physicians, especially in primary care, could become a significant issue for health providers in the coming years. In addition, reductions in Medicare or Medicaid reimbursement could lead to physicians relocating their practices in communities with fewer Medicare and Medicaid enrollees. The Obligated Group may be required to invest additional resources for recruiting and retaining physicians or may be required to increase the percentage of employed physicians in order to continue serving the growing population base and maintain market share.

The Members of the Obligated Group may contract with physician organizations (such as independent physician associations and physician-hospital organizations) to arrange for the provision of physician and ancillary services. Because many such physician organizations are separate legal entities with their own goals, obligations to shareholders, financial status, and personnel, there are risks involved in contracting with physician organizations.

In recruiting, retaining and otherwise contracting with physicians, the Obligated Group will be limited by rules promulgated by federal regulation. Failure to comply with IRS rules regarding appropriate physician recruitment could result in loss of tax-exempt status and failure to structure a contractual arrangement with a physician to comply with the Anti-Kickback Statute or Stark Law (as discussed above) could result in substantial fines, penalties, or exclusion from the federal health care programs. Management believes that the Obligated Group's physician arrangements are in material compliance with applicable laws and regulations, but no assurance can be given that regulatory authorities will not take a contrary position or that the Members of the Obligated Group will not be found to have violated applicable law. Additionally, future laws, regulations or policies may have a material adverse impact on the ability of the Members of the Obligated Group to recruit and retain physicians.

Pension and Benefit Fund Liabilities. The Obligated Group may incur significant expenses to fund pension and benefit plans for employees and former employees and to fund required workers' compensation benefits. Funding obligations in some cases may be erratic or unanticipated and may require significant commitments of available cash needed for other purposes. In addition, to the extent investment returns are lower than anticipated or losses on investments occur, the Obligated Group may also be required to make additional deposits in connection with pension fund liabilities. See "ADDITIONAL INFORMATION — Employees — Retirement Plans" in APPENDIX A hereto.

Wage and Hour Class Actions and Litigation. Federal law and many states impose standards related to worker classification, eligibility and payment for overtime, liability for providing rest periods and similar requirements. Large employers with complex workforces are susceptible to actual and alleged violations of these standards. In recent years, there has been a proliferation of "wage and hour" lawsuits, often in the form of large, sometimes multistate, class actions. For large employers such as hospitals and health systems, such class actions can involve multimillion-dollar claims, judgments and/or settlements. A major class action decided or settled adversely to any Obligated Group Member could have a material adverse impact on the Obligated Group's business or financial condition.

Medical Staff Disputes. The primary relationship between a hospital and physicians who practice in it is through the hospital's organized medical staff. Medical staff bylaws, rules and policies establish the criteria and procedures by which a physician may have his or her privileges or membership curtailed, denied or revoked. Physicians who are denied medical staff membership or certain clinical privileges or who have such membership or privileges curtailed or revoked often file legal actions against hospitals and medical staffs. Such actions may include a wide variety of claims, including antitrust claims, some of which could result in substantial uninsured damages to a hospital. Furthermore, from time to time, actions or decisions of hospital management may cause unrest among certain physician groups or members of the medical staff, which could result in legal or other actions, such as resignation from the medical staff. In addition, failure of the hospital governing body to adequately oversee the conduct of its medical staff may result in hospital liability to third parties.

<u>IRS Reclassification of Independent Contractors to Employees</u>. Health care facilities, like all businesses, are required to withhold income taxes from amounts paid to employees. If the employer fails to withhold the tax, the employer becomes liable for payment of the tax imposed on the employee. The IRS has established criteria for determining whether a worker is an employee or an independent contractor for tax purposes. If the IRS were to reclassify a significant number of hospital independent contractors (*e.g.,* physician medical directors) as employees, back taxes and penalties could be material.

SKILLED NURSING AND ASSISTED LIVING FACILITY OPERATION CARRIES CERTAIN ADDITIONAL RISKS

In addition to risks affecting the health care industry generally, the Obligated Group's skilled nursing and assisted living facility (collectively, "*Senior Living Facilities*") operations are subject to various additional risk factors. Some of these factors include (1) changes in the demand for senior living care, (2) changes in the number and type of competing senior care facilities, (3) changes in reimbursement rates and federal and state laws applicable to skilled nursing and assisted living facilities, (4) the limited income of seniors, and (5) difficulties in or restrictions on the Obligated Group's ability to raise rates for senior care. In recent years, a significant number of senior living facilities throughout the United States have defaulted on various financing obligations or otherwise have failed to perform as originally expected. There can be no assurance the Obligated Group's Senior Living Facilities will not experience one or more of the adverse factors that caused other facilities to fail.

THE NON-PROFIT HEALTH CARE ENVIRONMENT CARRIES CERTAIN RISKS

As nonprofit tax-exempt organizations, the Members of the Obligated Group are subject to federal, state and local laws, regulations, rulings and court decisions relating to their organization and operation, including their operation for charitable purposes. At the same time, the Members of the Obligated Group conduct large-scale complex business transactions and are major employers in their respective geographic areas. There can often be a tension between the rules designed to regulate a wide range of charitable organizations and the day-to-day operations of a complex health care organization. An increasing number of the operations or practices of health care providers have been challenged or questioned to determine if they are in compliance with the regulatory requirements for nonprofit tax-exempt organizations. These challenges, in some cases, are broader than concerns about compliance with federal and state statutes and regulations, such as Medicare and Medicaid compliance, and instead, in many cases, are examinations of core business practices of the health care organizations. Areas that have come under examination have included pricing practices, billing and collection practices, charitable care, executive compensation, exemption of property from real property and sales taxation and others. These challenges and questions have come from a variety of sources, including state attorneys general, the IRS, labor unions, Congress, state legislatures, local school boards, other federal and state agencies and patients and in a variety of forums, including hearings, audits and litigation. For example, Senate and House committees have conducted several nationwide investigations of hospital billing and collection practices, including proposed reform in the area of tax-exempt organizations as a part of health care reform generally. The effect of any examinations, investigations, or challenges to the nonprofit status of health care organizations cannot be predicted. There can be no assurance that future changes in state or federal laws and regulations will not adversely affect the operations and financial condition of the Obligated Group.

Litigation Related to Billing and Collection Practices. Lawsuits have been filed in both federal and state courts alleging, among other things, that hospitals have failed to fulfill their obligations to provide charity care to uninsured patients and have overcharged uninsured patients. The cases are proceeding in various courts around the country with inconsistent results. While it is not possible to make general predictions, some hospitals and health systems have incurred substantial costs in defending such lawsuits and in some cases have entered into substantial settlements. No Obligated Group Member is currently a defendant in litigation relating to billing and collection practices.

Challenges to Real Property Tax-Exemptions. The real property tax exemptions afforded to certain nonprofit health care providers by state and local taxing authorities have been challenged on the grounds that the health care providers were not engaged in sufficient charitable activities. These challenges have been based on a variety of grounds, including allegations of aggressive billing and collection practices and excessive financial margins. The majority of the real property owned by the Obligated Group is exempt from property tax. Any investigations or audits by the States or other governmental entities could lead to challenges with regard to property tax exemption with respect to facilities of the Obligated Group which, if successful, could adversely and materially affect the property tax exemption with respect to certain of the facilities.

Charity Care/Community Benefit. Tax-exempt hospitals often treat large numbers of low-income patients who are unable to pay in full for their medical care. General economic conditions that affect the number of employed individuals who have health coverage affect the ability of patients to pay for health care. Economic conditions could increase the number of uninsured and low-income patients. Similarly, changes in government policy, which may result in coverage exclusions under local, county, state and federal health care programs, may increase the frequency and severity of charity care treatment by such hospitals and other providers. It is also possible that future federal legislation could require that tax-exempt hospitals maintain minimum levels of charity care as a condition of federal income tax exemption and exemption from certain state and local taxes.

OBLIGATED GROUP FINANCINGS CARRY CERTAIN RISKS

The obligations of the Members of the Obligated Group under the Master Indenture are limited to the same extent as the obligations of debtors typically affected by bankruptcy, insolvency and the application of general principles of creditors' rights and as additionally described below. The Master Indenture permits the addition of other Members of the Obligated Group if certain conditions are met. See "THE MASTER INDENTURE — Membership in and Withdrawal From the Obligated Group" in APPENDIX C hereto.

The joint and several obligations described herein of the Members of the Obligated Group to make payments of debt service on the Obligations issued pursuant to and under the Master Indenture may not be enforceable to the extent (1) enforceability may be limited by applicable bankruptcy, moratorium, reorganization, fraudulent conveyance or similar laws affecting the enforcement of creditors' rights and by general equitable principles or (2) such payments (a) are requested to be made with respect to payments on any Obligation (other than the Series 2023C MTI Note) that is issued for a purpose that is not consistent with the charitable purposes of the Member of the Obligated Group from which such payment is requested or that is issued for the benefit of any entity other than a tax-exempt organization; (b) are requested to be made from any money or assets that are donor restricted or which are subject to a direct or express trust that does not permit the use of such money or assets for such payment; (c) would result in the cessation or discontinuation of any material portion of the health care or related services previously provided by the Member of the Obligated Group from which such payment is requested; or (d) are requested to be made pursuant to any loan violating applicable usury laws. The extent to which the money or assets of any present or future Member of the Obligated Group falls within the categories referred to above cannot be determined and could be substantial. The foregoing notwithstanding, the accounts of the Members of the Obligated Group are and will continue to be combined for financial reporting purposes and will be used in determining whether various covenants and tests contained in the Master Indenture (including tests relating to the issuance of additional Indebtedness) are satisfied.

A Member of the Obligated Group may not be required to make any payment of any Obligation or portion thereof or the recipient of such payment may be compelled to return such payment, the proceeds of which were not lent or otherwise disbursed to such Member of the Obligated Group to the extent that such payment would conflict with or would be prohibited or avoidable under applicable laws.

The application of the law relating to the enforceability of guaranties or obligations of a member of an obligated group to make debt service payments on behalf of another member of the obligated group is not amenable to an unqualified declaration of whether a transfer would be prohibited or subject to avoidance.

As a general matter, in addition to a transfer of property made with the actual intent to hinder, defraud or delay creditors, a transfer of an interest in property by an entity may be avoided if the transfer is made for less than the "reasonably equivalent value" or "fair consideration" and the transferor (1) is insolvent (*e.g.*, is unable to pay its debts as they become due), (2) rendered insolvent by the transaction, (3) is undercapitalized (*i.e.*, operating or about to operate without property constituting reasonably sufficient capital given its business operations) or (4) intended or expected to incur debts that it could not pay as they became due.

The lack of certainty in the treatment of transfers is attributable to several factors. First, there is no true uniform law governing fraudulent transfers. Such transfers may be avoided under the Bankruptcy Code, state law variants of the Uniform Fraudulent Transfer Act and its predecessor, the Uniform Fraudulent Conveyance Act, or other non-uniform statutes or common law principles. Second and more importantly, the standards for determining the reasonable equivalence of value or the fairness of consideration and the measure for determining insolvency are subjective standards resolved in the exercise of judicial discretion after engaging in a fact-intensive analysis. This subjectivity has resulted in a conflicting body of case law and a lack of certainty as to whether a given transfer would be subject to avoidance.

In addition, the Bankruptcy Code provides a means to avoid transfers of a debtor's interests in property made on account of an antecedent debt within 90 days of the debtor filing for relief or one year if the transferee is an "insider," if, as a result of that transfer, the transferee receives more than it would have received in a liquidation of the debtor under Chapter 7 of the Bankruptcy Code. Whether the creation of a lien or a payment made by a Member of the Obligated Group would be determined to be avoidable would be dependent on the particular circumstances surrounding the transfer.

There exists, in addition to the foregoing, common law authority and authority under various state statutes pursuant to which courts may terminate the existence of a nonprofit corporation or undertake supervision of its affairs on various grounds, including a finding that a nonprofit corporation has insufficient assets to carry out its stated charitable purposes or has taken some action that renders it unable to carry out its purposes. Such court action may arise on the court's own motion or pursuant to a petition of the attorney general of a particular state or other persons who have interests different from those of the general public, pursuant to the common law and statutory power to enforce charitable trusts and to see to the application of their funds to their intended charitable uses.

ENFORCEABILITY OF SECURITY INTEREST IN GROSS REVENUES MAY BE LIMITED

The Obligations of the Obligated Group issued pursuant to the Master Indenture are secured by the lien upon the Gross Revenues of the Obligated Group described under the heading "SOURCES OF PAYMENT AND SECURITY FOR THE SERIES 2023C BONDS" above. The Obligated Group's facilities are not currently pledged as security for the Series 2023C Bonds.

The enforceability, priority and perfection of the security interest in Gross Revenues created under the Master Indenture and the ability to receive and realize on the same may be limited by a number of factors, including, without limitation: (1) provisions prohibiting the direct payment of amounts due to health care providers from Medicaid and Medicare programs to persons other than such providers; (2) the absence of an express provision permitting assignment of receivables due under the contracts between the Members of the Obligated Group and third-party payors and present or future legal prohibitions against assignment; (3) certain judicial decisions that cast doubt upon the right of the Master Trustee, in the event of the bankruptcy of a Member of the Obligated Group, to collect and retain accounts receivable from Medicare, Medicaid and other governmental programs; (4) commingling of proceeds of accounts receivable with other moneys of the Members of the Obligated Group not so pledged under the Master Indenture; (5) statutory liens; (6) rights arising in favor of the United States of America or any agency thereof; (7) constructive trusts or equitable or other rights impressed or conferred thereon by a federal or state court in the exercise of its equitable jurisdiction; (8) federal and state laws governing fraudulent transfers as discussed above; (9) federal bankruptcy laws that may affect the enforceability of the Master Indenture or the security interest in the Gross Revenues; (10) rights of third parties in Gross Revenues converted to cash and not in the possession of the Master Trustee; and (11) claims that might arise if appropriate financing or continuation statements or amendments of financing statements are not filed in accordance with the Uniform Commercial Code of the applicable state, as from time to time in effect.

Accounts receivable of the Members of the Obligated Group which constitute Gross Revenues and are pledged as security under the Master Indenture may be sold or pledged if such sale or pledge is in accordance with the provisions of the Master Indenture. If a prior security interest in accounts receivable is granted, the Master Trustee's security interest therein would be subordinated to such prior interest and the holders of such prior security interest would have a claim to the Obligated Group's accounts receivable prior to the security interest therein which secures all Obligations. The lien created under the Master Indenture on accounts receivable sold pursuant to the Master Indenture would terminate and be immediately released upon any such sale.

With respect to receivables and revenues not subject to the security interest, or where such security interest was unenforceable, the Master Trustee would occupy the position of an unsecured creditor. Counsel to the Obligated Group has not provided an opinion with regard to the enforceability of the security interest on Gross Revenues of the Obligated Group where such Gross Revenues are derived from the Medicare and Medicaid programs.

Master Indenture Permits Issuance of Additional Debt on Parity with Series 2023C MTI Note

The value of the security interest in the Gross Revenues could be diluted by the issuance of additional Obligations on a parity with the Series 2023C MTI Note (including but not limited to the other Series 2023 MTI Notes) in accordance with the Master Indenture or incurrence of other MTI Debt by the Obligated Group in accordance with the Master Indenture. See the information in APPENDIX C hereto under the caption "THE MASTER INDENTURE — Additional MTI Debt." Pursuant to the terms of the Master Indenture, the Members of the Obligated Group may incur additional MTI Debt and Non-MTI Debt, letters of credit, and other third-party guarantees which are entitled to the benefits of security which does not extend to any other indebtedness (including the Obligations). Such security may include Liens on the Property of the Obligated Group (including health care facilities) or any depreciation reserve, debt service or interest reserve or similar fund established for such additional Indebtedness. See "THE MASTER INDENTURE — Liens on Property" in APPENDIX C hereto.

Certain Amendments to Principal Documents May Adversely Affect Security for the Series 2023C Bonds

The rights and remedies afforded to the holders of Obligations by the Master Indenture, including, without limitation, the right to demand acceleration of Obligations (including the Series 2023C MTI Note) upon the occurrence of an event of default under the Master Indenture (including, without limitation, a payment default under the Obligations), may only be initiated by the holders of 25% in aggregate principal amount of the Obligations, subject to the right of the holders of a majority in aggregate principal amount of the Obligations to direct all remedies under the Master Indenture. Upon the issuance of the Series 2023C Bonds, the Bond Trustee for the Series 2023C Bonds will be the holder of the Series 2023C MTI Note. See "THE MASTER INDENTURE — Acceleration" and "— Remedies; Rights of Obligation Holders" in APPENDIX C hereto.

The Master Indenture may also be amended with the consent of the holders of not less than 51% in aggregate principal amount of the Obligations outstanding. Such amendments could be material and could result in the modification, waiver or removal of significant covenants or restrictions, and such percentage of Obligation holders may be comprised wholly or partially of related bond trustees or the holders of additional Obligations issued after the issuance of the Series 2023C MTI Note. Certain amendments to the Master Indenture may also be made at the discretion of the Master Trustee but without Bondholder consent. See "THE MASTER INDENTURE — Supplemental Master Indentures without Consent of Holders" in APPENDIX C hereto.

Certain amendments to the Bond Indenture and Loan Agreement may be made in the discretion of the Bond Trustee. Other amendments to the Bond Indenture and the Loan Agreement may be made with the prior written consent of the holders of at least 51% of the aggregate principal amount of the Series 2023C Bonds.

Outstanding and Future Variable Rate Bonds Are Subject to Certain Risks That Could Reduce Assets Available to Pay Debt Service on the Series 2023C Bonds

The Obligated Group has outstanding variable rate bonds and other indebtedness, the interest rates on which could rise. Certain of the bonds issued for the benefit of the Obligated Group are directly held by financial institutions, with such financial institutions' respective commitments to hold such bonds expiring prior to the maturity date of such bonds. If the Obligated Group is unable or chooses not to extend or remarket such bonds, the Obligated Group would be required to provide liquidity to purchase or redeem such bonds upon such credit expiration, and the cash reserves of the Obligated Group would be affected until such bonds are remarketed or refinanced.

In the future, variable rate bonds may be issued on behalf of the Obligated Group that have no external dedicated liquidity. If such bonds are tendered or deemed tendered and not remarketed, the Obligated Group would be obligated to purchase such variable rate bonds from its own funds, including from cash reserves or draws on revolving credit facilities. The Obligated Group's ability to provide self-liquidity for such variable rate bonds may be adversely impacted by a variety of factors, including a reduction in investment income and a lack of availability of external liquidity from revolving or other credit facilities. The Obligated Group has no current plans for any bonds of this type.

LIBOR Phase Out Could Affect Swap Transactions and Future Cost of Funds

Certain of the Obligated Group's outstanding debt and interest rate swap transactions bear interest at rates that are determined using, or are payable on, a London Interbank Offered Rate (*"LIBOR"*) index. In 2017, the U.K. Financial Conduct Authority (the *"UK FCA"*), the body that regulates and supervises the publication of LIBOR, announced that it will no longer persuade or compel banks to submit rates for the calculation of LIBOR, in part based on the existence in the LIBOR market of manipulation of the index by those involved in submitting rates for the calculation of LIBOR. It is not presently possible to predict the impact of the phase out of LIBOR or the implementation of any future rule changes or benchmark rates adopted by the UK FCA or other regulatory body, if any, in connection with the replacement of LIBOR.

On November 30, 2020, the ICE Benchmark Administration Limited announced its plan to extend the date that most U.S. Dollar LIBOR values would cease being computed and published from December 31, 2022 to June 30, 2023. On March 5, 2021, the ICE Benchmark Administration Limited published a feedback statement that confirmed its intention to cease publication of one week and two month U.S. Dollar LIBOR tenors after December 31, 2022 (which publication cessation has since occurred) and all other U.S. Dollar LIBOR tenors after June 30, 2023. If future uncertainty surrounding the calculation of LIBOR results in sudden changes in LIBOR rates, the interest payments on the Obligated Group's LIBOR-based indebtedness, or payments under swaps, may be materially adversely affected. Further, the phase out of LIBOR and the uncertainty as to the benchmark rate or mechanism that may succeed LIBOR may increase the costs and availability of financing or otherwise materially adversely affect the Obligated Group depending on the market levels of any such replacement rate or mechanism and the vulnerability to manipulation, if any, of any such replacement rate or mechanism. The Obligated Group in the future may pursue amendments to its LIBOR-based debt and interest rate swap transactions to provide for a transaction mechanism or other reference rate in anticipation of LIBOR's discontinuation, but it may not be able to reach agreements with its counterparties regarding any such amendments. The replacement of LIBOR with a comparable or successor rate could cause the amount of interest payable on the Obligated Group's long-term debt to be different or higher than expected.

Certain Agreements with, or Covenants with Respect to, Financial Institutions Could Affect Available Funds

The Members of the Obligated Group have entered into (1) term loans and lines of credit with certain banks, (2) continuing covenant agreements with the purchasers of certain privately placed bonds, and (3) interest rate swap agreements with financial institution counterparties (such banks, financial institutions and bond purchasers, collectively, the "*Financial Institutions*"). The Members of the Obligated Group may also enter into similar agreements in the future. The Obligated Group's obligations to such Financial Institutions are secured, or may be secured, by Obligations issued under the Master Indenture. Such agreements described above with the Financial Institutions also contain certain covenants for the sole benefit of the related Financial Institutions (the "*Financial Institution Covenants*"), which Financial Institution Covenants in certain cases are more restrictive than the covenants included in the Master Indenture, including certain liquidity and debt service coverage covenants that are at levels that are slightly higher than the related Master Indenture covenants and tested on a quarterly basis. Financial Institution Covenants can be waived, modified or amended at the sole discretion of the related Financial Institutions. Failure by the Obligated Group to make payments due on the related Obligations, or failure by the Obligated Group to comply with the applicable Financial Institution Covenants, could cause an Event of Default under the Master Indenture and result in the acceleration of Obligations as described in the Master Indenture.

ENFORCEMENT OF REMEDIES MAY BE LIMITED OR DELAYED BY BANKRUPTCY OR OTHER LAWS

The obligations of the Members of the Obligated Group under the Master Indenture and the Obligations are general obligations of the Members of the Obligated Group and are secured only by the security interest granted to the Master Trustee in the Gross Revenues of the Members of the Obligated Group. Enforcement of the remedies mentioned under the headings "THE MASTER INDENTURE — Remedies; Rights of Obligation Holders" and "The BOND INDENTURE — Remedies, Acceleration and Annulment Thereof" in APPENDIX C hereto may be limited or delayed in the event of application of federal bankruptcy laws or other laws affecting creditors' rights and may be substantially delayed and subject to judicial discretion in the event of litigation or the required use of statutory remedial procedures.

If the Obligated Group were to file a petition for relief under Title 11 of the United States Bankruptcy Code (the "*Bankruptcy Code*"), the filing would operate as an automatic stay of the commencement or continuation of any judicial or other proceeding against the Obligated Group and any interest it has in its property. If the bankruptcy court so ordered, Obligated Group property, including accounts receivable and proceeds thereof, could be used, at least temporarily, for the benefit of the bankruptcy estate despite the claims of its creditors.

In a case under the current Bankruptcy Code, the Obligated Group could file a plan of reorganization. The plan is the vehicle for satisfying, and provides for the comprehensive treatment of, all claims against the Members of the Obligated Group and could result in the modification of rights of any class of creditors, secured or unsecured. To confirm a plan of reorganization, with one exception discussed below, it must be approved by the vote of each class of impaired creditors. A class approves a plan if, of those who vote, those holding more than one-half in number and two-thirds in amount vote in favor of such plan. Approval by classes of interests requires a vote in favor of the plan by two-thirds in amount. If these levels of votes are attained, those voting against the plan or not voting at all are nonetheless bound by the terms thereof. Other than as provided in the confirmed plan, all claims and interests are discharged and extinguished. If fewer than all of the impaired classes accept the plan, the plan may nevertheless be confirmed by the bankruptcy court, and the dissenting claims and interests would be bound thereby. For this to occur, one of the impaired classes must vote to accept the plan and the bankruptcy court must determine that the plan does not "discriminate unfairly" and is "fair and equitable" with respect to the nonconsenting class or classes. The Bankruptcy Code establishes different fair and equitable tests for secured claims and interest holders. For a plan to be confirmed, the bankruptcy court must also determine, among other requirements, that it provides creditors with not less than would be received in the event of liquidation and is proposed in good faith, and that the debtor's performance is feasible.

The various legal opinions to be delivered concurrently with the delivery of the Series 2023C Bonds will be qualified as to the enforceability of the various legal instruments by limitations imposed by general principles of equity and by bankruptcy, reorganization, insolvency or other similar laws affecting the rights of creditors generally and laws relating to fraudulent conveyances.

INTEREST RATE SWAPS TERMINATED DURING A PERIOD OF NEGATIVE VALUE COULD NEGATIVELY IMPACT FINANCIAL CONDITION

The Obligated Group has interest rate swap agreements in place and may periodically enter into other interest rate swap agreements to hedge interest rate risk. Any interest rate swap or other hedge agreement may, at any time, have a negative value to the Obligated Group. The Obligated Group's swap agreements may also be subject to early termination upon the occurrence of certain specified events. If either the Obligated Group or the counterparty terminates such an agreement when the agreement has a negative value to the Obligated Group, the Obligated Group could be obligated to make a termination payment to the counterparty in the amount of such negative value and such payment could be substantial and potentially materially adverse to the Obligated Group's financial condition.

The occurrence of a termination event or changes in the market value of such agreements could negatively or positively impact the Obligated Group's business or financial condition, and such impact could be material. In the event of an early termination of a swap agreement, there can be no assurance that (1) where the swap agreement has a positive value to the Obligated Group, the Obligated Group will receive any termination payment payable to it by the respective swap counterparty, (2) where the swap agreement has a negative value to the Obligated Group, the Obligated Group will have sufficient amounts to pay a termination payment payable by it to the respective swap counterparty, and (3) in any event, the Obligated Group will be able to obtain a replacement swap agreement with comparable terms.

Swap providers may require the Obligated Group to secure any new obligations in certain circumstances. Certain of the interest rate agreements to which the Members of Obligated Group are currently a party require collateral posting. The Obligated Group's ability to place a lien on its collateral is limited by the Master Indenture. See "THE MASTER INDENTURE — Liens on Property" in APPENDIX C hereto. If the Obligated Group is unable to secure its obligations under any swap agreement with sufficient collateral, the swap provider would have the right to terminate the swap and the Obligated Group could be required to make a termination payment to the swap provider, the amount of which could be substantial. See "INDEBTEDNESS — Use of Derivatives" in APPENDIX A hereto and Note 7 in "UPMC Audited Consolidated Financial Statements for the Fiscal Year Ended December 31, 2022" attached as APPENDIX B hereto for additional information.

CONSTRUCTION PROJECTS ARE SUBJECT TO DELAYS OR INCREASED COSTS

Construction projects, including the Tax-Exempt Capital Projects and any capital projects to be financed with the proceeds of the Series 2023 Taxable Bonds, are subject to a variety of risks including, but not limited to, delays in the issuance of necessary approvals or permits, strikes, shortages of materials, tariffs on materials, supply chain disruptions, adverse weather conditions, and general cost overruns. Cost overruns may occur due to change orders, delays in construction schedules, scarcity of building materials and labor, inflation, and other factors. Any of the forgoing could cause completion delays or the expenditure of more funds than originally allocated.

Bond Ratings May Be Lowered or Withdrawn

There can be no assurance that the ratings assigned to the Series 2023C Bonds at the time of issuance will not be lowered or withdrawn at any time, the effect of which could adversely affect the market price for and marketability of the Series 2023C Bonds. See "— An Economic Downturn or Other Unfavorable Economic Conditions Could Negatively Impact Financial Condition" above for a discussion of certain conditions that may cause re-evaluation of ratings by rating agencies. See also the information under the heading "RATINGS" herein.

There May Not Be a Secondary Market for the Series 2023C Bonds

Subject to prevailing market conditions, the Underwriters intend, but are not obligated, to make a market in the Series 2023C Bonds. There is presently no secondary market for the Series 2023C Bonds and no assurance can be given that a secondary market will develop. Consequently, investors may not be able to resell the Series 2023C Bonds purchased should they need or wish to do so.

Maintenance of Tax-exempt Status Is Dependent upon Compliance with Various Laws and Regulations

The tax-exempt status of interest on the Series 2023C Bonds depends, among other things, upon maintenance by the Members of the Obligated Group who operate facilities financed or refinanced with the proceeds of the Series 2023C Bonds of their status as organizations described in Section 501(c)(3) of the Code. The maintenance of such status is contingent on compliance with general rules based on the Code, Treasury regulations and judicial decisions regarding the organization and operation of tax-exempt hospitals and health systems, including their operation for charitable and other permissible purposes and their avoidance of transactions that may cause their earnings or assets to inure to the benefit of private individuals. As these general principles were developed primarily for public charities that do not conduct large-scale technical operations and business activities, they often do not adequately address the myriad of operations and transactions entered into by a modern health care organization. Although traditional activities of health care providers, such as medical office building leases, have been the subject of interpretations by the IRS in the form of private letter rulings, many activities or categories of activities have not been fully addressed in any official opinion, interpretation or policy of the IRS. The interpretation of the IRS and its position on these rules as they affect the organization and operation of health care organizations (for example, with respect to providing charity care, joint ventures, physician and executive compensation, physician recruitment and retention, etc.) are constantly evolving. The IRS can and in fact occasionally does alter or reverse its positions concerning tax-exemption issues, even concerning long-held positions upon which tax-exempt health care organizations have relied.

In addition to violations of the Code, the IRS has asserted that tax-exempt hospitals that are in violation of Medicare and Medicaid regulations regarding inducement for referrals may also be subject to revocation of their tax-exempt status. Because a wide variety of hospital physician transactions potentially violate these broadly stated prohibitions on inducement for referrals, the IRS has broadened the range of activities that may directly affect tax exemption, without defining specifically how those rules will be applied. As a result, tax-exempt hospitals, particularly those that have extensive transactions with physicians, are currently subject to an increased degree of scrutiny and, potentially, enforcement activities by the IRS. The policy position of the IRS is not necessarily indicative of a judicial determination of the applicable issues.

Section 4958 of the Code imposes excise taxes on "excess benefit transactions" between "disqualified persons" and tax-exempt organizations such as the Members of the Obligated Group. According to the legislative history and regulations associated with Section 4958, these excise taxes may be imposed by the IRS either in lieu of or in addition to revocation of exemption. These intermediate sanctions may be imposed in situations in which a "disqualified person" (such as an "insider") engages in "excess benefit transactions" such as (1) a transaction with a tax-exempt organization on other than a fair market value basis, (2) receipt of unreasonable compensation from a tax-exempt organization or (3) receipt of payment in an arrangement that otherwise violates the prohibition against private inurement. A disqualified person who benefits from an excess benefit transaction will be subject to an excise tax equal to 25% of the amount of the excess benefit. Organization managers who participate in the excess benefit transaction knowing it to be improper are subject to an excise tax equal to 10% of the amount of the excess benefit, subject to a maximum penalty of $20,000 per transaction. A second penalty, in the amount of 200% of the excess benefit, may be imposed on the disqualified person (but not upon the organization manager) if the excess benefit is not corrected within a specified period of time. Fair market value and reasonable compensation for tax purposes typically reflect a range rather than a specific dollar amount, and the IRS does not rule in advance on whether a transaction results in more than fair market value payment or more than reasonable compensation to a disqualified person. Although it is not possible to predict what enforcement action, if any, the IRS might take related to potential excess benefit transactions, consistent with the legislative history of Section 4958, regulations issued by the IRS indicate that not all excess benefit transactions jeopardize exempt status. Rather, the IRS will consider all relevant facts and circumstances, including the size and scope of the organization's activities that further exempt purposes; the size, scope and frequency of any excess benefit transactions; whether the organization has implemented appropriate safeguards reasonably designed to prevent future excess benefit; and whether the organization has corrected, or made good faith efforts to correct, any excess benefit such as by obtaining repayment of the amount of any excess benefit.

The legislative history of Section 4958 is potentially favorable to taxpayers because it provides the IRS with a punitive option short of revoking tax-exempt status to deal with incidents of private inurement. However, the standards for tax exemption have not been changed, including the requirement that no part of the net earnings of an exempt entity inure to the benefit of any private individual. Consequently, although the IRS has only infrequently revoked the tax exemption of nonprofit health care corporations in the past, the risk of revocation remains and there can be no assurance that the IRS will not direct enforcement activities against any of the Members of the Obligated Group.

In certain cases, the IRS has imposed substantial monetary penalties and future charity care or public benefit obligations on tax-exempt hospitals in lieu of revoking their tax-exempt status, as well as requiring that certain transactions be altered, terminated or avoided in the future and/or requiring governance or management changes. These penalties and obligations are typically imposed on the tax-exempt hospital pursuant to a "closing agreement" with respect to the hospital's alleged violation of Section 501(c)(3) exemption requirements. Given the uncertainty regarding how tax-exemption requirements may be applied by the IRS, Obligated Group Members are, and will be, at risk for incurring monetary and other liabilities imposed by the IRS through this "closing agreement" or similar process. Like certain of the other business and legal risks described herein which apply to large multihospital systems, these liabilities are probable from time to time for some systems in the nonprofit health care industry and could be substantial, in some cases involving millions of dollars, and in extreme cases could be materially adverse.

The ACA also contains requirements for tax-exempt hospitals through Section 501(r) of the Code. Under the ACA, each tax-exempt hospital facility is required to (i) conduct a community health needs assessment at least every three years and adopt an implementation strategy to meet the identified community needs, (ii) adopt, implement and widely publicize a written financial assistance policy that includes the Section 501(r) minimum statutory and regulatory requirements and a policy to provide emergency medical treatment without discrimination, (iii) limit charges to individuals who qualify for financial assistance under such tax-exempt hospital's financial assistance policy to no more than the amounts generally billed to individuals who have insurance covering such care and refrain from using "gross charges" when billing such individuals, and (iv) refrain from taking extraordinary collection actions without first making reasonable efforts to determine whether the individual is eligible for assistance under such tax-exempt hospital's financial assistance policy.

The Secretary of the U.S. Treasury issued final regulations under Section 501(r) of the Code that provide detailed and comprehensive guidance relating to requirements for community health needs assessments, financial assistance policies, emergency medical care policies, limitations on charges and billing and collection practices, and also provide guidance on consequences of failure to satisfy Section 501(r) requirements. These final regulations are complex and may be administratively burdensome to implement.

In addition, the U.S. Treasury is required to review information about each tax-exempt hospital's community benefit activities at least once every three years, as well as to submit an annual report to Congress with information generally regarding the levels of charity care, bad debt expenses, unreimbursed costs of government programs, and costs incurred by private tax-exempt hospitals for community benefit activities. The periodic reviews and reports to Congress regarding the community benefits provided by 501(c)(3) hospitals may increase the likelihood that Congress will require such hospitals to provide a minimum level of charity care in order to retain tax-exempt status and may increase IRS scrutiny of particular 501(c)(3) hospital organizations.

In general, certain failures to comply with Section 501(r) requirements may be corrected if such failures are not willful or egregious and certain correction and disclosure procedures are followed. In other circumstances, an organization's failure to meet one or more Section 501(r) requirements could endanger the organization's Section 501(c)(3) status as of the first day of the tax year in which a failure occurs. In addition, an organization may be subject to certain excise taxes if a hospital facility fails to maintain the requirements concerning community health needs assessments.

The IRS conducts audits of exempt organizations and considers a wide range of possible issues, including the community benefit standard, private inurement and private benefit, partnerships and joint ventures, retirement plans and employee benefits, employment taxes, tax-exempt bond financing, political contributions and unrelated business income. In addition, the IRS conducts compliance checks and correspondence audits that focus initially on limited issues, such as executive compensation, unrelated business income or community benefit. Such limited-scope reviews can be expanded in certain circumstances to include a variety of other issues as in a Team Examination Program ("*TEP*") audit. The IRS has periodically conducted audit and other enforcement activity regarding tax-exempt health care organizations. Certain audits are conducted by teams of revenue agents, often take years to complete and require the expenditure of significant staff time by both the IRS and the audited organization.

A Member of the Obligated Group could be audited by the IRS. Because of the complexity of the tax laws and the presence of issues about which reasonable persons can differ, a TEP or other audit could result in additional taxes, interest and penalties. A TEP or other audit also could potentially affect the tax-exempt status of any of the Members of the Obligated Group.

If the IRS were to find that a Member of the Obligated Group has participated in activities in violation of certain regulations or rulings, the tax-exempt status of such entity could be in jeopardy. Although the IRS has not frequently revoked the 501(c)(3) tax-exempt status of nonprofit health care organizations, it could do so in the future. Loss of tax-exempt status by any of the Members of the Obligated Group could result in loss of the exclusion from gross income of the interest on the Series 2023C Bonds that, in turn, could result in a default under the Bond Indenture, potentially triggering an acceleration of the Series 2023C Bonds. Any such event would have material adverse consequences on the future business or financial condition of the affected Members of the Obligated Group and, potentially, the Obligated Group as a whole. Additionally, the loss of federal tax-exempt status by a Member of the Obligated Group could adversely affect its access to future tax-exempt financing.

As described herein under the caption "TAX EXEMPTION AND OTHER TAX MATTERS," failure to comply with certain legal requirements may cause the interest on the Series 2023C Bonds to become included in gross income of the recipients thereof for federal income tax purposes. In such event, the Series 2023C Bonds may be accelerated at the discretion of the Bond Trustee or at the written request of holders of not less than 25% of the aggregate principal amount of all the Series 2023C Bonds then outstanding under the Bond Indenture. The Bond Indenture does not provide for the payment of any additional interest or penalty in the event the interest on the Series 2023C Bonds is determined to be includible in gross income for federal income tax purposes.

MISCELLANEOUS RISK FACTORS

The following factors, among others, may also adversely affect the operation of health care facilities, including the Obligated Group's facilities, to an extent that cannot be determined at this time:

- Cost increases without corresponding increases in revenue.

- Any termination or alteration of existing agreements with individual physicians or physician groups that render services to Obligated Group patients.

- An inflationary economy.

- Any inability to obtain future governmental approvals to undertake projects necessary to remain competitive as to both rates and charges as well as to quality and scope of care.

- Laws requiring particular staffing levels at medical facilities (*e.g.*, nurse-to-patient staffing ratios).

- State or federal imposition of higher minimum or living wages.

- The outcome of presidential or other political elections, or political or civil unrest.

- Climate change.

- The adoption of legislation or implementation of regulations establishing a national or statewide single-payor health program or that would establish national, statewide or otherwise regulated rates applicable to health care providers.

- Bank failures or other instability in the U.S. and/or global banking systems that cause an inability or delay to access cash and investments.

THE BOND TRUSTEE AND THE MASTER TRUSTEE

Pursuant to the Bond Indenture, the Bond Trustee, The Bank of New York Mellon Trust Company, N.A., Pittsburgh, Pennsylvania, serves as registrar and authentication, transfer and paying agent for the Series 2023C Bonds and the Owners thereof. The Bank of New York Mellon Trust Company, N.A. is also serving as the Master Trustee.

The obligations of the Bond Trustee and the Master Trustee are set forth in the Bond Indenture and the Master Indenture, respectively. The Bond Trustee and the Master Trustee have undertaken only those duties and obligations which are expressly set forth in the Bond Indenture and the Master Indenture, respectively. After issuance of the Series 2023C Bonds, the Bond Trustee and the Master Trustee act only pursuant to the specific terms of the Bond Indenture and the Master Indenture, respectively. The Bond Trustee and the Master Trustee have not independently passed upon the validity of the Series 2023C Bonds, the security for the payment thereof, the value or condition of any assets pledged to the payment thereof, the adequacy of the provisions for such payment, the status for federal or state income tax purposes of the interest on the Series 2023C Bonds, or any other matter with respect to the issuance of the Series 2023C Bonds.

LITIGATION

THE AUTHORITY

There is no litigation pending or, to the best of the Authority's knowledge, threatened against the Authority questioning the Authority's sale, issuance, execution, delivery or payment of the Series 2023C Bonds; the Authority's execution, delivery or performance of the Loan Agreement or the Bond Indenture; the organization, powers or authority of the Authority; or the right of the officers of the Authority to hold their respective offices.

THE CORPORATION

There is no litigation pending or, to the knowledge of management of the Corporation, threatened which in any manner questions the right of the Corporation to use the proceeds of the Series 2023C Bonds as described herein or to enter into the Loan Agreement, the Supplemental MTI or the Series 2023C MTI Note or which in any manner questions the validity or enforceability of such documents.

The Corporation is involved in litigation and responding to requests for information from governmental agencies occurring in the normal course of business. Certain of these matters are in the preliminary stages and legal counsel are unable to estimate the potential effect, if any, upon operations or financial condition of the Corporation. Management believes that these matters will be resolved without material adverse effect on the Corporation's financial position or results of operations. However, the ultimate outcome and effect on the Corporation's financial statements is unknown. See "ADDITIONAL INFORMATION — Litigation" in APPENDIX A hereto for additional information concerning litigation in which the Corporation is involved.

TAX EXEMPTION AND OTHER TAX MATTERS

FEDERAL TAX MATTERS – SERIES 2023C BONDS

Federal Exclusion of Interest from Gross Income. In the opinion of Eckert Seamans Cherin & Mellott, LLC, Pittsburgh, Pennsylvania (*"Bond Counsel"*), under existing statutes, regulations, rulings and court decisions, interest on the Series 2023C Bonds will not be includible in gross income of the holders thereof for federal income tax purposes, assuming continuing compliance by the Authority and the Corporation with the requirements of the Code. Interest on the Series 2023C Bonds will not be a specific preference item for purposes of computing the federal alternative minimum tax on individuals.

In rendering its opinion, Bond Counsel has assumed compliance by the Authority and UPMC with their respective covenants contained in the Bond Indenture, the Loan Agreement and the Tax Compliance Certificate executed and delivered in connection with the issuance of the Series 2023C Bonds, that are intended to comply with the provisions of the Code relating to actions to be taken by the Authority and UPMC in respect of the Series 2023C Bonds after issuance thereof to the extent necessary to effect or maintain the exclusion from federal gross income of the interest on the Series 2023C Bonds. These covenants relate to, *inter alia*, the maintenance by UPMC of its status as an organization described in Section 501(c)(3) of the Code, the use of and investment of proceeds of the Series 2023C Bonds and the rebate to the United States Treasury of specified arbitrage earnings, if any. Failure to comply with such covenants could result in interest on the Series 2023C Bonds becoming includible in gross income for federal income tax purposes from the date of issuance of the Series 2023C Bonds.

Original Issue Premium on the 2023C Bonds. The initial public offering price of each maturity of the 2023C Bonds (*"Premium Bonds"*) is greater than the principal amounts payable on such 2023C Bonds at their respective maturities. Such excess over the amount payable at maturity of a Premium Bond is amortizable bond premium, which is not deductible from gross income for federal income tax purposes.

Amortizable bond premium will reduce the owner's tax basis of a Premium Bond in each year by the amount of amortization for such year, which basis is used to determine, for federal income tax purposes, the amount of gain or loss upon the sale, redemption, payment at maturity or other disposition of a Premium Bond.

Owners of Premium Bonds should consult their own tax advisors with respect to the calculation of the amount of bond premium which will be treated for federal income tax purposes as having amortized for any taxable year (or portion thereof) of the owner and with respect to other federal, state and local tax consequences of owning and disposing of Premium Bonds.

Other Federal Tax Matters related to the Series 2023C Bonds. Ownership or disposition of the Series 2023C Bonds may result in other federal tax consequences to certain taxpayers, including, without limitation, certain S corporations, foreign corporations with branches in the United States, property and casualty insurance companies, taxpayers who have an initial basis in the Series 2023C Bonds greater or less than the principal amount thereof, individual recipients of Social Security or Railroad Retirement benefits, and taxpayers, including banks, thrift institutions and other financial institutions subject to Section 265 of the Code, who may be deemed to have incurred or continued indebtedness to purchase or to carry the Series 2023C Bonds. In addition, ownership or disposition of the Series 2023C Bonds may result in other federal tax consequences to "applicable corporations" (within the meaning of Section 59(k) of the Code enacted as part of the Inflation Reduction Act of 2022), in that interest on the Series 2023C

Bonds may be included in the calculation of the alternative minimum tax imposed on applicable corporations under Section 55(b) of the Code.

Bond Counsel is not rendering any opinion as to any federal tax matters other than those described under the sub-caption "— Federal Exclusion of Interest from Gross Income" and expressly stated in the Proposed Form of Opinion of Bond Counsel included as APPENDIX D hereto. Prospective purchasers of the Series 2023C Bonds should consult their independent tax advisors with regard to all federal tax matters.

PENNSYLVANIA

In the opinion of Bond Counsel, under the laws of the Commonwealth of Pennsylvania as enacted and construed on the date hereof, interest on the Series 2023C Bonds is exempt from Pennsylvania personal income tax and Pennsylvania corporate net income tax; however, under the laws of the Commonwealth of Pennsylvania, as enacted and construed on the date hereof, any profits, gains or income derived from the sale, exchange or other disposition of the Series 2023C Bonds will be subject to Pennsylvania taxes and local taxes within the Commonwealth.

OTHER

The Series 2023C Bonds and the interest thereon may be subject to state or local taxes in jurisdictions other than the Commonwealth of Pennsylvania under applicable state or local tax laws.

Bond Counsel is not rendering any opinion on state tax matters other than those described under the sub-caption "—Pennsylvania" and expressly stated in the form of the Bond Counsel opinion included in APPENDIX D hereto.

Purchasers of the Series 2023C Bonds should consult their independent tax advisors with regard to all state and local tax matters that may affect them.

CONTINUING DISCLOSURE

To comply with the requirements of Rule 15c2-12 promulgated by the Securities and Exchange Commission (the "*Rule*"), as applicable to prior series of bonds issued for the benefit of the Corporation, the Corporation has entered into a master continuing disclosure agreement (as amended and supplemented from time to time, the "*Disclosure Agreement*") with Digital Assurance Certification, L.L.C., as Dissemination Agent (the "*Dissemination Agent*"). The Corporation and the Dissemination Agent will supplement the Disclosure Agreement so that it will also apply to the Series 2023C Bonds. Under the Disclosure Agreement, the Corporation has agreed to provide to the Dissemination Agent, within 180 days after the end of each fiscal year of the Corporation, certain financial and operating data (referred to herein as "*Annual Information*"), including its annual financial statements prepared in accordance with generally accepted accounting principles, which may be the combined or consolidated financial statements of the System. The Dissemination Agent will file the Annual Information with the Municipal Securities Rulemaking Board (the "*MSRB*"), which operates the Electronic Municipal Market Access ("*EMMA*") system for municipal securities disclosures. The Disclosure Agreement will be for the benefit of the owners and Beneficial Owners of the Series 2023C Bonds and applicable prior bonds and will assist the Participating Underwriters (as defined in the Disclosure Agreement) in complying with the Rule. The Authority has undertaken no responsibility with respect to any reports, notices or information provided or required under the Disclosure Agreement, and has no liability to any person, including any owner or Beneficial Owner of the Series 2023C Bonds, with respect to any such reports, notices or disclosures.

