Guinness Atkinson
Global Innovators Fund
Managers Update – February 2018

January in Review

Global markets, rallying sharply, were certainly not plagued with the January blues. The major equity markets continued their ascent of previous years, led by emerging Asia and the US. However, the tranquility was disrupted as a selloff, led by the US, began on the 26th January.

The selloff began after the latest US jobs report indicated an acceleration in US wage growth, which showed average hourly wages climbed at a year-on-year rate of 2.9% in January and 2.7% in the previous month. This led to rising bond yields and a selloff in global equity markets into February. Investors were concerned that the return of inflation and higher rates could erode the profitability for companies trading at elevated valuations. Market volatility also increased. As Janet Yellen had her final meeting as the chair of the Federal Reserve, there remains expectation of a further rate rise in March.

By the end of January, many companies had reported earnings and out of around 400 companies that are tracked by 5 or more analysts, 70.5% had their price targets upgraded. Generally, reported earnings beat expectations.

Eurozone economic data did not support the case for a rapid pullback in monetary stimulus. In December, Eurozone producer price growth slowed to +2.2%, missing forecasts and down from +2.8% the previous month. The overall eurozone inflation rate was shown to be 1.3% in January, below the ECB's target of around 2%, reducing pressure on the central bank to quickly tighten. Italians head to the polls for their national elections in March. As one of the founding members of the EU and its 3rd largest economy, rising Euroskepticism will be watched carefully. In recent years Euroskepticism has been rising due to the deep recession in Italy, weak recovery and the migration crisis happening across the southern coast of Italy.

The EU and the UK are back to negotiating the guidelines of a Brexit transition period, after the lengthier-than-expected first phase of Brexit negotiations. This is with a backdrop of disagreements emerging both within the UK Cabinet and with the EU.

In Asia, the UK Prime Minister, Theresa May visited China, but refused to give written support, along with France, for China's "new silk road" project. There is still concern that contracts for huge infrastructure scheme are not transparent and favor Chinese companies. North Korea is to send its ceremonial head of state to the opening ceremony of the Winter Olympic Games in South Korea in February. There is hope that North Korea's participation in the games will ease tensions on the peninsula.

Market Movements

In January, the S&P 500 had its strongest month since March 2016, despite concerns that a correction may be overdue, which towards the end of the month appeared likely as markets continued their decline into the first week of February. As of the end of January, earnings revisions were notably stronger than their five-year average, pointing towards a strong start to the earnings season.

Given the strong rally in the beginning of the month and the rise in bond yields towards the end of the month, it was not unsurprising to see utilities and defensive sectors lagging in the month. The leading sectors were consumer discretionary, notably retail, and IT. The rise in 10-year yields helped support U.S. financials as well. Europe saw less pronounced earnings revision, and the STOXX 600 trailed its U.S. counterpart in January 2018.

The Global Innovators Fund's industrial stocks added to outperformance the most over the month, notably Boeing and Fanuc, the Japanese robotics manufacturer. The current overweight position in Information Technology also contributed positively to performance over January.

Portfolio update

Individual stock performance in the month followed, in general, the market movements described above. Key stock movements are highlighted below.

Nvidia (+27.0% total return in USD) continues to see strong demand for their graphics processing unit chips from computer gaming, and datacenters that are machines driving the analysis behind big data, artificial intelligence and machine learning. Their chips are also key to the development of autonomous vehicles giving the company an exciting avenue for future growth.

Boeing (+20.2% total return in USD) rallied strongly over the month as sentiment over Boeing's rising production of narrow and wide-body aircraft is expected to positively impact profitability. The company reported earnings at the end of January which demonstrated strong growth in cash flow.

Shire (-10.4% total return in USD), the global biotechnology group specializes in drugs treating rare diseases and specialized conditions. Shire has seen benefits from its acquisition of Baxalta in 2016, in terms of synergies, combating slowing sales growth and looming patent challenges for older products. However, in January sentiment turned negative regarding what would happen after these synergistic benefits were exhausted. Shire's new plasma manufacturing facility will boost its capacity by 30% but will be a drag Q4 gross margin.

WisdomTree (-7.7% total return in USD) an ETF provider, rallied into the middle of January but has sold off since, as expectation of their Q4 2017 earnings turned negative amid weaker markets. Their earnings, reported in early February, saw their business suffer outflows in Europe and inflows slow in its Canadian operations.

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We made two changes to the portfolio in January. We bought KLA Tencor and Lam Research and sold Intel and Verifone.

Intel has been held in the fund since February 2011, performing well over the holding period, with particularly strong performance materializing in 2017. Earnings released in October 2017 exceeded market expectations but we did not see strong growth continuing throughout 2018 and beyond. Cash flow return on investment has also been declining in recent years, adding to the potential risks.

Verifone provide the technology and infrastructure that allow merchants to offer a variety of payments options including chip and pin, contactless card payments and the likes of Apple Pay and Google Wallet. The company was bought on the original thesis of benefitting from the rollout of chip and pin technology in the US which was being driven by a shift in card fraud liability to merchants that do not offer this technology. The adoption of this has remained slow and demand for Verifone's payment terminals has slowed alongside softer card-network rules regarding fraud liability for non-chip terminals, decreasing the urgency to upgrade in certain merchant segments. This combined with a declining cashflow return on investment profile and increasing debt on their balance sheet contributed to our decision to sell Verifone.

KLA Tencor, a US based supplier of semiconductor process control and yield management solutions, is at the forefront of improving yields and reducing failure rates in the semiconductor industry. The company's products include defect inspection and calibration products. We see potential for the overall industry to expand, with the key market drivers being data centers, high performance computing, autonomous driving and artificial intelligence. KLA Tencor offers an attractive valuation of 14.4x with a strong cashflow return on investment profile and well covered debt. We think the company is in a strong position to meet our return requirements at a valuation which provides some downside protection.

