



Multi-asset investing at UOB Asset Management: Two decades of commitment to meeting clients' needs

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UOB Asset Management's investment philosophy behind multi-asset investing is based on deploying rigorous research targeting fundamental and systematic factors, to design solutions that can navigate through good times and bad. By diversifying and actively managing risk across the investment horizon, the firm seeks to deliver consistent outcomes to meet the increasing and changing demands of clients.

Over the last two decades, our approach has evolved to keep pace with changing economic and financial conditions. From basic dual-asset portfolios in traditional 60-40 equity-fixed income allocation, our multi-asset solutions have grown in sophistication to include portfolios that consist of multiple asset classes with active use of derivatives for hedging and overlay for efficient portfolio management. Here we take a look at how our strategies have developed over the various eras.

Overview: A brief history of time

Multi-asset investing involves constructing portfolios that hold investments in more than one asset class. The benefit of doing this, based on Harry Markowitz's modern portfolio theory (MPT), is that a portfolio's returns and risk can be optimised, by effective diversification.

The widely-accepted theory on portfolio management propounds that it is possible for investors to construct an 'efficient frontier' of optimal portfolios offering the maximum possible expected return for each given level of active risk. This is based on the premise that each asset class has different risk and return characteristics and when put together, the portfolio's total return and risk are not simply the sum of the individual asset returns and risk but determined also by the relationship between the various assets. Using statistical measures such as variance and correlation, an individual investment's return is less important than how it behaves in the context of an entire portfolio. This means that investors can reduce the risk of their portfolio by correctly diversifying or allocating assets in multiple asset classes. For example, a particular asset when held in isolation may offer high returns, but a very high risk. However, when added to a portfolio of lower return lower risk assets, it could boost return, and at the same time lower risk due to correlation benefits.

Besides stocks and bonds, multi-asset portfolios may also include real estate investment trusts (REITs), derivatives such as currency forwards and futures for hedging, and a myriad of alternative assets such as hedge funds, private equity.

Our approach to multi-asset investing begins with our strategic asset allocation (SAA), which takes into account longer term fundamental considerations about asset class returns, risk and correlation. In addition, we also adopt more short-term dynamic or tactical asset allocation (TAA) approach to try to capture risk premia which is driven by prevailing fundamental conditions and technical factors asset behaviour (asset pricing, risk and correlation). In addition we utilise systematic tools including: target risk triggers and introduce as well as risk budgets to monitor and manage downside risk.

A historical perspective

Economic and market conditions have gone through various cycles and our investment strategies have evolved with the times and shifting client goals. At the start of our multi-asset investing journey in the 1990s, during a time of strong growth in the global economy and surging stock markets, a traditional balanced relative return portfolio consisting of 60 per cent equity and 40 per cent fixed income served investors well. Then came the 1997-98 Asian Financial Crisis and the dot-com bust of 2000 when equities posed both a higher risk and return challenge where it was yielding low or even negative returns but with high risk. Investors sought greater diversification to reduce risk.

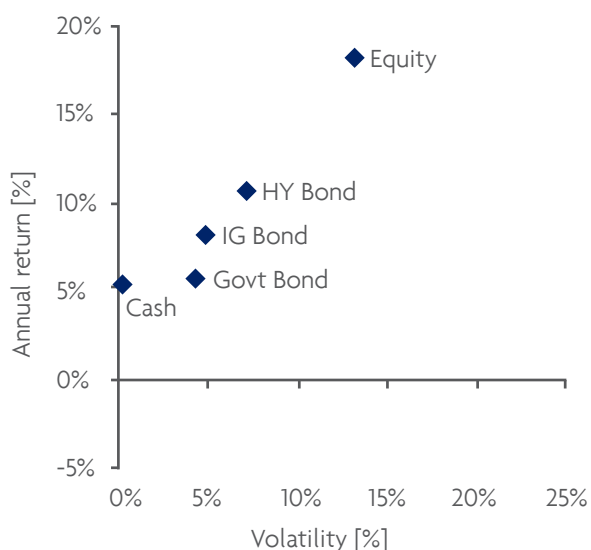
Economic conditions by era (US)

	1990s	2000s	2010-15	2015-present	Latest
Gross Domestic Product (GDP) growth - nominal	5.6	3.9	4	3.8	5.5
Industrial production	3.7	-0.1	2.6	1	3.9
Consumer Price Index (CPI) inflation	3.2	2.1	1.8	2.1	2.2
Nonfarm payrolls (year-on year)	1.8	0.2	1.2	1.7	1.8

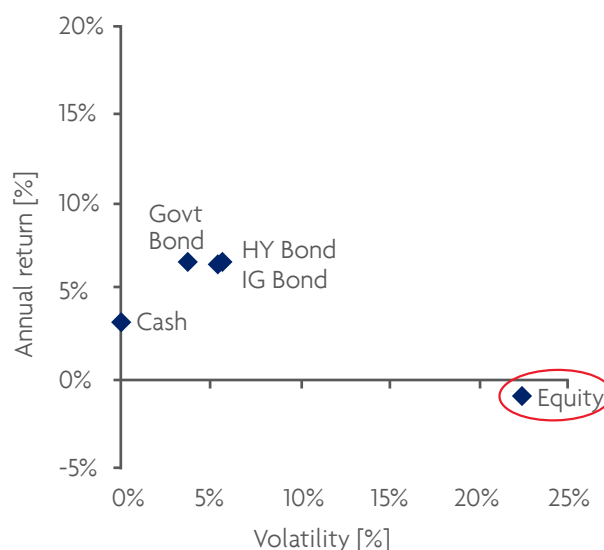
Market conditions from 2000 (US)

