TRIVARIATE RESEARCH

OPPORTUNITIES IN THE HEALTHCARE SECTOR

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RESEARCH SUMMARY AND CONCLUSIONS

We have seen a massive deviation in healthcare sector stock performance in 2021. Given the idiosyncratic nature of the sector, meaningful performance deviation is normal. However, this magnitude of performance deviation catalyzed us to look for valuation / growth disconnects and search for opportunities. Many profitless biotechnology companies had a massive run in 2020, starting this year with high valuations vs. history. When fears of a “bear steepener” early in the year caused a rotation out of profitless stocks, biotechnology started to underperform. Unlike parts of technology, this has persisted for biotechnology, with the median YTD mid-cap biotechnology stock down 42.5%, vs. the SP500 that is up 24.3% so far this year. On the positive side, micro-cap healthcare providers are up 45%, life sciences and tools are up 30.8% on average, and mega / large cap healthcare has generally outperformed the market YTD.

Performance for the overall sector was highly correlated to size, with mega beating large beating mid beating small beating micro-cap YTD. A potential explanation for this huge stock performance differential based on size might be profit margins. While mega / cap companies always were more profitable than small caps, that gap was consistent and flat for nearly 20 years. Now, there has been a widening, where the median small cap company is just about break-even today, and the median mega / large cap healthcare company has record net margins.

Exploring the details, we see four investment conclusions and stock ideas resulting from YTD performance. We follow these with quantitatively-derived stock ideas that embody these themes.

RESEARCH SUMMARY AND CONCLUSIONS

1. The biotechnology sell-off now appears too extreme, with forecasted sales growth strong and relative price-to-sales multiples now at multi-year lows. Adding exposure to biotechnology appears to be good risk-reward. Even if rising interest rates hurt terminal value assumptions, multi-year lows on sales seem overly punitive in our judgment.

2. Healthcare providers and services companies remain the cheapest industry within healthcare, with relative multiple contraction over the last five years, while all the other healthcare industry groups experienced relative multiple expansion on price-to-forward earnings. Interestingly, this contraction happened despite higher revenue growth and lower volatility of the revenue growth. Our prior work shows these stocks can be interest rate sensitive, so investors looking for businesses with pricing power, good revenue growth, low volatility of growth, and compelling relative valuation should look at healthcare providers and services for opportunities.

3. Life sciences and tools stocks had the highest gross margin expansion YTD, likely driving them to perform best among the healthcare industries. We continue to think the market will reward gross margin expansion as businesses that can offset rising input costs and beat margin expectations will likely outperform in 2022.

4. The relationship between classic defensive sectors like mega / large cap. pharma / biotechnology and consumer staples has consistently evolved. The relative valuation of the group is now at all time lows, with staples ripping MTD and leaving mega /large biotech / pharma at 62% of the relative multiples when they used to trade at premiums, despite relatively good performance this year. The shareholder return is about constant (dividend plus repurchase yield), a potential sign of the attractiveness of pharma as a defensive play.

HEALTHCARE PERFORMANCE: OWN ONLY LARGE EXCEPT PROVIDERS?