Lam Research, the US manufacturer of semiconductor processing equipment has been at the forefront of innovative wafer fabrication. Wafer manufacturing has been integral to a range of secular trends within the Information Technology sector. On a company level, Lam Research has seen improving cashflow return on investment while maintaining a strong balance sheet. The company has continually invested in R&D to help preserve its competitive edge. Recently, earnings and margins have been trending upwards. When looking at the company on a valuation basis it is attractively priced versus its own history, trading below its long term average forward P/E and cheaper than the majority of its peers.

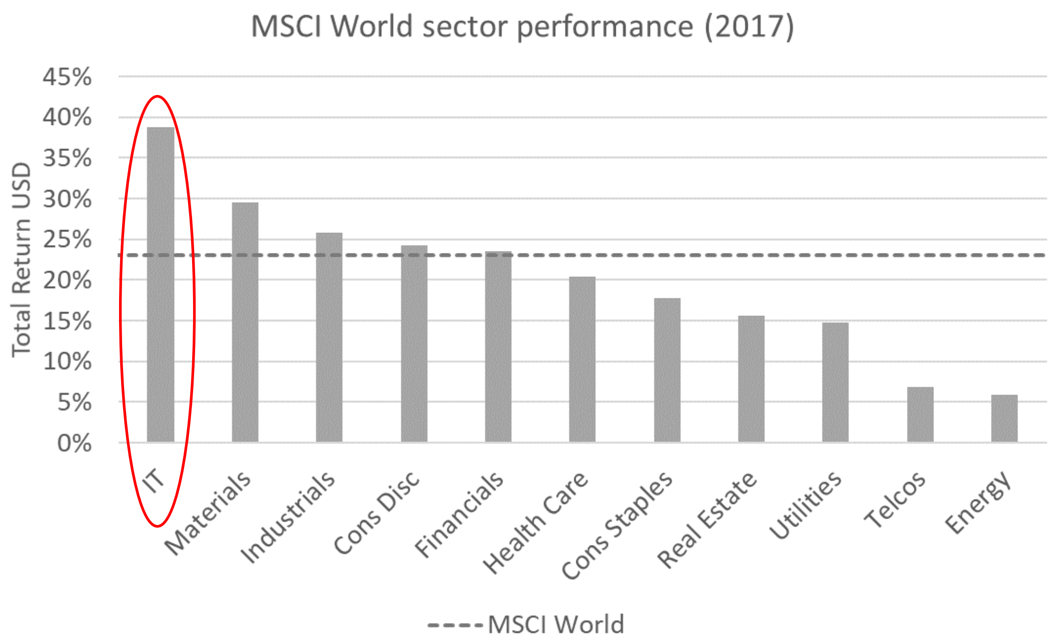
The overall effect on the portfolio was to maintain a similar exposure to the U.S. and the IT sector, albeit increase our exposure within IT to semiconductors and reduce our exposure to technology hardware & equipment. The fund remains at just under a 50% allocation to the IT sector.

Given our significant weight in the IT sector and the recent strong performance from the sector, investors have understandably been asking us if the IT sector is now overvalued. In the next few pages we take a top down look at what has driven the performance of the IT sector, how valuations and growth rates today compare to history, and a look at where we see the most attractive combination of Innovation, growth and valuation within the IT sector.

The IT sector in 2018 – growth driver or expensive and overhyped?

Whether it was the "FAANG's"[1] or "BAT's"[2], the internet stocks, the disruptors, etc., 2017 was a strong year for IT companies. The global IT sector was the top performing sector in 2017 and it generated an impressive total return of 38.74% (USD).

Chart 1

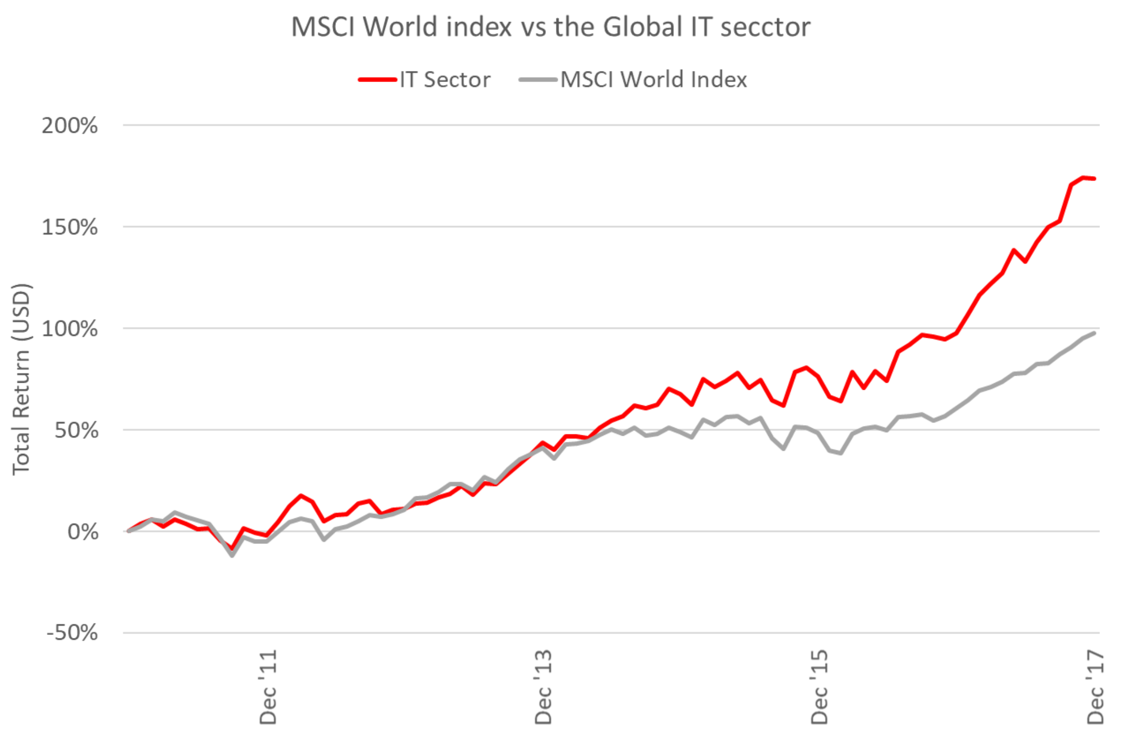


Source: Bloomberg. December 31, 2016 to December 31, 2017.