							S&P 500	
	Core CPI	3 month Labor	2 year US Treasury Yield	10 year US Treasury Yield	US IG Credit	US HY Credit	Dividend Yield	Earnings Yield
2000-2007	2.2	3.6	3.7	4.7	5.2	9.9	1.6	5.1
2008-2016	1.8	0.7	0.6	2.6	2.8	8.3	2.2	6
2017-present	2	1.8	2	2.6	2.9	6.1	1.9	4.8
Latest	2.2	2.8	2.5	2.7	3.3	7.5	2.3	5.7

1990s

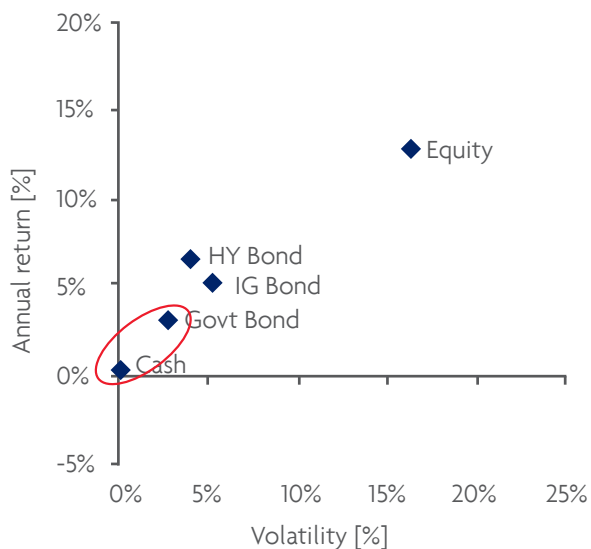


2000s

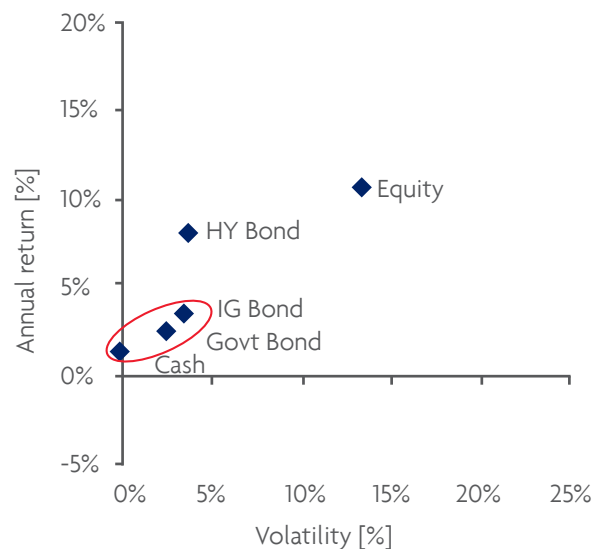


The recovery after the burst of the technology bubble in 2000 saw a boom in the real estate and services sectors in the US. However, the proliferation of sub-prime mortgages by the mid-2000s eventually led to the Global Financial Crisis (GFC) of 2008. In a bid to pull the economy out of recession, global central banks lowered interest rates and loosened monetary conditions. The period from 2008 to the present has been marked by low rates. This presented a returns problem for low risk assets. By the early 2010s, lower risk assets had a real return problem with some developed market government bonds seeing negative real yield. By the mid-2010s, even modest risk assets had a real return problem as financial repression set in.

