Vertex Pharmaceuticals Incorporated

Recommendation	Price	12-Mo. Target Price	Report Currency	Investment Style
BUY ★★★★★	USD 292.11 (as of market close Sep 09, 2022)	USD 326.00	USD	Large-Cap Growth

Equity Analyst Stewart Glickman, CFA

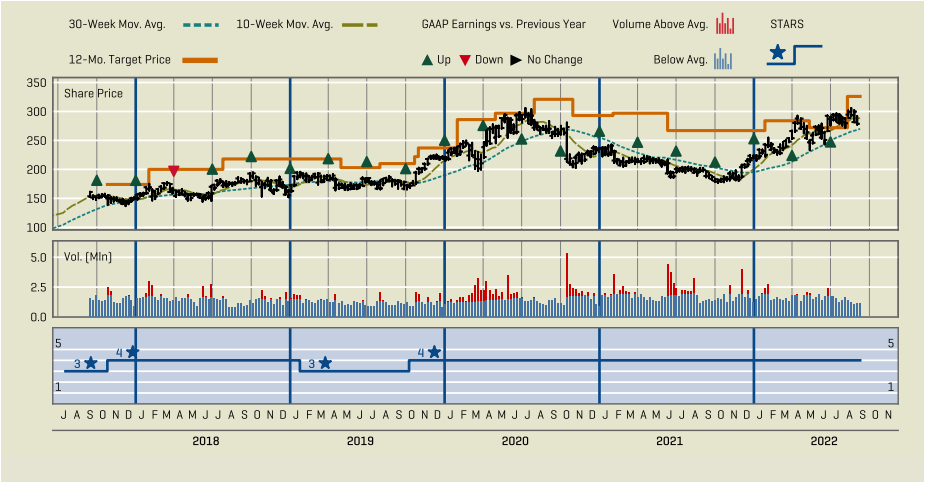
GICS Sector Health Care
Sub-Industry Biotechnology

Summary VRTX develops small molecule therapeutics for the treatment of a wide range of diseases, led by cystic fibrosis and anti-inflammatory conditions.

Key Stock Statistics (Source: CFRA, S&P Global Market Intelligence (SPGMI), Company Reports)

52-Wk Range	**USD 305.95 - 176.36**	Oper.EPS2022**E**	**USD 14.23**	Market Capitalization[B]	**USD 74.91**	Beta	**0.45**
Trailing 12-Month EPS	**USD 14.05**	Oper.EPS2023**E**	**USD 14.50**	Yield [%]	**N/A**	3-yr Proj. EPS CAGR[%]	**19**
Trailing 12-Month P/E	**20.79**	P/E on Oper.EPS2022**E**	**20.53**	Dividend Rate/Share	**N/A**	SPGMI's Quality Ranking	**B-**
USD 10K Invested 5 Yrs Ago	**18,391.0**	Common Shares Outstg.[M]	**256.00**	Trailing 12-Month Dividend	**N/A**	Institutional Ownership [%]	**93.0**

Price Performance



Source: CFRA, S&P Global Market Intelligence

Past performance is not an indication of future performance and should not be relied upon as such.

Analysis prepared by **Stewart Glickman, CFA** on Aug 10, 2022 10:47 AM ET, when the stock traded at **USD 297.56**.

Highlights

- In 2022, we expect VRTX's revenues to increase 15% Y/Y to $8.7 billion after growing 22% Y/Y in 2021, which we see as largely attributable to the incredibly successful launch of Trikafta in late 2019. In the second quarter of 2022, Trikafta accounted for 86% of VRTX's product sales.
- Trikafta is a triple combination therapy of VX-445, tezacaftor, and ivacaftor indicated for most patients with cystic fibrosis (CF). This drug expanded VRTX's market opportunity by approximately 55% (relative basis) to about 90% of the CF population. VRTX estimates that there are 83,000 patients living with CF in the U.S., Europe, Canada, and Australia. We believe that Trikafta will be a key driver of sales growth as VRTX continues to expand commercial access to the drug and converts patients on old therapies to it.
- Near-term catalysts include a plan to file for regulatory approval of CTX001, a sickle cell disease treatment (likely by year end); shifting to a pivotal development in the first quarter for VX-147, a treatment for APOL1-mediated kidney disease; and to file for an investigational new drug application for type 1 diabetes during 2022.

Investment Rationale/Risk

- Our opinion is Buy. VRTX has a dominant, first-mover advantage in cystic fibrosis (CF) treatment, complemented by potential early- to mid-stage clinical programs outside of CF. Strong patient reliance on VRTX's CF drugs and currently limited competition to the CF franchise support the cost of diversifying into non-CF businesses. VRTX's non-CF pipeline has exposure to promising therapeutic areas, such as sickle cell disease and beta thalassemia. We are particularly optimistic about CTX001, a potential onetime cure for sickle cell disease. We also see continued opportunities for Trikafta to outperform consensus expectations as VRTX obtains additional reimbursement agreements outside the U.S. and expands the treatable population.
- Risks to our opinion and target price include unfavorable regulatory rulings, the emergence of competitive threats (including Abbvie's potential CF drug), weaker-than-expected margins, and pricing or reimbursement pressures.
- Our 12-month target of $326 reflects a 22.5x P/E multiple on projected 2023 EPS, in line with VRTX's historical forward average. While there is some risk from competing CF drugs, we think VRTX has a first-mover advantage.