ANNUAL INFORMATION

The Annual Information shall include the audited combined or consolidated financial statements of the System prepared in accordance with generally accepted accounting principles and audited by a certified public accountant (if audited financial statements are available). The Annual Information shall also include updated information related to consolidated utilization statistics and sources of revenue, unless the Corporation is providing such information in quarterly reports as described below. In addition, the Corporation has covenanted to provide notice in a timely manner to the Dissemination Agent, who shall thereafter provide such notice to the MSRB, of any failure by the Corporation to provide the required Annual Information on or before the date specified in the Disclosure Agreement.

QUARTERLY INFORMATION

Although not required by the Rule, the Corporation has agreed in the Disclosure Agreement to provide quarterly financial and operating data of the System to the Dissemination Agent. The quarterly information will be delivered by the Corporation to the Dissemination Agent within sixty (60) days of the end of each quarter of the fiscal year. The quarterly information (which will be unaudited) includes information relating to consolidated utilization statistics, sources of revenues and consolidated financial information (including combining or consolidating divisional income statements).

MATERIAL EVENT NOTICES

Under the Disclosure Agreement, the Corporation also agrees to provide, in a timely manner, not in excess of ten (10) business days after the occurrence of the event, written notice to the Dissemination Agent of any of the following events with respect to the Series 2023C Bonds: (1) principal and interest payment delinquencies; (2) non-payment related defaults, if material; (3) unscheduled draws on debt service reserves reflecting financial difficulties; (4) unscheduled draws on credit enhancement reflecting financial difficulties; (5) substitution of a credit enhancer or liquidity provider, or its failure to perform; (6) adverse tax opinions or events affecting the tax-exempt status of the Series 2023C Bonds; (7) modification to the rights of registered or beneficial owners of the Series 2023C Bonds, if material; (8) bond redemptions (other than mandatory or sinking fund redemptions), if material, and tender offers; (9) defeasances; (10) release, substitution, or sale of property securing repayment of the Series 2023C Bonds, if material; (11) rating changes; (12) bankruptcy, insolvency, receivership or similar event of a Member of the Obligated Group; (13) the consummation of a merger, consolidation, or acquisition involving the Obligated Group or the sale of all or substantially all of the assets of the Obligated Group, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material; (14) appointment of a successor or additional bond trustee or the change of name of a bond trustee, if material; (15) the incurrence or agreement to incur a Financial Obligation (as defined in the Rule), if material; and (16) default, event of acceleration, termination event, modification of terms or other similar events under the terms of a Financial Obligation of the Corporation or any Member of the Obligated Group, any of which reflect financial difficulties. The Dissemination Agent is required to file a copy of any such notice with the MSRB within two business days of its receipt of such notice from the Corporation.

LIMITATIONS AND AMENDMENTS

The Corporation has agreed to provide the Annual Information and other information and to provide notices of material events only as described above. The Corporation does not make, and expressly disclaims, any representation or warranty concerning such information or concerning its usefulness to a decision to invest in or sell the Series 2023C Bonds at any future date.

The Disclosure Agreement may be amended to adapt to changed circumstances that arise from a change in legal requirements, a change in law, or a change in the identity, nature, status or type of operations of the Corporation. The Corporation may also amend or repeal the Disclosure Agreement if the applicable provisions of the Rule are repealed or a final court judgment is entered that the provisions are invalid, or in any other circumstance or manner, if the agreement, as supplemented or amended, would permit a participating underwriter to purchase the Series 2023C Bonds in the offering made hereby in compliance with the Rule.

The sole and exclusive remedy for a breach or default under the Disclosure Agreement described above is an action to compel specific performance of the undertakings of the Dissemination Agent and the Corporation. A breach or default under the Disclosure Agreement shall not constitute an Event of Default under the Bond Indenture or under the Loan Agreement or under any other document. The obligations of the Corporation under the Disclosure Agreement with respect to the Series 2023C Bonds shall terminate upon the legal defeasance, prior redemption or payment in full of the Series 2023C Bonds or the assumption by a successor of all of the obligations of the Corporation under the Disclosure Agreement.

LEGAL MATTERS

The Series 2023C Bonds are offered when, as and if issued by the Authority and accepted by Cain Brothers, a division of KeyBanc Capital Markets Inc. (*"Cain Brothers"*), RBC Capital Markets, LLC (*"RBC CM"*), Barclays Capital Inc. (*"Barclays"*), Huntington Securities Inc. d/b/a Huntington Capital Markets (*"Huntington"*), J.P. Morgan Securities LLC (*"J.P. Morgan"*), PNC Capital Markets LLC (*"PNC Capital Markets"*), BNY Mellon Capital Markets (*"BNY Mellon"*), Bancroft Capital LLC (*"Bancroft Capital"*) and BofA Securities, Inc. (*"BofA Securities"* and, together with Cain Brothers, RBC CM, Barclays, Huntington Capital Markets, J.P. Morgan, PNC Capital Markets, BNY Capital Markets and Bancroft Capital, the *"Underwriters"*), subject to prior sale, or withdrawal or modification of the offer without notice, and to the receipt of the approving legal opinion of Bond Counsel, to be delivered with the Series 2023C Bonds, substantially in the form set forth in APPENDIX D hereto. Certain legal matters will be passed upon for the Authority by Maiello Brungo & Maiello, LLP, Pittsburgh, Pennsylvania; for the Corporation by its special counsel, Hardwick Law Firm, LLC, Pittsburgh, Pennsylvania; and for the Underwriters by their counsel, Chapman and Cutler LLP, Chicago, Illinois.

The various legal opinions to be delivered in connection with the Series 2023C Bonds express the professional judgment of the law firm rendering the opinion as to the legal issues explicitly addressed therein. In rendering a legal opinion, the law firm does not become an insurer or guarantor of that expression of professional judgment, of the transactions opined upon, or the future performance of the parties to the transaction. In addition, the rendering of an opinion does not guarantee the outcome of any legal dispute that may arise out of the transaction which is the subject of the opinion.

CERTAIN RELATIONSHIPS

Eckert Seamans Cherin & Mellott, LLC (*"Eckert Seamans"*), Bond Counsel, and the Hardwick Law Firm, LLC, special counsel to the Corporation for the financing effected through the issuance of the Series 2023C Bonds, have represented, are currently representing and/or may in the future represent any, some or all of the Underwriters in matters unrelated to this financing. In addition, Eckert Seamans from time to time represents the Corporation with respect to matters unrelated to this financing.

Michael P. Lyons, a member of the Corporation's Board of Directors (the *"Board"*), is the Head of Corporate & Institutional Banking at The PNC Financial Services Group, Inc., the parent of PNC Capital Markets LLC, one of the Underwriters of the Series 2023C Bonds. The Board delegates effecting the financing, including selection of the underwriting team, to senior officers, and Mr. Lyons played no role in the financing beyond being present during general discussion at the Finance Committee and Board meetings during which the financing transaction was discussed and ultimately approved. Mr. Lyons recused himself and abstained from voting on the transaction. Another member of the Board, Susan Baker Shipley, is President, Western Pennsylvania and Ohio Valley, Huntington Bank, the parent of Huntington Securities, Inc. d/b/a Huntington Capital Markets, also one of the Underwriters of the Series 2023C Bonds. The Board delegates effecting the financing, including selection of the underwriting team, to senior officers, and Ms. Shipley played no role in the financing beyond being present during general discussion at the Board meeting during which the financing transaction was discussed and ultimately approved. Ms. Shipley recused herself and abstained from voting on the transaction.

Affiliates of certain of the Underwriters, of the Bond Trustee and of the Master Trustee have other business relationships with and/or are lenders to the Corporation.

Each of the Underwriters and its respective affiliates together constitute a full-service financial institution engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. Each of the Underwriters and its respective affiliates may have, from time to time, performed and may in the future perform, various investment banking services for the Corporation for which they received or will receive customary fees and expenses. In the ordinary course of their various business activities, each of the Underwriters and its respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities and financial instruments which may include bank loans and/or credit default swaps) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment securities activities may involve instruments and obligations of the Corporation.

The Royal Bank of Canada, an affiliate of RBC CM, Barclays, BNY Mellon, Huntington, Cain Brothers and BofA Securities, directly or through their affiliated entities (collectively, *"LC Credit Providers"*), participate in various lines of credit to the Corporation and the Insurance Subsidiaries.

Certain taxable notes issued by the Corporation are held in a trust in which Barclays Bank PLC, an affiliate of Barclays, is the beneficial owner.

J.P. Morgan is an affiliate of the Series 2023D Purchaser, the purchaser of the Series 2023D Bonds, as described herein. An affiliate of J.P. Morgan is also the lender under the Term Loan to be refinanced with a portion of the proceeds of the Series 2023D Bonds.

PNC Capital Markets LLC and PNC Bank, National Association are both wholly-owned subsidiaries of The PNC Financial Services Group, Inc. PNC Capital Markets LLC is not a bank and is a distinct legal entity from PNC Bank, National Association. PNC Bank, National Association has other banking and financial relationships with the Corporation.

The LC Credit Providers and Barclays, J.P. Morgan and PNC Bank, National Association, as credit providers, have or will have certain rights against the Corporation, including rights as creditors against the Corporation. Their respective affiliated entities were separately compensated for serving in those capacities. RBC CM received a payment, value, or credit from its affiliated entity.

RATINGS

Moody's Investors Service, Inc., S&P Global Ratings and Fitch Ratings, Inc. have assigned ratings to the Series 2023C Bonds of "A2" (stable outlook), "A" (positive outlook) and "A" (positive outlook), respectively. Any explanation of the significance of a rating may only be obtained from the rating agency issuing the same.

The Corporation furnished to such rating agencies certain materials and information about the Series 2023C Bonds and the Corporation that have not been included in this Official Statement. Generally, rating agencies base their ratings on such information and materials and their own investigations, studies and assumptions. Each rating reflects the view of only the rating agency that issued it. There is no assurance that a particular rating will be maintained for any given period of time or that it will not be lowered or withdrawn entirely if, in the judgment of the rating agency originally assigning the rating, circumstances so warrant. Any such change or withdrawal of such rating could have an adverse effect on the market price and/or marketability of the Series 2023C Bonds.

AUDITED FINANCIAL STATEMENTS

The audited consolidated financial statements of the Corporation for the fiscal year ended December 31, 2022 have been audited by Ernst & Young LLP, independent auditors, as stated in their report appearing in APPENDIX B to this Official Statement. Ernst & Young LLP has not performed any procedures with respect to the Corporation subsequent to the date of their report.

AFFILIATES INCLUDED IN FINANCIAL STATEMENTS

The consolidated financial information presented in APPENDIX A and APPENDIX B to this Official Statement includes affiliates of the Corporation that are not Members of the Obligated Group. See "OBLIGATED GROUP" in APPENDIX A hereto for certain financial information regarding, in the aggregate, net of the effect of intercompany eliminations and reclassifications, the affiliates of the Corporation which are Members of the Obligated Group.

VERIFICATION OF MATHEMATICAL COMPUTATIONS

Concurrent with the delivery of the Series 2023C Bonds, Robert Thomas CPA, LLC (the *"Verification Agent"*), a firm of independent accountants, will deliver its verification report indicating that it has verified, in accordance with standards established by the American Institute of Certified Public Accountants, certain information and assertions provided by the Underwriters. Included in the scope of its verification will be a verification of the mathematical accuracy of the mathematical computations of the adequacy of the deposit to the Series 2013B Escrow Fund to pay, when due, the principal of, interest on and redemption price of the Refunded Series 2013B Bonds. The Verification Agent will have restricted its procedures to verifying the arithmetical accuracy of such computations and will not have made any study or evaluation of the assumptions and information on which the computations were based and, accordingly, will not express an opinion on such assumptions and information, the reasonableness of such assumptions, or the achievability of future events. Such verification report will be relied upon by Bond Counsel in rendering its opinion with respect to the defeasance of the Refunded Series 2013B Bonds.

UNDERWRITING

The Underwriters, acting through Cain Brothers, as senior managing underwriter, have entered into a Bond Purchase Agreement (the *"Series 2023C Bond Purchase Agreement"*) with the Authority and the Corporation pursuant to which the Underwriters will purchase the Series 2023C Bonds from the Authority. The Series 2023C Bonds will be purchased at an aggregate price of $41,040,783.80 (representing the $36,815,000 principal amount of the Series 2023C Bonds, less Underwriters' discount of $195,436.55 plus net original issue premium of $4,421,220.35).

The obligations of the Underwriters to purchase the Series 2023C Bonds are subject to certain terms and conditions set forth in the Series 2023C Bond Purchase Agreement, the approval of certain legal matters by Bond Counsel and certain other conditions. The Series 2023C Bond Purchase Agreement provides that the Underwriters will purchase all the Series 2023C Bonds if any Series 2023C Bonds are purchased.

The Series 2023C Bond Purchase Agreement requires each Underwriter to provide to the Corporation, for and within a prescribed time frame, a separate list of all trades with respect to the Series 2023C Bonds made by such Underwriter, or its affiliated broker-dealers, including details of such trades, and provides, further, that if an Underwriter fails to provide such report, the Corporation shall have the right to direct the Representative to withhold all or any portion of the management fee payable to such Underwriter which shall then be paid to the Corporation. The component of the Underwriters' discount allocable to the management fee for the Series 2023C Bonds is $27,611.25.

The Underwriters may offer and sell the Series 2023C Bonds to certain dealers (including dealers depositing the Series 2023C Bonds into investment trusts) and others at prices lower than such initial public offering prices as are stated on the inside cover page hereof. The public offering prices may be changed from time to time by the Underwriters upon prior written notice to the Corporation and the Authority.

J.P. Morgan, one of the Underwriters of the Series 2023C Bonds, has entered into negotiated dealer agreements (each, a *"Dealer Agreement"*) with each of Charles Schwab & Co., Inc. (*"CS&Co"*) and LPL Financial (*"LPL"*) for the retail distribution of certain securities offerings at the original issue prices. Pursuant to each Dealer Agreement, each of CS&Co. and LPL may purchase Series 2023C Bonds from J.P. Morgan at the original issue price less a negotiated portion of the selling concession applicable to any Series 2023C Bonds that such firm sells.

PNC Capital Markets LLC, an underwriter for the Series 2023C Bonds, may offer to sell to its affiliate, PNC Investments LLC ("*PNCI*"), securities in PNC Capital Markets LLC's inventory for resale to PNCI's customers, including securities such as the Series 2023C Bonds.

BofA Securities, Inc., an underwriter of the Series 2023C Bonds, has entered into a distribution agreement with its affiliate Merrill Lynch, Pierce, Fenner & Smith Incorporated ("*MLPF&S*"). As part of this arrangement, BofA Securities, Inc. may distribute securities to MLPF&S, which may in turn distribute such securities to investors through the financial advisor network of MLPF&S. As part of this arrangement, BofA Securities, Inc. may compensate MLPF&S as a dealer for their selling efforts with respect to the Series 2023C Bonds.

MISCELLANEOUS

All quotations from, and summaries and explanations of, the Authorities Act, the Bond Indenture, the Loan Agreement, the Master Indenture, the Series 2023C MTI Note and other documents referred to herein do not purport to be complete, and are qualified by reference to said documents and matters of law in their entireties, which should be consulted for full and complete statements of their provisions. All projections, forecasts, estimates and other statements in this Official Statement involving matters of opinion, whether or not expressly so stated, are intended as such and not as representations of fact.

It is anticipated that CUSIP identification numbers will be printed on the Series 2023C Bonds, but neither the failure to print such number on any Series 2023C Bond nor any error in the printing of such number shall constitute cause for a failure or refusal by the purchaser thereof to accept delivery of and pay for any Series 2023C Bonds.

This Official Statement is not to be construed as a contract or agreement between the Authority or the Corporation and the purchasers or owners of any of the Series 2023C Bonds.

The Authority has not assisted in the preparation of this Official Statement, except for the statements under the section captioned "MONROEVILLE FINANCE AUTHORITY" and "LITIGATION" (solely as it relates to the Authority) herein and, except for those sections, the Authority is not responsible for any statements made in this Official Statement. Except for the authorization, execution and delivery of documents required to effect the issuance of the Series 2023C Bonds, the Authority has not otherwise assisted in the public offer, sale or distribution of the Series 2023C Bonds. Accordingly, except as aforesaid, the Authority assumes no responsibility for the disclosures set forth in this Official Statement.

The attached Appendices are integral parts of this Official Statement.

The execution and delivery of this Official Statement have been duly authorized by the Authority and duly approved by the Corporation.

MONROEVILLE FINANCE AUTHORITY

By: /s/ Andrew Kennedy
ANDREW KENNEDY, Chairman

Approved:

UPMC

By: /s/ J.C. Stilley
J.C. STILLEY, Treasurer

APPENDIX A

ABOUT UPMC

The information contained in this APPENDIX A was provided by UPMC and other identified sources of information believed to be reliable.

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Introduction

UPMC is a holding company that was established in 1982 as a Pennsylvania nonprofit corporation, exempt from federal income taxation under Section 501(a) of the Internal Revenue Code of 1986, as amended (the "Code"), as an organization described in Section 501(c)(3) of the Code. UPMC's direct and indirect wholly owned subsidiaries include, among others, various hospitals (the "Subsidiary Hospitals") and various health insurance companies (the "Insurance Subsidiaries").

UPMC, together with the Subsidiary Hospitals and the Insurance Subsidiaries, do business as University of Pittsburgh Medical Center and are one of the world's leading integrated delivery and financing systems (the "System"). Headquartered in Pittsburgh, the System serves the residents of its communities as both a provider and as an insurer. The System owns and operates over 40 hospitals and 800 clinical locations, primarily serving residents across the Commonwealth of Pennsylvania (the "Commonwealth"), as well as western New York and northwestern Maryland, but also drawing patients for highly specialized services from across the nation and around the world. As of December 31, 2022, the System employed 5,375 physicians. The System also offers, through its Insurance Subsidiaries, a variety of insurance products that cover approximately 4.5 million lives.

The System is:

- The largest healthcare delivery system in the Commonwealth
- The largest nongovernment employer in the Commonwealth, with more than 92,000 part-time and full-time employees
- Closely affiliated with the University of Pittsburgh of the Commonwealth System of Higher Education (the "University"), which ranks in the top ten in the nation in National Institutes of Health ("NIH") research funding with approximately $600 million during the federal fiscal year ended September 30, 2021
- Consistently ranked among the nation's best hospitals in many specialties by *U.S. News & World Report*
- One of the largest cancer networks in the country with more than 70 locations
- One of the leading transplant programs in the world
- A provider of hands-on healthcare and management services with partners around the world through UPMC International

Total operating revenues of the System were $25.5 billion during the twelve months ended December 31, 2022. These total revenues do not include external research funding which is accounted for separately through the University.

Operating Structure

The System has four major operating components: Health Services, Insurance Services, International Services and UPMC Enterprises. Listed below are the major units of Health Services and Insurance Services.

Health Services	**Insurance Services**
• Academic and Community Hospitals • Regional Hospitals • Specialty Services • Physician Services • Community Provider Services • Community and Ambulatory Services	• UPMC Health Plan • UPMC Health Network • UPMC For You • UPMC Health Benefits • Community Care Behavioral Health • UPMC Benefit Management Services, Inc. • UPMC Health Options • UPMC Health Coverage

In December 2022, UPMC announced the creation of the Division of Community and Ambulatory Services ("CAS") under the Health Services component. Intended to accelerate the development of additional high quality, cost-efficient services for the System's patients and members, the division will provide a dedicated focus for the expansion of access to community-based services across the continuum of care, including primary care and urgent-care services, in-home services, rehabilitative services, and ambulatory diagnostic and surgical centers.

To support these operating components, the System has an array of integrated enterprise – wide capabilities, including information services, human resources, regulatory/compliance, finance, treasury, risk management, facilities, quality, and government relations. The costs of these supporting services are allocated to the operating components. Below is a brief description of each of the operating components, followed by a description of some of the shared services.

HEALTH SERVICES

Health Services includes all 40 of the Subsidiary Hospitals, including the following material corporations: UPMC Presbyterian Shadyside (five hospitals), UPMC Children's Hospital of Pittsburgh, UPMC Bedford Memorial, UPMC Hamot, UPMC Horizon (two hospitals), UPMC McKeesport, UPMC Mercy, UPMC Northwest, UPMC Passavant (two hospitals), UPMC St. Margaret, UPMC Magee Womens Hospital, UPMC East, UPMC Altoona, UPMC Jameson, UPMC Cole, Kane Community Hospital, UPMC Susquehanna (five hospitals), UPMC Chautauqua WCA, UPMC Pinnacle (seven hospitals), UPMC Somerset, UPMC Western Maryland, UPMC Whitfield (Waterford, Ireland), UPMC Kildare (Clane, Ireland), Salvator Mundi (Rome, Italy), and ISMETT (Palermo, Italy). Before eliminations, Health Services accounted for approximately $14.8 billion of operating revenues for the fiscal year ended December 31, 2022.

Table 1 provides information about these Subsidiary Hospitals as of December 31, 2022.

Table 1 Subsidiary Hospitals (Dollars in Thousands)				
Legal Entity (Number of Hospital Facilities)	**Location**	**Beds in Service (a)**	**Revenues for Twelve Months Ended 12/31/2022**	**Year of Affiliation**
UPMC Presbyterian Shadyside (5)	Pittsburgh, PA	1,412	$ 2,427,159	(b)
UPMC Central PA (7)	Harrisburg/Hanover/Lititz/York /Carlisle/Mechanicsburg, PA	851	2,399,454	2017
UPMC Magee-Womens Hospital	Pittsburgh, PA	327	1,202,191	1999
UPMC Children's Hospital of Pittsburgh	Pittsburgh, PA	313	1,079,803	2001
UPMC North Central PA (5)	Williamsport/Wellsboro/Lock Haven/Muncy/Coudersport, PA	569	848,999	2016
UPMC Hamot (2)	Erie, PA	369	744,632	2011
UPMC Altoona	Altoona, PA	346	632,422	2013
UPMC Mercy	Pittsburgh, PA	398	411,154	2008
UPMC Passavant (2)	McCandless/Cranberry, PA	316	400,681	1997
UPMC Western Maryland	Cumberland, MD	188	371,978	2020
UPMC St. Margaret	Pittsburgh, PA	181	254,553	1997
UPMC East	Monroeville, PA	155	189,698	2012
UPMC Chautauqua	Jamestown, NY	135	160,176	2016
UPMC Horizon (2)	Greenville/Farrell, PA	69	155,782	1998
UPMC Northwest	Seneca, PA	134	138,965	2001
UPMC McKeesport	McKeesport, PA	150	135,217	1998
UPMC Jameson	New Castle, PA	91	122,003	2016
UPMC Somerset	Somerset, PA	56	101,878	2019
UPMC Whitfield	Waterford, Ireland	106	67,007	2018
UPMC Bedford	Bedford, PA	24	51,825	1998
ISMETT (c)	Palermo, Italy	87	45,560	1997
UPMC Aut Even	Kilkenny, Ireland	71	29,264	2021
Salvator Mundi	Rome, Italy	50	22,016	2018
UPMC Kildare	Clane, Ireland	39	12,762	2019
Total		**6,437**	**$12,005,179**	

(a) Beds in Service metric represents average available/staffed beds for all patient types for total fiscal year.

(b) Eye & Ear Hospital, Presbyterian Hospital and WPIC constitute the original hospitals of the System. Montefiore Hospital affiliated with the System in 1990 and Shadyside Hospital affiliated with the System in 1997.

(c) Revenues represent management and professional fees paid by ISMETT to UPMC.

SOURCE: UPMC Records

All of the System's domestic hospitals are licensed by the Commonwealth's Department of Health, the New York Department of Health or the Maryland Department of Health, as applicable, and are fully accredited by The Joint Commission.

Hospital Delivery Model. Health Services' clinical care delivery model leverages its academic medical center to create an interconnected system of five regional "hubs" that extend across local service areas. Through this model, the System provides high-quality care and resources locally, establishes centers of excellence for complex care, and effectively disseminates best practices across the network. Communities also benefit from reduced travel time and costs for residents who would otherwise need to travel out of area for care.

In each of the areas, collaborating System providers function as a regional hub to deliver an array of specialized programs and services to residents of the surrounding communities. These "hubs" complete joint Community Health Needs Assessments to identify important local health issues, while supporting a coordinated, system-wide community health strategy that extends across the region. Working together, the System's hospitals are committed to advancing health for residents in the community. Below are descriptions of each hub.

Southwestern Pennsylvania/Greater Pittsburgh Area. There are eight licensed System hospitals in Allegheny County including three state-of-the-art specialty hospitals – UPMC Children's Hospital of Pittsburgh, UPMC Magee-Womens Hospital and UPMC Presbyterian Shadyside (of which UPMC Western Psychiatric Hospital is a part) – and five community hospitals, including UPMC East, UPMC McKeesport, UPMC Mercy, UPMC St. Margaret, and UPMC Passavant (McCandless and Cranberry campuses). These System hospitals serve the Greater Pittsburgh area and pioneer and scale innovative health care models across the System's network. Following is a description of UPMC Presbyterian Shadyside and various specialty services that are offered primarily in these facilities.

UPMC Presbyterian Shadyside. UPMC Presbyterian Shadyside was created by the merger of UPMC Presbyterian and UPMC Shadyside, two of the largest acute care medical/surgical and quaternary hospitals in Pittsburgh. The merger of UPMC Presbyterian and UPMC Shadyside was completed on May 30, 2003. UPMC Presbyterian Shadyside is a Pennsylvania nonprofit corporation whose sole member is UPMC.

UPMC Presbyterian Shadyside operates facilities on two campuses located approximately two miles apart, referred to as the "Oakland Campus" and the "Shadyside Campus."

The Oakland Campus of UPMC Presbyterian Shadyside includes the following structures: Presbyterian Hospital, Montefiore Hospital, Eye and Ear Institute, Falk Clinic and a distinct-part psychiatric unit, UPMC Western Psychiatric Hospital, previously known as Western Psychiatric Institute and Clinic. The University leases UPMC Western Psychiatric Hospital's physical plant from the Commonwealth. UPMC Presbyterian Shadyside operates UPMC Western Psychiatric Hospital under a sublease with the University. Facilities of UPMC Magee-Womens Hospital and the main campus of the University are also located in the Oakland area. A number of these facilities are connected by a series of walkways, pedestrian bridges, and underground tunnels.

The Shadyside Campus includes the main UPMC Shadyside facilities, UPMC Hillman Cancer Center's flagship research and outpatient care facility, the UPMC Cancer Pavilion, and a UPMC Urgent Care facility. UPMC Hillman Cancer Center's Shadyside location is an approximately 355,000 square-foot facility dedicated to research and outpatient services for cancer patients. The UPMC Cancer Pavilion is a five-story, approximately 100,000 square-foot office building that accommodates administrative and physician offices.

UPMC Presbyterian Shadyside is accredited by the Pennsylvania Trauma Systems Foundation as an Adult Level I Trauma Center, one of only three in southwestern Pennsylvania.

As an academic medical center, in collaboration with the University, the System uses research, educational, and clinical programs to translate advances in medical science into enhanced medical capabilities. UPMC Presbyterian Shadyside is a major resource facility for the extensive research programs of its medical staff, the University's School of Medicine, and the University's Schools of the Health Sciences. Consistently recognized for excellence, UPMC Presbyterian Shadyside is nationally ranked in 9 adult specialties by *U.S. News & World Report*. It is also ranked #1 in Pittsburgh. In addition, UPMC Mercy is nationally ranked for rehabilitation and UPMC Magee-Womens Hospital is nationally ranked for obstetrics and gynecology.

UPMC Presbyterian Shadyside is the primary clinical training site for students of the University's Schools of Medicine and Nursing, as well as those in other health care disciplines, such as respiratory therapists and occupational and physical therapists. It is also a major clinical practice site supporting clinical rotations and transition/practicum placement for the nursing baccalaureate programs including at Duquesne University, Chatham University, Carlow University, Penn State University, Robert Morris University, Franciscan University of

Steubenville, West Liberty University and LaRoche University. UPMC Presbyterian Shadyside also serves as a clinical practice site for diploma and associate degree nursing programs such as the Community College of Allegheny County, the UPMC Schools of Nursing, and Pittsburgh Technical College. UPMC Presbyterian Shadyside is also a major clinical practice site for graduate nursing students from many different programs in the Advanced Practice Provider role as well as advanced leadership, education, and informatics areas of focus. UPMC Presbyterian Shadyside offers opportunities to participate in clinical, educational, and administrative programs to undergraduates and graduates enrolled in the University's School of Health and Rehabilitation Sciences, the School of Pharmacy, the School of Public Health, and the School of Dental Medicine. In addition, UPMC Presbyterian Shadyside operates one of the UPMC Schools of Nursing, a Radiologic Technology program and a Surgical Technology program. Each business unit participates in a wide range of training programs with other educational institutions across the region.

Transplantation Services and the Thomas E. Starzl Transplantation Institute. The Thomas E. Starzl Transplantation Institute at UPMC was a cradle for the development of modern organ transplant technology. The System's transplant program is one of the world's largest and most active. To date, more than 20,000 transplants have been performed at the System, a single-center experience that is unmatched by any other program. For the past five years, the System has performed more living-donor liver transplants than any other center in the United States.

The System's transplant programs are internationally renowned for their far-reaching influence on the entire field. System researchers and surgeons have made many of transplantation's most important advances. From new tailored drug treatment to devices that extend the viability of organs, to a strong commitment to living donor procedures, the System's team is setting new standards in transplant care. The System's organ transplant expertise extends globally as well. The Mediterranean Institute for Transplantation and Specialized Therapies ("ISMETT") is a leading transplant center and an international center for specialized medicine serving the people of the Mediterranean region. It is located in Palermo, Sicily, Italy. Working closely with the System for training, research, etc., ISMETT (operated by UPMC Italy) and its team of clinicians has become a world-class hospital that offers life-saving transplants to the people of the region and beyond.

The UPMC Immune Transplant and Therapy Center. A partnership between UPMC and the University, the UPMC Immune Transplant and Therapy Center (ITTC) is a pioneering force in the development of novel immunotherapies for transplant, cancer, chronic diseases, and the biology of aging. With the creation of the ITTC, the System brought its brightest minds in immunotherapy research together to explore the potential of immune transplant and therapy, design novel treatment approaches that harness or control the body's natural defenses to fight harmful diseases and infection, and to share ideas and drive further development in treatments for cancer and other diseases. With extended research, expertise and access to a robust series of clinical trials, the System is dedicated to bringing life-saving solutions to its patients as quickly as possible.

Pediatric Services. UPMC Children's Hospital of Pittsburgh ("UPMC Children's") is the region's only hospital dedicated exclusively to the care of children. UPMC Children's, a specialty acute care teaching and research hospital, provides a comprehensive range of healthcare services for infants, children, adolescents, and young adults, and functions as a referral center for secondary, tertiary, and quaternary levels of care. UPMC Children's opened its 10-acre campus in Pittsburgh's Lawrenceville neighborhood in 2009.

UPMC Children's operates a network of ambulatory and specialty care centers throughout the region, including locations in Pennsylvania, Maryland, and West Virginia. In 2020, UPMC and UPMC Children's opened UPMC Children's Harrisburg, a 72-bed pediatric inpatient unit located at UPMC Harrisburg. Advances in telemedicine technology allow for 24/7 connectivity between UPMC Children's Harrisburg and the pediatric specialists at UPMC Children's. UPMC Children's Harrisburg comprises acute care and pediatric and neonatal intensive care beds.

Pediatric primary care is provided at two primary care centers, and via the Ronald McDonald Care Mobile, a "doctor's office on wheels" that visits underserved communities throughout the Pittsburgh region. UPMC Children's also owns UPMC Children's Community Pediatrics ("UPMC CCP"), which comprises more than 250 pediatric providers practicing at more than 55 sites throughout the region. UPMC CCP is the largest pediatric and adolescent primary care medical network in western Pennsylvania. In addition, UPMC Children's Express Care is available for after-hours care for minor injuries and illnesses at 10 sites throughout western and central Pennsylvania, specifically Cranberry, Erie, Hummelstown, Monroeville, Moon, South Fayette, Washington, West Mifflin, and Wexford. Its latest location opened at UPMC Children's in Lawrenceville in 2022.

UPMC Children's is nationally and internationally recognized for its expertise in a number of signature services including cardiology, cardiothoracic surgery, critical care medicine, diabetes, hematology/oncology and blood and marrow transplantation, neuroscience, ophthalmology, organ transplantation, and rare disease therapy. Its Pediatric Intensive Care Unit is one of the nation's most comprehensive care facilities of its type. Its Benedum Pediatric Trauma Program is the region's only Level I Regional Resource Pediatric Trauma Center, and one of only two in Pennsylvania. As the nation's first pediatric transplant program, the Hillman Center for Pediatric Transplantation has been at the forefront since 1981, performing pediatric transplants at among the highest numbers and survival rates in the nation.

UPMC Children's also functions as a teaching and research institution affiliated with the University School of Medicine. It houses the University's Department of Pediatrics and serves as the primary teaching site for the clinical training of resident and fellow pediatric physicians. UPMC Children's was named #6 on the Best Children's Hospitals Honor Roll by *U.S. News & World Report* for 2022-23.

In December 2009, UPMC Children's became the first pediatric hospital in the United States to achieve a Stage 7 Award from Healthcare Information and Management Systems Society ("HIMSS") Analytics for achieving a virtually paperless patient record environment and the most comprehensive use of electronic medical records ("EMRs"). In 2015, it was the recipient of a prestigious Enterprise Davies Award from HIMSS. In 2012, UPMC Children's first achieved ANCC Magnet Recognition® status from the American Nurses Credentialing Center ("ANCC"). The hospital earned re-designation status in 2017 and again in 2022.

In 2018 and 2020, UPMC Children's was named among the nation's Most Innovative Children's Hospitals by *Parents* Magazine. It earned designation as a top children's hospital by the Leapfrog Group in 2020 and 2022.

Women's Services. Recognized as a National Center of Excellence in Women's Health by the U.S. Department of Health and Human Services, UPMC Magee-Womens Hospital ("UPMC Magee") is the region's premiere women's health care provider. UPMC Magee is nationally ranked by *U.S. News & World Report* for excellence in gynecology and rated as a 2022-2023 High Performing Hospital for Maternity Care (Uncomplicated Pregnancy). A Magnet®-designated hospital, UPMC Magee also is recognized by *Newsweek* as one of the best maternity hospitals in the U.S.

UPMC Magee is a pioneer in gender-based medicine, with the first interdisciplinary research institute focusing exclusively on the health issues of women and infants and the numerous biological differences that are gender specific.

A full-service, acute care research and teaching hospital for women, men, and newborns, UPMC Magee delivers nearly 10,000 babies and performs more than 13,300 surgeries annually. UPMC Magee's 77-bed neonatology intensive care unit is one of the largest in Pennsylvania, treating more than 1,900 babies each year. UPMC Magee is located approximately three blocks from the Oakland Campus. In addition to the main hospital facility, UPMC Magee operates a network of specialty care services throughout the region – physician offices, women's imaging centers, and community neighborhood health centers. Nationally renowned signature services and programs include reproductive endocrinology, fertility preservation, neonatology, maternal fetal medicine, women's cancer – including expansive breast and gynecologic oncology programs – and one of the largest academic bariatric surgery programs in the country.

UPMC Magee is one of the original six recipients of the U.S. Department of Health and Human Services award as a National Center of Excellence in Women's Health and, in 2019, achieved Magnet Recognition® status from the ANCC.

Minimally Invasive Neurosurgery. Traditional treatment for serious brain, spine, vascular, and neurological conditions often required extensive surgery with higher chances of damage to the body and long recovery periods. Due to innovative surgical techniques developed and/or pioneered by physicians at the UPMC Neurological Institute, neurosurgeons can now treat many patients using custom surgical tools and powerful imaging technology to visualize and access hard-to-reach areas with minimal or no incisions. As a result, patients frequently can return to normal activities within hours or days of their treatment.

Cancer Services. In an effort to address the needs for cancer care throughout its service area, the System has coordinated cancer services under one operating unit with the University. UPMC Hillman Cancer Center ("UPMC Hillman") is one of the largest cancer networks in the country and consists of scientists and healthcare professionals in disciplines ranging from cancer prevention and early detection to novel therapeutic discovery, survivorship, and end-of-life care. UPMC Hillman received an "exceptional" score, the highest achievable rating—and its largest grant to date—when it was recently renewed as a National Cancer Institute ("NCI")-designated Comprehensive Cancer Center for another five-year period. UPMC Hillman is the only NCI-designated comprehensive cancer center in the region.

UPMC Hillman is an integrated network encompassing cancer care services, research and clinical trials, practitioner training, prevention and early detection services, and other aspects of cancer care. It includes a multidisciplinary team of more than 2,000 physicians, researchers, administrative staff, and other healthcare professionals at more than 70 locations in western and central Pennsylvania, Ohio, Maryland, and New York and offers 17 specialty care programs for patients with rare, advanced, or metastatic cancers.

UPMC Hillman is one of the largest networks in the U.S. to be recognized by accredited, independent organizations, including the American College of Radiation Oncology Practice and Quality Oncology Practice Initiative, for quality, consistency, and outcomes in comprehensive care. Additionally, UPMC Hillman has international locations in Italy and Ireland and collaborates with other hospitals in Europe and Asia.

UPMC Behavioral Health. UPMC Western Psychiatric Hospital is a nationally recognized leader in mental health clinical care, research, and education. It is one of the nation's foremost university-based psychiatric care facilities through its integration with the Department of

Psychiatry of the University's School of Medicine. UPMC Western Psychiatric Hospital is the hub of UPMC Western Behavioral Health, a network of nearly 60 community-based programs providing specialized mental health and addiction care for children, adolescents, adults, and seniors throughout western Pennsylvania. The unique depth of expertise from the academic hub, as well as the breadth and scope of its ambulatory and community-based offerings, make UPMC Western Psychiatric Hospital and UPMC Western Behavioral Health valuable community resources.

Additional Specialty Services. Additional specialty services available at the System from the Southwestern Pennsylvania sites include, among others:

- Orthopaedic Care
- Sports Medicine and Concussion Program
- Center for Healthy Aging
- Heart and Vascular Institute
- Comprehensive Lung Center
- The McGowan Institute for Regenerative Medicine
- The Peter M. Winter Institute for Simulation Education and Research (WISER)
- Lupus Center of Excellence
- Stroke Institute
- Digestive Disorders Center
- UPMC Rehabilitation Institute
- Esophageal and Lung Surgery Institute

Northwest Pennsylvania and New York. UPMC Hamot, located in Erie, Pennsylvania, serves the region as an acute-care teaching hospital and regional referral center. The hospital delivers a full suite of quality medical services, including highly specialized medical and surgical treatment, a Level III neonatal intensive care unit, and the region's only Level II Trauma Center. UPMC Chautauqua, located in southwestern New York, offers an extensive range of inpatient and outpatient acute services to meet the healthcare needs of a large rural population. In McKean County, Pennsylvania, UPMC Kane provides quality medical services to area residents who may otherwise have to travel long distances for care. It provides access to medical and surgical care, as well as specialized services. The hospital also operates the first tele-Emergency Department in the Commonwealth of Pennsylvania. UPMC Northwest, located in Seneca, Pennsylvania, is the only hospital in Venango County and offers area residents access to cutting-edge medical services not typically found at a local community hospital, as well as providing inpatient rehabilitation and transitional care. UPMC Horizon is an acute-care teaching hospital located in Mercer County, approximately one hour northwest of Pittsburgh, Pennsylvania, operating from campuses located in Farrell and Greenville providing inpatient, outpatient, and emergency care, as well as specialized diagnostic and treatment procedures such as those offered by UPMC Hillman. UPMC Jameson is an acute-care hospital in New Castle, Pennsylvania, approximately 55 miles north of Pittsburgh and 20 miles southeast of Youngstown, Ohio. UPMC Jameson delivers a full range of quality medical services — including specialized invasive and non-invasive services at The Heart and Vascular Institute at UPMC Jameson.

West Central Pennsylvania and Maryland. Located in Blair County, UPMC Altoona is a tertiary-care teaching hospital that serves as the anchor for the System's regional hub in west central Pennsylvania. The hospital delivers comprehensive services, such as cancer care, heart and vascular services, and neurosurgery; and its Level II Trauma and Thrombectomy Capable Stroke Centers serve patients in a 20-county region. UPMC Bedford is an acute-care hospital in Bedford County. It is the county's only hospital and provides area residents with access to medical and surgical services, as well as cutting-edge medical services not typically found at a local community hospital, including comprehensive wound care. UPMC Somerset joined on February 1, 2019, and efforts are underway to expand clinical programs, establish a multi-specialty consultation program, add a new primary care center, recruit and retain outstanding medical staff, and update information technology capabilities at the hospital. UPMC Western Maryland, an acute care hospital located in Cumberland, Maryland, joined on February 1, 2020, and offers a wide range of inpatient and outpatient services through its accredited cancer center, certified stroke center, robotic surgery program, and cutting-edge neurosurgery operating suite. This hospital is also designated as a Level III Adult Trauma Center in Maryland, in addition to offering the only open-heart surgery in the state, west of Baltimore, through its award-winning cardiac surgery center.

North Central Pennsylvania. In the Susquehanna region of Central Pennsylvania, the System has six campuses that function as one fully integrated hub offering an extensive range of inpatient and outpatient acute and rehabilitation services to meet the healthcare needs of a large rural population. The System is a leading provider of advanced medical services in north central Pennsylvania, offering a comprehensive network of physicians in a range of specialties including highly advanced oncology and cardiac care. In 2016, the System started investing $500 million to transform the future of health care in the region through projects that include increasing local access to health care by expanding facilities in new communities, opening a newly renovated UPMC Hillman Cancer Center in Williamsport, expanding emergency department treatment capacity achieving Level II Trauma designation, and building an all-new center of excellence for physical medicine and rehabilitation. Three campuses, along with all their subsidiaries, joined the System in October 2016 - in Lycoming County (UPMC Muncy and UPMC Williamsport, including its Divine Providence Campus) and in Tioga County (UPMC Wellsboro). In 2017, the System expanded to include UPMC Lock Haven, in Clinton County, which was previously a for-profit hospital. In 2023, UPMC began working with the Pennsylvania Department of Health to convert services at UPMC Lock Haven to an outpatient emergency department. In March 2018, UPMC Cole, located in Potter County, joined the System.

Central Pennsylvania. The System is a leading provider of inpatient and outpatient health care in the region surrounding Harrisburg, with a network of care that encompasses more than 200 outpatient locations, including primary and specialty care, UPMC Urgent Care Centers, and UPMC Hillman Cancer Centers. Through an integrated network of seven hospitals (UPMC Harrisburg, UPMC West Shore, UPMC Community Osteopathic, UPMC Carlisle, UPMC Lititz, UPMC Memorial, and UPMC Hanover), the System provides a regionalized approach to health care. The System offers high-quality specialized tertiary services at UPMC Harrisburg, including heart and vascular services, kidney transplant surgery, neurologic and advanced stroke care, women's health, and emergency medicine. UPMC Children's Harrisburg has 72 beds, including NICU, PICU, and acute care beds that bring the nationally ranked care of UPMC Children's to Central Pennsylvania. A 104-bed hospital, UPMC Memorial, opened in August 2019 and has since continued to expand its campus with access to the UPMC Leader Surgery Center, UPMC Hillman Cancer Center and UPMC Liver Transplant Clinic. Meanwhile, UPMC West Shore has continued to expand its campus to include the largest heart and vascular outpatient center in the region.

Physician Services. The System employed 5,375 physicians as of December 31, 2022. The majority of these physicians are included in the System's faculty practice plan, the University of Pittsburgh Physicians ("UPP") and a network of community physicians called Community Medicine, Inc. ("CMI"). UPP was founded in 1999 through the consolidation of 16 independent clinical faculty practice plans. At that time, UPP became a subsidiary of UPMC. UPP was created to provide the intellectual and financial resources to support the System's academic commitment to the University's School of Medicine, and to foster a collegial environment.

CMI was created on January 1, 2001 through the consolidation of over 100 community-based physician practice corporations into one legal, tax-exempt entity. The CMI physician practices are comprised primarily of primary care physicians (representing family medicine and internal medicine), as well as specialists in orthopedic surgery and neurosurgery.

The management staff and practice management functions of UPP and CMI were combined to form UPMC Physician Services which provides centralized management oversight and services to the physicians/practices of UPP, CMI and other employed physicians of the System that focus on pediatrics, cancer care, and women's health services.

The System and the University's School of Medicine have a cooperative program for the recruitment of physicians and faculty.

The System's medical staff includes nationally and internationally recognized leaders in their respective fields. More than 400 System physicians have been recognized as 2022 "Best Doctors" across 60 different specialties. The System's doctors represent more than half of the physicians listed in Pittsburgh. These physicians are part of the Top Doctors® list, which is compiled by Castle Connolly. The Castle Connolly Top Doctor selection process is entirely merit-based. Doctors cannot pay to be listed. Castle Connolly's peer-to-peer nominations and rigorous research process ensure only the most qualified physicians are included.

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Table 2 below lists the total number of physicians on the medical staff of the Subsidiary Hospitals by specialty and the percent board-certified as of December 31, 2022.

Table 2 **Medical Staff - Subsidiary Hospitals**			
Specialty	**Number of Physicians**	**Number Board Certified**	**Percent Certified**
CRITICAL CARE MEDICINE	133	118	89%
DERMATOLOGY	67	64	96%
EMERGENCY MEDICINE	393	301	77%
FAMILY MEDICINE	842	791	94%
HOSPITAL BASED PHYSICIANS	1,238	1,158	94%
MEDICINE			
Cardiology	305	293	96%
Endocrinology	65	64	98%
Gastroenterology	183	180	98%
General Medicine	1059	955	90%
Geriatric Medicine	35	29	83%
Hematology/Oncology	273	259	95%
Infectious Disease	96	93	97%
Nephrology	150	137	91%
Pulmonology	172	166	97%
Rheumatology	54	52	96%
NEUROLOGY	191	171	90%
NEUROSURGERY	79	56	71%
OBSTETRICS/GYNECOLOGY	395	348	88%
OPHTHALMOLOGY	228	197	86%
ORAL SURGERY/DENTAL MEDICINE	110	74	67%
ORTHOPAEDICS	494	404	82%
OTOLARYNGOLOGY	99	88	89%
PEDIATRICS	830	814	98%
PHYSICAL MEDICINE/REHABILITATION	104	92	88%
PSYCHIATRY	237	208	88%
SURGERY			
Cardiovascular & Thoracic Surgery	59	46	78%
General Surgery	333	273	82%
Plastic Surgery	89	78	88%
UROLOGY	108	89	82%
TOTAL	**8,421**	**7,598**	**90%**
Source: UPMC Records, Credentials Verification Office			

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Community Provider Services. Community Provider Services includes senior living, skilled nursing, home care, and ambulatory rehabilitation services. As of December 31, 2022, the 27 facilities listed below, certain of which are joint ventures, provide comprehensive long-term care services to support and assist over 2,600 mostly senior residents each day in maintaining their health and quality of life. The levels of care offered include independent living, assisted living, personal care, skilled nursing, and dementia care. Community Provider Services is also responsible for a continuum of home care services, a network of more than 70 ambulatory rehabilitation centers that provide physical and occupational therapy, and the University's Institute on Aging which offers information, services, and programs available for older adults through its toll-free information and referral number.

