

US Biopharmaceuticals

The Priority Review – Week of February 5th, 2024

Industry Overview

Sector Sentiment a B+ 2 months in 2024

As we near the end of earnings, growth names continue to garner positive sentiment from investors, with generalists focusing on names like Lilly, Merck, and Vertex. For GARP names AbbVie is pulling ahead of its peers (Gilead, Amgen, Biogen, JNJ, Pfizer, and Bristol), but investors are still figuring out which name will rerate the most this year. Management teams didn't indicate an increased appetite for M&A in 1H (which may be needed to maintain SMID momentum), but also weren't overly concerned over pricing / the IRA. We'd peg sentiment at a B+ which is where we started 2024 but up from a C+ 3-4 months ago. Maintain ratings on covered companies.

Lilly still a favorite on beatable guidance

During its earnings call on Tuesday Lilly threaded the needle by presenting 2024 guidance which looks beatable while also supporting its high multiple ([See our thoughts on Lilly's 4Q report](#)). We have a different take on Novo's (Lilly's biggest competitor) recently announced Catalent deal. While there is an incentive for Lilly to play up anti-competitive risks to the FTC, this deal could underscore a larger manufacturing concern at Novo, putting them in a constrained backdrop for the year. While Lilly may still have difficulties in meeting obesity demand for GLP-1s, we think it will be more intermittent. Phase 2 data on tirzepatide in NASH was good, with the benefits on fibrosis being a major upside surprise. It's likely Lilly will take GGG into a bigger NASH program, but even if it's tirzepatide we think it rolls out closer to 2025. NASH, sleep apnea, and heart failure are barely accounted for in consensus sales with the latter 2 having phase three data come out mid-year. We still like the stock and recently raised our PO to \$800 from \$750.

Vertex threads the needle on 4Q call

Vertex reported solid results and strong guidance during its 4Q call on Monday ([see our thoughts on Vertex's 4Q report](#)). Vanzacaftor (their next gen triple therapy for Cystic fibrosis) was positive, though the FEV-1 (what doctors use to follow CF patients) looks the same in vanza and Trikafta. We think vanza could take 25% of Trikafta patients as it's once daily dose and better sweat chloride provide a modest benefit. Generally, patients on a highly effective orphan drug don't switch therapies unless their conditions worsen. Additionally, the lower royalty burden on vaza is a modest P&L tailwind, but not a reason to buy. For Royalty Pharma ([See our thoughts on vanza's impact on Royalty](#)), a switch rate for Trikafta would end up being a big positive but at a minimum, you can now do sensitivity math which makes it safer to own than with a year overhang.

Tepid guidance for Amgen, Gilead still a favorite in GARP

While not bad, Amgen and Gilead's 4Q / 2024 guidance left something to be desired. Amgen's stock has mostly moved on its pipeline dream in Obesity, as its current product portfolio isn't bringing that much growth ([See our thoughts on Amgen's 4Q](#)). Gilead reported earnings and an uninspiring outlook ([See our thoughts on Gilead's 4Q](#)) following a pipeline setback in EVOKE 01 in lung cancer ([See our thoughts on EVOKE 01](#)). However, we think the valuation is reasonable, with lots of events including Trodelvy in urothelial & TNBC, HIV data at CROI and PREP / BCMA data for the cell therapy business. We still prefer Gilead in the GARP or value basket in Biopharma and over Amgen.

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Biopharmaceuticals

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See page 2 for abbreviations

2024 outlook

- [2024 US Biopharma Outlook report](#)
- [2024 Company Profiles report](#)
- [Bristol \(BMY\) Downgrade note](#)
- [Kymera \(KMYR\) Downgrade note](#)
- [LianBio \(LIAN\) Downgrade note](#)