Analyst's Risk Assessment

LOW | **MEDIUM** | HIGH

Although VRTX is a clear and dominant leader in the market for cystic fibrosis treatments and has historically maintained a strong financial position, VRTX's current reliance on only sales of cystic fibrosis treatments precludes us from assigning it a risk assessment of low.

Revenue/Earnings Data

Revenue (Million USD)

	1Q	2Q	3Q	4Q	Year
2023	**E** 2,200	**E** 2,300	**E** 2,300	**E** 2,360	**E** 9,160
2022	2,098	2,196	**E** 2,275	**E** 2,210	**E** 8,685
2021	1,724	1,793	1,984	2,073	7,574
2020	1,515	1,524	1,538	1,628	6,206
2019	858	941	950	1,413	4,163
2018	641	752	785	870	3,048

Earnings Per Share (USD)

	1Q	2Q	3Q	4Q	Year
2023	**E** 3.80	**E** 3.83	**E** 3.93	**E** 2.94	**E** 14.50
2022	3.52	3.60	**E** 3.64	**E** 3.47	**E** 14.23
2021	2.98	3.11	3.56	3.37	13.02
2020	2.56	2.61	2.64	2.51	10.32
2019	1.14	1.26	1.23	1.70	5.33
2018	0.76	0.94	1.09	1.30	4.08

Fiscal Year ended Dec 31. EPS Estimates based on CFRA's Operating Earnings; historical earnings are adjusted. In periods where a different currency has been reported, this has been adjusted to match the current quoted currency.

Dividend Data

No cash dividends have been paid in the last year.

Vertex Pharmaceuticals Incorporated

Business Summary Jan 30, 2022

CORPORATE OVERVIEW. Vertex Pharmaceuticals (VRTX) is a biotechnology company that focuses on developing and commercializing therapies for the treatment of cystic fibrosis ("CF"). In 2020, all of VRTX's product revenues came from sales of CF therapies. The company is also advancing research and development in other areas, including pain, sickle cell disease, beta-thalassemia, and alpha-1 antitrypsin deficiency. We believe that these programs have significant commercial potential. For example, VRTX's program with CRISPR Therapeutics to develop clinical candidate CTX001 for sickle cell disease and beta-thalassemia is unique because it is one of the first human trials to use the powerful CRISPR/Cas-9 gene-editing technology.

MARKET BACKGROUND. CF is a life shortening genetic disease affecting approximately 83,000 people across North America, Europe, and Australia. CF is caused by a defective or missing CFTR protein resulting from mutations in the CFTR gene. The absence of working CFTR proteins results in poor flow of salt and water into and out of cells in a number of organs, including the lungs. As a result, thick, sticky mucus builds up and blocks the passages in many organs, leading to a variety of symptoms. In particular, mucus builds up and clogs the airways in the lungs, causing chronic lung infections and progressive lung damage.

VRTX's commercialized medicines include Symdeko/Symkevi, Orkambi, Kalydeco, and Trikafta/Kaftrio. Since the late 2019 launch of Trikafta, many patients that were previously on VRTX's other CF therapies have switched over to Trikafta. Collectively, VRTX's four CF drugs are approved to treat a large majority of the CF patients in North America, Europe, and Australia. VRTX believes that its current therapies could address up to 90% of all CF patients. The company is pursuing genetic therapies to address the remaining 10% of people with CF.

COMPETITIVE DYNAMICS. A number of companies are seeking to identify and develop drug candidates for the treatment of CF, including public companies such as AbbVie, Eloxx Pharmaceuticals, Proteostasis Therapeutics, and Translate Bio as well as several private companies. Given VRTX's dominance in the market for CF treatments, we believe that the company's sales would face significant pressure if a competing therapy were successfully developed. In recent years, VRTX has committed significant research resources to and made significant investments in its pipeline of potential new therapies for alpha-1 antitrypsin deficiency, APOL1-mediated kidney diseases, pain, beta-thalassemia, sickle cell disease, muscular dystrophy, T1D, and other diseases. Many other pharmaceutical and biotechnology companies are also investing resources for the discovery and development of small molecules, gene therapies, and cell therapies to treat the same diseases for which VRTX is developing therapies.

IMPACT OF MAJOR DEVELOPMENTS. On October 15, 2020, VRTX announced after market hours that it was discontinuing its Phase 2 study of VX-814 in patients with alpha-1 antitrypsin deficiency (AATD), causing shares to trade down by 21% the next day. On June 10, 2021, VRTX announced that VX-864 for AATD achieved its primary endpoint, but the clinical benefit of the drug was not large enough to support advancement into late-stage development. Using the lessons from VX-814 and VX-864, we expect VRTX to take its next molecule for AATD into the clinic in 2022. Following the discontinuation of clinical candidates VX-864 and VX-814 for AAT deficiency, we expect investors to put increased pressure on VRTX to engage in business development activity. The company has indicated an interest in deals involving transformative mid- to late-stage assets, but management suggested that it was not a priority.

In late October 2019, VRTX's triple combination therapy of VX-445, tezacaftor, and ivacaftor for CF (i.e. Trikafta) was approved by the FDA. This drug significantly expanded VRTX's market opportunity to about 90% of the CF population, up from an estimated 58% of the CF population that was previously treatable with VRTX's therapies. The key patents for Trikafta are expected to expire in 2037 in both the U.S. and Europe. The largest development prior to VRTX's triple combination therapy was the launch of SYMDEKO in the U.S. in 2018.