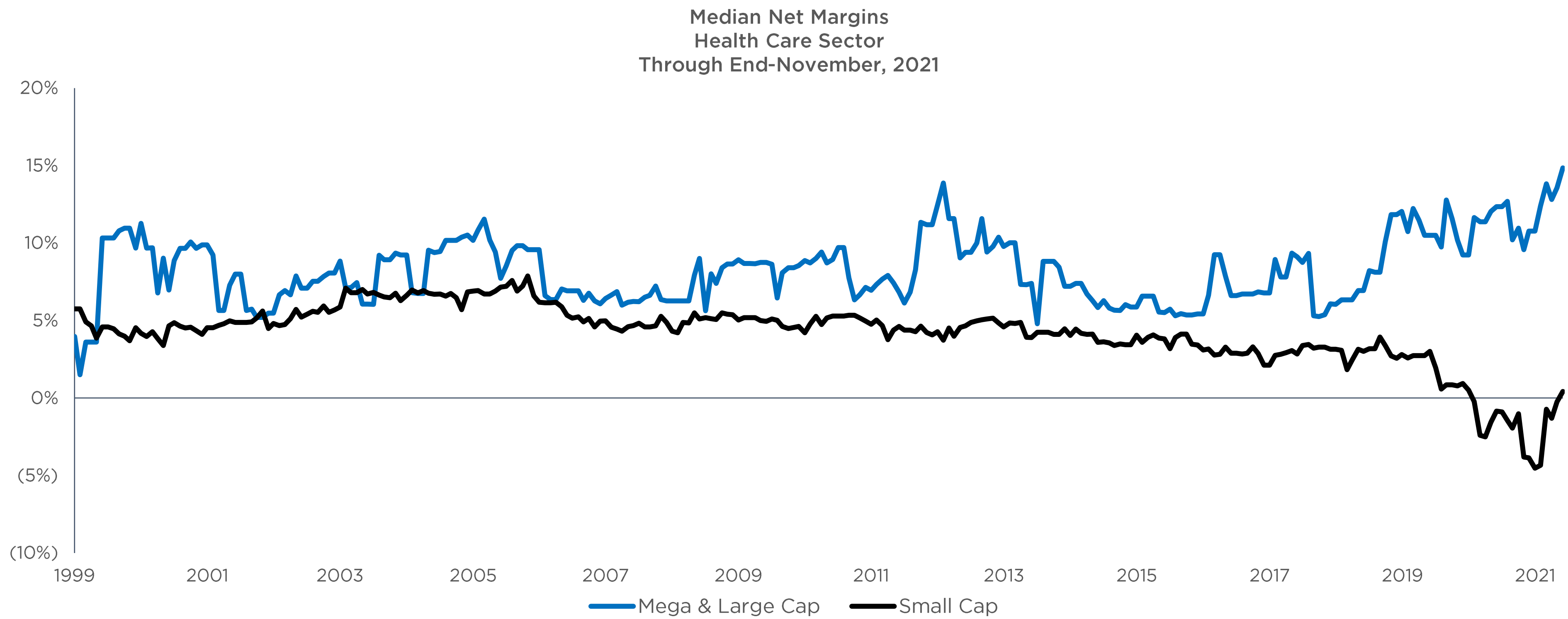
We have seen a massive deviation in healthcare sector stock performance in 2021. Obviously, like all sectors, there are completely different business models within the sector and so meaningful performance deviation is normal. However, this magnitude of performance deviation catalyzed us to look for valuation / growth disconnects and search for opportunities. Many profitless biotechnology companies had a massive run in 2020, starting this year with high valuations vs. history. When fears of a "bear steepener" early in the year caused a rotation out of profitless stocks, biotechnology underperform. That has lasted, with the median YTD mid-cap biotechnology stock down 42.5%, vs. the SP500 that is up 24.3% so far this year. On the positive side, micro-cap healthcare providers are up 45%, life sciences and tools are up 30.8% on average, and mega / large cap healthcare has generally outperformed the market YTD. Performance for the overall sector was highly correlated to size, with mega beating large beating mid beating small beating micro-cap YTD. The right call was to own bigger stocks, and small cap providers, and short biotech.

Median YTD Returns
December 13, 2021

Sector	Mega Cap	Large Cap	Mid Cap	Small Cap	Micro Cap	Overall
Biotechnology	23.7%	(4.2%)	(42.5%)	(32.1%)	(37.9%)	(35.9%)
Health Care Equipment & Supplies	26.1%	17.9%	3.2%	1.2%	(17.4%)	2.3%
Health Care Providers & Services	38.3%	33.9%	(7.1%)	6.2%	45.0%	9.7%
Health Care Technology		(27.9%)	(1.4%)	(10.5%)	10.5%	(1.7%)
Life Sciences Tools & Services	38.9%	36.1%	37.1%	(19.0%)	(11.7%)	30.8%
Pharmaceuticals	29.6%	19.3%	(13.4%)	(33.1%)	(34.0%)	(29.0%)
Health Care Sector Overall	32.2%	21.1%	(9.5%)	(20.7%)	(30.2%)	(18.7%)