4Q23 earnings reports

- J&J: [Initial thoughts on the JNJ 4Q23 results](#) and [thoughts post the JNJ 4Q23 call](#)
- Merck: [Initial thoughts on MRK 4Q23 results](#) and [thoughts post the 4Q23 MRK call](#)
- Bristol: [Initial Thoughts on BMY 4Q23 results](#) and [thoughts post the BMY 4Q23 call](#)
- AbbVie: [Initial thoughts on ABBV 4Q23 results](#) and [thoughts post the ABBV 4Q23 call](#)
- Pfizer: [Initial thoughts on PFE 4Q23 results](#) and [thoughts post the PFE 4Q23 call](#)
- Amgen: [Initial thoughts on AMGN 4Q23 results](#) and [thoughts post the AMGN 4Q23 call](#)
- Regeneron: [Initial thoughts on REGN 4Q23 results](#) and [thoughts post the REGN 4Q23 call](#)
- Lilly: [Initial thoughts on LLY 4Q23 results](#) and [thoughts post the LLY 4Q23 call](#)
- Vertex: [Initial thoughts on VRTX 4Q23 results](#) and [thoughts post the VRTX 4Q23 call](#)
- Gilead: [Initial thoughts on GILD 3Q23 results](#) and [thoughts post the GILD 3Q23 call](#)

4Q23 earnings read-through notes

- Sanofi: [Sanofi read-through to our coverage](#)
- Novo: [Novo read-through to our coverage](#)
- Roche: [Roche read-through to our coverage](#)
- GlaxoSmithKline: [GSK read-through to our coverage](#)

4Q23 earnings tracker

- Week 1&2: [Weeks 1&2 Earnings Tracker](#) and [Weeks 1&2 Quotes Tracker](#)

Key takes from JPM Healthcare Conference

- [JPM Healthcare Conference Day 1 takeaways](#)
- [JPM Healthcare Conference Day 2 takeaways](#)
- [JPM Healthcare Conference Day 3 & 4 takeaways](#)

Key takes from our Vegas Healthcare Conference

- [Vegas Healthcare Conference Day 1 takeaways](#)
- [Vegas Healthcare Conference Day 2 take aways](#)
- [Vegas Healthcare Conference wrap up](#)

Upcoming catalysts, investor days and regulatory dates

- Pfizer Oncology R&D Day, February 29, 2024

Abbreviations:

GLP-1: glucagon like peptide

GGG: glucagon like peptide combo

NASH: Nonalcoholic steatohepatitis

HIV: Human Immunovirus

CROI: Conference on Retroviruses and Opportunistic Infections

TNBC: Triple-negative breast cancer

PREP: Pre-exposure prophylaxis

BCMA: B-cell maturation antigen

IRA: Inflation Reduction Act

GARP: Growth at a Reasonable Price

Heme/onc: Hematology and Oncology

LOE: Loss of exclusivity

IO: Immuno-Oncology

NOVO: Novo Nordisk

Exhibit 1: Stock Mentioned

Stock prices and ratings mentioned in this report

BofA Ticker	Bloomberg ticker	Company name	Price	Rating
AMGN	AMGN US	Amgen Inc.	US\$ 290.40	B-2-7
LLY	LLY US	Eli Lilly	US\$ 737.20	B-1-7
GILD	GILD US	Gilead Sciences Inc.	US\$ 73.22	B-1-7
RPRX	RPRX US	Royalty Pharma	US\$ 29.31	B-1-7
VRTX	VRTX US	Vertex Pharmaceutica	US\$ 422.92	B-1-9

Source: BofA Global Research

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Price objective basis & risk

Amgen Inc. (AMGN)

Our PO for AMGN is \$315 per share. We value AMGN using a sum of the parts NPV analysis of key marketed drugs (\$240/sh) and pipeline and others (\$156/sh), which assumes a range of weighted average cost of capital (WACC) from 5% and terminal growth rate ranging from -5% to -30% depending on the product lifecycle. Our PO also reflects -\$81/sh in net debt.

Upside risks to our price objective are 1) less than-expected base business erosion 2) stronger-than-expected sales of Lumakras, Tezspire, Tepezza, and 3) competitor clinical trial failures

Downside risks to our price objective are 1) faster-than-expected revenue erosion from legacy brands, 2) slower-than-expected growth of new drug launches, and 3) clinical trial failures.