2010-15

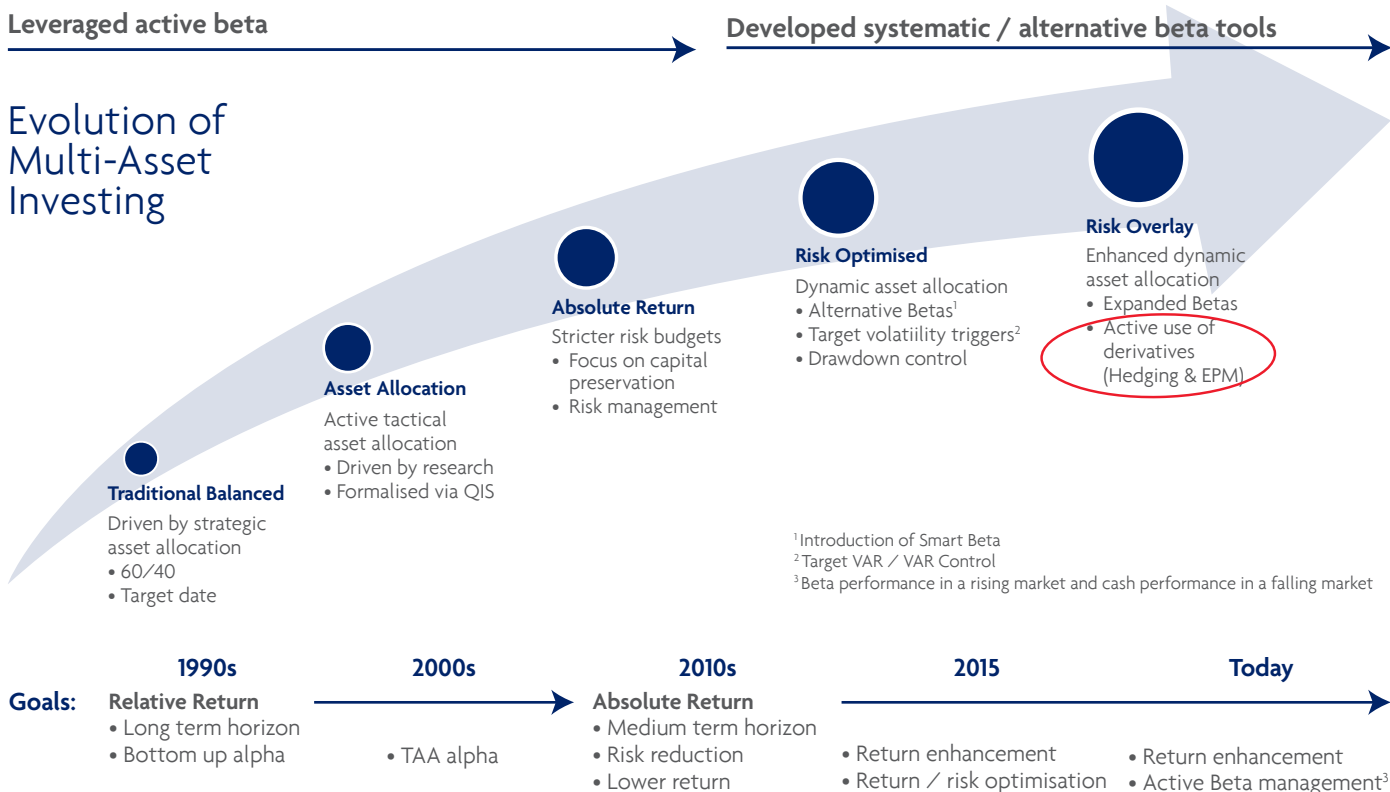


2015-present



Our multi-asset investment approach evolved to meet those challenges. As client investment goals shifted towards absolute return objectives with stricter risk controls and a focus on capital preservation, so too did our strategies. More emphasis is now placed on risk management, risk budgets with an eye on tactical asset allocation to protect principal (de-risk) during periods of uncertainty. Derivatives are more actively used for hedging and efficient portfolio management and we are developing systematic and alternative beta tools in search for diversification to enable greater returns at lower risk.

Evolution of multi-asset investing



Acronyms
QIS: Quarterly Investment Strategy
EPM: Efficient Portfolio Management
VAR: Value at Risk
Source: UOBAM, 31 January 2019

1990s: Everything is awesome

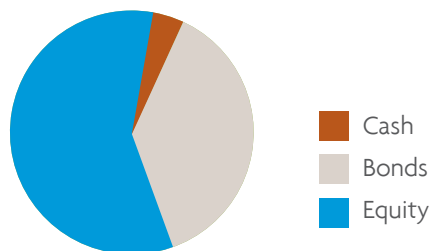
The 1990s was a time of strong economic growth with steady job creation, low inflation, rising productivity, economic boom, and a surging stock market. These resulted from a combination of rapid technological changes and sound monetary policy by global central banks.

US Economy – 1990s

	Average	Period End	Min	Max
GDP growth - nominal (%)	5.6%	5.5%	2.8%	7.6%
Industrial production (%)	3.7%	5.3%	-3.5%	8.7%
CPI inflation (%)	3.2%	1.9%	1.9%	5.6%
Nonfarm payrolls (y-o-y%)	1.8%	2.5%	-1.5%	3.5%

Notably, the Asian Financial Crisis of 1997-98 impacted much of newly industrialised Asia, known then as the ‘Tiger Economies’. The stock markets and currencies fell by up to 70 per cent. The aftermath of the crisis saw an increased demand for diversification of risk. We responded by starting to build out our capabilities to invest outside Asia.

Our typical balanced portfolio with a longer-term horizon was driven by strategic asset allocation (SAA) and focused on two assets – bonds and equity. The investment objective was relative return with portfolio managers actively seeking bottom-up alpha to outperform markets. It had a heavy concentration in domestic assets, typically 60/40 allocation in favour of equities. We did however, launch some target date strategies with a bit more diversification that utilised glide path algorithms to manage risk towards a future target maturity.



2000s: Bubble, bubble, toil & trouble

The recession in the early 2000s saw a decline in economic activity which mainly occurred in the developed countries – in the European Union in 2000-01 and the United States in 2002-03. This was followed by a boom in the real estate and services sectors in the US in the mid-2000s which led up to the Global Financial Crisis of 2008.

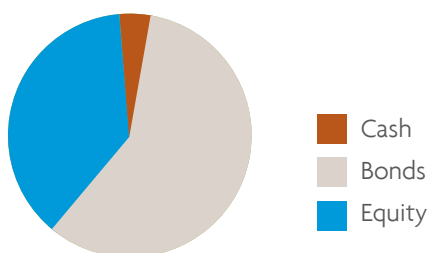
US Economy – 2000s

	Average	Period End	Min	Max
GDP growth - nominal (%)	3.9%	4.2%	-3.1%	7.1%
Industrial production (%)	-0.1%	-2.8%	-15.3%	4.6%
CPI inflation (%)	2.1%	0.8%	0.6%	2.9%
Nonfarm payrolls (y-o-y%)	0.2%	-3.8%	-5.0%	2.2%

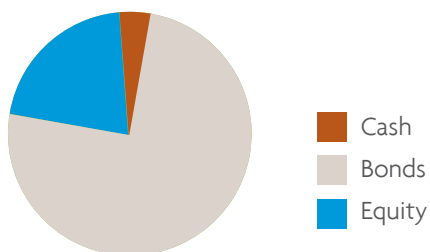
We saw two bubbles that both burst spectacularly in that decade. The tech bubble popped in 2000, while the US housing bubble collapsed in 2008. With that, a trend emerged of clients increasingly targeting more stable outcomes with lower allocation to riskier assets and greater diversification. Absolute return-oriented solutions gradually gained prominence such as our capital protected strategies.