Prior to that, in July 2015, VRTX received FDA approval for ORKAMBI to treat the underlying causes of cystic fibrosis in patients 12 and older with the F580del mutation. This approval was a significant milestone for VRTX because it enabled VRTX to become the clear market leader for the treatment of CF. VRTX subsequently obtained additional approvals for ORKAMBI to treat additional subsets of the CF patient population.

FINANCIAL TRENDS. For the year ending December 31, 2021, VRTX achieved revenue of $7.6 billion, up 22% year-over-year. Growth in 2021 was largely driven by the rapidly expanding sales of Trikafta. The company's adjusted EPS was $13.02, up 26% from $10.32 in the prior year. VRTX has generated growing levels of positive free cash flow for the past several years and has generally maintained a significant net cash position. As such, we believe that VRTX has substantial financial flexibility.

Corporate information

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CEO, President & Director
R. Kewalramani

Executive VP & CFO
C. F. Wagner

Executive Chairman
J. M. Leiden

CEO, President & Director
R. Kewalramani

Chief Accounting Officer & SVP of Accounting, Tax, Treasury, Strategic Sourcing & Corporate Services
K. C. Ambrose

Senior VP & General Counsel
J. Liu

Board Members

A. M. Garber
B. I. Sachs
D. L. McKenzie
J. M. Leiden
L. A. Carney
M. G. McGlynn
R. Kewalramani
S. N. Bhatia
S. P. Upadhyay
T. C. Kearney
Y. Lee

Domicile
Massachusetts

Auditor
Ernst & Young LLP

Founded
1989

Employees
3,900

Stockholders
107

Vertex Pharmaceuticals Incorporated

Quantitative Evaluations

Fair Value Rank

1	2	3	4	5

LOWEST HIGHEST

Based on CFRA's proprietary quantitative model, stocks are ranked from most overvalued (1) to most undervalued (5).

Fair Value Calculation **USD 416.63**

Analysis of the stock's current worth, based on CFRA's proprietary quantitative model suggests that VRTX is undervalued by USD 124.52 or 42.63%

Volatility

LOW	AVERAGE	HIGH

Technical Evaluation **BEARISH**

Since June, 2022, the technical indicators for VRTX have been BEARISH"

Insider Activity

UNFAVORABLE	NEUTRAL	FAVORABLE

Expanded Ratio Analysis

	2021	2020	2019	2018
Price/Sales	7.54	10.03	13.71	14.09
Price/EBITDA	19.65	20.90	43.61	58.32
Price/Pretax Income	20.90	19.97	40.92	71.55
P/E Ratio	16.87	22.90	41.08	40.62
Avg. Diluted Shares Outstg. (M)	259.90	263.40	260.70	259.18

Figures based on fiscal year-end price

Key Growth Rates and Averages

Past Growth Rate (%)	1 Year	3 Years	5 Years
Net Income	NM	3.76	83.67
Sales	22.06	35.46	34.79
Ratio Analysis (Annual Avg.)			
Net Margin (%)	30.92	34.30	36.46
% LT Debt to Capitalization	N/A	N/A	N/A
Return on Equity (%)	24.93	28.01	30.78

Company Financials Fiscal year ending Dec 31

Per Share Data (USD)	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Tangible Book Value	34.18	28.03	18.08	17.18	7.70	3.31	2.46	4.16	5.67	1.40
Free Cash Flow	9.35	11.52	5.82	4.62	2.35	0.73	-2.03	-2.65	-0.76	0.93
Earnings	9.01	10.29	4.51	8.09	1.04	-0.46	-2.31	-3.14	-2.24	0.15
Earnings (Normalized)	13.02	10.32	5.33	4.08	1.95	0.85	-1.11	-2.17	-1.58	1.18
Dividends	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Payout Ratio (%)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Prices: High	242.99	306.08	225.66	194.92	167.86	127.60	143.45	124.35	89.96	66.10
Prices: Low	176.36	197.47	160.95	144.07	73.34	71.46	97.45	59.79	40.34	32.04
P/E Ratio: High	18.70	29.70	42.30	47.80	86.10	NM	NM	NM	NM	56.00
P/E Ratio: Low	13.50	19.10	30.20	35.30	37.60	84.10	NM	NM	NM	27.20
Income Statement Analysis (Million USD)										
Revenue	7,574	6,206	4,163	3,048	2,489	1,702	1,032	580.00	1,212	1,527
Operating Income	2,779	2,869	1,202	664.00	393.00	11.00	-465.00	-641.00	-157.00	49.00
Depreciation + Amortization	126.00	110.00	107.00	72.00	61.00	61.00	62.00	63.00	48.00	38.00
Interest Expense	62.00	58.00	58.00	72.00	69.00	81.00	84.00	73.00	23.00	15.00
Pretax Income	2,730	3,117	1,395	600.00	-16.00	-67.00	-558.00	-735.00	-626.00	32.00
Effective Tax Rate	14.20	13.00	15.60	-247.70	684.10	-24.70	-5.40	-0.90	19.60	-0.90
Net Income	2,342	2,712	1,177	2,097	263.00	NM	NM	NM	NM	NM
Net Income (Normalized)	1,694	1,761	751.10	401.40	382.90	NM	NM	NM	NM	21.20
Balance Sheet and Other Financial Data (Million USD)										
Cash	7,525	6,659	3,808	3,168	2,089	1,435	1,042	1,387	1,465	1,321
Current Assets	9,561	8,133	4,823	3,843	2,649	1,832	1,407	1,547	1,589	1,590
Total Assets	13,433	11,752	8,319	6,246	3,546	2,897	2,499	2,335	2,319	2,759
Current Liabilities	2,142	1,878	1,335	1,120	807.00	793.00	506.00	368.00	398.00	433.00
Long Term Debt	N/A	N/A	N/A	N/A	N/A	N/A	224.00	281.00	N/A	400.00
Total Capital	11,067	9,629	6,758	5,022	2,649	2,179	1,920	1,921	1,863	1,931
Capital Expenditures	235.00	260.00	75.00	95.00	99.00	57.00	45.00	51.00	110.00	71.00
Cash from Operations	2,644	3,254	1,569	1,270	845.00	236.00	-365.00	-573.00	-61.00	268.00
Current Ratio	4.46	4.33	3.61	3.43	3.28	2.31	2.78	4.20	3.99	3.67
% Long Term Debt of Capitalization	N/A	N/A	N/A	N/A	N/A	N/A	11.70	14.60	N/A	20.70
% Net Income of Revenue	30.90	43.70	28.30	68.80	10.60	-6.60	-53.90	NM	-36.70	-7.00
% Return on Assets	13.79	17.87	10.32	8.48	7.62	0.26	-12.02	-17.23	-3.85	1.22
% Return on Equity	24.90	36.70	22.40	64.40	5.40	-6.90	-53.70	-60.50	-38.90	2.90