Eli Lilly and Company (LLY)

Our \$800 price objective is based on a probability-adjusted net present value (NPV) analysis of franchise verticals including Endocrinology (\$569/share), Oncology (\$122/share), Cardiovascular (\$4/share), Neuroscience (\$13/share), Immunology (\$41/share), other pharmaceutical products and early pipeline assets (\$69/share), as well as approximately -\$17/share in net cash. We use a WACC ranging from 5% for approved products to 9% for pipeline products, depending on the stage of development. We apply terminal values ranging from -12% (cardiology) to 1% (endocrinology) based on projected sales decline following loss of exclusivity within each business vertical.

Risks to our price objective are 1) better-than-expected launches of competing products, 2) emerging clinical data for pipeline assets that does not confirm prior observations, 3) failure to effectively commercialize approved products, 4) potential drug pricing system restructuring in the US.

Gilead Sciences Inc. (GILD)

Our \$95 price objective is based on a sum-of-the parts net present value (NPV) analysis. We forecast sales of key franchises or products to 2030 using a weighted average cost of capital (WACC) of 8%, and include a terminal value where appropriate. Under these



assumptions, we value the HIV franchise at \$80/share, HCV and HDV at \$7/share, the Kite platform at \$8/share, remdesivir at \$2/share, Trodelvy at \$9/share, with the pipeline at \$5/share and net cash at -\$15/share.

Upside risks: 1) stronger-than-expected sales of Biktarvy in HIV and faster uptake of Descovy in PrEP, 2) greater durability of HCV revenues, 3) rapid uptake of Kite, 4) and success of the oncology pipeline may lead investors to assign further value to these programs.

Downside risks: 1) moderating sales of Biktarvy, Genvoya, Odefsey, and Descovy due to competition, which may include long-acting injectable formulations, 2) greater than expected erosion of HCV revenues, 3) limited upside from Gilead's CAR-Ts, 4) the oncology pipeline may have limited clinical success or be meaningfully delayed.

Royalty Pharma (RPRX)

Our \$40/share price objective is based on a probability-adjusted SOTP NPV analysis which includes current growth products (\$32/sh, 79% of our valuation), and projected revenues from future investments (\$13/sh, 33%). We project out revenues through 2038, apply a WACC of 5% (mature products) to 8% (future growth products), and use terminal growth rates ranging from -5% (current growth products) to 5% (future growth products), in-line with other mature biopharma companies. We calculate net cash as -\$5/sh (-11% of our valuation).

Downside risks: 1) current portfolio royalties do not reach current assumed levels, 2) new investments fail to replicate historical returns, 3) new corporate structure and shareholder base adversely impacts historically low tax rate, 4) competition in the royalty investing space makes it harder to attain new value accretive investments, 5) patent/royalty expiries are not replaced by new royalty streams.

Vertex Pharmaceuticals Inc. (VRTX)

Our 12-month price objective for Vertex of \$550/share is based on our net present value (NPV) analysis. We forecast sales for each of the approved products, Kalydeco, Orkambi, Symdeko, and Trikafta through 2030. We assume a weighted-average cost of capital (WACC) of 9%, in line with peer companies of similar size and risk and varying terminal growth rates for each asset based on its characteristics and patent life (-50% to 2%). Given these assumptions, we estimate a value of \$3/share for Kalydeco, \$1/share for Orkambi, \$0/share for Symdeko, \$417/share for Trikafta, \$6/share for Casgevy, \$8/share for VX-548, \$58/sh for vanzacaftor, \$53/share in net cash, and \$4/share for the pipeline.

Risks to our price objective are 1) payer pushback on pricing, 2) difficulty in securing reimbursement agreements, particularly in the EU, 3) clinical trial failures, and 4) new competitors in cystic fibrosis.

