

1 Q. Reference: CA-NP-014

2  
3 NP was asked to provide detail on its defined benefit pension plan and the Actuary's  
4 assumptions. A report was provided from Mercer. Please provide the latest copy of  
5 Mercer's Capital Market Outlook and the equivalent report of AON -Hewitt used  
6 within the Fortis group of companies.  
7

8 A. The response to Request for Information CA-NP-014 provided details of actuarial  
9 assumptions used in the determination of Newfoundland Power's defined benefit pension  
10 plan costs. The response also included the Actuarial Valuation of the Company's defined  
11 benefit pension plan provided by Mercer.  
12

13 This Request for Information seeks the most recent capital market outlooks by Mercer  
14 and AON-Hewitt. Newfoundland Power did not have these reports in its possession.  
15

16 The Mercer report *Economic and Market Outlook – 2016 and Beyond* was retrieved  
17 online through a publically accessible website and is provided in Attachment A.  
18

19 The report *AON Hewitt Capital Market Assumptions & Methodology (Canadian Version)*  
20 has been sourced and is provided in Attachment B.  
21

22 As Newfoundland Power did not have the reports requested in its possession, it is not in a  
23 position to comment on if, or how, either of these reports may be used by other Fortis  
24 companies.

**Mercer - Economic and Market Outlook 2016 and Beyond**

HEALTH WEALTH CAREER

# ECONOMIC AND MARKET OUTLOOK 2016 AND BEYOND



Diverging forces:  
normalisation in US and UK,  
stimulation in Japan and the  
eurozone, and challenges in  
emerging economies



# EXECUTIVE SUMMARY

## MORE OF THE SAME

Global economic growth in 2016 is likely to be similar to that seen in 2015. In the developed world, growth is expected to remain modestly above trend, lowering unemployment rates further and continuing the process of returning these economies to normal. The normalisation process is much more advanced in the US and UK, which are both likely to embark on a rate-hiking cycle, whereas in Japan and the eurozone, we should see ongoing loosening measures. 2015 was an *annus horribilis* for a number of emerging economies, and although 2016 is unlikely to be as bad, it will likely be some time before economic growth accelerates meaningfully.

## FED RAISES RATES

The Federal Reserve (Fed) raised interest rates in December, the first change of any kind in 8 years and the first increase since 2006. Further increases are likely in 2016, with the Bank of England (BoE) close behind. The increases would be in response to the sharp fall in unemployment over recent years, which has led to signs of wage growth in both the US and the UK. The key question for 2016 concerns the pace at which the Fed may increase rates and whether this will unsettle economies and markets. We think the resulting economic impact on the developed world would likely be modest, although rate hikes, if coupled with US dollar strength, could present a challenge to some emerging market (EM) economies and US exporters. We think there is a material risk of the Fed taking more action than is currently discounted by markets, which could lead to periodic bouts of bond and equity market weakness.

## EMERGING MARKET ECONOMIES CONTINUE TO WORK THROUGH THEIR PROBLEMS

Many of the world's EM economies face significant structural challenges, ranging from unwinding the credit bubble and reforming the Chinese economy to adjusting to lower commodity prices. Overcoming these challenges is a bit like losing weight – easier in theory than in practice! Material progress has been made in improving competitiveness in some countries, but at the cost of higher unemployment and very weak economic growth. This weak economic growth, although a necessary part of the adjustment phase, increases the risk of a financial accident (for example, sovereign or major corporate defaults).

## INFLATION TO RISE AS PAST OIL-PRICE COLLAPSE IMPACT FADES

Disinflationary pressures from commodities and weak EM economies are likely to remain, but should moderate somewhat. In the UK and the US, domestic inflationary pressures are likely to be a lot more balanced on the back of lower unemployment, which is leading to increased wage growth. Headline inflation rates that are currently close to zero in major developed economies are likely to rise by a percentage point or more as past declines (2014 Q4–2015 Q1) in the oil price fall out of the year on year (YOY) inflation indices. These rises should lead to diminished fears over the risk of global deflation.

## MODERATELY POSITIVE OUTLOOK FOR GLOBAL EQUITIES

Global equities should generate decent, if unspectacular, returns in 2016. In the developed world, solid economic growth should lead to reasonable earnings growth, especially in Europe and Japan. However, with equity valuations in the ballpark of fair value and the Fed and BoE raising interest rates, double-digit equity returns, although possible, are not our central case.

## FED THE BIGGEST RISK TO MARKETS, LESS SO ECONOMIES

In 2016 (and probably in 2017 and 2018 as well), the main risk to financial markets will come from the Fed. If the Fed were to raise interest rates in a very gentle fashion so that they were at or below 1% by the end of 2016, then the impact on bond and equity markets would probably be modest. However, if rates were to go up more rapidly, possibly due to the emergence of higher inflationary pressures, then bond markets, and potentially equity markets, could suffer. Although we would expect any equity market falls to be temporary, bond market falls could be more permanent. Interest rate increases are unlikely to have a significant impact on developed world economies, although they could undermine some EM economies, especially if the US dollar rises sharply.

## OTHER RISKS

China remains the other significant source of risk to our relatively benign economic outlook. The most likely outcome would be a gradual slowing of the Chinese economy as it rebalances towards domestic consumption. However, the rapid growth in debt within the private sector over the last seven years is unsustainable, and it would require considerable faith in the government to achieve a successful deleveraging. We will investigate this topic later in the paper.

The slowdown in China has also heightened risks in other EM economies that have become highly dependent on Chinese demand (particularly commodity producers). Brazil looks especially fragile given its domestic political problems, and an accident in one economy could have repercussions for financial conditions across the developing world. China and the EM economies are now at a size when they have significant impacts on global growth and financial markets.

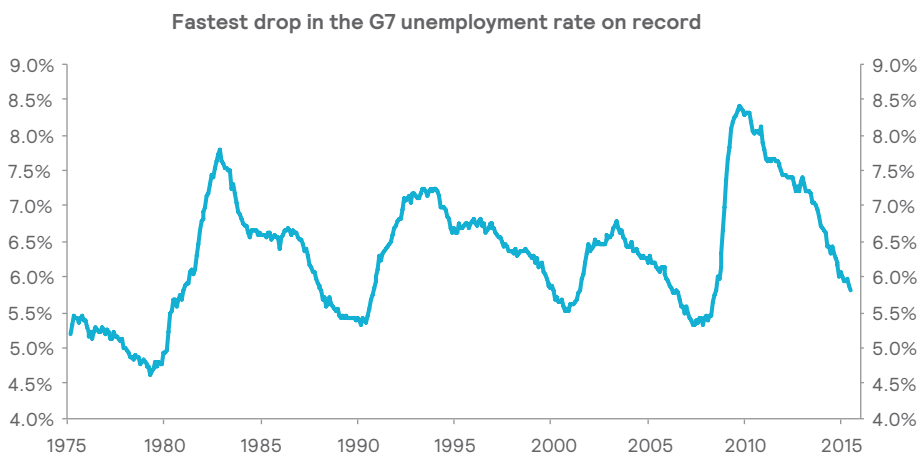
Terrorism and geopolitical risks also loom more generally over the global economy and markets. Being aware of the risks and having portfolios robust enough to withstand major shocks is important, even if, in practice, knowing the likelihood or severity of any event is impossible.

# GLOBAL ECONOMIC OUTLOOK

We continue to expect the developed world economy to grow at an above-trend pace in 2016. Economic growth should be supported by a developed world economy that has mostly resolved the key issues that have depressed growth over the last few years: fiscal tightening, weak banking systems, risk of eurozone collapse, and corporate- and personal-sector deleveraging. This growth outlook means unemployment rates should continue to fall (see Figure 1). In the US, the UK, and to some extent Japan, unemployment may fall below the level that economists have historically seen as consistent with full employment. This should continue to push up wage growth, which in turn may push inflation back up towards targeted levels (around 2% per annum) over the next few years.

We expect the developed world economy to grow at an above-trend pace in 2016.

FIGURE 1: UNEMPLOYMENT FALLING FAST IN DEVELOPED MARKETS



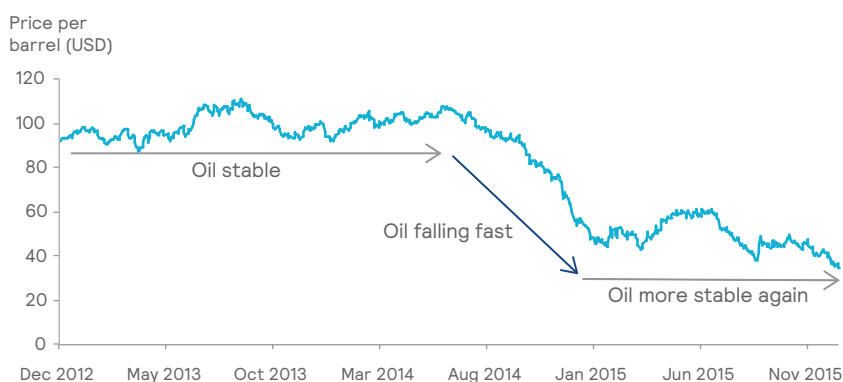
Source: Goldman Sachs Global Investment Research

In the eurozone, unemployment is at last falling at a decent rate, and this is expected to continue. However, the level of unemployment is still very high, and a number of years of strong jobs growth will be required to get the region back to full employment and for wage growth to pick up. Thus, whereas inflationary pressures in the US, the UK and, to some extent, Japan, are becoming more balanced, they remain very much on the downside in the eurozone.

Regardless of wage pressures, headline inflation rates are due to rise everywhere in the developed world as past oil-price falls cease to be relevant for the YOY data releases (see Figure 2). For example, in 2014Q4 the oil price was \$80/barrel, double the level in 2015Q4, meaning that at the end of 2015 any oil product (such as gasoline) had fallen sharply in YOY terms over the previous year. By March 2016, if oil prices follow the current forward curve, then in YOY terms, oil price inflation will be flat. As a result, inflation will cease being held down by weak oil prices and should rise by about 1%.

### FIGURE 2: OIL PRICE HAS STOPPED FALLING

Despite moderately stronger exports to the developed world,



Source: Bloomberg

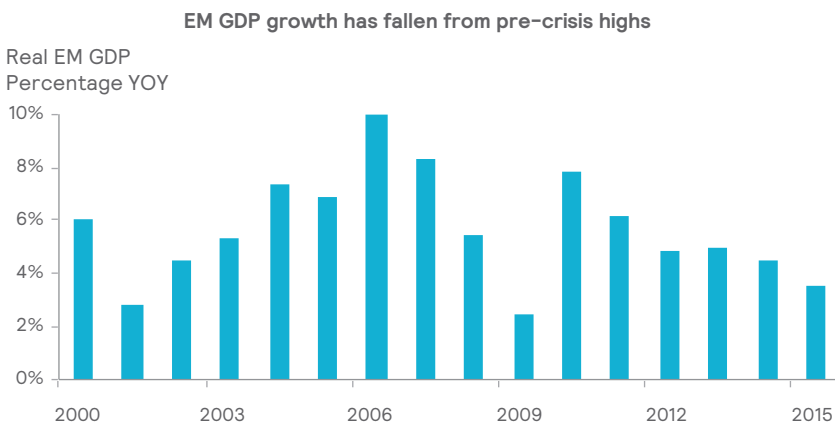
EMs performed very poorly in 2015, registering their worst year (as of December 18, 2015) since the financial crisis (see Figure 3). Whereas commodity importers, such as India, have benefited from lower commodity prices, many others, such as Brazil and Russia, were pushed into recession as the price of their exports fell sharply. Figure 4 shows that inflation and unemployment have risen rapidly while economic growth has been negative. China's economy also slowed as the government attempted to slow the pace of credit growth to reduce the build-up of debt, while simultaneously trying to reduce investment and shift resources away from inefficient state-owned enterprises towards more efficient private-sector firms. This slowdown rippled across the EMs, especially those Asian economies reliant on exports to China. The sharp increase in the value of the US dollar against almost all EM currencies increased the cost of servicing debt denominated in US dollars. Further US dollar strength could put more pressure on overseas companies that have borrowed in US dollars.