Source: S&P Global Market Intelligence. Data may be preliminary or restated; before results of discontinued operations/special items. Per share data adjusted for stock dividends; EPS diluted. E-Estimated. NA-Not Available. NM-Not Meaningful. NR-Not Ranked. UR-Under Review.

Vertex Pharmaceuticals Incorporated

Sub-Industry Outlook

We have a positive outlook on the biotechnology sub-industry (biotech), a historically defensive sub-industry. We expect to see solid drug sales growth driven by Covid-19 therapeutics, the continued adoption of many new and innovative therapies, a favorable M&A environment, and a low prevalence of patent expirations in 2022, although that rises significantly in 2023. We also expect drugmakers to benefit from a return to normalcy since lower in-person physician visits during the pandemic had a negative impact on prescription growth.

In January 2021, the U.S. experienced a blue wave as Democrats took control of the House, Senate, and Presidency, forming a unified government. Yet, Democrats only hold a slim majority in the House and the slimmest majority possible in the Senate. Thus, it is nearly impossible to pass any sweeping legislation without bipartisan support due to the potential for filibuster. Reducing drug costs has been a bipartisan issue in the past few years, but Democrats and Republicans have diverging views on how to approach it. We think the Biden administration may focus its efforts on crafting modest drug price legislation that is palatable enough to be passed.

The Covid-19 pandemic created new commercial opportunities for many biopharmaceutical firms. According to the Milken Institute, there were 331 treatments and 270 vaccines in development for Covid-19 as of October 5, 2021. Many firms will be unsuccessful or too slow in developing therapies, leading to sunk costs. Yet, some firms are prospering enormously, notably vaccine developers such as Moderna and Pfizer/BioNTech. Due to the emergence of more dangerous Covid-19 variants, boosters started to be offered in the U.S. and other parts of the world to increase efficacy. Going forward, we think people will likely need repeat vaccinations to have lifelong immunity to Covid-19. In our view, Covid-19 vaccines will be a long-lasting and significant source of revenue for lead vaccine developers.

In the long run, the growth of the biotech industry is dependent on the volume of new therapy approvals. Despite pandemic disruptions, FDA approvals of novel drug agents in 2020 increased by 8 to 57, slightly below the record 61 approvals achieved in 2018. However, delays in clinical trials could have an adverse impact on the level of novel drug approvals in 2021 and beyond. In 2021, we think it is possible that the approval of non-Covid-19 therapies will take longer than usual because of a shift in FDA resources to focus on Covid-19 therapies. Since new drugs typically take at least five years to reach peak sales levels, we think that the biotech industry is likely to see promising sales growth over the next few years because of strong approval activity in recent years.

Biopharma M&A activity in 2021 was relatively low, possibly because of pandemic disruptions or high asset prices. Going forward, we think that the M&A environment could continue to be constrained, as a more activist Federal Trade Commission (led by Lina Khan) could be more skeptical of proposed mergers.

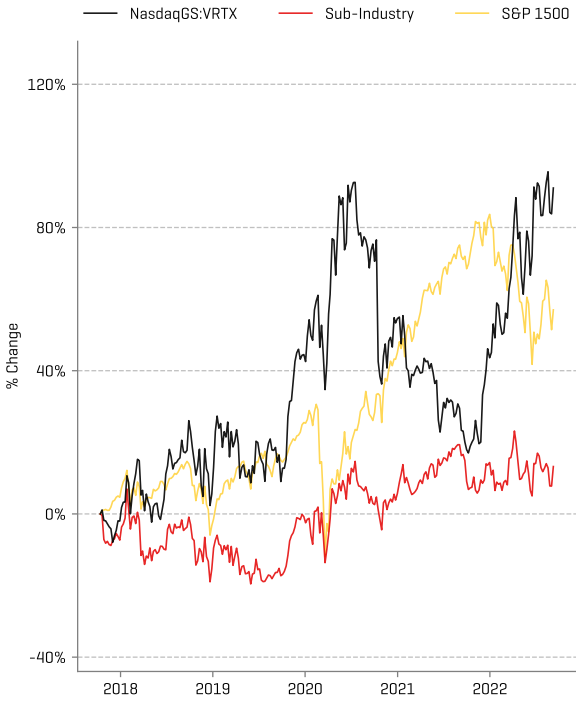
Year to date through June 30, the S&P 1500 Biotech Index was down 1.6%, vs. a 20.5% decline for the S&P 1500 Composite Index. In 2021, the Biotech Index rose 8.2%, vs. a 26.7% gain for the Composite Index.

