



## Market comment: How realistic are return expectations, really?

February 2018

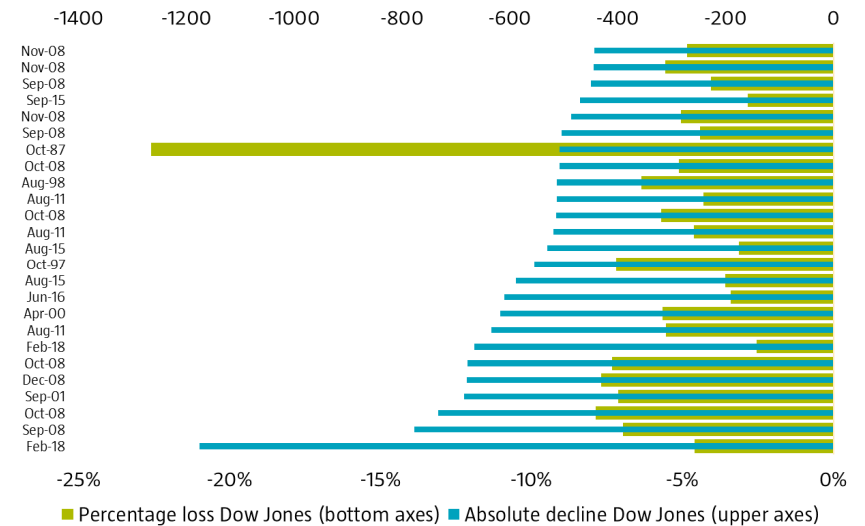
### Yield curve: How realistic are return expectations, really?

The conclusion of our 2018 outlook was that our preferred outcome for the year would be one with bond yields trending higher and volatility in risky assets returning. We had to wait just four weeks to get exactly that. Bond yields were on the up from the start of the year, while stocks started to show the first signs of strains at the end of January, culminating in the biggest ever one-day decline in the Dow Jones Industrial Average Index in the first week of February. This sounds a lot more ominous than it is though: the 1,175 points drop represents a 4.6% decline, barely enough to get it in the top 30 since the Second World War.

The current sell-off seems to have been triggered by a number of factors, including higher bond yields, some concern about future US inflation and the meltdown in the crypto currencies, as well as an overbought stock market. Neither of these seem to be particularly threatening on their own account. With the world economy still showing positive momentum, and with inflation still no big problem, the odds of this developing into a painful long drawn-out correction seem to be small. The fact that high yield bond spreads hardly rose during the sell-off seems to corroborate the idea that this is more technical than fundamental. Having said that, for a lot of people, this is the first unpleasant sell-off in a long time, which can always lead to prolonged selling pressures, as people de-risk.

But let's leave the current volatility in the market for what it is. We would like to highlight two pieces of research that have been published in recent months, raising the interesting question of how realistic the current returns expectations of long-term investors really are. We know this is the central question that we normally ask (and answer) in our annual Expected Returns publication, but we will take a different approach to the subject this time around. We will address the question of if and how it is possible for equities and housing to structurally produce returns in excess of economic growth. Is this a realistic or an unsustainable outcome?