While 2017 was a particularly strong year for the IT sector, over the last 7 years the sector has outperformed the MSCI World index by 76% and again it was the best performing sector.

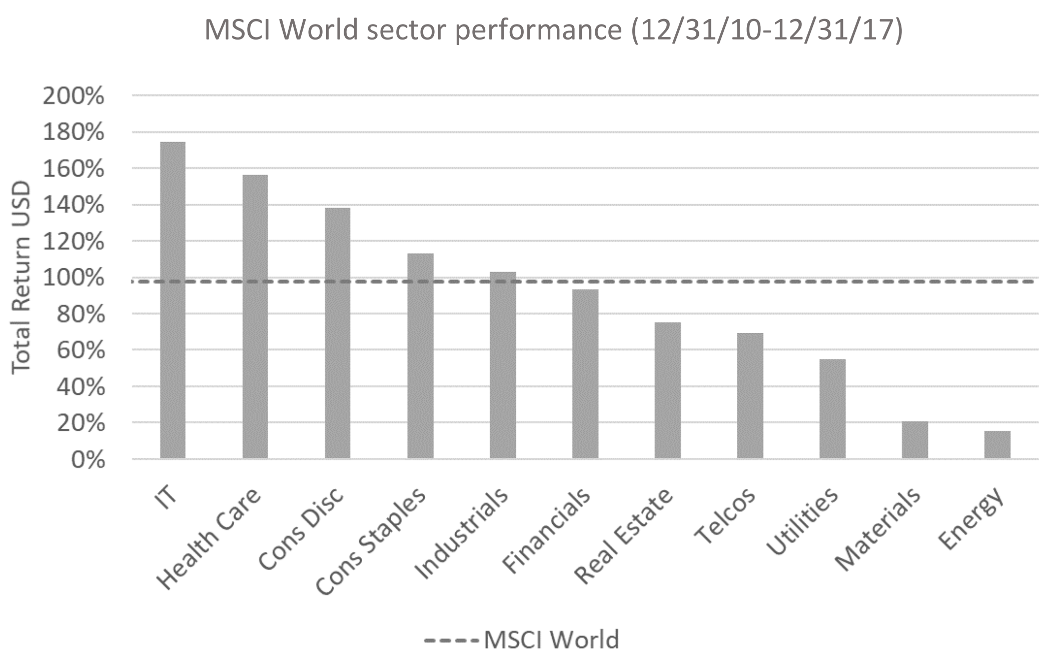
[1] Facebook, Amazon, Apple, Netflix, Google
[2] Baidu, Alibaba, Tencent

Chart 2



Source: Bloomberg. December 2011 to December 2017.

Chart 3



Source: Bloomberg. December 31, 2010 to December 31, 2017.

It is interesting to look back at this period and note the strong performance of the more innovative sectors, IT, Health Care, Consumer Discretionary, Industrials, in contrast to the generally less innovative sectors, such as Real Estate, Telcos, Utilities, Materials and Energy.

"Innovation distinguishes between a leader and a follower." Steve Jobs

However, given the strong performance from the IT sector over the last year and over the last seven years should we be worried about IT company valuations?

"Learning and innovation go hand in hand. The arrogance of success is to think that what you did yesterday will be sufficient for tomorrow." William Pollard

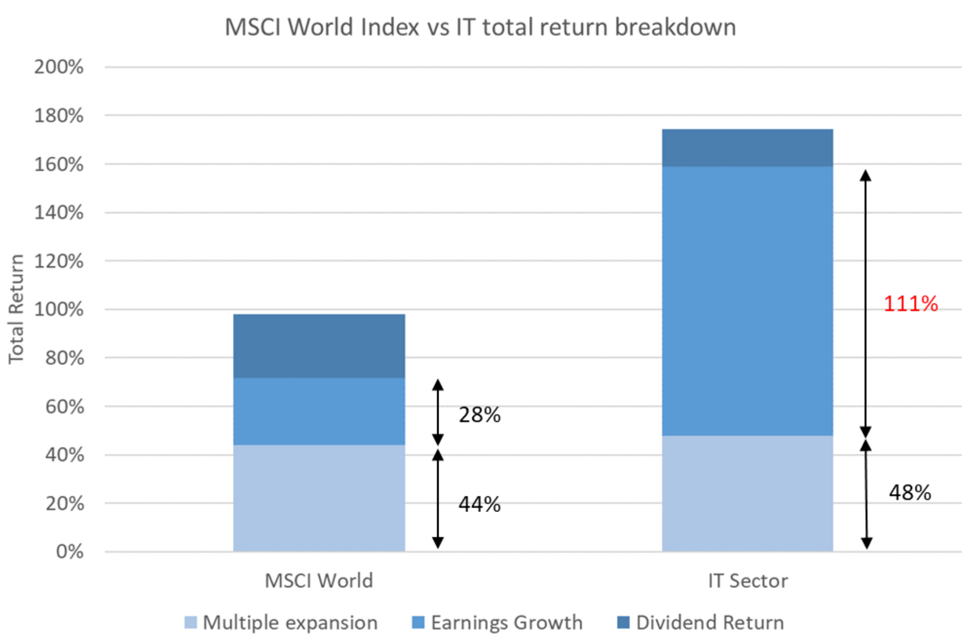
An interesting place to start to answer this question is to look at the performance drivers of the IT sector over the last seven years and compare it to the MSCI World Index.

We can decompose the total return of an equity, sector or index into three parts. Firstly, the return due to a valuation multiple expansion, in this case the price-earnings multiple, secondly the return due to the growth in expected earnings, and thirdly the return due to dividends and their reinvestment.

As you can see in chart 2, when we compare the drivers of the return of the IT sector to that of the MSCI World index, we see that the return due to multiple expansion is very similar for both: 44% for the MSCI World index and 48% for the IT sector.