Table 3
Comprehensive Long-Term Care Facilities

Facility	Location	County	Skilled Nursing Beds	Assisted Living /Independent Living Units
Asbury Heights of UPMC	Mt. Lebanon	Allegheny	139	271
Avalon Place	New Castle	Lawrence	84	--
Avalon Springs Place	Mercer	Mercer	100	3
Beatty Pointe Village	Monroeville	Allegheny	--	124
Canterbury Place	Lawrenceville (Pittsburgh)	Allegheny	115	50
Cole Place*	Coudersport	Potter	44	--
Cole Manor	Coudersport	Potter	--	28
Cranberry Place	Cranberry Township	Butler	150	--
Cumberland Woods Village	McCandless Township	Allegheny	--	99
Cumberland Crossing	McCandless Township	Allegheny	--	100
Hampton Fields Village	Hampton Township	Allegheny	--	125
Haven Place**	Lockhaven	Clinton	90	--
Heritage Place	Shadyside/Squirrel Hill (Pittsburgh)	Allegheny	143	--
Jameson Care Center	New Castle	Lawrence	78	36
Lighthouse Pointe Village at Chapel Harbor	O'Hara Township	Allegheny	--	131
Seneca Hills Village	Penn Hills	Allegheny	--	123
Seneca Manor	Penn Hills	Allegheny	--	82
Seneca Place	Penn Hills	Allegheny	174	--
Sherwood Oaks	Cranberry Township	Butler	43	344
Strabane Trails Village(1)	South Strabane Township	Washington	--	123
Strabane Woods of Washington(1)	South Strabane Township	Washington	--	81
Sugar Creek Station	Franklin	Venango	148	4
Muncy Place**	Muncy	Lycoming	138	--
The Green Home**	Wellsboro	Tioga	120	--
The Laurels Personal Care Facility	Wellsboro	Tioga	--	30
Vanadium Woods Village	Scott Township	Allegheny	--	121
Weatherwood Manor	Greensburg	Westmoreland	--	81

[1] Joint ventures with The Washington Hospital.

*Legally owned by UPMC Cole

**Legally owned by UPMC Susquehanna

INSURANCE SERVICES

UPMC owns the Insurance Subsidiaries that provide healthcare financing products and network care delivery operations through its Insurance Services component, which collectively is the second largest provider-owned health plan in the United States. UPMC began creating the Insurance Subsidiaries in the late 1990s in response to the evolving influence of the managed care marketplace and the need to integrate the full continuum of services necessary to effectively meet customer expectations. The Insurance Subsidiaries together constitute the largest health insurer in western Pennsylvania, offering a full range of commercial and government health insurance programs. Insurance Services accounted for approximately $13.9 billion in operating revenues for the fiscal year ended December 31, 2022, before eliminations. A significant portion of medical costs of Insurance Services is provided through contracts with the Subsidiary Hospitals and employed physicians in Physician Services. The Insurance Subsidiaries are required to maintain net assets to meet statutory requirements of the Department of Insurance of the Commonwealth as of the end of each calendar year. This estimated requirement was $1.6 billion as of December 31, 2022. The Insurance Subsidiaries had an "Excellent" rating from the National Committee for Quality Assurance ("NCQA") in 2022.

The major Insurance Subsidiaries, their lines of business and their operating revenues for fiscal year 2022 are shown in the table below. More detailed descriptions of the companies, including the products they offer, follows Table 4.

Table 4
Insurance Services Division

Subsidiary	Line of Business	Revenues for the Twelve Months Ended December 31, 2022 (dollars in millions)
UPMC For You, Inc.	Pennsylvania Non-profit Health Maintenance Organization ("HMO") offering Medicaid products, Medicare Special Needs Plans and Community HealthChoices	$8,050
UPMC Health Options, Inc.	Pennsylvania Preferred Provider Organization ("PPO") Risk Assuming Non-Licensed Insurer ("RANLI") offering Commercial products	2,013
UPMC Health Plan, Inc.	Pennsylvania Non-profit HMO offering commercial and government products	1,897
Community Care Behavioral Health Organization	Pennsylvania Non-profit Health Maintenance Organization ("HMO") offering both commercial and governmental behavioral health products	1,470
UPMC Health Benefits, Inc.	Pennsylvania licensed Insurance company offering Medicare PPO, Workers' Compensation, Employer stop loss, Individual, Dental, Vision, Commercial Group and Secondary Coverage products	166
UPMC Benefit Management Services, Inc.	State licensed third party administrator offering a full suite of employer self-funded products	132
UPMC Health Network, Inc.	Pennsylvania Hospital Plan Corporation and Professional Health Services Plan Corporation offering a Medicare PPO product	100
UPMC Health Coverage, Inc.	Pennsylvania Non-profit HMO offering commercial and special needs products	86
Other entities	Various companies providing data analytics, employee health and productivity, and benefit plan designs and other services	7
Total Operating Revenue		**$13,921**

UPMC for You provides benefits and services to those eligible for Medical Assistance, also known as Medicaid and is the largest Medical Assistance Managed Care Organization in western Pennsylvania. An additional product offering is UPMC for Life Dual, which provides benefits and services for those eligible for both Medicare and Medicaid. Community HealthChoices ("CHC") is a statewide program introduced by the Commonwealth to offer long-term care services in five distinct regions across the Commonwealth.

UPMC Health Options includes several products and services to serve the needs of both employer groups and individuals and their families. These products include: UPMC HealthyU, UPMC Inside Advantage, UPMC Business Advantage, UPMC Small Business Advantage, MyFlex Advantage, UPMC COBRA Advantage and Individual and Small Group ACA Compliant PPO plans currently offered on the Pennsylvania Insurance Exchange.

UPMC Health Plan includes UPMC for Life, a suite of Medicare HMO plans, including a prescription drug program as well as health and disease management programs, and also offers a commercial HMO group product and service.

Community Care Behavioral Health ("CCBH") is the largest nonprofit behavioral health managed care company in the nation, which supports the CHC program by managing behavioral health services for Medical Assistance recipients in 43 counties. Additionally, through integrated services, Community Care Behavioral Health provides behavioral health management for UPMC Health Plan's commercial and Medicare members. Also offered is UPMC for Kids, a Children's Health Insurance Program ("CHIP"), which covers uninsured children who do not qualify for Medical Assistance.

UPMC Health Benefits includes UPMC for Life offered in Pennsylvania and West Virginia, Individual Advantage, UPMC Dental Advantage, UPMC Vision Advantage, Workers' Compensation offered in Pennsylvania, Delaware, Maryland, New Jersey, West Virginia, Florida, DC, and Virginia, employer stop loss coverage, Small Group ACA Compliant PPO and a full suite of Medicare supplemental products.

UPMC Benefit Management Services offers a full suite of self-funded employer solutions for health, dental, and vision benefits along with UPMC Work Partners which offers a comprehensive suite of programs and technology to promote health and productivity to the region's employers, including health management, employee assistance, workers' compensation, family and medical leave, disability, consulting, data analytics, and return-to-work programs and services. Additionally, provides offerings for LifeSolutions which provides employers with comprehensive and proactive employee assistance programs ("EAP").

UPMC Health Network includes UPMC for Life, a suite of Medicare PPO plans, including a prescription drug program as well as health and disease management programs.

UPMC Health Coverage includes ACA-compliant HMO products offered to both on and off-marketplace group employers and individuals in Pennsylvania, as well as a Special Needs Plan in the southeastern region of Pennsylvania.

Enrollment Trends. Total enrollment in products offered by Insurance Services has grown substantially. The table below shows the membership by plan product.

Table 5

Enrollment in Insurance Service Products

*As of December 31	Commercial - Fully Insured	Commercial – ASO	Medical Assistance	Medicare	EAP Solutions	Work Partners	Community Health Choices	Total TPA	Community Care	Dental & Vision and Ancillary	Total Enrollment
Jan 1, 2023	402,457	227,810	723,214	205,045	192,117	632,759	140,024	16,300	1,501,295	442,019	**4,483,040**
Jan 1, 2022	446,915	228,147	540,386	199,999	178,011	556,268	134,166	15,032	1,270,616	446,321	**4,015,861**
2022	412,288	226,736	717,300	200,684	186,101	631,943	139,657	13,178	1,494,166	442,407	**4,464,460**
2021	464,710	238,922	535,339	200,128	176,551	566,879	133,914	67,475	1,258,036	442,376	**4,084,330**
2020	512,710	243,427	485,249	196,758	174,657	550,901	132,986	66,457	1,159,027	447,126	**3,969,298**
2019	536,981	246,871	419,540	192,788	152,459	475,636	70,870	80,895	995,203	404,316	**3,575,559**
2018	501,802	214,816	419,324	182,337	138,793	431,336	43,260	98,165	981,691	385,007	**3,396,531**
2017	498,290	210,117	420,239	168,784	143,066	377,811	-	96,620	989,553	351,984	**3,256,464**
2016	459,386	177,960	404,077	157,779	137,595	311,047	-	190,049	964,570	267,460	**3,069,923**
2015	394,573	174,691	367,840	146,973	157,768	283,107	-	201,338	908,866	239,402	**2,874,558**
2014	336,905	166,926	268,842	125,917	159,142	265,017	-	118,269	740,781	190,925	**2,372,724**
2013	336,843	168,063	252,708	126,028	157,089	229,784	-	46,780	769,086	177,098	**2,263,479**
2012	287,859	173,597	237,289	113,095	137,137	225,085	-	-	715,762	149,070	**2,038,894**
2011	230,770	163,762	156,334	101,977	129,198	171,686	-	-	669,474	17,323	**1,640,524**
2010	220,377	149,514	142,635	93,491	123,598	163,507	-	-	620,765	-	**1,513,887**
2005	182,665	125,413	99,785	29,620	107,847	66,682	-	-	267,237	-	**879,249**
2000	125,975	52,168	71,153	-	-	-	-	-	118,111	-	**367,407**

Source: UPMC Records
*Except where noted

INTERNATIONAL SERVICES

The goal of International Services is to leverage the System's capabilities to generate new revenue streams. International Services' mission is to serve as the enabling platform through which the System's global health strategy is pursued. Its mandate is to establish and operate profitable new lines of business by exporting the System's medical and operational expertise and transformational medical and information technologies internationally with the goal of improving patient care in the communities it serves and maximizing operational efficiencies. These activities support the System's strategic framework by creating jobs locally, elevating its brand and reputation globally, attracting investment capital and generating returns on investments that fund the System's core activities, research and future investments that result in direct benefit to the communities the System serves. Before eliminations, International Services accounted for approximately $105 million of operating revenues for the fiscal year ended December 31, 2022.

International Services maintains a strategy focused on aligning resources to support efforts in five core countries: Ireland, Italy, Kazakhstan, China, and Croatia. The following sections provide a summary of activity in each country of focus:

Ireland. UPMC acquired UPMC Whitfield Hospital and full ownership of the UPMC Whitfield Cancer Centre in May 2018. The facility is located on the outskirts of Waterford City and is the largest private hospital in the South East Region of Ireland. UPMC Whitfield Hospital provides access to an advanced cancer center, orthopaedics, ophthalmology, cardiology, endoscopy and a range of other surgical specialities.

UPMC in partnership with Bon Secours Health System opened the Cork Radiotherapy Centre in July 2019. The center offers advanced radiotherapy treatments in the South West Region of Ireland. The joint venture successfully negotiated a reimbursement contract with VHI, the largest private payor in Ireland.

UPMC and the Institute of Eye Surgery ("IOES") acquired UPMC Kildare, a 39-bed facility on the outskirts of Dublin in November 2019. The facility boasts an ophthalmology center of excellence, while also developing ear, nose and throat, urology, gynecology and oncology service lines to complement UPMC Whitfield's service mix.

The first UPMC Outreach Centre was opened in Carlow, Ireland in late 2019. The center provides specialized physician office visits in the community and helps develop referrals for the UPMC Ireland network.

In January 2021, UPMC acquired Aut Even Hospital, a private elective care facility in Kilkenny (34 miles from UPMC Whitfield) offering surgical, diagnostic and medical services to patients across more than 21 specialties. The 71-bed facility is being integrated into the UPMC Ireland infrastructure as UPMC Aut Even Hospital.

The first international UPMC Sports Medicine Clinic launched in Waterford, Ireland at the Waterford Institute of Technology ("WIT") Arena in November 2020. The UPMC Sports Medicine Clinic is part of the UPMC Concussion Network. The continued evolution of the UPMC Concussion Network continues to attract engagement from many national stakeholders, providing opportunities for collaborations and partnerships. In 2022, three new UPMC Sports Medicine and Institute for Health Clinics were opened at Technological University of the Shannon ("TUS") Limerick, TUS Thurles and Connacht GAA in Ireland.

In March 2023, UPMC closed on the acquisition of the Sports Surgery Clinic ("SSC"), which is a leading independent orthopedic hospital in northern Dublin. The hospital has 101 beds, 40 orthopedic related consultants, and over 400 nurses, physiotherapists, and other health care professionals. This acquisition expands the System's orthopedic care and sports medicine program to make the System a leading provider in Ireland.

Italy. The System's longest established international foothold is through ISMETT, a joint venture of UPMC and the Italian Region of Sicily, for the creation and management of a public hospital in Palermo. ISMETT, as a transplant, specialty surgery and research hospital has performed more than 2,900 transplants since its founding. The collaboration has brought world-class transplant and other specialty healthcare services to southern Italy. UPMC has provided management and professional medical staffing to ISMETT under a management contract since October 1997. As part of the joint venture project, UPMC owns 42% of ISMETT with associated governance rights to ensure balanced control. The ownership structure was revised in 2018 to include a 3% share owned by the ISMETT-affiliated foundation, RiMED Foundation, to improve integration with related research activities.

The System is also supporting the RiMED Foundation by providing services related to the construction and management of the Biomedical Research and Biotechnology Center ("BRBC"), an over 30,000 square meter research center currently under construction and expected to open in 2024.

In 2019, the region of Sicily approved funding for the construction of a new 250-bed, System managed, specialty hospital ("IsMeTT 2") to be located next to BRBC. Design plans were approved by the Ministry of Health in 2022.

In January 2013, UPMC Italy opened UPMC Hillman Cancer Center at San Pietro Fatenbenefratelli ("FBF") Hospital in Rome, Italy. The highly specialized FBF offers innovative radiotherapy treatments and advanced care protocols, such as image-guided radiotherapy and stereotactic radiotherapy ("SRS"). The center was among the first centers in Rome providing SRS capabilities and is now providing the highest number of advanced treatments in the Rome (Lazio) Region.

In 2018, the System opened UPMC Hillman Cancer Center Villa Maria near Naples, Italy. The center provides high-quality radiotherapy services in an underserved area and is the second center, along with San Pietro, in UPMC Italy's oncology network.

UPMC acquired full control of one of the most prominent private hospitals in Rome, Salvator Mundi International Hospital ("SMIH"), in 2018. The acquisition established a hospital platform for the System in Rome that offers specialized treatments and ensures complete access to diagnostic, therapeutic and support services to the community. SMIH is a private 50 plus bed general services hospital located near Rome's city center, focusing on oncology, orthopaedics, sports medicine, neurosurgery and plastic and reconstructive surgery service lines. In 2022, SMIH completed operating room renovations improving surgical and training capabilities and increasing capacity. SMIH obtained full hospital authorization in late 2022, allowing it to reopen its cardiac catheterization and hemodynamics lab. Additional specialty programs in consideration for launch in 2023 include oral surgery, spine clinic, ophthalmology, women's health, hand surgery, and expansion of sports medicine and cardiovascular services.

Kazakhstan. In January 2013, UPMC partnered with Nazarbayev University ("NU") to develop a National Research Oncology Center ("NROC") in the Kazakhstan capital of Astana. By March 2014, UPMC signed a multi-year agreement that positioned the System as the strategic healthcare advisor to NU. At the start, the engagement centered on planning and design, advisory services, clinical training, and co-management of the NROC. As the relationship with NU evolved, the System's scope of services expanded well beyond oncology. Today, UPMC continues to work with NU to improve and transform its clinical, educational and research programs to develop the first integrated academic medical center in Kazakhstan.

China. UPMC executed a framework agreement with Wanda Healthcare to jointly operate five hospitals in some of China's largest cities: Chengdu, Beijing, Shanghai, Guangzhou and Wuhan. Wanda Group, a Global Fortune 500 company, intends to invest $4-5 billion in its new hospital network, with the first facility, Chengdu Wanda-UPMC International Hospital, scheduled to open in 2024. UPMC is providing management oversight and participating in the design/construction process, while Wanda will own, finance, design and build the facilities. In 2019, UPMC signed the hospital management agreement for the (Chengdu) hospital with Wanda, launching the largest U.S.-China medical collaboration.

In 2021, UPMC established a five-year, $7 million partnership with Arion Cancer Center, Beijing's first tertiary private cancer center, which includes support from UPMC Hillman Cancer experts to provide joint tumor boards and second medical opinions. The Arion relationship will provide immediate foundational experience to support the launch of a UPMC cancer network in China, which would include a significant Cancer Center of Excellence at the Wanda-UPMC Chengdu International Hospital.

Croatia. In 2022, the System announced the future addition of a fifth country, Croatia, to the System's portfolio. UPMC entered into a joint venture partnership with Prof. Dragan Primorac, founder and chairman of St Catherine Specialty Hospital, to develop a comprehensive cancer center in the greater Zagreb region. Subject to a public tender process, construction will commence in 2023, with an anticipated opening of 2024.

UPMC ENTERPRISES

As the innovation, venture capital and commercialization arm of the System, the mission of UPMC Enterprises is to transform ideas into thriving businesses and life changing medicine – a mission that articulates, at the highest level, how Enterprises drives the System's disruptive mandate of shaping the future of health care through innovation. UPMC Enterprises leverages a 20 plus year history of developing and investing in businesses that solve complex health care challenges, including successful investments such as Stentor and Evolent Health, by harnessing the strength of the System's clinical, technical, business, and capital resources. The process involves collaborating with colleagues throughout the System and the University, as well as with health care entrepreneurs, companies and investors globally, to develop advanced solutions and new models of care with the potential to be transformative at the System and across the broader market. See Note 16 to the audited financial statements for UPMC and affiliates for the years ended December 31, 2021 and 2022 included as Appendix B hereto for additional information regarding UPMC Enterprises' activities. Unless noted, UPMC Enterprises is a majority owner of the companies listed below.

UPMC Enterprises' focus areas, which work in an integrated fashion to achieve its goals, are as follows:

Digital Solutions. The Digital Solutions team at UPMC Enterprises is focused on connecting the entire health system with technology products that will empower clinicians and payers to provide patient-centered, high-quality, compassionate care at the lowest cost while engaging consumers in all steps of their health care journey. Recent initiatives in this area include:

***Astrata*.** Astrata is a digital health care quality company focused on natural language processing and advanced analytics in value-based care. Launched in 2021, Astrata was formed as a result of a collaboration between UPMC Enterprises, UPMC Health Plan, and the Wolff Center of UPMC. In 2022, Astrata gained two external customer relationships (Providence Health & Services and Change Healthcare).

Clearsense, a technology company that partners with health care organizations to drive more value from data, entered a license agreement that will allow the company to integrate the Alexandria Charts (secure, enterprise-grade, HITRUST-certified cloud platform developed by UPMC Enterprises) platform into Clearsense's end-to-end data management platform for customers such as Banner Health. In connection with the agreement, UPMC received equity in Clearsense, augmenting its initial $5 million investment. UPMC has continued to invest in Clearsense providing governance, technological expertise, and additional capital in support of its next fundraise. UPMC Enterprises is a minority owner.

Rx Express, a UPMC Enterprises initiative to improve pharmacy operations, patient experience and clinical outcomes, is live at ten hospitals and eleven retail pharmacies, serving upwards of 50,000 patients per year. Arrive Health, a System vendor and platform solution focused on solving issues related to medication affordability, access and information transparency acquired Rx Express at the end of 2022 for $3 million. The System will continue to be a customer of multiple lines of business.

RxAnte. Founded with the mission to improve the way medicines are prescribed, taken, and paid for, RxAnte enables health plans, care providers, and pharma to drive clinical quality, reduce drug-related medical spending, and maximize the value of medicines through comprehensive, analytics-powered solutions. Through its Mosaic Pharmacy, RxAnte provides polypharmacy patient management and delivered total cost of care savings for target UPMC Health Plan members (approximately 1,500) over $400 per member per month.

Translational Sciences. Through its Translational Sciences efforts, UPMC Enterprises works to accelerate the application of scientific discoveries to deliver new models of care, narrowing the gap between bench and bedside. The Translational Sciences team was founded with an initial focus on cancer, transplantation, aging and ophthalmology and over the past two years has diversified its core strategic purview to include gene and cell therapy, neurological disorders and expanded cancer modalities and treatments. Recent activities include:

Avista spun out with intellectual property from the University to develop novel, highly targeted and efficacious gene therapy treatments of retinal dystrophies, a group of genetic mutations that cause degeneration of the retina and subsequent blindness. In 2022, the company signed a collaboration and exclusive license agreement with Roche Pharmaceuticals ("Roche"). The partnership leverages Avista's scAAVengr platform to develop intravitreal viral vector capsids matching profiles defined by Roche. The partnership includes an upfront payment from Roche of $7.5 million with a total potential revenue exceeding $1 billion based on future development milestones and commercial royalty payments. Recent data developed by Avista has exceeded initial expectations by Roche.

Cerevance entered a strategic research collaboration with Merck to identify novel targets for Alzheimer's disease utilizing Cerevance's proprietary technology platform. Cerevance received a $25 million upfront payment and is eligible to receive development and commercial milestone payments totaling approximately $1.1 billion, in addition to potential royalties on sales of approved products derived from the collaboration. UPMC Enterprises is a minority owner.

Code Biotherapeutics is a company addressing muscular and systemic gene therapy through a novel non-viral delivery technique. In 2022, the company signed a collaboration agreement with Takeda Pharmaceutical. It includes $5 million in upfront, near-term milestone and research funding payments with a total value potential of $2 billion to the company. UPMC Enterprises is a minority owner.

***Novasenta*.** This UPMC Enterprises spinout company was launched in 2021. The company discovers novel therapeutic targets to develop innovative and effective treatments with the goal of transforming the lives of patients with cancer. In 2022, the team developed three lead therapeutic antibody targets and is slated to enter clinical trials in 2023. The company has increased its full time equivalent employees from 16 to 25 as of December 31, 2021 and 2022, respectively.

Generian is a UPMC Enterprises spinout company that signed a collaboration and exclusive license agreement with Astellas Pharma ("Astellas") leveraging Generian's drug discovery platform for diseases that have limited treatment options. The partnership includes over $180 million in upfront and milestone payments and additional royalties on sales and research and development support for up to three programs over the later of the three year research term or the expiration of the last-to-expire ten year royalty term. The company has met its first milestone for two out of three programs and talks continue with Astellas to expand the partnership.

***MyUPMC* and *UPMC Find a Doctor*.** As part of its digital modernization efforts, UPMC Enterprises leads the development of MyUPMC, the System's "digital front door" that enables a continuous relationship between consumers and the System and a key access and integration point for the increasing number of digital health tools being integrated into patient care. The total cumulative users of MyUPMC grew to over 1.8 million patients in 2022 (a 13% increase as compared to 2021). Total monthly active users grew to 507,000 patients in 2022 (a 15% increase as compared to 2021). Of patients seen at a System clinic in the last 12 months, 68% of those patients have an active MyUPMC account. MyUPMC accounted for more than 325,000 return visit appointments scheduled by patients using the MyUPMC web portal or MyUPMC mobile app in 2022.

The MyUPMC team is also responsible for Find a Doctor, which continued to expand its online provider search and scheduling capabilities for new and return patients. It serves as both a provider directory for consumers and patients to browse and find a new provider, as well as an opportunity for patients to self-schedule their new patient appointment online. The team currently builds and curates profiles for nearly 10,000 providers. As of November 2022, nearly 90,000 appointments have been scheduled online on the Find a Doctor platform. Online screening mammography scheduling was launched in April 2022 and has seen over 12,000 mammograms scheduled online year-to-date.

ENTERPRISE WIDE SERVICES

***Information Technology*.** UPMC's Information Technology Division ("UPMC IT") provides centralized technology services to support and enable the System's operations internationally and domestically. Management of UPMC views information technology as the backbone of a fully integrated, self-regulating healthcare system and is regularly recognized for its pioneering use of information technology, from electronic medical records to biometrics, machine learning and natural language processing. UPMC IT manages more than 500,000 connected devices, over 3,000 applications, and 70 petabytes of data storage, including more than 2.7 billion patient records. The System has been named a Most Wired Healthcare Organization for 24 consecutive years by College of Healthcare Information Management Executives. The System is one of only 17 health systems awarded the highest tier of recognition for both ambulatory and acute settings. Other noteworthy technology advancements include:

- Any patient who is also a UPMC Health Plan member can now seamlessly connect to their health coverage from within MyUPMC. This includes plan summaries and identification Cards, explanation of benefits and claims, as well as programs like RXWell and AnywhereCare. These tools recognize each patient's unique coverage, including multiple policies, and connects them without an additional login. This change reached more than

600,000 members. Since launching in May 2022, utilization of these services has increased 101% on a month over month basis.

- The System implemented Viz.AI software leveraging artificial intelligence to scan patient CT images and alert Neurology physicians of the detection of a possible stroke condition. This solution is deployed across all of the System's locations and external facilities supported by the System's tele-stroke program.
- UPMC partnered with Microsoft to provide its latest cloud computing, artificial intelligence and machine-learning tools to the clinical analytics team.
- UPMC mitigated cybersecurity threats by ensuring that the System digital assets, including patient, member and financial data are secured, as well as the availability of critical technology services. UPMC's IT achieved HITRUST Common Security Framework and National Institute of Standards and Technology re-certification in April 2021.
- UPMC Central PA was awarded Epic Gold Stars Level 9, up from level 8 in 2021. This ranks UPMC Central PA in the top 11% of all Epic systems and represents the System's commitment to being a leader in best practices of EMR use.
- The Global Technology Operations Center ("GTOC") in Ireland continues to provide infrastructure support for the System's European facilities and for the System staff in China and Kazakhstan. GTOC also provides network and computing infrastructure, data management, and cybersecurity.
- UPMC IT continues to play an active role in participating in the UPMC Experience initiative, which is dedicated to enhancing the culture at the System so that all employees are ambassadors of the UPMC mission and values. UPMC IT service line increased Essential Services Survey ("ESS") scores from 83% in 2021 to 96% in 2022. The feedback from the survey helps to ensure UPMC IT is delivering an unparalleled experience to clinical partners through the delivery of technology services that translates into the delivery of life-changing patient care.

Risk Management. The System is insured for professional and general liability losses through wholly owned, multi-provider insurance companies (the "Captives"). The Captives provide primary and excess professional liability coverage on an occurrence basis to the System hospitals, subsidiaries, employed physicians, and other entities not included in the consolidated UPMC financial statements. The professional liability insurance agreements have retrospective clauses, which permit additional premiums or refunds to be made based on actual loss experience. The Medical Care Availability and Reduction of Error ("MCARE") Act, enacted by the Commonwealth, created the PA MCARE Fund which provides defined limits of coverage for claims exceeding the primary layer of professional liability insurance coverage provided by the Captives.

The PA MCARE Fund replaced the Pennsylvania Medical CAT Fund as the agency for the Commonwealth to facilitate the payment of professional liability claims exceeding the primary layer of professional liability insurance carried by the System's hospitals and other healthcare providers practicing in the Commonwealth. The PA MCARE Fund is funded on a "pay-as-you-go" basis and assesses healthcare providers based upon a percentage of the rates established by the Joint Underwriting Association (also a Commonwealth agency) for this basic coverage.

The Captives are comprised of five separate companies that provide different lines of insurance and reinsurance coverage for the System, as well as other affiliated companies and physicians. The UPMC insurance program has been in existence for more than 40 years in a variety of different structures and provides the following lines of insurance coverage: primary, excess and reinsurance coverage for professional liability risks; primary coverage for general liability, directors and officers, and managed care errors and omissions; and a layer of reinsurance coverage for the UPMC Health Plan and CCBH. The professional liability insurance program represents the most significant aspect of the risks and activity and insures over 5,000 physicians. All five companies provide professional liability insurance and/or reinsurance coverage for UPMC and subsidiaries and other affiliated entities and physicians, as deemed appropriate.

Reserves for professional liability losses and loss adjustment expenses are determined using individual case-based evaluations and statistical analyses and represent an estimate of reported claims and claims incurred but not reported. Those estimates are subject to the effects of trends in loss severity and frequency. Although considerable variability is inherent in such estimates, UPMC's management believes that the reserves for professional liability losses and loss adjustment expenses are reasonable. The estimates are continually reviewed and adjusted as necessary as experience develops or new information becomes known. Such adjustments are included in current operations.

Mediation has become an accepted and, in many instances, the preferred method to resolve professional liability claims. UPMC implemented a program in 2004 that has resolved 97% of the cases that have been mediated.

Obligated Group

UPMC as the corporate parent organization, UPMC Presbyterian Shadyside, UPMC Magee Womens Hospital, UPMC Passavant and UPMC St. Margaret are the only current Members of the Obligated Group under the Master Indenture. The Obligated Group is made up of the System hospitals that management of UPMC believes consist of its core hospitals which gives management flexibility with respect to non-core services and facilities to be able to better adapt to a changing healthcare environment. None of the other corporations within the System, although owned and controlled by the System, are Members of the Obligated Group.

The audited financial statements for UPMC and affiliates for the years ended December 31, 2021 and 2022 are included as Appendix B to the offering document to which this Appendix A is attached. The financial statements include affiliates of UPMC that are not Members of the Obligated Group and therefore are not obligated with respect to the Bonds. In the aggregate, net of the effect of intercompany eliminations and reclassifications, the affiliates of UPMC which are Members of the Obligated Group accounted for $3.8 billion of total consolidated operating revenues and $6.2 billion of total assets for and as of the year ended December 31, 2022 and $3.8 billion of total consolidated operating revenues and $8.0 billion of total assets for and as of the year ended December 31, 2021.

Governance

The bylaws of UPMC provide for a Board of Directors (the "Board") consisting of individuals exercising up to 24 votes. Approximately one-third of the Board's total votes are held by individuals appointed by the University, and the remaining two-thirds of the total votes are held by a combination of individuals elected from the community at-large and individuals appointed by the Subsidiary Hospitals or their affiliated organizations. With certain exceptions, directors serve a term of three years and are limited to three consecutive terms, subject to a one-year hiatus before being able to serve again. The Board meets on a near-monthly basis.

The officers of the Board include: the Chairperson, Vice Chairpersons, and the Chairperson of the Finance Committee. Corporate officers include the President and Chief Executive Officer, Chief Financial Officer, Treasurer, Chief Legal Officer, Secretary, and such other officers as the Board may elect from time to time. The following individuals currently hold the offices so noted:

Chairperson
John P. Surma
Retired Chairman and CEO
United States Steel Corporation

First Vice Chairperson
Douglas M. Browning
Principal
DM Browning & Associates, LLC

Second Vice Chairperson
Mark J. Laskow
Managing Director
Greycourt & Co. Inc.

Chairperson, Finance Committee
John P. Surma
Retired Chairman and CEO
United States Steel Corporation

President and Chief Executive Officer
Leslie C. Davis
President and CEO, UPMC

Chief Financial Officer
Edward T. Karlovich
Chief Financial Officer, UPMC

Treasurer
J.C. Stilley
Chief Investment Officer and Treasurer, UPMC

Chief Legal Officer
W. Thomas McGough, Jr.
Chief Legal Officer, UPMC

Secretary
Michele P. Jegasothy
Corporate Secretary, UPMC

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Standing committees of the Board include: Finance, Audit, Quality Patient Care, Ethics and Compliance, Executive Compensation, Inclusion and Diversity, Investment, and Governance and Nominating. The International and Enterprises Committee is an ad-hoc committee of the Board. Current members of the Board are:

Elaine M. Bellin
President and Chief Executive Officer
Paragon Foods

Eva Tansky Blum
Retired Executive Vice President and Director, Community Affairs
PNC Bank, N.A.
Retired, Chair and President
The PNC Foundation

Douglas M. Browning
Principal
DM Browning & Associates, LLC

Debra L. Caplan
Executive-in-Residence
The Forbes Funds

Vaughn S. Clagette, MD
Practicing Physician
The Southeast Permanente Medical Group

James P. Covert
Operating Partner
Cressey & Company

Douglas P. Dick
Chairman and Chief Executive Officer
Dick Building Company

Margaret P. Joy
Partner
McCarthy McEnroe Rosinski & Joy

Patrick D. Gallagher
Chancellor and Chief Executive Officer
University of Pittsburgh

Richard S. Hamilton
Chairman
AAA East Central

Mark J. Laskow**
Retired

Michael P. Lyons
Head of Corporate & Institutional Banking and Asset Management Group
The PNC Financial Services Group

Eleni Lucido**
Vice President and General Manager, U.S. and Canada
MSA Safety

W. Duff McCrady
President
McCrady Corporation

Robert W. Montler
President and CEO
Lee Industries, Inc.

Douglas A. Neidich**
Chief Executive Officer
GreenWorks Development

Ann S. Pepperman
Attorney
McCormick Law Firm

Mark H. Raimy
Chief Executive Officer
Welders Supply Company

Anantha Shekhar, MD
Vice Chancellor for the Health Sciences; and John and Gertrude Petersen Dean, School of Medicine
University of Pittsburgh

Susan Baker Shipley
President, Western Pennsylvania and Ohio Valley
Huntington National Bank

Gregory Spencer
Chief Executive Officer
Randall Industries

John P. Surma**
Retired Chairman and CEO
United States Steel Corporation

John J. Verbanac
President and Chief Executive Officer
Summa Development, LLC

Michael G. Wells
Managing Director
Princeton Biopharma Capital Partners

** Also members of the Audit Committee of the UPMC Board

<u>Executive Management</u>. The following individuals are responsible for policy implementation and management of the programs, services, facilities and support operations of the System:

Leslie C. Davis, President and CEO. Bachelor of Arts degree, University of South Florida, 1980. Master of Education in Administration, Planning and Social Policy, Harvard University, 1981. Previous positions include: Senior Vice President, UPMC from 2014 to 2019; Executive Vice President and Chief Operating Officer, Health Services Division of UPMC from 2019 to 2021; Vice President of clinical affiliations and ambulatory programs at Thomas Jefferson University, 1984-1997; Chief Operating Officer of Presbyterian Medical Center of Philadelphia, Chief Marketing and Planning Officer, University of Pennsylvania Health System, 1997-2004; President of Graduate Hospital in Philadelphia and Regional COO, part of Tenet Healthcare Corporation, 2002-2004; President of UPMC Magee-Womens Hospital, 2004-2018.

Alison V. Beam, Senior Vice President and Chief Government Affairs Officer. B.S. in Health Policy and Administration from the Pennsylvania State University, 2008. Graduated from Drexel University School of Law 2010-2013. Previous positions included acting Secretary of Health for Pennsylvania, 2021; Deputy Chief of Staff for the Pennsylvania Governor, 2019-2021 and Chief of Staff to the Pennsylvania Insurance Commissioner 2017-2019.

Timothy R. Billiar, M.D., Executive Vice President, UPMC and Chief Scientific Officer. George Vance Foster Professor, Department of Medicine, University of Pittsburgh School of Medicine. Chair, Department of Surgery, UPMC. Graduate of Pritzker School of Medicine, 1983. Surgical residency, 1984-1987 and University of Minnesota and University of Pittsburgh, 1987-1992.

Charles E. Bogosta, Executive Vice President, UPMC; President, UPMC International; President, UPMC Cancer Center. Bachelor's degree, State University of New York, 1980. Master's degree, Bowling Green University, 1981. Previous positions include: Chief Financial Officer and Executive Vice President for Business Development, Corporate Health Dimensions, Inc., 1991-1998; Chief Financial Officer and Chief Operating Officer, Health Enterprises Management, Inc., 1985-1991.

Jeanne M. Cunicelli, Executive Vice President, UPMC; President, UPMC Enterprises. Bachelor's degree, Carnegie Mellon University, 1988. Master's degree, University of San Francisco, 1999. Previous positions include: Executive Vice President Translational Sciences, UPMC Enterprises, 2017-2020; Advisor to UPMC Enterprises, 2016; Managing Director, Partner, Vice President, Bay City Capital 1997-2015; Analyst, Director, Senior Director, Ernst and Young, 1989-1996; Special Education Instructor 1988-1989.

David M. Farner, Executive Vice President, UPMC and Chief Strategic and Transformation Officer. Bachelor's degree, Westminster College, 1985. Previous positions include: Associate Executive Vice President, UPMC, 1996-2003; Financial Analyst, Presbyterian University Hospital, 1986-1995; and Staff Auditor, Arthur Andersen & Company, 1985-1986.

John L. Galley, Senior Vice President and Chief Human Resources Officer. B.S. in Business Administration from Duquesne University with a major in Accounting, 1984 and graduated Beta Gamma Sigma with an MBA from the Katz Graduate School of Business at the University of Pittsburgh, 1992 with concentration in Finance and serves on the board of several non-profit organizations in the region. His career spans more than 35 years and he has experience in various industries including steel, retail, global industrial technology, and healthcare.

Diane P. Holder, Executive Vice President, UPMC; President, UPMC Insurance Services; President and Chief Executive Officer, UPMC Health Plan. Bachelor's degree, University of Michigan, 1975. Master of Science degree, Columbia University, 1977. Previous positions include: President, Western Psychiatric Institute and Clinic 1993-2003, Senior Vice President, UPMC Presbyterian, Vice President Behavioral Health Services 1997-2003, and President and CEO, Community Care Behavioral Health Organization, 1996-1999.

Edward T. Karlovich, Executive Vice President, UPMC and Chief Financial Officer. Bachelor's degree, Duquesne University, 1982. Master of Business Administration, University of Pittsburgh, 1999. Previous positions include various financial and operational positions within UPMC's Health Services Division since 1990, most recently as Vice President, CFO and Chief of Staff of that Division; and Arthur Anderson & Co., Senior Manager 1982-1990.

Mr. Karlovich has announced his plan to retire at the end of the calendar year 2023 and assist UPMC with the transition to a new chief financial officer. UPMC intends to conduct a national search for Mr. Karlovich's successor.

Joon Lee, Senior Vice President, UPMC, the President, Physician Services Division, and the President, University of Pittsburgh Physicians. After earning his medical degree from Duke University School of Medicine in Durham, N.C., 1988, Dr. Lee then completed a medical internship, 1988-1989, residency and chief residency, 1989-1992, as well as cardiology fellowship, at Massachusetts General Hospital in Boston, 1995-1996. He joined the University of Pittsburgh faculty in 1996 after serving as an instructor in medicine at Harvard Medical School. Dr. Lee is certified in cardiovascular disease and interventional cardiology by the American Board of Internal Medicine. Fellow of the American College of Cardiology.

Ed McCallister, Senior Vice President and Chief Information Officer. Previously served for 15 years as a director and then vice president and CIO of UPMC's rapidly growing Insurance Services Division. Bachelor's degree in business administration from St. Francis University, 1984; Licensure and Certifications, Software Development Program (SPD) and Operations Development Program (ODP), Active.

W. Thomas McGough, Jr., Executive Vice President, UPMC and Chief Legal Officer. Juris Doctorate degree, University of Virginia, 1978. Bachelor's degree, Princeton University – magna cum laude, 1975. Previous positions include: Partner, Reed Smith, and member of the executive committee and chairman of litigation department; Associate at Reed Smith 1982-1986, Partner at Reed Smith, 1987-2010; Associate Counsel to the Senate committee investigating the Iran-Contra affair; Assistant United States Attorney for the Western District of Pennsylvania, 1980-1982; Clerk for Justice William H. Rehnquist of the Supreme Court of the United States, 1979-1980; and Clerk for Judge Collins J. Seitz of the United States Court of Appeals for the Third Circuit, 1978-1979.

Mark Sevco, Senior Vice President, UPMC & President, UPMC Hospitals, HSD, Hospital Division Administrator, Health Services Division. University of Pittsburgh, Graduate School of Public Health Master of Health Administration 1991, University of Pittsburgh, Katz Graduate School of Business Master of Business Administration 1991, Bachelor of Science, Applied Mathematics University of Pittsburgh, College of Arts & Sciences 1989. On March 31, 2023, Mr. Sevco announced his resignation. UPMC intends to conduct a national search for his replacement.

Marshall W. Webster, M.D., Senior Vice President, UPMC. Graduate of the Johns Hopkins University School of Medicine, 1964. Residency training in General and Thoracic Surgery, UPMC, 1965-1970. On the faculty of the University of Pittsburgh since 1973, having previously held the Mark M. Ravitch Chair in Surgery, 1999-2007. Past service as Chief of

Vascular Surgery, 1998-2000, Executive Vice-Chair 1996-1998, and Interim Chair of the Department of Surgery, 1998-1999.

Business Affiliation Agreements

Over its history, UPMC has entered into a number of affiliation agreements ("Business Affiliation Agreements"). UPMC is in regular discussions with a variety of regional, domestic and international organizations regarding potential new Business Affiliation Agreements. The major Business Affiliation Agreements with financial commitments still in effect are summarized below.

Altoona Regional Health System ("Altoona Regional"). On July 1, 2013, Altoona Regional officially became UPMC Altoona after the boards of directors of Altoona Regional and its parent company, Central Pennsylvania Health Services Corporation, voted unanimously to join the System by executing an Integration and Affiliation Agreement (the "Altoona Agreement"). The Altoona Agreement includes a capital commitment from UPMC of $250 million over 10 years to enhance healthcare facilities and services for patients and to bring outstanding technology, science, innovation, and expertise to the Altoona region. As UPMC's regional referral center and tertiary hub, UPMC Altoona is able to offer more specialized medicine and advanced treatments. The Altoona Agreement also provided for UPMC to make a contribution of $10 million to UPMC Altoona's supporting foundation, the Foundation for Life, and assume responsibility for all of Altoona Regional's outstanding debt, pension, and other liabilities. As of December 31, 2022, $50 million of the original $250 million commitment remains to be spent.

PinnacleHealth. On September 1, 2017, PinnacleHealth System ("Pinnacle"), based in Harrisburg, Pennsylvania, and UPMC executed an Integration and Affiliation Agreement (the "Pinnacle Agreement") to enhance clinical and population health management capabilities to better serve the residents of central Pennsylvania by creating UPMC Pinnacle, which consisted of 767 beds over four facilities. On July 1, 2017, Pinnacle completed its acquisition of Memorial Hospital of York, Lancaster Regional Medical Center, Heart of Lancaster Regional Medical Center in Lititz, and Carlisle Regional Medical Center. Also on September 1, 2017, Pinnacle and Hanover HealthCare PLUS, the parent organization of Hanover Hospital in Hanover, Pennsylvania ("Hanover"), executed an agreement that made Hanover a member of the Pinnacle network. As part of the Pinnacle Agreement, UPMC committed up to $145 million per year for seven years for capital projects and other operational spending. UPMC assumed $648.8 million of Pinnacle's existing debt. On the date of the acquisition, UPMC established a $222 million fund, which is dedicated solely for the support of UPMC Pinnacle and is controlled solely by UPMC Pinnacle's board of directors. As of December 31, 2022, $369 million of the original commitment under the Pinnacle Agreement remains to be spent.

Charles Cole Memorial Hospital. On March 1, 2018, Charles Cole Memorial ("Cole") and UPMC executed an Integration and Affiliation Agreement (the "Cole Agreement") to expand healthcare services and advance quality of care for the people of northcentral Pennsylvania creating UPMC Cole. As part of the Cole Agreement, UPMC has committed $27.5 million over seven-years for capital projects, programmatic enhancements, and information technology and assumed Cole's debt and pension obligations. UPMC Cole is a 49-bed facility based in Coudersport, Pennsylvania. As of December 31, 2022, $4 million of the original commitment under the Cole Agreement remains to be spent.

Somerset Hospital. On February 1, 2019, Somerset Hospital and UPMC executed an Integration and Affiliation Agreement (the "Somerset Agreement") and created UPMC Somerset. The affiliation allows a greater opportunity for the Somerset facility to grow and offer more specialty services to local patients close to their homes. UPMC Somerset is a 126-bed facility based in Somerset, Pennsylvania. As part of the affiliation, UPMC has committed to invest at least $45 million over 10 years to enhance services and upgrade facilities at UPMC Somerset. As of December 31, 2022, $19 million of the original commitment under the Somerset Agreement remains to be spent.

Western Maryland Health System. On February 1, 2020, Western Maryland Health System and UPMC executed an Integration and Affiliation Agreement (the "Western Maryland Agreement") and created UPMC Western Maryland. The affiliation allows a greater opportunity for the western Maryland facility to grow and offer more specialty services to local patients close to their homes. UPMC Western Maryland is a 224-bed hospital based in Cumberland, Maryland. As part of the affiliation, UPMC has committed to invest at least $90 million over five years to enhance services and upgrade facilities at UPMC Western Maryland. As of December 31, 2022, $58 million of the original commitment under the Western Maryland Agreement remains to be spent.

Related Foundations. UPMC is party to certain affiliation agreements with separate foundations (the "Foundations") each of which is organized exclusively for the benefit of the respective Subsidiary Hospital it was incorporated to support. The assets of the Foundations are restricted for use by each Foundation's respective Subsidiary Hospital and require Foundation board approval to be expended. Generally, the Foundation boards are not controlled by UPMC or the Subsidiary Hospitals. The assets of these Foundations as of December 31, 2022 are shown on UPMC's consolidated balance sheet as beneficial interests in Foundations ($667 million). These Foundations include Children's ($362 million), Magee ($69 million), Presbyterian/Shadyside ($48 million), Susquehanna ($45 million), Hamot Health Foundation ($28 million), St. Margaret ($28 million), Northwest Hospital ($28 million), Chautauqua ($17 million), VNA ($13 million), McKeesport ($10 million), Canterbury Place ($6 million), Mercy ($4 million), Asbury Heights ($3 million), Sherwood Oaks ($2 million), Western Maryland ($2 million), Altoona ($1 million), and Jameson ($1 million).

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Community Benefits

With more than 92,000 employees, the System is the largest nongovernmental employer in the Commonwealth. The System's operations generate a total economic impact of $48 billion, as reported by the Hospital Association of Pennsylvania in 2022.

UPMC annually performs an in-depth assessment and review of the System's community benefits. During the year ended June 30, 2021, the System provided more than $1.5 billion in community benefits divided between charity care and unreimbursed amounts from programs for the poor ($444 million), community health programs and donations ($473 million) and support for research and education ($593 million).