/ Stewart Glickman, CFA

Industry Performance

GICS Sector: Health Care
Sub-Industry: Biotechnology

Based on S&P 1500 Indexes
Five-Year market price performance through Sep 10, 2022



NOTE: A sector chart appears when the sub-industry does not have sufficient historical index data.
All Sector & Sub-Industry information is based on the Global Industry Classification Standard (GICS).
Past performance is not an indication of future performance and should not be relied upon as such.
Source: CFRA, S&P Global Market Intelligence

Sub-Industry: Biotechnology Peer Group*: Biotechnology

Peer Group	Stock Symbol	Exchange	Currency	Recent Stock Price	Stk. Mkt. Cap. (M)	30-Day Price Chg. (%)	1-Year Price Chg. (%)	P/E Ratio	Fair Value Calc.	Yield (%)	Return on Equity (%)	LTD to Cap (%)
Vertex Pharmaceuticals Incorporated	**VRTX**	**NasdaqGS**	**USD**	**288.99**	**74,114.0**	**-3.3**	**51.0**	**21.0**	**416.63**	**N/A**	**30.2**	**N/A**
Alnylam Pharmaceuticals, Inc.	ALNY	NasdaqGS	USD	226.30	27,162.0	1.3	21.5	NM	N/A	N/A	-190.5	58.1
Amgen Inc.	AMGN	NasdaqGS	USD	245.45	131,299.0	-1.2	11.1	14.0	213.58	3.2	123.3	91.7
BeiGene, Ltd.	BGNE	NasdaqGS	USD	167.21	17,371.0	-15.4	-51.2	NM	N/A	N/A	-45.0	3.1
BioMarin Pharmaceutical Inc.	BMRN	NasdaqGS	USD	93.01	17,251.0	-2.8	21.3	69.0	55.40	N/A	1.2	19.3
BioNTech SE	BNTX	NasdaqGS	USD	147.20	35,772.0	-6.4	-56.2	3.0	N/A	N/A	105.3	N/A
Biogen Inc.	BIIB	NasdaqGS	USD	207.98	30,181.0	-4.4	-35.3	12.0	105.92	N/A	13.6	32.3
Gilead Sciences, Inc.	GILD	NasdaqGS	USD	65.10	81,594.0	5.0	-9.4	9.0	62.66	4.5	20.6	54.3
Moderna, Inc.	MRNA	NasdaqGS	USD	141.28	55,269.0	-17.4	-66.6	4.0	71.14	N/A	113.9	N/A
Regeneron Pharmaceuticals, Inc.	REGN	NasdaqGS	USD	708.85	75,782.0	13.9	5.9	12.0	362.16	N/A	31.8	8.5
Seagen Inc.	SGEN	NasdaqGS	USD	152.64	28,152.0	-13.1	-0.1	NM	N/A	N/A	-23.4	N/A

*For Peer Groups with more than 10 companies or stocks, selection of issues is based on market capitalization.
NA-Not Available; NM-Not Meaningful.
Note: Peers are selected based on Global Industry Classification Standards and market capitalization. The peer group list includes companies with similar characteristics, but may not include all the companies within the same industry and/or that engage in the same line of business.

Vertex Pharmaceuticals Incorporated

Analyst Research Notes and other Company News

August 10, 2022
10:02 AM ET... CFRA Keeps Buy Opinion on Shares of Vertex Pharmaceuticals (VRTX 297.53****):
Our 12-month target price of $326, raised $54, reflects a 22.5x multiple of projected '23 EPS, in line with VRTX's historical forward average. We cut our '22 EPS estimate by $0.04 to $14.23, but lift '23's by $0.20 to $14.50. Q2 EPS of $3.60, vs. $3.11, beat the consensus view by $0.10. VRTX's revenues from its cystic fibrosis franchise rose 22% year over year (the 2nd straight quarter with 22% growth). The company continues to develop drugs for treating sickle cell disease, kidney disease, acute pain, and type 1 diabetes, among others. VRTX was able to expand access for reimbursement in a number of countries as well as continued growth of Trikafta in the U.S., especially among children in the 6-11 age cohort. Management guidance on CF sales in '22 was boosted by $0.2B, to a revised range of $8.6B-$8.8B, or about 15% growth at the midpoint. This growth potential does come with the tradeoff of higher R&D (now guided to a midpoint of $3.05B, up 22%). / Stewart Glickman, CFA

May 12, 2022
03:59 PM ET... CFRA Keeps Buy Opinion on Shares of Vertex Pharmaceuticals (VRTX 237.42****):
Our 12-month target price of $272, cut $12, reflects a 19x multiple applied to our revised '23 EPS estimate, slightly below VRTX's historical forward average. We cut our '22 EPS estimate by $0.30 to $14.27 and, similarly, '23's by $1.29 to $14.30. Q1 EPS of $3.52, vs. $2.98, missed the consensus view by $0.02. VRTX's revenues from its cystic fibrosis franchise rose 22% year over year, as patient volumes rose, with stronger acceleration in international markets (+55%) than in the U.S. (+9%). VRTX was able to expand access for reimbursement in a number of countries as well as continued growth of Trikafta in the U.S. Management guidance on CF sales in '22 remains in a range of $8.4B-$8.6B, or about 12% at the midpoint. Other key catalysts include the Phase III trial for treatment of APOL1 kidney disease. / Stewart Glickman, CFA