The main driver of the IT sector outperformance has come from very strong earnings growth. Indeed, earnings forecasts for the IT sector have grown by an impressive 111% over the last seven years, compared to the MSCI World index where it has been only 28%.

Chart 4

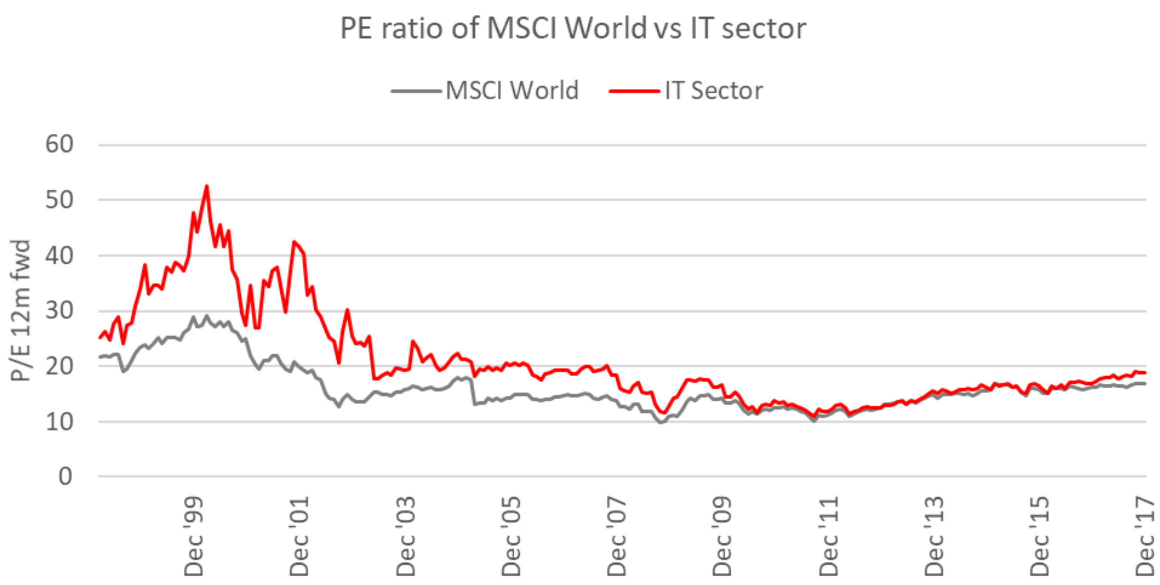


Source: Bloomberg. December 31, 2010 to December 31, 2017.

Given the multiple expansion in the IT sector has been very similar to that of the MSCI World index, arguably we should not be overly concerned about the valuation of the IT sector. If anything should we not be more concerned about the other sectors that are not delivering such impressive earnings growth?

When we look at the valuation of the IT sector and compare it to the MSCI World index and go back 20 years (as far as we can go back), we can see that the IT sector at the end of 2017 traded at a small premium to the MSCI World. Clearly, we are not in the territory of the excessive valuation of the "dot.com" bubble at the turn of the millennium.

Chart 5

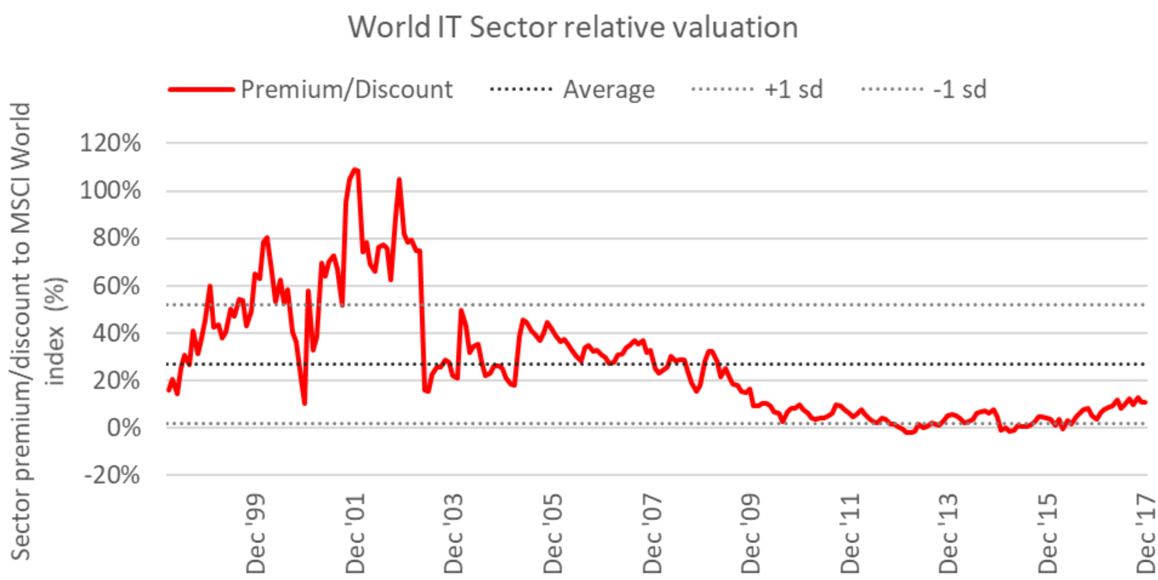


Source: Bloomberg. December 1999 to December 2017.

We should expect the IT sector to generally trade at a premium to the broad index given the historic growth rates of this sector and the potential for future growth in this innovative sector. You might have thought that back in 2010 IT stocks were already expensive relative to the MSCI World Index, but that was not the case as the chart below shows. In December 2010 the IT sector traded at a 10.0% premium to the MSCI World Index, whereas at the end of 2017 it traded at a 10.4% premium. If we look at the premium or discount that the IT sector has traded at relative to the MSCI World index over the last 20 years, the premium at the end of 2017 of 10.4%, is well below the 20 year average of 27%.

Certainly, the sector was looking particularly attractively priced through 2010 to 2015 where it was trading at around one standard deviation below the 20 year average premium, but there is still some way to go until we see IT stocks reverting back to their average premium.