In 2016, we expect EM economies' growth to remain below trend, especially if commodities remain weak and the US dollar stays strong. However, many EM economies have become more competitive over the last few years as a result of sharp falls in currency value, which is already being reflected in improving trade balances with the rest of the world. This improvement is sowing the seeds for an eventual recovery across EMs, which may start to become more visible as we head into 2017.

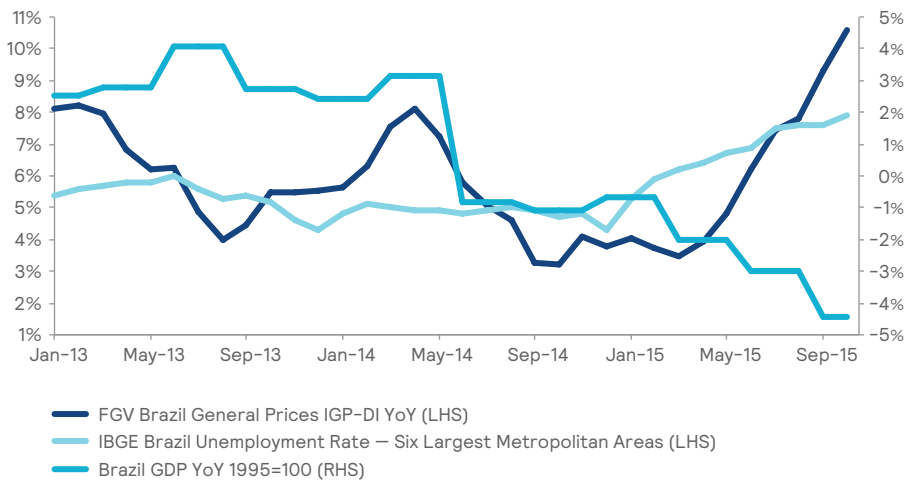
Growth in EMs may stay below trend, especially if commodities remain weak and the US dollar stays strong.

FIGURE 3: EMERGING MARKETS WEAKENING FURTHER



Source: J.P. Morgan

FIGURE 4: BRAZIL WORSENING RAPIDLY



Source: Bloomberg

## UNITED STATES

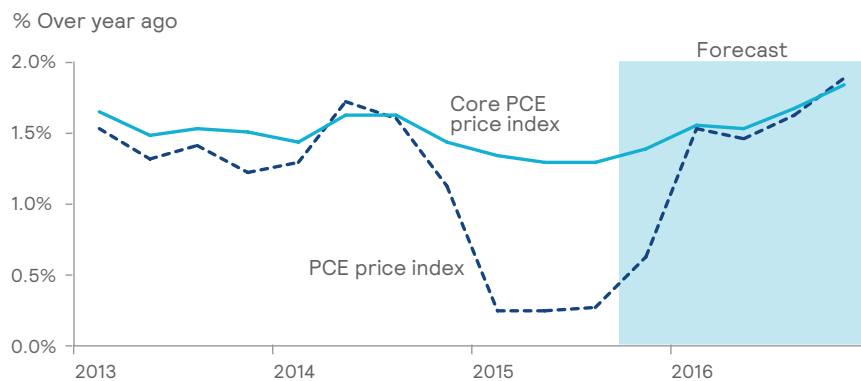
US economic growth is set to continue at a decent pace in 2016. Growth will be driven by consumption, which should continue to benefit from strong jobs growth, a pick-up in wage growth, strong asset prices, and a lingering boost from past falls in oil prices. Jobs growth in 2015 is likely to have been the strongest in more than 15 years, while wage growth (as noted earlier in this paper) should also increase.

Capital investment (capex) should also contribute to growth. However, although conditions for a sharp pick-up in investment have been in place for some time (high cash levels, high profitability, and supportive banks and capital markets), capex has disappointed over recent years, and there is a risk it will do so again in 2016.

Residential property investment is likely to be strong. The number of new homes being built remains very low and with demand strengthening and availability of mortgages improving residential investment should remain strong, even if mortgage rates rise.

As noted earlier in this paper, headline inflation is likely to rise in early 2016 as energy inflation moves from being a huge drag on US inflation to being more balanced (see Figure 5). Core inflation (headline inflation excluding food and energy) is likely to remain near its 1.3% per annum level on the PCE measure but may start to rise modestly as wage growth rises and some of the disinflationary pressures from commodities and the strong US dollar dissipate.

**FIGURE 5: HEADLINE INFLATION TO RISE**

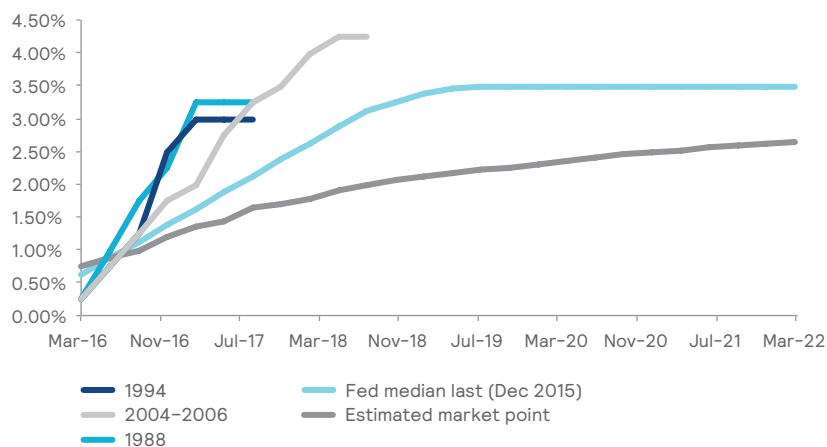


Source: J.P. Morgan

The Fed has just raised interest rates for the first time in over 10 years. We expect this to continue in 2016 and beyond. The speed and magnitude of further interest rate increases will determine whether the market impact is benign or not. Central to the Fed’s thinking is whether further gains in employment will start to push up wage costs – the Fed would anticipate that this will eventually feed into higher inflation. The Fed will also be monitoring whether interest rate increases slow the economy, which would encourage it to slow or end rate hikes. Figure 6 shows that the market is currently expecting the Fed to raise interest rates at a much slower pace than in past rate-hiking cycles.

The speed and magnitude of interest rate increases will determine market volatility.

FIGURE 6: FED EXPECTED TO RAISE INTEREST RATES VERY GENTLY



Source: Trient Asset Management AS

We think that the initial Fed rate increases will have little impact on US growth. Although borrowers would be hurt by rising interest rates, this would be partially offset by the boost to those holding interest-bearing assets (for example, deposits and money market funds) and a possible boost to confidence as investors may see this as the Fed indicating that the financial crisis is over. However, continued acceleration in wages growth could precipitate a more rapid pace of Fed “normalisation,” with negative implications for Treasury bonds and, potentially, equity markets.

## EUROZONE

After almost a decade of near stagnation, the eurozone economy has at last started to grow, boosted by strong retail sales growth (see Figure 7). Growth has been seen in almost all parts of the region, with peripheral economies marginally outperforming core economies. This economic growth is likely to continue next year and probably beyond, supported by employment growth, the weak euro and very low interest rates, while decent loan growth on the back of a healthier banking sector will also help.

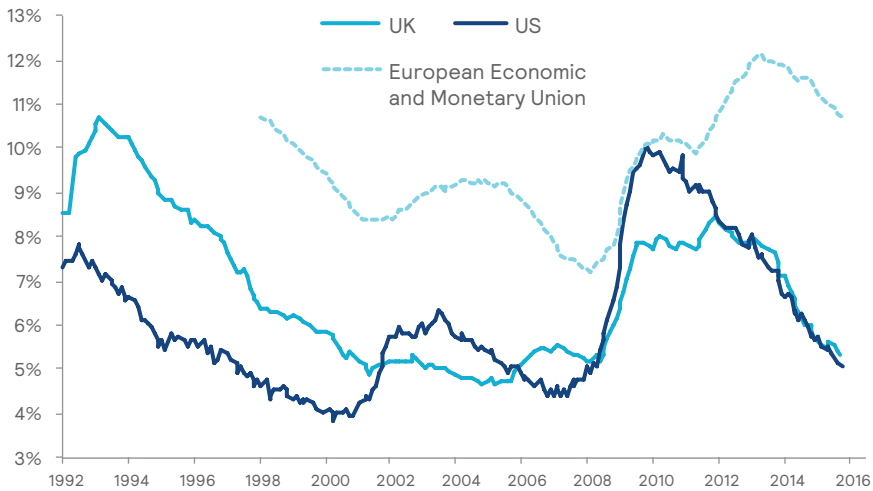
Although economic growth in the eurozone is likely to be decent (1.5%–2% per annum), it will take some time, perhaps two to three years, for unemployment to return to normal levels (see Figure 8). As a result, wage growth is likely to remain anemic (with the notable exception of Germany), which will continue to put downward pressure on inflation, offsetting the upward pressure from the weak euro.

FIGURE 7: RETAIL SALES HAVE BEEN STRONG



Source: Bloomberg

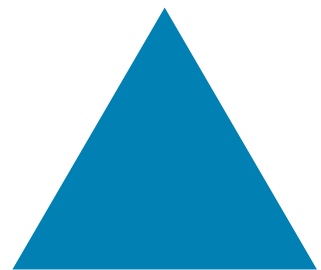
FIGURE 8: EUROZONE UNEMPLOYMENT STILL HIGH



Source: Eurostat, BLS, ONS

Headline inflation in the eurozone is likely to rise back up to 1% per annum because of base effects relating to past falls in the oil price (as discussed earlier). Core inflation, currently 1.1% per annum, may remain relatively stable, with upward pressure from the weak euro being offset by further weak labour cost growth.

Unlike the Fed, the European Central Bank (ECB) will remain with its foot firmly on the accelerator. Though it may not announce any further monetary policy loosening over and above the measures announced in December, it will be alert to any signs that the recovery may be stalling, as this would impact the likelihood of meeting its inflation goal over the medium term.



Solid consumption on the back of jobs growth and wage gains should lead the recovery.

## UNITED KINGDOM

The UK had another good year in 2015 with decent economic growth and strong jobs growth leading to a further decline in unemployment. This is expected to continue in 2016, although the pace of jobs growth may slow somewhat if productivity, which has been weak over the last few years, picks up.

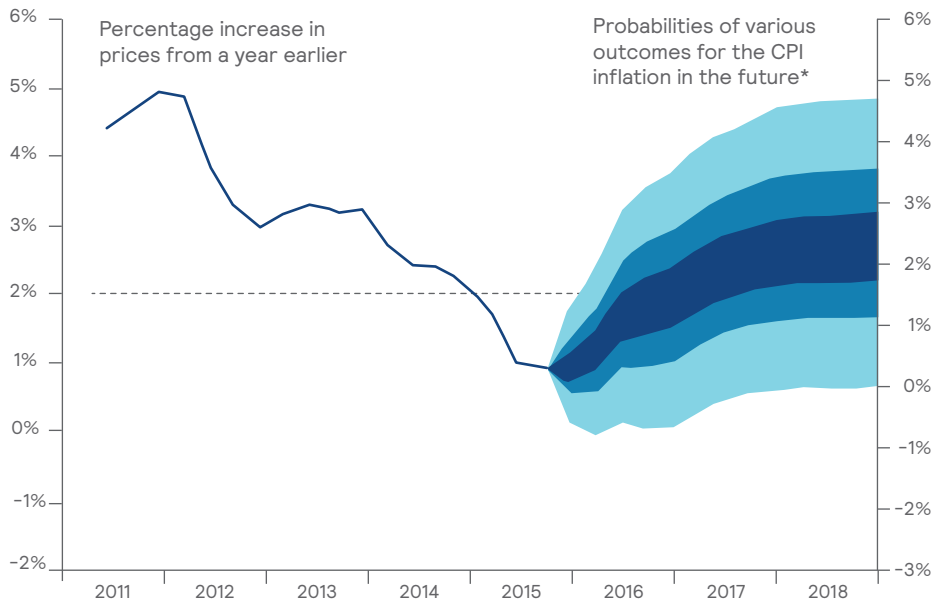
Solid consumption on the back of jobs growth and wage gains should lead the recovery, while capital expenditure is also likely to contribute. The outlook for exports is mixed. Although the ongoing recovery in the eurozone should help, the strength in sterling against the euro and all currencies excluding the US dollar should hurt export growth. Unlike in the US, the eurozone, and Japan – where fiscal policy will be roughly neutral – government spending cuts could slow overall growth somewhat.