Analyst Certification

I, Geoff Meacham, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

US - Biopharmaceuticals Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	89bio, Inc	ETNB	ETNB US	Geoff Meacham
	Acumen Pharma	ABOS	ABOS US	Geoff Meacham
	Agios Pharmaceuticals	AGIO	AGIO US	Greg Harrison, CFA
	Amylyx Pharmaceuticals	AMLX	AMLX US	Geoff Meacham
	BioMarin	BMRN	BMRN US	Geoff Meacham
	BridgeBio Pharma	BBIO	BBIO US	Greg Harrison, CFA
	Caribou	CRBU	CRBU US	Geoff Meacham
	CRISPR Therapeutics	CRSP	CRSP US	Geoff Meacham
	Eli Lilly and Company	LLY	LLY US	Geoff Meacham
	Gilead Sciences Inc.	GILD	GILD US	Geoff Meacham
	HUTCHMED	HCM	HCM US	Alec W. Stranahan
	Immatics	IMTX	IMTX US	Alec W. Stranahan
	Insmed Incorporated	INSM	INSM US	Jason Zemansky
	Intellia Therapeutics	NTLA	NTLA US	Greg Harrison, CFA
	Janux Therapeutics	JANX	JANX US	Geoff Meacham
	Keros	KROS	KROS US	Greg Harrison, CFA
	Kiniksa Pharmaceuticals, Ltd.	KNSA	KNSA US	Geoff Meacham
	Krystal Biotech	KRYS	KRYS US	Alec W. Stranahan
	Kura Oncology	KURA	KURA US	Jason Zemansky
	Liquidia Corporation	LQDA	LQDA US	Greg Harrison, CFA
	Lyell Immunopharma	LYEL	LYEL US	Geoff Meacham
	MeiraGTx	MGTX	MGTX US	Alec W. Stranahan
	Merck & Co.	MRK	MRK US	Geoff Meacham
	Mineralys Therapeutics	MLYS	MLYS US	Greg Harrison, CFA
	Neumora Therapeutics	NMRA	NMRA US	Geoff Meacham
	Rani Therapeutics	RANI	RANI US	Geoff Meacham
	Regenxbio, Inc.	RGNX	RGNX US	Alec W. Stranahan
	Revolution Medicines	RVMD	RVMD US	Alec W. Stranahan
	Rocket Pharmaceuticals, Inc.	RCKT	RCKT US	Greg Harrison, CFA
	Royalty Pharma	RPRX	RPRX US	Geoff Meacham
	Sana Biotechnology	SANA	SANA US	Geoff Meacham
	SpringWorks	SWTX	SWTX US	Alec W. Stranahan
	Syndax Pharmaceuticals	SNDX	SNDX US	Jason Zemansky
	Traverse Therapeutics Inc	TVTX	TVTX US	Greg Harrison, CFA
	Turnstone Biologics	TSBX	TSBX US	Geoff Meacham
	Vertex Pharmaceuticals Inc.	VRTX	VRTX US	Geoff Meacham
	Werewolf Therapeutics	HOWL	HOWL US	Jason Zemansky
	Xencor	XNCR	XNCR US	Alec W. Stranahan
NEUTRAL				
	AbbVie	ABBV	ABBV US	Geoff Meacham
	Alector, Inc	ALEC	ALEC US	Greg Harrison, CFA
	Amgen Inc.	AMGN	AMGN US	Geoff Meacham
	Arcus Biosciences	RCUS	RCUS US	Jason Zemansky
	Beam Therapeutics	BEAM	BEAM US	Greg Harrison, CFA
	Biogen Inc.	BIIB	BIIB US	Geoff Meacham
	Bristol-Myers Squibb	BMJ	BMJ US	Geoff Meacham
	Cytokinetics, Incorporated	CYTK	CYTK US	Jason Zemansky
	Editas Medicine	EDIT	EDIT US	Greg Harrison, CFA
	Erasca	ERAS	ERAS US	Alec W. Stranahan
	Esperion	ESPR	ESPR US	Jason Zemansky
	Exscientia	EXAI	EXAI US	Alec W. Stranahan
	IGM Biosciences	IGMS	IGMS US	Greg Harrison, CFA
	Johnson & Johnson	JNJ	JNJ US	Geoff Meacham
	Kymera Therapeutics	KYMR	KYMR US	Geoff Meacham
	Moderna	MRNA	MRNA US	Geoff Meacham
	Pfizer	PFE	PFE US	Geoff Meacham
	Recursion Pharmaceuticals, Inc.	RXR	RXR US	Alec W. Stranahan
	Tyra Biosciences	TYRA	TYRA US	Greg Harrison, CFA
	Vir	VIR	VIR US	Geoff Meacham
	Y-mAbs Therapeutics, Inc	YMAB	YMAB US	Alec W. Stranahan
UNDERPERFORM				
	AlloVir, Inc.	ALVR	ALVR US	Jason Zemansky
	CureVac	CVAC	CVAC US	Geoff Meacham