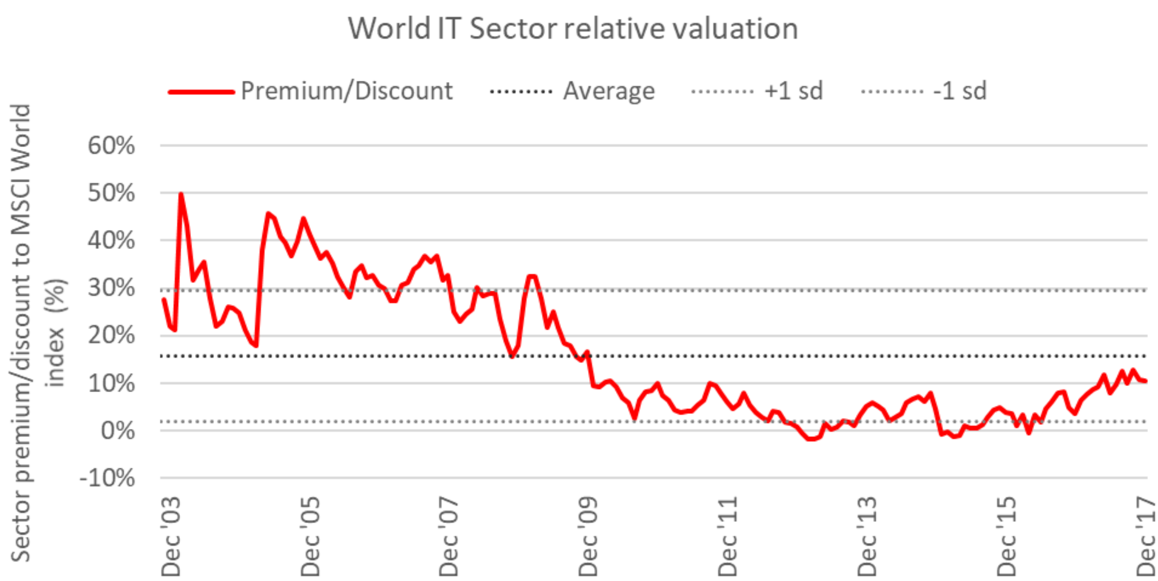
Chart 6



Source: Bloomberg. December 1999 to December 2017.

Even if we look at the same data but strip out the years in anticipation of the dot.com boom, and the hangover of the bust (1998-2003), then the IT sector today trades at its average premium over this period (2003-2017).

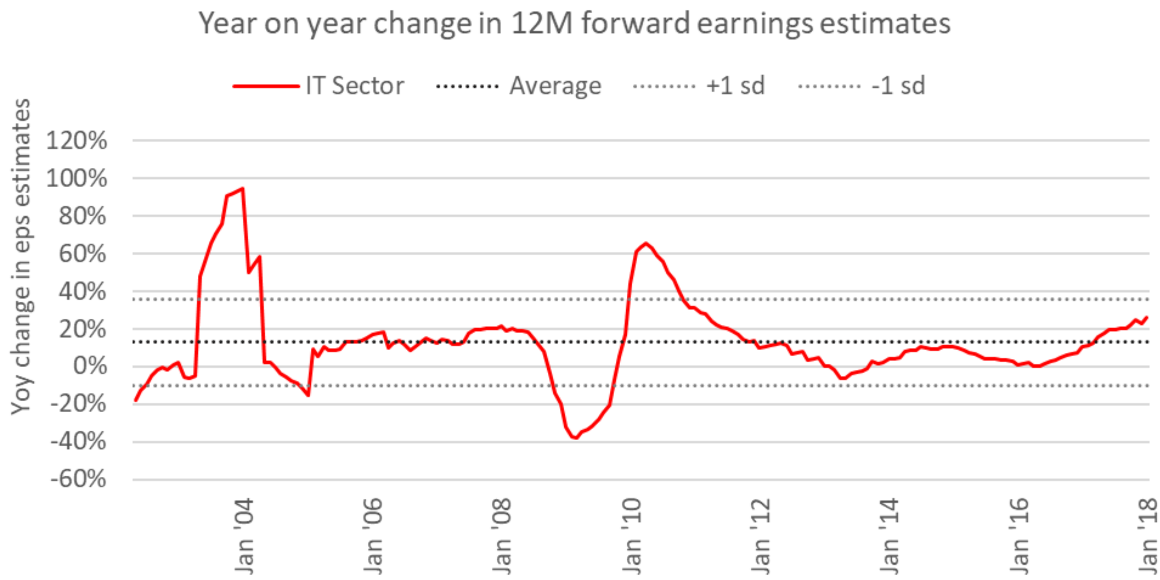
Chart 7



Source: Bloomberg. December 2003 to December 2017.

We were then interested to look at how growth expectations for the sector evolved over the last 20 years. As you can see in this next chart, earnings expectations for the sector have moved dramatically over this period. Expectations around the time of the "dot.com" bubble where clearly far too high and did not last long. The global financial crisis and ensuing recession had a meaningful impact on expectations of earnings growth, but these recovered reasonably quickly. Despite these gyrations in expectations, on average over this period analysts have expected the sector to grow its earnings at 13%. However, analysts currently expect IT sector earnings to grow at a much faster rate of 23%.

Chart 8



Source: Bloomberg. January 2004 to January 2018.