January 27, 2022
01:41 PM ET... CFRA Keeps Buy Opinion on Shares of Vertex Pharmaceuticals (VRTX 232.93****):
Our 12-month target price of $284, raised $17, reflects a 19.5x multiple of our revised '22 EPS estimate. The applied multiple is a modest discount to VRTX's recent historical forward average, which we think is reasonable in light of potential competitive threats to VRTX's cystic fibrosis (CF) cornerstone franchise. We lift our '22 EPS estimate by $1.00 to $14.57, and start '23's at $15.59. Q4 EPS of $3.37, vs. $2.51, beat the consensus view by $0.08. We think VRTX will continue to drive innovation in CF treatment, including ongoing development in a new Phase III trial. Other key catalysts include an upcoming meeting with the FDA over a possible Phase III trial for treatment of APOL1 kidney disease. Nonetheless, at least for the near term, we note that about 75% of VRTX's revenues are driven by its CF franchise, where it currently enjoys a first-mover advantage, but developments in this space from rival AbbVie (ABBV 137 ****) bear watching as well. / Stewart Glickman, CFA

November 03, 2021
08:31 AM ET... CFRA Keeps Buy Opinion on Shares of Vertex Pharmaceuticals Inc. (VRTX 181.40****):
Following solid Q3 results, we keep our target at $267, 19.7x our '22 EPS estimate. We up our '21 EPS estimate by $0.64 to $13.00 and keep our '22 EPS estimate at $13.57. VRTX posts Q3 EPS of $3.56 vs. $2.64 (+35% Y/Y), above the $3.50 consensus and our estimate of $3.09. Net product revenues rose 29% Y/Y to $1.98B, $115M above our estimate and $120M above consensus on a remarkable 62% Y/Y increase in sales of VRTX's key drug Trikafta/Kaftrio (to treat cystic fibrosis, 78% of net product sales) driven by solid US sales performance and increased uptake internationally as the treatment is now approved and reimbursable in 20 countries. We expect the solid performance in Trikafta to continue driven by the recent strong launches in Europe and its recent uptake for kids age 6-11 in the US, while its acceptance for priority review in Canada for the same age group is positive. In the near-term increased uptake of Trikafta will be the main catalyst and long-term the focus will continue to be on pipeline developments. / Sel Hardy

July 30, 2021
04:48 AM ET... CFRA Maintains Buy Opinion on Shares of Vertex Pharmaceuticals Inc. (VRTX 200.95****):
We keep our target price at $267, reflecting a ratio of 20.9x our next-12-month EPS of $12.79. Q2 EPS of $3.11 vs. $2.61 beat our estimate of $2.92 due to better-than-expected expense management. We raise our 2021 EPS estimate to $12.36 from $12.17. VRTX lifted its product revenue guidance to a range of $7.2 billion to 7.4 billion from a prior range of $6.7 billion to $6.9 billion, which came as no surprise to us as we have been more bullish than the Street about Trikafta's prospects. Q2 sales of $1.79 billion exceeded the consensus expectation by 3.9% as Trikafta/Kaftrio sales grew 37% Y/Y to $1.79 billion. Net product revenues increased 4% Y/Y in the U.S. to $1.26 billion while international sales grew an impressive 71% Y/Y (up from 43% in 1Q21) to $536 million due to the strong uptake of Kaftrio in Europe. Despite the strong commercial performance of VRTX's cystic fibrosis franchise, investors are likely focused on business development opportunities given recent pipeline disappointments. / Kevin Huang, CFA

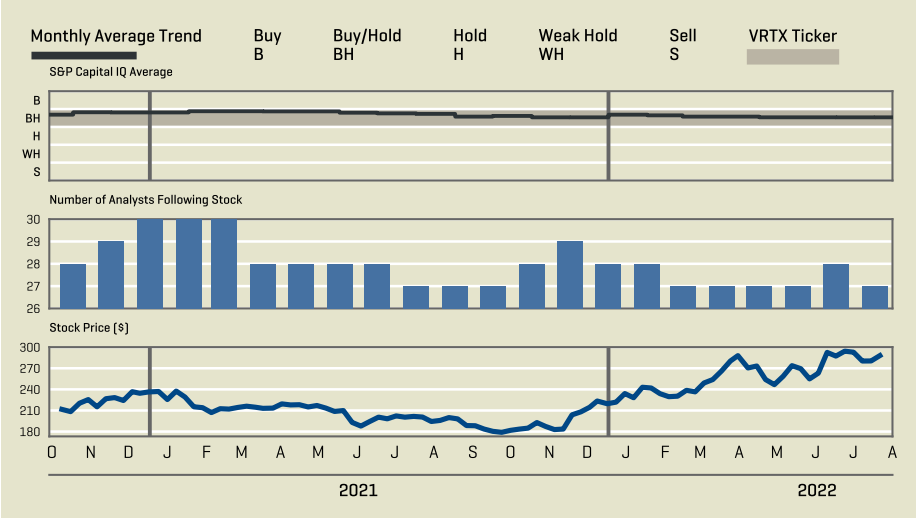
June 11, 2021
07:34 AM ET... CFRA Keeps Buy Opinion on Shares of Vertex Pharmaceuticals (VRTX 186.79****):
VRTX announced that VX-864 for alpha-1 antitrypsin deficiency (AATD) achieved its primary endpoint, but the clinical benefit was not large enough for VRTX to advance VX-864 into late-stage development. Investor expectations should have already been tempered by the failure of VX-814 for AATD last year. Using the lessons from VX-814 and VX-864, we expect VRTX to take its next molecule for AATD into the clinic in 2022. We lower our target price by $30 to $267 to reflect the news. In light of VX-864's discontinuation, we expect investors to put increased pressure on VRTX to engage in business development activity. In the near term, we suspect that shares may trade flatly due to weak investor sentiment, but we remain bullish on VRTX's other pipeline efforts (especially CTX001), and we continue to see opportunity for Trikafta to outperform consensus expectations. In fact, VRTX announced data today on 22 patients treated with CTX001 showing a consistent and sustained response to treatment. / Kevin Huang, CFA