The System has established a broad-based financial assistance program that enables uninsured and underinsured individuals and families to qualify for free or discounted services. The program extends to households earning up to 400% of the federal poverty level.

An important facet of growth in the region is to develop the highly trained workforce of the future. The System's hospital-based nursing schools and several "allied health" programs play an important part, training nurses, nursing assistants, clinical therapists, medical technologists, and other clinicians. Through its close relationship with the University, the System's hospitals train more than 1,900 medical residents and clinical fellows each year, comprising one of the largest programs in the United States.

The System is also helping to develop inclusive workplaces that benefit from the talents of all. The System continues to affirm its commitment to Dignity and Respect, collaborating with community partners that include government, business organizations, and community leaders serving diverse populations. In addition, the System continued to foster inclusion among its vendors by committing $318 million to initiatives that support local minority-and women-owned businesses in calendar year 2022.

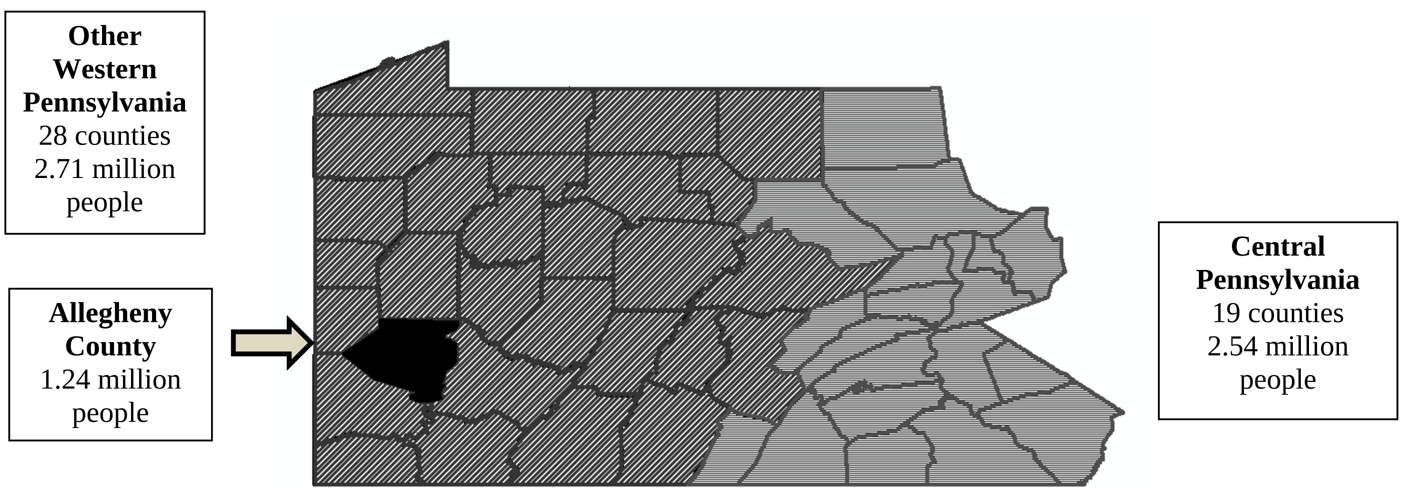
In accordance with Internal Revenue Service ("IRS") regulations, UPMC conducted a joint Community Health Needs Assessment ("CHNA") in Fiscal Year 2022, which builds on the initial CHNAs conducted in Fiscal Years 2013, 2016, and 2019. The Fiscal Year 2022 joint CHNA provided an opportunity for UPMC to re-engage with community stakeholders in a rigorous, structured process guided by public health experts. An ongoing objective of the CHNA effort is to help align community benefit programs and resources with community health needs. In conformance with the IRS three-year cycle, in 2022, UPMC once again drew on public health data, community input, and expertise from the University's School of Public Health in order to update the assessments and improvement plans by June 30, 2022. For the Fiscal Year 2022 CHNA cycle, UPMC took a regional hub approach to conduct the CHNA assessments, which grouped System hospitals in close geographic proximity, allowing local communities to set priorities, while supporting a coordinated community health strategy across the System. UPMC used the community input to develop strategic plans for each of its licensed hospitals to address significant community health needs. Importantly, these plans address local community needs not only at the hospital level, but also include efforts undertaken in partnership with other System hospitals, external organizations, and the System. These plans include both improvement and expansion of existing programs, as well as development of new programs and initiatives. In addition, partnerships with other community organizations were established and enhanced in order to better coordinate resources. Key themes that emerged at System hospitals throughout western and central Pennsylvania can be grouped into four broad categories — chronic disease management, behavioral health, access to care and navigating resources, and prevention and community-wide healthy living.

Service Area and Market Share

For the period ended June 30, 2022, the System’s health services market included 29 counties in western Pennsylvania, with a population base of approximately four million people, and 19 counties in central Pennsylvania, with a population base of approximately 2.5 million people.

These populations include large proportions of people aged 65 and over – 21% of residents in western Pennsylvania and 19% of residents in central Pennsylvania are senior citizens. This age distribution is a significant factor in the mix and scope of healthcare services delivered.

The following map shows counties that are included in the System’s three defined service areas: 1) Allegheny County, 2) 28 additional counties in the western Pennsylvania region, and 3) the 19-county central Pennsylvania region. The population figures are 2021 estimates, which are provided by the U.S. Census Bureau.



Source: 2021 Population estimates based on 2020 U.S. Census Data.

Other Western PA Counties

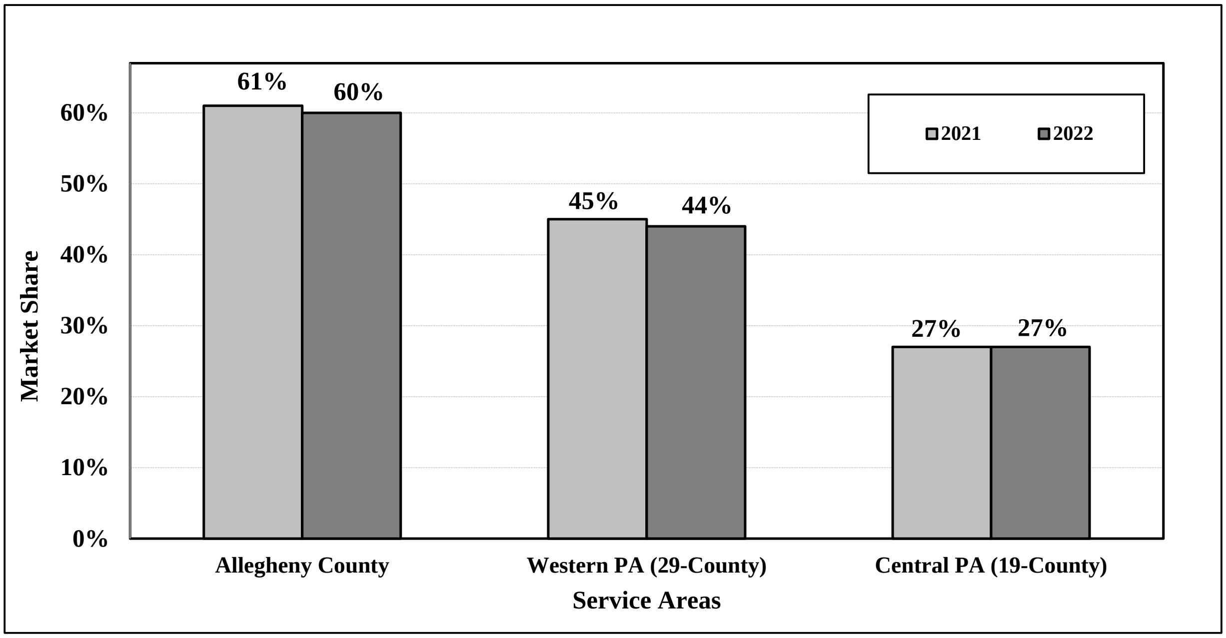
Armstrong	Clearfield	Jefferson
Beaver	Crawford	Lawrence
Bedford	Elk	McKean
Blair	Erie	Mercer
Butler	Fayette	Potter
Cambria	Forest	Somerset
Cameron	Greene	Venango
Centre	Huntingdon	Warren
Clarion	Indiana	Washington
		Westmoreland

Central PA Counties

Adams	Lebanon
Clinton	Lycoming
Columbia	Mifflin
Cumberland	Montour
Dauphin	Northumberland
Franklin	Perry
Fulton	Snyder
Juniata	Tioga
Lancaster	Union
	York

The chart below shows the change in the System's estimated inpatient market share for the first two quarters of calendar years 2021 and 2022 by service area.

INPATIENT MEDICAL-SURGICAL MARKET SHARE
AS OF JUNE 30(1)



Source: Pennsylvania Health Care Cost Containment Council

Table 6 shows the change in medical-surgical discharges from all hospitals within each service area for the same period. This is the most recent market share data currently available.

Table 6
Total Inpatient Discharges[1] within the Service Areas (All Hospitals)
(January 1 through June 30 of calendar years 2022 and 2021)

	CY 22 Q2	CY 21 Q2	Percent Change
Allegheny County	94,702	104,329	(9.23%)
Western Pennsylvania (29-County Region)	185,804	202,836	(8.40%)
Central Pennsylvania (19-County Region)	114,276	118,912	(3.90%)

Source: Pennsylvania Health Care Cost Containment Council

1 Excludes psychiatry and substance abuse discharges

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Material Contracts

<u>Academic Affiliation Agreement</u>. The University and UPMC have entered into an Academic Affiliation Agreement, which addresses the System's role as the primary clinical and teaching site for the University's School of Medicine and the Schools of Health Related Professions, the role of the University's School of Medicine faculty and supporting financial arrangements. In addition, the University and UPMC have entered into a Support Services Agreement and other ancillary agreements, addressing contractual and financial terms for numerous services provided by either party to the other and related matters, including research grants related to the health sciences. These agreements commenced on July 1, 1998 and currently extend to June 30, 2026. The agreements automatically renew thereafter for successive two (2) year terms, unless either UPMC or the University provides notice of termination. In 2022, the total payments to the University totaled $449 million, consisting of $240 million of academic and research support and $209 million of other payments.

<u>Highmark Contracts</u>. The Consent Decrees with the Commonwealth under which only certain services were provided to Highmark commercial members on an in-network basis by the System's hospitals, physicians, and ancillary providers in the Greater Pittsburgh area expired on June 30, 2019. Prior to their expiration, UPMC and Highmark entered into a comprehensive agreement under which UPMC agreed to have all of its hospitals, physicians and ancillary providers in Western Pennsylvania participate in Highmark's commercial and Medicare Advantage products for a ten-year term running through June 30, 2029 for commercial products and December 31, 2029 for Medicare Advantage products. Since the initial agreement, UPMC has entered into participating provider agreements with Highmark. Under these agreements, the parties have agreed to very limited termination rights and addressed the extent to which the System's providers would participate in Highmark's narrow network products. The System also has contracts in place with Highmark on behalf of its central Pennsylvania subsidiaries UPMC North Central PA and UPMC Central PA, many of which were extended for five-year terms ending in 2024 and 2025. System-employed physicians and ancillary providers in central Pennsylvania also have participation agreements with Highmark. In addition, the System has contracts with organizations acquired by Highmark since 2019, which are now known as WholeHealth and Highmark Blue Cross and Blue Shield of Western New York, which cover patients in UPMC's Northwest Pennsylvania and New York region.

Indebtedness

UPMC, its Subsidiary Hospitals and other owned and controlled entities had approximately $5.5 billion in outstanding debt as of December 31, 2022 on a consolidated basis. The annualized weighted average interest cost of the debt for the calendar year ended December 31, 2022 was approximately 3.0% and the annualized cost of capital during the period was 3.08%. The three- and five-year annualized costs of capital were 3.1% and 3.2%, respectively. This cost of capital includes the accrual of interest payments, the amortization of financing costs and original issue discount or premium, the ongoing costs of variable rate debt and the cash flow impact of derivative contracts. As of December 31, 2022, approximately 12% of the System's long-term debt was variable rate and 88% was fixed rate, after giving effect to derivative contracts. The interest cost for the variable and fixed rate debt for the period averaged 2.0% and 3.2% respectively.

In January 2019, UPMC entered into a five-year $600 million credit facility with a syndicate of banks. As of December 31, 2022, UPMC had approximately $138 million in letters of credit outstanding under the credit facility leaving $462 million available to fund operating and capital needs, none of which was drawn. As of December 31, 2022, UPMC had $1 million of unsecured letters of credit outstanding outside of this credit facility.

In support of the Insurance Services Division, UPMC has two credit facilities of $350 million and $250 million, the latter of which temporarily decreases each year to $25 million from September 1st to April 30th. These credit facilities expire in May 2026 and May 2027, respectively. As of December 31, 2022, these credit facilities were undrawn.

Table 7
Outstanding Indebtedness
As of December 31, 2022
(Dollars in Thousands)

Issuer	Original Borrower	Series	Amount Outstanding
Allegheny County Hospital Development Authority	UPMC Health System	1997B	$43,606
	UPMC	2007A	38,342
	UPMC	2017D	397,936
	UPMC	2019A	740,532
	UPMC	2021B	52,825
Monroeville Finance Authority	UPMC	2012	73,410
	UPMC	2013B(1)	44,084
	UPMC	2014B	43,904
	UPMC	2022B	189,780
Pennsylvania Economic Development Financing Authority	UPMC	2013A(1)	104,298
	UPMC	2014A	261,471
	UPMC	2015B	113,488
	UPMC	2016	220,327
	UPMC	2017A	410,925
	UPMC	2017B	88,527
	UPMC	2017C	133,960
	UPMC	2020A	267,952
	UPMC	2021A	253,803
	UPMC	2022A	227,531
Tioga County Industrial Development Authority	Laurel Health System	2010	5,603
	Laurel Health System	2011	3,956
Dauphin County General Authority	Pinnacle Health System	2016A	93,665
	Pinnacle Health System	2016B	80,605
General Authority of Southcentral Pennsylvania	Hanover Hospital	2013	3,558
	Hanover Hospital	2015	21,093
Potter County Hospital Authority	UPMC	2018A	12,781
Somerset County Hospital Authority	Somerset Hospital	2009	420
Maryland Health and Higher Educational Facilities Authority	UPMC	2020B	197,530
None	UPMC	2020D	349,730
	UPMC	2020 Term Loans(1)	499,929
	UPMC	2021C	399,513
	Somerset Management Services	2013	1,405
	Various	Financing Leases & Loans	144,386
		Swap Liabilities	732
Total UPMC Outstanding Debt			**$5,521,607**

Includes original issue discount and premium, Deferred Financing Costs and other.
Source: UPMC Records
(1) The Series 2013A Bonds, the Series 2013B Bonds and a term loan outstanding in the amount of $200 million will be refunded or refinanced, as applicable, concurrently with the issuance of the tax-exempt Series 2023 Bonds. See "PLAN OF FINANCE" in the forepart of the offering document to which this Appendix A is attached.

Future Financing Plans. UPMC's current plan is to maintain total outstanding debt at approximately a level equal to the level that it ended 2022 plus $1 billion excluding any debt related to acquisitions. This is expected to require the issuance of additional bonds in each year from 2025 through 2027 to replace debt that is scheduled to mature in each year. UPMC routinely evaluates the feasibility of issuing debt to fund capital projects and to refund existing debt.

Use of Derivatives. UPMC uses a combination of fixed and variable rate debt to finance capital needs. To manage the amount and type of this debt, UPMC has two derivative agreements related to debt management as described below.

On September 25, 2003, UPMC entered into a $168,090,000 LIBOR-based forward starting floating-to-fixed interest rate swap with a maturity date of December 1, 2025. This swap converts variable rate bonds equal to the current notional amount of the swap to a fixed interest rate. UPMC has the right to terminate this contract at a market price at any time. The counterparty on this contract is Goldman Sachs Mitsui Marine Derivative Products, L.P. As of December 31, 2022, the notional amount of this swap was $37,935,000 and the market value of this swap represented a liability of UPMC to the counterparty of approximately $470,000.

On May 16, 2007, UPMC entered into an interest swap agreement that converts the interest on the Series 2007A1 Bonds from a LIBOR-based to a SIFMA-based variable rate. The original notional amount of $46,095,000 amortizes in conjunction with the Series 2007A1 Bond amortization. The counterparty on this contract is Goldman Sachs Mitsui Marine Derivative Products, L.P. As of December 31, 2022, the notional amount of this swap was $38,450,000 and the market value of this swap represented a liability of UPMC to the counterparty of approximately $272,000.

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Consolidated Utilization Statistics

The following table presents selected consolidated statistical indicators of medical/surgical, psychiatric, sub-acute and rehabilitation patient activity for the years ended December 31, 2022 and 2021.

Table 8
Consolidated Utilization Statistics

	Twelve Months Ended December 31	
	2022	**2021**
Licensed Beds	8,774	8,771
Beds in Service		
Medical-Surgical	5,106	5,089
Psychiatric	430	430
Rehabilitation	249	256
Skilled Nursing	1,539	1,551
Total Beds in Service	7,324	7,326
Patient Days		
Medical-Surgical	1,368,102	1,446,186
Psychiatric	109,455	122,366
Rehabilitation	66,021	74,332
Skilled Nursing	328,039	319,638
Total Patient Days	1,871,617	1,962,522
Observation Days	169,486	168,726
Obs Average Daily Census	464	462
Average Daily Census	5,128	5,377
Admissions and Observation Cases		
Medical-Surgical	234,385	251,039
Observation Cases	90,631	95,280
Subtotal	325,016	346,319
Psychiatric	9,359	10,643
Rehabilitation	4,287	4,566
Skilled Nursing	3,597	3,444
Total Admissions and Observation Cases	342,259	364,972
Overall Occupancy	76%	80%
Average Length of Stay		
Medical/Surgical	5.8	5.8
Psychiatric	11.7	11.5
Rehabilitation	15.4	16.3
Skilled Nursing	91.2	92.8
Overall Average Length of Stay	7.4	7.3
Emergency Room Visits	1,000,660	1,030,438
Transplants (Domestic & International)		
Liver	228	247
Kidney	351	328
All Other	293	312
Total	872	887
Other Post-Acute Metrics		
Home Health Visits	586,595	679,616
Hospice Care Days	232,477	242,688
Outpatient Rehab Visits	680,742	722,628

Source of Revenues

The gross patient service revenues of the System are derived from third-party payers, which reimburse or pay the System for the services it provides to patients covered by such payers. Third-party payers include the federal Medicare Program, the federal and state Medical Assistance Programs ("Medicaid"), Highmark and other third-party insurers, such as health maintenance organizations and preferred provider organizations. A minor percentage of third-party payer contracts expire in 2023. Management anticipates that these will be extended. Table 9 is a summary of the percentage of the Subsidiary Hospitals' gross patient service revenue by payer. (See "Material Contracts – Highmark Contracts" herein).

Table 9
Payer Mix

	Twelve Months Ended December 31	
	2022	**2021**
Medicare	48%	47%
Medicaid	17%	18%
UPMC Insurance Services Commercial	11%	12%
Commercial Insurers	16%	15%
Self-pay/Other	8%	8%
Total	100%	100%

Source: UPMC Records

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Consolidating Condensed Statements of Operations

Each of the divisions of the System records revenues associated with its activities. These activities include transactions with the other divisions. Table 10 shows the Consolidating Statement of Operations by Division for the twelve months ended December 31, 2022. Table 11 shows the same information for the twelve months ended December 31, 2021.

Table 10
Consolidating Statement of Operations for the
Twelve months ended December 31, 2022
(Dollars in Millions)

	Division			
	Health Services	**Insurance Services**	**Eliminations**	**Consolidated**
Revenues:				
Net patient service revenue	$13,272	$0	$(3,032)	$10,240
Insurance enrollment revenue	0	13,036	0	13,036
Other revenue	1,451	885	(80)	2,256
Total operating revenues	$14,723	$13,921	$(3,112)	$25,532
Expenses:				
Salaries, professional fees and benefits	$8,560	$578	$(63)	$9,075
Insurance claims expense	0	11,882	(2,970)	8,912
Supplies, purchased services and general	5,725	967	(79)	6,613
Depreciation and amortization	687	7	0	694
Total operating expenses	$14,972	$13,434	$(3,112)	$25,294
Operating income (prior to lease impairment)	$(249)	$487	$0	$238
Operating Margin% (prior to lease impairment)	(1.7)%	3.5%	0	0.9%
Lease impairment expense	76	0	0	76
Operating (loss) income	$(325)	$487	$0	$162
Operating Margin%	(2.2)%	3.5%	0	0.6%
Rating Agency Operating Margin%	(3.3)%	3.4%	0	0%
Operating EBIDA	$362	$494	$0	$856
Operating EBIDA%	2.4%	3.5%	0	3.4%

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Table 11 Consolidating Statement of Operations for the Twelve months ended December 31, 2021 (Dollars in Millions)				
	Division			
	Health Services	Insurance Services	Eliminations	Consolidated
Revenues:				
Net patient service revenue	$12,874	$0	$(2,869)	$10,005
Insurance enrollment revenue	0	12,110	0	12,110
Other revenue	1,471	877	(97)	2,251
Total operating revenues	$14,345	$12,987	$(2,966)	$24,366
Expenses:				
Salaries, professional fees and benefits	$7,732	$538	$(63)	$8,207
Insurance claims expense	0	11,339	(2,869)	8,470
Supplies, purchased services and general	5,277	914	(34)	6,157
Depreciation and amortization	678	11	0	689
Total operating expenses	$13,687	$12,802	$(2,966)	$23,523
Operating income	$658	$185	$0	$843
Operating Margin%	4.6%	1.4%	0	3.5%
Rating Agency Operating Margin%	3.4%	1.4%	0	2.8%
Operating EBIDA	$1,336	$196	$0	$1,532
Operating EBIDA%	9.3%	1.5%	0	6.3%

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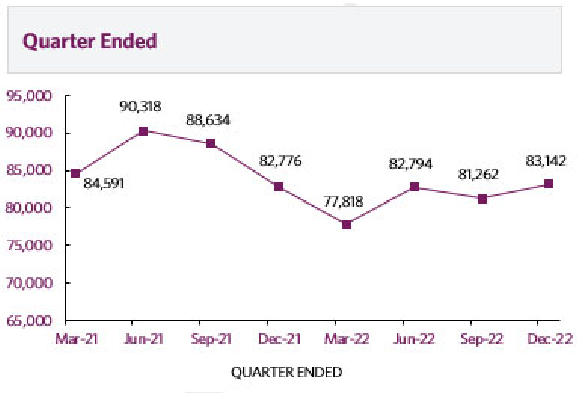
Revenue Metrics – Health Services

Medical-Surgical Admissions and Observation Visits

Inpatient activity, as measured by medical-surgical admissions and observation visits at the System's hospitals for the year ended December 31, 2022, decreased 6% compared to the same period in 2021 as volumes declined due to the ongoing shift of site of care from inpatient to outpatient, as well as the continued effects of the COVID-19 experience on the operating activities of the System.

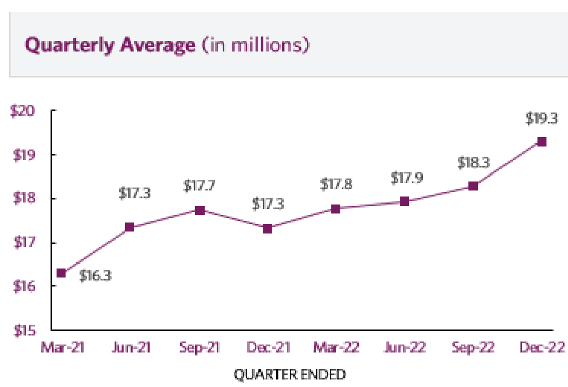
For the Twelve Months Ended December 31: (in Thousands)			
	2022	Variance	2021
Academic	108.8	(7)%	117.4
Community	45.6	(10)%	50.8
Regional	170.6	(4)%	178.1
Total	325.0	(6)%	346.3



Outpatient Revenue per Workday

The System's outpatient activity for the year ended December 31, 2022, as measured by average revenue per workday, increased 7% compared to the same period in 2021. Surgical demand, particularly in the outpatient setting, has increased as former inpatient services continue to move to outpatient. This coupled with the increase in ambulatory patient volumes has caused the increase to outpatient revenue per workday. Hospital outpatient activity is measured on an equivalent workday ("EWD") basis to adjust for weekend and holiday hours.

For the Twelve Months Ended December 31: (in Thousands)			
	2022	**Variance**	**2021**
Academic	$6,804	6%	$6,424
Community	1,813	1%	1,804
Regional	9,704	8%	8,953
Total	$18,321	7%	$17,181



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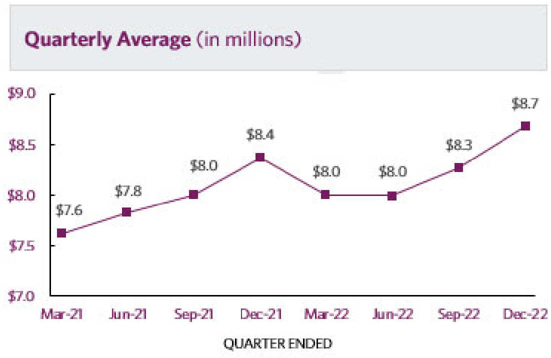
Physician Service Revenue per Weekday

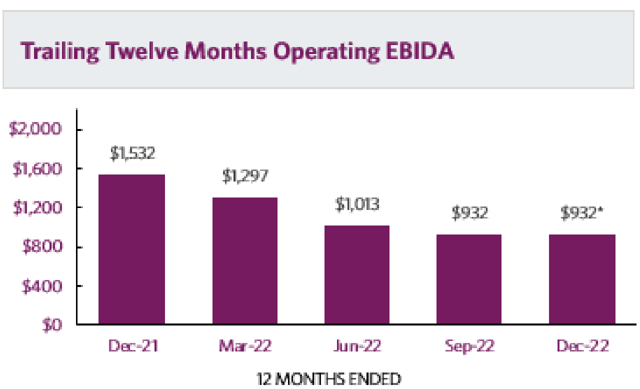
The System's physician activity for the year ended December 31, 2022, as measured by average revenue per weekday, increased 3% from the comparable period in 2021. Physician services activity is measured on a weekday basis.

Average for the Twelve Months Ended December 31 (in thousands)			
	2022	Change	2021
Academic	$3,595	0%	$3,592
Community	1,849	7%	1,726
Regional	2,766	5%	2,640
Total	$8,210	3%	$7,958



Operating Earnings Before Interest, Depreciation and Amortization

Operating EBIDA for the year ended December 31, 2022 decreased $600 million compared to the year ended December 31, 2021.



For the Twelve Months Ended December 31 In Millions		
	2022	2021
Operating Income	$238*	$843
Depreciation and Amortization	694	689
Operating EBIDA	$932*	$1,532

**Excludes $76 million of lease impairment*

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Debt Service Coverage Ratio

The table below sets forth the historical debt service coverage ratio of the System for the fiscal years ended December 31, 2022 and 2021.

Table 12
Debt Service Coverage Ratio
Twelve Months Ended December 31
(Dollars in Millions)

	2022	**2021**
Excess of expenses over revenues	$(1,033)	$1,460
Adjusted By:		
Net Unrealized Losses (Gains) during Period (1)	840	(248)
Depreciation and Amortization (1)	694	689
Loss (Gain) on Extinguishment of Debt (1)	(14)	2
Lease Impairment – Facilities (1)	76	-
Realized Investment Impairments (2)	(15)	(16)
Interest Expense (3)	156	161
Revenues Available for Debt Service	$703	$2,049
Historical Debt Service Requirements - 2007 Master Trust Indenture ("*MTI*")	$366	$335
Debt Service Coverage Ratio - MTI	1.92x	6.11x
Historical Debt Service Requirements - All Debt and Finance Leases	$403	$376
Debt Service Coverage Ratio - All Debt and Finance Leases	1.74x	5.45x

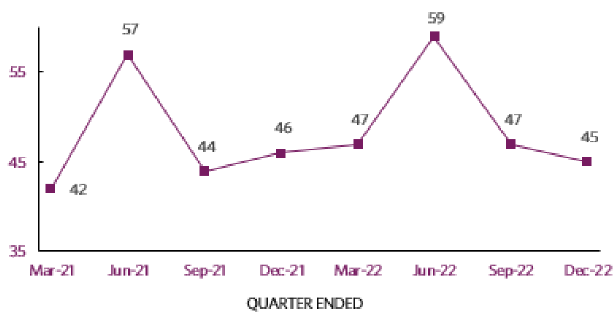
(1) Non-Cash.
(2) Reflects ultimate realization of previously impaired cost-based investments.
(3) Includes only interest on long-term debt.

Unrestricted Cash and Investments Over Long-Term Debt and Days Cash on Hand

Unrestricted cash and investments over long term debt as of December 31, 2022 decreased $1.1 billion when compared to December 31, 2021 due primarily to negative investment returns in 2022.

Days in Accounts Receivable

Days in net Accounts Receivable at December 31, 2022 and December 31, 2021 were 45 and 46, respectively.



By Receivable			
		Days:	
	2022 Balance	Dec 31, 2022	Dec 31, 2021
Patient AR	$ 1,419	47	54
Other AR	1,933	44	41
Consolidated	$ 3,352	45	46

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Strategic Initiatives

As discussed in more detail below under "Management Discussion and Analysis", operating income declined in fiscal year 2022 as compared to fiscal year 2021. Management of the System has begun the following initiatives to improve margins. The System's values of Dignity and Respect; Caring and Listening; Quality and Safety; Excellence and Innovation; and Responsibility and Integrity will define and guide these initiatives.

Premium Labor Reduction

- Prioritize retention of staff through pay structure and benefit investments
- Build talent pipelines to increase clinical hiring
- Augment traveler program to afford workforce agility and flexibility
- Eliminate premium labor
- Implement shared regional staffing models
- Standardization of workforce structures
- Reduce turn-over
- Improve the employee experience and diversity

Capacity & Structural

- Remediation of unprofitable business lines
- Optimization of inpatient vs. ambulatory capacity, resources, and cost
- Capital rationalization
- Shrink physical space footprint

Service Line Optimization

- Surgical services resurrection planning
- inpatient bed opening plan
- Leverage Centers of Excellence
- Enhance Advanced Practice Provider ("APP") driven support models
- Increase usage of telemedicine to bolster efficiency
- Re-define ambulatory models of care to improve affordability
- Leverage specialty hospitals
- Restructure/lower fixed cost overhead
- Reduce variation of clinical practice

Operational Excellence and Administrative

- Accelerate throughput through reducing average length of stay
- Improve access
- Shared service insourcing and outsourcing
- Scrutiny and elimination of non-patient facing, non-clinical positions
- Productivity gains through enabling technologies (EMR, business intel tools, etc.)
- Leverage system purchasing power

Optimize Integrated Delivery and Financing Systems

- Direct care to low-cost, high-quality System sites of service
- Alignment of resources, marketing and planning
- Adoption of shared risk models to protect premiums

Financial Results for Fiscal Year 2021 Compared to Fiscal Year 2022. The System's operating income decreased from $843 million in fiscal year 2021 to $162 million in fiscal year 2022. The decrease is attributable to the continued effect of COVID-19 on patient volumes, along with conditions in the labor and supply markets having resulted in cost growth in employment, staffing and other operating expenses in excess of revenue growth.

The System's total operating revenue increased from approximately $24.4 billion in fiscal year 2021 to approximately $25.5 billion in fiscal year 2022, a 4.8% increase, driven primarily by enrollment growth within the Insurance Services Division.

The System's operating expenses, excluding lease impairment expense, increased 7.5% from fiscal year 2021 to fiscal year 2022, from approximately $23.5 billion in fiscal year 2021 to approximately $25.3 billion in fiscal year 2022. Management attributes the increase in operating expenses to increased expenditures related to the COVID-19 pandemic related to salaries and benefits due to increased staffing needs, and other supplies. Salary and benefits increased 10.6% over the prior fiscal year as a result of front-line staffing needs. Supplies, purchased services and general expenses increased 7.4% over the prior fiscal year due to increased demand for certain medical supplies and drugs.

The System's net non-operating gains decreased during fiscal year 2022 primarily due to investment fluctuations, resulting in a $1,204 million negative change during fiscal year 2022 as compared to a $651 million positive change in fiscal year 2021, which Management primarily attributes to market trends.

Capital Expenditures and Liquidity. The System incurred capital expenditures of $782 million in fiscal year 2021 and $994 million in fiscal year 2022. These capital expenditures were principally for the acquisition of new facilities, expansion and renovation of existing facilities, equipment and systems additions, introduction of new medical technologies, the development of information systems, various other capital improvements and equity investments. Major capital expenditures over the prior two-year period included construction and improvements at UPMC Central PA, UPMC North Central PA, UPMC Mercy and UPMC Presbyterian (including a new hospital that broke ground in 2022) as well as ongoing expansion and improvement across the entirety of UPMC. Major information services projects included enhancements that are advancing UPMC's leading clinician centric computing environment, technology infrastructure that supports UPMC's diversified digital environment, investments in enterprise data analytics and other technologies that are transforming the consumer experience across the spectrum of health care. The primary source of funding for these capital projects was the System's cash and investments, borrowing and cash generated from operations. Routine expenditures during the two-year period were funded from cash generated from operations. Management expects that capital expenditures for the next three years will approximate 2022 levels. Major capital expenditures over the next three years include the Heart and Transplant facility at UPMC Presbyterian, continued investments in information technology and ongoing expansion and improvements across the entirety of UPMC. Management anticipates that the primary source of funding for these capital projects will be the System's cash and investments, borrowing and cash generated from operations.

The System's unrestricted cash and investments decreased from 148 days' cash on hand at the end of fiscal year 2021 to 109 days' cash on hand at December 31, 2022. The decrease is a result of average daily expenditures increasing during fiscal year 2022 as described above and declines in the market value of the System's investments. Additional available liquidity is provided by the line of credit of $600 million. As of December 31, 2022, no balance had been drawn on the line.

Critical Accounting Policies. The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management of the System to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and the accompanying notes. The System considers its critical accounting policies to be in the following areas which require significant judgments and estimates in the preparation of the System's consolidated financial statements, including allowances and liabilities related to the following:

1. *Patient accounts receivable*. Estimating adjustments related to explicit price concessions is complicated due to the number of payer contracts and varying reimbursement techniques used by third-party payers. The System uses software to assist in projecting expected reimbursement and regularly validates such estimates by comparison to actual collection results on a disaggregated basis (by patient type, by payer, by facility).

2. *Insurance reserves.* Estimates are based on historical claims payment patterns and can be influenced by changes in membership and disruption to claim payment patterns caused by various internal and external factors.

Additional Information

LITIGATION

The System is, from time to time, party to a variety of normal course claims and litigation involving such items as employment, professional liability and claims for benefits. The health care industry is also subject to numerous laws and regulations governing participation in and billing of government health care programs. There are constant developments in this area and active government enforcement. The System has risk management, compliance, internal audit, and legal programs that are intended to prevent, detect and correct violations of federal and state laws, regulations and other standards. Except as described below, there is currently no litigation pending against the System which, in the opinion of management, if successful, would materially adversely affect the operations or financial condition of either the System or the Obligated Group.

On October 9, 2012, UPMC received a Civil Investigative Demand ("CID") from the Department of Justice ("DOJ") that sought records relating to 40 surgical procedures performed between January 25, 2008 and June 24, 2010. UPMC timely responded to that CID. In November 2013, the DOJ advised UPMC that the CID had been served as part of the DOJ's investigation of allegations asserted by relators in a federal qui tam lawsuit filed under seal. On July 27, 2016, the DOJ announced that it had reached an agreement with UPMC to settle certain allegations that UPMC had violated the False Claims Act for approximately $2,500. UPMC admitted no liability in settling those claims. The DOJ declined to intervene in the remaining allegations of the relators' lawsuit, which was also unsealed on July 27, 2016. In their Second Amended Complaint against UPMC and UPP, Inc., relators allege that UPMC violated the False Claims Act violations, by overpaying physicians and encouraging physicians to perform medically unnecessary procedures. On June 29, 2022, the Court denied UPMC's motion for summary judgment. Trial is scheduled for October 23 – November 9, 2023. The outcome and ultimate effect on UPMC's financial condition and operations cannot be determined at this time, however it could be material.

EMPLOYEES

For the 12 months ended December 31, 2022, employee salaries and benefits represented 35.9% of UPMC's total consolidated operating expenses. UPMC's affiliations with the University's Schools of the Health Sciences and other local universities, colleges, and technical schools contribute to the recruiting of clinicians, allied healthcare staff, and other employees, as do innovations in scheduling and compensation. As a result of UPMC's association with the above-mentioned schools, the System's ability to recruit and retain nursing and other personnel has been enhanced. Below is a summary of the System's full time equivalent employees as of December 31, 2022, by operating components.

Health Services	69,653
Insurance Services	6,076
International and Enterprises	3,294
Total full-time equivalent employees	79,023

As of December 31, 2022, approximately 2.6% of the System's employees were covered by the collective bargaining units listed below. The Service Employees International Union ("SEIU") is continuing organizing efforts at the System.

Entity	Bargaining Unit	Union	Employed	Contract Expiration
UPMC Altoona	Ancillary Clinical & Support Staff	AFSCME	544	6/30/2024
	RN	SEIU Healthcare PA	515	12/31/ 2025
UPMC Children's Hospital of Pittsburgh	Skilled Maintenance	IUOE Local 95-95A	55	8/31/2024
Canterbury Place	Skilled Maintenance	IUOE Local 95-95A	3	6/12/2024
UPMC Cole	RN/LPN	OPEIU Local 112	66	11/30/2023
UPMC McKeesport	Service Worker	Teamsters Local 205	126	6/30/2026
	Engineers	IUOE Local 95-95A	24	7/15/2025
	RN/LPN	SEIU Healthcare PA	69	3/31/2024
	Security Guards	SPFPA 502	14	10/29/2023
UPMC Mercy	Skilled Maintenance	IUOE Local 95-95A	50	12/31/2025
UPMC Magee-Womens Hospital	Skilled Maintenance	IUOE Local 95-95A	39	6/30/2023
	Security Guards	SPFPA Local 502	22	9/30/2027
UPMC Passavant	Skilled Maintenance	IUOE Local 95-95A	39	6/30/2025
UPMC Presbyterian Shadyside	Skilled Maintenance & Telecommunications Specialist	IUOE Local 95-95A	82	3/31/2024
	Security Guards	SPFPA 502	34	2/7/2023*
UPMC Somerset	RN	PSEA/SPNA	104	12/31/2023
UPMC St. Margaret	Skilled Maintenance	IUOE Local 95-95A	18	1/31/2025
WCA Services	Ambulance Service Staff	SEIU Local 200 New York	78	7/31/2023
Western Psychiatric Institute & Clinic	Clinical Support	SEIU Healthcare PA	16	4/30/2025
	Inpatient RN	JNESO SEIU Healthcare PA	123	9/30/2024

*Currently working while negotiating new contract.

Retirement Plans. UPMC and its subsidiaries maintain defined benefit pension plans, defined contribution plans, and nonqualified plans that cover substantially all of the System's employees. Benefits under the defined benefit plans vary and are generally based upon the employee's earnings, age and years of service participation. The System's defined benefit pension plans are in compliance with all funding requirements under the Employee Retirement Income Security Act of 1974 ("ERISA"). During calendar year 2022, the System made no contributions to its defined benefit pension plans. Under the defined contribution plans, employees may elect to contribute a portion of their salary, which is matched in accordance with the provisions of the plans. Benefits under the nonqualified plans are based on eligibility and formulas, as defined under the plans.

INVESTMENT MANAGEMENT

In addition to funds held for working capital, the System maintains several long-term investment portfolios held by UPMC, the Subsidiary Hospitals and the Insurance Subsidiaries, which include unrestricted assets, donor and other restricted assets, foundation assets, and pension fund assets. The Investment Committee meets quarterly to review asset allocation and manager performance for a majority of the portfolios.

As of December 31, 2022, the System's investment portfolio, excluding Enterprises and various restricted assets, utilized 174 ongoing external investment managers including 45 traditional managers, 18 hedge fund managers and 111 private capital managers. The System is also invested with an additional 32 legacy private capital and hedge fund managers. The System's investment portfolio has a long-term perspective and has generated annualized returns of (10.9%), 3.7% and 4.2% for the trailing one-, three- and five-year periods, respectively, ending December 31, 2022. As of December 31, 2022, 69% of the System's investment portfolio could be liquidated within three days.

The table below compares reported investing and financing activity for the years ended December 31, 2022 and 2021.

Table 13
Investing and Financing Activity by Type for the Twelve Months Ended December 31
(Dollars in Thousands)

	2022	2021
Realized Gains	($ 28,000)	$ 575,402
Interest, Dividends and Fees	119,923	79,530
Realized Investment Income	$ 91,923	$ 654,932
Unrealized Gains on Derivative Contracts	2,728	2,557
Other Unrealized Gains (Loss)	(842,834)	245,080
Investment Gain (Loss)	($ 748,183)	$ 902,569
UPMC Enterprises Results	(186,702)	71,697
Gain/Loss on Defeasance	14,409	(2,342)
Interest Expense	(157,959)	(161,976)
Gain on Investing and Financing Activities	($ 1,078,435)	$ 809,948

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APPENDIX B

AUDITED CONSOLIDATED FINANCIAL STATEMENTS OF UPMC
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2022

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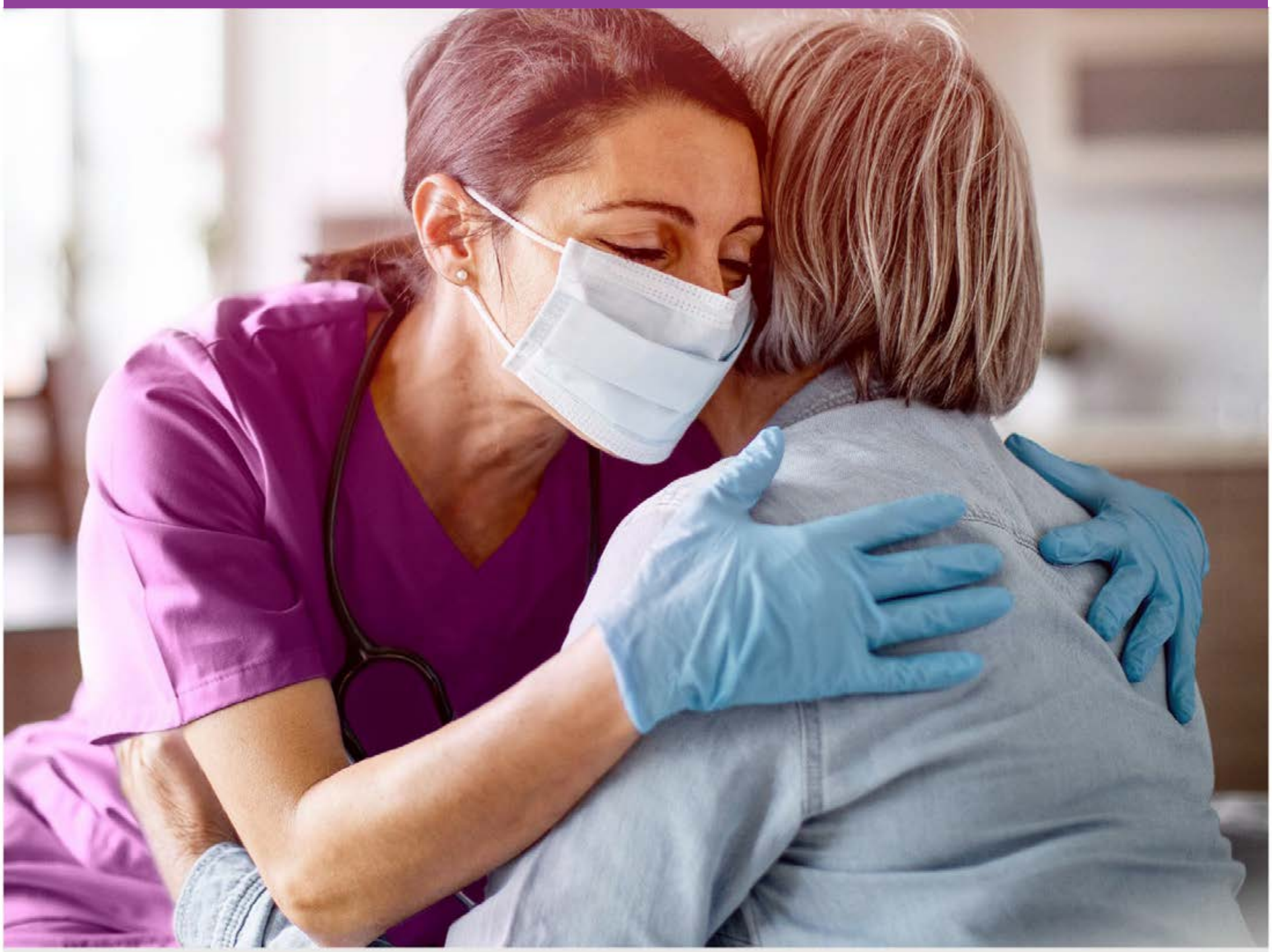
UPMC Year End Audited Consolidated Financial Statements

FOR THE PERIOD ENDED DECEMBER 31, 2022



UPMC
LIFE CHANGING MEDICINE

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Report of Independent Registered Public Accounting Firm

To the Board of Directors of UPMC

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of UPMC (the Company) as of December 31, 2022 and 2021, the related consolidated statements of operations and changes in net assets, and cash flows for the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2022 and 2021, and the results of its operations and its cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the auditing standards of the Public Company Accounting Oversight Board (United States) (PCAOB) and in accordance with auditing standards generally accepted in the United States of America, the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 27, 2023 (not presented herein) expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are required to be independent with respect to the Company in accordance with the relevant ethical requirements relating to our audit.

We conducted our audits in accordance with the auditing standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

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Building a better working world

Implicit and Explicit Price Concessions for Revenue Recognition

Description of the Matter

For the year ended December 31, 2022, the Company's net patient service revenue was $10.2 billion. As discussed in Note 1 to the consolidated financial statements, net patient service revenue is recorded based upon the estimated amounts the Company expects to be entitled to receive from patients and third-party payers in exchange for providing patient care. Estimates of the explicit price concessions under managed care, commercial, and governmental insurance plans are based upon the payment terms specified in the related contractual agreements or as mandated under government payer programs. Management continually reviews the explicit price concession estimation process to consider and incorporate updates to laws and regulations and the frequent changes in managed care and commercial contractual terms resulting from contract negotiations and renewals. Revenues related to uninsured patients and uninsured copayment and deductible amounts for patients who have health care insurance coverage may have discounts applied (uninsured discounts and contractual discounts). The Company also records estimated implicit price concessions (based primarily on historical collection experience) related to uninsured accounts to record these revenues at the estimated amounts the Company expects to collect. Additional collection risks relate to uninsured patients' accounts, including amounts owed from patients after insurance has paid the amounts covered by the applicable agreement. Implicit price concessions relate primarily to amounts due directly from patients and are based upon management's assessment of a patient's historical propensity to pay and write-offs, business and economic conditions, trends in federal, state and private employer health care coverage and other collection indicators.

