

GlycoMimetics Inc.

A Relatively De-risked Story

Well capitalized and ready to execute: On the heels of its IPO in January, GLYC finished 1Q with \$57.0mn in cash and cash equivalents. Expenses in the quarter were modest, with \$3.9mn going to R&D and \$1.2mn in SG&A. We expect spending to increase slightly with the initiation of the Phase I study with GMI-1271 this quarter.

Rivipansel (formerly GMI-1070) is set to enter Phase III development in 2H14: Details on the design of the Phase III trial will be released by PFE over the next 3-6 months. We expect the primary endpoint of the study to be time to hospital discharge, with opiod use being a key secondary endpoint given the positive results of the Phase II study. As a reminder, PFE is responsible for Phase III development and commercialization of rivipansel while GLYC receives milestone payments and royalties in the low-teens based on future sales of the product.

Phase III study of rivipansel triggers \$35mn milestone payments: GLYC will receive \$15mn this quarter (in advance of the trial initiation) and the balance when the first patient is dosed on the study. We believe these milestone payments should help fund the operation into 2016 along with cash on the balance sheet.

GLYC: Quarterly and Annual EPS (USD)

| | 2013 | | 2014 | | 2015 | | | Change y/y | |
|--------|--------|--------|--------|--------|---------|--------|--------|------------|-------|
| FY Dec | Actual | Old | New | Cons | Old New | | Cons | 2014 | 2015 |
| Q1 | 0.04A | -0.30E | -0.30A | -0.29E | N/A | N/A | N/A | -850% | N/A |
| Q2 | -3.70A | 0.47E | 0.49E | 0.09E | N/A | N/A | N/A | 113% | N/A |
| Q3 | -3.00A | 0.68E | 0.70E | 0.45E | N/A | N/A | N/A | 123% | N/A |
| Q4 | -2.80A | -0.42E | -0.44E | -0.17E | N/A | N/A | N/A | 84% | N/A |
| Year | -8.87A | 0.47E | 0.46E | 0.10E | -2.04E | -2.12E | -1.40E | 105% | -561% |
| P/E | N/A | | 22.9 | | | N/A | | | |

Source: Barclays Research.

Consensus numbers are from Thomson Reuters

Barclays Capital Inc. and/or one of its affiliates does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report.

Investors should consider this report as only a single factor in making their investment decision. PLEASE SEE ANALYST CERTIFICATION(S) AND IMPORTANT DISCLOSURES BEGINNING ON PAGE 3.

Equity Research

OVERWEIGHT Unchanged

Exchange-Nasdaq

Healthcare | U.S. Biotechnology 8 May 2014

| Industry View | NEUTRAL Unchanged |
|-----------------------------|------------------------|
| Price Target | USD 15.00 Unchanged |
| Price (07-May-2014) | USD 10.54 |
| Potential Upside/Downside | +42% |
| Tickers | GLYC |
| Market Cap (USD mn) | 196 |
| Shares Outstanding (mn) | 18.61 |
| Free Float (%) | 97.24 |
| 52 Wk Avg Daily Volume (mn) | 0.2 |
| Dividend Yield (%) | N/A |
| Return on Equity TTM (%) | N/A |
| Current BVPS (USD) | 2.02 |
| Source: Thomson Reuters | |

Stock Rating



Link to Barclays Live for interactive charting

U.S. Biotechnology

Price Performance

Ying Huang, Ph.D. 1.212.526.5387 ying.huang2@barclays.com BCI, New York

Catherine Hu +1 212 526 9719 catherine.hu@barclays.com BCI, New York

Dimiter V. Tassev, Ph.D. +1 212 526 5157 dimiter.tassev@barclays.com BCI, New York