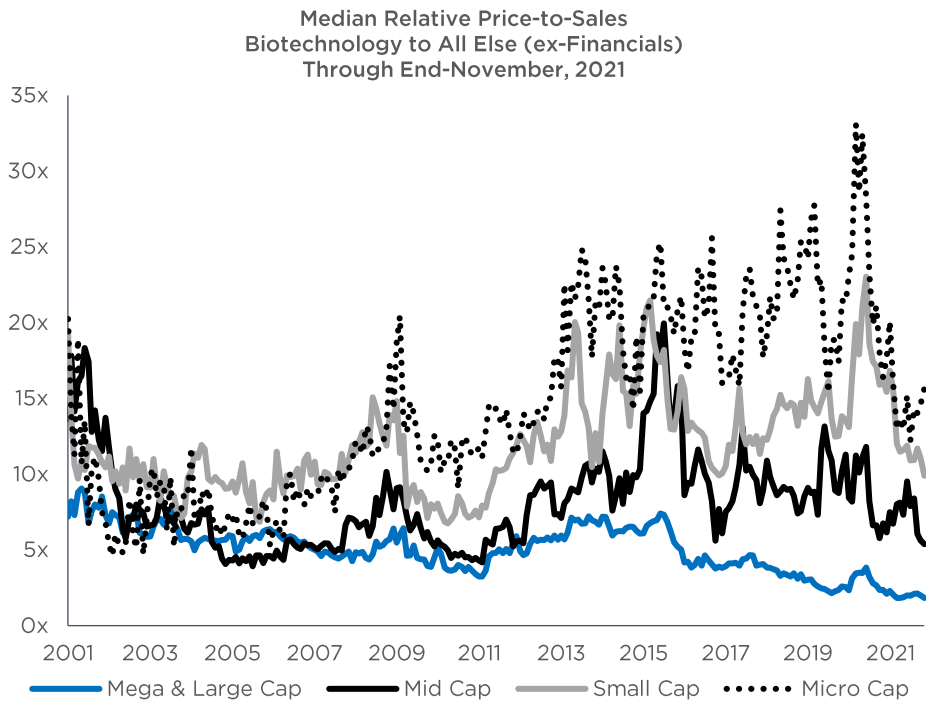
BIG COMPANIES ARE BECOMING INCREMENTALLY PROFITABLE

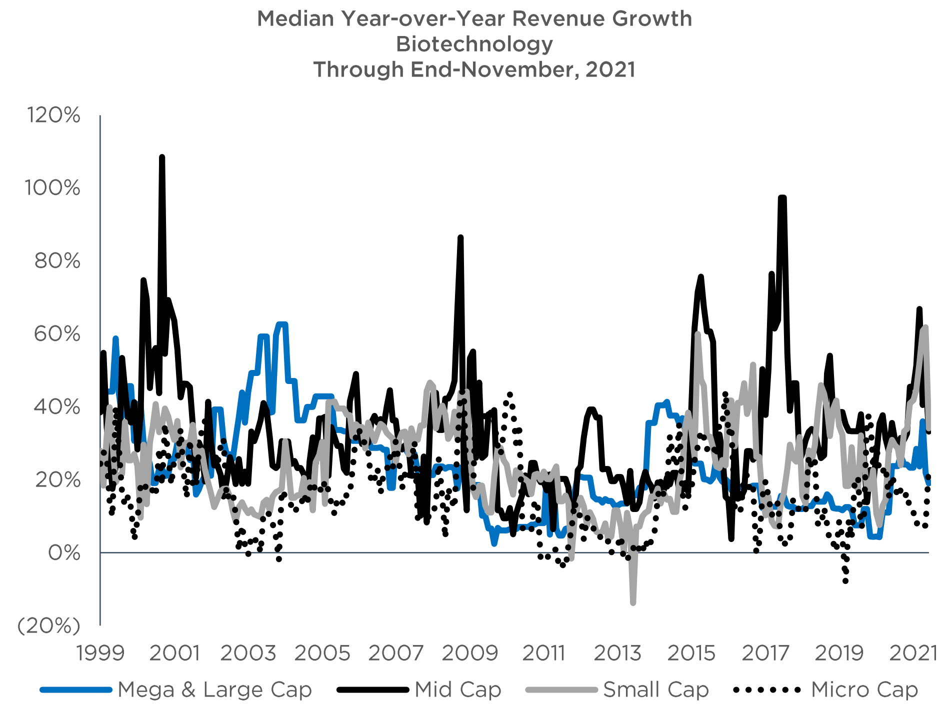
A potential explanation for this huge stock performance differential based on size might be profit margins. While mega / cap companies always were more profitable than small caps, that gap was consistent and flat for nearly 20 years. Now, there has been a widening, where the median small cap company is just about break-even today, and the median mega / large cap healthcare company has record net margins.