Auditing management's estimates of explicit and implicit price concessions was complex and judgmental due to the significant data inputs and subjective assumptions utilized in determining related amounts.

How We Addressed the Matter in Our Audit

We tested internal controls that address the risks of material misstatement related to the measurement and valuation of revenues, including estimation of explicit and implicit price concessions. For example, we tested management's internal controls over the key data inputs to the explicit and implicit price concessions models, significant assumptions underlying management's models, and management's internal controls over retrospective hindsight reviews of historical reserve accuracy.

To test the estimated explicit and implicit price concessions, we performed audit procedures that included, among others, assessing methodologies and evaluating the significant assumptions discussed above and testing completeness and accuracy of the underlying data used by the Company in its estimates. We compared the significant assumptions used by management to current industry and economic trends and considered changes, if any, to the Company's business and other relevant factors. We also assessed the historical accuracy of management's estimates based on the results of the analysis comparing prior year estimates to actual results and other analytics as a source of potential corroborative or contrary evidence.

Ernst & Young LLP

We have served as the Company's auditor since 1994.
February 27, 2023

CONSOLIDATED BALANCE SHEETS

(DOLLARS IN THOUSANDS)

	As of December 31, 2022	As of December 31, 2021
CURRENT ASSETS		
Cash and cash equivalents	**$ 953,980**	$ 930,376
Patient accounts receivable	**1,418,566**	1,404,695
Insurance and other receivables	**1,933,177**	1,634,524
Other current assets	**588,555**	591,570
Total current assets	**4,894,278**	4,561,165
Board-designated, restricted, trusteed and other investments	**7,704,484**	9,766,549
Beneficial interests in foundations and trusts	**667,380**	783,779
Property, buildings and equipment:		
Land and land improvements	**558,402**	532,564
Buildings and fixed equipment	**8,651,098**	8,314,299
Movable equipment	**3,372,982**	3,294,921
Finance Leases	**222,178**	194,118
Construction in progress	**901,389**	590,085
	13,706,049	12,925,987
Less allowance for depreciation	**(7,186,157)**	(6,715,391)
	6,519,892	6,210,596
Operating lease right-of-use assets	**796,886**	976,026
Other assets	**744,434**	790,300
Total assets	**$ 21,327,354**	$ 23,088,415
CURRENT LIABILITIES		
Accounts payable and accrued expenses	**$ 834,097**	$ 783,477
Accrued salaries and related benefits	**1,024,110**	963,076
Current portion of insurance reserves	**1,155,133**	1,018,418
Current portion of long-term obligations	**369,443**	280,793
Other current liabilities	**939,010**	1,571,781
Total current liabilities	**4,321,793**	4,617,545
Long-term obligations	**5,152,164**	5,300,849
Long-term insurance reserves	**458,285**	429,182
Operating lease noncurrent liabilities	**770,766**	895,949
Other noncurrent liabilities	**717,464**	566,530
Total liabilities	**11,420,472**	11,810,055
Net assets without donor restrictions	**8,737,069**	9,883,697
Net assets with donor restrictions	**1,169,813**	1,394,663
Total net assets	**9,906,882**	11,278,360
Total liabilities and net assets	**$ 21,327,354**	$ 23,088,415

See accompanying notes

CONSOLIDATED STATEMENTS OF OPERATIONS AND CHANGES IN NET ASSETS

(DOLLARS IN THOUSANDS)

	Years Ended December 31 2022	2021
NET ASSETS WITHOUT DONOR RESTRICTIONS		
Net patient service revenue	**$ 10,240,253**	$ 10,005,556
Insurance enrollment revenue	**13,036,362**	12,110,124
Other revenue	**2,255,388**	2,250,804
Total operating revenues	**25,532,003**	24,366,484
Salaries, professional fees and employee benefits	**9,075,804**	8,207,431
Insurance claims expense	**8,911,760**	8,469,749
Supplies, purchased services and general	**6,612,758**	6,157,002
Depreciation and amortization	**693,757**	689,389
Total operating expenses	**25,294,079**	23,523,571
Operating income (prior to lease impairment expense)	**237,924**	842,913
Lease impairment expense	**75,784**	-
Operating income	**162,140**	842,913
Academic and research support provided	**(242,000)**	(240,300)
Other non-operating activities	**122,326**	87,171
Income tax expense	**(6,186)**	(6,032)
After-tax income	**$ 36,280**	$ 683,752
Investing and financing activities:		
Investment (loss) gain	**(748,183)**	902,569
Interest expense	**(157,959)**	(161,976)
Gain (loss) on extinguishment of debt	**14,409**	(2,342)
UPMC Enterprises activity:		
Portfolio company revenue and net gains from sales	**11,470**	271,482
Portfolio company and research and development expense	**(198,172)**	(199,785)
(Loss) gain from investing and financing activities	**(1,078,435)**	809,948
Excess of (expenses over revenues) revenues over expenses	**(1,042,155)**	1,493,700
Excess of (expenses over revenues) revenues over expenses attributable to noncontrolling interest	**(9,167)**	33,674
Excess of (expenses over revenues) revenues over expenses attributable to controlling interest	**(1,032,988)**	1,460,026
Net change in pension liability and other	**(113,640)**	256,909
Change in net assets without donor restrictions	**$ (1,146,628)**	$ 1,716,935
NET ASSETS WITH DONOR RESTRICTIONS		
Net contributions and other changes	**6,792**	21,081
(Losses) gains on restricted investments	**(20,642)**	22,754
Assets released from restriction for operations and capital purchases	**(94,601)**	(8,573)
Change in beneficial interests in foundations and trusts	**(116,399)**	104,973
Change in net assets with donor restrictions	**(224,850)**	140,235
Change in total net assets	**(1,371,478)**	1,857,170
Net assets, beginning of period	**11,278,360**	9,421,190
Net assets, end of period	**$ 9,906,882**	$ 11,278,360

See accompanying notes

CONSOLIDATED STATEMENTS OF CASH FLOWS

(DOLLARS IN THOUSANDS)

	Years Ended December 31 2022	2021
OPERATING ACTIVITIES		
(Decrease) increase in total net assets	**$ (1,371,478)**	$ 1,857,170
Adjustments to reconcile change in total net assets to net cash provided by operating activities:		
Depreciation and amortization	**693,757**	689,389
Change in beneficial interest in foundations and trusts	**116,399**	(104,973)
Restricted contributions and investment losses (gains)	**13,850**	(43,835)
Unrealized losses (gains) on investments	**842,834**	(245,080)
Realized losses (gains) on investments	**28,000**	(575,402)
Purchases of non-alternative investments	**(8,080,807)**	(11,759,789)
Sales of non-alternative investments	**9,251,039**	11,128,045
Changes in operating assets and liabilities:		
Accounts receivable	**(312,524)**	(415,492)
Other current assets	**3,015**	(81,005)
Accounts payable and accrued liabilities	**111,654**	115,865
Insurance reserves	**165,818**	107,923
Other current liabilities	**(632,771)**	290,364
Other noncurrent assets and liabilities	**55,516**	(830,497)
Other operating changes	**114,263**	(153,202)
Net cash provided by (used in) operating activities	**998,565**	(20,519)
INVESTING ACTIVITIES		
Purchase of property, buildings and equipment	**(964,243)**	(756,970)
UPMC Enterprises investments in non-consolidated entities	**(55,039)**	(43,156)
Cash acquired through divestitures	**-**	83,543
Net change in investments designated as nontrading	**35,143**	(21,593)
Purchases of alternative investments	**(212,346)**	(289,523)
Sales of alternative investments	**255,969**	363,264
Net change in other assets	**40,793**	39,131
Net cash used in investing activities	**(899,723)**	(625,304)
FINANCING ACTIVITIES		
Repayments of long-term obligations	**(1,113,374)**	(1,372,555)
Borrowings of long-term obligations	**1,051,986**	1,363,883
Restricted contributions and investment (losses) gains	**(13,850)**	43,835
Net cash (used in) provided by financing activities	**(75,238)**	35,163
Net change in cash and cash equivalents	**23,604**	(610,660)
Cash and cash equivalents, beginning of period	**930,376**	1,541,036
Cash and cash equivalents, end of period	**$ 953,980**	$ 930,376
SUPPLEMENTAL INFORMATION		
Finance lease obligations incurred to acquire assets	**$ 29,757**	$ 25,130

See accompanying notes

1. ORGANIZATIONAL OVERVIEW AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

UPMC is a Pennsylvania nonprofit corporation and is exempt from federal income tax pursuant to Section 501(a) of the Internal Revenue Code (the "Code") as an organization described in Section 501(c)(3) of the Code. Headquartered in Pittsburgh, Pennsylvania, UPMC is one of the world's leading integrated delivery and financing systems. UPMC comprises nonprofit and for-profit entities offering medical and health care-related services, including health insurance products. Closely affiliated with the University of Pittsburgh (the "University") and with shared academic and research objectives, UPMC partners with the University's Schools of the Health Sciences to deliver outstanding patient care, train tomorrow's health care specialists and biomedical scientists, and conduct groundbreaking research on the causes and course of disease.

The accompanying audited consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America ("GAAP") and include the accounts of UPMC and its subsidiaries. Intercompany accounts and transactions are eliminated in consolidation.

Cash and Cash Equivalents

Cash and cash equivalents consist primarily of cash and investments, which are so near to maturity that they present insignificant risk of changes in value. Fixed income instruments with original, short-term maturities of less than 90 days that are held in Master Trust Funds ("MTF") are excluded from cash equivalents as they are commingled with longer-term investments.

Net Patient Service Revenue

UPMC's net patient service revenue is recorded based upon the estimated amounts UPMC expects to be entitled to receive from patients, third-party payers (including health insurers and government programs) and others and includes an estimate of variable consideration for retroactive revenue adjustments due to settlement of audits, reviews and investigations. Generally, UPMC bills the patients and third-party payers several days after the services are performed and/or the patient is discharged from the facility. Estimates of the explicit price concessions under managed care, commercial and governmental insurance plans are based upon the payment terms specified in the related contractual agreements or as mandated under government payer programs. UPMC continually reviews the explicit price concession estimation process to consider and incorporate updates to laws and regulations and the frequent changes in managed care and commercial contractual terms resulting from contract negotiations and renewals. Revenue is recognized as performance obligations are satisfied. Performance obligations are determined based on the nature of the services provided by UPMC. Revenue for performance obligations satisfied over time is recognized based on actual charges incurred in relation to total expected (or actual) charges. UPMC believes that this method provides a reasonable representation of the transfer of services over the term of the performance obligation based on the inputs needed to satisfy the obligation. Generally, performance obligations satisfied over time relate to inpatient services. UPMC measures the performance obligation from admission into the hospital to the point when it is no longer required to provide services to that patient, which is generally at the time of discharge. Revenue for performance obligations satisfied at a point in time is recognized when goods or services are provided and UPMC does not believe it is required to provide additional goods or services to the patient.

(DOLLARS IN THOUSANDS)

The majority of UPMC's services are rendered to patients with third-party coverage. Payment under these programs for all payers is based on a combination of prospectively determined rates, discounted charges and historical costs. Amounts received under Medicare and Medical Assistance programs are subject to review and final determination by program intermediaries or their agents. The contracts UPMC has with commercial payers also provide for retroactive audit and review of claims. Agreements with third-party payers typically provide for payments at amounts less than established charges. Generally, patients who are covered by third-party payers are responsible for related deductibles and coinsurance, which vary in amount. UPMC also provides services to uninsured patients. Revenues related to uninsured patients and uninsured copayment and deductible amounts for patients who have health care coverage may have discounts applied (uninsured discounts and contractual discounts). UPMC also records estimated implicit price concessions (based primarily on historical collection experience) related to uninsured accounts to record these revenues at the estimated amounts UPMC expects to collect. Subsequent changes to the estimate of the transaction price are generally recorded as adjustments to net patient service revenue in the period of the change and are accrued on an estimated basis in the period the related services are rendered and adjusted in future periods if final settlements differ from estimates. Adjustments arising from a change to previously estimated transaction prices were not significant in the years ended December 31, 2022 or 2021.

Consistent with UPMC's mission, care is provided to patients regardless of their ability to pay. UPMC has determined it has provided implicit price concessions to uninsured patients and patients with other uninsured balances (for example, copays and deductibles). The implicit price concessions included in estimating the transaction price represent the difference between amounts billed to patients and the amounts UPMC expects to collect based on its collection history with those patients. Patients who meet UPMC's criteria for charity care are provided care without charge or at amounts less than established rates and UPMC has determined it has provided an implicit price concession. Price concessions, including charity care, are deducted from net patient service revenue.

The collection of outstanding receivables from Medicare, Medicaid, managed care payers, other third-party payers and patients is UPMC's primary source of cash and is critical to its operating performance. The primary collection risks relate to uninsured patient accounts, including patient accounts for which the primary insurance carrier has paid the amounts covered by the applicable agreement, but patient responsibility amounts (deductibles and copayments) remain outstanding. Implicit price concessions relate primarily to amounts due directly from patients. Estimated implicit price concessions are recorded for all uninsured accounts, regardless of the age of those accounts. Accounts are written off when all reasonable internal and external collection efforts have been performed. The estimates for implicit price concessions are based upon UPMC's assessment of historical write-offs and expected net collections, business and economic conditions, trends in federal, state and private employer health care coverage and other collection indicators.

The composition of net patient service revenue for the years ended December 31, 2022 and 2021 is as follows:

Years Ended December 31	**2022**	2021
Commercial	**38%**	39%
Medicare	**39%**	37%
Medical Assistance	**16%**	16%
Self-pay/other	**7%**	8%
	100%	100%

(DOLLARS IN THOUSANDS)

Laws and regulations governing the Medicare and Medical Assistance programs are complex and subject to interpretation. Compliance with such laws and regulations is subject to government review and interpretation as well as significant regulatory action, including fines, penalties and exclusion from Medicare and Medical Assistance programs. As a result, there is at least a reasonable possibility that the recorded estimates may change.

Insurance Enrollment Revenue

UPMC's insurance subsidiaries (collectively, the "Health Plans") provide health care services on a prepaid basis under various contracts. Insurance enrollment revenues are recognized as income in the period in which enrollees are entitled to receive health care services, which represents the performance obligation. Health care premium payments received from UPMC's members in advance of the service period are recorded as unearned revenues.

Insurance enrollment revenues include premiums that are collected from companies, individuals, and government entities. Laws and regulations governing the Medicare and Medical Assistance programs are complex and subject to interpretation. Compliance with such laws and regulations can be subject to government review and interpretation as well as significant regulatory action, including fines, penalties and exclusion from the programs. As a result, there is at least a reasonable possibility that recorded estimates may change.

Other Revenue

UPMC's other revenue consists of various contracts related to its Health Services and Insurance Services divisions. These contracts vary in duration and in performance obligations. Revenues are recognized when the performance obligations identified within the individual contracts are satisfied and collectability is probable. Revenue recognized related to governmental funding in response to the COVID-19 pandemic is captured in other revenue.

Receivables

Concentrations of patient accounts receivable at December 31, 2022 and 2021 include:

Years Ended December 31	**2022**	2021
Commercial	**44%**	44%
Medicare	**30%**	28%
Medical Assistance	**11%**	12%
Self-pay/other	**15%**	16%
	100%	100%

Insurance and other receivables are primarily comprised of payments due to Insurance Services and include the uncollected amounts from fully insured groups, individuals and government programs and are reported net of an allowance for estimated terminations and uncollectible accounts.

Board-Designated, Restricted, Trusteed and Other Investments

Substantially all of UPMC's investments in debt and equity securities are classified as trading. This classification requires UPMC to recognize unrealized gains and losses on substantially all of its investments in debt and equity securities as investment (loss) gain in the consolidated statements of operations and changes in net assets. This classification also includes UPMC Enterprises' cost basis investments in early stage entities, which are categorized as alternative investments. Gains and losses on the sales of securities are determined by the average cost method. Realized and unrealized gains and losses are included in investment (loss) gain in the consolidated statements of operations and changes in net assets. Realized and unrealized gains and losses on donor-restricted assets are recorded as changes in net assets with donor restrictions in the consolidated statements of operations and changes in net assets.

Investments in equity securities with readily determinable fair values and all investments in debt securities are measured at fair value using quoted market prices or model-driven valuations. These investments predominantly include those maintained in MTF and are summarized as nonalternative investments in Note 5.

Investments in limited partnerships that invest in marketable securities (hedge funds) are reported using the equity method of accounting based on information provided by the respective partnership, generally received on a one month lag. The values provided by the respective partnerships are based on historical cost, appraisals or other estimates that require varying degrees of judgment. Generally, UPMC's holdings reflect net contributions to the partnership and an allocated share of realized and unrealized investment income and expenses. The investments may individually expose UPMC to securities lending, short sales, and trading in futures and forward contract options and other derivative products. UPMC's risk is limited to its carrying value for these lending and derivatives transactions. Amounts can be divested only at specified times. The financial statements of the limited partnerships are audited annually, generally as of December 31.

The values of UPMC's private equity investments are based upon financial statements received from the general partners, which are generally received on a quarterly lag. As a result, the market values and earnings recorded as of December 31, 2022 generally reflect the partnership activity experienced during the year ended September 30, 2022. These investments are summarized as alternative investments in Note 5.

Fair Value Elections

Pursuant to accounting guidance provided by ASC 825-10, *Financial Instruments*, UPMC makes elections, on an investment-by-investment basis, as to whether it measures certain equity method investments that are traded in active markets at fair value. Fair value elections are generally irrevocable. The initial unrealized gains recognized upon election of the fair value option are recorded as operating revenue in the consolidated statements of operations and changes in net assets consistent with accounting for other equity method investments where UPMC has the ability to exercise significant influence but not control. Any subsequent changes in the fair value of the investment are recorded as investment (loss) gain in the consolidated statements of operations and changes in net assets, consistent with UPMC's reporting of gains and losses on other marketable securities included in board-designated, restricted, trusteed and other investments. Management believes this reporting increases the transparency of UPMC's financial condition.

Financial Instruments

Cash and cash equivalents and investments recorded at fair value aggregate to $7,502,345 and $9,583,692 at December 31, 2022 and 2021, respectively. The fair value of these instruments is based on market prices as estimated by financial institutions. The fair value of amounts owed to counterparties under derivative contracts at December 31, 2022 and 2021, is $732 and $3,683, respectively, and due from counterparties is $0 and $222, respectively, based on pricing models that take into account the present value of estimated future cash flows.

UPMC participates in securities lending transactions whereby a portion of its investments are loaned, through its agent, to various parties in return for cash and securities from the parties as collateral for the securities loaned. The amount of cash collateral received under securities lending is reported as an asset with a corresponding payable in the consolidated balance sheets. The total collateral is required to have a market value between 102% and 105% of the market value of securities loaned. As of December 31, 2022 and 2021, securities loaned to various parties, of which UPMC maintains ownership, were $203,429 and $203,256, respectively, and total collateral (cash and noncash) received related to the securities loaned was $212,925 and $213,284, respectively.

Beneficial Interests in Foundations and Trusts

Several of UPMC's subsidiary hospitals have foundations that, according to their bylaws, were formed for the exclusive purpose of supporting and furthering the mission of the respective hospital. The foundations are separate corporations and are not liable for the obligations of UPMC, including any claims of creditors of any UPMC entities. The net assets of certain foundations are included in the consolidated balance sheets as beneficial interests in foundations and net assets with donor restrictions because the hospitals' use of these assets is at the discretion of the foundations' independent boards of directors.

Beneficial interests in foundations and trusts of $667,380 and $783,779 and the net assets with donor restrictions of consolidated foundations of $53,208 and $61,262 as of December 31, 2022 and 2021, respectively, are not pledged as collateral for UPMC's debt.

Property, Buildings and Equipment

Property, buildings and equipment are recorded at cost or, if donated or impaired, at fair market value at the date of receipt or impairment. Interest cost incurred on borrowed funds (net of interest earned on such funds) during the period of construction of capital assets is capitalized as a component of the cost of acquiring those assets.

Costs associated with the development and installation of internal-use software are expensed or capitalized depending on whether they are incurred in the preliminary project stage, application development stage or post-implementation stage.

Depreciation is computed using the straight-line method at rates designed to depreciate the assets over their estimated useful lives (predominantly ranging from 3 to 40 years) and includes depreciation related to finance leases. Certain newly constructed buildings have estimated useful lives of up to 60 years. Depreciation expense on property, buildings and equipment for the years ended December 31, 2022 and 2021 was $692,765 and $687,178, respectively.

Leases

Leases are classified as either operating or financing, and the lease classification determines whether the expense is recognized on a straight-line basis (operating leases) or based on an effective interest method (finance leases). UPMC has made accounting policy elections not to apply lease recognition requirements to short-term leases as well as to use the risk-free discount rate for its operating leases. Operating leases are categorized as operating lease right-of-use assets on the consolidated balance sheets, while finance leases are recognized as property, buildings and equipment. UPMC has also made an accounting policy election not to bifurcate lease components from non-lease components. For leases that include variable lease payments, the payment is determined based on the executed contract terms. Some leases contain options to extend or terminate the lease, but these are not recognized in the right-of-use assets and lease liabilities as of December 31, 2022, unless it is probable that the option will be exercised. During the year ended December 31, 2022, due to changes in the nature and extent as to how specific leased locations are utilized, certain renewal options, previously deemed probable, were deemed to be unlikely to be exercised. As a result, a reduction of both the right-of-use-asset and lease liability totaling $118,557 was recorded as of December 31, 2022.

Asset Impairment

UPMC evaluates the recoverability of the carrying value of long-lived assets by reviewing long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable and adjusts the asset cost to fair value if undiscounted cash flows are less than the carrying amount of the asset. For the year ended December 31, 2022, an impairment for certain right-of-use assets was recorded in the amount of $75,784. No impairment was recorded for the year ended December 31, 2021.

Other Assets

Investments in individual entities in which UPMC has the ability to exercise significant influence but does not control, generally 20% to 50% ownership, are reported using the equity method of accounting unless the fair value option is elected. Other assets includes approximately $392,787 and $384,920 at December 31, 2022 and 2021, respectively, relating to investments in partnerships and joint ventures that provide health care, management, and other goods and services to UPMC, its affiliates and the community at large.

Goodwill

Goodwill represents the excess of the cost of an acquired entity over the net of the amounts assigned to the fair value of assets acquired and liabilities assumed. As of December 31, 2022 and 2021, goodwill of $266,799 and $267,702 respectively, is recorded in UPMC's consolidated balance sheets as other assets.

Goodwill is reviewed annually for impairment, or more frequently if events or circumstances indicate that the carrying value of an asset may not be recoverable. UPMC has the option to qualitatively assess goodwill for impairment before completing a quantitative assessment. Under the qualitative approach, if, after assessing the totality of events or circumstances, including both macroeconomic, industry and market factors, and entity-specific factors, UPMC determines it is likely (more likely than not) that the fair value is greater than its carrying amount, then the quantitative impairment analysis is not required. As of December 31, 2022 and 2021, after application of the qualitative approach, there were no indicators of impairment.

Derivatives

UPMC uses derivative financial instruments ("derivatives") to modify the interest rates and manage risks associated with its asset allocation and outstanding debt. UPMC records derivatives as assets or liabilities in the consolidated balance sheets at fair value. The accounting for changes in the fair value (i.e., gains or losses) of a derivative depends on whether it has been designated and qualifies as part of a hedging relationship and, further, on the type of hedging relationship. UPMC has entered into interest rate swap agreements that convert a portion of its variable rate debt to a fixed interest rate. None of UPMC's swaps outstanding as of December 31, 2022 and 2021 are designated as hedging instruments and, as such, changes in fair value are recognized in investing and financing activities as investment (loss) gain in the consolidated statements of operations and changes in net assets.

By using derivatives to manage these risks, UPMC exposes itself to credit risk and market risk. Credit risk is the failure of the counterparty to perform under the terms of the derivatives. When the fair value of a derivative is positive, the counterparty owes UPMC, which creates credit risk for UPMC. When the fair value of a derivative is negative, UPMC owes the counterparty, and therefore, it does not incur credit risk. UPMC minimizes the credit risk in derivatives by entering into transactions that require the counterparty to post collateral for the benefit of UPMC based on the credit rating of the counterparty and the fair value of the derivative. If UPMC has a derivative in a liability position, UPMC's credit is a risk and fair market values could be adjusted downward. Market risk is the effect on the value of a financial instrument that results from a change in interest rates. The market risk associated with interest rate changes is managed by establishing and monitoring parameters that limit the types and degree of market risk that may be undertaken. Management also mitigates risk through periodic reviews of derivative positions in the context of UPMC's total blended cost of capital.

Net Assets

Resources are classified for reporting purposes as net assets without donor restrictions and net assets with donor restrictions, according to the absence or existence of donor-imposed restrictions. Board-designated net assets are net assets without donor restrictions that have been set aside by the Board for specific purposes. Net assets with donor restrictions are those assets, including contributions and accumulated investment returns, whose use has been limited by donors for a specific purpose or time period or are those for which donors require the principal of the gifts to be maintained in perpetuity to provide a permanent source of income.

Net assets with donor restrictions include $379,125 and $439,517 of net assets held in perpetuity and $790,688 and $955,146 of temporary restricted net assets at December 31, 2022 and 2021, respectively. Net assets with donor restrictions include beneficial interests in foundations that support research and other health care programs. Some net assets with donor restrictions are limited by donors and the foundations to a specific time period or purpose and are reclassified to net assets without donor restrictions and included in the consolidated statements of operations and changes in net assets as other revenue or assets released from restriction for capital purchases when the restriction is met.

Excess of Expenses over Revenues

The consolidated statements of operations and changes in net assets include excess of expenses over revenues as a performance indicator. Excess of expenses over revenues includes all changes in net assets without donor restrictions except for contributions and distributions from foundations for the purchase of property and equipment, adjustments for pension liability, other than net periodic pension cost, discontinued operations, if any, and the cumulative effect of changes in accounting principles, if any.

Use of Estimates

The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

2. COVID-19

In March 2020 and March 2021, the federal government enacted the CARES Act and the American Rescue Plan ("ARP"), respectively, that provide, among other funding sources, relief funds to hospitals and other health care providers on the front lines of the COVID-19 response. This funding has been used to support health care related expenses or lost revenue attributable to COVID-19. For the year ended December 31, 2022, UPMC recognized approximately $234,000 within operating income compared to $316,000 recognized for the year ended December 31, 2021. UPMC and its subsidiaries have and expect to continue to experience an impact on operations as a result of the COVID-19 pandemic.

In order to increase cash flow to providers of services and suppliers impacted by the COVID-19 pandemic, the Centers for Medicare & Medicaid Services ("CMS") expanded the current Accelerated and Advance Payment Program. Beginning in April 2020, CMS provided advance funding that aggregated to a total of approximately $840,000 to 185 individually identified UPMC entities. In October 2020, a bill was signed into law which changed the original Medicare loan repayment terms for health care providers allowing recoupment to begin one year after the Medicare Accelerated and Advance Payment Program loan was issued. Recoupment began in April 2021 and the recovery period was approximately 18 months from that date. Additionally, the CARES Act allowed employers to defer the deposit and payment of certain employer's share of Social Security/FICA taxes. As of December 31, 2022, these deferred amounts were substantially repaid. As of December 31, 2021, $619,000 was outstanding and included in other current liabilities.

3. NEW ACCOUNTING PRONOUNCEMENTS

Effective January 1, 2021, UPMC adopted the Financial Accounting Standards Board ("FASB") Accounting Standards Update ("ASU") 2018-14, *Compensation – Retirement Benefits- Defined Benefit Plans* (Topic 715). This ASU modifies the disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans. UPMC applied the relevant provisions of the standard to their consolidated financial statement disclosures accordingly.

4. CHARITY CARE

UPMC's patient acceptance policy is based on its mission and its community service responsibilities. Accordingly, UPMC accepts patients in immediate need of care, regardless of their ability to pay. UPMC does not pursue collection of amounts determined to qualify as charity care based on established policies of UPMC. These policies define charity care as those services for which no payment is due for all or a portion of the patient's bill. For financial reporting purposes, charity care is excluded from net patient service revenue. The amount of charity care provided, determined on the basis of cost, was $108,905 and $87,331 for the years ended December 31, 2022 and 2021, respectively. UPMC estimates the cost of providing charity care using the ratio of average patient care cost to gross charges and then applying that ratio to the gross uncompensated charges associated with providing charity care.

(DOLLARS IN THOUSANDS)

5. CASH AND INVESTMENTS

Following is a summary of cash and investments included in the consolidated balance sheets:

	December 31 2022	2021
Internally designated:		
Health insurance programs	**$ 1,689,382**	$ 1,694,242
Professional and general liability insurance program	**625,533**	692,969
Employee benefit and workers' compensation self-insurance programs	**121,798**	159,220
Other	**-**	99,182
	2,436,713	2,645,613
Externally designated:		
Trusteed assets for capital and debt service payments	**3,533**	3,447
Donor-restricted assets	**476,322**	606,064
	479,855	609,511
Other long-term investments	**4,787,916**	6,511,425
Board-designated, restricted, trusteed and other investments	**7,704,484**	9,766,549
Cash and cash equivalents	**953,980**	930,376
	$ 8,658,464	$ 10,696,925

Investments are primarily maintained in MTF and administered using a bank as trustee. As of December 31, 2022, UPMC utilized 174 ongoing external investment managers, including 45 traditional managers, 18 hedge fund managers and 111 private capital managers. UPMC is also invested with an additional 32 legacy private capital and hedge fund managers. The largest allocation to any alternative investment fund is $90,160 as of December 31, 2022. Certain managers use various equity and interest rate derivatives. These instruments are subject to various risks similar to nonderivative financial instruments, including market, credit, liquidity, operational and foreign exchange risk. UPMC's unfunded commitments to investments are $525,148 and $376,193 as of December 31, 2022 and 2021, respectively. Unfunded commitments may be called by managers pursuant to the terms of each specific fund's documents, which allow capital to be called during a fund's investment period for new investments. While terms vary, investment periods are generally within six years.

(DOLLARS IN THOUSANDS)

Investment return from cash and investments is comprised of the following for the years ended December 31, 2022 and 2021:

	2022	2021
Interest income	**$ 109,917**	$ 73,213
Dividend income	**44,008**	40,928
Net realized (losses) gains on sales of securities	**(28,000)**	575,402
	125,925	689,543
Unrealized investment (losses) gains	**(842,834)**	245,080
Derivative contracts mark to market	**2,728**	2,557
	(840,106)	247,637
Total investment (loss) gain	**(714,181)**	937,180
Traditional investment manager and trustee fees	**(34,002)**	(34,611)
Investment (loss) gain	**$ (748,183)**	$ 902,569

In managing the UPMC investment strategy, an important consideration is to ensure sufficient liquidity. While UPMC's relationships with its external investment managers vary in terms of exit provisions, a percentage of the agreements allow ready access to underlying assets which are generally liquid and marketable. Liquidity as of December 31, 2022 is shown below:

Liquidity Availability	**Cash and Cash Equivalents**	**Nonalternative Investments**	**Alternative Investments**	**Total**
Within three days	$ 953,980	$ 4,725,107	$ -	$ 5,679,087
Within 30 days	–	124,887	100,048	224,935
Within 60 days	–	-	-	-
Within 90 days	–	-	494,384	494,384
More than 90 days	–	308,759	1,951,299	2,260,058
Total	$ 953,980	$ 5,158,753	$ 2,545,731	$ 8,658,464

6. CREDIT ARRANGEMENTS

UPMC has a revolving line and letter of credit facility (the "Revolving Facility") with a capacity of $600,000. The Revolving Facility expires on January 24, 2024. The Revolving Facility is used to manage cash flow during the year and to provide for a consolidated method of issuing various letters of credit for certain business units. A note to secure UPMC's repayment obligation with respect to the Revolving Facility was issued under the 2007 MTI and is secured by a pledge of and security interest in the gross revenues of UPMC's parent corporation, UPMC Presbyterian Shadyside, UPMC Magee-Womens Hospital, UPMC Passavant and UPMC St. Margaret as members of the obligated group under the 2007 UPMC MTI. Advances may be variable rate based on the prime rate or the Federal Funds effective rates or fixed on the date of the advance based on the LIBOR Rate and the reserve requirement on Eurocurrency liabilities.

As of December 31, 2022 and 2021, UPMC had issued $137,778 and $82,990, respectively, of letters of credit under the Revolving Facility. These letters of credit predominantly support the capital requirements of certain insurance subsidiaries. As of December 31, 2022 and 2021, there was $462,222 and $517,010, respectively, available to borrow under the Revolving Facility. No amounts were outstanding under the Revolving Facility as of December 31, 2022 and 2021.

(DOLLARS IN THOUSANDS)

In support of the Insurance Services division, UPMC has credit facilities of $350 million and $250 million, the latter of which temporarily decreases each year to $25 million from September 1st to April 30th. The credit facilities expire in May 2026 and May 2027, respectively. As of December 31, 2022, these credit facilities were undrawn.

7. LONG-TERM OBLIGATIONS AND DERIVATIVE INSTRUMENTS

Long-term obligations consist of the following:

	December 31	
	2022	2021
Fixed rate revenue bonds	**$ 4,452,224**	$ 4,496,406
Variable rate revenue bonds	**673,157**	701,192
Finance leases and other	**144,350**	124,758
Par value of long-term obligations	**5,269,731**	5,322,356
Net premium and other	**251,876**	259,286
	5,521,607	5,581,642
Less current portion	**(369,443)**	(280,793)
Total long-term obligations	**$ 5,152,164**	$ 5,300,849

Bonds and leases outstanding represent funds borrowed by the UPMC parent corporation and various subsidiaries pursuant to loan agreements and lease and sublease financing arrangements with governmental authorities. The proceeds were used for the purchase, construction and renovation of hospital facilities, certain buildings and equipment, as well as the extinguishment of debt.

The fixed rate revenue bonds bear interest at fixed coupon rates ranging from 1.80% to 6.00% as of December 31, 2022 and from 1.80% to 6.00% as of December 31, 2021. The average interest costs for the variable rate revenue bonds were 2.02% and 1.30% during the years ended December 31, 2022 and 2021, respectively. Bonds have varying principal payments and final maturities from 2023 through 2052. Certain revenue bonds ($43,606 and $43,595 for 2022 and 2021, respectively) are secured by bond insurance. The bonds contain redemption provisions whereby, at the direction of UPMC, the bonds may be redeemed on various dates as presented within the bond agreements.

Bonds in the aggregate of $5,124,649 and $5,193,915 as of December 31, 2022 and 2021, respectively, are issued under the UPMC MTI. The bonds are secured by a pledge of and security interest in gross revenues. Certain amounts borrowed under the MTI are loaned to certain subsidiary corporations pursuant to loan and contribution agreements and require the transfer of subsidiary funds to the parent corporation in the event of failure to satisfy the UPMC parent corporation liquidity covenant.

The various indebtedness agreements contain restrictive covenants, the most significant of which are the maintenance of minimum debt service coverage and liquidity ratios, and restrictions as to the incurrence of additional indebtedness and transfers of assets. UPMC was in compliance with such covenants as of December 31, 2022 and 2021.

(DOLLARS IN THOUSANDS)

Aggregate maturities of long-term obligations for the next five years, assuming no remarketing of UPMC's variable rate debt, indicating the maximum potential payment obligations in these years, are as follows:

2023	$ 369,443
2024	162,531
2025	521,222
2026	575,575
2027	254,135

Interest paid, net of amounts capitalized, on all obligations was $193,283 and $191,221 during the years ended December 31, 2022 and 2021, respectively.

During the year ended December 31, 2022, UPMC issued the tax-exempt Series 2022A and 2022B fixed rate bonds in the par amount of $212,430 and $172,195, respectively, in order to fund new capital projects and refund existing debt. Concurrently, UPMC remarketed the tax-exempt Series 2017C and 2017D-2 bonds. During the year ended December 31, 2021, UPMC issued Series 2021A, 2021B, and 2021C fixed rate bonds in the par amount of $221,860, $47,430, and $400,000, respectively, with an original issue premium of $42,165, $10,288, and $0, respectively, in order to fund new capital projects and refund existing debt.

UPMC maintains interest rate swap programs on certain of its bonds in order to manage its interest rate risk. To meet this objective and to take advantage of low interest rates, UPMC entered into various interest rate swap agreements to manage interest rate risk. The notional amount under each interest rate swap agreement is reduced over the term of the respective agreement to correspond with reductions in various outstanding bond series.

During the term of these agreements, the floating to fixed rate swaps convert variable rate debt to a fixed rate and the basis swaps convert the interest rate on underlying LIBOR-based bonds to the Securities Industry and Financial Markets Association Municipal Swap Index ("SIFMA Index").

Under the basis swaps, UPMC pays a rate equal to the SIFMA Index, an index of seven-day, high-grade, tax-exempt variable rate demand obligations. The SIFMA Index rates ranged from 0.04% to 3.80% (weighted average rate of 1.23%) and from 0.02% to 0.11% (weighted average rate of 0.04%) as of December 31, 2022 and 2021, respectively.

The following table summarizes UPMC's interest rate swap agreements:

				Notional Amount at	
Swap	**Maturity Date**	**UPMC Pays**	**UPMC Receives**	**Dec 31, 2022**	Dec 31, 2021
Floating to fixed	2025	3.60%	68% one-month LIBOR	**$ 37,935**	$ 49,280
Basis	2037	SIFMA Index[1]	67% three-month LIBOR plus .3217%	**38,450**	46,095
Floating to fixed	2024	1.413%	67% one-month LIBOR	**-**	7,500
				$ 76,385	$ 102,875

[1]The SIFMA Index is a 7-day high-grade market index comprised of tax-exempt variable rate demand obligations.

(DOLLARS IN THOUSANDS)

Pursuant to master netting arrangements, UPMC has the right to offset the fair value of amounts recognized for derivatives, including the right to reclaim or obligation to return cash collateral from/to counterparties. The fair values of UPMC's derivative financial instruments are presented below, representing the gross amounts recognized as of December 31, 2022 and December 31, 2021 which are not offset by counterparty or type of item hedged:

	Dec 31, 2022	Dec 31, 2021
Other assets	**$ -**	$ 222
Long-term obligations	**(732)**	(3,683)
	$ (732)	$ (3,461)

8. FAIR VALUE MEASUREMENTS

As of December 31, 2022 and 2021, UPMC held certain assets that are required to be measured at fair value on a recurring basis. These include cash and cash equivalents, certain board-designated, restricted, trusteed, and other investments and derivative instruments. Certain alternative investments are measured using the equity method of accounting and are therefore excluded from the fair value hierarchy tables presented herein. The valuation techniques used to measure fair value are based upon observable and unobservable inputs. Observable inputs reflect market data obtained from independent sources, while unobservable inputs are generally unsupported by market activity. The three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value, includes:

Level 1: Quoted prices for identical assets or liabilities in active markets.

Level 2: Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-driven valuations whose inputs are observable or whose significant value drivers are observable.

Level 3: Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The following tables represent UPMC's fair value hierarchy for its financial assets and liabilities measured at fair value on a recurring basis as of December 31, 2022 and 2021. The interest rate swaps are valued using internal models, which are primarily based on market observable inputs, including interest rate curves. When quoted market prices are unobservable for fixed income securities, quotes from independent pricing vendors based on recent trading activity and other relevant information, including market interest rate curves, referenced credit spreads and estimated prepayment rates where applicable, are used for valuation purposes. These investments are included in Level 2 and include corporate fixed income, government bonds, and mortgage and asset-backed securities. As of December 31, 2022 and 2021, respectively, UPMC had $1,156,119 and $1,113,233 of alternative investments accounted for under the equity method, which approximates fair value.

Other investments measured at fair value represent funds included on the consolidated balance sheets that are reported using net asset value ("NAV"). These amounts are not required to be categorized in the fair value hierarchy. The fair value of these investments is based on the net asset value information provided by the general partner. Fair value is based on the proportionate share of the NAV based on the most recent partners' capital statements received from the general partners, which is generally one quarter prior to the balance sheet date. Certain of UPMC's alternative investments are utilizing NAV to calculate fair value and are included in other investments in the following tables.

(DOLLARS IN THOUSANDS)

FAIR VALUE MEASUREMENTS AS OF DECEMBER 31, 2022

	Level 1	Level 2	Level 3	NAV	Total Carrying Amount
ASSETS					
Fixed income	$ 853,228	$ 1,723,814	$ -	$ -	$ 2,577,042
Domestic equity	1,275,130	8,700	-	-	1,283,830
International equity	696,429	541	-	-	696,970
Public real estate	103,870	-	-	-	103,870
Long/short equity	61,389	13,657	-	-	75,046
Absolute equity	51,241	-	-	-	51,241
Commodities	-	-	-	-	-
Derivative instruments	-	-	-	-	-
Securities on loan	203,429	-	-	-	203,429
Securities lending collateral	116,000	-	-	-	116,000
Alternative and other investments at NAV	-	-	-	1,556,937	1,556,937
Total assets measured at fair value on a recurring basis	$ 3,360,716	$ 1,746,712	$ -	$ 1,556,937	$ 6,664,365
LIABILITIES					
Payable under securities lending agreement	$ (116,000)	$ -	$ -	$ -	$ (116,000)
Derivative instruments	-	(732)	-	-	(732)
Total liabilities measured at fair value on a recurring basis	$ (116,000)	$ (732)	$ -	$ -	$ (116,732)

FAIR VALUE MEASUREMENTS AS OF DECEMBER 31, 2021

	Level 1	Level 2	Level 3	NAV	Total Carrying Amount
ASSETS					
Fixed income	$ 1,041,729	$ 2,911,201	$ -	$ -	$ 3,952,930
Domestic equity	1,490,595	9,760	-	-	1,500,355
International equity	873,730	-	-	-	873,730
Public real estate	137,364	-	-	-	137,364
Long/short equity	73,485	15,173	-	-	88,658
Absolute equity	54,195	-	-	-	54,195
Commodities	-	-	-	-	-
Derivative instruments	-	222	-	-	222
Securities on loan	203,256	-	-	-	203,256
Securities lending collateral	117,873	-	-	-	117,873
Alternative and other investments at NAV	-	-	-	1,842,828	1,842,828
Total assets measured at fair value on a recurring basis	$ 3,992,227	$ 2,936,356	$ -	$ 1,842,828	$ 8,771,411
LIABILITIES					
Payable under securities lending agreement	$ (117,873)	$ -	$ -	$ -	$ (117,873)
Derivative instruments	-	(3,683)	-	-	(3,683)
Total liabilities measured at fair value on a recurring basis	$ (117,873)	$ (3,683)	$ -	$ -	$ (121,556)

(DOLLARS IN THOUSANDS)

9. PENSION PLANS

UPMC and its subsidiaries maintain defined benefit pension plans (the "Plans"), defined contribution plans and nonqualified pension plans that cover substantially all of UPMC's employees. Under the defined contribution plans, employees may elect to contribute a percentage of their salary, which is matched in accordance with the provisions of the defined contribution plans. Contributions to the nonqualified pension plans are based on a percentage of salary or contractual arrangements. Within excess of (expenses over revenues) revenues over expenses, the total expense relating to the aforementioned pension plans was $213,822 and $231,374, respectively, for the years ended December 31, 2022 and 2021.

Benefits under the Plans vary and are generally based upon the employee's earnings and years of participation. It is UPMC's policy to meet the requirements of the Employee Retirement Income Security Act of 1974 ("ERISA") and the Pension Protection Act of 2006. No contributions were made to the Plans for the years ended December 31, 2022 and 2021.

To develop the expected long-term rate of return on plan assets assumption, UPMC considers the current level of expected returns on risk-free investments, the historical level of risk premium associated with the other asset classes in which the pension portfolio is invested and the expectations for future returns on each asset class. The expected return for each asset class is then weighted based on the target asset allocation to develop the expected long-term rate of return on assets assumption for the pension portfolio.

The table below sets forth the accumulated benefit obligation, the change in the projected benefit obligation and the change in the assets of the Plan. The table also reflects the funded status of the Plans as well as recognized and unrecognized amounts in the consolidated balance sheets. As of December 31, 2022 and December 31, 2021, the pension liability is included in other noncurrent liabilities and the pension asset is included in other assets on the consolidated balance sheet, respectively.

	Year Ended December 31	
	2022	2021
Accumulated benefit obligation	**$ 2,713,380**	$ 2,895,156
CHANGE IN PROJECTED BENEFIT OBLIGATION		
Projected benefit obligation at beginning of year	**$ 3,057,429**	$ 3,018,239
Service cost	**179,540**	174,019
Interest cost	**89,701**	76,674
Actuarial gain	**(302,638)**	(5,429)
Benefits paid	**(202,838)**	(206,074)
Projected benefit obligation at end of year	**2,821,194**	3,057,429
CHANGE IN PLAN ASSETS		
Fair value of plan assets at beginning of year	**3,087,194**	2,846,256
Actual return on plan assets	**(256,663)**	447,012
Employer contributions	**-**	-
Annuity purchases	**-**	-
Benefits paid	**(202,838)**	(206,074)
Fair value of plan assets at end of year	**2,627,693**	3,087,194
Pension liability (asset) at end of year	**$ 193,501**	$ (29,765)

(DOLLARS IN THOUSANDS)

Included in net assets without donor restrictions at December 31, 2022 and 2021 are the following amounts that have not yet been recognized in net periodic pension cost:

	As of December 31	
	2022	2021
Unrecognized prior service credit	**$ 28,807**	$ 34,063
Unrecognized net actuarial loss	**(405,972)**	(243,569)
	$ (377,165)	$ (209,506)

Changes in plan assets and benefit obligations recognized in net assets without donor restrictions during 2022 and 2021 include the following:

	Year Ended December 31	
	2022	2021
Current year net actuarial (loss) gain	**$ (162,408)**	$ 261,056
Amortization of actuarial loss	**5**	28,280
Amortization of prior service credit	**(5,256)**	(5,256)
	$ (167,659)	$ 284,080

The service cost component of net periodic benefit cost is included in salaries, professional fees and employee benefits and all other components of net periodic benefit cost are included in other non-operating activities in the consolidated statements of operations and changes in net assets. The components of net periodic pension cost for the Plan were as follows:

	Year Ended December 31	
	2022	2021
Service cost	**$ 179,540**	$ 174,019
Interest cost	**89,701**	76,674
Expected return on plan assets	**(208,383)**	(191,385)
Recognized net actuarial loss	**5**	28,280
Amortization of prior service credit	**(5,256)**	(5,256)
Net periodic pension cost	**$ 55,607**	$ 82,332

The weighted average actuarial assumptions used to determine the benefit obligations and net periodic pension cost for the Plan are as follows:

	As of December 31	
	2022	2021
Discount rates:		
Used for benefit obligations	**5.20%**	2.87%
Used for net periodic pension cost	**2.87%**	2.49%
Expected rate of compensation increase:		
Used for benefit obligations	**Age-graded**	Age-graded
Used for net periodic pension cost	**Age-graded**	Age-graded
Expected long-term rate of return on plan assets	**7.00%**	7.00%
Interest crediting rate	**4.20%**	2.40%

(DOLLARS IN THOUSANDS)

The assumptions for long-term rate of return are developed using the expected returns of the various asset classes in which the pension invests and the allocations of each asset class with respect to the investment as a whole. The change in discount rate from 2.87% to 5.20% had the net effect of decreasing the projected benefit obligation by $624,482 for the year ended December 31, 2022. The change in the interest crediting rate from 2.40% to 4.20% increased the projected benefit obligation by $301,031 for the year ended December 31, 2022.