| U.S. Biotechnology | | | | | | Industry View: NEUTRAL | | |
|-------------------------------|---------|--------|-------------|---------|--------------|------------------------------------------------------------------------------------------|--|--|
| GlycoMimetics Inc. (GLY | ′C) | | | | | Stock Rating: OVERWEIGHT | | |
| Income statement (\$mn) | 2013A | 2014E | 2015E | 2016E | CAGR | Price (07-May-2014) USD 10.54 | | |
| Revenue | 4 | 35 | 0 | 25 | 84.3% | Price Target USD 15.00 | | |
| EBITDA (adj) | -10 | 9 | -40 | -20 | N/A | Why Overweight? GlycoMimetics is currently in | | |
| EBIT (adj) | -11 | 8 | -40 | -21 | N/A | Phase III clinical testing with Pfizer-partnered GMI- | | |
| Pre-tax income (adj) | -11 | 8 | -40 | -21 | N/A | 1070 for the treatment of VOC. The company also h | | |
| Net income (adj) | -11 | 8 | -40 | -21 | N/A | a proprietary compound, GMI-1271, which will enter | | |
| EPS (adj) (\$) | -8.87 | 0.46 | -2.12 | -0.93 | N/A | clinical testing for the treatment of AML in 2014. | | |
| Diluted shares (mn) | 1.2 | 18.0 | 18.9 | 22.0 | 164.0% | | | |
| DPS (\$) | 0.00 | 0.00 | 0.00 | 0.00 | N/A | Upside case USD 19.00 | | |
| DI 3 (‡) | 0.00 | 0.00 | 0.00 | 0.00 | IN/ A | Based on our current sales estimates for GMI-1070, | | |
| Margin and return data | | | | | Average | assuming positive Phase III data and regulatory | | |
| EBITDA (adj) margin (%) | -262.6 | 25.9 | N/A | -79.8 | -105.5 | approval we reach a valuation of \$19/share. | | |
| EBIT (adj) margin (%) | -265.9 | 23.7 | N/A | -82.0 | -108.1 | | | |
| Pre-tax (adj) margin (%) | -266.4 | 23.7 | N/A | -82.0 | -108.2 | Downside case USD 9.00 | | |
| Net (adj) margin (%) | -265.6 | 23.7 | N/A | -82.0 | -108.2 | Assuming clinical failure and subsequent termination | | |
| ROIC (%) | 2,598.8 | -753.9 | 2,204.4 | 1,579.2 | 1,407.1 | of the GMI-1271, along with peak sales estimates for | | |
| ROA (%) | -89.5 | 19.9 | -74.9 | -59.5 | -51.0 | GMI-1070 of \$500mn, we reach a valuation of | | |
| ROE (%) | -137.4 | 23.2 | -82.5 | -66.6 | -65.8 | \$9/share. | | |
| KOE (%) | -137.4 | 23.2 | -02.5 | -00.0 | -03.0 | H :1 /B :1 | | |
| Balance sheet and cash flow (| mn) | | | | CAGR | Upside/Downside scenarios | | |
| Tangible fixed assets | 0 | 0 | 0 | 0 | -47.6% | Price History Price Target Prior 12 months Next 12 months | | |
| Intangible fixed assets | 0 | 0 | 0 | -1 | N/A | High Upside | | |
| Cash and equivalents | 2 | 77 | 29 | 40 | 158.5% | | | |
| Total assets | 5 | 78 | 29 | 40 | 96.5% | 18.99 19.00 | | |
| Short and long-term debt | 0 | 0 | 0 | 0 | 0.0% | | | |
| Other long-term liabilities | 0 | 0 | 0 | 0 | N/A | Target | | |
| Total liabilities | 2 | 9 | 0 | 7 | 41.9% | 15.00 | | |
| Net debt/(funds) | -2 | -77 | -29 | -40 | N/A | Comment | | |
| Shareholders' equity | 3 | 69 | 29 | 33 | 124.8% | Current | | |
| Change in working capital | -5 | 9 | -8 | 6 | N/A | 9.00 | | |
| Cash flow from operations | -16 | 18 | -48 | -14 | N/A | 8.40 | | |
| Capital expenditure | 0 | 0 | 0 | 0 | N/A | | | |
| Free cash flow | -16 | 18 | -48 | -14 | N/A | Low Downside | | |
| | | | | | | | | |
| Valuation and leverage metric | | | | | Average | POINT® Quantitative Equity Scores | | |
| P/E (adj) (x) | N/A | 22.9 | N/A | N/A | 22.9 | Value | | |
| EV/EBITDA (adj) (x) | -1.0 | -7.1 | 0.4 | 1.3 | -1.6 | | | |
| Equity FCF yield (%) | -123.9 | 9.3 | -24.3 | -6.1 | -36.2 | | | |
| EV/sales (x) | 2.7 | -1.8 | N/A | -1.1 | -0.1 | Quality | | |
| P/BV (x) | 4.3 | 2.8 | 7.0 | 7.0 | 5.3 | N/A | | |
| Dividend yield (%) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | |
| Total debt/capital (%) | 3.2 | 0.1 | 0.3 | 0.3 | 1.0 | Sentiment | | |
| Selected operating metrics | | | | | Average | N/A | | |
| SG&A/sales (%) | 72.0 | 13.8 | N/A | 22.0 | 35.9 | | | |
| R&D/sales (%) | 293.9 | 62.5 | N/A N/A | 160.0 | 172.1 | Low High | | |
| R&D growth (%) | 293.9 | 86.5 | 59.9 | 14.3 | 46.3 | Source: POINT®. The scores are valid as of the date of this | | |
| SG&A growth (%) | 33.3 | 67.8 | 59.9 4.9 | 8.6 | 46.3 28.7 | report and are independent of the fundamental analysts' | | |
| 30αA grown (%) | 33.3 | 07.8 | 4.9 | 6.0 | 20.7 | views. To view the latest scores, please go to the equity company page on Barclays Live. | | |