BIOTECHNOLOGY VALUATION VS. GROWTH OUTLOOK HAS CHANGED

The biotechnology sell-off now appears too extreme (left chart). Mega / large cap biotechnology stocks have never been cheaper, and mid-cap biotechnology stocks are at ten-year relative lows. Meanwhile, the revenue growth rates for companies remain robust (right chart) implying that this valuation reset has been material. Our judgment is the risk-reward looks positive for biotechnology today.

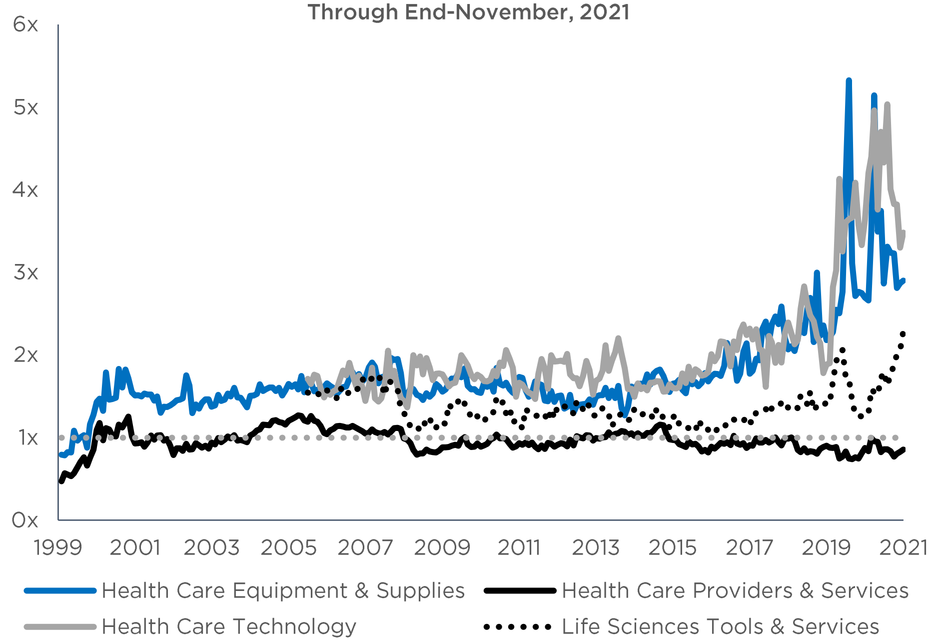




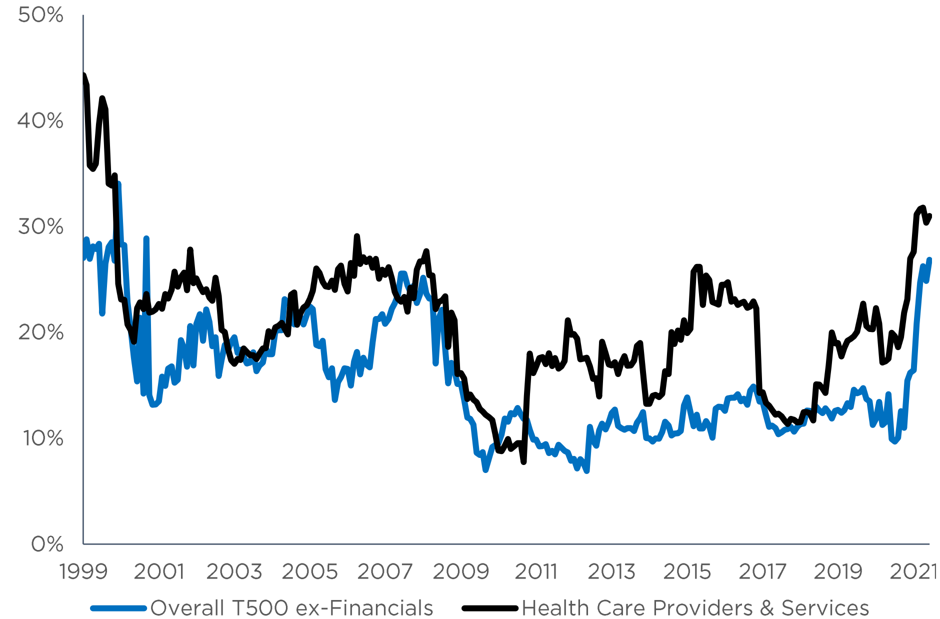
HEALTHCARE PROVIDERS AND SERVICES LOOK ATTRACTIVE

Healthcare providers and services companies remain the cheapest industry within healthcare, having seen relative multiple contraction over the last five years, while all the other healthcare industry groups experienced relative multiple expansion on price-to-forward earnings (left chart). Interestingly, this contraction happened despite higher revenue growth (right chart), and lower volatility of the revenue growth. Gross margins contracted for the group this year, and cost pressures are an obvious concern. However, our prior work shows these stocks can be interest rate sensitive, so investors looking for businesses with pricing power, good revenue growth, low volatility of growth, and compelling relative valuation should look at healthcare providers and services for opportunities.

Median Relative Price to Forward Earnings
Top 500 by Market Cap.
Through End-November, 2021