In the early 2000s our multi-asset strategies were still somewhat anchored to relative return objectives, but there was a greater emphasis on short-term tactical asset allocation to add value. There was also a decline of home bias as investors sought greater diversification to reduce risk.

A typical portfolio with a longer-term horizon would have strategic asset allocation (SAA) that was driven by research and formalised at our quarterly investment strategy meetings. There was also an overlay of shorter-term active tactical asset allocation (TAA) that was dependant on market conditions, where allocation would deviate from the SAA by up to +/-10 per cent to capture alpha. Allocation to equities was modestly reduced, with an increased fixed income proportion. Geographically, the bias was still towards domestic assets, though with increasing diversification. Overall, there was an increased emphasis on total returns.



With a more risk-averse portfolio, the equity exposure was further reduced and diversified, while the increased fixed income exposure was mainly in domestic assets (or US dollar assets with foreign exchange risk mitigation). The emphasis was on absolute return with a shorter-term horizon, and a focus on risk control. While asset allocation was similarly driven by the fundamental research view, there was a focus on downside risk with a drawdown control process.



Early-2010s: Policy support and a rising tide

The early 2010s was a period of recovery following the Global Financial Crisis. The Obama administration passed the American Recovery and Reinvestment Act of 2009, pushing out US\$830 billion of fiscal stimulus. This coupled with expansionary monetary policy helped to kick-start a long period of economic expansion.

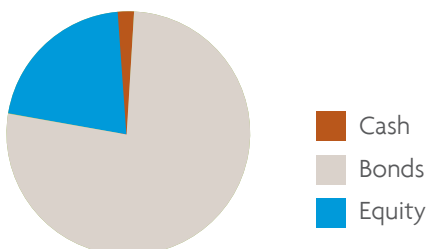
US economy – 2010-15

	Average	Period End	Min	Max
GDP growth - nominal (%)	4.0%	2.9%	3.0%	5.2%
Industrial production (%)	2.6%	-4.0%	-4.0%	8.5%
CPI inflation (%)	1.8%	2.1%	1.6%	2.3%
Nonfarm payrolls (y-o-y%)	1.2%	1.9%	-3.8%	2.3%

Economic performance globally diverged between the developed and developing world. In general, low interest rates and deflationary pressure enabled investors to generate real returns across most asset classes.

Our multi-asset investing strategy became more goal-oriented with an absolute return outcome focus. There was a greater emphasis on diversification and risk control, resulting from increased risk aversion after the GFC. Capital preservation rose in importance and we introduced risk budgets to aid in our portfolio management process. Clients continued to focus more on stable absolute return objectives, but gradually started to add risk due to low real returns – a lagged effect of financial repression. We introduced Value-at-Risk (VaR) and drawdown-controlled strategies, along with Smart Beta portfolios.

A typical modest risk-averse portfolio had an absolute return focus with a medium-term horizon. The investment objective was total return, with lower return expectations but significant risk reduction. There was a stricter emphasis on risk budgets with a focus on capital preservation and stringent risk management. The portfolio would typically have greater diversification for risk optimisation with a meaningful reduction in risk via a pared down equity allocation and the use of smart beta solutions for the riskier exposures (equity). Risk monitoring and oversight was beefed up by both the front office and risk and performance teams.



Post-2015: The hunt for yield

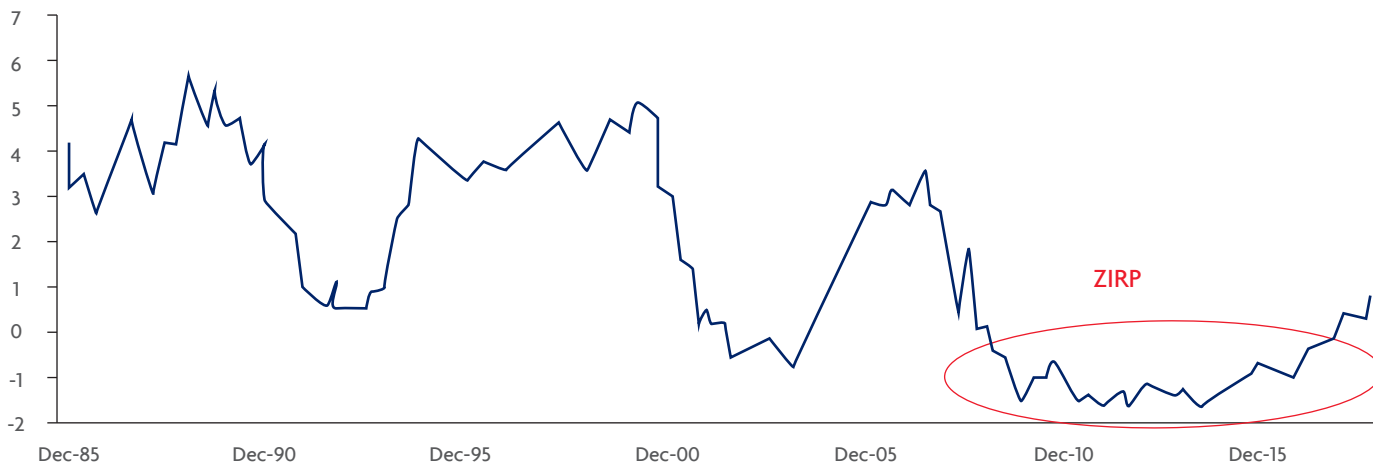
As economic expansion continued with prolonged low interest rates, the hunt for higher returns led to an acceptance of increased risk. Multi-asset investing strategies remained goal-oriented and absolute return focused. But the protracted effects of quantitative easing (QE) led to greater risk tolerance. At the same time, there was no let-up in risk monitoring with greater demands on risk management.