Source: Company data, Barclays Research Note: FY End Dec

8 May 2014 2

ANALYST(S) CERTIFICATION(S):

I, Ying Huang, Ph.D., hereby certify (1) that the views expressed in this research report accurately reflect my personal views about any or all of the subject securities or issuers referred to in this research report and (2) no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this research report.

The POINT® Quantitative Equity Scores (POINT Scores) referenced herein are produced by the firm's POINT quantitative model and Barclays hereby certifies that (1) the views expressed in this research report accurately reflect the firm's POINT Scores model and (2) no part of the firm's compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this research report.

IMPORTANT DISCLOSURES

Barclays Research is a part of the Corporate and Investment Banking division of Barclays Bank PLC and its affiliates (collectively and each individually, "Barclays"). For current important disclosures regarding companies that are the subject of this research report, please send a written request to: Barclays Research Compliance, 745 Seventh Avenue, 14th Floor, New York, NY 10019 or refer to http://publicresearch.barclays.com or call 212-526-1072.

The analysts responsible for preparing this research report have received compensation based upon various factors including the firm's total revenues, a portion of which is generated by investment banking activities.

Analysts regularly conduct site visits to view the material operations of covered companies, but Barclays policy prohibits them from accepting payment or reimbursement by any covered company of their travel expenses for such visits.

In order to access Barclays Statement regarding Research Dissemination Policies and Procedures, please refer to https://live.barcap.com/publiccp/RSR/nyfipubs/disclaimer/disclaimer-research-dissemination.html. In order to access Barclays Research Conflict Management Policy Statement, please refer to: http://group.barclays.com/corporates-and-institutions/research/research-policy.

The Corporate and Investment Banking division of Barclays produces a variety of research products including, but not limited to, fundamental analysis, equity-linked analysis, quantitative analysis, and trade ideas. Recommendations contained in one type of research product may differ from recommendations contained in other types of research products, whether as a result of differing time horizons, methodologies, or otherwise.

Primary Stocks (Ticker, Date, Price)

GlycoMimetics Inc. (GLYC, 07-May-2014, USD 10.54), Overweight/Neutral, A/C/D/J/L

Disclosure Legend:

A: Barclays Bank PLC and/or an affiliate has been lead manager or co-lead manager of a publicly disclosed offer of securities of the issuer in the previous 12 months.