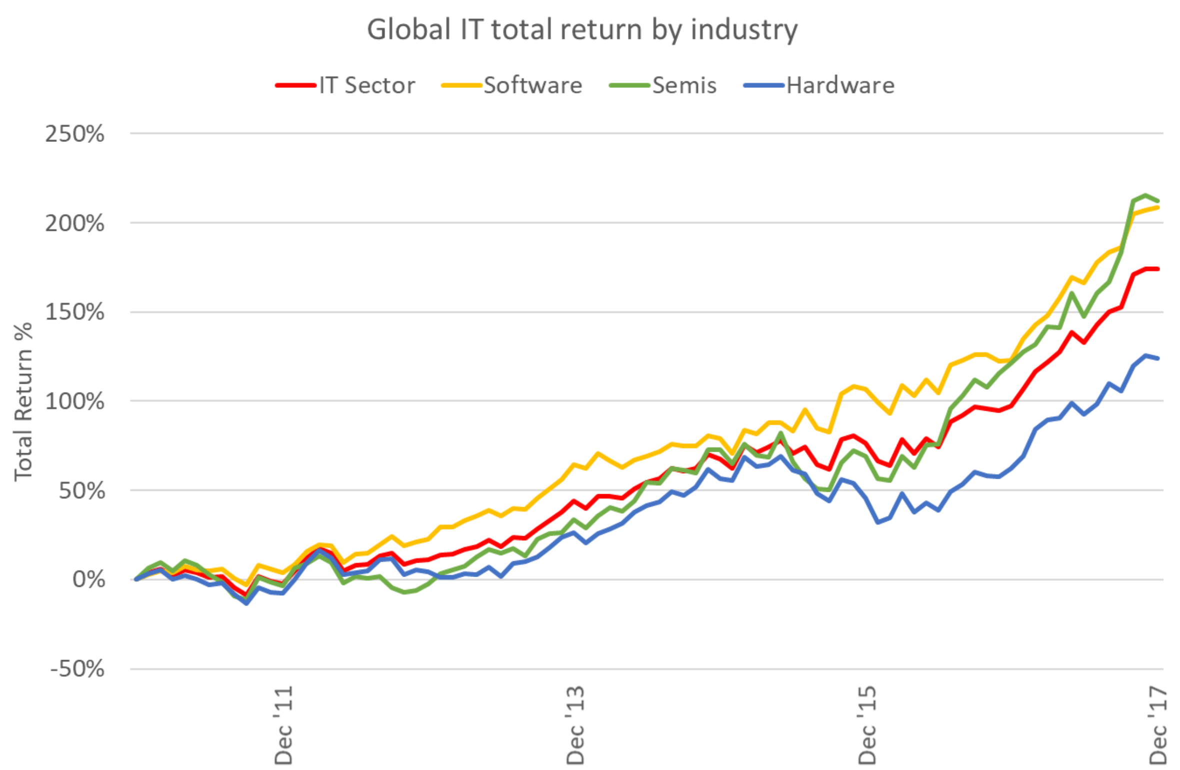
There therefore seems to be little to concern us when we take a broad top down view of the IT sector and compare it to historic norms. In summary:

1. Yes, the IT sector has performed well over the last seven years but this has been driven by strong earnings growth, not a big multiple expansion like the "dot.com" bubble. The multiple expansion of the IT sector over the last seven years has been very similar to the MSCI World Index.
2. IT companies are trading on a multiple which is below the 20 years average premium to the MSCI World Index, with a considerable gap to make up before we are even back to average let alone an above average premium.
3. Currently, analysts expect IT companies to grow their earnings at a faster rate than the 20 year average. This could be an area of concern if we thought analysts were being overly optimistic. However, with a global economy performing well as the US, Europe and China all release positive economic data, and various secular growth themes driving growth in IT, be it big data, internet of things, robotics, virtual and augmented reality, etc., an above average forecast of earnings growth does not feel outlandish.

We then wanted to go a little deeper to consider whether there are any subsectors with excessive valuation within the IT sector.

The IT sector can be split down in a number of different ways but the way we like to look at the sector is by breaking it down into three industries: Software, Semiconductors and Hardware. The chart below shows how the three different industries have performed over the same period. We can see that the Hardware sector has lagged the average, but Software and Semiconductors have been particularly strong.

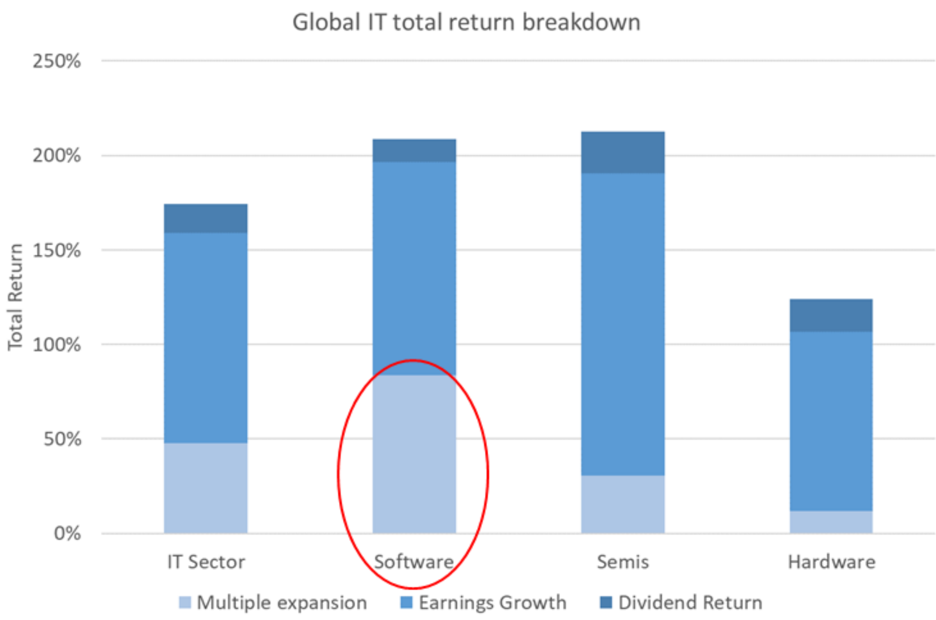
Chart 9



Source: Bloomberg. December 2011 to December 2017.

When we then look at what has driven the performance of these three different sectors we can see again that earnings growth has dominated their returns. However, it is noticeable that it is the Software sector that has seen the largest multiple expansion, while in Hardware and Semiconductors multiple expansion has been even lower than that of the MSCI World index.

Chart 10



Source: Bloomberg. December 31, 2010 to December 31, 2017.