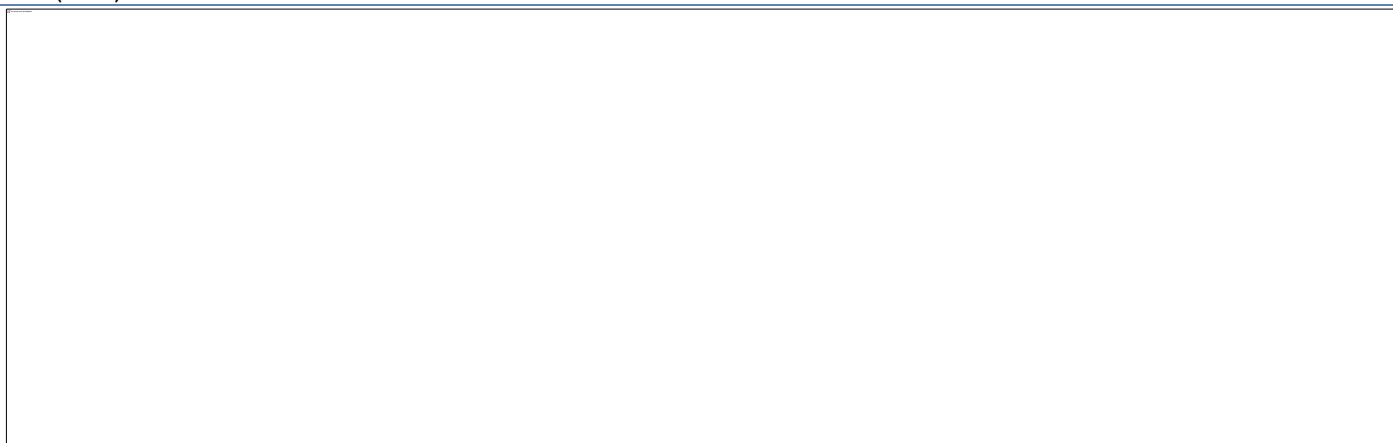
US - Biopharmaceuticals Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Day One Biopharmaceuticals	DAWN	DAWN US	Alec W. Stranahan
	LianBio	LIAN	LIAN US	Geoff Meacham
	Novavax	NVAX	NVAX US	Alec W. Stranahan
	Regeneron Pharmaceuticals Inc.	REGN	REGN US	Geoff Meacham
	Reneo Pharmaceuticals	RPHM	RPHM US	Jason Zemansky
	TG Therapeutics	TGTX	TGTX US	Alec W. Stranahan
	United Therapeutics Corporation	UTHR	UTHR US	Greg Harrison, CFA
RSTR				
	BioXcel Therapeutics	BTAI	BTAI US	Greg Harrison, CFA