- B: An employee of Barclays Bank PLC and/or an affiliate is a director of this issuer.
- C: Barclays Bank PLC and/or an affiliate is a market-maker and/or liquidity provider in equity securities issued by this issuer or one of its affiliates.
- D: Barclays Bank PLC and/or an affiliate has received compensation for investment banking services from this issuer in the past 12 months.
- E: Barclays Bank PLC and/or an affiliate expects to receive or intends to seek compensation for investment banking services from this issuer within the next 3 months.
- F: Barclays Bank PLC and/or an affiliate beneficially owned 1% or more of a class of equity securities of the issuer as of the end of the month prior to the research report's issuance.
- G: One of the analysts on the coverage team (or a member of his or her household) owns shares of the common stock of this issuer.
- H: This issuer beneficially owns 5% or more of any class of common equity securities of Barclays Bank PLC.
- I: Barclays Bank PLC and/or an affiliate has a significant financial interest in the securities of this issuer.
- J: Barclays Bank PLC and/or an affiliate trades regularly in the securities of this issuer.
- K: Barclays Bank PLC and/or an affiliate has received non-investment banking related compensation from this issuer within the past 12 months.
- L: This issuer is, or during the past 12 months has been, an investment banking client of Barclays Bank PLC and/or an affiliate.
- M: This issuer is, or during the past 12 months has been, a non-investment banking client (securities related services) of Barclays Bank PLC and/or an affiliate.
- N: This issuer is, or during the past 12 months has been, a non-investment banking client (non-securities related services) of Barclays Bank PLC and/or an affiliate.
- O: Barclays Capital Inc., through Barclays Market Makers, is a Designated Market Maker in this issuer's stock, which is listed on the New York Stock Exchange. At any given time, its associated Designated Market Maker may have "long" or "short" inventory position in the stock; and its associated Designated Market Maker may be on the opposite side of orders executed on the floor of the New York Stock Exchange in the stock.
- P: A partner, director or officer of Barclays Capital Canada Inc. has, during the preceding 12 months, provided services to the subject company for remuneration, other than normal course investment advisory or trade execution services.
- Q: The Corporate and Investment Banking division of Barclays Bank PLC, is a Corporate Broker to this issuer.
- R: Barclays Capital Canada Inc. and/or an affiliate has received compensation for investment banking services from this issuer in the past 12 months.

8 May 2014

IMPORTANT DISCLOSURES CONTINUED

S: Barclays Capital Canada Inc. is a market-maker in an equity or equity related security issued by this issuer.

Guide to the Barclays Fundamental Equity Research Rating System:

Our coverage analysts use a relative rating system in which they rate stocks as Overweight, Equal Weight or Underweight (see definitions below) relative to other companies covered by the analyst or a team of analysts that are deemed to be in the same industry (the "industry coverage universe").

In addition to the stock rating, we provide industry views which rate the outlook for the industry coverage universe as Positive, Neutral or Negative (see definitions below). A rating system using terms such as buy, hold and sell is not the equivalent of our rating system. Investors should carefully read the entire research report including the definitions of all ratings and not infer its contents from ratings alone.

Stock Rating

Overweight - The stock is expected to outperform the unweighted expected total return of the industry coverage universe over a 12-month investment horizon.

Equal Weight - The stock is expected to perform in line with the unweighted expected total return of the industry coverage universe over a 12-month investment horizon.

Underweight - The stock is expected to underperform the unweighted expected total return of the industry coverage universe over a 12-month investment horizon.

Rating Suspended - The rating and target price have been suspended temporarily due to market events that made coverage impracticable or to comply with applicable regulations and/or firm policies in certain circumstances including where the Corporate and Investment Banking Division of Barclays is acting in an advisory capacity in a merger or strategic transaction involving the company.

Industry View

Positive - industry coverage universe fundamentals/valuations are improving.

Neutral - industry coverage universe fundamentals/valuations are steady, neither improving nor deteriorating.

Negative - industry coverage universe fundamentals/valuations are deteriorating.