### The biggest drop in absolute terms, not that significant in relative terms

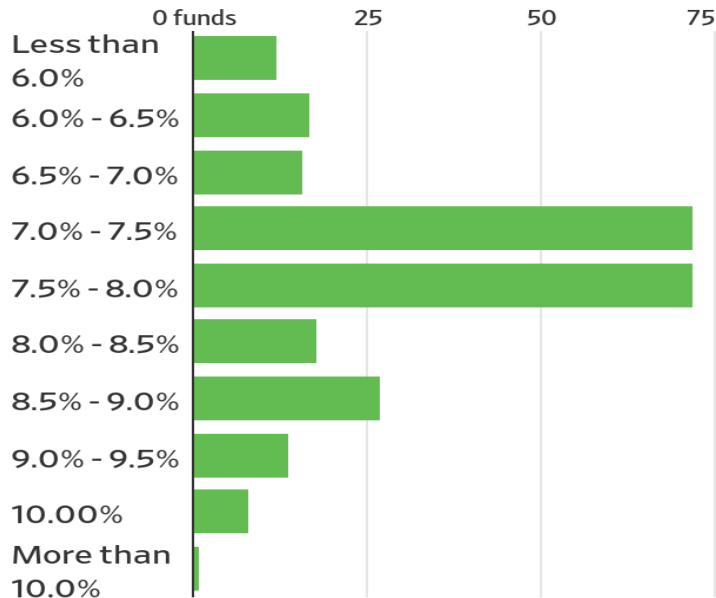


Source: Bloomberg & Robeco

### What to expect?

The first piece of research is best summarized by the table above copied from the Wall Street Journal. The table presents an overview of the distribution of the long-term (10 to 30 years according to the newspaper) nominal return expectations of 230 US public pension funds, based on the research paper from Aleksander Andonov and Joshua Rauh. According to the study, the nominal average expected return is 7.6%, resulting in an expected real return of 4.8%. As can be seen from the table, these averages mask quite a high degree of variation, with a non-negligible number of pension funds expecting a longer-term return north of 8%. As a bit of perspective, looking at the OECD data, the average annual realized return of the US pension providers over the period 2006-2016 has been 1.5% in nominal terms and -0.3% in real terms (see table below). One could be excused in thinking that this number was greatly

### High return Expectations... Number of funds by expected rate of return



Source: <https://blogs.wsj.com/moneybeat/2018/01/19/can-we-be-brutally-honest-about-investment-returns/>

impacted by the 2008-2009 stock market correction, but as it turns out, the average total return on the S&P 500 was 6.9% in the 2006-2016 timeframe. As a second bit of perspective, our own long-term (steady state) nominal return on equities is 7%, while we expect bonds to yield 4.25%. In other words, unless you resort to leverage, this 7.6% return will not be feasible according to our own estimates. According to the study, on average around 25% of the portfolio under review is allocated to bonds and cash, while the remaining 75% is allotted to equities, real assets and hedge funds. As such, these portfolios are more aggressively positioned than what we are used to in Europe, but you still need a pretty optimistic view of the world to get to a 7.6% longer-term return. Recent performance clearly does not support these kinds of return expectations.

### ...do not match with the poor past results...

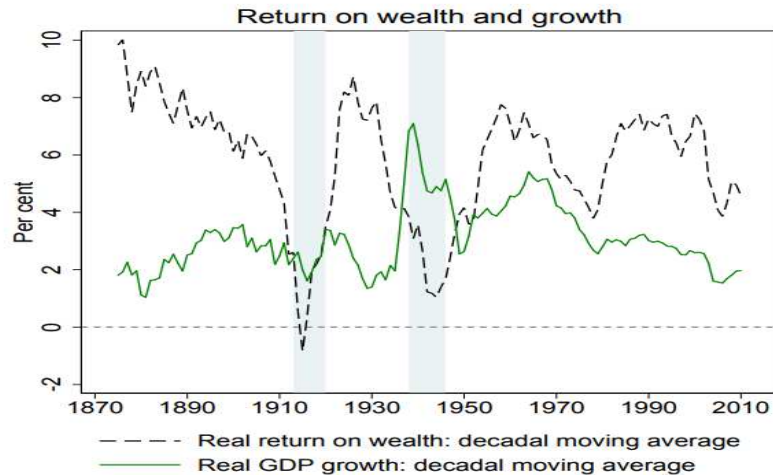
#### A. Selected OECD countries

Country	5-year average		10-year average	
	Nominal	Real	Nominal	Real
Canada	8.3	6.9	5.2	3.5
Netherlands	8.2	6.7	5.5	3.8
Hungary	8.1	6.6	..	..
Sweden	6.9	6.5	..	..
Belgium	7.8	6.5	4.6	2.6
Israel	6.4	6.0	5.5	3.6
Slovenia	6.7	5.9	7.0	5.2
Australia	7.7	5.8	5.3	2.9
Finland	6.4	5.3	..	..
Switzerland	4.9	5.3	2.5	2.4
Iceland	7.9	5.2	5.5	0.3
Denmark	6.0	5.1	5.4	3.8
Norway	6.9	4.6	5.1	2.9
Spain	5.0	4.2	..	..
Portugal	4.7	4.1	2.4	1.2
Luxembourg	5.0	3.9	2.7	0.9
Chile	7.3	3.9	5.5	1.8
Austria	5.3	3.7	2.5	0.5
United States	5.1	3.7	1.5	-0.3
Italy	4.2	3.5	3.0	1.5
Estonia	4.3	3.2	1.1	-1.8
Latvia	3.9	3.1	2.7	-0.6
Korea	3.5	2.3	4.2	1.8
Mexico	5.7	2.3	5.8	1.8
Slovak Republic	2.4	1.7	1.3	-0.4
Turkey	8.3	0.5	10.6	2.3
Czech Republic	1.5	0.3	1.9	-0.2