The US Federal Reserve (Fed) had cut interest rates rapidly and embarked on QE to boost liquidity by expanding its balance sheet in the aftermath of the GFC when the financial system seized up and liquidity dried up. Eventually, real interest rates turned negative. As the 3 month London interbank rate (Libor) net of US core consumer price index (CPI) inflation slipped below zero, returns on risk-free assets turned negative. This zero interest rate policy (ZIRP) played out elsewhere as well, with other global central banks such as the European Central Bank similarly cutting rates and enacting QE to boost their economies.

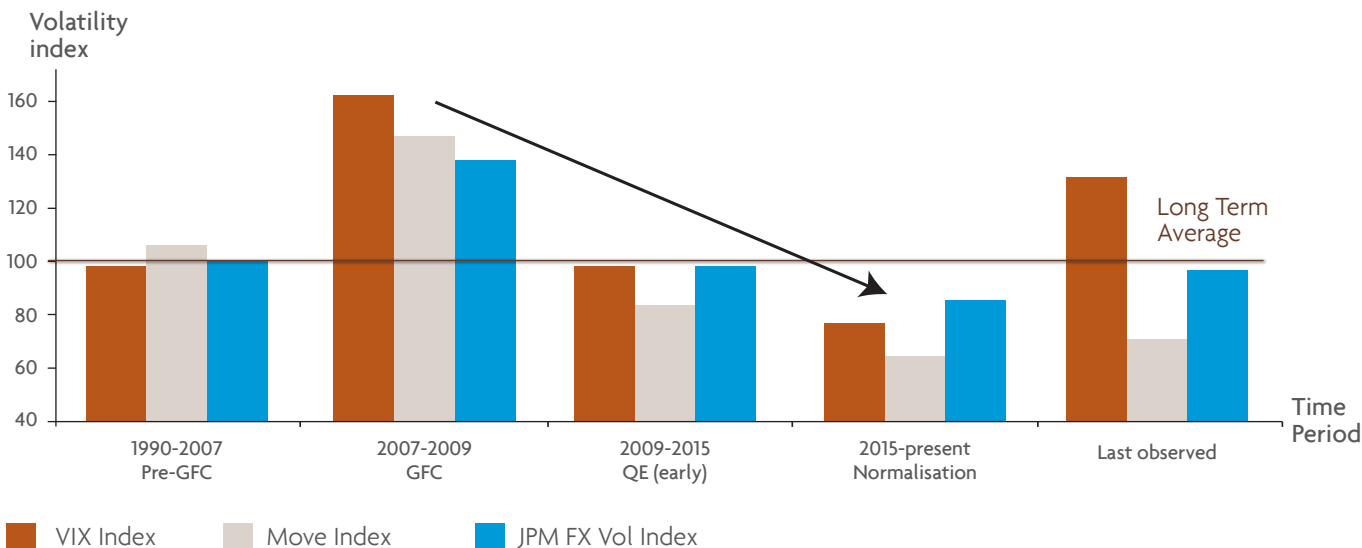
Consequently, negative real rates drove down volatility with risks suppressed. Various volatility measures such as that for equities (CBOE's VIX Volatility index), US Treasuries (Merrill Lynch Option Volatility Estimate or MOVE index) and foreign exchange (JPM FX volatility index), which had spiked at the height of the GFC, fell to pre-crisis levels and settled well below that.

Real interest rates turned negative post-GFC

3mth Libor – US Core CPI (%)



Volatility dived as real rates turned negative post-GFC



With real rates being negative, yields on various asset classes also mostly fell to way below the normalised levels of the 2000-07 period. Yields on US corporate bonds – both investment grade (IG) and high yield (HY) – arguably were not sufficiently pricing in the risks associated with these assets. With the economy on the mend, financial repression pushed investors’ strategic asset allocation to seek higher risk.

