DON'T FEAR HIGH INFORMATION TECHNOLOGY VALUATIONS

Key Points:

- Historically, there has been no correlation between valuations and equity returns.
- Context is critical when evaluating whether high valuations are justified.
- IT valuations are still nowhere near Tech Bubble highs.

Following a multi-year stretch of almost uninterrupted outperformance, some investors question whether the Information Technology sector is in a position similar to the late 1990s Tech Bubble, pointing to lofty valuations as evidence. However, in our view, not only are valuations an invalid indicator of a second Tech bubble, but they also ignore essential context.

Historical P/E ratios illustrate valuations' lack of predictive power. Many investors assume that high P/Es mean equities are expensive and will soon fall. Contrary to popular belief, history disagrees. S&P 500 calendar-year returns following the 10 highest start-of-year P/E ratios show no discernible pattern (Exhibit 1). Regardless of the high returns in 1998 or the low returns in 2002, the average returns for the periods were positive, with the years around the dotcom bubble being the main outliers. Even though 2020 has the tenth highest P/E ratio on record with 23.9, if history is any indication, this likely will have little implications on how returns will shape up this year.

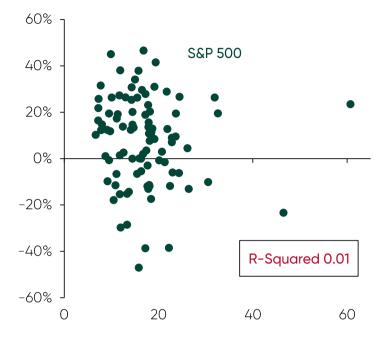
Exhibit 1: S&P 500 One-Year Returns Following History's 10 Highest Trailing P/E Ratios

Year	P/E Ratio at Beginning of Year	Calendar Year Return
2009	60.7	23%
2002	46.5	-23%
1999	32.6	20%
2003	31.9	26%
2000	30.5	-10%
2001	26.4	-13%
1992	26.1	4%
1998	24.4	27%
2018	24.3	-6%
2017	23.7	19%
Average	33.7	6.7%
Median	30.5	11.9%

Source: Global Financial Data as of 31/12/2019. Based on S&P 500 annual index price in USD from 31/12/1926 to 31/12/2019 and S&P 500 P/E Ratio from 31/12/1926 to 31/12/2019. P/E is based on last twelve months of earnings. Excludes 2020 as only years with full calendar year returns are included.

Similarly, since 1926, there is nearly zero relationship between start-of-year P/Es and returns over the following year, as Exhibit 2 below implies.

Exhibit 2: Relationship Between P/E Ratio (Y0) and Returns over the Following Year (Y+1)



Source: Global Financial Data as of 31/12/2019. Based on S&P 500 annual index price in USD from 31/12/1926 to 31/12/2019 and S&P 500 P/E Ratio from 31/12/1926 to 31/12/2019. P/E is based on last twelve months of earnings. R-squared represents the % of total variation in one year returns that can be explained by P/E ratios at the start of the year.

As illustrated, valuations alone tell you very little about returns over the next 12 or even 24 months. Cheap equities can get cheaper; pricey ones can get pricier. As a result, bubbles shouldn't be judged on valuations alone. Another relevant case is the Energy sector in 2015 and early 2016. At this time, Energy stocks were collapsing and sentiment was dour. If bubbles were defined by extremely high P/Es alone, the context of the situation would have been completely missed. P/Es were soaring as Energy companies' earnings plummeted due to falling oil prices.

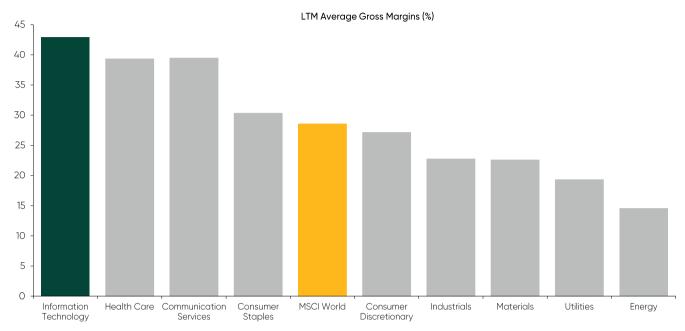
In addition, a prime historical example lies during early 2009. Valuations were stratospheric by many measures due to the 2008 financial crisis' earnings erosion. Widely used valuation metrics are just one measure that may describe sentiment. Analyzing all of the pertinent components prior to looking at the broader context of the situation is necessary in order to arrive at a viable conclusion.