April 30, 2021
10:42 AM ET... CFRA Maintains Buy Opinion on Shares of Vertex Pharmaceuticals Inc. (VRTX 218.08****):
We keep our target price at $297, reflecting a ratio of 23.8x our next-12-month EPS estimate of $12.47. Q1 EPS of $2.98 vs. $2.56 beat our estimate of $2.70. We raise our 2021 EPS estimate to $12.17 from $11.89 and our 2022 EPS to $13.57 from $13.27. Product revenues grew 14% Y/Y to $1.72 billion, ahead of expectations because of continued outperformance from Trikafta/Kaftrio, sales of which grew 33% Y/Y to $1.19 billion. International sales, which grew 43% Y/Y, have become an increasingly important driver of growth recently due to the rapid uptake of Kaftrio in England and Germany. Despite the great quarter, investors remain largely focused on the company's pipeline. Later this quarter, we look forward to the data readout for the Phase 2 proof-of-concept study for VX-864. Expectations for it are low following the discontinuation of VX-814. We are optimistic about CTX001, and so is VRTX, as evidenced by its recent $900 million upfront payment to Crispr Therapeutics related to CTX001. / Kevin Huang, CFA

Note: Research notes reflect CFRA's published opinions and analysis on the stock at the time the note was published. The note reflects the views of the equity analyst as of the date and time indicated in the note, and may not reflect CFRA's current view on the company.

Vertex Pharmaceuticals Incorporated

Analysts Recommendations



	No. of Recommendations	% of Total	1 Mo.Prior	3 Mos.Prior
Buy	11	41	11	10
Buy/Hold	6	22	6	7
Hold	10	37	10	9
Weak hold	0	0	0	0
Sell	0	0	0	0
No Opinion	0	0	0	1
Total	27	100	27	27

Wall Street Consensus Estimates

Fiscal Year	Avg Est.	High Est.	Low Est.	# of Est.	Est. P/E
2023	15.51	17.48	14.17	24	18.63
2022	14.20	14.89	13.16	24	20.35
2023 vs. 2022	**▲ 9%**	**▲ 17%**	**▲ 8%**	**N/A%**	**▼ -8%**
Q3'23	3.96	4.15	3.82	6	72.98
Q3'22	3.65	4.06	3.16	20	79.12
Q3'23 vs. Q3'22	**▲ 8%**	**▲ 2%**	**▲ 21%**	**▼ -70%**	**▼ -8%**

Wall Street Consensus Opinion

Buy/Hold

Wall Street Consensus vs. Performance

For fiscal year 2022, analysts estimate that VRTX will earn USD 14.20. For fiscal year 2023, analysts estimate that VRTX's earnings per share will grow by 9.24% to USD 15.51.

Forecasts are not reliable indicator of future performance.

Note: A company's earnings outlook plays a major part in any investment decision. S&P Global Market Intelligence organizes the earnings estimates of over 2,300 Wall Street analysts, and provides their consensus of earnings over the next two years, as well as how those earnings estimates have changed over time. Note that the information provided in relation to consensus estimates is not intended to predict actual results and should not be taken as a reliable indicator of future performance.

Note: For all tables, graphs and charts in this report that do not cite any reference or source, the source is S&P Global Market Intelligence.

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Glossary

STARS

Since January 1, 1987, CFRA Equity and Fund Research Services, and its predecessor S&P Capital IQ Equity Research has ranked a universe of U.S. common stocks, ADRs (American Depositary Receipts), and ADSs (American Depositary Shares) based on a given equity's potential for future performance. Similarly, we have ranked Asian and European equities since June 30, 2002. Under proprietary STARS (Stock Appreciation Ranking System), equity analysts rank equities according to their individual forecast of an equity's future total return potential versus the expected total return of a relevant benchmark (e.g., a regional index (MSCI AC Asia Pacific Index, MSCI AC Europe Index or S&P 500® Index)), based on a 12-month time horizon. STARS was designed to help investors looking to put their investment decisions in perspective. Data used to assist in determining the STARS ranking may be the result of the analyst's own models as well as internal proprietary models resulting from dynamic data inputs.