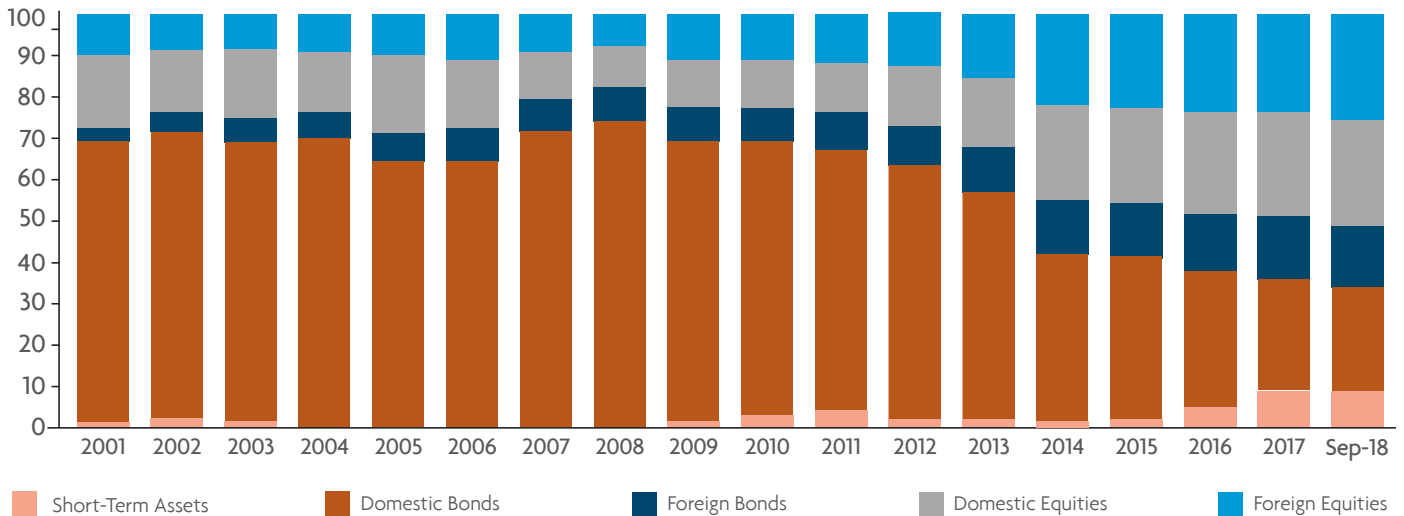
Yields by asset class (%)

	Core CPI	3m Libor	2-yr UST Yield	10-yr UST Yield	S&P 500			
					US IG Credit	US HY Credit	Dividend Yield	Earnings Yield
2000-2007	2.2%	3.6%	3.7%	4.7%	5.2%	9.9%	1.6%	5.1%
2008-2016	1.8%	0.7%	0.6%	2.6%	2.8%	8.3%	2.2%	4.8%
2017 present	2.0%	1.8%	2.0%	2.6%	2.9%	6.1%	1.9%	6.0%
Latest	2.2%	2.8%	2.5%	2.7%	3.3%	7.5%	2.3%	5.7%

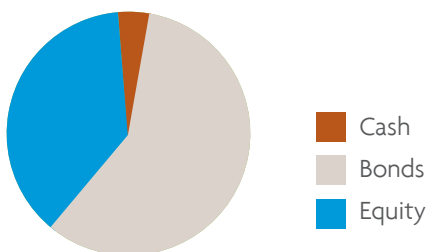


Even government pension funds made significant allocation changes in response to the “New Normal”. Japan’s Government Pension Investment Fund (GPIF) increasingly moved further out on the risk curve, first raising its allocation to foreign bonds, then to domestic equities and then foreign equities.

GPIF asset allocation (%)



Similarly, to take on the challenge of lower real yields, UOBAM’s strategy continued to focus on absolute returns objective with a vigilant eye on risk control. Our typical risk-averse portfolio with a medium-term horizon focused on capital preservation. The pressure on returns meant a modest increase in risk with a higher allocation to equities. However, risk management was paramount with target volatility triggers where we would scale back risk when needed. The portfolio would have an increased diversification for risk optimisation and a deployment of Smart Beta for equities.



Who moved my stimulus?

With the economic recovery well established, global central banks have gradually removed the stimulus used to resuscitate the economy. We would describe current conditions as being in a late cycle environment where growth, employment and inflation are approaching trend levels – the normalisation phase. The US Federal Reserve first gradually reduced the pace of QE – slowing down and then stopping the treasury purchases, a gradual withdrawal of liquidity. They then moved to taper reinvestment, and shrink their balance sheets – quantitative tightening, while raising interest rates at the same time.

US economy – 2015 to present

	Average	Period End	Min	Max
GDP growth - nominal (%)	3.8%	5.5%	2.3%	5.5%
Industrial production (%)	1.0%	3.9%	-4.0%	5.6%
CPI inflation (%)	2.1%	2.2%	1.7%	2.4%
Nonfarm payrolls (y-o-y%)	1.7%	1.8%	1.4%	1.9%