In 2016, the UK is likely to hold a referendum on whether to remain in the European Union (EU) – the so-called “Brexit”. Opinion polls suggest the vote will be close. Predicting the impact of the build-up to the vote and the response to the result is difficult, but it seems likely that the uncertainty will hit business confidence, leading to a modest, temporary hit to the economy. Regardless of whether exiting the EU is good or bad for the UK economy over the long term, an exit vote could lead to further uncertainty and possibly a decline in sterling.

Inflation is likely to rise sharply early in the year, following the same pattern as in the US, because of the significant drop in prices, which creates the possibility for a strong rebound. Figure 9 shows that the BoE expects to see inflation rise back to its 2% per annum target over the next two to three years in part because of rising wage growth (see Figure 10).

The BoE is likely to raise interest rates. As long as this does not result in a sharp appreciation of sterling, we would expect the hike to have little impact on economic growth. Further interest rate increases are likely, especially if the labour market remains strong.

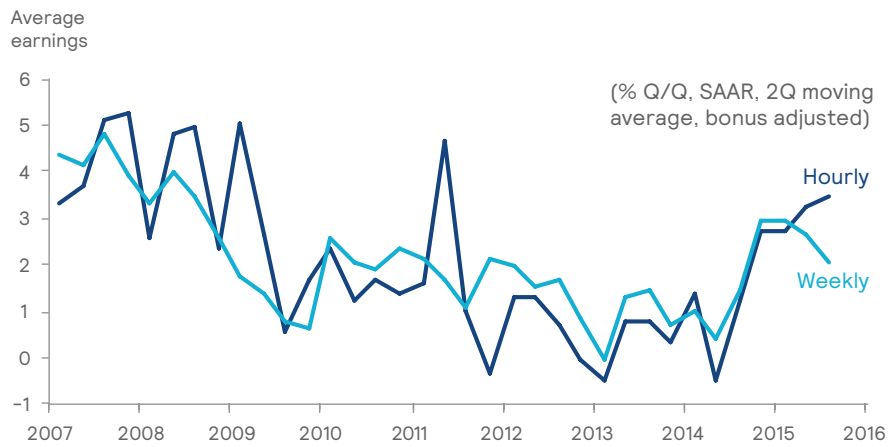
FIGURE 9: BANK OF ENGLAND EXPECTS INFLATION TO RISE



\*The fan chart is constructed so that outturns of inflation are also expected to lie within each pair of the lighter blue areas on 30 occasions. In any particular quarter of the forecast period, inflation is therefore expected to lie somewhere within the fans on 90 out of 100 occasions. And on the remaining 10 out of 100 occasions, inflation can fall anywhere outside the blue areas of the fan chart.

Source: Bank of England

FIGURE 10: WAGE GROWTH PICKING UP



Source: ONS

Additional government spending may support modest growth.

## JAPAN

Economic growth in Japan softened in the middle two quarters of 2015, weighed down by weak capex, a slowdown in exports, and subdued private consumption, as well as a sharp decline in inventory growth. However, we expect the economy to pick up modestly in 2016. After decreasing in the first half of 2015, exports have started to improve as the economies of Japan's regional trading partners start showing signs of stabilising. Although capex declined further in recent months, forward-looking sentiment surveys appear to have firmed, which should translate into a higher level of corporate investment in the coming quarters. Ahead of the crucial upper house election scheduled for July, we also expect additional government spending in the form of a supplementary budget. Furthermore, the government will likely push for higher wages in the annual negotiation between trade unions and businesses. A positive increase in real wages could translate to a pickup in consumption.

The Bank of Japan (BoJ) remains committed to pushing inflation to 2% per annum. In the past year, the country's inflation has been boosted by the sharp fall in the yen, although weak oil prices have worked in the opposite direction. We have seen some positive signs that wages are rising and that Japan is beginning to shake off the deflationary mindset that has gripped the economy over the last 20 years. Nonetheless, with the yen no longer falling, the BoJ may loosen monetary policy further in 2016.

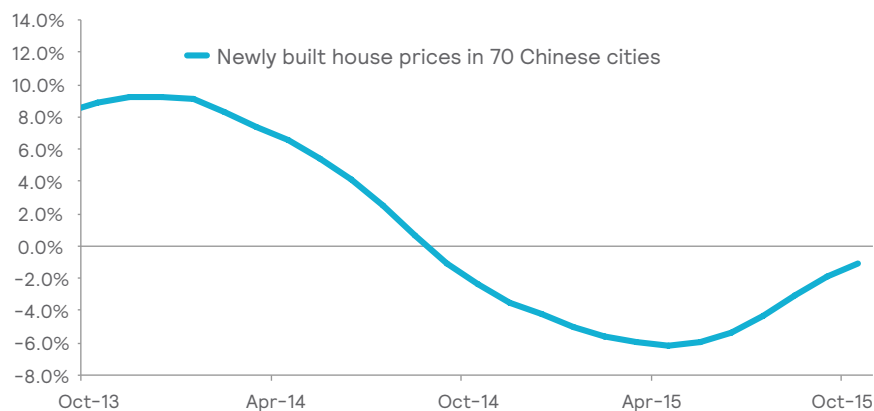


## CHINA

We expect Chinese growth to remain on a downward trajectory given the country’s ongoing effort to rebalance its economy. Indeed, during the fifth Plenum in October 2014, the government revised down the growth target over the next five years from 7% to 6.5% per annum. However, ongoing fiscal and monetary support should ensure that economic growth in 2016 remains at a reasonable pace, and, as a result, we believe the risk associated with an uncontrolled economic hard landing remains small. House prices have fallen sharply in the past few years, but recent indicators have confirmed that the property market is starting to stabilise (see Figure 11). However, as in 2015 when markets were roiled by an ill-advised stock market intervention and a badly explained shift in its currency management regime, the key risk in 2016 (if it materialises) will likely be policy related – as demonstrated in August when investors misunderstood the renminbi devaluation. The failure to properly communicate policy changes could result in widespread market disruptions reverberating well beyond China’s own shores. We expect the currency to remain fairly stable; however, a sharp weakening is possible, especially if deflationary pressures in China intensify.

Growth remains on a downward trajectory due to China’s ongoing effort to rebalance its economy.

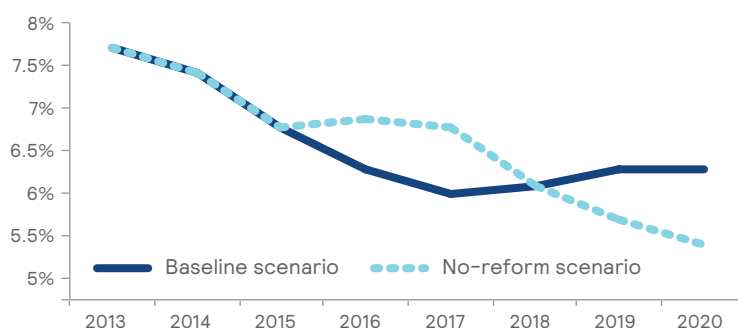
FIGURE 11: CHINESE HOUSE PRICES RECOVER



Source: Bloomberg

China's vital structural reform is still a work in progress. Figure 12 shows that the strength of the economy later in this decade is expected to be a function of whether the economy reforms. State-owned enterprises still dominate key areas of the economy, and the government has yet to carry out reforms in earnest. Despite the abolition of the one-child policy, the demographic profile will deteriorate rapidly over the coming years, with adverse social and economic implications. Despite a shift away from shadow banking, leverage remains a concern as credit growth continues to rise at an unsustainable rate.

**FIGURE 12: CHINESE GROWTH STRONGER IF IT REFORMS**



Source: IMF staff estimations and projections

Nevertheless China has met a number of key reform milestones in 2015. Most notably, as part of the government's effort to give markets a more prominent role in resource allocation, interest rates have now been liberalised. By allowing banks to set their own lending and deposit rates, capital should be able to flow to the most productive areas, particularly to the private sector. In addition, despite the miscommunication surrounding the partial floatation of the renminbi, the International Monetary Fund has judged sufficient progress has been made on currency reform and has included the renminbi in the Fund's Special Drawing Right basket. Furthermore, the rollover of local government debt has also removed a key source of imminent risk.

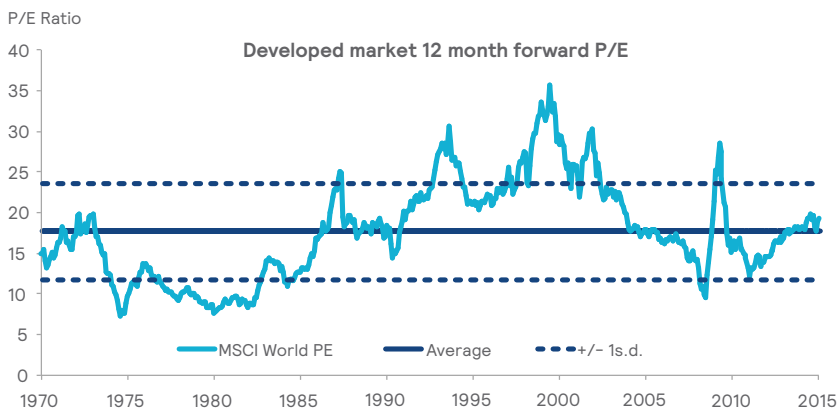
# MARKET OUTLOOK

We expect global equities to perform well in 2016, generating decent if unspectacular returns. Equities should be supported by ongoing economic growth in most of the developed world and continuing loose monetary policy, even after taking account of tightening in the US and the UK. We think equities are in the ballpark of fair value (see Figure 13) – possibly even a little rich in the US, while on the cheap side in most other countries. EMs look cheap, but whether this translates into strong market returns depends in part on whether those economies recover and whether monetary policy tightening in the US leads to a further withdrawal of funds from the region. In addition, part of EMs’ apparent cheapness is explained by the significant weights of lowly rated sectors such as banks and commodities.

Equities should be supported by ongoing economic growth in most of the developed world and continuing loose monetary policy.

Although the outlook for the year as a whole is positive, we may again see periodic bouts of weakness, most likely as a result of fears that the Fed may have to raise interest rates more aggressively than the shallow pace currently expected. Of course there is also a chance that the tightening cycle ends quickly, which could lead to more significant equity market strength.

FIGURE 13: EQUITY P/E SUGGESTS FAIR VALUE



Source: Thomson Reuters Datastream IBES

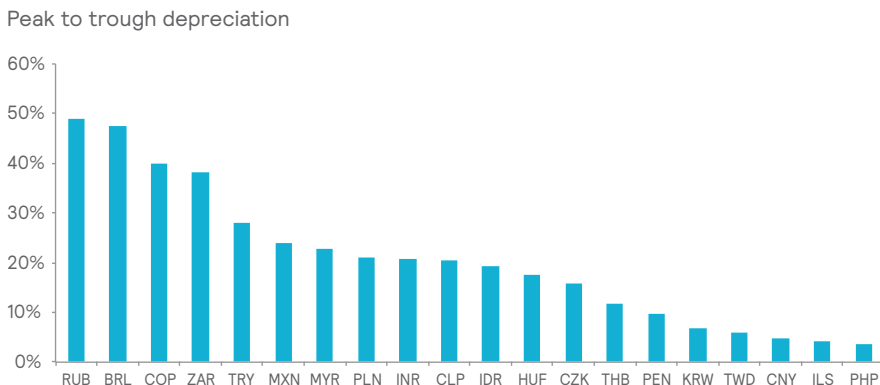
## EQUITY SECTORS

The equity component of the Mercer Global Equity Portfolio is made up of developed market equities (DME), emerging market equities (EME), global small cap equities (SCE), and low volatility equities (LVE).

We think that DME will be the top-performing component. The key economies in the developed world are growing at an above-trend pace, and that growth rate is fairly stable and backed by improving fundamentals. This growth is likely to lead to decent earnings per share growth, especially outside the US where there is scope for margin expansion. Rising bond yields may be a headwind for DME, although that will not have too much of an impact unless they rise more than expected.