Source: <http://www.oecd.org/pensions/private-pensions/Pension-Markets-in-Focus-2017.pdf>

So where could this return come from? According to the Wall Street Journal, these expectations are based on long-run average nominal returns on cash (3.2%), bonds (4.9%), real estate (7.7%), hedge funds (6.9%), publicly traded stocks (8.7%) and private equity funds (10.3%). Given the continued decline in productivity seen in recent decades, as well as the popularity of the secular stagnation school of thought, it raises the question of how realistic the return expectations for the risky parts of the portfolio really are. Returns must be earned, right? Surely, in the longer run, there must be a link between growth and returns?

### Wealth returns have structurally outstripped growth...



### ...which is completely thanks to risky asset returns



Source: <https://www.ineteconomics.org/uploads/papers/Jorda-Knoll-Kuvshinov-Schularick-Taylor-The-Rate-of-Return-on-Everything.pdf>

### Excess returns

The answer to that question partly comes from the second (unrelated) piece of research, entitled [The Rate of Return on everything, 1870-2015](#). In this study, the authors look at the historic track record of the nominal and real returns of 16 developed nations since 1870. Unlike what the title suggests, this study does not look at 'everything': it does not include returns of assets like gold, land, High Yield, currencies, credits, Emerging Market Debt, art, etc.; the main added feature compared to previous research is the inclusion of the real estate returns. Still, it is an interesting read, with numerous useful breakdowns and charts. One of these charts is related to the question that we have just asked, looking at the link between growth and return on a 10-year moving average. The picture is clear: with the exception of the two decades that marked the world wars, returns have been quite clearly in excess of the underlying real growth rates of the 16 countries. Overall, there does not appear to be much of a link between underlying growth and returns.

The average real growth rate over the period was 3.1%, while the diversified portfolio return was 5.9%. Looking at the breakdown of this portfolio, it is clear that all of this so-called 'excess' return came from the risky assets: cash (1.3%) and bonds (2.5%) on average lagged the growth of the real economy, while stocks (7.0%) and real estate (6.7%) exceeded it. Based on these historic returns, the 4.8% assumed real return of pension funds all of a sudden does not appear to be too outlandish after all.

This outcome raises a number of questions. How is it possible that returns in risky assets structurally outstrip growth? Is this a logical, stable outcome, or has it been an anomaly – lasting over 150 years in that case – that is bound to be reversed in the future? And wouldn't it be logical to assume that in the current search-for-yield environment, future returns would be depressed? Doesn't the economic law of supply (stable) and demand (higher) for investments predict that all this wealth will lead to lower returns? How does it all add up? We will address these issues below.

### GDP/returns gap

To start with a bit of a nerdy observation, most of the numbers presented in the study appear to be based on simple average returns, not the (more logical) geometrical returns<sup>1</sup>. As the authors correctly point out, the simple average return is always larger than the geometric return, the difference increasing with the volatility of the sequence of returns. In normal English: if stock returns are more volatile than, say, economic growth numbers, it means that the simple average return in equities will show a level of 'excess' returns that may in fact not have been there. As we do not have the underlying data, it is difficult to assess how big this impact is. However, based on the independent Shiller database that looks at the same timeframe (1870-2015), we can see that the difference between the simple average of real returns of US stocks (8.3%) and the more correct geometrical return (6.8%) is quite substantial. As we do not have comparable data, we do not know how big the equivalent lowering of geometrical GDP growth averages has been. Based on the lower volatility in GDP data, we would expect it to be much smaller. Probably the key takeaway here is that the past real return in equities has been lower than the earlier mentioned 7% for all 16 countries, and is probably closer to 5.5%. This still means that there is a gap with GDP growth, of course.