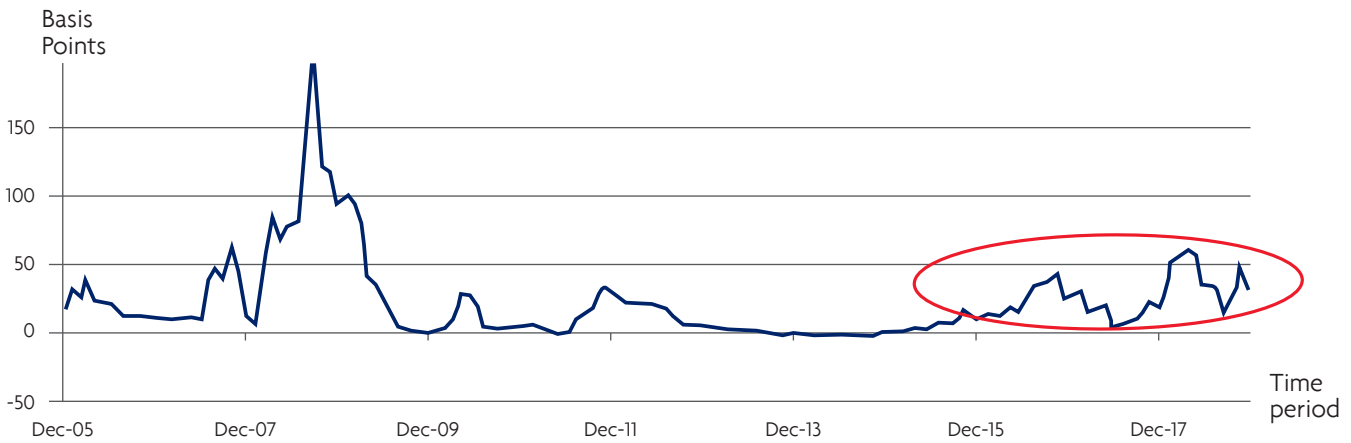
Notably as the economic expansion matures and monetary policy starts to normalise, economic and geopolitical frictions increase, evidenced by the rise of US-China trade tensions. The shift from zero interest rates has also triggered increased market volatility.

With the Fed raising interest rates and moving to normalise monetary policy, financial conditions may have tightened more than the Fed intended. The 3-month Libor net of Fed Funds Target Rate (FDTR) saw a moderate spike as the Fed increased rates by 25 basis points every quarter in 2018 to 2.25-2.5 per cent and indicated that it would raise rates another two to three times this year. But it did an about-turn in March this year (2019) saying that it will not increase the benchmark lending rate again this year amid a drop in consumer spending and broader global uncertainty.

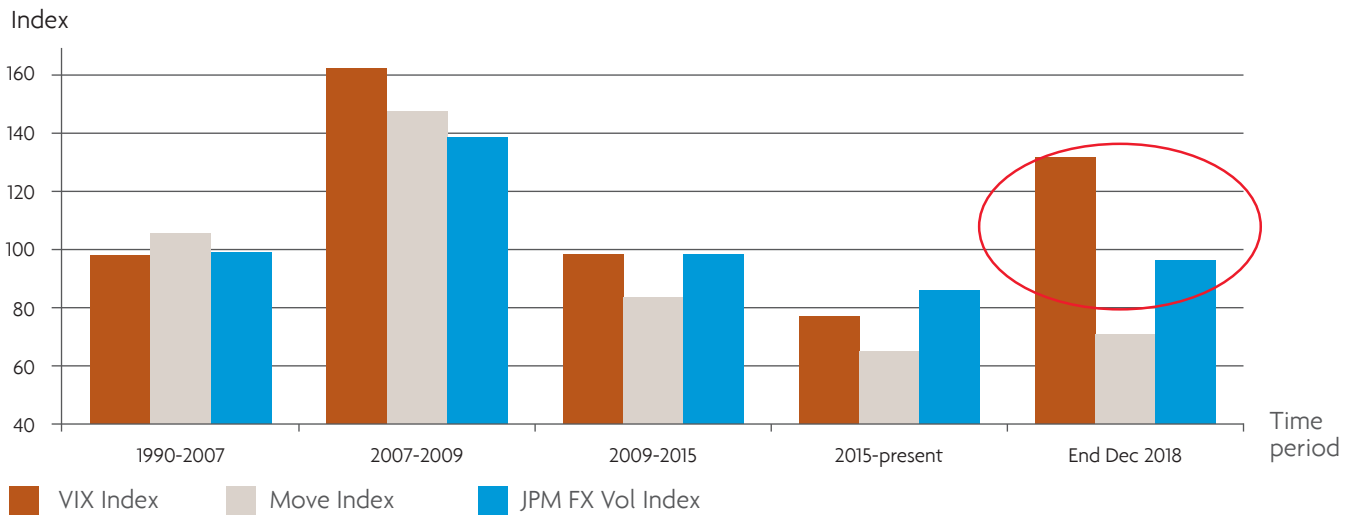
Volatility has also increased modestly more recently after being suppressed for a long period under QE. Notably, the volatility measure for stock markets – VIX index has risen more than others.

Financial conditions may have tightened more than Fed intended

3mth Libor (Federal funds target rate)