When put into such a broad context, even the basic claim of extremely high Information Technology valuations similar to the late 1990's Tech bubble appears flawed. Select valuations such as Information Technology price-to-sales ratios may be elevated relative to history. But is that necessarily irrational? Tech margins are generating higher earnings growth for investors. Actually, Information Technology boasts the highest gross profit margins of all sectors (Exhibit 3)—a key differentiator from Tech in the late 1990s, when investors were clamoring for unprofitable firms with little more than a vague business plan.

In the last 20 years, the net profit margin of the S&P 500 Information Technology sector has more than doubled, as high-profit margin Internet and software firms have rapidly surpassed lower-margin hardware firms as the dominant Tech industry group. Today, the sector is comprised of some of the world's most

profitable companies. It stands to reason investors are willing to pay for this-particularly in the late stages of a bull market, when rising valuations are perfectly normal and reasonable.

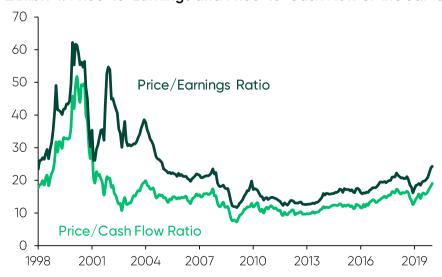
Exhibit 3: MSCI World Gross Margins by Sector (%)



Source: FactSet, Inc. as of 31/12/2019 using monthly data.

Considering a variety of valuations beyond price to sales - P/E, or price-to-cash flow, most Information Technology valuations are nowhere near bubble territory. People worried about higher valuations today focus on the level, comparing them to past points. Seeing that they are high by historical standards, they fear a fall looms. However, we think the rate of change is more important. Sudden spikes or swoons in valuations can tell you sentiment is reaching extremes. But valuations aren't spiking today, but mainly recovering from its fall in 2018. Looking at the larger picture, IT valuations are continuing the irregular march upwards they started in 2011 (Exhibit 4).

Exhibit 4: Price-to-Earnings and Price-to-Cash Flow of the S&P 500 Information Technology



Source: FactSet, Inc. 31/12/1997 – 31/1/2020 using monthly data.

Finally, investors caution the Information Technology sector is a rapidly growing share of the overall market—over 20% of the S&P 500's market capitalisation, for example. This is true, and is also the case for Tech earnings (Exhibit 5). Contrast this to the unjustified disconnect between euphoric prices and deteriorating fundamentals in the dot-com era, when profit-starved firms swelled to nearly 35% of the S&P 500 market capitalisation at the peak. Overall, earnings and market capitalisation have essentially moved in lockstep during this bull market, with some minor fluctuations recently.

40% 35% 30% Information Technology as % of S&P 500 Market Cap 25% 20% 15% 10% Information Technology as % of 5% S&P 500 total earnings 0% -5% -10% 1995 1998 2001 2004 2007 2010 2013 2016 2019

Exhibit 5: Information Technology Earnings and Market Cap as % of the S&P 500

Source: FactSet, Inc.; S&P 500 and S&P 500 Information Technology (Sector) Indices Market Value and Trailing 12M Net Income from 31/03/1995 to 31/12/2019.

Tech bubble fears currently abound as valuations continue to rise, yet most traditional bubble signs are absent. Margin debt is not spiking. There is no abundance of unworthy IPOs finding solid demand. Parabolic sector performance and market capitalisation changes are absent. Weighing in this evidence with the broader reality, this is not a very similar backdrop to 1999 in our view. Ultimately, most valuations are just opinions, aggregated and distilled into numbers—ones anyone can see and pundits dissect regularly. Efficient markets price in common opinions of equities' value, sapping valuations' predictive power.

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