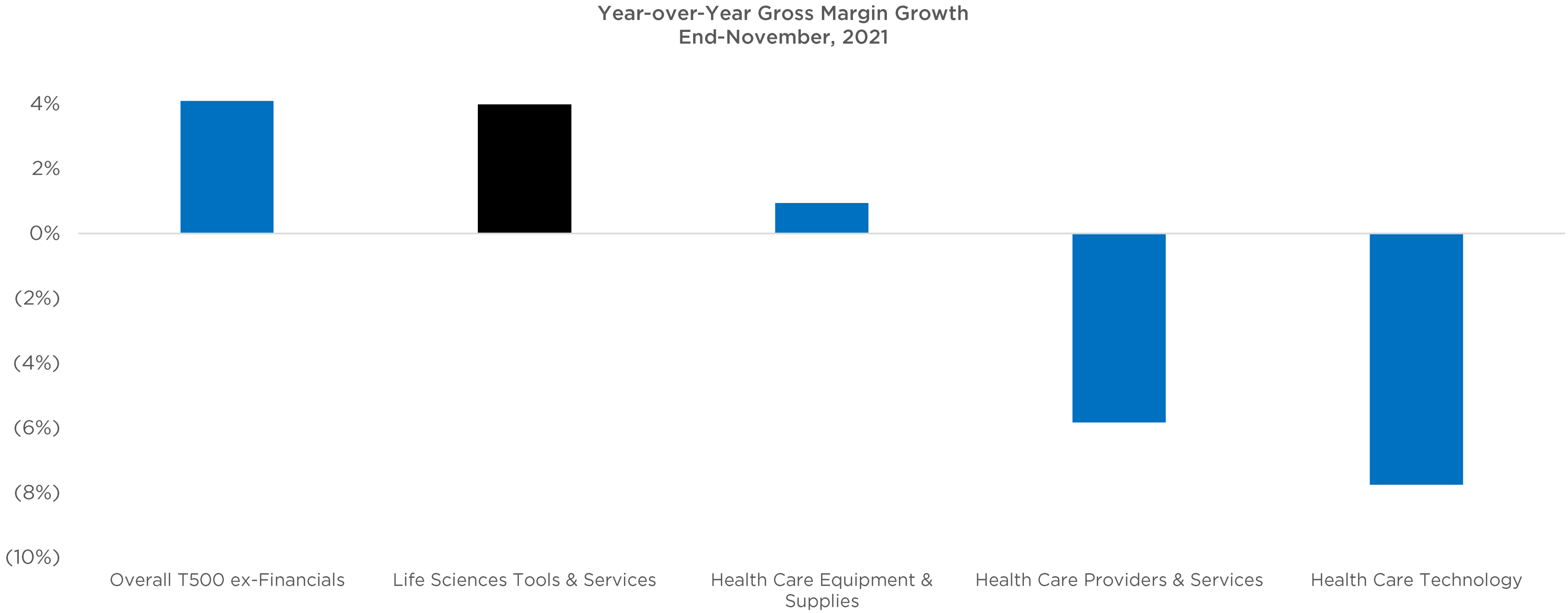


Mean Year-over-Year Revenue Growth
Top 500 by Market Cap.
Through End-November, 2021