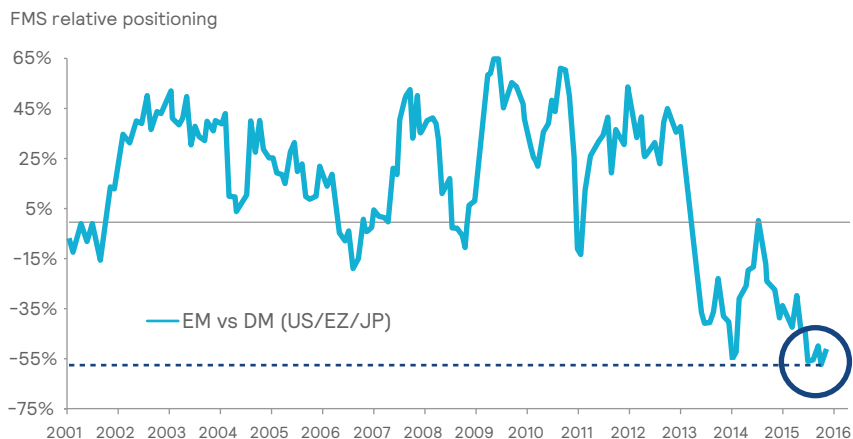
We see EMEs as being the next best performer, although also the most volatile. We expect emerging economies to continue to perform poorly but not to deteriorate further, with the recessions in Russia and Brazil easing somewhat. Corporate profits, which have not grown in recent years, are likely to remain stagnant, providing little support to those equities, while the exceptional economic weakness in countries such as Brazil creates the risk of a financial accident. However, after substantial falls (see Figure 14) EM currencies are offering more value, while it is also possible that the prospect of better economic growth in 2017, favorable valuations, and an investor base that is heavily underweight the sector (see Figure 15) could lead to a sharp rebound.

**FIGURE 14: EM CURRENCIES HAVE FALLEN SHARPLY**



Source: Haver Analysis, Goldman Sachs Global Investment Research

FIGURE 15: INVESTORS HEAVILY UNDERWEIGHT EM EQUITIES



Source: BofA Merrill Lynch Global Fund Manager Survey

SCE and LVE should show reasonable performance. Although we do not expect the difference between the four components to be significant. Although slightly better profit growth and favorable funding markets may support SCEs, their valuations already discount stronger profit growth and any disappointment may be punished. LVEs are also expensive because they have benefited from the uncertain economic environment and from investors seeking yield when compared to returns in bonds and cash. With cash rates and bond yields likely to rise in 2016, we would expect some of the appeal of LVE to wane.

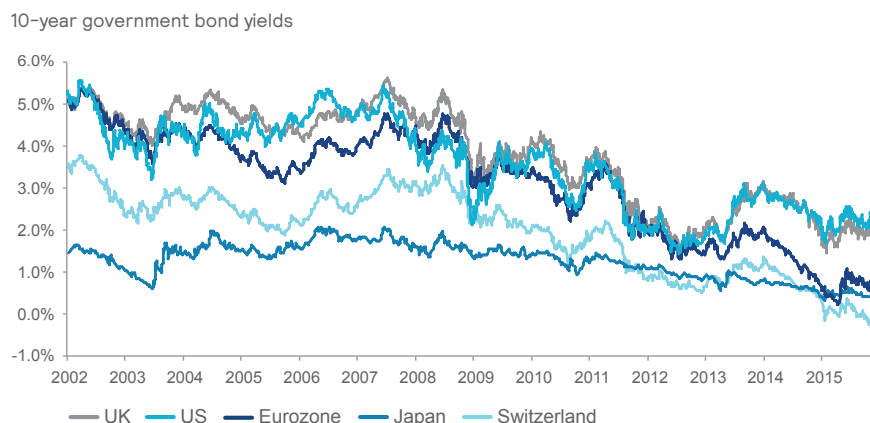


The outlook for developed market bonds remains uninspiring.

## DEVELOPED MARKET BONDS

The outlook for developed market bonds remains uninspiring. As Figure 16 shows, 10-year government bond yields remain close to their lowest levels ever. We expect the Fed to raise interest rates further in 2016. As shown earlier in Figure 6, the US market is currently priced for a very slow hiking cycle over the next few quarters, and we think the main risk is the Fed moving more aggressively than expected.

FIGURE 16: BOND YIELDS VERY LOW



Source: Bloomberg

Likewise the BoE is expected to raise interest rates very gently, and the market is priced for them to only reach 2% in 2021. The BoE is expecting UK inflation to reach or even exceed its 2% target in 2017/2018, so there is a risk that hikes will be much more aggressive than are currently expected. In contrast to the Fed and the BoE, the BoJ and the ECB are likely to maintain exceptionally loose monetary policy: the BoJ is likely to loosen monetary policy further, while the ECB should continue with its expanded quantitative easing programme into 2017.

We expect the Fed's hiking programme to increase bond yields across the developed world, with the loosening in Japan and ongoing accommodation in the eurozone dampening rather than offsetting the upward pressure from the Fed. Bond yields may also be under upward pressure from further bond sales by overseas central banks in oil exporting and EM economies seeking to repatriate funds to offset their capital outflows. Finally, the Fed at some point will stop reinvesting in maturing bonds and coupon income. Though not our base case, the Fed and the BoE would put any hiking cycle on hold if there were signs of a sustained slowdown with both central banks seeking to ensure the recovery continues. Any pause in the hiking cycle would boost bonds.

## INVESTMENT GRADE AND HIGH YIELD BONDS

Investment grade (IG) and high yield (HY) bonds performed poorly in 2015, with credit spreads widening. The widening in spreads was most evident in energy-related issuers, with other commodity producers also performing poorly. European corporate bonds generally outperformed US corporate bonds, helped by the economic recovery and a much smaller energy sector.

In 2016, we expect credit spreads (the difference in yield between government and nongovernment bonds) to narrow. Although US energy sector defaults are expected to rise sharply, especially if the oil price stays near current levels, defaults elsewhere may only rise modestly. IG and HY now discount higher default rates than we think likely and therefore should outperform government bonds. Liquidity in corporate bond markets is much lower than seen before the financial crisis, so the market may suffer periodic bouts of volatility, possibly around any unexpected moves by the Fed.

However, we have experienced a prolonged period of spread tightening since the financial crisis, and some may say we could be near the end of this cycle. Companies have generally capitalised on the cheap cost of borrowing and as yields rise this may lead to refinancing problems that in turn could lead to an increase in defaults. This may be a 2017/18 problem, but if the Fed is more aggressive in its tightening path, these fears may materialise sooner.

## EMERGING MARKET DEBT

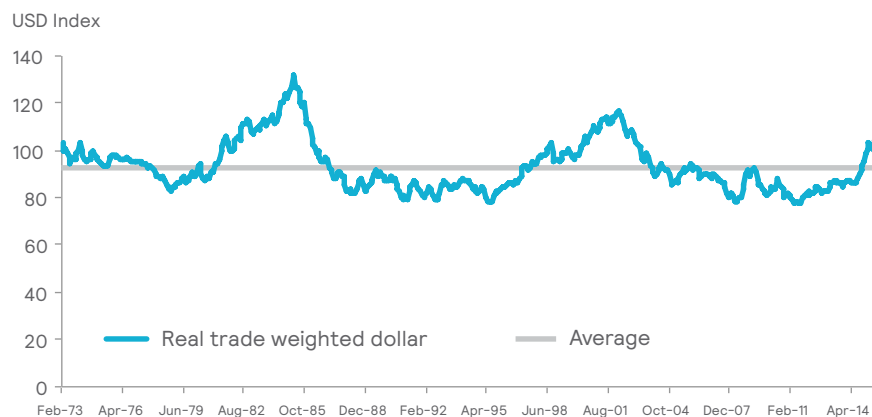
Emerging market debt (EMD) substantially underperformed in 2015 on the back of the exceptionally weak performance of a number of EM currencies (see Figure 14). EMD returns in local currencies were satisfactory. The Brazilian real has lost over 30% against the US dollar in 2015, although other currencies were less weak. Following these falls, a number of EM currencies are now looking relatively cheap. However, because of structural challenges discussed earlier in this paper, we doubt that EM currencies will rebound until it is clear that economic growth is recovering and that the risks in economies like Brazil are contained.

The US dollar could strengthen as the ongoing economic recovery and interest rate increases support it.

## FOREIGN EXCHANGE

The US dollar strengthened in 2015. Figure 17 shows that the US dollar has risen by about 20% over the last couple of years and in real terms is about 11% above the average of the last 45 years. In 2016, we think the US dollar could strengthen as the ongoing economic recovery and interest rate increases support it. However, our confidence in the US dollar is lower than it was a year ago for two main reasons: first, the US dollar is no longer cheap and is above the average of the last 45 years; second, with sentiment overwhelmingly positive on the US dollar, there is a risk of a big outflow from this currency if the recovery doesn't continue as we and others expect.

FIGURE 17: US DOLLAR A LITTLE RICH



Source: Bloomberg

Elsewhere, both the BoJ and the ECB are likely to maintain monetary policies that keep their currencies weak and may even embark on further loosening if their currencies strengthen substantially. In the UK, the BoE raising interest rates later in the year should provide support for sterling. However, the lead-up to the vote on Brexit could lead to some temporary weakness in the economy, undermining sterling. A vote for Brexit would cause further disruption, at least in the short run, and could lead to further sterling weakness.



## RISKS AHEAD

As is always the case, our forecast is made up of a number of risks. Quantifying these risks is impossible, so we don't try, and there are also numerous risks that we have not identified that will inevitably affect economies and markets in 2016. The five risks we note are:

- 1. The Fed gets aggressive:** As we noted earlier, the market and most investors expect the Fed to raise interest rates very slowly. In 2004, before the interest rate hiking cycle, many thought the Fed would also proceed cautiously, although it subsequently raised interest rates for 17 months in succession.
- 2. EM crisis:** We expect the high level of foreign currency reserves and improved competitiveness to enable EM economies to stabilise this year without a major crisis. However, there are risks in Brazil and other EM countries that weak economic growth will lead to a negative financial event (such as a major default), especially if commodity prices remain weak and if the US dollar moves much higher.
- 3. European fragmentation:** Though the economic environment in the eurozone is much improved, with government deficits much closer to being under control, the political environment remains fragile following a prolonged period of high unemployment in many countries. The popularity of mainstream political parties has fallen sharply, while the refugee crisis is creating additional political pressures within the region.
- 4. Geopolitical shock:** The Paris attacks and an increase in geopolitical risk more generally have had little impact on economies and markets so far. However, geopolitical risks are perhaps higher than they have been for some time and have the potential to undermine economies and markets.
- 5. Productivity:** Finally and on a more optimistic note, we may see a pick-up in productivity in the US, the UK, and other developed economies. Productivity growth has been very weak over the last few years, but we have seen signs that it has at last started to improve. If this trend were to continue, it would provide a boost to corporate profits and reduce the risk that the Fed and other central banks would have to raise interest rates more aggressively.