The following pension benefit payments are expected to be paid in the years ending December 31:

2023	$ 230,255
2024	234,125
2025	242,816
2026	242,730
2027	244,082
2028-2032	1,200,988

UPMC employs a total return investment approach whereby a mix of equities and fixed income investments are used to maximize the long-term return on plan assets subject to accepting a prudent level of risk. Risk tolerance is established through consideration of plan liabilities, plan funded status and corporate financial condition. The pension portfolio contains a diversified blend of equity, fixed income and alternative investments. Equity investments are diversified across United States and non-United States corporate stocks, as well as growth, value, and small and large capitalizations. Other assets such as real estate, private equity and hedge funds are used to enhance long-term returns while improving portfolio diversification. Investment risk is measured and monitored on an ongoing basis through quarterly investment portfolio reviews, annual liability measurements and periodic asset/liability studies.

As of December 31, 2022, UPMC employed 182 external investment managers to handle the investment of the assets in the pension portfolio. Of these, 23 managers manage equity investments, 10 manage fixed income investments and 149 managers oversee alternative investment strategies. The largest allocation to any alternative investment manager is $43,800 as of December 31, 2022. Unfunded commitments due to investments within the Plans, funded with Plan assets, are $338,338 and $349,438 as of December 31, 2022 and 2021, respectively. Unfunded commitments may be called by managers pursuant to the terms of each specific fund's documents, which allow capital to be called during a fund's investment period for new investments. While terms vary, investment periods are generally within six years.

(DOLLARS IN THOUSANDS)

The following is a summary of the pension plan asset allocations at December 31, 2022 and 2021:

	2022	2021	2022 Target
Nonalternative investments:			
Fixed income	**11.7%**	11.8%	13.0%
Domestic equity	**16.8%**	21.1%	25.0%
International equity	**16.2%**	18.2%	19.0%
Total nonalternative investments	**44.7%**	51.1%	57.0%
Real assets:			
Real estate	**5.0%**	3.7%	4.0%
Income opportunities	**1.7%**	1.7%	2.0%
Natural resources	**5.4%**	4.2%	4.0%
Total real assets	**12.1%**	9.6%	10.0%
Alternative investments:			
Long/short equity	**11.4%**	10.9%	11.0%
Absolute return	**7.3%**	6.0%	7.0%
Private equity	**24.5%**	22.4%	15.0%
Total alternative investments	**43.2%**	39.3%	33.0%
Total	**100.0%**	100.0%	100.0%

All of the Plans' assets are measured at fair value, including its alternative investments. The same levels of the fair value hierarchy as described in Note 8 are used to categorize the Plans' assets. Corporate debt instruments and fixed income/bonds are valued using pricing models, quoted prices of securities with similar characteristics or discounted cash flows. The fair value of common/collective trust funds is determined by the issuer sponsoring such funds by dividing the fund's net assets at fair value by its units outstanding at the valuation dates. Partnership interests are valued using NAV, which is based on the unit values of the interests as determined by the issuer sponsoring such interests dividing the fund's net assets at fair value by its units outstanding at the valuation dates.

(DOLLARS IN THOUSANDS)

The fair values of the Plans' assets at December 31, 2022, by asset category and by the level of inputs used to determine fair value, were as follows:

	Level 1	Level 2	Level 3	NAV	Total
ASSETS					
Equity securities:					
Domestic equity	**$ 361,310**	**$ 4,300**	**$ -**	**$ -**	**$ 365,610**
International equity	**261,073**	**129**	**-**	**-**	**261,202**
U.S. REITS	**37,558**	**1,714**	**-**	**-**	**39,272**
Fixed income:					
Government securities	**37,691**	**2,669**	**-**	**-**	**40,360**
Bond funds	**95,860**	**-**	**-**	**-**	**95,860**
Corporate debt instruments	**-**	**41,951**	**-**	**-**	**41,951**
Asset and mortgage-backed securities	**-**	**62,870**	**-**	**-**	**62,870**
Long/short equity	**72,302**	**45,094**	**-**	**-**	**117,396**
Absolute return	**11,074**	**-**	**-**	**-**	**11,074**
Other investments	**-**	**-**	**-**	**1,588,482**	**1,588,482**
Net receivables	**3,616**	**-**	**-**	**-**	**3,616**
Plans' assets at fair value	**$ 880,484**	**$ 158,727**	**$ -**	**$ 1,588,482**	**$ 2,627,693**

The fair values of the Plans' assets at December 31, 2021, by asset category and by the level of inputs used to determine fair value, were as follows:

	Level 1	Level 2	Level 3	NAV	Total
ASSETS					
Equity securities:					
Domestic equity	$ 576,856	$ 6,403	$ -	$ -	$ 583,259
International equity	322,344	-	-	-	322,344
U.S. REITS	51,923	1,598	-	-	53,521
Fixed income:					
Government securities	30,976	-	-	-	30,976
Bond funds	145,405	-	-	-	145,405
Corporate debt instruments	-	42,145	-	-	42,145
Asset and mortgage-backed securities	-	68,948	-	-	68,948
Long/short equity	47,895	-	-	-	47,895
Absolute return	11,482	-	-	-	11,482
Other investments	-	-	-	1,780,190	1,780,190
Net receivables	1,029	-	-	-	1,029
Plans' assets at fair value	$ 1,187,910	$ 119,094	$ -	$ 1,780,190	$ 3,087,194

(DOLLARS IN THOUSANDS)

10. HEALTH INSURANCE REVENUE AND COSTS

Health care costs were $11,882,007 and $11,338,966, of which $2,970,247 and $2,869,217 were eliminated in consolidation representing medical services performed by other UPMC entities for the years ended December 31, 2022 and 2021, respectively. Such costs are included in insurance claims expense. These costs include estimates of payments to be made on claims reported but not yet processed as of the balance sheet date and estimates of health care services incurred but not reported to the Health Plans. Such estimates include the cost of services that will continue to be incurred after the balance sheet date when the Health Plans are obligated to remit payment for such services in accordance with contract provisions or regulatory requirements. UPMC determines the amount of the reserve for incurred but not paid claims by following a detailed actuarial process that uses both historical claim payment patterns as well as emerging medical cost trends to project UPMC's best estimate of reserve for physical health care costs. This process involves formatting of historical paid claims data into claim triangles, which compare claim incurred dates to the dates of claim payments. This information is analyzed to create completion factors that represent the average percentage of total incurred claims that have been paid through a given date after being incurred. Completion factors are applied to claims paid through the period-end date to estimate the ultimate claim expense incurred for the period. Actuarial estimates of incurred but not paid claim liabilities are then determined by subtracting the actual paid claims from the estimate of the ultimate incurred claims.

For the most recent incurred months, the percentage of claims paid for claims incurred in those months is generally low. This makes the completion factors methodology less reliable for such months. Therefore, incurred claims for most recent months are not projected from historical completion and payment patterns; rather, they are projected by estimating the claims expense for those months based on recent claims expense levels and health care trend levels, or trend factors.

While there are many factors that are used as part of the estimation of UPMC's reserve for physical health care costs, the two key assumptions having the most significant impact on UPMC's incurred but not paid claims liability as of December 31, 2022 were the completion and trend factors.

		2022		2021
Reserve for physical health care costs (beginning balance)	**$**	**642,078**	$	705,361
Add: Provisions for medical costs occurring in:				
Current year		**10,622,623**		10,149,739
Prior year		**13,174**		(26,263)
Net incurred medical costs		**10,635,797**		10,123,476
Deduct: Payments for claims occurring in:				
Current year		**9,975,085**		9,507,661
Prior year		**655,252**		679,098
Net paid medical costs		**10,630,337**		10,186,759
Reserve for physical health care costs (ending balance)	**$**	**647,538**	$	642,078

The foregoing rollforward shows unfavorable development of $13,174 and favorable development of ($26,263) for the years ended December 31, 2022 and 2021, respectively. UPMC regularly reviews and sets assumptions regarding cost trends and utilization when initially establishing a reserve for physical health care costs. UPMC continually monitors and adjusts the reserve and claim expense based on subsequent paid claims activity. If it is determined that UPMC's assumptions regarding cost trends and utilization are materially different from actual results, UPMC's consolidated statement of operations and changes in net assets and consolidated balance sheet could be impacted in future periods. Adjustments of prior year estimates may result in additional claim expense or a reduction of claim expense in the period an adjustment is made.

Incurred claims development for the years ended December 31, 2022, 2021 and 2020 are as follows:

	(Unaudited) December 31, 2020	(Unaudited) December 31, 2021	**December 31, 2022**
December 31, 2020	$ 9,319,976	$ 9,300,474	**$ 9,300,474**
December 31, 2021		10,149,739	**10,162,913**
December 31, 2022			**10,622,623**
			$ 30,086,010

Paid claims development for the years ended December 31, 2022, 2021 and 2020 are as follows:

	(Unaudited) December 31, 2020	(Unaudited) December 31, 2021	**December 31, 2022**
December 31, 2020	$ 8,623,868	$ 9,300,474	**$ 9,300,474**
December 31, 2021		9,507,661	**10,162,913**
December 31, 2022			**9,975,085**
			$ 29,438,472

At December 31, 2022, the total of incurred but not reported ("IBNR") liabilities plus expected development on reported claims and the cumulative number of reported claims for the years ended December 31, 2022, 2021 and 2020 are as follows:

	Total IBNR and Expected Development on Reported Claims	**(Unaudited) Cumulative Number of Reported Claims***
December 31, 2020	$ -	23,307
December 31, 2021	-	25,671
December 31, 2022	647,538	27,268
Total	**$ 647,538**	**76,246**

** In thousands*

The cumulative number of reported claims for each claim year has been developed using historical data captured by UPMC's claims payment system and data warehouse.

Net assets without donor restrictions required to meet statutory requirements of the Health Plans were $1,622,649 and $1,587,303 at December 31, 2022 and 2021, respectively.

(DOLLARS IN THOUSANDS)

11. PROFESSIONAL AND GENERAL LIABILITY INSURANCE

UPMC is insured for professional and general liability losses through wholly owned, multiprovider insurance companies (the "Captives"). The Captives provide primary and excess professional liability coverage to UPMC subsidiaries, employed physicians of UPMC and other entities not included in the consolidated financial statements. For those self-insured risks, UPMC has established irrevocable trust funds to pay claims and related costs.

Certain insurance agreements have retrospective clauses that permit additional premiums or refunds to be made based on actual experience. The reserve for professional and general liability indemnity losses and loss adjustment expenses is determined using individual case-based evaluations and actuarial analyses and represents an estimate of reported claims and claims incurred but not reported. Those estimates are subject to the effects of trends in average loss severity and average frequency. Although considerable variability is inherent in such estimates, management believes that the reserves for professional and general liability losses and loss adjustment expenses are reasonable. The estimates are reviewed and adjusted as necessary as experience develops or new information becomes known. Such adjustments are included in current operations. Reserves for professional and general liability losses and loss adjustment expenses of $541,413 and $533,315, discounted at 3.50% and 1.00% (which approximates the risk-free rates), were recorded as of December 31, 2022 and 2021, respectively. At December 31, 2022 and 2021, respectively, $105,711 and $104,133 of the loss reserves are included in current portion of insurance reserves and $435,702 and $429,182 are included in long-term insurance reserves.

The following table provides a rollforward of the reserve balances for professional and general liability costs for the years ended December 31, 2022 and 2021.

	2022	2021
Reserve for professional and general liability costs (beginning balance)	**$ 533,315**	$ 479,421
Add: Provisions for expenses occurring in:		
Current year	**138,402**	125,437
Prior year	**2,398**	5,292
Change in discount rate	**(22,008)**	(8,100)
Net incurred expenses	**118,792**	122,629
Deduct: Payments for expenses occurring in:		
Current year	**510**	363
Prior year	**95,071**	81,791
Net paid expenses	**95,581**	82,154
Changes in other reserves	**(15,113)**	13,419
Reserve for professional and general liability costs (ending balance)	**$ 541,413**	$ 533,315

The foregoing rollforward shows unfavorable development of $2,398 and $5,292 for the years ended December 31, 2022 and 2021, respectively.

(DOLLARS IN THOUSANDS)

The following table provides undiscounted information for claims development for incurred losses and paid claim loss by incident year for the year ended December 31, 2022. The information about incurred and paid claims development for the years ended December 2013 to 2021 is presented as supplementary information. For the reported development, the adequacy of case reserves has been consistent and favorable over time, and there have been no significant changes in the rate at which claims have been reported. For the paid development, the rate of payment of claims has been relatively consistent over time.

DIRECT CLAIM LOSS INCURRED

Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	Unaudited									
2013	$ 77,146	$ 79,850	$ 72,831	$ 68,055	$ 72,144	$ 68,116	$ 68,529	$ 69,693	$ 72,457	**$ 75,635**
2014	-	86,191	84,910	83,562	78,108	75,644	73,443	74,808	76,487	**76,103**
2015	-	-	96,593	102,111	89,569	88,801	83,033	80,946	79,273	**79,446**
2016	-	-	-	90,844	94,155	91,655	84,615	73,214	72,195	**71,692**
2017	-	-	-	-	100,732	99,428	104,403	103,570	100,146	**99,861**
2018	-	-	-	-	-	100,781	97,451	96,836	93,128	**89,834**
2019	-	-	-	-	-	-	103,995	106,787	109,126	**109,640**
2020	-	-	-	-	-	-	-	108,482	109,915	**112,983**
2021	-	-	-	-	-	-	-	-	125,437	**125,368**
2022	-	-	-	-	-	-	-	-	-	**138,402**
								Total		**$ 978,964**

DIRECT CLAIM LOSS PAID

Accident Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	Unaudited									
2013	$ 353	$ 5,861	$ 12,020	$ 28,016	$ 42,775	$ 49,807	$ 56,494	$ 58,760	$ 64,342	**$ 67,950**
2014	-	467	7,771	16,949	40,736	48,191	57,372	61,217	64,744	**67,374**
2015	-	-	355	16,914	26,838	43,634	58,646	65,427	68,562	**70,716**
2016	-	-	-	446	6,375	14,220	27,736	39,232	46,946	**50,379**
2017	-	-	-	-	1,610	10,168	27,867	50,244	55,202	**60,770**
2018	-	-	-	-	-	251	3,555	22,235	37,270	**44,465**
2019	-	-	-	-	-	-	216	13,936	25,751	**40,448**
2020	-	-	-	-	-	-	-	759	12,369	**25,494**
2021	-	-	-	-	-	-	-	-	363	**18,416**
2022	-	-	-	-	-	-	-	-	-	**510**
								Total		**$ 446,522**

Net reserves	**$ 532,442**
Other reserves	24,120
Risk retention group	32,209
Discount adjustment	(47,358)
Total reserves	**$ 541,413**

(DOLLARS IN THOUSANDS)

AVERAGE ANNUAL PERCENTAGE PAYOUT OF INCURRED CLAIMS (UNAUDITED)

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10 and Prior
0.8%	8.4%	12.9%	20.4%	16.1%	10.5%	7.3%	5.6%	5.5%	12.5%

In addition, the following table shows the total of IBNR plus expected development on reported claims by incident year and the cumulative number of reported claims by incident year. The cumulative number of reported claims are counted on a per occurrence and per coverage basis. Claim counts include open claims, claims that have been paid and closed, and asserted reported claims that have been closed without the need for any payment.

Incident Year	Incurred Claim Loss and Adjustment Expenses for the Year Ended December 31, 2022	Total Incurred but Not Reported as of December 31, 2022	Cumulative Number of Claims Reported as of December 31, 2022
2013	$ 75,635	$ -	277
2014	76,103	-	248
2015	79,446	974	305
2016	71,692	5,184	278
2017	99,861	22,028	271
2018	89,834	28,227	275
2019	109,640	39,797	302
2020	112,983	62,066	216
2021	125,368	98,694	145
2022	138,402	135,840	96

The methodology for reserving and determining the reserve for loss and loss adjustment expenses, IBNR reserves, considers, among other things, the line of business, the number of years of experience and the age of the experience year being developed.

Loss development factors are also applied to the current evaluations of losses to project the ultimate incurred losses arising from each period of coverage. The selected loss development factors are based on the historical loss experience of UPMC. Therefore, it is assumed that the selected loss development factors coupled with UPMC's experience and actuarial support are appropriate to project the loss development that will be experienced.

The reserve for costs and claims adjustment expenses was based on the best data available to UPMC; however, these estimates are subject to a degree of inherent variability. It is possible that UPMC's actual incurred costs and claim adjustment expenses will not conform to the assumptions inherent in the determination of the liability; accordingly, the ultimate settlement of costs and the related claims adjustment expenses may vary from the estimates included in the consolidated financial statements.

The Medical Care Availability and Reduction of Error ("MCARE") Act was enacted by the legislature of the Commonwealth of Pennsylvania (the "Commonwealth") in 2002. This Act created the MCARE Fund, which replaced The Pennsylvania Medical Professional Liability Catastrophe Loss Fund (the "Medical CAT Fund"), as the agency for the Commonwealth to facilitate the payment of medical malpractice claims exceeding the primary layer of professional liability insurance carried by UPMC and other health care providers practicing in the Commonwealth.

(DOLLARS IN THOUSANDS)

The MCARE Fund is funded on a "pay as you go basis" and assesses health care providers based on a percentage of the rates established by the Joint Underwriting Association (also a Commonwealth agency) for basic coverage. The MCARE Act of 2002 provides for a further reduction to the current MCARE coverage of $500 per occurrence to $250 per occurrence and the eventual phaseout of the MCARE Fund, subject to the approval of the Pennsylvania Insurance Commissioner. To date, the Pennsylvania Insurance Commissioner has deferred the change in coverage and eventual phaseout of the MCARE Fund to future years.

12. RELATED-PARTY TRANSACTIONS

UPMC monitors its relationships with related or affiliated entities on an ongoing basis. The most significant of these relationships is with the University in which UPMC purchases and sells certain services from and to the University. With shared academic and research objectives, UPMC provides financial support annually to the University to advance these objectives recognizing the long-term inherent benefit to UPMC's core clinical operations. UPMC looks to the University to lead the efforts related to the academic and research support objectives of UPMC and believes that, while complementary to its mission, the support provided to the University for academics and research is not part of UPMC's core operating activities of providing direct patient care or offering health insurance coverage. For the years ended December 31, 2022 and 2021, UPMC incurred expenses of $242,000 and $240,300, respectively, for academic and research support. Payments to the University that are core to UPMC's missions related to providing clinical care and insurance coverage totaled $170,932 and $208,854 for the years ended December 31, 2022 and 2021, respectively, which includes clinical services rendered by certain faculty and medical residents, facility rental agreements and other related services, and are reflected within operating expense.

13. LEASES

UPMC has operating and finance leases for corporate offices, physician offices and various equipment types, among others. These lease arrangements have remaining lease terms of one year to 25 years, some of which include options to extend the leases for several periods, and some of which include options to terminate the leases within one year. Statement of operations and changes in net assets information related to leases were as follows:

	Year Ended December 31	
	2022	2021
Finance lease cost:		
Depreciation	**$ 27,840**	$ 26,975
Interest on lease liabilities	**1,999**	2,115
Total finance lease cost	**29,839**	29,090
Operating lease cost	**159,230**	152,068
Short-term/variable lease cost	**27,817**	30,554
Total	**$ 216,886**	$ 211,712

(DOLLARS IN THOUSANDS)

Supplemental balance sheet information related to leases was as follows:

	Year Ended December 31	
	2022	2021
OPERATING LEASES		
Operating lease right-of-use assets	**$ 796,886**	$ 976,026
Other current liabilities	**148,940**	127,194
Operating lease liabilities	**770,766**	895,949
Total operating lease liabilities	**$ 919,706**	$ 1,023,143
FINANCE LEASES		
Property, plant and equipment, net	**$ 60,853**	$ 60,501
Current portion of long-term obligations	**22,673**	24,555
Long-term obligations	**46,965**	47,269
Total finance lease liabilities	**$ 69,638**	$ 71,824
WEIGHTED AVERAGE REMAINING LEASE TERM		
Operating leases	**9.6 years**	11.7 years
Finance leases	**7.2 years**	7.4 years
WEIGHTED AVERAGE DISCOUNT RATE		
Operating leases	**2.8%**	2.9%
Finance leases	**2.8%**	2.9%

Undiscounted maturities of lease liabilities were as follows:

For the Years Ended December 31	Operating Leases	Finance Leases
2023	**$ 155,121**	**$ 23,804**
2024	**135,380**	**15,750**
2025	**114,860**	**8,625**
2026	**102,262**	**4,630**
2027	**82,438**	**1,542**
Thereafter	**391,105**	**15,856**
Total undiscounted maturities of lease liabilities	**$ 981,166**	**$ 70,207**
Less: discount on lease liabilities	**(61,460)**	**(569)**
Total lease liabilities	**$ 919,706**	**$ 69,638**

(DOLLARS IN THOUSANDS)

14. INCOME TAXES

UPMC calculates income taxes using the balance sheet method for its taxable subsidiaries. Taxable income differs from pretax book income principally due to certain income and deductions for tax purposes being recorded in the financial statements in different periods. Deferred income tax assets and liabilities are recorded for the tax effect of these differences using enacted tax rates for the years in which the differences are expected to reverse. UPMC assesses the realization of deferred tax assets and the need for a valuation allowance to reduce those assets to their net realizable value based on future operations, reversal of existing temporary differences, carryforward and carryback periods for credits and net operating losses, and potential tax planning strategies that may exist.

As of December 31, 2022, the for-profit entities of UPMC had gross federal net operating loss ("NOL") carryforwards of $883,149 (expiring in years 2023 through 2042) and gross state (primarily related to Pennsylvania) NOL carryforwards of $1,919,208 (expiring in years 2023 through 2042) that are available to offset future taxable income. During 2022, Pennsylvania enacted a corporate income tax rate reduction that will take effect incrementally from 2023 through 2031 and which resulted in revaluation of UPMC state NOLs to reflect the lower rate. Utilization of the Pennsylvania NOL carryforwards in any one year is limited to 40% of taxable income per company. Federal NOLs generated prior to January 1, 2018 can be carried forward up to 20 years and there is no taxable income limitation on the utilization of such NOLs. Non-insurance company federal NOLs generated subsequent to December 31, 2017 carryforward indefinitely and utilization of such NOLs is limited to 80% of taxable income. Non-life insurance company federal NOLs generated subsequent to December 31, 2017 can be carried forward up to 20 years and there is no taxable income limitation on the utilization of such NOLs. During the calendar years ended December 31, 2022 and December 31, 2021, UPMC realized tax benefits of $736 and $147, respectively, from the use of NOL carryforwards to offset federal and state net taxable income.

The following is a reconciliation of income taxes computed at the statutory U.S. federal income tax rate to the actual effective income tax expense:

Years Ended December 31	**2022**	2021
Taxes computed at the federal rate	**$ (34,781)**	$ (60,405)
State income taxes, net of federal tax benefit	**2,228**	1,384
Valuation allowance	**29,630**	58,291
Permanent differences	**6,366**	4,730
Other items, net	**2,743**	2,032
Income tax expense	**$ 6,186**	$ 6,032

(DOLLARS IN THOUSANDS)

The following table presents deferred tax assets as of December 31, 2022 and 2021:

	2022	2021
Deferred tax assets:		
Net operating losses	**$ 261,230**	$ 306,814
Accrued benefits	**23,618**	18,922
Other	**36,986**	33,895
	321,834	359,631
Less valuation allowance	**(321,834)**	(359,631)
	$ -	$ -

Tax benefits are recognized when it is more likely than not that a tax position will be sustained upon examination by the tax authorities based on the technical merits of the position. Such tax positions are measured as the largest amount of tax benefit that is greater than 50% likely to be realized upon ultimate settlement with the tax authorities assuming full knowledge of the position and all relevant facts. As of December 31, 2022, there were no uncertain tax positions. Certain of UPMC's subsidiaries are subject to taxation in the United States and foreign jurisdictions. As of December 31, 2022, UPMC's returns for the calendar years ended December 31, 2019, through December 31, 2021, are open for examination by the various taxing authorities.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(DOLLARS IN THOUSANDS)

15. FUNCTIONAL EXPENSES

UPMC provides general health care services primarily to residents within its geographic locations and supports related research and education programs. For the years ended December 31, 2022 and 2021, expenses related to providing these services were as follows:

FOR THE YEAR ENDED DECEMBER 31, 2022

	Hospital & health care services	Insurance services	Academic & research activities	UPMC Enterprises activity	Admin support	Total
Salaries, professional fees and employee benefits	$ 7,516,856	$ 578,066	$ -	$ -	$ 980,882	$ 9,075,804
Insurance claims expense	-	8,911,760	-	-	-	8,911,760
Supplies, purchased services and general	5,207,606	826,025	-	-	579,127	6,612,758
Depreciation and amortization	494,332	7,095	-	-	192,330	693,757
Lease Impairment	-	-	-	-	75,784	75,784
Academic and research support provided	-	-	242,000	-	-	242,000
Income tax expense	-	-	-	-	6,186	6,186
Interest expense	157,959	-	-	-	-	157,959
Portfolio company and development expense	-	-	75,155	123,017	-	198,172
	$ 13,376,753	$ 10,322,946	$ 317,155	$ 123,017	$ 1,834,309	$ 25,974,180

FOR THE YEAR ENDED DECEMBER 31, 2021

	Hospital & health care services	Insurance services	Academic & research activities	UPMC Enterprises activity	Admin support	Total
Salaries, professional fees and employee benefits	$ 6,718,365	$ 537,570	$ -	$ -	$ 951,496	$ 8,207,431
Insurance claims expense	-	8,469,749	-	-	-	8,469,749
Supplies, purchased services and general	4,916,400	846,517	-	-	394,085	6,157,002
Depreciation and amortization	504,900	11,330	-	-	173,159	689,389
Lease Impairment	-	-	-	-	-	-
Academic and research support provided	-	-	240,300	-	-	240,300
Income tax expense	-	-	-	-	6,032	6,032
Interest expense	161,976	-	-	-	-	161,976
Portfolio company and development expense	-	-	86,582	113,203	-	199,785
	$ 12,301,641	$ 9,865,166	$ 326,882	$ 113,203	$ 1,524,772	$ 24,131,664

(DOLLARS IN THOUSANDS)

16. UPMC ENTERPRISES ACTIVITY

UPMC Enterprises conducts research, development and innovation activities on behalf of UPMC primarily focused on technologies for use in the health care industry to lower costs and improve care; such activities are expensed as incurred. From time to time, UPMC invests in companies that are developing technologies that align with its strategic imperatives, including companies that are not yet at the commercialization stage. UPMC's level of investment is dependent on numerous strategic considerations and may provide either a controlling or a non-controlling ownership interest. UPMC Enterprises also seeks partnerships with external companies to accelerate commercial growth of innovation activities, which may include the sale of internally developed technology solutions. Leveraging UPMC's long-standing reputation for academic and research excellence, UPMC Enterprises also sponsors the translation of basic science conducted in a research setting to its commercial use in bedside clinical practice, application in medical laboratories or use across emerging venues where medicine is delivered; such activities are expensed as incurred.

UPMC Enterprises activity is comprised of the following for the years ended December 31:

	2022	2021
Technology research and development costs	**$ (52,887)**	$ (48,211)
Investments in translational sciences	**(22,268)**	(38,371)
Revenue from portfolio companies with controlling interest	**33,041**	37,828
Expenses of portfolio companies with controlling interest	**(116,864)**	(108,251)
Net loss from non-consolidated interest in portfolio companies	**(6,153)**	(4,952)
Net (losses) gains from technology-related investments	**(21,571)**	233,654
UPMC Enterprises activity	**$ (186,702)**	$ 71,697

17. CONTINGENCIES

On October 9, 2012, UPMC received a Civil Investigative Demand ("CID") from the Department of Justice ("DOJ") that sought records relating to 40 surgical procedures performed between January 25, 2008 and June 24, 2010. UPMC timely responded to that CID. In November 2013, the DOJ advised UPMC that the CID had been served as part of the DOJ's investigation of allegations asserted by Relators in a federal qui tam lawsuit filed under seal. On July 27, 2016, the DOJ announced that it had reached an agreement with UPMC to settle certain allegations that UPMC had violated the False Claims Act for approximately $2,500. UPMC admitted no liability in settling those claims. The DOJ declined to intervene in the remaining allegations of the Relators' lawsuit, which was also unsealed on July 27, 2016. In their Second Amended Complaint against UPMC and UPP, Inc., Relators allege that UPMC violated the False Claims Act by overpaying physicians and encouraging physicians to perform medically unnecessary procedures. On June 29, 2022, the Court denied UPMC's motion for summary judgment. Trial is scheduled for October 23 – November 9, 2023. The outcome and ultimate effect on UPMC's consolidated financial statements cannot be determined at this time.

On July 29, 2019, UPMC received two grand jury subpoenas and an unexecuted search warrant from the DOJ seeking various records from one of UPMC's clinical departments. On or about September 2, 2021, the United States filed a Complaint in Partial Intervention against UPMC, UPP and a UPMC cardiothoracic surgeon, in the matter previously filed under seal in the United States District Court of the Western District of Pennsylvania as U.S. ex. rel. Jonathan D'Cunha, M.D. v. UPMC et al, alleging that the Defendants violated the False Claims Act by, inter alia, performing concurrent surgeries. UPMC plans to zealously defend against the United States' claims. On November 1, 2021, Defendants moved to dismiss the United States' claims. On June 30, 2022, the Court denied UPMC's motion to dismiss. On February 23, 2023, the United States and Defendants signed a settlement agreement that will result in a dismissal with prejudice of the United States' claims. The settlement will not have a material impact on UPMC's consolidated financial statements.

On or about August 30, 2022, Plaintiff, Jonathan D'Cunha, M.D. filed a third party complaint in the United States District Court for the Western District of Pennsylvania against UPMC and certain of its subsidiaries alleging that they failed to provide insurance coverage and/or indemnification to him for claims asserted against him by a current UPMC cardiothoracic surgeon. Those claims contend, inter alia, that Dr. D'Cunha defamed and illegally wiretapped the UPMC surgeon. The UPMC Defendants have filed answers to those claims. The ultimate outcome and effect on UPMC's consolidated financial statements cannot be determined at this time.

On or about December 15, 2020, a current employee filed a claim against UPMC, the University of Pittsburgh and other defendants, contending that the Defendants retaliated against him for authoring an article asserting that the medical profession discriminates against applicants from underrepresented races and ethnicities. On April 11, 2021, the UPMC Defendants moved to dismiss most of the claims in the Complaint. On December 21, 2021, the Court entered an Order granting the UPMC Defendants' motion in part and denying it in part and provided the employee with leave to amend certain of his claims. On January 11, 2022, the employee filed an Amended Complaint that would ultimately assert two claims. On January 25, 2022, the UPMC Defendants moved to dismiss one of the claims and answered the other. On April 4, 2022, the Court denied the UPMC Defendants' motion to dismiss. On July 1, 2022, UPMC answered the second claim. Discovery is proceeding. The ultimate outcome and effect on UPMC's consolidated financial statements cannot be determined at this time.

On or about March 9, 2021, Vince Ranalli and Lou Ranalli filed a putative class action in the Allegheny County Court of Common Pleas against UPMC and a local law firm that UPMC had retained. The lawsuit alleges that a data breach at the law firm exposed the plaintiffs' personal medical and financial information. Michael Bowen was later substituted as the named plaintiff. The parties have reached a settlement that received final court approval on October 6, 2022. The settlement will result in no material impact to UPMC's financial condition.

On October 22, 2021, Penn State Hershey Medical Center ("PSHMC") filed a demand for arbitration against UPMC Central PA, alleging that contending that UPMC Central PA breached a joint venture agreement with PSHMC that created the Pennsylvania

Psychiatric Institute. On October 27, 2021, UPMC Central PA filed counterclaims against PSHMC. An arbitration hearing was conducted in December 2022. The parties await the arbitrator's ruling. The ultimate outcome and effect on UPMC's consolidated financial statements cannot be determined at this time.

On May 19, 2022, Maxim Healthcare, Inc. filed a counterclaim in a confidential arbitration proceeding initiated by UPMC regarding Maxim's placement of a drug-seeking radiology technician at UPMC. The counterclaims seek at least $1.7M as well as punitive damages. UPMC plans to zealously defend against these counterclaims. The ultimate outcome and effect on UPMC's consolidated financial statements cannot be determined at this time.

On or about August 30, 2022, Plaintiff Malinda Smidga filed a putative class action complaint in the United States District Court for the Western District of Pennsylvania against Meta Platforms, Inc. and UPMC alleging that UPMC's use of Meta's Pixel violated the putative class's right to privacy as well as federal and state statutory and common law. On November 21, 2022, the Court granted UPMC's motion to compel arbitration and administratively closed the matter pending individual arbitration of the Plaintiff's claims, which had not been initiated as of January 24, 2023. The ultimate outcome and effect on UPMC's consolidated financial statements cannot be determined at this time.

18. SUBSEQUENT EVENTS

Management evaluated events occurring subsequent to December 31, 2022 through February 27, 2023, the date the consolidated financial statements of UPMC were issued. During this period, there were no subsequent events requiring recognition or disclosure in the consolidated financial statements.

APPENDIX C

DEFINITIONS OF TERMS AND SUMMARIES OF CERTAIN PROVISIONS OF THE PRINCIPAL DOCUMENTS

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DEFINITIONS OF TERMS AND SUMMARIES OF CERTAIN PROVISIONS OF THE PRINCIPAL DOCUMENTS

THE FOLLOWING SUMMARIES ARE OF CERTAIN PROVISIONS OF THE MASTER INDENTURE, THE BOND INDENTURE AND THE LOAN AGREEMENT. THEY ARE NOT FULL STATEMENTS OF ANY OF THE DOCUMENTS AND REFERENCE SHOULD BE MADE TO THE DOCUMENTS THEMSELVES FOR ALL OF THEIR TERMS AND PROVISIONS.

DEFINITIONS OF CERTAIN TERMS

The following are certain terms used in the Master Indenture, the Bond Indenture, the Loan Agreement and/or the Official Statement.

"**2023C Bonds**" means one or more of the Monroeville Finance Authority, UPMC Revenue Bonds, Series 2023C.

"**2023C Project**" means the financing of all or a portion of (a) the costs of refunding the Refunded Bonds and (b) the payment of certain costs of issuance of the 2023C Bonds.

"**2023C MTI Note**" means the promissory note issued by the Corporation under the terms of and pursuant to the Master Indenture, delivered to the Authority and assigned to the Bond Trustee to evidence the Corporation's payment obligation under the Loan Agreement with respect to the 2023C Bonds in the principal amount equal to the aggregate principal amount of the 2023C Bonds.

"**Administrative Fees and Expenses**" means all reasonable and necessary costs and expenses (including reasonable attorneys' fees and expenses) of the Authority or the Bond Trustee, as applicable, incurred in connection with the 2023C Bonds or otherwise pursuant to the Bond Indenture or the Loan Agreement in the preparation of any responses, reproduction of any documentation or participation in any inquiries, investigations or audits from any Person, including but not limited to the Internal Revenue Service, the SEC or other official body or governmental agency, or in connection with any amendment, supplement or modification to the Bond Indenture or the Loan Agreement and any discussions relating to or negotiation, preparation, approval, execution and delivery of any and all documents necessary or desirable in order to effect such amendment, supplement or modification.

"**Affiliate**", for purposes of the Master Indenture, means a Person which is controlled directly or indirectly by a Member. For the purposes of this definition, control means with respect to: (a) a corporation having stock, the ownership of more than 50% of the securities the holders of which are entitled to elect a majority of the members of the Governing Body of such corporation; (b) a not for profit corporation not having stock, having the power to elect or appoint a majority of the members of the Governing Body of such corporation; or (c) any other entity, the power to direct the management of such entity through the ownership of at least a majority of its voting securities or the right to designate or elect at least a majority of the members of its Governing Body, by contract or otherwise.

"**Affiliated Group**" means the combined group of all Members and all Affiliates.

"**Audited Financial Statements**" for purposes of the Master Indenture, means the consolidated audited financial statements of the Corporation, prepared in accordance with GAAP, which have been examined by an independent firm of certified public accountants appointed by the Corporation. Upon written notice from the Obligated Group Agent to the Master Trustee, "Audited Financial Statements" shall include the separate audited financial statements of a Member whose financial statements are not included within the consolidated audited financial statements of the Corporation.

"**Authority**" means the Monroeville Finance Authority.

"**Authorized Officer**" means (a) with respect to the Corporation, a representative of the Corporation duly authorized and empowered to execute any document, certificate or agreement and legally bind the Corporation, and (b) with respect to the Authority, the Chairman or Vice Chairman of the Authority or such other individual duly authorized by the bylaws of the Authority to legally bind the Authority, or any individual so designated by a duly adopted resolution of the Authority validly in effect.

"**Balloon Debt**" means Long Term Debt twenty-five percent (25%) or more of the original principal amount of which matures within a period of twelve (12) consecutive months, as designated by the Obligated Group Agent.

"**Bond Counsel**" means any attorney or firm of attorneys nationally recognized in rendering opinions for the benefit of bondholders on matters pertaining to the tax-exempt nature of interest on obligations issued by states or their political subdivisions and duly admitted to practice law before the highest court of any state of the United States of America.

"**Bond Fund**" means the fund of that name established by the Bond Trustee pursuant to the Bond Indenture.

"**Bond Indenture**" means the Trust Indenture dated as of April 1, 2023 between the Authority and the Bond Trustee entered into in connection with the 2023C Bonds.

"**Bond Register**" means the registration books of the Authority kept by the Bond Trustee to evidence the registration and transfer of 2023C Bonds.

"**Bond Registrar**" means the Bond Trustee, as keeper of the Bond Register.

"**Bond Trustee**" means The Bank of New York Mellon Trust Company, N.A., a national banking association having a corporate trust office in Pittsburgh, Pennsylvania, as the Bond Trustee under the Bond Indenture, or any successor trustee.

"**Bond Year**" means, initially, that period commencing on the Closing Date and ending on December 31, 2023, and, thereafter, the consecutive period of twelve months commencing on January 1 of each calendar year and ending on December 31 of such calendar year, or as otherwise selected by the Corporation.

"**Bondholder**" means the Person in whose name a 2023C Bond is registered on the Bond Register.

"**Business Day**" means a day which is not (a) a Saturday or Sunday or (b) a day on which commercial banks in (1) Pittsburgh, Pennsylvania, (2) New York, New York, or (3) the city or cities in which the corporate trust office of the Bond Trustee responsible for the administration of the Bond Indenture are authorized or required by law or executive order to be closed.

"**Capitalized Interest**" means amounts irrevocably deposited in escrow to pay interest on Long Term Debt.

"**Clearing Fund**" means the fund of that name established by the Bond Trustee pursuant to the Bond Indenture.

"**Closing Date**" means the date of delivery of the 2023C Bonds, which is expected to be April 19, 2023.

"**Code**" means the Internal Revenue Code of 1986, as amended from time to time. Each reference to a section of the Code shall be deemed to include the United States Treasury Regulations, including temporary regulations, relating to such section that are applicable to the 2023C Bonds or the use of the proceeds thereof.

"**Commonwealth**" means the Commonwealth of Pennsylvania.

"**Consultant**" means a consulting, financial advisory, accounting, insurance, investment banking or commercial banking firm selected by the Obligated Group Agent and not unacceptable to the Master Trustee, having the skill and experience necessary to render the particular report required and having a favorable reputation for such skill and experience, which firm does not control any Member or Affiliate and is not controlled by or under common control with any Member or an Affiliate.

"**Continuing Disclosure Agreement**" means the Master Continuing Disclosure Agreement dated March 27, 2008 between the Corporation and Digital Assurance Certification, L.L.C., as dissemination agent, as amended and supplemented from time to time, including by a supplement dated the Closing Date with respect to the 2023C Bonds, pursuant to which the Corporation undertakes to provide the information and notices with respect to the 2023C Bonds required by subsection (b)(5) of Rule 15c2-12.

"**Corporation**" means UPMC, a Pennsylvania nonprofit corporation, its successors or assigns.

"**Counsel**" means an attorney duly admitted to practice law before the highest court of any state and, without limitation, may include in-house legal counsel for any Member or the Master Trustee.

"**Days' Cash on Hand**" means the number determined as of any date by dividing (a) Unrestricted Cash by (b) the quotient of (i) operating expenses less bad debts, depreciation and amortization, divided by (ii) the number of days in the period under consideration.

"**Debt Service Coverage Ratio**" means, for each Fiscal Year, the ratio of Income Available for Debt Service to the Debt Service Requirements on Long Term Debt for such Fiscal Year.

"**Debt Service Requirements**" means, with respect to the period of time for which calculated, the aggregate of the payments required to be made during such period in respect of principal (whether at maturity or as a result of mandatory sinking fund redemption) and interest on Long Term Debt; less (a) any Capitalized Interest and (b) any payments to be made from an escrow account established for the purpose of paying such Long Term Debt. In the case of any Balloon Debt, Put Debt, Variable Rate Debt, Derivative Contract or Guaranty, the calculation of Debt Service Requirements shall be made in the manner set forth in the Master Indenture.

"**Defaulted Interest**" means interest on any 2023C Bond which is payable but not duly paid on the date due.

"**Defeasance Obligations**" means the securities used to defease any MTI Debt under the Related Documents.

"**Derivative Contract**" means an interest rate swap, exchange, cap or other agreement between a Member and any other party for the purpose of managing interest rate, spread or similar exposure on Long Term Debt.

"**Electronic Means**" means telegram, telex, telecopier, electronic mail or other telecommunications or electronic telecommunications device capable of creating a written notice that is operative as between the parties and acceptable for use by them.

"**Event of Default**" means any event of default under the Master Indenture, as defined in the Master Indenture, and any event of default under the Bond Indenture, as defined in the Bond Indenture, as applicable.

"**Favorable Opinion**" means an opinion of Bond Counsel addressed to the Authority and the Bond Trustee substantially to the effect that: (i) the action proposed to be taken is authorized or permitted by Municipality Authorities Act, as amended, and the Bond Indenture and complies with their respective terms; and (ii) such action will not adversely affect (A) the exclusion from gross income of interest on the 2023C Bonds for purposes of federal income taxation, and (B) any applicable tax exemption with respect to the 2023C Bonds provided under Commonwealth law.

"**Fiscal Year**" means, with respect to the Corporation and the Obligated Group, any twelve-month period beginning on January 1 of any calendar year and ending on December 31 of such calendar year, or such other consecutive twelve month period designated from time to time in writing by the Obligated Group Agent to the Master Trustee.

"**Fitch**" means Fitch Ratings, Inc., its successors and assigns, or, if such corporation shall be dissolved or liquidated or shall no longer perform the functions of a securities rating organization, any other nationally recognized securities rating organization designated in writing by the Corporation.

"**Government Obligations**" means the following:

(a) United States Treasury Obligations;

(b) Obligations fully and unconditionally guaranteed as to timely payment of principal and interest by the United States of America;

(c) Obligations fully and unconditionally guaranteed as to timely payment of principal and interest by any agency or instrumentality of the United States of America when such obligations are backed by the full faith and credit of the United States of America; or

(d) Evidences of ownership of proportionate interests in future interest and principal payments on obligations described above held by a bank or trust company as custodian, under which the owner of the investment is the real party in interest and has the right to proceed directly and individually against the obligor and the underlying government obligations are not available to any person claiming through the custodian or to whom the custodian may be obligated.

"**Governing Body**" means the board of directors, board of trustees or similar group in which the right to exercise the powers of corporate directors or trustees is vested or an executive committee of such board or any duly authorized committee of that board to which the relevant powers of that board have been lawfully delegated.

"**Gross Revenues**" means all revenues of the Obligated Group whether in the form of accounts receivables, contract rights or general intangibles, including income therefrom and all proceeds thereof, but excluding specifically restricted gifts, grants, pledges, bequests, donations, legacies and contributions (including income therefrom or proceeds from the sale thereof) made to a Member, to the extent that such property may not be pledged or applied to the payment of any Debt Service Requirements as a result of restrictions or designation imposed by the donor or maker of the gift, grant, pledge, bequest, donation, contribution or other sums in question.

"**Guaranty**" means any Obligation guaranteeing any debt of any other Person in any manner, whether directly or indirectly, including but not limited to obligations incurred through an agreement (i) to purchase such debt; (ii) to advance funds for the purchase or payment of such debt; or (iii) otherwise to assure the owner of such debt against loss in respect thereof.

"**Income Available for Debt Service**" means the excess of revenues over expenses as shown on the Audited Financial Statements, adjusted by the Obligated Group Agent in its reasonable judgment to exclude the effect of (i) depreciation and amortization, (ii) interest expense on Long Term Debt, (iii) any gain or loss resulting from either the extinguishment of indebtedness or the sale, exchange or other disposition of capital assets not in the ordinary course of business, (iv) the net proceeds of insurance (other than business interruption insurance) and condemnation awards; (v) any gains or losses resulting from changes in the fair value of Derivative Contracts; (vi) non-cash investment gains and losses, including any other than temporary impairment of or changes in fair value of investments; and (vii) non-cash items other than in the ordinary course of business. To the extent not included in the excess of revenues over expenses, Income Available for Debt Service shall include any realized investment gains and losses, including any adjustments required to reduce realized gains on previously impaired investments.

"**Independent**" means, with respect to any Person, one which is not and does not have a partner, director, officer, member or substantial stockholder who is a member of the Corporation or an Affiliate, or an officer or employee of the Corporation or an Affiliate; provided that the fact that a Person is retained regularly by or transacts business with the Corporation or Affiliate shall not, in and of itself, cause such Person to be deemed an employee of the Corporation or Affiliate for the purposes of this definition.

"**Independent Public Accountant**" means an Independent, nationally recognized accounting firm which is appointed by the Corporation for the purpose of examining and reporting on or passing on questions relating to the financial statements of the Corporation, has all certifications necessary for the performance of such services and has a favorable reputation for skill and experience in performing similar services in respect of entities of a comparable size and nature.

"**Interest Payment Date**" means May 15 and November 15 of each year, commencing November 15, 2023.

"**Investment Securities**" means those investments selected by the Corporation, including but not limited to Government Obligations, Federal Housing Administration debentures, certificates of deposits and other deposits, commercial paper, money market funds, State Obligations, repurchase agreements, investment contracts and such other investments as are determined by the Corporation in accordance with its investment policy.