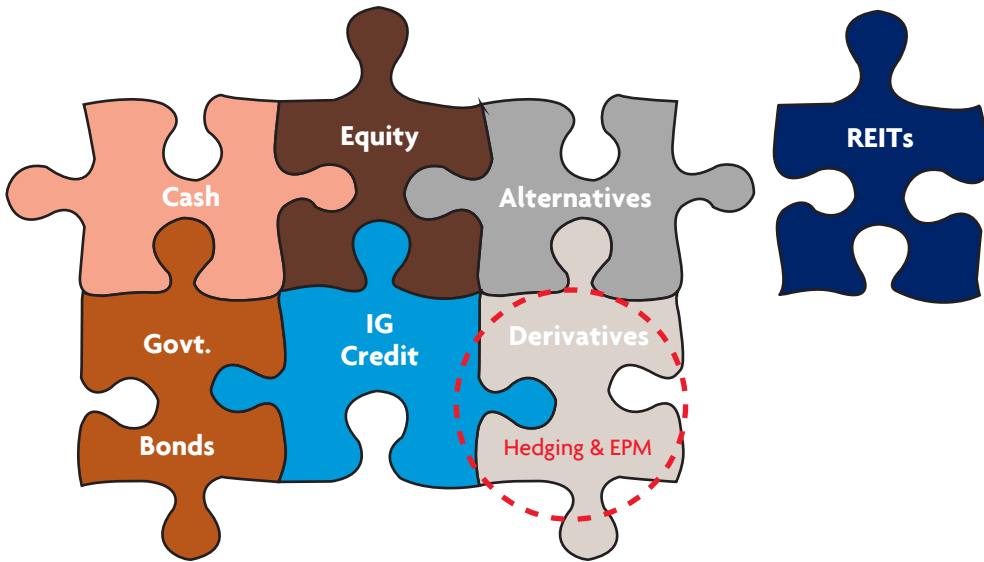


Indexed volatility by period against long-term average

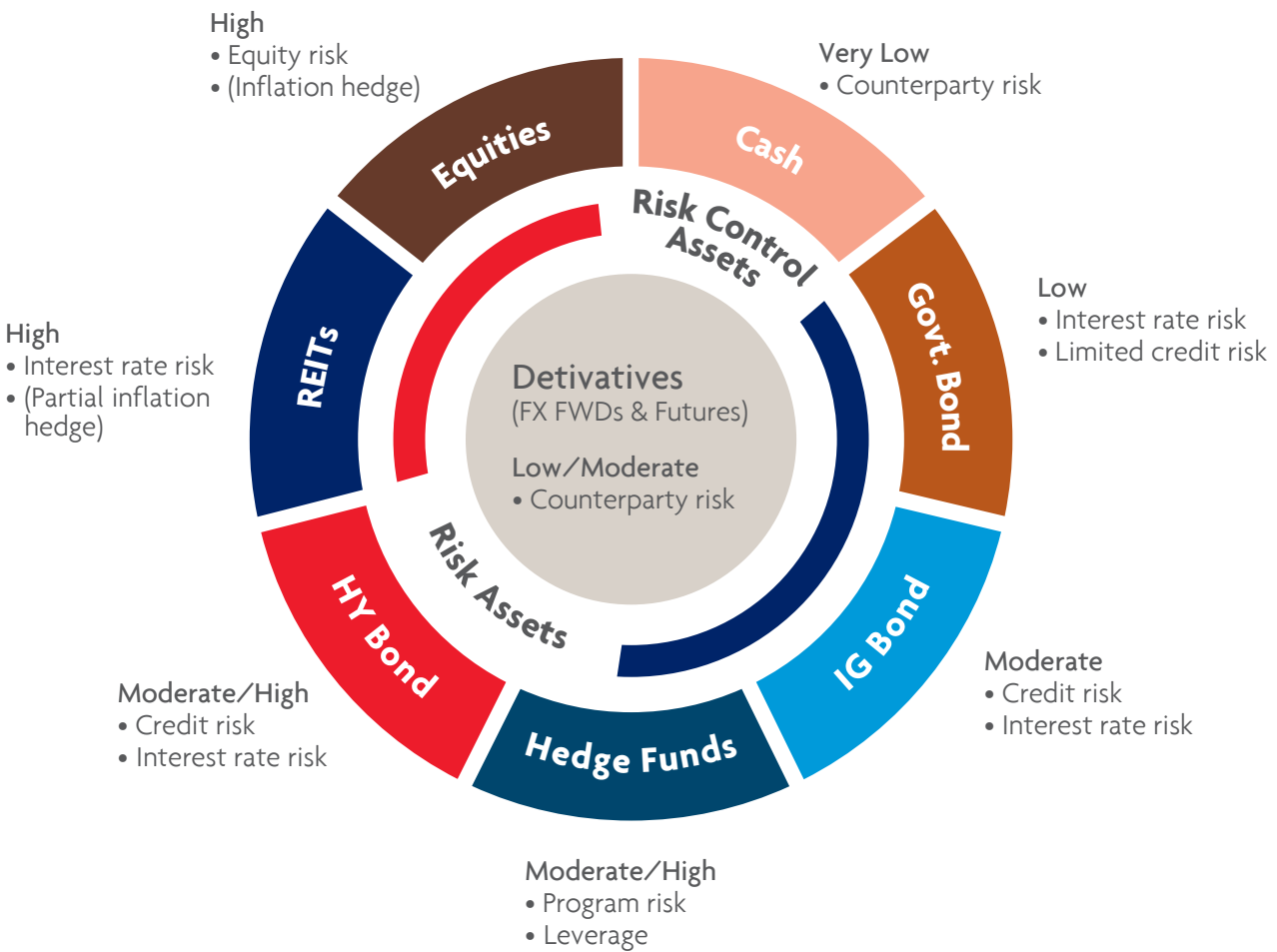


Our multi-asset investing strategy in this environment remains goal-oriented and risk aware. With a renewed emphasis on absolute return, we actively search for uncorrelated beta, or returns on various asset classes that are independent of one another. We have moderately increased risk with higher equity allocation. We employ more dynamic active tactical asset allocation and have introduced overlay solutions to manage beta positioning, actively using derivatives for efficient implementation. Our risk control measures include target volatility triggers, drawdown controls and risk overlay via futures. We have significantly increased diversification, adding more asset classes to meet the demands for active risk management, and use smart beta for equities, with a total return focus and tactical risk mitigation.

More building blocks for greater diversification options



Asset class risk



All sources are from Bloomberg, as of 31 January 2019, unless otherwise stated

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