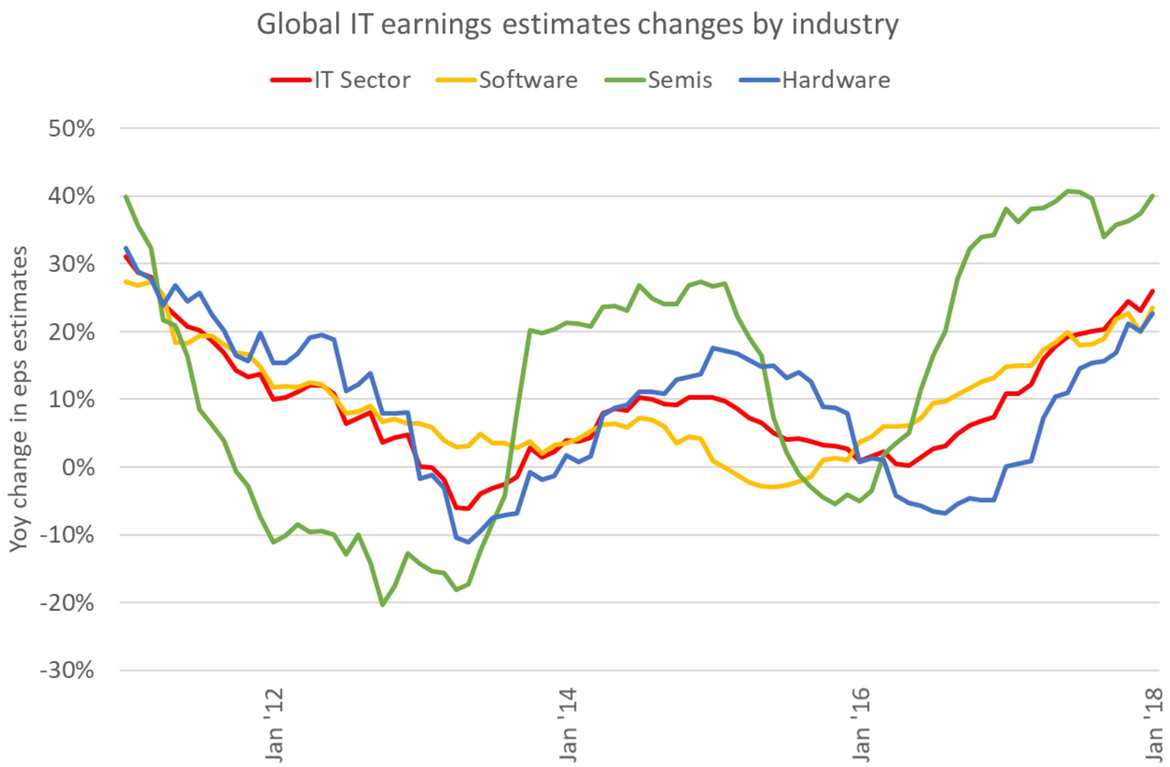
Looking at how valuations have evolved for these industries, it is interesting to note that back in 2010 the three industries traded on very similar multiples, with the semiconductors being the cheapest. However, over the last seven years we have seen a significant re-rating in the Software industry to the point that this industry now trades at a 50% premium to Hardware and Semiconductors.

Chart 11

Source: Bloomberg. December 2011 to December 2017.

If we look at how forward looking expectations of earnings growth have evolved amongst the three sectors, the semiconductors stand out for their wide changes in analyst sentiment. Semiconductors cycles have historically tended to be quite short, as new capacity is brought on line and before long new technologies emerge which require a new equipment cycle and new opportunities for profits. This goes some way to explain why the semiconductor companies tend to trade at a discount to other IT companies.

Chart 12

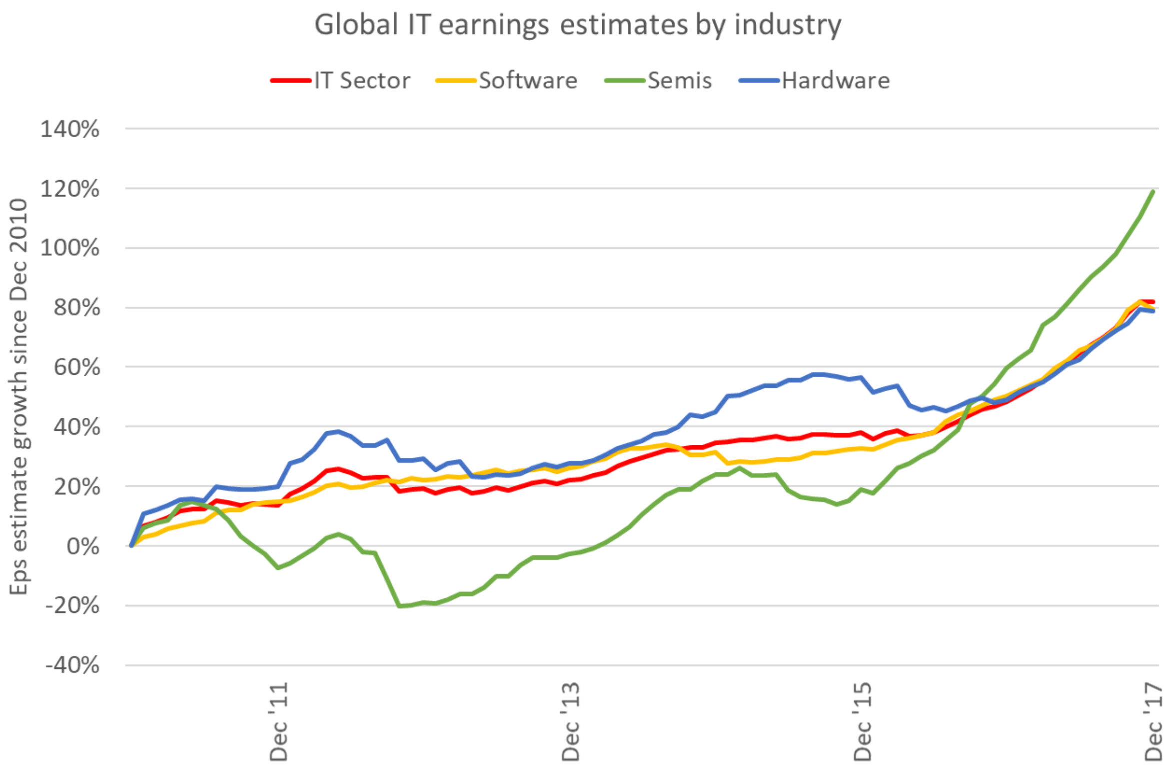


Source: Bloomberg. January 2012 to January 2018.