Below is the list of companies that constitute the "industry coverage universe":

U.S. Biotechnology

Alexion Pharmaceuticals (ALXN) Amgen Inc. (AMGN) ARIAD Pharmaceuticals (ARIA) Arrowhead Research Corp. (ARWR) Biogen Idec (BIIB) BioMarin Pharmaceutical (BMRN) Celgene Corp. (CELG) Celladon Corp. (CLDN) Cempra Inc. (CEMP) Dendreon Corp. (DNDN) Fibrocell Science Inc. (FCSC) Gilead Sciences (GILD) Idenix Pharmaceuticals (IDIX) GlycoMimetics Inc. (GLYC) Halozyme Therapeutics Inc. (HALO) Incyte Corp. (INCY) Intrexon Corp. (XON) Medivation Inc. (MDVN) Regeneron Pharmaceuticals (REGN) Tetraphase (TTPH) Trevena Inc. (TRVN)

Distribution of Ratings:

Vertex Pharmaceuticals (VRTX)

Barclays Equity Research has 2629 companies under coverage.

45% have been assigned an Overweight rating which, for purposes of mandatory regulatory disclosures, is classified as a Buy rating; 45% of companies with this rating are investment banking clients of the Firm.

37% have been assigned an Equal Weight rating which, for purposes of mandatory regulatory disclosures, is classified as a Hold rating; 42% of companies with this rating are investment banking clients of the Firm.

14% have been assigned an Underweight rating which, for purposes of mandatory regulatory disclosures, is classified as a Sell rating; 38% of companies with this rating are investment banking clients of the Firm.

Guide to the Barclays Research Price Target:

Each analyst has a single price target on the stocks that they cover. The price target represents that analyst's expectation of where the stock will trade in the next 12 months. Upside/downside scenarios, where provided, represent potential upside/potential downside to each analyst's price target over the same 12-month period.

Guide to the POINT® Quantitative Equity Scores:

The POINT Quantitative Equity Scores (POINT Scores) are based on consensus historical data and are independent of the Barclays fundamental analysts' views. Each score is composed of a number of standard industry metrics.

A high/low Value score indicates attractive/unattractive valuation. Measures of value include P/E, EV/EBITDA and Free Cash Flow.

A high/low Quality score indicates financial statement strength/weakness. Measures of quality include ROIC and corporate default probability.

A high/low Sentiment score indicates bullish/bearish market sentiment. Measures of sentiment include price momentum and earnings revisions.

8 May 2014

IMPORTANT DISCLOSURES CONTINUED

These scores are valid as of the date of this report. To view the latest scores, which are updated monthly, *click here*.

For a more detailed description of the underlying methodology for each score, please *click here*.

Barclays offices involved in the production of equity research:

London

Barclays Bank PLC (Barclays, London)

New York

Barclays Capital Inc. (BCI, New York)

Tokyo

Barclays Securities Japan Limited (BSJL, Tokyo)

São Paulo

Banco Barclays S.A. (BBSA, São Paulo)

Hong Kong

Barclays Bank PLC, Hong Kong branch (Barclays Bank, Hong Kong)

Toronto

Barclays Capital Canada Inc. (BCCI, Toronto)

Johannesburg

Absa Bank Limited (Absa, Johannesburg)

Mexico City

Barclays Bank Mexico, S.A. (BBMX, Mexico City)

Taiwan

Barclays Capital Securities Taiwan Limited (BCSTW, Taiwan)

Seoul

Barclays Capital Securities Limited (BCSL, Seoul)

Mumbai

Barclays Securities (India) Private Limited (BSIPL, Mumbai)

Singapore

Barclays Bank PLC, Singapore branch (Barclays Bank, Singapore)

IMPORTANT DISCLOSURES CONTINUED

GlycoMimetics Inc. (GLYC)

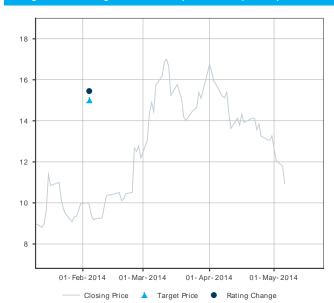
USD 10.54 (07-May-2014)

Stock Rating OVERWEIGHT

Industry View

NEUTRAL

Rating and Price Target Chart - USD (as of 07-May-2014)



Currency=USD

Date Closing Price Rating Adjusted Price Target

04-Feb-2014 9.92 Overweight 15.00

Source: Thomson Reuters, Barclays Research

Historical stock prices and price targets may have been adjusted for stock splits and dividends.