Is this a sustainable situation? To start with the positive news, there are valid arguments why returns for equities can structurally outstrip the growth of the underlying economy. To a certain extent this is a stock versus flow argument: the level of earnings is the stock factor, while (GDP) growth is the flow part. An example can clarify this. Take a company that has a steady turnover and a profit margin that is equally steady over a longer period. In that case, its earnings will also be steady in the longer run. The

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1) As a simple example: if a stock index starts at 100, declines by 60% (to a level of 40) and rebounds by 60% ( $= 40 * 1.6 = 64$ ), the geometrical return will be -20% ( $= \sqrt{64/100} - 1$ ), while the average return (-60%, +60%) will be 0%.

owner of this firm, or the shareholder, will therefore get a steady return in the form of dividends. In this world there is zero growth but still a steady positive return. One could of course argue (as economic theory does), that this is not a stable situation: this steady return will attract other companies which will eventually erode the profit margin. In the real world, it is clear that these profit margins are pretty stable, with barriers to entry limiting the level of profit erosion. This can be deducted from the fact that dividends have indeed played an important and stable role in explaining the 'excess' return made in equities and real estate in the past. Looking at the Shiller database, the total geometrical nominal return for the US has been 8.9% since 1871, while the average annual dividend yield over that timeframe has been 4.4%. As such, this seems to be a stable reason to expect returns in excess of growth, which can be seen as compensation for the risks involved with equities compared to risk-free assets such as bonds and cash.

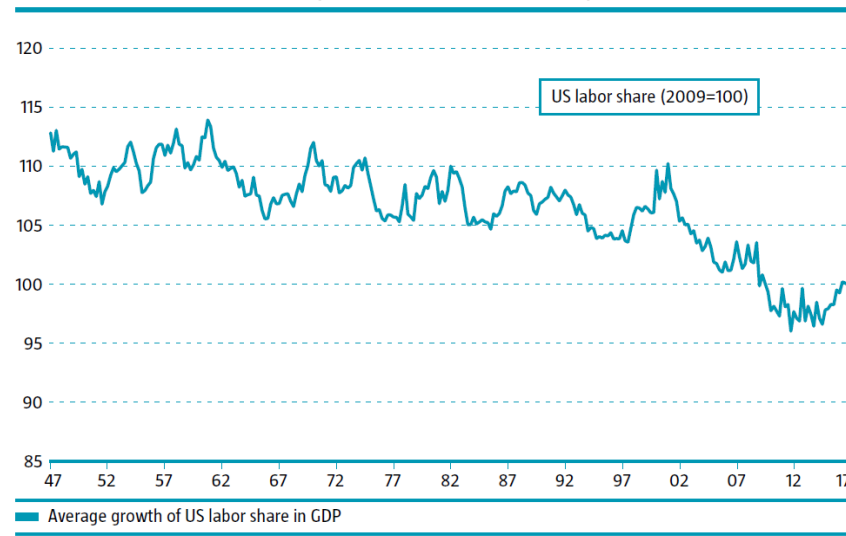
The story doesn't end there however. Stock prices have also risen more than the underlying growth rate of the economy, adding to the excess return recorded in the past. From a theoretical perspective, this sounds less sustainable. As long as earnings are roughly stable as a percentage of the total economy, and as long as there is some longer-run price-earnings equilibrium that investors are willing to pay, stock markets should roughly track GDP growth, right?

Not necessarily. For one thing, companies with a stock market listing represent a subset of the total economy, and a small part at that. Small and medium enterprises along with governments are a substantial part of the overall economy, and it is clear that this leaves room for a structural mismatch between earnings growth (of listed companies) and economic growth. Higher levels of leverage, and exposure to growth outside the 16 reported countries (the emerging markets), are all factors that can lead to higher earnings growth compared to GDP growth. Doesn't this however imply that in the long run, listed companies dominate the total economy? Not necessarily, as there are also dilution effects taking place. For one thing, earnings are diluted by taxes, reducing the potential growth for

shareholders. Also, listed companies issue new shares on a regular basis (either to finance acquisitions, or as part of payments schemes), which dilutes existing shareholders' claim to the earnings growth. A final point to make is that listed companies are not exactly a stable group of companies: the weight and composition of stock markets constantly changes. Young, fast-growing companies get added, while old, slow-growing companies may disappear, or lose importance. This dynamic means that the earnings per share development can deviate from the underlying growth.

The fact that earnings can indeed outpace the economy over longer periods of time is clearly reflected in the development of the so-called labor share of the US economy (see chart). Over a period of 70 years, the labor share has structurally declined, indicating that a bigger slice of the pie has gone to capital. Whether this is a sustainable outcome remains to be seen.