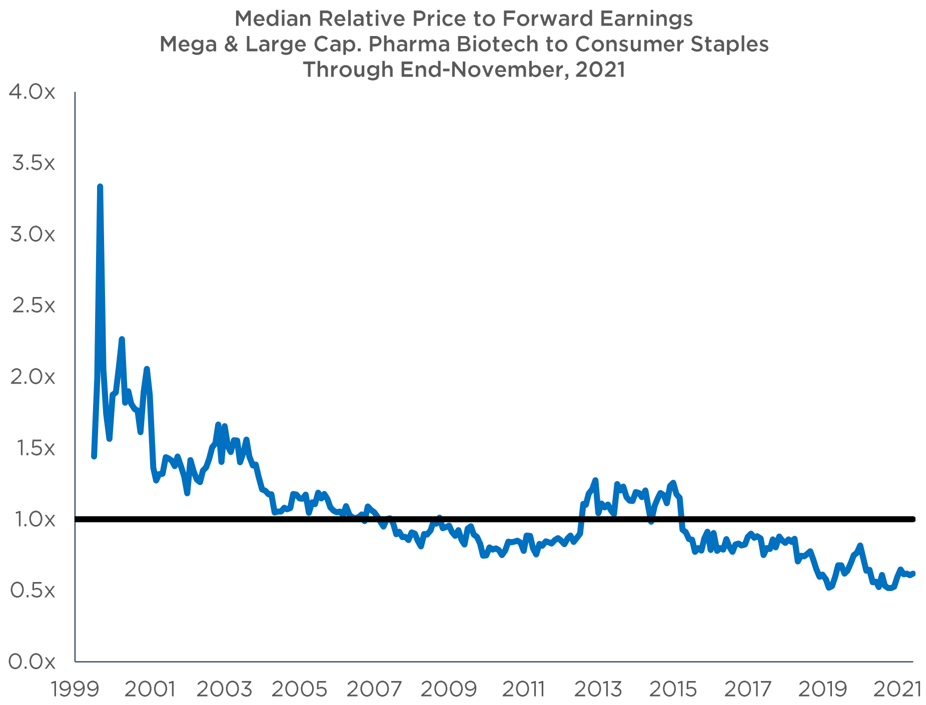
LIFE SCIENCE TOOLS AND SERVICES HAVE EXPANDED GROSS MARGINS

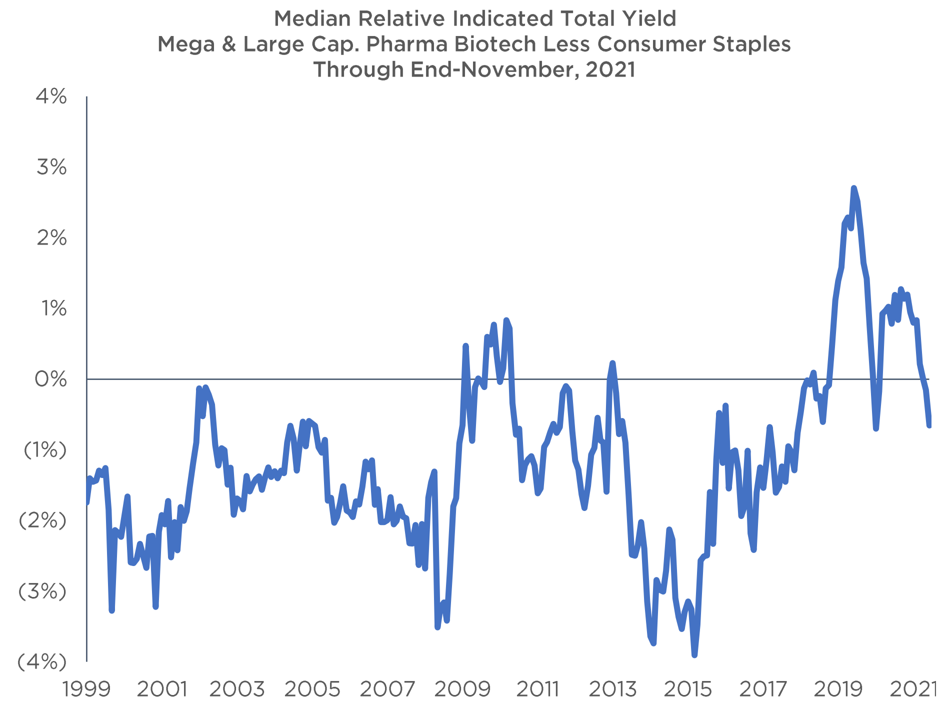
Life sciences and tools stocks had the highest gross margin expansion YTD, likely driving them to perform best among the healthcare industries. We continue to think the market will reward gross margin expansion as businesses that can offset rising input costs and beat margin expectations will likely outperform in 2022.



PHARMA SEEMS TOO CHEAP VS. CONSUMER STAPLES

The relationship between classic defensive sectors like mega / large cap. pharma / biotechnology and consumer staples has consistently evolved. The relative valuation of the group is now at all time lows (left chart), with staples ripping MTD and leaving biotech / pharma at 62% of the relative multiples when they used to trade at premiums. The shareholder return is about constant (dividend plus repurchase yield), a potential sign of the attractiveness of pharma as a defensive play (right chart).





QUANTITATIVELY-DERIVED HEALTHCARE STOCK IDEAS