## IMPORTANT NOTICES

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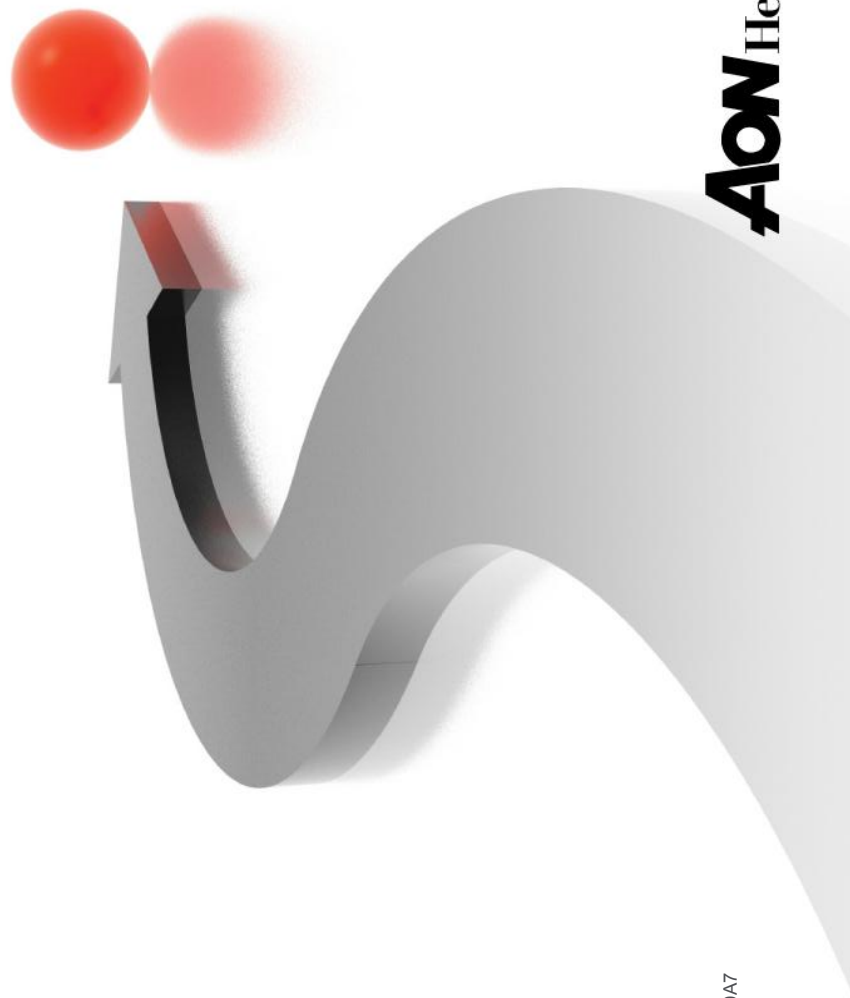
**AON Hewitt Capital Market Assumptions & Methodology (Canadian Version)**  
**January 7, 2016**

Aon Hewitt

# Aon Hewitt Capital Market Assumptions & Methodology (Canadian Version)

*10-Year Horizon as at December 31, 2015*

*Produced January 7, 2016*



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This document summarizes Aon Hewitt Canada's **10-year** forward-looking capital market assumptions ("CMAs") that are to be used in the determination of strategic portfolio allocations and related modeling or projection studies. The methodology described herein is also the basis of longer-term 30-yr CMAs that can be used to determine an expected long-term portfolio return for the purposes of performing an actuarial valuation.

The CMAs presented in this document represent Aon Hewitt Canada's best-estimate view of future economic conditions and are established by a national committee comprised of Investment and Risk Management practitioners. The determination of the CMAs involves a thorough analysis of all available quantitative and qualitative resources including, but not limited to, in-house analyses of historical returns, external analyses of long-term historical returns presented in published research articles, the actual state of the market and the good judgment of the national assumptions committee. Additionally, the CMAs reflect the analyses and research done by Aon Hewitt investment and risk management colleagues around the globe and are checked for global consistency.

Notes:

1. In order to be as accurate and up-to-date as possible, the assumptions are reviewed and, if needed, adjusted, on a monthly basis.
2. The return assumptions presented in this document are for indices only and do not consider active management fees or expected value added except in the case of certain alternative asset classes (e.g. hedge funds) where the return assumptions are assumed net of fees and the added value is inherent to the asset class.

The following are the standard market indices used as return proxies for each asset class in the Aon Hewitt Model:

<b>Asset Class</b>	<b>Benchmark Index</b>
<b><i>Inflation</i></b>	Consumers Price Index (CPI)
<b><i>Fixed Income</i></b>	
91-day T-Bills	FTSE TMX Canada 91 Day TBill Index
Banker's Acceptance	Bank of Canada - V39071
Overall Real Return Bonds	FTSE TMX Canada Real Return Bond Index
Short-Term Federal Bonds	FTSE TMX Canada Short Term Federal Bond Index
Short-Term Provincial Bonds	FTSE TMX Canada Short Term Provincial Bond Index
Short-Term Municipal Bonds	FTSE TMX Canada Short Term Municipal Bond Index
Short-Term Corporate AAA/AA Bonds	FTSE TMX Canada Short Term Corporate AA+ Bond Index
Short-Term Corporate A Bonds	FTSE TMX Canada Short Term Corporate A Bond Index
Short-Term Corporate BBB Bonds	FTSE TMX Canada Short Term Corporate BBB Bond Index
Short-Term Government Bonds	FTSE TMX Canada Short Term Government Bond Index
Short-Term Corporate Bonds	FTSE TMX Canada Short Term Corporate Bond Index
Mortgages	FTSE TMX Canada Short Term Corporate Bond Index
Short-Term Bonds	FTSE TMX Canada Short Term Overall Bond Index
Mid-Term Federal Bonds	FTSE TMX Canada Mid Term Federal Bond Index
Mid-Term Provincial Bonds	FTSE TMX Canada Mid Term Provincial Bond Index
Mid-Term Municipal Bonds	FTSE TMX Canada Mid Term Municipal Bond Index
Mid-Term Corporate AAA/AA Bonds	FTSE TMX Canada Mid Term Corporate AA+ Bond Index
Mid-Term Corporate A Bonds	FTSE TMX Canada Mid Term Corporate A Bond Index
Mid-Term Corporate BBB Bonds	FTSE TMX Canada Mid Term Corporate BBB Bond Index

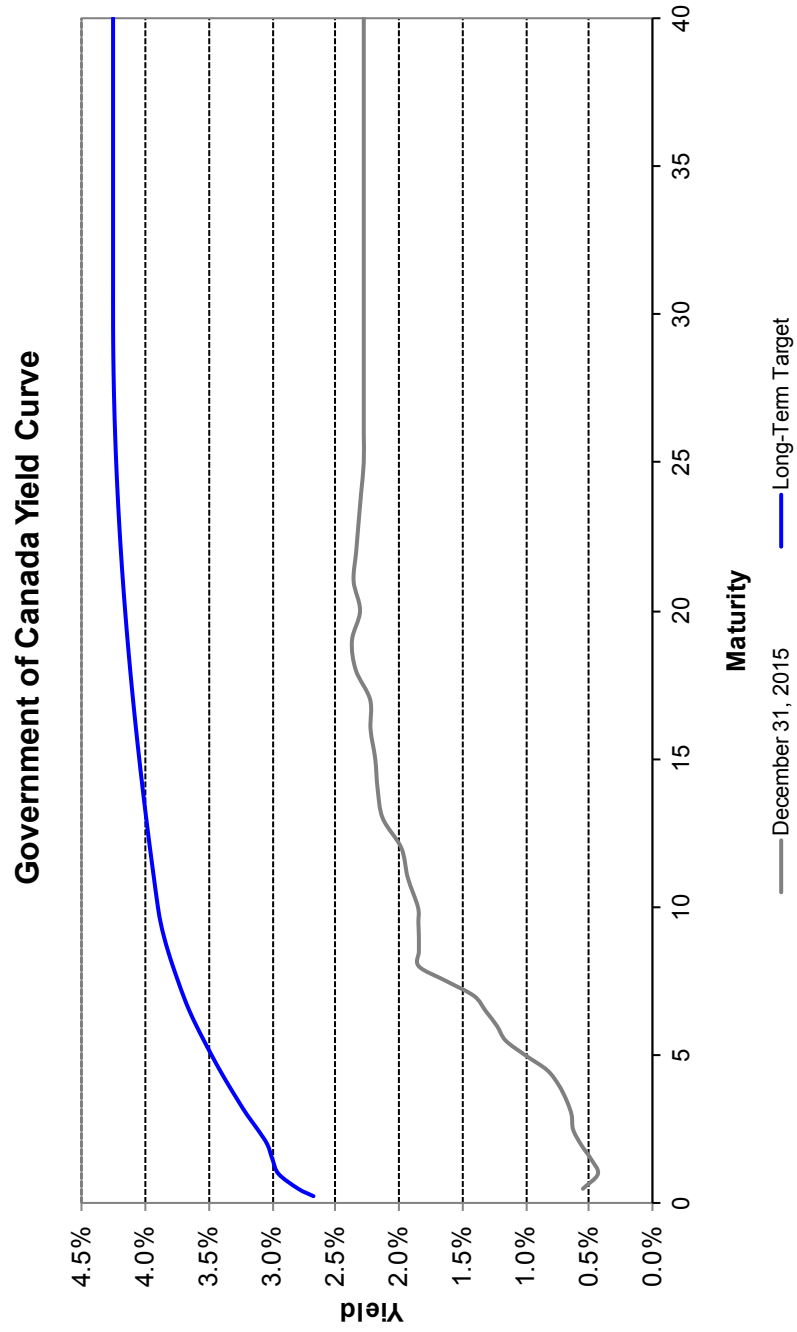
**Asset Class** **Benchmark Index**

<b>Asset Class</b>	<b>Benchmark Index</b>
<b>Fixed Income</b>	
Mid-Term Government Bonds	FTSE TMX Canada Mid Term Government Bond Index
Mid-Term Corporate Bonds	FTSE TMX Canada Mid Term Corporate Bond Index
Mid-Term Bonds	FTSE TMX Canada Mid Term Overall Bond Index
Long-Term Federal Bonds	FTSE TMX Canada Long Term Federal Bond Index
Long-Term Provincial Bonds	FTSE TMX Canada Long Term Provincial Bond Index
Long-Term Municipal Bonds	FTSE TMX Canada Long Term Municipal Bond Index
Long-Term Corporate AAA/AA Bonds	FTSE TMX Canada Long Term Corporate AA+ Bond Index
Long-Term Corporate A Bonds	FTSE TMX Canada Long Term Corporate A Bond Index
Long-Term Corporate BBB Bonds	FTSE TMX Canada Long Term Corporate BBB Bond Index
Long-Term Government Bonds	FTSE TMX Canada Long Term Government Bond Index
Long-Term Corporate Bonds	FTSE TMX Canada Long Term Corporate Bond Index
Long-Term Bonds	FTSE TMX Canada Long Term Overall Bond Index
Extra Long-Term Bonds	FTSE TMX Canada 20+ Strip Bond Index
Universe Federal Bonds	FTSE TMX Canada Federal Bond Index
Universe Provincial Bonds	FTSE TMX Canada Provincial Bond Index
Universe Municipal Bonds	FTSE TMX Canada Municipal Bond Index
Universe Corporate AAA/AA Bonds	FTSE TMX Canada Corporate AA+ Bond Index
Universe Corporate A Bonds	FTSE TMX Canada Corporate A Bond Index
Universe Corporate BBB Bonds	FTSE TMX Canada Corporate BBB Bond Index
Universe Government Bonds	FTSE TMX Canada All Government Bond Index
Universe Corporate Bonds	FTSE TMX Canada All Corporate Bond Index
Universe Bonds	FTSE TMX Canada Universe Bond Index
Global Bonds	Barclays Global Aggregate (CAD)
High Yield Bonds (USD), hedged	Merrill Lynch, High Yield Master II (USD)
Bank Loans (USD), hedged	CS Leveraged Loan Index (USD)
Emerging Market Debt (USD), hedged	JPM EMBI Global Diversified (USD)



<b>Asset Class</b>	<b>Benchmark Index</b>
<b>Equities</b>	
Canadian Equities	S&P/TSX Capped Composite
Canadian Equities, Small Cap	BMO - Nesbitt Burns, Small Cap, weighted
Canadian Equities, Low Volatility	S&P/TSX Composite Low Volatility Index
U.S. Equities, unhedged	S&P 500 (CAD)
U.S. Equities, hedged	S&P 500 (USD)
U.S. Equities, Small/Mid Cap, unhedged	Russell 2500 (CAD)
U.S. Equities, Small Cap, unhedged	Russell 2000 (CAD)
U.S. Equities, Low Volatility, unhedged	S&P 500 Low Volatility Index (CAD)
International Equities, unhedged	MSCI - E.A.F.E. (CAD)
International Equities, hedged	MSCI - E.A.F.E. (Local Currency)
International Equities, Small Cap, unhedged	MSCI - E.A.F.E. small cap (CAD)
International Equities, Low Volatility, unhedged	S&P International Developed Low Volatility (CAD)
Global Equities, unhedged	MSCI - World (CAD)
Global Equities, hedged	MSCI - World (Local Currency)
Global Equities, Small Cap, unhedged	MSCI - World, Small Cap (CAD)
Global Equities, Small Cap, hedged	MSCI - World, Small Cap (Local Currency)
Global Equities, Low Vol, unhedged	MSCI World Minimum Volatility Index (CAD)
All Country Index (ACWI)	MSCI - ACWI (CAD)
All Country Index (ACWI), partially hedged	MSCI - ACWI, Partially Hedged
Emerging Markets, unhedged	MSCI - Emerging Markets, Free, Gross (CAD)
Emerging Markets, Low Volatility, unhedged	S&P Emerging Markets Low Volatility (CAD)