"**Lien**" means any mortgage, pledge of, security interest in or lien, charge, restriction or encumbrance on any Property to secure MTI Debt or Non-MTI Debt (other than from one Member or Affiliate to another Member or Affiliate).

"**Liquidity Ratio**" means, as of any date, the ratio of Unrestricted Cash to the Principal Balance of all Long Term Debt on such date.

"**Long Term Debt**" means all MTI Debt which is not Short Term Debt. Long Term Debt may be incurred in the form of Derivative Contracts, Balloon Debt, Put Debt, Subordinated Debt or Variable Rate Debt.

"**Loan**" means the loan to the Corporation by the Authority, concurrently with the issuance of the 2023C Bonds, of the gross proceeds from the sale of the 2023C Bonds for the purpose of financing the 2023C Project.

"**Loan Agreement**" means the Loan Agreement dated as of April 1, 2023 between the Authority and the Corporation entered into in connection with the 2023C Bonds.

"**Magee**" means UPMC Magee-Womens Hospital, a Pennsylvania nonprofit corporation.

"**Master Indenture**" means the Master Trust Indenture dated as of May 1, 2007 among the Corporation, UPS, Magee, Passavant, USM and the Master Trustee, as it may from time to time be further amended or supplemented in accordance with the terms thereof.

"**Master Indenture Note**" means any Note issued under the Master Indenture by a Member to evidence indebtedness incurred pursuant to the terms of the Master Indenture.

"**Master Trustee**" means The Bank of New York Mellon Trust Company, N.A., as master trustee, or any successor trustee under the Master Indenture.

"**Maturity**" when used with respect to any 2023C Bond means the date on which the principal of such 2023C Bond becomes due and payable as provided by such 2023C Bond or the Bond Indenture, whether at Stated Maturity or by acceleration or redemption or otherwise.

"**Member**" or "**Member of the Obligated Group**" means, individually, the Corporation, UPS, Magee, Passavant, USM and any Person who is designated in writing under to the Master Indenture by the Obligated Group Agent to the Master Trustee as a Member of the Obligated Group in accordance with the Master Indenture and which has not terminated such status pursuant to the Master Indenture.

"**Moody's**" means Moody's Investors Service, its successors and assigns, and, if such corporation shall be dissolved or liquidated or shall no longer perform the functions of a securities rating agency, for the purpose of the definition of "State Obligations" only, Moody's shall be deemed to refer to any other nationally recognized securities rating organization designated by the Corporation, with written notice to the Authority and the Bond Trustee.

"**MTI Debt**" means all indebtedness for the repayment of borrowed money or other obligations incurred or assumed pursuant to the provisions of the Master Indenture that is evidenced by an Obligation. MTI Debt may be issued in the form of Long Term Debt or Short Term Debt. MTI Debt shall not include indebtedness of one Member or Affiliate to another Member or Affiliate.

"**Non-MTI Debt**" means all indebtedness for the repayment of borrowed money other than MTI Debt as shown on the Audited Financial Statements.

"**Obligated Group**" means, collectively, the Corporation, UPS, Magee, Passavant, USM and any other Person which has fulfilled the requirements for entry into the Obligated Group set forth in the Master Indenture and which has not terminated such status pursuant to the Master Indenture.

"**Obligated Group Agent**" means the Corporation or such other Member as may be designated from time to time pursuant to an Officer's Certificate of the then current Obligated Group Agent filed with the Master Trustee.

"**Obligation**" means any evidence of MTI Debt authorized to be issued by the Obligated Group Agent pursuant to the Master Indenture which has been authenticated by the Master Trustee.

"**Obligation holder**," "**holder**" or "**owner of the Obligation**" means the registered owner of any Obligation, as shown on the Obligation Register.

"**Obligation Register**" means the registry that sets forth, among other things, the ownership of each Obligation issued under the Master Indenture and the Principal Balance of each such Obligation, maintained by the Master Trustee in accordance with the Master Indenture.

"**Officer's Certificate**" means a certificate signed, in the case of a certificate delivered by the Corporation, by an Authorized Officer of the Corporation or, in the case of a certificate delivered by any other Person, the chief executive officer, chief financial officer or any vice president of such other Person, in either case whose authority to execute such certificate shall be evidenced to the satisfaction of the Bond Trustee.

"**Outstanding**" means, with respect to the 2023C Bonds, all 2023C Bonds authenticated and delivered under the Bond Indenture as of the time in question, except:

(a) All 2023C Bonds theretofore canceled or required to be canceled under the Bond Indenture;

(b) 2023C Bonds for the payment or redemption of which provision has been made in accordance with the Bond Indenture; provided that, if such 2023C Bonds are being redeemed, the required notice of redemption shall have been given or provision satisfactory to the Bond Trustee and the Master Trustee shall have been made for the giving of such notice of redemption, and that if such 2023C Bonds are being purchased, there shall be a firm commitment for the purchase and sale thereof; and

(c) 2023C Bonds in substitution for which other 2023C Bonds have been authenticated and delivered pursuant to the Bond Indenture.

"**Outstanding Obligations**" or "**Obligations Outstanding**" means all Obligations which have been duly authenticated and delivered by the Master Trustee under the Master Indenture, except:

(a) Obligations canceled because of payment at or prepayment or redemption prior to maturity;

(b) Obligations securing Related Bonds for the payment or redemption of which cash or Defeasance Obligations shall have been theretofore deposited with the Related Bond Trustee; provided that if such Related Bonds are to be redeemed prior to the maturity thereof, notice of such redemption shall have been given or arrangements satisfactory to the Related Bond Trustee shall have been made therefor, or waiver of notice satisfactory in form to the Related Bond Trustee shall have been filed with the Related Bond Trustee;

(c) Obligations in lieu of which others have been authenticated under the Master Indenture; and

(d) For the purpose of all consents, approvals, waivers and notices required to be obtained or given under the Master Indenture, Obligations held or owned by a Member or by an Affiliate.

The Principal Balance of Obligations Outstanding at any time shall be determined by reference to the Obligation Register, which, absent manifest error, shall be conclusive.

"**Outstanding Related Bonds**" means all Related Bonds which are deemed outstanding under the terms of the Related Bond Indenture.

"**Passavant**" means UPMC Passavant, a Pennsylvania nonprofit corporation.

"**Paying Agent**" means the commercial bank, national banking association or trust company, if any, designated pursuant to the Bond Indenture to receive and disburse the principal of and interest on the 2023C Bonds.

"**Permitted Encumbrances**" means, as of any particular time, the Lien on Gross Revenues granted pursuant to the Master Indenture to secure Obligations; and:

(a) Any Lien on Property acquired subject to an existing Lien, if at the time of such acquisition, the aggregate amount remaining unpaid on the debt secured thereby does not exceed the lesser of the acquisition price or the fair market value of the Property subject to such Lien, as determined by the Obligated Group Agent;

(b) Any Lien on any Property of any Member or any Affiliate granted in favor of or securing debt to any other Member or any Affiliate;

(c) Liens on Property given, granted or bequeathed by the owner thereof existing at the time of such gift, grant or bequest, provided that such Liens attach solely to the Property (including the income therefrom) which is the subject of such gift, grant or bequest;

(d) Liens on proceeds of MTI Debt (or on income from the investment of such proceeds) that secure payment of such MTI Debt and any security interest in any rebate fund established pursuant to the Code, any depreciation reserve, debt service or interest reserve, debt service fund or any similar fund established pursuant to the terms of any Supplemental Master Indenture, Related Bond Indenture or Related Document in favor of the Master Trustee, a Related Bond Trustee, a Related Issuer, or the holder of the Obligation issued pursuant to such Supplemental Master Indenture, Related Bond Indenture or Related Document or the provider of any liquidity or credit support for such Related Bond or MTI Debt;

(e) Liens on Defeasance Obligations;

(f) Liens on accounts receivable arising as a result of the sale of such accounts receivable with or without recourse, provided that the principal amount of debt secured by such Lien does not exceed twenty percent (20%) of total accounts receivable as shown on the Audited Financial Statements;

(g) Liens on any Property of a Member in effect on the effective date of the Master Indenture, or existing at the time any Person becomes a Member;

(h) Any Lien if, after giving effect to such Lien and all other Liens classified as Permitted Encumbrances pursuant to this paragraph (h), the total aggregate value of the Property secured by such Liens does not exceed ten percent (10%) of Total Assets; and

(i) Any Lien on Property if such Lien equally and ratably secures all of the Obligations.

"**Person**" means any natural person, firm, joint venture, joint operating agreement, association, partnership, limited liability company, business trust, corporation, public body, agency or political subdivision thereof or any other similar entity.

"**Principal Balance**" means, as of any particular date, the principal amount of the MTI Debt or Non-MTI Debt under consideration that would be due and payable if such debt were accelerated or matured on such date.

"**Property**" means any and all rights, titles and interests in and to any and all property, whether real or personal, tangible or intangible, wherever situated and whether now owned or hereafter acquired.

"**Property, Plant and Equipment**" means all assets of the Obligated Group that are classified as property, plant and equipment on the Audited Financial Statements.

"**Put Debt**" means Long Term Debt which is payable or required to be purchased or redeemed from the owner by or on behalf of the underlying obligor (other than at the option of the owner) prior to its stated maturity date, other than pursuant to any mandatory sinking fund or other similar fund or other than by reason of acceleration upon the occurrence of an Event of Default under the Master Indenture.

"**Quarterly Disclosure Report**" means the report required to be delivered by the Obligated Group Agent to the Master Trustee pursuant to the Master Indenture.

"**Rating Agency**" means each nationally recognized securities rating agency, which at the time of issue of the 2023C Bonds includes Fitch, Moody's and S&P, and each such entity's successors and assigns.

"**Ratings Event**" means the release by each Rating Agency of a long term credit rating with respect to the Corporation that is lower than "A-" or "A3."

"**Rebate Fund**" means the fund of that name established by the Bond Trustee pursuant to the Bond Indenture.

"**Record Date**" means any Regular Record Date or any Special Record Date.

"**Refunded Bonds**" means the Authority's UPMC Revenue Bonds, Series 2013B maturing on or after July 1, 2024, all of which are being refunded with proceeds of the 2023C Bonds and other available funds.

"**Registered Owner**" means, with respect to any 2023C Bond, the person in whose name such 2023C Bond is registered on the Bond Register.

"**Regular Record Date**" means the first (1st) day of each month (whether or not a Business Day) containing an Interest Payment Date.

"**Related Bonds**" means (i) any revenue bonds or similar obligations issued by any state, commonwealth or territory of the United States or any agency or instrumentality of any of the foregoing, the proceeds of which are loaned or otherwise made available to any Member or Affiliate in consideration of the delivery of an Obligation to or upon the order of such governmental issuer, and (ii) any bonds or other debt instruments issued by a Member, an Affiliate or any other Person in consideration of the delivery of an Obligation to the holder of such bonds.

"**Related Bond Indenture**" means any indenture or similar instrument pursuant to which any Related Bonds are issued.

"**Related Bond Trustee**" means any trustee under any Related Bond Indenture and any successor trustee thereunder.

"**Related Document**" means any agreement pursuant to which any proceeds of any Related Bonds are made available to or for the benefit of any Member or Affiliate or any other loan agreement or Derivative Contract entered into by a Member with respect to MTI Debt.

"**Related Issuer**" means any issuer of a series of Related Bonds.

"**Short Term Debt**" means MTI Debt having an original maturity that is less than or equal to one year.

"**Special Record Date**" means the date fixed by the Bond Trustee pursuant to the Bond Indenture for the payment of Defaulted Interest.

"**S&P**" means S&P Global Ratings, a division of Standard & Poor's Financial Services LLC, its successors and its assigns, and, if such corporation shall be dissolved or liquidated or shall no longer perform the functions of a securities rating agency, for the purpose of the definition of "State Obligations" only, S&P shall be deemed to refer to any other nationally recognized securities rating organization designated by the Corporation, with written notice to the Authority and the Bond Trustee.

"**State Obligations**" means:

(a) Direct general obligations of any state of the United States of America or any subdivision or agency thereof to which is pledged the full faith and credit of a state the unsecured general obligation debt of which is rated "A3" by Moody's and "A" by S&P, or better, or any obligation fully and unconditionally guaranteed by any state, subdivision or agency whose unsecured general obligation debt is so rated.

(b) Direct general short-term obligations of any state agency or subdivision or agency thereof described in clause (a) above and rated "A-1" by S&P and "MIG-1" by Moody's.

(c) Special Revenue Bonds (as defined in the United States Bankruptcy Code) of any state, state agency or subdivision described in clause (a) above and rated "AA" or better by S&P and "Aa" or better by Moody's; or

(d) Pre-refunded municipal obligations rated "AAA" by S&P and "Aaa" by Moody's meeting the following requirements:

(i) The municipal obligations are (A) not subject to redemption prior to maturity or (B) the trustee for the municipal obligations has been given irrevocable instructions concerning their call and redemption and the issuer of the municipal obligations has covenanted not to redeem such municipal obligations other than as set forth in such instructions;

(ii) The municipal obligations are secured by cash or United States Treasury Obligations which may be applied only to payment of the principal of, interest and premium on such municipal obligations;

(iii) The Bond Trustee has received a Verification Report stating that the principal of and interest on the United States Treasury Obligations (plus any cash in the escrow) is sufficient to pay in full all principal of, interest, and premium, if any, due and to become due on the municipal obligations;

(iv) The cash or United States Treasury Obligations serving as security for the municipal obligations are held by an escrow agent or trustee in trust for owners of the municipal obligations;

(v) No substitution of a United States Treasury Obligation shall be permitted except with another United States Treasury Obligation and upon delivery of a new Verification Report; and

(vi) The cash or United States Treasury Obligations are not available to satisfy any other claims, including those by or against the trustee or escrow agent.

"**Stated Maturity**" when used with respect to any 2023C Bond means the date specified in such 2023C Bond as the fixed date on which the principal of such 2023C Bond is due and payable (unless pursuant to redemption or declaration of acceleration).

"**Subordinated Debt**" means any Long Term Debt incurred or assumed pursuant to the Master Indenture, the payment of which is by its terms specifically subordinated to payments on or with respect to other Long Term Debt.

"**Subsidiary Hospital**" as defined in and used in the Official Statement means each of the following hospitals affiliated with the Corporation: UPMC Presbyterian Shadyside (five hospitals), UPMC Children's Hospital of Pittsburgh; UPMC Bedford Memorial; UPMC Hamot; UPMC Horizon (two hospitals); UPMC McKeesport; UPMC Mercy; UPMC Northwest; UPMC Passavant (two hospitals); UPMC St. Margaret; UPMC Magee-Womens Hospital; UPMC East; UPMC Altoona; UPMC Jameson; UPMC Cole; Kane Community Hospital; UPMC Susquehanna (five hospitals); UPMC Chautauqua WCA; UPMC Pinnacle (seven hospitals); UPMC Somerset; UPMC Western Maryland; UPMC Whitfield; UPMC Kildare; UPMC Aut Even; Salvador Mundi; and ISMETT.

"**Supplemental Master Indenture**" means an indenture amending or supplementing the Master Indenture entered into pursuant to the Master Indenture after the date of the Master Indenture.

"**Tax Regulatory Agreement**" means the certificate of such designation dated as of the Closing Date executed by the Authority and the Corporation with respect to the 2023C Bonds.

"**Total Assets**" means Total Assets as shown on the Audited Financial Statements for the period in question.

"**Transaction Test**" means a determination that, after giving effect to the particular action or transaction in question, (i) the Affiliated Group will be able to satisfy the test for incurrence of one dollar of additional Long Term Debt in accordance with the Master Indenture, and (ii) the Debt Service Coverage Ratio for the most recently ended Fiscal Year, recalculated as if the action or transaction had occurred at the beginning of such Fiscal Year, either (A) was at least 2.5 to 1.0, or (B) is not reduced by more than twenty percent (20%).

"**Trust Estate**" means (i) the Loan Agreement and all payments received or receivable, with respect to the 2023C Bonds, by the Authority from the Corporation pursuant thereto (excluding Unassigned Rights); (ii) the 2023C MTI Note; (iii) all funds and accounts established and maintained under the Bond Indenture other than the Rebate Fund, and all income and receipts received or receivable by the Bond Trustee with respect to such funds and accounts (except with respect to the Rebate Fund); and (iv) any and all other property of every kind and nature from time to time hereafter, by delivery or by writing of any kind, conveyed, pledged, assigned or transferred as and for additional security under the Bond Indenture by the Authority, the Corporation, or by anyone on their behalf to the Bond Trustee, including without limitation moneys of the Corporation held by the Bond Trustee in any of the funds and accounts established under the Bond Indenture as security for the 2023C Bonds; provided, however, that there is expressly excepted and excluded from the lien and operation of the Bond Indenture amounts held by the Bond Trustee in the Rebate Fund.

"**Unassigned Rights**" means (a) the fees and expenses payable to the Authority under the Loan Agreement, including without limitation the right to receive additional payments for such fees and expenses thereunder, (b) the Authority's right to indemnification under the Loan Agreement, (c) the Authority's right to receive notices under the Bond Indenture and the Loan Agreement, (d) the Authority's right to give or withhold consents under the Related Documents, and (e) the Authority's right to execute and deliver supplements and amendments to the Loan Agreement.

"**United States Treasury Obligations**" means direct obligations (other than an obligation subject to variation in principal repayment) of the United States of America.

"**Unrestricted Cash**" means the sum of cash, securities and investments, including, without limitation, investments in mutual funds and limited partnerships as shown on the Audited Financial Statements, minus (i) trustee-held funds derived from or for the payment of indebtedness, including, without limitation, debt service, reserve and construction funds, and (ii) amounts required to be set aside by donor restriction, contractual agreement or by law or regulation to meet a specific obligation or potential obligation of any Member or Affiliate, including malpractice exposure, self-insurance or "captive" insurer commitments, and pension or retirement fund payments.

"**UPS**" means UPMC Presbyterian Shadyside, a Pennsylvania nonprofit corporation.

"**USM**" means UPMC St. Margaret, a Pennsylvania nonprofit corporation.

"**Variable Rate Debt**" means any Long Term Debt, the rate of interest on which is subject to change prior to maturity.

"**Verification Report**" means, for purposes of the Bond Indenture, a verification report as to the sufficiency of funds held to discharge 2023C Bonds (or, for purposes of clause (d) of the definition of "State Obligations", the municipal obligations in question), from an Independent Public Accountant or other Independent certified public accounting firm not unacceptable to the Bond Trustee.

"**Written Request**" with reference to the Authority means a request in writing signed by an Authorized Officer of the Authority and with reference to the Corporation means a request in writing signed by an Authorized Officer of the Corporation.

Any calculations required to be made pursuant to the Master Indenture, shall be made on the basis of the Audited Financial Statements, together with any notes thereto. All accounting terms not specifically defined in the Master Indenture shall be construed in accordance with generally accepted accounting principles consistently applied, except as otherwise stated therein. If any change in accounting principles from those used in the preparation of the Audited Financial Statements for the Fiscal Year ended June 30, 2006 results from the promulgation of rules, regulations, pronouncements and opinions by or required by the Financial Accounting Standards Board, American Institute of Certified Public Accountants or other authoritative bodies that determine generally accepted accounting principles (or successors thereto or agencies with similar functions) and such change results in a change in the accounting terms used in the Master Indenture, the accounting terms used therein shall be modified to reflect such change in accounting principles so that the criteria for evaluating financial condition shall be the same after such change as if such change had not been made. Any such modification shall be described in an Officer's Certificate of the Obligated Group Agent filed with the Master Trustee, which shall contain a certification to the effect that (i) such modifications are occasioned by such a change in accounting principles and (ii) such modifications will not have a materially adverse effect on the Obligation holders.

THE MASTER INDENTURE

The following summarizes certain provisions of the Master Indenture but is not to be regarded as a full statement thereof, and reference should be made to the Master Indenture itself for all of the terms and provisions thereof.

Issuance of Obligations; Terms Thereof

Subject to the further conditions specified in the Master Indenture, the Corporation and each additional Member, if any, shall be permitted to issue one or more series of Obligations under the Master Indenture on which all Members of the Obligated Group will be jointly and severally liable. The number and aggregate principal amount of Obligations shall not be limited, except as provided in any Supplemental Master Indenture. Subject to the applicable provisions of the Master Indenture, all Obligations shall be issued upon and contain such maturities, payment terms, interest rate provisions, redemption or prepayment features and other provisions as shall be set forth in the Master Indenture or the Supplemental Master Indenture providing for the issuance of such Obligations.

Obligations may be issued under the Master Indenture to evidence any type of MTI Debt, including without limitation any MTI Debt in a form other than a promissory note. Any Derivative Contract may also be authenticated as an Obligation under the Master Indenture. Any Derivative Contract which is authenticated as an Obligation under the Master Indenture shall be equally and ratably secured under the Master Indenture with all other Obligations issued under the Master Indenture provided, however, that any Obligation issued in connection with a Derivative Contract shall be deemed to be an Outstanding Obligation under the Master Indenture solely for the purpose of being secured on a pro rata basis with other Obligations and receiving payment under the Master Indenture and shall not be entitled to exercise any rights under the Master Indenture.

Cross Guaranties; Security Therefor

Each Member, jointly and severally, unconditionally and irrevocably guarantees and promises to pay, any and all payments on any Obligations, according to the terms thereof, when due. If for any reason any payment required pursuant to the terms of any Obligation issued under the Master Indenture has not been timely paid by the Member which incurred such Obligation, all other Members shall be obligated to make such payment.

The Master Indenture Note and all other Obligations issued under the Master Indenture are secured by a grant of a security interest in (i) the Gross Revenues of the Members and (ii) the Revenue Fund and all moneys and investments therein and all income derived from the investment thereof.

Upon the occurrence and continuance of an Event of Default under the Master Indenture, each Member covenants and agrees that it shall cause all of its Gross Revenues to be deposited into a special revenue account held by the Master Trustee separate and apart from all other funds. Gross Revenues so collected, to the extent not needed to pay the Obligations of the Obligated Group then due, shall be released to the Members for any purpose. Such Gross Revenues shall be collected only until such time as the Master Trustee shall have received an Officer's Certificate from the Obligated Group Agent that no Event of Default exists and that all arrearages on Obligations issued under the Master Indenture, if any, have been paid.

If no Event of Default shall have occurred and then be continuing, and so long as the Gross Revenues are not required to be deposited into a special revenue account pursuant to the provisions of the Master Indenture, each Member shall be permitted to commingle, transfer or make expenditures from or deposits of its Gross Revenues and the proceeds thereof.

Supplemental Master Indenture Creating an Obligation

In addition to the Master Indenture Note being issued by the Corporation under the terms of the Master Indenture, any Member and the Master Trustee may from time to time enter into a Supplemental Master Indenture in order to issue an Obligation under the Master Indenture. Such Supplemental Master Indenture shall, (i) with respect to Obligations created thereby, set forth the date thereof, and the date or dates on which principal of and premium, if any, and interest on such obligations shall be payable, and (ii) provide for the form of such Obligations and shall contain such other terms and provisions as shall not be inconsistent with the provisions of the Master Indenture.

Membership In and Withdrawal from the Obligated Group

Any Person may become a Member of the Obligated Group if:

(a) Such Person shall execute and deliver to the Master Trustee a Supplemental Master Indenture acceptable to the Master Trustee which shall also be executed by the Master Trustee and the Obligated Group Agent and contain the agreement of such Person (i) to become a Member of the Obligated Group and thereby to become subject to compliance with all provisions of the Master Indenture and (ii) unconditionally and irrevocably to jointly and severally make payments upon each Obligation at the times and in the amounts provided in each such Obligation; and

(b) The Master Trustee shall have received (i) an Officer's Certificate of the Obligated Group Agent which (A) confirms that no Event of Default has occurred and will be continuing after the addition of the new Member to the Obligated Group, (B) demonstrates that, immediately upon such Person becoming a Member of the Obligated Group, the Members would not, as a result of such transaction, be in default in the performance or observance of any covenant or condition to be performed or observed by them under the Master Indenture, and (C) demonstrates satisfaction of the Transaction Test; (ii) an opinion of Counsel to the effect that the instrument described in paragraph (a) above has been duly authorized, executed and delivered and constitutes a legal, valid and binding agreement of such Person, enforceable in accordance with its terms, subject to customary exceptions for bankruptcy, insolvency and other laws generally affecting enforcement of creditors' rights and application of general principles of equity, and (iii) an opinion of Bond Counsel to the effect that, under then existing law, the consummation of such transaction will not adversely affect the validity of any Related Bond or any exemption from federal or state income taxation of interest payable on such Related Bond to which such Related Bond would otherwise be entitled.

Each successor, assignee, surviving, resulting or transferee of a Member must agree to become, and satisfy the above described conditions to becoming, a Member of the Obligated Group prior to any such succession, assignment or other change in such Member's status.

Each Member covenants that it will not take any action, corporate or otherwise, which would cause it or any successor thereto to cease to be a Member of the Obligated Group unless the Obligated Group Agent delivers an Officer's Certificate to the Master Trustee certifying that immediately after such cessation, (i) no Event of Default exists under the Master Indenture and (ii) the Transaction Test will be satisfied. Notwithstanding the foregoing, the Obligated Group covenants and agrees that neither the Corporation nor UPS shall be permitted to withdraw from, or cease to be a Member of, the Obligated Group while any Obligations are Outstanding.

Financial Covenants

(a) Each Member covenants and agrees to conduct its business, and to cause each Affiliate to conduct business, on a revenue producing basis and to charge fees and rates for its services that will provide funds sufficient to pay (i) all payments on MTI Debt, (ii) all payments on Non-MTI Debt, (iii) all expenses of operation, maintenance and repair of its Property, and (iv) all other payments required to be made by it under the Master Indenture. Each Member further covenants and agrees that it will, from time to time as often as necessary and to the extent permitted by law, revise its rates, fees and charges in such manner as may be necessary or proper to comply with the provisions of this section of the Master Indenture.

(b) The Obligated Group covenants and agrees to maintain a Debt Service Coverage Ratio for each Fiscal Year equal to at least 1.1 to 1.0.

(c) The Obligated Group covenants and agrees to maintain a Liquidity Ratio as of the last day of each Fiscal Year equal to at least 0.5 to 1.0.

(d) The Obligated Group Agent shall calculate the Debt Service Coverage Ratio for each Fiscal Year and the Liquidity Ratio as of the last day of each Fiscal Year. Within 90 days of the end of each Fiscal Year, the Obligated Group Agent shall deliver to the Master Trustee an Officer's Certificate that demonstrates the calculation of the Debt Service Coverage Ratio and the Liquidity Ratio.

(e) (i) If the Debt Service Coverage Ratio is less than 1.10 to 1 for any Fiscal Year, and/or the Liquidity Ratio is less than 0.5 to 1.0 as of the last day of such Fiscal Year, the Obligated Group Agent shall, within 120 days of the end of such Fiscal Year, retain a Consultant to make recommendations with respect to the rates, fees, charges and operations of the Affiliated Group and the other factors affecting its financial condition in order to cause the Debt Service Coverage Ratio to be at least 1.10 to 1 and the Liquidity Ratio to be at least 0.5 to 1.0.

(ii) A copy of the Consultant's report and recommendations, if any, shall be filed with the Obligated Group Agent and the Master Trustee within 60 days of the date such Consultant is retained. The Obligated Group shall, as soon as possible, cause the Affiliated Group to revise such rates, fees, charges and operations in conformity with the recommendations of the Consultant and otherwise follow the recommendations of the Consultant to the extent permitted by law. If the Affiliated Group complies with the recommendations of the Consultant, the financial covenants in paragraphs (b) and (c) above shall be deemed to have been complied with, even if the Debt Service Coverage Ratio remains below 1.10 to 1.0 and the Liquidity Ratio remains below 0.5 to 1.0; provided, however, that failure to maintain a Debt Service Coverage Ratio for any Fiscal Year of at least 1.0 to 1.0 combined with a failure to maintain a Liquidity Ratio for any Fiscal Year of at least 0.5 to 1.0 shall constitute an Event of Default.

Merger, Consolidation, Sale or Conveyance

Each Member agrees that it will not merge into, or consolidate with, one or more Persons which are not Members, or allow one or more of such Persons to merge into it, or sell or convey all or substantially all of its Property to any Person who is not a Member, unless:

(a) Any successor to such Member (including without limitation any purchaser of all or substantially all the Property of such Member) shall execute and deliver to the Master Trustee an appropriate instrument, satisfactory to the Master Trustee, containing the agreement of such successor to assume, jointly and severally, the due and punctual payment of all Obligations according to their tenor and the due and punctual performance and observance of all the covenants and conditions of the Master Indenture to be kept and performed by such Member;

(b) Immediately after such merger or consolidation, or such sale or conveyance, (i) no Member would be in default in the performance or observance of any covenant or condition of any Related Document or the Master Indenture as a result of such merger, and (ii) the Affiliated Group would satisfy the Transaction Test; and

(c) There shall be delivered to the Master Trustee an opinion of Bond Counsel to the effect that under then existing law the consummation of such merger, consolidation, sale or conveyance would not adversely affect the validity of any Related Bonds or the exemption otherwise available from federal or state income taxation of interest payable on any Related Bonds.

Financial Statements, Quarterly Disclosure

The Obligated Group Agent covenants to keep or cause to be kept proper books of records and accounts in which full, true and correct entries will be made of all dealings or transactions of or in relation to the business and affairs of the Affiliated Group in accordance with generally accepted accounting principles consistently applied except as may be disclosed in the notes to the Audited Financial Statements. The Obligated Group Agent will furnish to the Master Trustee:

(a) As soon as practicable after they are available, but in no event more than 150 days after the last day of each Fiscal Year, Audited Financial Statements for such Fiscal Year; and

(b) At the time of delivery of the Audited Financial Statements referred to in subsection (a) above, an Officer's Certificate of the Obligated Group Agent, stating that the Obligated Group Agent has made a review of the activities of the Affiliated Group during the preceding Fiscal Year for the purpose of determining whether or not the Members have complied with all of the terms, provisions and conditions of the Master Indenture and that the Obligated Group has kept, observed, performed and fulfilled each and every covenant, provision and condition of the Master Indenture on its part to be performed and is not in default in the performance or observance of any of the terms, covenants, provisions or conditions thereof, or if any such Person shall be in default such certificate shall specify all such defaults and the nature thereof; and

(c) Within sixty (60) days of the end of each fiscal quarter within each Fiscal Year, a Quarterly Disclosure Report which shall include unaudited consolidated internal financial statements of the Corporation for such quarter. The Obligated Group Agent shall calculate the Debt Service Coverage Ratio and the Liquidity Ratio for each fiscal quarter within each Fiscal Year and include such calculations as part of the Quarterly Disclosure Report, together with an Officer's Certificate certifying accuracy and compliance with the covenants contained in the Master Indenture.

Additional MTI Debt

No Member will incur, or permit an Affiliate to incur, any MTI Debt other than MTI Debt consisting of one or more of the following, which the Obligated Group Agent may, from time to time, designate or redesignate to any applicable classification permitted hereby:

(a) Long Term Debt if, prior to incurrence of the Long Term Debt, there is delivered to the Master Trustee an Officer's Certificate certifying that:

(i) the principal amount of Long Term Debt to be incurred at such time, when added to the aggregate Principal Balance of all other Long Term Debt theretofore issued pursuant to this clause (i), will not exceed five percent (5%) of Total Operating Revenues as shown on the Audited Financial Statements, and the Debt Service Coverage Ratio is at least 1.1 to 1.0; or

(ii) based on the most recently ended Fiscal Year for which Audited Financial Statements are available, the Debt Service Coverage Ratio, taking into account the aggregate Principal Balance of all Long Term Debt, and the proposed additional Long Term Debt as if it had been incurred at the beginning of such Fiscal Year, is not less than 1.0 to 1.0; or

(iii) an Officer's Certificate of the Obligated Group Agent certifying that (A) based on the Audited Financial Statements for the most recently ended Fiscal Year, the Debt Service Coverage Ratio is not less than 1.10 to 1.0, and (B) that the projected Debt Service Coverage Ratio for each of the next two full Fiscal Years following the incurrence of such Long Term Debt or, in the case of the incurrence of Long Term Debt for capital improvements, following the completion of the facilities being financed, taking the proposed additional Long Term Debt into account, is not less than 1.25 to 1.0; or

(iv) in the case of Long Term Debt incurred for the purpose of refunding any Long Term Debt, the Obligated Group Agent shall deliver to the Master Trustee an opinion of Counsel stating that (A) the incurrence of the Long Term Debt has been duly authorized, (B) the applicable requirements for its issuance have been satisfied, and (C) upon the incurrence of such proposed Long Term Debt and application of the proceeds thereof, the Outstanding Long Term Debt to be refunded thereby will no longer be Outstanding.

(b) Short Term Debt, provided that immediately after the incurrence of such MTI Debt the aggregate Principal Balance of all such Short Term Debt does not exceed twenty percent (20%) of Total Operating Revenues as shown on the Audited Financial Statements, and provided further that for a period of at least seven (7) consecutive days in each Fiscal Year, the Principal Balance of all Short Term Debt shall not exceed five percent (5%) of such Total Operating Revenues.

Notwithstanding the foregoing, if an Event of Default has occurred and is continuing, the Obligated Group shall not incur any MTI Debt other than for refunding purposes.

Subordinated Debt and Non-MTI

(a) Subordinated Debt may be incurred by Members and Affiliates without limitation.

(b) Non-MTI Debt may be incurred by Members and Affiliates without limitation, provided however, that the aggregate Principal Balance of Non-MTI Debt at any one time may not exceed the greater of (i) twenty five percent (25%) of the aggregate Principal Balance of all then Outstanding Obligations, or (ii) two hundred fifty million dollars ($250,000,000).

Computation of Debt Service on Certain Instruments:

(a) Debt Service on Balloon Debt and Put Debt. For purposes of the computation of Debt Service Requirements, whether historic or projected, the following provisions shall apply to Balloon Debt and Put Debt:

(i) The debt service on such Balloon Debt or Put Debt shall be assumed to be substantially level over a term of twenty (20) years from the date of incurrence, at an assumed interest rate based on the last-published "30-year Revenue Bond Index" published by The Bond Buyer immediately preceding the date of calculation; or

(ii) The principal of such Balloon Debt or Put Debt is amortized during the term to the stated maturity thereof by deposits made to a sinking fund with a sinking fund schedule established by resolution of the Governing Body of the Obligated Group Agent adopted at or subsequent to the time of incurrence of such Long Term Debt, as certified in an Officer's Certificate of the Obligated Group Agent, provided, that at the time of such calculation, all deposits required to have been made prior to such date shall have been made; or

(iii) With respect to Balloon Debt or Put Debt for which there exists a credit facility, the principal of such Balloon Debt or Put Debt is due and payable in the amounts and at the times specified in such credit facility.

(b) Debt Service on Guaranties. Debt Service Requirements on Long Term Debt in the form of a Guaranty shall be determined to be an amount equal to 20% of the debt service on the indebtedness being guaranteed; provided, however, that if a Member makes any payment under a Guaranty, the Debt Service Requirements thereon for the Fiscal Year in which the payment is made and each of the next two succeeding Fiscal Years shall be deemed equal to 100% of the Debt Service Requirements on the indebtedness or portion thereof guaranteed.

(c) Debt Service on Variable Rate Debt. Projected (but not historic) Debt Service Requirements on Variable Rate Debt shall be deemed to bear interest at a rate equal to the greater of (i) the average interest rate on such debt for the most recent 24 month period, provided, however, that if the debt has not been outstanding for 24 months, then the interest rate shall be the average rate for the most recent 12 months, or (ii) the average interest rate for the two month period prior to the date of calculation, as determined by an Officer's Certificate of the Obligated Group Agent. Historic Debt Service Requirements on Variable Rate Debt shall be calculated at the actual interest rates for the period under consideration.

(d) Effect of Derivative Contract. For purposes of the computation of Debt Service Requirements, Long Term Debt with respect to which the Obligated Group has entered into a Derivative Contract shall include only the net amount payable by or to the Obligated Group such Derivative Contract, with all variable rate components calculated in accordance with the Master Indenture.

Sale or Other Disposition of Property

Members may sell or otherwise dispose of their Property (herein referred to as a "**transfer**") as follows:

(a) Members may transfer Property at any time without limitation if the aggregate value of the Property being transferred in any Fiscal Year does not exceed ten percent (10%) of Total Assets in such Fiscal Year.

(b) Members may transfer Property that is valued in excess of ten percent (10%) of Total Assets in any Fiscal Year if the transfer:

(i) Is to another Member or to an Affiliate; or

(ii) Is in the ordinary course of business and made in an arm's length transaction for fair market value as certified in an Officer's Certificate of the Obligated Group Agent, provided however, that if the aggregate value of all Property being transferred in any Fiscal Year exceeds thirty percent (30%) of Total Assets, then the Obligated Group Agent shall also be required to deliver a fairness opinion to the Master Trustee from an independent Consultant that confirms that the transfers are being made for fair market value; or

(iii) Is in return for other Property of equal or greater value; or

(iv) Is of Property, Plant or Equipment that is obsolete and no longer of use to the Member; or

(v) Is to a third party as part of a permitted merger, consolidation, sale or conveyance; or

(vi) Is of Property received by a Member or Affiliate as a restricted gift or grant, if the donor's restrictions on the use of such Property prevent the application thereof to payment of Debt Service Requirements or costs of operation; or

(vii) Satisfies the Transaction Test.

(c) Notwithstanding the foregoing, no transfers or sales shall be permitted in any period during which an Event of Default has occurred and is continuing without the prior written consent of the holders of at least twenty-five percent (25%) of the aggregate principal amount of the Outstanding Obligations.

Liens on Property

No Member may create, incur, or permit to be created, incurred or to exist, any Lien on any Property except for Permitted Encumbrances.

Note and Document Substitution

The Master Indenture provides that the Obligated Group Agent and the Master Trustee may, without the consent of any of the Holders of any Obligations or any Related Bonds, enter into one or more supplements, amendments, restatements, or substitutions to the Master Indenture, to amend, restate, supplement, substitute, or remove any covenant, agreement, term or provision of the Master Indenture in order to effect (i) the affiliation of the Obligated Group Agent, the Obligated Group, any Members of the Obligated Group, or any Affiliates with another entity or entities in order to create a new modified credit group or structure, (ii) the release or discharge of any collateral securing the Related Bonds, including, but not limited to, the release or discharge of (A) any or all Obligations, in whole or in part, issued pursuant to the Master Indenture to. secure the Related Bonds and (B) the Obligated Group Agent, the Obligated Group, any Members of the Obligated Group or any Affiliates from any or all liability (whether direct or indirect) with respect to the Related Bonds or a portion thereof, any Related Document, any Related Bond Indenture, the Obligations, or the Master Indenture or any portion of any thereof, in consideration for the issuance of a note or notes to secure the Related Bonds or portion of the Related Bonds that are to become an obligation of the new unified credit group, which note or notes would constitute obligations of the new unified credit group, and (iii) the replacement of all or a portion of the financial and operating covenants and related definitions set forth in the Master Indenture with those of the new unified credit group, set forth. in the new agreement or master indenture (such transaction is referred to herein as the "Substitution Transaction").

If all amounts due or to become due on the Related Bonds have not been fully paid to the Holder thereof, at or prior to the implementation of the Substitution Transaction there shall also be delivered to the Master Trustee: (i) an opinion of bond counsel to the effect that under then existing law the implementation of the Substitution Transaction and the execution of the related amendments, supplements, restatements, replacements or substitutions would not adversely affect the validity of the Related Bonds or the exclusion from federal income taxation of interest payable on the Related Bonds, (ii) an opinion of counsel to the new unified credit group to the effect that (1) the note or notes of the new unified credit group to be delivered to secure the Related Bonds are enforceable in accordance with their terms, except to the extent that the enforceability of such note or notes may be limited by any applicable bankruptcy, insolvency, liquidation, rehabilitation or other similar laws or enactment affecting the enforcement of creditors' rights, and (2) the issuance of the note or notes will not cause the Related Bonds or such note or notes to become subject to the registration requirements pursuant to the Securities Act of 1933, as amended, and (iii) written evidence from each Rating Agency then maintaining a rating on any Related Bonds that as a result of implementation of the Substitution Transaction, the rating on the Related Bonds will be no less than the lower of: (A) the lowest of the then-current long-term rating on the Related Bonds, or (B) a rating of "A" (in the case of Standard & Poor's and Fitch) or "A2" (in the case of Moody's), in each case without regard to gradations or subcategories within a rating category.

Events of Default

Each of the following events is an "Event of Default" under the Master Indenture:

(a) Failure of the Obligated Group to pay any installment of interest, principal, or any premium, on any Obligation when the same shall become due and payable, whether at maturity, upon any date fixed for prepayment or by acceleration or otherwise; or

(b) Failure of any Member to comply with, observe or perform any other covenants, conditions, agreements or provisions thereof and to remedy such default within 90 days after written notice thereof to such Member and the Obligated Group Agent from the Master Trustee or the holders of at least 25% in aggregate principal amount of the Outstanding Obligations; provided, that if such default cannot with due diligence be wholly cured within 90 days but can be wholly cured, the failure of the Member to remedy such default within such 90-day period shall not constitute a default under the Master Indenture if the Member shall immediately upon receipt of such notice commence with due diligence and dispatch the curing of such default and shall thereafter prosecute and complete the same within 180 days; or

(c) Any representation or warranty made by any Member in the Master Indenture or in any Supplemental Master Indenture or in any statement or certificate furnished to the Master Trustee or the holder of any Obligation in connection with the delivery of any Obligation or furnished by any Member proves untrue in any material respect as of the date of the issuance or making thereof and shall not be corrected or brought into compliance within 90 days after written notice thereof to the Obligated Group Agent by the Master Trustee or the holders of at least 25% in aggregate principal amount of the Outstanding Obligations; or

(d) Any judgment, writ or warrant of attachment or of any similar process shall be entered or filed against any Member or against any Property of any Member and remains unvacated, unpaid, unbonded, unstayed or uncontested in good faith for a period of 90 days; provided, however, that none of the foregoing shall constitute an Event of Default unless the amount of such judgment, writ, warrant of attachment or similar process, together with the amount of all other such judgments, writs, warrants or similar processes so unvacated, unpaid, unbonded, unstayed or uncontested, exceeds 10% of Total Assets; or

(e) Any Member shall default in the payment of any Non-MTI Debt in excess of $50,000,000, and any grace period with respect to such Non-MTI Debt shall have expired, or an event of default under the agreements under which such Non-MTI Debt in excess of $50,000,000 was incurred has occurred which results in such Non-MTI Debt becoming or being declared due and payable prior to the date on which it would otherwise become due and payable; provided, however, that such default shall not constitute an Event of Default if within the time allowed for service of a responsive pleading in any proceeding to enforce payment of the indebtedness under the laws governing such proceeding (i) such Member in good faith commences proceedings to contest the existence or payment of such Non-MTI Debt, or (ii) sufficient funds are escrowed with an escrow agent for payment of such Non-MTI Debt; or

(f) Any Member admits insolvency or bankruptcy or its inability to pay its debts as they mature, or makes an assignment for the benefit of creditors or applies for or consents to the appointment of a trustee, custodian or receiver for such Member, or for the major part of its Property; or

(g) A trustee, custodian or receiver is appointed for any Member or for the major part of its Property and is not discharged within 90 days after such appointment; or

(h) Bankruptcy, dissolution, reorganization, arrangement, insolvency or liquidation proceedings, proceedings under Title 11 of the United States Code, as amended, or other proceedings for relief under any bankruptcy law or similar law for the relief of debtors are instituted by or against any Member, and if instituted against any Member, are allowed against such Member or are consented to or are not dismissed, stayed or otherwise nullified within 90 days after such institution.

Acceleration

If an Event of Default has occurred and is continuing, the Master Trustee may, and if requested by the holders of not less than 25% in aggregate principal amount of Outstanding Obligations, shall, by notice in writing delivered to the Obligated Group Agent, declare the entire Principal Balance of all Obligations then outstanding under the Master Indenture and the interest accrued thereon immediately due and payable, and the entire principal and such interest shall thereupon become immediately due and payable. The foregoing notwithstanding, if the Supplemental Master Indenture creating an Obligation includes a requirement that the consent of any credit enhancer, liquidity provider or any other Person be obtained prior to the acceleration of such Obligation, the Master Trustee may not accelerate such Obligation without the consent of such Person.

Remedies; Rights of Obligation Holders

Upon the occurrence of any Event of Default under the Master Indenture, the Master Trustee may pursue any available remedy including a suit, action or proceeding at law or in equity to enforce the payment of the principal of, premium, if any, and interest on the Obligations Outstanding under the Master Indenture and any other sums due under the Master Indenture and may collect such sums in the manner provided by law out of the Property of any Member wherever situated.

If an Event of Default shall have occurred, and if the holders of 25% or more in aggregate principal amount of Obligations Outstanding shall have requested (and upon the provision of indemnity satisfactory to the Master Trustee in its sole discretion), the Master Trustee shall be obligated to exercise such one or more of the rights and powers conferred by the Master Indenture as the Master Trustee shall deem most expedient in the interests of the holders of Obligations; provided, however, that the Master Trustee shall have the right to decline to comply with any such request if the Master Trustee shall be advised by Counsel that the action requested may not lawfully be taken or the Master Trustee shall determine that such action would be unjustly prejudicial to the holders of Obligations not parties to such request.

No remedy conferred upon or reserved to the Master Trustee (or to the holders of Obligations) by the terms of the Master Indenture is intended to be exclusive of any other remedy, but each and every such remedy shall be cumulative and shall be in addition to any other remedy given to the Master Trustee or to the holders of Obligations now or hereafter existing at law or in equity.

No delay or omission to exercise any right or power accruing upon any default or Event of Default shall impair any such right or power or shall be construed to be a waiver of any such default or Event of Default, or acquiescence therein; and every such right and power may be exercised from time to time and as often as may be deemed expedient.

No waiver of any default or Event of Default under the Master Indenture, whether by the Master Trustee or by the holders of Obligations, shall extend to or shall affect any subsequent default or Event of Default or shall impair any rights or remedies consequent thereon.

Direction of Proceedings by Holders

The holders of a majority in aggregate principal amount of the Outstanding Obligations which have become due and payable in accordance with their terms, shall have the right, at any time, by an instrument or instruments in writing executed and delivered to the Master Trustee, to direct the method and place of conducting all proceedings to be taken in connection with the enforcement of the terms and conditions of the Master Indenture or for the appointment of a receiver or any other proceedings under the Master Indenture.

Appointment of Receivers

Upon the occurrence of an Event of Default, and upon the filing of a suit or other commencement of judicial proceedings to enforce the rights of the Master Trustee and the holders of Obligations, the Master Trustee shall be entitled, as a matter of right, to the appointment of a receiver or receivers of the rights and properties pledged under the Master Indenture and of the revenues, payments and profits thereof, pending such proceedings, with such powers as the court making such appointment shall confer.