Source: IDC, Barclays Research

Link to Barclays Live for interactive charting

A: Barclays Bank PLC and/or an affiliate has been lead manager or co-lead manager of a publicly disclosed offer of securities of GlycoMimetics Inc. in the previous 12 months.

C: Barclays Bank PLC and/or an affiliate is a market-maker and/or liquidity provider in equity securities issued by GlycoMimetics Inc. or one of its affiliates

D: Barclays Bank PLC and/or an affiliate has received compensation for investment banking services from GlycoMimetics Inc. in the past 12 months.

J: Barclays Bank PLC and/or an affiliate trades regularly in the securities of GlycoMimetics Inc..

L: GlycoMimetics Inc. is, or during the past 12 months has been, an investment banking client of Barclays Bank PLC and/or an affiliate.

Valuation Methodology: We value GlycoMimetics using a probability-adjusted net present value (NPV) model. We assign \$9/share for the company's GMI-1070 program (71% probability of reaching the market) and \$3/share for the company's GMI-1271 program (11% probability of reaching the market), both of which are discounted 10%. Additionally, we attribute roughly \$3/share in net cash. As a result, we come up with a price target of \$15/share.

Risks which May Impede the Achievement of the Barclays Research Price Target: As with most developmental-stage biotechnology companies, the primary risks are 1) running out of necessary capital to fund operations and being unable to obtain capital through subsequent financings, 2) failure in demonstrating clinical benefits for their two key pipeline products, 3) competition from currently-approved or other late-stage clinical compounds.

8 May 2014 6

DISCLAIMER:

This publication has been prepared by the Corporate and Investment Banking division of Barclays Bank PLC and/or one or more of its affiliates (collectively and each individually, "Barclays"). It has been issued by one or more Barclays legal entities within its Corporate and Investment Banking division as provided below. It is provided to our clients for information purposes only, and Barclays makes no express or implied warranties, and expressly disclaims all warranties of merchantability or fitness for a particular purpose or use with respect to any data included in this publication. Barclays will not treat unauthorized recipients of this report as its clients. Prices shown are indicative and Barclays is not offering to buy or sell or soliciting offers to buy or sell any financial instrument.

Without limiting any of the foregoing and to the extent permitted by law, in no event shall Barclays, nor any affiliate, nor any of their respective officers, directors, partners, or employees have any liability for (a) any special, punitive, indirect, or consequential damages; or (b) any lost profits, lost revenue, loss of anticipated savings or loss of opportunity or other financial loss, even if notified of the possibility of such damages, arising from any use of this publication or its contents.

Other than disclosures relating to Barclays, the information contained in this publication has been obtained from sources that Barclays Research believes to be reliable, but Barclays does not represent or warrant that it is accurate or complete. Barclays is not responsible for, and makes no warranties whatsoever as to, the content of any third-party web site accessed via a hyperlink in this publication and such information is not incorporated by reference.

The views in this publication are those of the author(s) and are subject to change, and Barclays has no obligation to update its opinions or the information in this publication. The analyst recommendations in this publication reflect solely and exclusively those of the author(s), and such opinions were prepared independently of any other interests, including those of Barclays and/or its affiliates. This publication does not constitute personal investment advice or take into account the individual financial circumstances or objectives of the clients who receive it. The securities discussed herein may not be suitable for all investors. Barclays recommends that investors independently evaluate each issuer, security or instrument discussed herein and consult any independent advisors they believe necessary. The value of and income from any investment may fluctuate from day to day as a result of changes in relevant economic markets (including changes in market liquidity). The information herein is not intended to predict actual results, which may differ substantially from those reflected. Past performance is not necessarily indicative of future results.