### Labor has been at the losing end, in favor of earnings

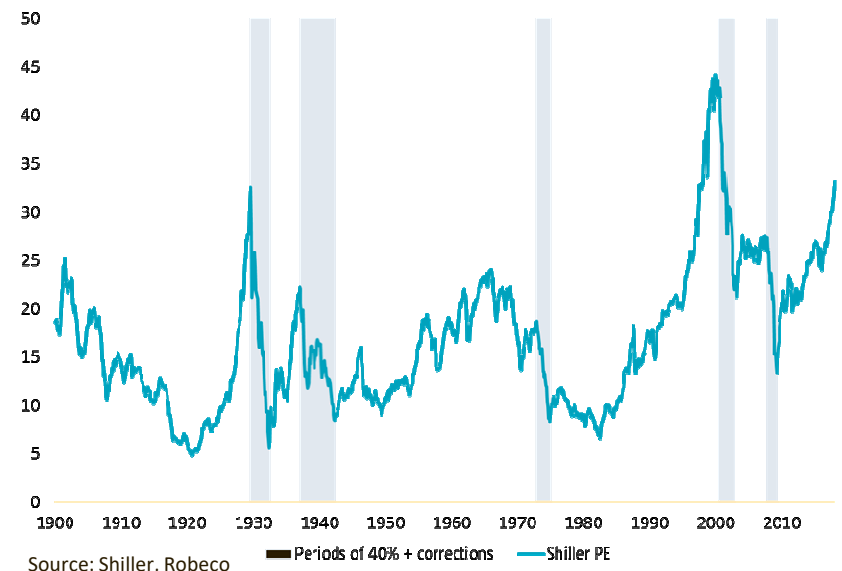


Source: Bureau of Labor Statistics

The second assumption, the long-term equilibrium PE level, is also not supported by the numbers. Looking at the Shiller database, starting from a PE level of 11x back in 1870, stocks are currently trading at 23x. This has certainly not been a straight line up – stock markets are way too volatile for that – but we only need to look at the Shiller CAPE to see that stocks have structurally become more expensive over time.

And here is of course the link with the rise of wealth, and the increased pot of money seeking returns. More wealth depresses the returns that can be made in the markets, all else being equal. The process through which this lower future return is 'created', if you will, is by assets being priced higher and higher. You only need to look at the very low yields that we currently see in the bond market to make the point: these low future returns have come on the back of above-average returns as bond prices were bid up. You see the same process in real estate and equities: you get above-average returns on your investment as stocks and houses are being bid up, but this leads to a reduction in future dividend yield or rental returns.

### Stocks have structurally become more expensive



Source: Shiller, Robeco

Which brings us back to where we started: dividends being an important part of the excess return we have seen in the past. As stated, the long-term dividend yield has been 4.4% for the US, but if we look at the current dividend yield of the S&P 500, this has declined below the 2% level. Given the importance of dividends in the 'excess' return, it is pretty safe to say that from this starting level, one should not expect the same returns that have been reached in the past.

All in all, we indeed think that the return expectations of US pension funds are too optimistic. For one thing, stock markets have been supported by the very earnings-friendly environment, a trend that cannot continue indefinitely. More important, given the importance of dividends in the explanation of the 'excess' return, the much lower dividend yields that we currently see will leave their mark on future returns as well.

### Changes in the portfolio

During the January rally we reduced our risk profile by lowering our exposure to equities, while at the same time building an underweight position in high yield bonds. Following the sharp sell-off in early February, we effectively reduced our equity position to neutral by allocating mostly to cash. This should be seen as a temporary measure, as we expect to re-enter the stock market at a later stage.

	Portfolio	BM	active	previous
Equities Developed Markets	25.0%	25.0%		6.0%
Equities Emerging Markets	5.0%	5.0%		
Real Estate Equities	5.0%	5.0%		
Commodities	5.0%	5.0%		
Core Gov Bonds 1-10	16.0%	20.0%	-4.0%	-8.0%
Core Gov Bonds 10+	6.90%	7.5%	-0.6%	0.0%
Investment Grade Corp Bonds	20.0%	20.0%	0.0%	0.0%
High Yield Corp Bonds	1.0%	5.0%	-4.0%	-2.0%
Emerging Market Bonds LC	9.0%	5.0%	4.0%	4.0%
Cash	7.10%	2.5%	4.6%	0.0%
EUR/USD	2.0%	0.0%	2.0%	-3.0%
EUR/JPY	0.0%	0.0%		3.0%
EUR/GBP	0.0%	0.0%		
EUR CASH	-2.0%	0.0%	-2.0%	0.0%

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