<b>Asset Class</b>	<b>Benchmark Index</b>
<b>Alternatives</b>	
Commodities, hedged	Goldman Sachs Light Energy Commodity Index (USD)
Canadian Real Estate (Direct)	REALpac/IPD Canada Property Index
U.S. Real Estate (Direct), hedged	NCREIF Property Index (USD)
Global Real Estate (REITS), unhedged	EPRA / NAREIT (CAD)
Infrastructure (Direct), hedged	n/a
Infrastructure (Indirect), unhedged	UBS 50/50 Infrastructure Index (CAD)
Private Equity, hedged	Cambridge & Associates Private Equity (USD)
Farmland, hedged	NCREIF Farmland Index (USD)
Timberland, hedged	NCREIF Timberland Index (USD)
Hedge Funds - Global Macro, hedged	CSFB/Tremont Global Macro (USD)
Hedge Funds - Market Neutral, hedged	CSFB/Tremont Equity Market Neutral (USD)
Hedge Funds - Managed Futures, hedged	CISDM CTA Equally Weighted Index (USD)
Multi-Strategy Hedge Fund, hedged	Custom Index (USD)
Diversified Growth Fund, hedged	Custom Index (USD)



## 1. Long-term target yield-to-maturities for key bonds

Index	Expected Long-Term Yield	
	Assumption	Source
Inflation	2.0%	Bank of Canada target
Short Term (91-day T-Bills)	2.67%	Based on the historical spread to 10-year federal bonds
7-year federal bonds (CANSIM V122542)	3.62%	Based on the historical spread to 10-year federal bonds
10-year federal bonds (CANSIM V122543)	3.85%	Based on inflation (2.0%) plus target Real GDP growth (1.9%)
>10-year federal bonds (CANSIM V122544)	4.18%	Based on the historical spread to 10-year federal bonds
Federal LT RRB (CANSIM V122553)	2.01%	Based on the historical spread between Bank of Canada long-term benchmark bond yield (V122544) and federal long-term real return bond (V122553), which can be interpreted as expected inflation and a bias reflecting a cost of hedging inflation*

\* The cost of hedging reflects the fact that purchasers of real return bonds in the market are prepared to pay a price for the protection against inflation risk as part of a buy and hold strategy.

## 2. Expected returns, standard deviations and downside risks

Asset Class	Expected 10-yr Annualized Return (Compound)		10-yr Average Annual Std. Deviation	
	Source		Source	
Realized Inflation	Based on consensus forecasts and on the inflation risk premium implied by market break-even inflation rates		Estimated from historical data series (1987-2014)	
Canadian Fixed Income	Expected returns are generated by Aon Hewitt's proprietary bond model. Historical money market yields, actual yield curve and expected long term nominal and real return YTM's are used to calibrate the model that generates yield curve movements. Expected returns are then derived from the yield curve movements		Generated by the same model that generated the expected fixed income returns (tested against historical numbers for reasonability)	
Global Bonds	Similar expected return to Canadian Bonds adjusted for the inter-country interest rate differential representing an unhedged investment		Estimated from historical data series (1990-2014)	
High Yield Bonds	Derived from a U.S. 5-yr bond yield, plus a credit spread and net upgrade benefit, less a provision for default		Estimated from historical data series (1987-2014)	
Bank Loans	Sum of the floating rate, considering floors, credit spreads and changes in price, less the net effect of defaults		Estimated from historical data series (2007-2014) <sup>1</sup>	
Emerging Market Debt	Derived from a U.S. mid-term bond yield, plus a credit spread, less a provision for default		Estimated from historical data series (1997-2014)	

<sup>1</sup> Historical data is available since 1992. From 1992 to 2007, the historical returns exhibit very low volatility. Beginning in 2007, volatility has significantly increased and returns on bank loans have become highly correlated with those of high-yield bonds. We have chosen to ignore the period 1992-2007.

Asset Class	Expected 10-yr Annualized Return (Compound)	10-yr Average Annual Standard Deviations
	Source	Source
Canadian Equities	Forecast earnings are used to calculate the equity market cash flows. The forecast cash flows are then discounted and their aggregated value is equated to the current level of the equity market to arrive at an expected return	Estimated from historical data series (1987-2014)
Canadian Equities, Small cap	Annualized premium of 0.5% over large cap Canadian equities reflecting the asset class' higher volatility and higher earnings growth potential	Estimated from historical data series (1987-2014)
Canadian Equities, Low Volatility	Expected return such that the Sharpe ratio is the same as for Canadian Equities	Estimated from historical data series (1997-2014)
U.S. Equities	Simulated currency returns are applied to the local currency distribution to arrive at an estimate in CAD	Standard deviation of the simulated unhedged distribution (1987-2014)
U.S. Equities, hedged	Forecast earnings are used to calculate the equity market cash flows. The forecast cash flows are then discounted and their aggregated value is equated to the current level of the equity market to arrive at an expected return	Estimated from historical data series in local currency (1987-2014)
U.S. Equities, Mid/Small cap	Annualized premium of 0.25% over large cap U.S. equities (USD) reflecting the asset class' higher volatility and higher earnings growth potential. The return is then translated into CAD	Standard deviation of the simulated unhedged distribution (1987-2014)
U.S. Equities, Small cap	Annualized premium of 0.5% over large cap U.S. equities (USD) reflecting the asset class' higher volatility and higher earnings growth potential. The return is then translated into CAD	Standard deviation of the simulated unhedged distribution (1987-2014)
U.S. Equities, Low Volatility	Expected return such that the Sharpe ratio is the same as for U.S. Equities	Estimated from historical data series in local currencies (1990-2014)

Asset Class	Expected 10-yr Annualized Return (Compound)	10-yr Average Annual Standard Deviations
	Source	Source
International Equities	Simulated currency returns are applied to the local currency distribution to arrive at an estimate in CAD	Standard deviation of the simulated unhedged distribution (1987-2014)
International Equities, hedged	Forecast earnings are used to calculate the cash flows for the main equity markets comprising the EAFE index. The forecast cash flows are then discounted and their aggregated value is equated to the current level of the equity markets to arrive at an expected return for each of the economies. They are then combined to form the EAFE return, taking into account half of the diversification	Estimated from historical data series in local currencies (1987-2014)
International Equities, small cap	Annualized premium of 0.5% over large cap International equities (local currency) reflecting the asset class' higher volatility and higher earnings growth potential. The return is then translated into CAD	Standard deviation of the simulated unhedged distribution (1993-2014)
International Equities, Low Volatility	Expected return such that the Sharpe ratio is the same as for International Equities	Estimated from historical data series in local currencies (1991-2014)
Global Equities	Based on the return of a portfolio comprised of a 50% allocation to U.S. equities (S&P 500) and a 50% allocation to International equities (MSCI – EAFE)	Standard deviation of an unhedged portfolio comprised of 50% U.S. equities and 50% International equities
Global Equities, hedged	Based on the return of a portfolio comprised of a 50% allocation to U.S. equities (S&P 500 USD) and a 50% allocation to International equities (MSCI – EAFE Local)	Standard deviation of a hedged portfolio comprised of 50% U.S. equities and 50% International equities
Global Equities, Small Cap.	Based on the return of a portfolio comprised of a 50% allocation to U.S. equities Small Cap. (Russell 2000) and a 50% allocation to International equities Small Cap. (MSCI – EAFE, Small Cap.)	Standard deviation of an unhedged portfolio comprised of 50% U.S. equities Small Cap. and 50% International equities Small Cap.

Asset Class	Expected 10-yr Annualized Return (Compound)	10-yr Average Annual Standard Deviations
	Source	Source
Global Equities, Small Cap., hedged	Based on the return of a portfolio comprised of a 50% allocation to U.S. equities Small Cap. (Russell 2000 USD) and a 50% allocation to International equities Small Cap. (MSCI – EAFE, Small Cap. Local)	Standard deviation of a hedged portfolio comprised of 50% U.S. equities Small Cap. and 50% International equities Small Cap.
Global Equities, Low Volatility	Based on the return of a portfolio comprised of a 50% allocation to U.S. Equities, Low Volatility (S&P 500, Low Volatility) and a 50% allocation to International Equities, Low Volatility (S&P International Developed, Low Volatility)	Standard deviation of an unhedged portfolio comprised of 50% U.S. Equities Low Vol. and 50% International Equities Low Vol.
All Country World Index (ACWI)	Based on the return of a portfolio comprised of a 88% allocation to Global equities (MSCI – World) and a 12% allocation to Emerging markets (MSCI - Emerging Markets)	Standard deviation of an unhedged portfolio comprised of 88% Global equities (MSCI – World) and 12% Emerging markets (MSCI - Emerging Markets)
All Country World Index (ACWI), partially hedged	Based on the return of a portfolio comprised of a 88% allocation to Global equities (MSCI – World Local) and a 12% allocation to emerging markets (MSCI - Emerging Markets)	Standard deviation of a partially hedged portfolio comprised of 88% Global (MSCI – World Local) equities and 12% Emerging markets (MSCI - Emerging Markets)
Emerging Markets	Long term earnings growth assumptions are established for each of the main countries and combined into a composite to forecast earnings and calculate the equity market cash flows. The aggregated value of discounted forecast cash flows is equated to the current level of the equity market to arrive at an expected return	Estimated from historical data series (1988-2014)
Emerging Markets, Low Volatility	Expected return such that the difference in expected return between Emerging Markets and Emerging Markets low volatility is the same as the difference in expected return between International and International low volatility equities	Estimated from historical data series (1997-2014)



Asset Class	Expected 10-yr Annualized Return (Compound)	10-yr Average Annual Standard Deviations
	Source	Source
Commodities, hedged	Derived from LIBOR plus U.S. inflation	Estimated from historical data series (1987-2014)
Canadian Real Estate (Direct)	Based on an estimated income yield, real rental growth, expected inflation, and management fees	Historical standard deviation adjusted upward to reflect appraisal smoothing (1987-2014)
U.S. Real Estate (Direct), hedged	Based on an estimated income yield, real rental growth, expected inflation, and management fees	Historical standard deviation adjusted upward to reflect appraisal smoothing (1987-2014)
Global REITS, unhedged	Discount of 1% to the expected return on Global Equities reflecting the asset class' lower beta	Estimated from historical data series (1990-2014)
Infrastructure (Listed), unhedged	Discount of 1% to the expected return on Global Equities reflecting the asset class' lower beta	Estimated from historical data series (1995-2014)
Infrastructure (Direct), hedged	Based on current income yield, expected inflation, 50% leverage, cost of financing and management fees	Derived from the standard deviation of Real Estate, Global REITS and Listed Infrastructure. Adjusted for leverage
Private Equity	We model a diversified portfolio with allocations to leveraged buyouts, venture capital, mezzanine debt and distressed debt. Return assumptions are formulated for each strategy based on an analysis of the exposure of each strategy to various market factors with associated risk premiums	Standard deviation such that the Sharpe ratio is the same as that of U.S. equities, hedged
Farmlands, hedged	Based on current income yield, expected inflation and management fees	Historical standard deviation adjusted upward to reflect appraisal smoothing (1992-2014)
Timberlands, hedged	Based on current income yield, expected inflation and management fees	Historical standard deviation adjusted upward to reflect appraisal smoothing (1987-2014)

Asset Class	Expected 10-yr Annualized Return (Compound)	10-yr Average Annual Standard Deviations
	Source	Source
Equity Market Neutral, hedged	A factor benchmark is estimated via a multivariate regression on cash, fixed income and equities. An assumed excess return is then added to the factor return based on the expected manager skill (alpha) of the average manager and a provision for fees is taken	Estimated from historical data series (1994-2014), adjusted upward following the views of the CMA Committee and hedge fund research team
Global Macro, hedged	A factor benchmark is estimated via a multivariate regression on cash, fixed income and equities. An assumed excess return is then added to the factor return based on the expected manager skill (alpha) of the average manager and a provision for fees is taken	Estimated from historical data series (1994-2014)
Managed Futures, hedged	A factor benchmark is estimated via a multivariate regression on cash, fixed income and equities. An assumed excess return is then added to the factor return based on the expected manager skill (alpha) of the average manager and a provision for fees is taken	Estimated from historical data series (1987-2014)
Diversified Growth Fund, hedged	A benchmark is estimated using a multivariate regression on the money markets, Canadian provincial bonds, corporate bonds, global equities and hedge funds, and takes into account management fees	Based on the volatility of the underlying asset classes, plus an additional risk factor, providing an appropriate Sharpe ratio for the asset class

### 3. Summary Statistics

The following table summarizes all asset class expected return and risk assumptions. Due to the impact of volatility on compounding, the level annual (year-over-year) return required to achieve the assumed geometric average is higher. This is illustrated in the table below.