Disclosures

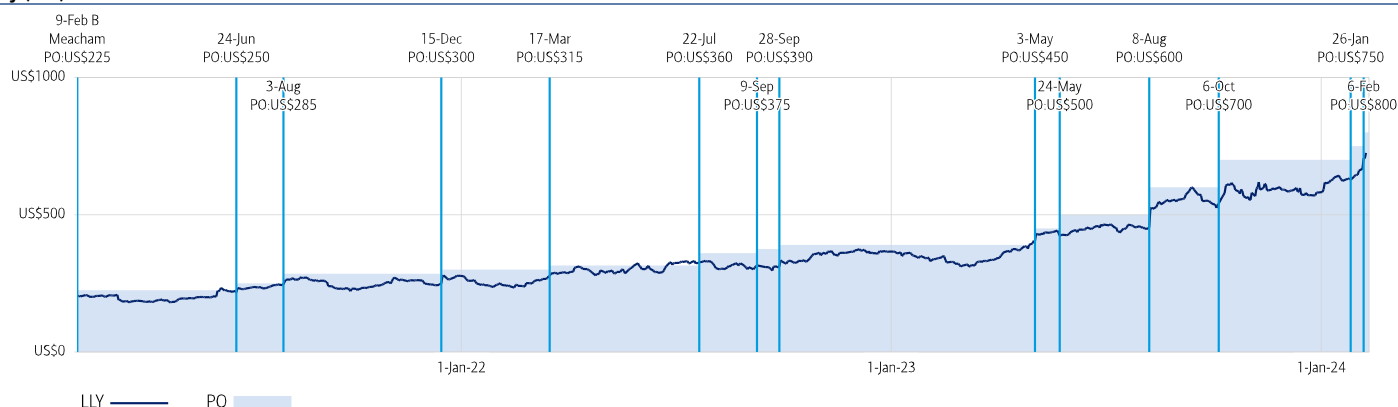
Important Disclosures

Amgen Inc. (AMGN) Price Chart



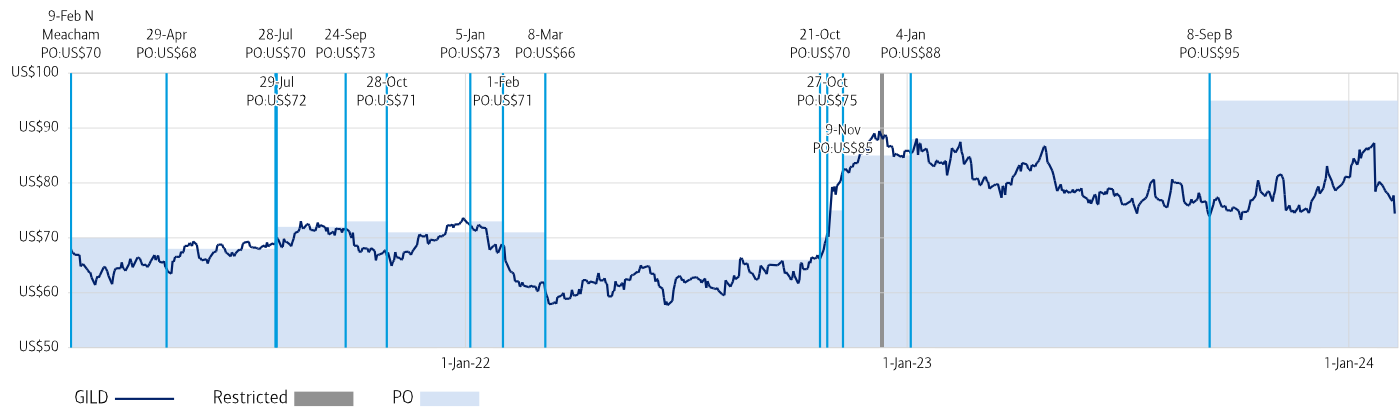
The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