S&P Global Market Intelligence's Quality Ranking

(also known as **S&P Capital IQ Earnings & Dividend Rankings**) - Growth and S&P Capital IQ Earnings & Dividend Rankings stability of earnings and dividends are deemed key elements in establishing S&P Global Market Intelligence's earnings and dividend rankings for common stocks, which are designed to capsulize the nature of this record in a single symbol. It should be noted, however, that the process also takes into consideration certain adjustments and modifications deemed desirable in establishing such rankings. The final score for each stock is measured against a scoring matrix determined by analysis of the scores of a large and representative sample of stocks. The range of scores in the array of this sample has been aligned with the following ladder of rankings:

A+	Highest	B	Below Average
A	High	B-	Lower
A	Above	C	Lowest
B+	Average	D	In Reorganization
NC	Not Ranked		

EPS Estimates

CFRA's earnings per share (EPS) estimates reflect analyst projections of future EPS from continuing operations, and generally exclude various items that are viewed as special, non-recurring, or extraordinary. Also, EPS estimates reflect either forecasts of equity analysts; or, the consensus (average) EPS estimate, which are independently compiled by S&P Global Market Intelligence, a data provider to CFRA. Among the items typically excluded from EPS estimates are asset sale gains; impairment, restructuring or merger-related charges; legal and insurance settlements; in process research and development expenses; gains or losses on the extinguishment of debt; the cumulative effect of accounting changes; and earnings related to operations that have been classified by the company as discontinued. The inclusion of some items, such as stock option expense and recurring types of other charges, may vary, and depend on such factors as industry practice, analyst judgment, and the extent to which some types of data is disclosed by companies.

12-Month Target Price

The equity analyst's projection of the market price a given security will command 12 months hence, based on a combination of intrinsic, relative, and private market valuation metrics, including Fair Value.

Abbreviations Used in Equity Research Reports

CAGR - Compound Annual Growth Rate
CAPEX - Capital Expenditures
CY - Calendar Year
DCF - Discounted Cash Flow
DDM - Dividend Discount Model
EBIT - Earnings Before Interest and Taxes
EBITDA - Earnings Before Interest, Taxes, Depreciation & Amortization
EPS - Earnings Per Share
EV - Enterprise Value
FCF - Free Cash Flow
FFO - Funds From Operations
FY - Fiscal Year
P/E - Price/Earnings
P/NAV - Price to Net Asset Value
PEG Ratio - P/E-to-Growth Ratio
PV - Present Value
R&D - Research & Development
ROCE - Return on Capital Employed
ROE Return on Equity
ROI - Return on Investment
ROIC - Return on Invested Capital
ROA - Return on Assets
SG&A - Selling, General & Administrative Expenses
SOTP - Sum-of-The-Parts
WACC - Weighted Average Cost of Capital

Dividends on American Depository Receipts (ADRs) and American Depository Shares (ADSs) are net of taxes (paid in the country of origin).

Qualitative Risk Assessment

Reflects an equity analyst's view of a given company's operational risk, or the risk of a firm's ability to continue as an ongoing concern. The Qualitative Risk Assessment is a relative ranking to the U.S. STARS universe, and should be reflective of risk factors related to a company's operations, as opposed to risk and volatility measures associated with share prices. For an ETF this reflects on a capitalization-weighted basis, the average qualitative risk assessment assigned to holdings of the fund.

STARS Ranking system and definition:

★★★★★ **5-STARS (Strong Buy):**
Total return is expected to outperform the total return of a relevant benchmark, by a notable margin over the coming 12 months, with shares rising in price on an absolute basis.

★★★★☆ **4-STARS (Buy):**
Total return is expected to outperform the total return of a relevant benchmark over the coming 12 months.

★★★☆☆ **3-STARS (Hold):**
Total return is expected to closely approximate the total return of a relevant benchmark over the coming 12 months.

★★☆☆☆ **2-STARS (Sell):**
Total return is expected to underperform the total return of a relevant benchmark over the coming 12 months.

★☆☆☆☆ **1-STAR (Strong Sell):**
Total return is expected to underperform the total return of a relevant benchmark by a notable margin over the coming 12 months, with shares falling in price on an absolute basis.

Relevant benchmarks:
In North America, the relevant benchmark is the S&P 500 Index, in Europe and in Asia, the relevant benchmarks are the MSCI AC Europe Index and the MSCI AC Asia Pacific Index, respectively.

Vertex Pharmaceuticals Incorporated

Disclosures

Stocks are ranked in accordance with the following ranking methodologies:

STARS Stock Reports:
Qualitative STARS rankings are determined and assigned by equity analysts. For reports containing STARS rankings refer to the Glossary section of the report for detailed methodology and the definition of STARS rankings.

Quantitative Stock Reports:
Quantitative rankings are determined by ranking a universe of common stocks based on 5 measures or model categories: Valuation, Quality, Growth, Street Sentiment, and Price Momentum. In the U.S., a sixth sub-category for Financial Health will also be displayed. Percentile scores are used to compare each company to all other companies in the same universe for each model category. The five (six) model category scores are then weighted and rolled up into a single percentile ranking for that company. For reports containing quantitative rankings refer to the Glossary section seof the report for detailed methodology and the definition of Quantitative rankings.

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STARS Stock Reports:

Global STARS Distribution as of June 30, 2022

Ranking	North America	Europe	Asia	Global
Buy	42.0%	43.9%	48.4%	43.5%
Hold	51.4%	50.9%	42.2%	49.7%
Sell	6.6%	5.2%	9.5%	6.8%
Total	100.0%	100.0%	100.0%	100.0%

Analyst Certification:

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