This material has been issued and approved for distribution in the UK and European Economic Area ("EEA") by Barclays Bank PLC. It is being made available primarily to persons who are investment professionals as that term is defined in Article 19 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005. It is directed at, and therefore should only be relied upon by, persons who have professional experience in matters relating to investments. The investments to which it relates are available only to such persons and will be entered into only with such persons. Barclays Bank PLC is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority and is a member of the London Stock Exchange.

The Corporate and Investment Banking division of Barclays undertakes U.S. securities business in the name of its wholly owned subsidiary Barclays Capital Inc., a FINRA and SIPC member. Barclays Capital Inc., a U.S. registered broker/dealer, is distributing this material in the United States and, in connection therewith accepts responsibility for its contents. Any U.S. person wishing to effect a transaction in any security discussed herein should do so only by contacting a representative of Barclays Capital Inc. in the U.S. at 745 Seventh Avenue, New York, New York 10019.

Non-U.S. persons should contact and execute transactions through a Barclays Bank PLC branch or affiliate in their home jurisdiction unless local regulations permit otherwise.

Barclays Bank PLC, Paris Branch (registered in France under Paris RCS number 381 066 281) is regulated by the Autorité des marchés financiers and the Autorité de contrôle prudentiel. Registered office 34/36 Avenue de Friedland 75008 Paris.

This material is distributed in Canada by Barclays Capital Canada Inc., a registered investment dealer and member of IIROC (www.iiroc.ca).

Subject to the conditions of this publication as set out above, the Corporate & Investment Banking Division of Absa Bank Limited, an authorised financial services provider (Registration No.: 1986/004794/06. Registered Credit Provider Reg No NCRCP7), is distributing this material in South Africa. Absa Bank Limited is regulated by the South African Reserve Bank. This publication is not, nor is it intended to be, advice as defined and/or contemplated in the (South African) Financial Advisory and Intermediary Services Act, 37 of 2002, or any other financial, investment, trading, tax, legal, accounting, retirement, actuarial or other professional advice or service whatsoever. Any South African person or entity wishing to effect a transaction in any security discussed herein should do so only by contacting a representative of the Corporate & Investment Banking Division of Absa Bank Limited in South Africa, 15 Alice Lane, Sandton, Johannesburg, Gauteng 2196. Absa Bank Limited is a member of the Barclays group.

In Japan, foreign exchange research reports are prepared and distributed by Barclays Bank PLC Tokyo Branch. Other research reports are distributed to institutional investors in Japan by Barclays Securities Japan Limited. Barclays Securities Japan Limited is a joint-stock company incorporated in Japan with registered office of 6-10-1 Roppongi, Minato-ku, Tokyo 106-6131, Japan. It is a subsidiary of Barclays Bank PLC and a registered financial instruments firm regulated by the Financial Services Agency of Japan. Registered Number: Kanto Zaimukyokucho (kinsho) No. 143.

Barclays Bank PLC, Hong Kong Branch is distributing this material in Hong Kong as an authorised institution regulated by the Hong Kong Monetary Authority. Registered Office: 41/F, Cheung Kong Center, 2 Queen's Road Central, Hong Kong.

Information on securities/instruments that trade in Taiwan or written by a Taiwan-based research analyst is distributed by Barclays Capital Securities Taiwan Limited to its clients. The material on securities/instruments not traded in Taiwan is not to be construed as 'recommendation' in Taiwan. Barclays Capital Securities Taiwan Limited does not accept orders from clients to trade in such securities. This material may not be distributed to the public media or used by the public media without prior written consent of Barclays.

This material is distributed in South Korea by Barclays Capital Securities Limited, Seoul Branch.

All equity research material is distributed in India by Barclays Securities (India) Private Limited (SEBI Registration No: INB/INF 231292732 (NSE), INB/INF 011292738 (BSE) | Corporate Identification Number: U67120MH2006PTC161063 | Registered Office: 208 | Ceejay House | Dr. Annie Besant Road | Shivsagar Estate | Worli | Mumbai - 400 018 | India, Phone: + 91 22 67196363). Other research reports are distributed in India by Barclays Bank PLC, India Branch.