Stock ideas that embody the themes we uncovered are shown here. We are nervous showing healthcare ideas given the idiosyncratic nature of the sector, so we offer ideas only that embody the themes we uncovered in today's note. These include pharma / biotech where multiples have contracted but forward revenue growth forecasts have expanded, providers that are cheap with above average growth, and tools with forecasted gross margin expansion, among other attributes.

Healthcare Sector Stock Ideas
End-November, 2021

Ticker	Company	Industry Group	Market Cap. (US$ Bil.)
PFE	Pfizer Inc.	Pharmaceuticals	309.83
MRK	Merck & Co., Inc.	Pharmaceuticals	185.45
BMY	Bristol-Myers Squibb Company	Pharmaceuticals	131.07
AMGN	Amgen Inc.	Biotechnology	119.07
GILD	Gilead Sciences, Inc.	Biotechnology	88.57
REGN	Regeneron Pharmaceuticals, Inc.	Biotechnology	69.02
VRTX	Vertex Pharmaceuticals Incorporated	Biotechnology	52.92
BIIB	Biogen Inc.	Biotechnology	34.45
MOH	Molina Healthcare, Inc.	Health Care Providers & Services	17.57
BMRN	BioMarin Pharmaceutical Inc.	Biotechnology	15.38
INCY	Incyte Corporation	Biotechnology	14.98
AHCO	AdaptHealth Corp.	Health Care Providers & Services	2.91
AGTI	Agiliti, Inc.	Health Care Providers & Services	2.57
NSTG	NanoString Technologies, Inc.	Life Sciences Tools & Services	1.72

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