Application of Moneys

All moneys received by the Master Trustee pursuant to any right given or action taken under the Master Indenture (except moneys held for the payment of Obligations called for prepayment or redemption which have become due and payable) shall, after payment of the related cost and expenses incurred or made by the Master Trustee, be applied as follows:

(a) Unless the principal of all the Obligations shall have become or shall have been declared due and payable, all such moneys shall be applied:

First: To pay the persons entitled thereto all installments of interest then due on the Obligations, in the order of the maturity of the installments of such interest, and, if the amount available shall not be sufficient to pay in full any particular installment, then to the payment ratably, to the persons entitled thereto, without any discrimination or privilege; and

Second: To pay the persons entitled thereto the unpaid principal and premium, if any, on the Obligations which shall have become due (other than Obligations called for redemption or payment for the payment of which moneys are held pursuant to the provisions of the Master Indenture), in the order of the scheduled dates of their payment, and, if the amount available shall not be sufficient to pay in full Obligations due on any particular date, then to the payment ratably, according to the amount of principal and premium due on such date, to the persons entitled thereto, without any discrimination or privilege.

(b) If the principal of all the Obligations shall have become due or shall have been declared due and payable, all such moneys shall be applied to the payment of the principal, premium, if any, and interest then due and unpaid upon the Obligations without preference or priority of principal, premium or interest over the others, or of any installment of interest over any other installment of interest, or of any Obligation over any other Obligation, ratably, according to the amounts due respectively for principal, premium and interest to the persons entitled thereto without any discrimination or privilege.

Rights and Remedies of Obligation Holders

No holder of any Obligation shall have any right to institute any suit, action or proceeding in equity or at law for the enforcement of the Master Indenture or for the execution of any trust thereof or for the appointment of a receiver or any other remedy under the Master Indenture, unless an Event of Default has occurred and the holders of 25% or more in aggregate principal amount of the Obligations which have become due and payable in accordance with their terms or have been declared due and payable and have not been paid in full shall have made written request to the Master Trustee and shall have offered it reasonable opportunity either to proceed to exercise the powers granted or to institute such action, suit or proceeding in its own name, and shall have offered indemnity to the Master Trustee satisfactory to the Master Trustee in its sole discretion, and unless the Master Trustee shall thereafter fail or refuse to exercise the powers, or to institute such action, suit or proceeding in its own name; and such notification, request and offer of indemnity are hereby declared in every case at the option of the Master Trustee to be conditions precedent to the execution of the powers and trusts of the Master Indenture and to any action or cause of action for the enforcement of the Master Indenture, or for the appointment of a receiver or for any other remedy under the Master Indenture; it being understood and intended that no one or more holders of the Obligations shall have any right in any manner whatsoever to affect, disturb or prejudice the lien of the Master Indenture by its, his or their action or to enforce any right under the Master Indenture except in the manner provided in the Master Indenture, and that all proceedings at law or in equity shall be instituted, had and maintained in the manner provided in the Master Indenture and for the equal benefit of the holders of all Obligations Outstanding. Nothing contained in the Master Indenture shall, however, affect or impair the right of any holder to enforce the payment of the principal of, premium, if any, and interest on any Obligation at and after the maturity thereof, or the obligation of the Members to pay the principal, premium, if any, and interest on each of the Obligations issued under the Master Indenture to the respective holders thereof at the time and place, from the source and in the manner in such Obligations expressed.

Termination of Proceedings

In case the Master Trustee shall have proceeded to enforce any right under the Master Indenture by the appointment of a receiver, or otherwise, and such proceedings shall have been discontinued or abandoned for any reason, or shall have been determined adversely to the Master Trustee, then and in every case the Members and the Master Trustee shall, subject to any determination in such proceeding, be restored to their former positions and rights under the Master Indenture with respect to the Property pledged and assigned under the Master Indenture, and all rights, remedies and powers of the Master Trustee shall continue as if no such proceedings had been taken.

Waiver of Events of Default

If, at any time after the principal of all Obligations shall have been declared due and payable, and before any judgment or decree for the payment of the moneys due shall have been obtained or entered, any Member shall pay or shall deposit with the Master Trustee a sum sufficient to pay all matured installments of interest upon all such Obligations and the principal and premium, if any, of all such Obligations that shall have become due otherwise than by acceleration (with interest on overdue installments of interest and on such principal and premium, if any, at the rate borne by such Obligations to the date of such payment or deposit, to the extent permitted by law) and the expenses of the Master Trustee, and any and all Events of Default under the Master Indenture, other than the nonpayment of principal of and accrued interest on such Obligations that shall have become due by acceleration, shall have been remedied, then and in every such case the holders of a majority in aggregate principal amount of all then Outstanding Obligations, by written notice to the Obligated Group Agent and to the Master Trustee, may waive all Events of Default and rescind and annul such declaration and its consequences; but no such waiver or rescission and annulment shall extend to or affect any subsequent Event of Default, or shall impair any right consequent thereon.

Supplemental Master Indentures without Consent of Holders

The Obligated Group Agent and the Master Trustee may, without the consent of or notice to, any of the Obligation holders, amend or supplement the Master Indenture, for any one or more of the following purposes:

(a) To cure any ambiguity or defective provision in or omission from the Master Indenture in such manner as is not inconsistent with and does not impair the security of the Master Indenture or adversely affect the holder of any Obligation;

(b) To grant to or confer upon the Master Trustee for the benefit of the Obligation holders any additional rights, remedies, powers or authority that may lawfully be granted to or conferred upon the Obligation holders and the Master Trustee, or either of them, to add to the covenants of the Members for the benefit of the Obligation holders or to surrender any right or power conferred under the Master Indenture upon any Member;

(c) To assign and pledge under the Master Indenture any additional revenues, properties or collateral;

(d) To evidence the succession of another entity to the agreements of a Member or the Master Trustee, or the successor of any thereof under the Master Indenture;

(e) To permit the qualification of the Master Indenture under the Trust Indenture Act of 1939, as then amended, or under any similar federal statute hereafter in effect or to permit the qualification of any Obligation for sale under the securities laws of any state of the United States;

(f) To provide for the issuance of Obligations;

(g) To reflect the addition to or withdrawal of a Member from the Obligated Group;

(h) To modify, eliminate or add to the provisions of the Master Indenture if the Master Bond Trustee shall have received written confirmation from each Rating Agency that such change will not result in a withdrawal or reduction of its credit rating assigned to the Obligated Group Agent, or a report, opinion or certification of a Consultant to the effect that such change is consistent with then current industry standards; and

(i) To make any other change which does not materially adversely affect the holders of any of the Obligations and does not materially adversely affect the holders of any Related Bonds, including without limitation any modification, amendment or supplement to the Master Indenture or any indenture supplemental thereto in such a manner as to establish or maintain exemption of interest on any Related Bonds from federal income taxation under applicable provisions of the Code.

Modification of Master Indenture with Consent of Holders

In addition to Supplemental Master Indentures without the consent of the holders as described above, the holders of not less than 51% in aggregate principal amount of the Obligations Outstanding at the time of the execution of such Supplemental Master Indenture or, if less than all of the Obligations are affected thereby, the holders of not less than 51% in aggregate principal amount of the Outstanding Obligations affected thereby, shall have the right to consent to and approve the execution by the Obligated Group Agent and the Master Trustee of such Supplemental Master Indentures as shall be deemed necessary and desirable by the Obligated Group Agent for the purpose of amending, adding to or rescinding any of the terms or provisions contained in the Master Indenture or in any Supplemental Master Indenture; provided, however, that nothing shall permit (a) an extension of the stated maturity or reduction in the principal amount of or reduction in the rate or extension of the time of paying of interest on or reduction of any premium payable on the redemption of, any Obligation, without the consent of the holder of such Obligation, (b) a reduction in the aggregate principal amount of Obligations the holders of which are required to consent to any such Supplemental Master Indenture, without the consent of the holders of all the Outstanding Obligations which would be affected by the action to be taken, or (c) modification of the rights, duties or immunities of the Master Trustee, without the written consent of the Master Trustee.

Satisfaction and Discharge of the Master Indenture

If the Members shall pay or provide for the payment of all Outstanding Obligations in any one or more of the following ways:

(a) By paying or causing to be paid the Principal Balance of, redemption premium, if any, and interest on all Outstanding Obligations, as and when the same become due and payable;

(b) By depositing with the Master Trustee, in trust, at or before maturity, moneys in an amount sufficient to pay or redeem (when redeemable) all Outstanding Obligations (including the payment of premium, if any, and interest payable on such Obligations to the maturity or redemption date thereof), provided that such moneys, if invested, shall be invested in such amount as will, together with the income or increment to accrue thereon, without consideration of any reinvestment thereof, be fully sufficient to pay or redeem (when redeemable) and discharge the indebtedness on all Obligations Outstanding at or before their respective maturity dates, all as verified by an independent accountant; or

(c) By delivering to the Master Trustee all Outstanding Obligations for cancellation;

and if the Obligated Group shall also pay or cause to be paid all other sums payable under the Master Indenture by the Obligated Group and, if any such Obligations are to be redeemed prior to the maturity thereof, notice of such redemption shall have been given in accordance with the requirements of the Master Indenture or provisions satisfactory to the Master Trustee shall have been made for the giving of such notice, then and in that case, the Master Indenture and the estate and rights granted under the Master Indenture shall cease, determine, and become null and void. The satisfaction and discharge of the Master Indenture shall be without prejudice to the rights of the Master Trustee to charge and be reimbursed by the Obligated Group for any expenditures which it may thereafter incur in connection herewith. The foregoing notwithstanding, the liability of the Obligated Group in respect of the Obligations shall continue, but the holders thereof shall thereafter be entitled to payment only out of the moneys or Defeasance Obligations deposited with the Master Trustee.

THE BOND INDENTURE

The 2023C Bonds will be issued under the Bond Indenture by and between the Authority and the Bond Trustee. The following summarizes certain provisions of the Bond Indenture but is not to be regarded as a full statement thereof, and reference should be made to the Bond Indenture itself for all of the terms and provisions thereof.

Pledge and Assignment

Under the Bond Indenture the Authority grants a security interest in the Trust Estate to the Bond Trustee for the equal and pro rata benefit and security of each and every owner of the 2023C Bonds.

Disposition of Proceeds

The proceeds derived from the sale of the 2023C Bonds (net of original issue premium or original issue discount, if any, and net of underwriter's discount) shall, on the Closing Date, be deposited into the Clearing Fund and used to pay the costs of the 2023C Project. Net Proceeds to be used to pay costs of issuance, if any, shall be paid directly from the Clearing Fund.

Bond Fund; Application Thereof

Pursuant to the Bond Indenture, there is established by the Bond Trustee a fund known as the "**Bond Fund**". The Bond Trustee shall deposit to the credit of the Bond Fund all installment payments payable pursuant to the Loan Agreement and any other amounts required or permitted to be deposited therein pursuant to the provisions of the Bond Indenture. Moneys so deposited to the Bond Fund shall be applied as follows:

(a) To the payment of interest, when due, on all Outstanding 2023C Bonds, including any accrued interest due in connection with the issuance of, purchases of, or the redemption of 2023C Bonds;

(b) To the payment, when due, of the principal of 2023C Bonds then payable at Stated Maturity (but only upon surrender of such 2023C Bonds) or earlier redemption date (including, without limitation, a mandatory sinking fund redemption date), subject to reduction by the principal amount of 2023C Bonds of the same maturity purchased by the Corporation and surrendered to the Bond Trustee for cancellation or purchased for cancellation by the Bond Trustee pursuant to the provisions of the Bond Indenture;

(c) During the 12 month period preceding each Stated Maturity or mandatory redemption date, the Bond Trustee shall, at the Written Request of the Corporation and upon deposit of moneys by the Corporation for such purposes, purchase 2023C Bonds of the maturity becoming due on such Stated Maturity or mandatory redemption date from funds deposited to the Bond Fund for such purpose; provided, however, that such purchase shall not be made unless the purchase price does not exceed 100% of the principal amount of the 2023C Bonds to be purchased, plus accrued interest; and provided that upon the making of any transfer of moneys from the Bond Fund in connection with a proposed purchase or redemption of 2023C Bonds after such transfer, there shall be no deficiency in amounts required to be in the Bond Fund, taking into account the amounts then required to be paid or transferred therefrom for other purposes or reserve therein against such payments and transfers; and

(d) To the extent that the same has not otherwise been paid or provided for, the Administrative Fee shall be payable from the Bond Fund at the Written Request of the Corporation and the Authority, but only if and to the extent that, on such date that the Written Request is submitted, excess funds not needed for the payment of debt service are on deposit therein.

Rebate Fund

Pursuant to the Bond Indenture, there is established by the Bond Trustee a fund related to the 2023C Bonds known as the "**Rebate Fund**". The Bond Trustee will make deposits to and withdrawals from the Rebate Fund in accordance with the Bond Indenture and the Tax Regulatory Agreement so as to facilitate compliance with the rebate provisions of the Code. In the event that any rebatable excess investment earnings are generated, shortly after the end of the fifth (5^{th}) Bond Year, every fifth (5^{th}) year thereafter, and after the final retirement of the 2023C Bonds, the Bond Trustee shall, upon the Written Request of the Corporation, pay to the United States the amount required to be rebated to the United States pursuant to the Code.

Investment or Deposit of Funds

All investments in the funds established under the Bond Indenture shall constitute Investment Securities and shall mature, or be subject to repurchase, withdrawal without penalty or redemption at the option of the holder on or before the dates on which the amounts invested are reasonably expected to be needed for the purposes of the Bond Indenture. All investments shall be made at the Written Request of the Corporation. No investments shall be made which would cause the 2023C Bonds to become "arbitrage bonds" within the meaning of Section 148 of the Code and the applicable regulations promulgated thereunder. Interest, income and gains received in respect of the principal of the Investment Securities shall, with respect to all funds and accounts (other than the Rebate Fund), be deposited to the credit of the Bond Fund. Earnings from Investment Securities held in the Rebate Fund shall remain therein until applied in accordance with the provisions of the Bond Indenture.

Events of Default

Each of the following shall be an Event of Default under the Bond Indenture:

(i) If payment of any installment of interest on any 2023C Bond is not made when it becomes due and payable; or

(ii) If payment of the principal or premium, if any, of any 2023C Bond is not made when it becomes due and payable at Maturity; or

(iii) If there occurs any "Event of Default" as defined in the Loan Agreement or any amendment or supplement thereto; or

(iv) If there is an “Event of Default” as defined in the Master Indenture, or any amendment or supplement thereto; or

(v) the Authority shall default in the due and punctual performance of any other of the material covenants, conditions, agreements and provisions contained in the 2023C Bonds or in the Bond Indenture or any agreement supplemental hereto to be performed on the part of the Indenture, and such default shall continue for the period of 30 days after written notice specifying such default and requiring the same to be remedied shall have been given to the Authority and the Corporation by the Bond Trustee, which notice the Bond Trustee may give in its discretion and must give at the written request of the owners of not less than twenty five percent (25%) in aggregate principal amount of the 2023C Bonds then Outstanding under the Bond Indenture exclusive of 2023C Bonds then owned by the Authority or the Corporation; provided that, if such default cannot with due diligence and dispatch be cured within 30 days but can be cured, the failure of the Authority to remedy such default within such 30 day period shall not constitute a default under the Bond Indenture if the Bond Trustee is provided with a certification from the Authority to the effect that such default cannot with due diligence and dispatch be cured within 30 days but can be cured and the Authority shall immediately upon receipt of such notice commence with due diligence and dispatch the curing of such default and, having so commenced the curing of such default, shall thereafter prosecute and complete the same with due diligence and dispatch.

Remedies, Acceleration and Annulment Thereof

Upon the occurrence of any Event of Default, the Bond Trustee may pursue any available remedy including a suit at law or in equity to enforce the payment of the principal of, premium, if any, and interest on the 2023C Bonds Outstanding under the Bond Indenture.

If any Event of Default has occurred and is continuing, the Bond Trustee may, and at written request of the holders of 25% in principal amount of the 2023C Bonds then Outstanding, shall, by notice in writing to the Authority, declare the principal of all 2023C Bonds then Outstanding to be immediately due and payable, and upon such declaration such principal, together with interest accrued thereon, shall become due and payable immediately at the place of payment provided therein.

If after the principal of the 2023C Bonds has been so declared to be due and payable, all arrears of interest upon the 2021 Bonds (and interest on overdue installments of interest at the maximum rate permitted by law or one percent (1%) over the interest rate on the respective 2023C Bonds, whichever is lesser) are paid by the Authority, and the Authority also performs all other things in respect to which it may have been in default under the Bond Indenture and pays or causes to be paid the reasonable charges of the Bond Trustee and the Bondholders, including reasonable attorney's fees and expenses, then, and in every such case, the Authority shall provide written direction to the Bond Trustee to, and the Bond Trustee shall, annul such declaration and its consequences, and such annulment shall be binding upon the Bond Trustee and upon all holders of 2023C Bonds issued under the Bond Indenture; but no such annulment shall extend to or affect any subsequent default or impair any right or remedy consequent thereon. The Bond Trustee shall provide the Authority and the Corporation with written notice of the completion of such annulment.

Legal Proceedings by Bond Trustee

If any Event of Default has occurred and is continuing, the Bond Trustee in its discretion may, and upon the written request of the holders of 25% in principal amount of the 2023C Bonds then Outstanding and receipt of indemnity to its satisfaction shall in its own name:

(a) By mandamus, or other suit, action or proceeding at law or in equity, enforce all rights of the Bondholders, including the right to require the Corporation to charge and collect rates, rentals and other charges adequate to carry out the terms of the Bond Indenture and to require the Authority to carry out any other agreements with, or for the benefit of, the Bondholders and to perform its duties under the Municipality Authorities Act, as amended;

(b) Bring suit upon the 2023C Bonds;

(c) By action or suit in equity require the Authority to account as if it were the Bond Trustee of an express trust for the Bondholders;

(d) By action or suit in equity enjoin any acts or things which may be unlawful or in violation of the rights of the Bondholders; and

(e) Enforce its rights as holder of the 2023C MTI Note.

Bondholders May Direct Proceedings

The holders of at least 25% in principal amount of the 2023C Bonds then Outstanding under the Bond Indenture shall have the right to direct the method and place of conducting all remedial proceedings by the Bond Trustee under the Bond Indenture, provided such written request shall not be otherwise than in accordance with law or the provisions of the Bond Indenture, the Bond Trustee shall have received indemnity to its satisfaction, and that the Bond Trustee shall have the right to decline to follow any such written request which in the opinion of the Bond Trustee would be unjustly prejudicial to Bondholders not a party to such written request.

Limitations on Actions by Bondholders

No Bondholder shall have any right to pursue any remedy under the Bond Indenture unless (a) the Bond Trustee shall have been given written notice of an Event of Default, (b) the holders of at least 25% in principal amount of the 2023C Bonds then Outstanding shall have requested the Bond Trustee, in writing, to exercise the powers granted pursuant to the Bond Indenture or to pursue such remedy in its or their name or names, (c) the Bond Trustee shall have been offered indemnity satisfactory to it against costs, expenses and liabilities, and (d) the Bond Trustee shall have failed to comply with such request within a reasonable time.

Application of Moneys in Event of Default

(a) All moneys received by the Bond Trustee pursuant to any right given or action taken under the Bond Indenture together with all moneys in the funds maintained by the Bond Trustee under the Bond Indenture (except the Rebate Fund), shall, after payment of the cost and expenses of the proceedings resulting in the collection of such moneys and of the fees, expenses, liabilities and advances incurred or made by the Bond Trustee, be deposited in the Bond Fund, and shall be applied as follows:

(i) Unless the principal of all the 2023C Bonds shall have become or shall have been declared due and payable, all such moneys shall be applied:

First: To the payment to the Persons entitled thereto of all installments of interest then due on the 2023C Bonds, in the order of the maturity of the installments of such interest, and, if the amount available shall not be sufficient to pay in full any particular installment, then to the payment ratably, according to the amounts due on such installment, to the persons entitled thereto, without any discrimination or privilege; and

Second: To the payment to the Persons entitled thereto of the unpaid principal of any of the 2023C Bonds which shall have become due (other than the 2023C Bonds called for redemption for the payment of which moneys are held pursuant to the other provisions of the Bond Indenture), in the order of their due dates, and, if the amount available shall not be sufficient to pay in full the 2023C Bonds due on any particular date, then to the payment ratably, according to the amount of principal due on such date, to the Persons entitled thereto without any discrimination or privilege;

(ii) If the principal of all the 2023C Bonds shall have become due or shall have been declared due and payable, all such moneys shall be applied to the payment of the principal and interest then due and unpaid upon the 2023C Bonds, and then to eliminate any deficiency in the Rebate Fund, without preference or priority of principal over interest or of interest over principal or of any installment of interest over any other installment of interest, or of any Bond over any other Bond, ratably, according to the amounts due respectively for principal and interest, to the persons entitled thereto without any discrimination or privilege; and

(iii) If the principal of all the 2023C Bonds shall have been declared due and payable, and if such declaration shall thereafter have been rescinded and annulled, then, subject to the provisions of paragraph (b) below in the event that the principal of all the 2023C Bonds shall later become due or be declared due and payable, the moneys shall be applied in accordance with the provisions of this paragraph (a).

(b) Whenever moneys are to be applied by the Bond Trustee pursuant to these provisions, such moneys shall be applied by it at such times, and from time to time, as the Bond Trustee shall determine, having due regard for the amount of such moneys available for application and the likelihood of additional moneys becoming available for such application in the future. Whenever the Bond Trustee shall apply such moneys, it shall fix the date (which shall be an Interest Payment Date unless it shall deem another date more suitable) upon which such application is to be made and upon such date interest on the amounts of principal to be paid on such date shall cease to accrue. The Bond Trustee shall give notice of the deposit with it of any such moneys and of the fixing of any such date and of the Special Record Date in accordance with the Bond Indenture ten (10) days prior to the Special Record Date. The Bond Trustee shall not be required to make payment to the holder of any unpaid 2023C Bond until such 2023C Bond shall be presented to the Bond Trustee for appropriate endorsement or for cancellation if fully paid.

(c) Whenever all 2023C Bonds and interest thereon have been paid, all fees, expenses and charges of the Bond Trustee have been paid and all other obligations of the Authority and the Corporation under the Bond Indenture have been satisfied, any balance remaining shall be paid to the Corporation.

Removal of Bond Trustee

Any Bond Trustee under the Bond Indenture may be removed at any time upon 60 days' notice by an instrument appointing a successor to the Bond Trustee so removed, executed by the holders of a majority in principal amount of the 2023C Bonds then Outstanding and filed with the Bond Trustee, the Corporation and the Authority. If no Event of Default under the Loan Agreement has occurred and is continuing, the Corporation may remove the Bond Trustee and appoint a successor by an instrument filed with the Bond Trustee and the Authority, with the approval of the Authority, which shall not be unreasonably withheld.

Amendments and Supplements without Bondholders' Consent

The Bond Indenture may be amended or supplemented from time to time, without the written consent of the Bondholders, but with the prior written consent of the Corporation, by a supplemental indenture, for one or more of the following purposes:

(a) To add additional covenants of the Authority or to surrender any right or power conferred upon the Authority;

(b) To cure any ambiguity, to cure, correct or supplement any defective (whether because of any inconsistency with any other provision of the Bond Indenture or otherwise) provision of the Bond Indenture (which actions shall supersede any actions taken by the Bond Trustee under the Bond Indenture), or to make any other revision which shall not impair the security of the Bond Indenture or materially adversely affect the Bondholders;

(c) To obtain, maintain or upgrade a rating on the 2023C Bonds;

(d) To modify or supplement the Bond Indenture in such manner as may be necessary or appropriate to qualify the Bond Indenture under the Trust Indenture Act of 1939 as then amended, or under any similar federal statute hereafter enacted;

(e) To provide for the establishment of additional funds and accounts under the Bond Indenture and for the proper administration of and transfers of moneys between any such funds and accounts; and

(f) To modify any of the provisions of the Bond Indenture relating to the mechanics of keeping the 2023C Bonds immobilized in book-entry form;

(g) To make amendments to the provisions of the Indenture relating to arbitrage matters under Section 148 of the Code, if, in the opinion of Bond Counsel, those amendments would not cause the interest on the Outstanding 2023C Bonds to become included in the gross income of the holders thereof for federal income tax purposes, which amendments may, among other things, change the responsibility for making the relevant arbitrage calculations; and

(h) To make any other amendment that is not materially adverse to the interests of the Bondholders and does not involve a change described below under the subheading "Amendments with Bondholders' Consent" requiring consent of specific Bondholders.

Amendments with Bondholders' Consent

The Bond Indenture may be amended from time to time by a supplemental indenture, with the prior written consent of the Authority and the holders of at least 51% in aggregate principal amount of the 2023C Bonds then Outstanding; provided, that (a) no amendment shall be made which affects the rights of some but less than all the Outstanding 2023C Bonds without the consent of the holders of 51% of the 2023C Bonds so affected, and (b) no amendment which alters the interest rates on any 2023C Bonds, the maturities, interest payment dates (except as summarized in the immediately preceding paragraph) or redemption provisions of any 2023C Bonds, the provisions of the Bond Indenture governing amendments to the Bond Indenture or would deprive the holders of the 2023C Bonds (except as aforesaid) of the lien created by the Indenture, may be made without the consent of the holders of all Outstanding 2023C Bonds adversely affected thereby.

Amendments of the Loan Agreement Not Requiring Consent of Bondholders

The Authority and the Bond Trustee shall, without the consent or notice to the Bondholders, consent to any amendment, change or modification of the Loan Agreement as may be required or otherwise permitted (a) by the provisions of the Loan Agreement or the Indenture, (b) for the purpose of curing any ambiguity, defect, inconsistent provision or omission in the Loan Agreement, (c) to make changes in the Loan Agreement required in connection with a supplemental indenture authorized under the Indenture provisions described above, (d) to obtain, maintain or upgrade a rating on the 2023C Bonds, or (e) in connection with any other change therein that is not materially adverse to the interests of the Bond Trustee or the Bondholders.

Amendments of the Loan Agreement Requiring Consent of Bondholders

Except for the amendments, changes or modifications detailed immediately above, neither the Authority nor the Bond Trustee shall consent to any other amendment, change or modification of the Loan Agreement without the written approval or consent of the holders of not less than 51% in aggregate principal amount of the 2023C Bonds then Outstanding. Consent of Bondholders shall be obtained by the Bond Trustee only upon the written direction of the Corporation, and at the expense of the Corporation.

Amendments of the Master Indenture

In the event that the Bond Trustee as the holder of the 2023C MTI Note is requested by the Master Trustee to consent to any amendment to the Master Indenture requiring the consent of the holders of Obligations under the Master Indenture, as applicable, the Bond Trustee shall obtain the consent of the holders of not less than 51% in aggregate principal amount of the 2023C Bonds of each series then Outstanding. Consent of Bondholders shall be obtained by the Bond Trustee only upon the written direction of the Corporation, and at the expense of the Corporation.

Defeasance

(a) When interest on, and principal or redemption price (as the case may be) of, all 2023C Bonds issued under the Bond Indenture have been paid or there shall have been deposited with the Bond Trustee an amount, evidenced by moneys or non-callable Government Obligations, the principal of and interest on which, when due, will provide sufficient moneys to fully pay the 2023C Bonds at the maturity date or date fixed for redemption thereof, as well as all other sums payable under the Bond Indenture by the Authority and by the Corporation, the right, title and interest of the Bond Trustee shall thereupon cease and the Bond Trustee, on demand of the Authority, shall release the Bond Indenture and shall execute such documents to evidence such release as may be reasonably required by the Authority and shall turn over to the Authority or to such Person as may be entitled to receive the same all balances remaining in any funds under the Bond Indenture.

(b) Notwithstanding the foregoing provisions of paragraph (a) above, the lien of the Bond Indenture shall not be released and discharged until the Bond Trustee has received (i) an Opinion of Counsel to the effect that all conditions precedent to such discharge have been satisfied and (ii) in the event that provision has been made to pay all 2023C Bonds rather than all 2023C Bonds having been paid and the 2023C Bonds shall not be paid within 90 days from the date such provision for payment is made, the Bond Trustee receives a Verification Report.

Deposit of Funds for Payment of 2023C Bonds

If the Authority deposits with the Bond Trustee moneys or Government Obligations sufficient to pay the principal or redemption price of any particular 2023C Bond or 2023C Bonds becoming due, either at maturity or by call for redemption or otherwise, together with all interest accruing thereon to the due date, interest on the 2023C Bond or 2023C Bonds shall cease to accrue on the due date and all liability of the Authority with respect to such 2023C Bond or 2023C Bonds shall likewise cease. Thereafter such 2023C Bond or 2023C Bonds shall be deemed not to be Outstanding under the Bond Indenture and the holder or holders of such 2023C Bond or 2023C Bonds shall be restricted exclusively to the funds so deposited for any claim of whatsoever nature with respect to such 2023C Bond or 2023C Bonds, and the Bond Trustee shall hold such funds in trust for such holder or holders.

Notwithstanding the preceding paragraph, the lien of the Bond Indenture shall not be released and discharged until (i) the Bond Trustee has received an Opinion of Counsel to the effect that all conditions precedent to such discharge have been satisfied and (ii), in the event that provision has been made to pay such Bonds rather than all such Bonds having been paid and such 2023C Bonds shall not be paid within 90 days from the date such provision for payment is made, the Bond Trustee receives a Verification Report.

THE LOAN AGREEMENT

Under the Loan Agreement, the Authority will lend to the Corporation the gross proceeds from the sale of the 2023C Bonds to finance the 2023C Project, and the Corporation will agree to make installment payments to the Authority, which shall be assigned to the Bond Trustee, at such times and in such amounts as are necessary to meet the payment obligations under the 2023C Bonds when the same become due. The following summarizes certain provisions of the Loan Agreement, but is not to be regarded as a full statement of its terms, and reference should be made to the Loan Agreement itself for all of the provisions thereof. The Loan Agreement will remain in effect until such time as all Outstanding 2023C Bonds and all other expenses payable by the Corporation under the Loan Agreement have been paid or provision for such payment has been made as described under the heading "THE BOND INDENTURE - Defeasance" in this Appendix C.

Time and Manner of Repayment

Under the Loan Agreement, the Corporation agrees to make the following payments in the manner specified hereinafter:

Payments Equal to Interest. On or before each Interest Payment Date, an amount equal to the interest due on the 2023C Bonds on such Interest Payment Date.

Payments Equal to Principal. On or before each date on which payment of principal on the 2023C Bonds is required pursuant to the Bond Indenture, an amount equal to the principal amount of the 2023C Bonds (i) due on such date pursuant to the mandatory sinking fund redemption requirements of the Bond Indenture, or (ii) maturing by their terms on such date.

Payments Required to Effect Optional Redemption. On or before the Business Day next preceding the date of redemption of any 2023C Bonds to be optionally redeemed pursuant to the Bond Indenture, an amount not less than the full amount required to pay the principal of and premium, if any, on such 2023C Bonds to be optionally redeemed.

Rebate to the United States. If there is any amount required to be paid to the United States pursuant to Section 148(f) of the Code, the Bond Indenture and the Loan Agreement with respect to the 2023C Bonds, the Corporation shall pay such amount to the Bond Trustee for deposit to the Rebate Fund, which payment will be submitted to the United States upon the Written Request of the Corporation.

Bond Trustee's Fee. While the 2023C Bonds remain Outstanding, the reasonable compensation and expenses of the Bond Trustee under the Bond Indenture shall be paid directly to such Bond Trustee by the Corporation upon the receipt by the Corporation of a bill for such services from the Bond Trustee.

Authority's Administrative Fee. The Corporation shall pay the Authority a closing fee for the 2023C Bonds on or before the Closing Date. The Corporation also shall pay all other Administrative Fees and Expenses of the Issuer within 30 days of receipt of an itemized statement from the Issuer relating thereto.

Payment Credits.

To the extent that any payment required to be made pursuant to the provisions outlined above would cause the amount in the Bond Fund in the Bond Indenture to exceed the amount required to be transferred by the Bond Trustee from the Bond Fund pursuant to the provisions of the Bond Indenture on or before the next succeeding payment date, the payment required by such provisions shall be reduced so that such excess will not occur. Payments received under the 2023C MTI Note shall be credited against payments required above.

The Corporation may make all or any part of any payment required with respect to the redemption of 2023C Bonds by delivering to the Bond Trustee any 2023C Bond maturing, or subject to redemption (assuming notice in accordance with the Bond Indenture has been timely delivered) on the maturity or redemption date immediately following the date of such delivery and having it credited at the face amount to the payment and canceled by the Bond Trustee. In addition, the Corporation shall be entitled to a credit during the last year of maturity to the extent that any payment required to be made pursuant to the Loan Agreement would, together with the amount held by the Bond Trustee in all funds (other than the Rebate Fund) under the Bond Indenture, exceed the principal amount of the 2023C Bonds Outstanding and the amount of the interest due both at the final maturity date and the interest payment date immediately preceding the final maturity date.

Prepayment

The Corporation may prepay all or a portion of the Loan to the same extent and upon the same conditions that the Authority has the right to prepay or defease all or any portion of the 2023C Bonds in accordance with the Bond Indenture.

Insurance

The Corporation will maintain, or cause to be maintained, insurance covering such risks and in such amounts as is required by the Master Indenture, and naming each of the Authority and the Bond Trustee as an additional insured as its interest may appear.

Indemnification of Authority and Bond Trustee

The Corporation agrees that the Authority and the members, officers, employees, attorneys and agents thereof shall not be liable for and the Corporation covenants and agrees to protect, exonerate, defend, indemnify and save the Authority and the members, officers, employees, attorneys and agents thereof and the Bond Trustee harmless from and against any and all costs, damages or liabilities which may arise out of the issuance of the 2023C Bonds, as set forth in the Loan Agreement.

Events of Default by the Corporation

The occurrence of any of the following shall constitute an Event of Default under the Loan Agreement:

(a) Failure by the Corporation to make any payments described above under the caption "THE LOAN AGREEMENT – Time and Manner of Repayment" when due; or

(b) Failure by the Corporation to make any payment under the Loan Agreement or in the performance of or compliance with any of the material provisions, warranties, covenants, agreements, terms or conditions contained in the Loan Agreement, other than those specified in clause (a) above, which continues for thirty (30) days following written notice thereof to the Corporation from the Authority or the Bond Trustee except in the case of a default which cannot be cured within such thirty (30) days, in which case the period shall be extended for such period as is reasonable to cure the same with due diligence, provided the Corporation commences such performance or compliance within thirty (30) days and proceeds diligently to cure the same; or

(c) The occurrence of an Event of Default under the Bond Indenture, the Master Indenture, or the 2023C MTI Note; or

(d) An order or decree shall be entered appointing a receiver, receivers, custodian or custodians for any of the revenues of the Corporation, or approving a petition filed against the Corporation seeking reorganization of the Corporation under the federal bankruptcy laws or any other similar law or statute of the United States of America or any state thereof, or if any such order or decree, having been entered without the consent or acquiescence of the Corporation, shall not be vacated or discharged or stayed on appeal within 120 days after the entry thereof; or

(e) Any proceeding shall be instituted, with the consent or acquiescence of the Corporation, or any plan shall be entered into by the Corporation, for the purpose of effecting a composition between the Corporation and its creditors or for the purpose of adjusting the claims of such creditors pursuant to any federal or Commonwealth statute now or hereafter enacted, if the claims of such creditors are under any circumstances payable from any part or all of the amounts payable by the Corporation under the Loan Agreement; or

(f) The Corporation (i) files a petition in bankruptcy or under Title 11 of the United States Code, as amended, (ii) makes an assignment for the benefit of its creditors or (iii) consents to the appointment of a receiver, custodian or trustee for itself or for the whole or any part of the revenues of the Corporation from which the payments by the Corporation under the Loan Agreement may be made; or

(g) If (i) the Corporation is adjudged insolvent by a court of competent jurisdiction, (ii) on a petition in bankruptcy filed against the Corporation, the Corporation is adjudged as bankrupt or (iii) an order, judgment or decree is entered by any court of competent jurisdiction appointing, without the consent of the Corporation, a receiver, custodian or trustee of the Corporation or of the whole or any part of its property and any of the aforesaid adjudications, orders, judgments or decrees shall not be vacated or set aside or stayed within 120 days from the date of entry thereof; or

(h) The Corporation shall file a petition or answer seeking reorganization or any arrangement under the federal bankruptcy laws or any other applicable law or statute of the United States of America or any state thereof; or

(i) Under the provisions of any other law for the relief or aid of debtors, any court of competent jurisdiction shall assume custody or control of the Corporation or of the whole or any substantial part of its property, and such custody or control shall not be terminated within 30 days from the date of assumption of such custody or control.

Unless and until the Authority or the Bond Trustee shall have exercised any remedies upon an Event of Default, the Corporation (or any other Person on behalf of the Corporation) may at any time (a) pay all accrued unpaid payments then due and owing on the outstanding balance of the Loan and all other sums which the Corporation is obligated to pay under the Loan Agreement; and (b) cure all other existing Events of Default under the Loan Agreement, and in every such case, such payment and cure shall be deemed to constitute a waiver of the Event of Default and its consequences as though the Event of Default had not occurred.

Remedies upon Event of Default

Upon the occurrence of an Event of Default under the Loan Agreement:

(a) The entire outstanding balance of the Loan and any other sums which the Corporation is obligated to pay to the Authority under the Loan Agreement shall immediately be due and payable; provided, however, that the Bond Trustee shall have declared the acceleration of the 2023C Bonds in accordance with the Bond Indenture.

(b) The Bond Trustee, after ten (10) days' notice to the Corporation, may, but shall not be required to, perform for the account of the Corporation any covenant of the Corporation under the Loan Agreement in the performance of which the Corporation is in default or make any payment for which the Corporation is in default. The Corporation shall pay to the Bond Trustee upon demand any amount paid by it in the performance of such covenant and any amounts which the Bond Trustee shall have paid by reason of failure of the Corporation to comply with any covenant or provision of the Loan Agreement, including reasonable counsel fees and expenses incurred in connection with prosecution or defense of any proceedings instituted by reason of default of the Corporation, together with interest at a rate equal to the lesser of the highest rate permitted by applicable law and the cost of the money to the Bond Trustee, from the date of payment until repayment by the Corporation.

(c) The Authority or Bond Trustee may pursue any other right/remedy available at law or in equity.

(d) In the event that proceedings shall be pending for the bankruptcy or reorganization of the Corporation under the federal bankruptcy laws or another applicable law, or a receiver or trustee shall have been appointed for the property of the Corporation, or any other similar judicial proceeding relative to the Corporation or the creditors or property of the Corporation shall have been instituted, then the Bond Trustee shall be entitled and empowered, by intervention is such proceedings or otherwise, to file and prove a claim or claims for the whole amount owing and unpaid pursuant to the Loan Agreement and, in case of any judicial proceedings, to file such proofs of claim and other papers or documents as may be necessary or advisable in order to have the claims of the Bond Trustee allowed in such judicial proceedings relative to the Corporation or its creditors or its property, and to collect and receive any moneys or other property payable or deliverable on any such claims, and to distribute such amounts as provided in the Indenture after the deduction of its reasonable charges and expenses to the extent permitted by the Indenture. Any receiver, assignee or trustee in bankruptcy or reorganization is hereby authorized to make such payments directly to the Bond Trustee, and to pay to the Bond Trustee and the Authority any amount due each of them for their respective reasonable compensation and expenses, including reasonable expenses and fees of counsel incurred by each of them up to the date of such distribution.

Remedies of Authority

In addition to the rights of the Bond Trustee following an Event of Default, the Authority shall have the right to proceed against the Corporation for payment of Administrative Fees and Expenses and any additional fees due under the Bond Indenture and for indemnification under the Loan Agreement.

Term of Loan Agreement

The Loan Agreement shall remain in full force and effect for a term commencing on the date of the issuance of the 2023C Bonds and terminating at such time as there are no 2023C Bonds Outstanding under the provisions of the Bond Indenture; provided, however, that the Loan Agreement and the obligation of the Corporation to make payments under the Loan Agreement shall continue following the discharge of the 2023C Bonds until such time as any amounts due to the Internal Revenue Service for rebate required by the Bond Indenture and the Tax Regulatory Agreement and any other amounts due under the Loan Agreement have been satisfied.

Amendment of the Loan Agreement

The Loan Agreement may be amended from time to time in accordance with the provisions of the Bond Indenture described above under the heading "THE BOND INDENTURE" in this Appendix C. The provisions of the Loan Agreement concerning the Corporation's obligation to comply with the rebate requirements of Section 148(f) of the Code, may be amended by an instrument in writing signed by the parties thereto in the event that the Corporation delivers to the Bond Trustee an Officer's Certificate accompanied by a Favorable Opinion addressed to the Bond Trustee to the effect that amendments to the Loan Agreement are necessary or desirable to comply with the provisions of Section 148(f) of the Code.

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APPENDIX D

FORM OF APPROVING OPINION OF BOND COUNSEL

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[FORM OF OPINION OF BOND COUNSEL]

April 19, 2023

Re: $36,815,000, Aggregate Principal Amount,
Monroeville Finance Authority
UPMC Revenue Bonds, Series 2023C

To the Purchasers of the Within-Described Bonds:

We have served as bond counsel in connection with the issuance by the Monroeville Finance Authority ("Authority"), a body corporate and politic created pursuant to the Pennsylvania Municipality Authorities Act, as amended ("Act"), of $36,815,000, aggregate principal amount, Monroeville Finance Authority UPMC Revenue Bonds, Series 2023C (the "Bonds").

The Bonds are issued pursuant to the Act, a resolution adopted by the Authority on February 16, 2023 ("Resolution"), and a Trust Indenture, dated as of April 1, 2023 ("Indenture"), between the Authority and The Bank of New York Mellon Trust Company, N.A., as trustee ("Trustee").

The proceeds of the 2023C Bonds will be applied to finance the payment of (a) all or a portion of the costs of refunding the outstanding Monroeville Finance Authority, UPMC Revenue Bonds, Series 2013B maturing on or after July 1, 2024, and (b) a portion of the costs and expenses of issuing the Bonds.

The proceeds of the Bonds will be loaned by the Authority to the Borrower pursuant to a Loan Agreement, dated as of April 1, 2023 ("Loan Agreement"), between the Authority and the Borrower. The Authority has assigned all of its right, title and interest in the Loan Agreement (except for rights related to certain approvals, consents and notices, certain modifications, supplements and amendments to the Loan Agreement, the right to pursue remedies, the right to payment of certain fees and expenses and the right to indemnification) to the Trustee for the benefit of the Registered Owners (as defined in the Indenture).

As a basis for this opinion we have examined such matters of law and such documents, certifications, instruments and records as we deemed necessary to enable us to render the opinion set forth below, including without limitation: the Act; applicable provisions of the Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder or made applicable with respect thereto (collectively, "Code"); original counterparts or certified copies of the Resolution, the Indenture and the Loan Agreement; an agreement dated the date hereof ("Tax Regulatory Agreement") of the Authority through certain Authority officials having responsibility for issuing the Bonds, and of the Borrower given pursuant to the Code; opinions delivered by the Authority's counsel and counsel to the Borrower; and the other documents, certifications, instruments and records listed in the Closing Memorandum in respect of the Bonds filed this date with the Trustee. We have also examined a fully executed and authenticated Bond or a true copy thereof, and we assume all other Bonds are in such form and are similarly executed and authenticated. In rendering this opinion, we have relied on the opinions referred to above as to all matters of fact and law set forth therein, and on the genuineness, truthfulness and completeness of all documentation examined as referred to above.

Based on the foregoing and the other qualifications and limitations set forth herein, we are of the opinion that:

1. The Authority is validly existing under the Act, and at all relevant times had and has full power and authority thereunder to adopt the Resolution, execute the Indenture and the Loan Agreement, and perform the obligations thereunder, and to issue the Bonds.

2. The Indenture and the Loan Agreement have been duly authorized, executed and delivered by the Authority, and the obligations of the Authority thereunder are valid, binding and enforceable in accordance with the respective terms thereof, except to the extent that enforcement may be affected by bankruptcy, insolvency, reorganization, moratorium or other similar laws or legal or equitable principles affecting the enforcement of creditors' rights ("Creditors' Rights Limitations").

3. The Bonds have been duly authorized, executed and issued by the Authority, and are valid and binding special, limited obligations of the Authority payable solely from the sources described in the Indenture, and enforceable in accordance with their terms, except to the extent that enforcement may be affected by Creditors' Rights Limitations, and the Bonds are entitled to the benefit and security of the Indenture to the extent provided therein.

4. Under the laws of the Commonwealth of Pennsylvania as enacted and construed on the date hereof, interest on the Bonds is exempt from Pennsylvania personal income tax and Pennsylvania corporate net income tax; however, under the laws of the Commonwealth of Pennsylvania as enacted and construed on the date hereof, any profits, gains or income derived from the sale, exchange or other disposition of the Bonds will be subject to Commonwealth of Pennsylvania taxes and local taxes within the Commonwealth of Pennsylvania.

5. Under the existing statutes, regulations, rulings and court decisions, interest on the Bonds will not be includible in the gross income of the holders thereof for federal income tax purposes, assuming continuing compliance by the Authority and the Borrower with the requirements of the Code. Interest on the Bonds will not be a specific preference item for purposes of computing the federal alternative minimum tax on individuals.

In rendering its opinion, Bond Counsel has assumed compliance by the Authority and the Borrower with their respective covenants contained in the Indenture, the Loan Agreement and the Tax Regulatory Agreement, that are intended to comply with the provisions of the Code relating to actions to be taken, or caused to be taken, by the Authority and/or the Borrower after the issuance of the Bonds necessary to effect or maintain the exclusion from gross income of the interest on the Bonds for federal income tax purposes. These covenants and representations relate to, *inter alia*, the maintenance by the Borrower of its status as an organization described in Section 501(c)(3) of the Code, the use and investment of proceeds of the Bonds and the rebate to the United States Treasury of specified arbitrage earnings, if any. Failure to comply with such covenants could result in the interest on the Bonds becoming includible in gross income for federal income tax purposes from the date of issuance of the Bonds.

We call your attention to the fact that the Bonds are special, limited obligations of the Authority, and neither the faith nor credit of the Commonwealth of Pennsylvania or any of its political subdivisions is pledged to the payment of the principal of, premium, if any, or interest on the Bonds. The Authority has no taxing power.

We express no opinion as to any matter not set forth in the numbered paragraphs herein. This opinion is rendered on the basis of federal law and the laws of the Commonwealth of Pennsylvania as enacted and construed on the date hereof. This opinion is given as of the date hereof and we assume no obligation to supplement this opinion to reflect changes in the law that may hereafter occur or changes in the facts or circumstances that may hereafter come to our attention. Without limiting the generality of the foregoing, we express no opinion with respect to, and assume no responsibility for, the accuracy, adequacy or completeness of the preliminary official statement or the official statement prepared in respect of the offering of the Bonds and make no representation that we have independently verified the contents thereof.

Very truly yours,

ECKERT SEAMANS CHERIN & MELLOTT, LLC

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UPMC

LIFE CHANGING MEDICINE

MONROEVILLE FINANCE AUTHORITY • UPMC REVENUE BONDS, SERIES 2023C

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