However, if we look at the cumulative growth in forward earnings estimates over this period we see that despite the semiconductors cycles, it is the semiconductors that have seen the greatest growth in forecast earnings.

Given the industry trades on a multiple of just 15x and earnings look set to continue to grow at a good pace, then this looks like an interesting balance of attractive value and growth. When you consider a number of today's important innovation themes, all demand more sophisticated and faster semiconductors whether it is, big data, artificial intelligence, machine learning, virtual and augmented reality, etc., despite the inevitable cyclicality the medium to long-term outlook looks favourable for these companies.

Chart 13



Source: Bloomberg. December 2011 to December 2017.

This top down analysis largely reflects what we have seen when we have been following our bottom up stock selection process. Indeed the two additions to the portfolio in January (KLA Tencor and LAM Research) are two attractively valued semiconductor companies with attractive growth prospects.

"We always overestimate the change that will occur in the next two years and underestimate the change that will occur in the next ten." Bill Gates

Outlook

The fund has always sought to provide exposure to many of the exciting innovation growth themes that exist and last year the market began to react to the potential of many of these themes. Recent earnings results from many of the companies held in the fund suggest that the growth opportunities are still present and continue to expand, and we are pleased with the way that our holdings have been executing on their growth plans as well as their share price performance. We also hold better quality companies than the broader market. The current portfolio has, on average, more cash than debt on their balance sheets and a cash flow return on investment of 16%, which is almost 40% higher than the broader market.

We do not attempt to predict future market directions, but we feel confident that the strong balance sheets and superior return on capital of the businesses held in the portfolio will serve the fund well over the long term.

Thank you for your continued support.

Portfolio Managers
Dr Ian Mortimer, CFA
Matthew Page, CFA

Analysts
Joshua Cole
Sagar Thanki

Performance

In January, the Guinness Atkinson Global Innovators Fund produced a total return of 5.42% (TR in USD), compared to the MSCI World Index return of 5.31%. The fund therefore outperformed the Index by 0.11%.

Performance

as of 01/31/18	YTD	1 YR	3 YR Annualized	5 YR Annualized	10 YR Annualized	Since inception annualized (12/15/98)
Global Innovators, Investor Class[1]	5.42%	37.47%	15.95%	18.29%	10.82%	8.50%
Global Innovators, Institutional Class[2]	5.43%	37.77%	16.15%	18.41%	10.88%	8.53%
MSCI World Index	5.31%	26.54%	12.48%	12.34%	7.07%	6.26%

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as of 12/31/17	YTD	1 YR	3 YR Annualized	5 YR Annualized	10 YR Annualized	Since inception annualized (12/15/98)
Global Innovators, Investor Class[1]	34.75%	34.75%	12.68%	18.53%	9.29%	8.24%
Global Innovators, Institutional Class[2]	35.07%	35.07%	12.87%	18.65%	9.35%	8.27%
MSCI World Index	23.10%	23.10%	9.91%	12.31%	5.68%	6.00%

Investor class (IWIRX) Inception 12.15.1998 Expense ratio* 1.24% (net); 1.35% (gross)

Institutional class (GINNX) Inception 12.31.2015 Expense ratio* 0.99% (net); 1.38% (gross)

Performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance of the Fund may be lower or higher than the performance quoted. For most recent month-end and quarter-end performance, visit https://www.gafunds.com/our-funds/global-innovators-fund or call (800) 915-6566.

Performance data shown for Global Innovators, Institutional Class (GINNX), prior to its launch date on 12/31/15, uses performance data from the Global Innovators, Investor Class (IWIRX).

*The Advisor has contractually agreed to reduce its fees and/or pay Fund expenses (excluding Acquired Fund Fees and Expenses, interest, taxes, dividends on short positions and extraordinary expenses) in order to limit the Fund's Total Annual Operating Expenses to .99% for the Institutional class and 1.24%for the Investor class through June 30, 2018. To the extent that the Advisor waives its fees and/or absorbs expenses to satisfy this cap, it may seek repayment of a portion or all of such amounts at any time within three fiscal years after the fiscal year in which such amounts were waived or absorbed, subject to the 0.99% for the Institutional class and 1.24% for the Investor class expense cap.

Mutual fund investing involves risk and loss of principal is possible. Investments in foreign securities involve greater volatility, political, economic and currency risks and differences in accounting methods. These risks are greater for emerging markets countries. The Fund also invests in medium and smaller companies, which will involve additional risks such as limited liquidity and greater volatility. The Fund may invest in derivatives which involves risks different from, and in certain cases, greater than the risks presented by traditional investments.

Securities mentioned are not recommendations to buy or sell any security. Current and future portfolio holdings are subject to risk.

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GUINNESS ATKINSON FUNDS

Top 10 holdings for the Global Innovators fund, as of January 31, 2018, are:

1.	NVIDIA Corp	4.03%
2.	PayPal Holdings Inc	3.82%
3.	Continental AG	3.59%
4.	Cisco Systems Inc	3.58%
5.	Samsung Electronics Co Ltd	3.56%
6.	Alphabet Inc – A Shares	3.56%
7.	NIKE Inc	3.53%
8.	The Boeing Co	3.53%
9.	Cognizant Technology Solutions Corp – A Shares	3.49%
10.	Siemens AG	3.49%

For a complete list of holdings for the Global Innovators Fund, please visit https://www.gafunds.com/our-funds/global-innovators-fund

Opinions expressed are subject to change at any time, are not guaranteed and should not be considered investment advice.

Earnings growth is not representative of the Fund's future performance.

MSCI World Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed markets.

One cannot invest directly in an index.

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