Eli Lilly (LLY) Price Chart



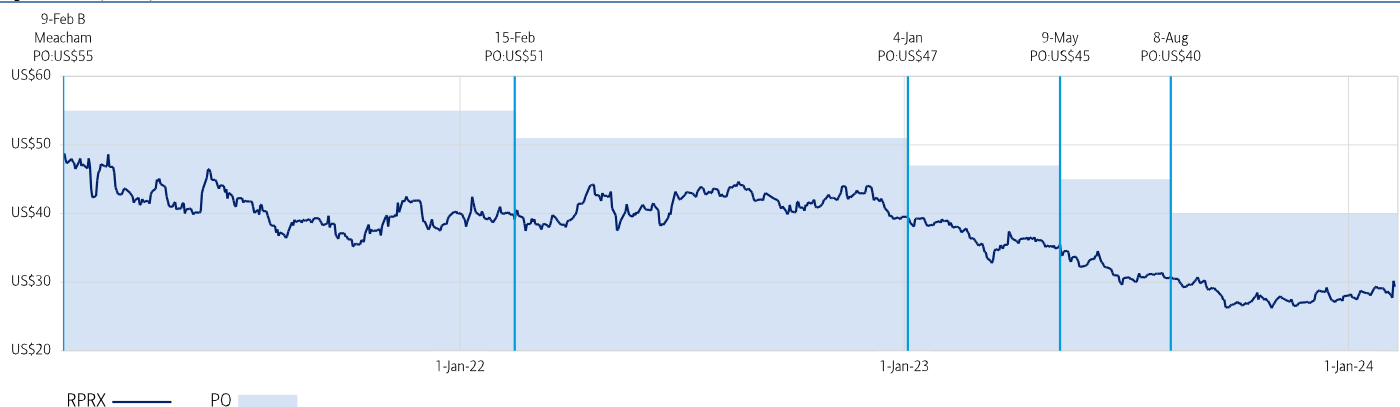
B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

Gilead Sciences Inc. (GILD) Price Chart

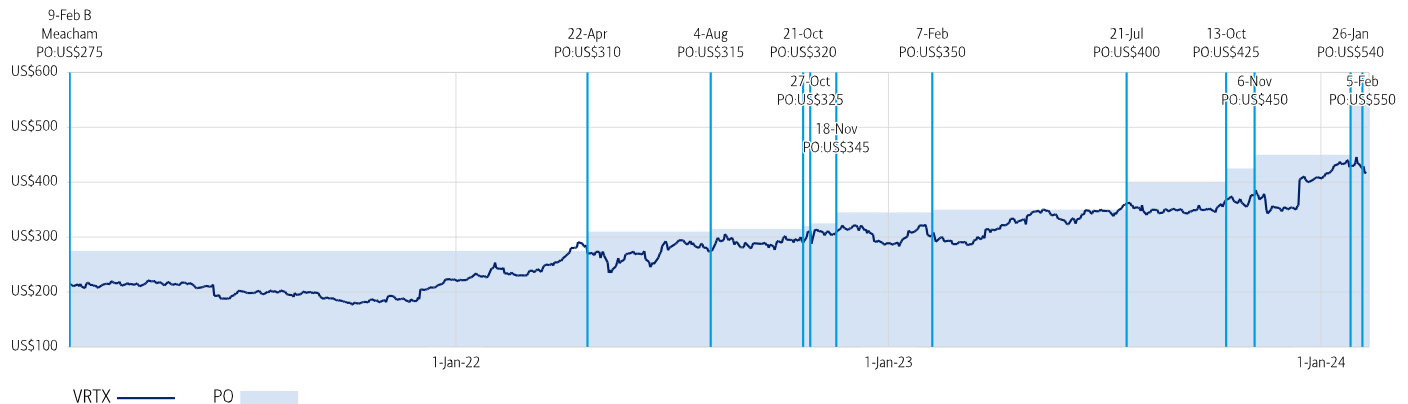
B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

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Royalty Pharma (RPRX) Price Chart

B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

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Vertex Pharmaceuticals (VRTX) Price Chart

B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

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Equity Investment Rating Distribution: Health Care Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	234	60.94%	Buy	115	49.15%
Hold	80	20.83%	Hold	36	45.00%
Sell	70	18.23%	Sell	29	41.43%

Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

^{R1} Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R2}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R2} Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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