<b>Asset Class</b>	<b>10-yr Average Annual Return</b>	<b>10-yr Compound Return</b>	<b>Average Annual Standard Deviation</b>	<b>Average Annual CTE 95%</b>
Inflation	1.9%	1.9%	1.3%	-0.6%
91-day T-Bills	1.3%	1.3%	1.0%	0.2%
Banker's Acceptance	1.7%	1.7%	1.1%	0.4%
Overall Real Return Bonds	0.9%	0.4%	10.2%	-19.1%
Short-Term Federal Bonds	1.3%	1.3%	1.6%	-1.6%
Short-Term Provincial Bonds	1.6%	1.6%	2.1%	-2.3%
Short-Term Municipal Bonds	1.8%	1.8%	2.0%	-1.7%
Short-Term AAA/AA Corporate Bonds	2.0%	2.0%	2.2%	-1.8%
Short-Term A Corporate Bonds	2.3%	2.2%	2.4%	-2.0%
Short-Term BBB Corporate Bonds	2.6%	2.6%	3.2%	-3.2%
Short-Term Government Bonds	1.4%	1.4%	1.7%	-1.7%

<b>Asset Class</b>	<b>10-yr Average Annual Return</b>	<b>10-yr Compound Return</b>	<b>Average Annual Standard Deviation</b>	<b>Average Annual CTE 95%</b>
Short-Term Corporate Bonds	2.3%	2.2%	2.5%	-2.3%
Mortgages	2.3%	2.3%	2.5%	-2.2%
Short-Term Bonds	1.7%	1.7%	2.0%	-1.9%
Mid-Term Federal Bonds	1.3%	1.3%	3.8%	-6.5%
Mid-Term Provincial Bonds	2.0%	1.9%	4.8%	-7.6%
Mid-Term Municipal Bonds	2.3%	2.2%	5.1%	-8.0%
Mid-Term AAA/AA Corporate Bonds	2.3%	2.2%	4.8%	-7.2%
Mid-Term A Corporate Bonds	2.6%	2.5%	5.2%	-7.7%
Mid-Term BBB Corporate Bonds	3.0%	2.8%	6.6%	-10.1%
Mid-Term Government Bonds	1.7%	1.6%	4.3%	-7.1%
Mid-Term Corporate Bonds	2.7%	2.6%	5.8%	-8.8%
Mid-Term Bonds	2.0%	1.9%	4.7%	-7.5%
Long-Term Federal Bonds	0.9%	0.6%	7.5%	-14.7%
Long-Term Provincial Bonds	2.6%	2.0%	11.1%	-19.0%
Long-Term Municipal Bonds	3.2%	2.5%	12.0%	-20.1%
Long-Term AAA/AA Corporate Bonds*	2.2%	1.9%	8.5%	-14.7%
Long-Term A Corporate Bonds	3.8%	2.9%	13.3%	-21.9%
Long-Term BBB Corporate Bonds	4.7%	3.6%	15.1%	-24.2%
Long-Term Government Bonds	2.1%	1.6%	9.9%	-17.6%
Long-Term Corporate Bonds	4.1%	3.2%	13.9%	-22.7%
Long-Term Bonds	2.5%	2.0%	10.8%	-18.6%

\*Considering the small number of long-term AAA/AA bonds, the behavior of this asset class is highly uncertain.

<b>Asset Class</b>	<b>10-yr Average Annual Return</b>	<b>10-yr Compound Return</b>	<b>Average Annual Standard Deviation</b>	<b>Average Annual CTE 95%</b>
Extra Long-Term Bonds	2.6%	0.6%	20.9%	-34.3%
Universe Federal Bonds	1.2%	1.1%	3.3%	-5.5%
Universe Provincial Bonds	2.2%	2.0%	7.0%	-11.7%
Universe Municipal Bonds	2.5%	2.3%	6.6%	-10.5%
Universe AAA/AA Corporate Bonds	2.1%	2.0%	2.6%	-2.9%
Universe A Corporate Bonds	2.9%	2.7%	7.3%	-11.2%
Universe BBB Corporate Bonds	3.3%	3.0%	7.3%	-10.9%
Universe Government Bonds	1.7%	1.6%	5.1%	-8.5%
Universe Corporate Bonds	2.8%	2.7%	6.0%	-8.8%
Universe Bonds	2.0%	1.9%	5.4%	-8.5%
Global Bonds	2.2%	1.9%	8.1%	-14.6%
High Yield Bonds (USD)	6.3%	5.9%	9.4%	-13.5%
Bank Loans (USD)	3.4%	3.2%	6.3%	-11.1%
Emerging Market Debt (USD)	5.3%	4.9%	10.2%	-14.1%

<b>Asset Class</b>	<b>10-yr Average Annual Return</b>	<b>10-yr Compound Return</b>	<b>Average Annual Standard Deviation</b>	<b>Average Annual CTE 95%</b>
Canadian Equities	8.3%	7.1%	17.0%	-26.4%
Canadian Equities, Small Cap	9.3%	7.6%	20.3%	-32.3%
Canadian Equities, Low Vol	7.1%	6.3%	14.0%	-20.1%
U.S. Equities	7.6%	6.5%	15.9%	-24.0%
U.S. Equities, hedged	8.0%	6.6%	18.0%	-28.0%
U.S. Equities, Small/Mid Cap	8.4%	6.8%	20.1%	-29.0%
U.S. Equities, Small Cap	8.9%	7.0%	21.6%	-31.1%
U.S. Equities, Low Vol	6.7%	5.9%	13.4%	-18.8%
Int'l Equities	7.9%	6.9%	15.8%	-25.9%
Int'l Equities, hedged	8.0%	6.6%	18.0%	-31.0%
Int'l Equities, Small Cap	8.8%	7.4%	18.6%	-28.4%
Int'l Equities, Low Vol	5.9%	5.4%	10.4%	-16.5%
Global Equities	7.8%	6.9%	14.7%	-23.1%
Global Equities, hedged	8.0%	6.7%	17.3%	-28.3%
Global Equities, Small Cap	8.9%	7.6%	17.7%	-26.2%
Global Equities, Small Cap, hedged	9.2%	7.4%	20.9%	-31.9%
Global Equities, Low Vol	6.3%	5.8%	10.5%	-15.0%
All Country Index (ACWI)	8.2%	7.2%	15.0%	-23.2%
All Country Index (ACWI), partially hedged	8.3%	7.0%	17.5%	-28.2%
Emerging Markets	11.0%	8.3%	25.9%	-35.1%
Emerging Markets, Low Vol	7.9%	6.9%	15.7%	-22.9%

<b>Asset Class</b>	<b>10-yr Average Annual Return</b>	<b>10-yr Compound Return</b>	<b>Average Annual Standard Deviation</b>	<b>Average Annual CTE 95%</b>
Commodities, hedged	4.2%	3.2%	15.0%	-26.5%
Canadian Real Estate (Direct)	6.0%	5.3%	12.5%	-22.3%
U.S. Real Estate, hedged	7.2%	6.6%	12.5%	-20.0%
Global REITS (Listed-unhedged)	7.3%	5.9%	18.5%	-28.2%
Infrastructure (Direct), hedged	7.7%	6.2%	19.3%	-26.7%
Infrastructure (Listed-unhedged)	6.8%	5.9%	15.0%	-21.8%
Private Equity, hedged	12.1%	9.0%	28.9%	-35.5%
Farmlands, hedged	8.0%	7.1%	14.5%	-18.2%
Timberlands, hedged	4.9%	4.3%	12.0%	-17.5%
Equity Market Neutral, hedged	3.5%	3.2%	8.0%	-12.5%
Global Macro, hedged	4.6%	4.1%	10.5%	-15.3%
Managed Futures, hedged	5.2%	4.5%	13.6%	-19.2%
Multi-Strategy Hedge Fund, hedged	4.4%	4.2%	7.5%	-10.2%
Diversified Growth Funds, hedged	5.9%	5.5%	10.0%	-14.0%