Barclays Bank PLC Frankfurt Branch distributes this material in Germany under the supervision of Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin).

This material is distributed in Malaysia by Barclays Capital Markets Malaysia Sdn Bhd.

This material is distributed in Brazil by Banco Barclays S.A.

This material is distributed in Mexico by Barclays Bank Mexico, S.A.

Barclays Bank PLC in the Dubai International Financial Centre (Registered No. 0060) is regulated by the Dubai Financial Services Authority (DFSA). Principal place of business in the Dubai International Financial Centre: The Gate Village, Building 4, Level 4, PO Box 506504, Dubai, United Arab Emirates. Barclays

Bank PLC-DIFC Branch, may only undertake the financial services activities that fall within the scope of its existing DFSA licence. Related financial products or services are only available to Professional Clients, as defined by the Dubai Financial Services Authority.

Barclays Bank PLC in the UAE is regulated by the Central Bank of the UAE and is licensed to conduct business activities as a branch of a commercial bank incorporated outside the UAE in Dubai (Licence No.: 13/1844/2008, Registered Office: Building No. 6, Burj Dubai Business Hub, Sheikh Zayed Road, Dubai (Licence No.: 13/952/2008, Registered Office: Al Jazira Towers, Hamdan Street, PO Box 2734, Abu Dhabi).

Barclays Bank PLC in the Qatar Financial Centre (Registered No. 00018) is authorised by the Qatar Financial Centre Regulatory Authority (QFCRA). Barclays Bank PLC-QFC Branch may only undertake the regulated activities that fall within the scope of its existing QFCRA licence. Principal place of business in Qatar: Qatar Financial Centre, Office 1002, 10th Floor, QFC Tower, Diplomatic Area, West Bay, PO Box 15891, Doha, Qatar. Related financial products or services are only available to Business Customers as defined by the Qatar Financial Centre Regulatory Authority.

This material is distributed in the UAE (including the Dubai International Financial Centre) and Qatar by Barclays Bank PLC.

This material is distributed in Saudi Arabia by Barclays Saudi Arabia ('BSA'). It is not the intention of the publication to be used or deemed as recommendation, option or advice for any action (s) that may take place in future. Barclays Saudi Arabia is a Closed Joint Stock Company, (CMA License No. 09141-37). Registered office Al Faisaliah Tower, Level 18, Riyadh 11311, Kingdom of Saudi Arabia. Authorised and regulated by the Capital Market Authority, Commercial Registration Number: 1010283024.

This material is distributed in Russia by OOO Barclays Capital, affiliated company of Barclays Bank PLC, registered and regulated in Russia by the FSFM. Broker License #177-11850-100000; Dealer License #177-11855-010000. Registered address in Russia: 125047 Moscow, 1st Tverskaya-Yamskaya str. 21.

This material is distributed in Singapore by the Singapore branch of Barclays Bank PLC, a bank licensed in Singapore by the Monetary Authority of Singapore. For matters in connection with this report, recipients in Singapore may contact the Singapore branch of Barclays Bank PLC, whose registered address is One Raffles Quay Level 28, South Tower, Singapore 048583.

Barclays Bank PLC, Australia Branch (ARBN 062 449 585, AFSL 246617) is distributing this material in Australia. It is directed at 'wholesale clients' as defined by Australian Corporations Act 2001.

IRS Circular 230 Prepared Materials Disclaimer: Barclays does not provide tax advice and nothing contained herein should be construed to be tax advice. Please be advised that any discussion of U.S. tax matters contained herein (including any attachments) (i) is not intended or written to be used, and cannot be used, by you for the purpose of avoiding U.S. tax-related penalties; and (ii) was written to support the promotion or marketing of the transactions or other matters addressed herein. Accordingly, you should seek advice based on your particular circumstances from an independent tax advisor.

© Copyright Barclays Bank PLC (2014). All rights reserved. No part of this publication may be reproduced or redistributed in any manner without the prior written permission of Barclays. Barclays Bank PLC is registered in England No. 1026167. Registered office 1 Churchill Place, London, E14 5HP. Additional information regarding this publication will be furnished upon request.