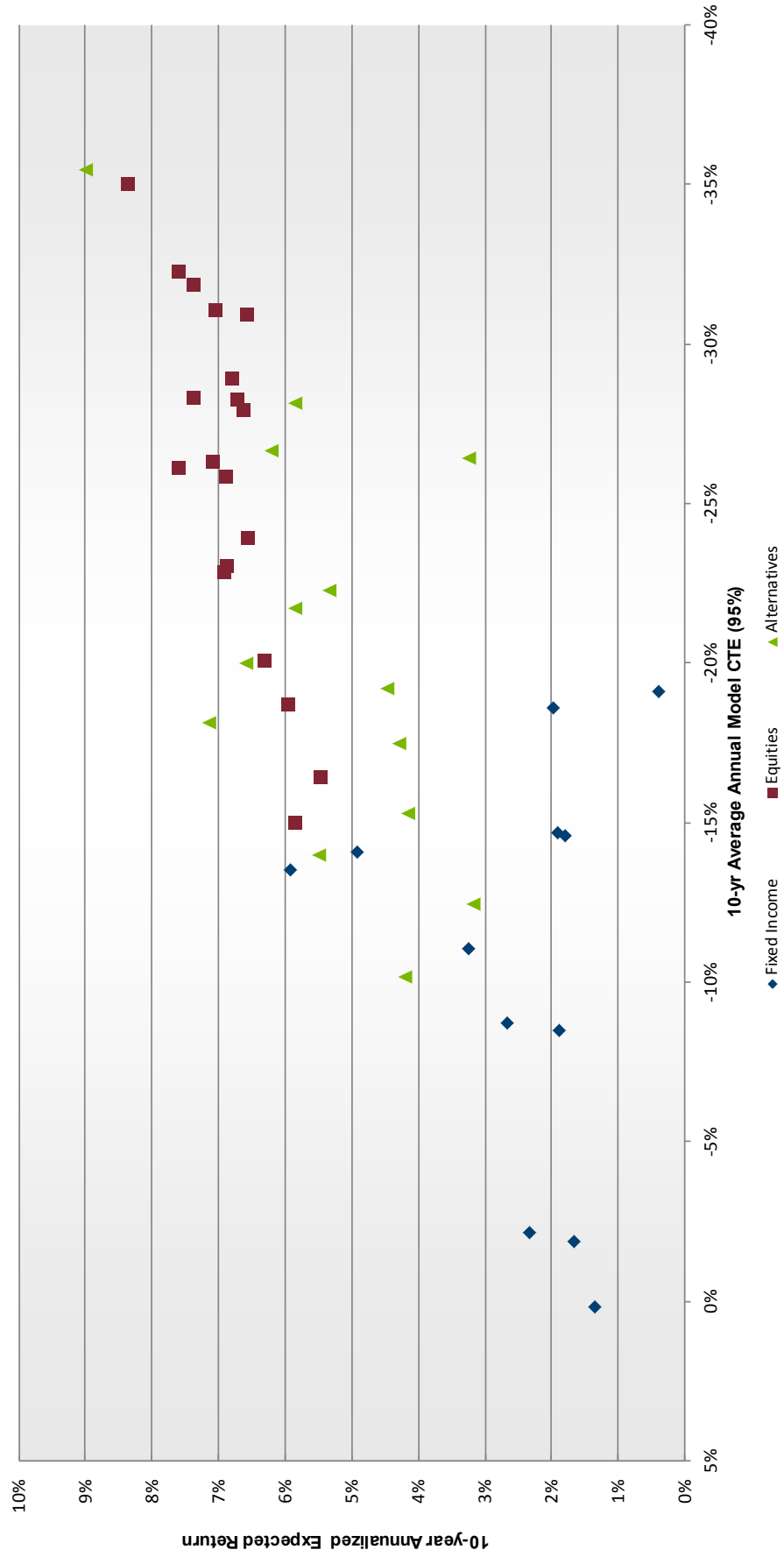


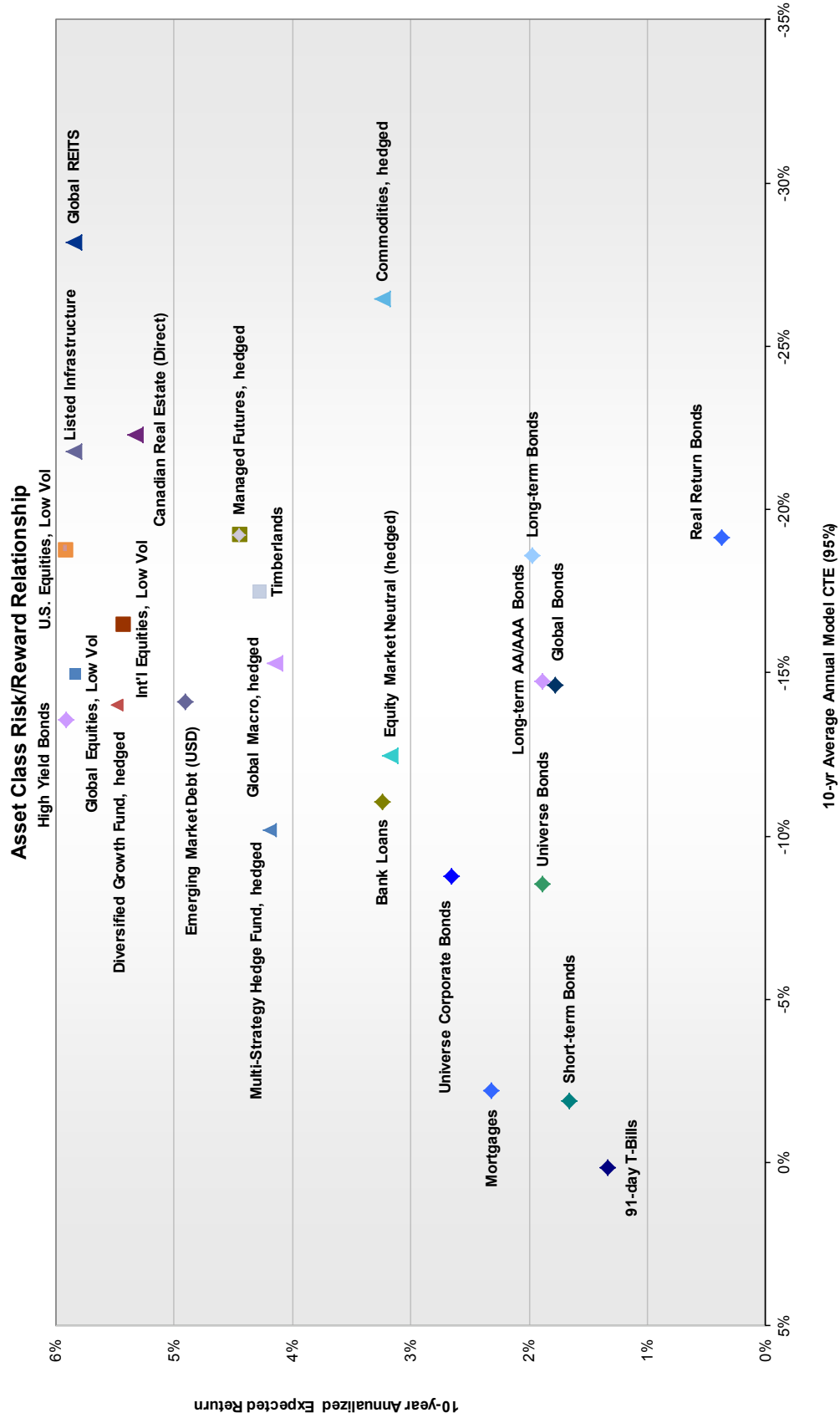
- Correlations and standard deviations (where applicable) are based on monthly (or quarterly where applicable) nominal returns of the indices and periods stated above for the periods ending November 30, 2014.
- Infrastructure (Direct) correlations are assumed equal to U.S. Direct Real Estate correlations.
- All expected returns, standard deviations and CTEs are rounded to one decimal place.

The **Sharpe Ratio** is defined as the excess of the asset's expected return over the risk free (Short Term) expected return, divided by the asset's standard deviation.

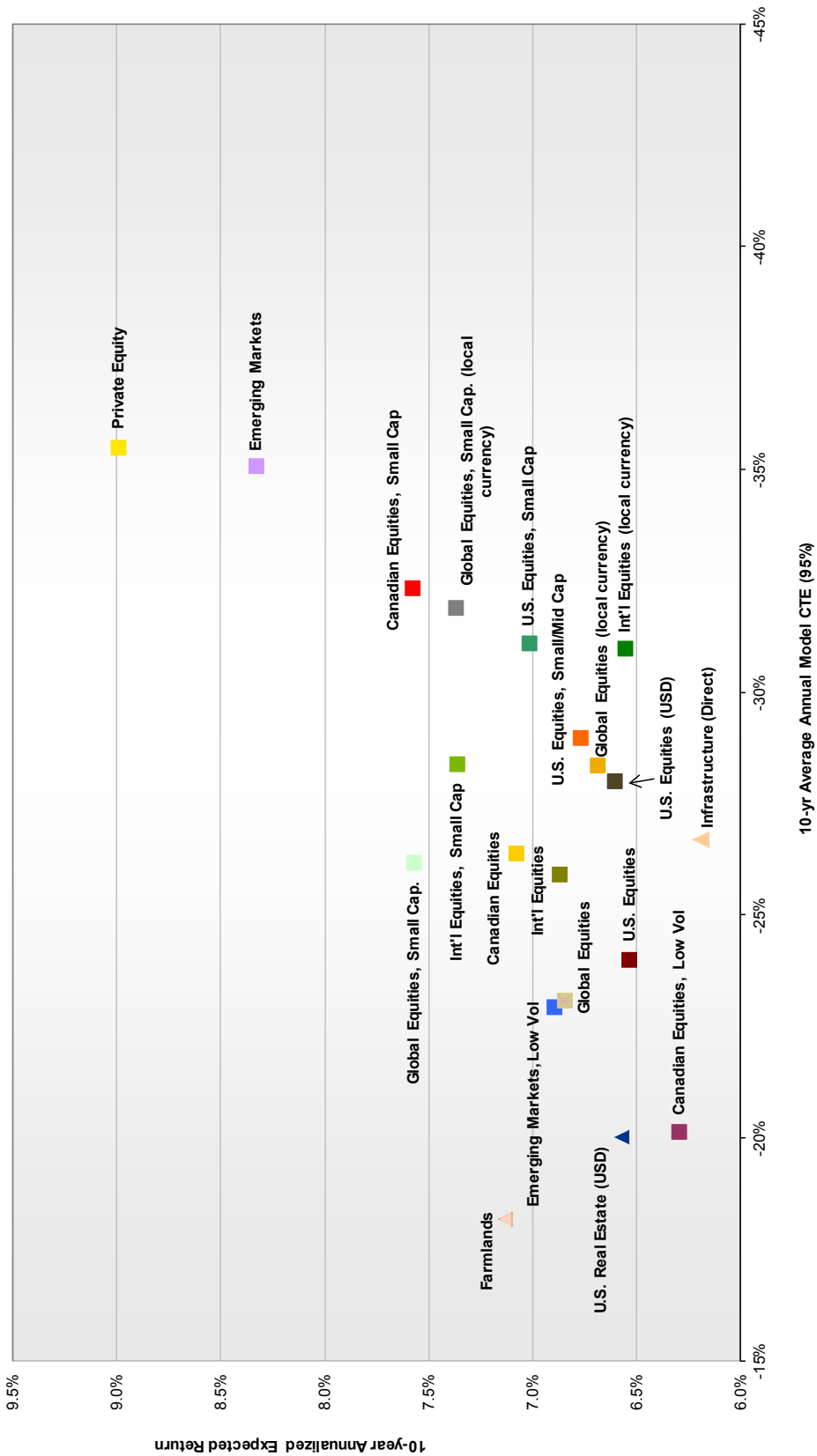
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### Asset Class Risk/Reward Relationship

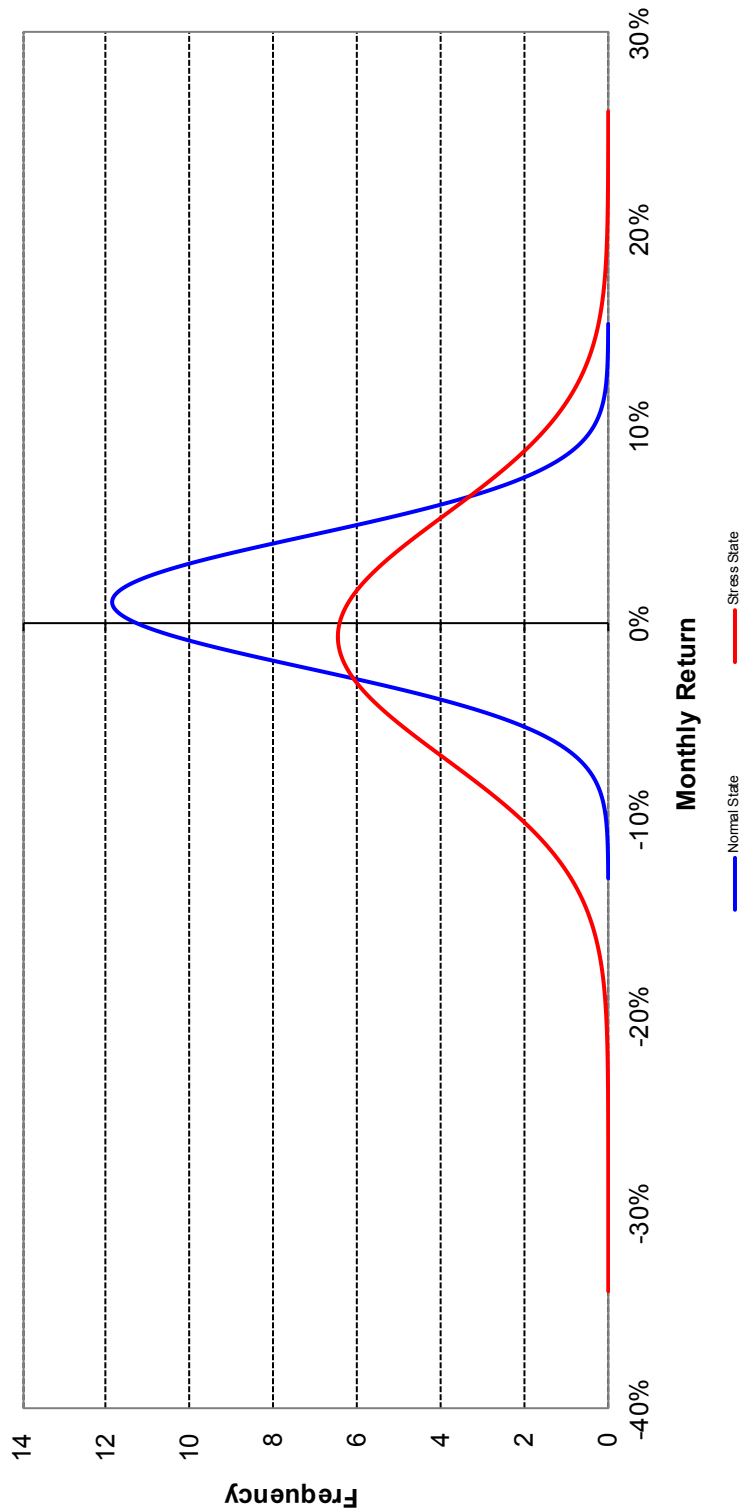




### Asset Class Risk/Reward Relationship



**Distribution of Monthly Returns for the S&P/TSX by Economic State**



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