

# Invest.Wise

**Quarterly Asset Allocation** 

October to December 2015

MCI (P) 058/12/2014

# **Market Commentary: 4th Quarter 2015**

Risk assets – stocks and corporate credits – are likely to face another round of volatility and lower prices over the coming quarter.

Mid-year, we warned that global financial markets had entered a "more dangerous phase", as a result of the "great disconnect" between surging asset prices and sluggish/stagnant economies. And mid-August, we cut exposures to equities, urging a "shift to quality", amidst heightened risk of sharp corrections in asset prices.

The unfinished business from the global financial crisis of 2008-2009 will likely continue to drive prices lower over coming months. For all the money printed and despite zero to negative interest rates, global economic growth has been slowing, deflation/disinflation is gathering momentum, and emerging markets (EM) are facing serious economic and financial market pressures.

Meanwhile, central banks are running out of ammunition. Indeed, zero interest rates are coming to an end in the United States. And, markets are worried that quantitative easing could turn into quantitative squeezing as the Federal Reserve starts to run down its balance sheet.

Amidst the downside risks for stocks and corporate bonds, there are also likely to be rebounds during the quarter. But the uptrend in global equities seems to be over. A new bear phase is probably not imminent for the developed markets. But even they will become markets for traders rather than passive investors. There will likely be large sideways swings. European and Japanese equities will probably perform better than their US counterparts – enjoying, as they do, more favourable monetary conditions. But they, too, will have to endure a lot of volatility.

EM equities are already in a bear phase, and this should gather downside momentum in coming months.

The EM selldown will likely be driven by a further slowing in economic growth, weakness in global demand, low commodity prices, acceleration of fund outflows amidst current account deficits, and higher political risk premiums.

China's economy will most probably continue to slow. It will be weighed down by difficulty in boosting fixed asset investment growth without aggravating economic problems with poor quality credit, and the inability of household consumption to grow fast enough to maintain economic expansion at a time of slowing investment growth.

Meanwhile, a series of policy missteps in the management of the Chinese stock market has undermined investor confidence at a time when that precious commodity is most needed.

Short-end US Treasury yields are likely to continue rising, off historical lows, in anticipation of the end of zero interest rates in the US. The 10-year yield, however, is likely to surprise on the downside near-term despite the prospect of higher Fed rates – on pessimism towards long-term growth prospects, low inflation, and safe-haven buying amidst financial market instability. The resulting yield curve flattening will feed the equities market's fears.

Asian corporate credits will likely continue to be sold on growing risk aversion, particularly a worsening in EM sentiment.

The higher yield on the two-year US Treasury should support the US dollar against other currencies. Further, we could see dollar scarcity as a result of hoarding amidst rising risk aversion. The greenback will likely trade higher over the coming months, particularly against emerging markets, Asia ex-Japan and commodity currencies.



# **Equities**

The uptrend in global equities that started in 2009 – represented by the MSCI All Country World Index – is likely over. Within that broad asset class, there will continue to be country and regional differences in performances. But the outlook over coming months is generally weak.

Emerging market equities are already in the grip of the bear. This will almost certainly continue. Developed markets, led by the US, will most probably struggle sideways over coming months, with the risks on the downside rather than upside.

Optimists argue that the steepness of the US Treasury yield curve does not speak of either a recession or a bear market in the US. The spread between the 10-year yield and the 3-month yield is still far from zero to negative,

representing the flattening and inversion of the yield curve that had predicted every recession in the US going back to 1960. True.

But there have been bear markets in the US without an accompanying recession. For example, the S&P500 fell by 21% between July and October 2011, with neither an inverted yield curve nor recession. There were other worries though – the Euro Area debt crisis and the political brinksmanship of the US debt ceiling negotiations.

With the US economy continuing to grow at a modest pace, it is by no means clear a bear market will be upon us any time soon. But do not rule it out simply because of the shape of the US Treasury yield curve. There are enough technical signals to warn us of possible stomach-wrenching volatility in coming months, and enough fundamental triggers to cause it as well.

US corporate earnings have slowed to the point of reversal. Corporate profit margins have peaked. (Figure 1) Higher wages and a strong US dollar will make it difficult for companies to deliver the earnings growth the market needs to justify current valuations. Pre-tax profit as a percentage of US gross national product is almost two standard deviations above a 70-year average. Mean reversion is a high probability risk.

The so-called cyclically adjusted price to earnings (CAPE) ratio – the valuation method which looks at the price of stocks divided by their 10-year average inflation-adjusted earnings – was sitting at 27x at end-2014. Like corporate earnings, that was also approaching two standard deviations above the average. And so, valuation is also reversing to the mean. It has fallen to 24x, and we believe the mean reversion will continue. (Figure 2)

Figure 1: US Corporate Margins Have Peaked

Source: Bloomberg, DBS CIO Office,, as of end August 2015



Figure 2: Bonds More Expensive than Equities

Source: Robert Shiller, DBS CIO Office as of end July 2015

Other measures of US market value – namely, the ratio of market capitalisation to the gross national product and the ratio of the market value of non-financial stocks relative to their replacement costs – are also approaching their two-sigma thresholds, and hence risk reversions to the mean. In short, prices falling. Markets forgive many things when assets are cheap. They can be very unforgiving when stocks are priced for perfection in a very imperfect world.

Meanwhile, the plentiful, cheap money that drove leverage is now over. And by the way, US margin debt as a proportion of GDP is currently around 2.64%, well above its 2007 peak of 2.23%. The Fed will almost certainly hike rates by December.

And quantitative easing will turn into quantitative squeezing as the Federal Reserve looks for ways to run down its bloated balance sheet over coming years.

While US equities are at risk of earnings contraction, emerging market equities are already in an earnings recession. The MSCI Emerging Market index has been on a declining earnings trend since 2012. The Chinese index has had about a year of falling earnings. Asia ex-Japan's earnings started falling nine months ago.

This is part of the cycle of hot money flows: Cheap money fleeing weak developed market economies drive up emerging market asset valuations, consumer prices, and currencies. In the process, it erodes competitiveness, widens current account deficits, and deepens dependence on external dollar funding. And in the end, as the liquidity flows back to the developed markets, emerging market currencies have to fall to restore competitiveness and profitability. And asset prices have to be marked down to make valuations attractive enough for investors to take the currency, earnings and market risk at a time of market turbulence and painful economic adjustment.

China is struggling with a combination of cyclical and structural challenges. The structural challenges relate to China's "trilemma" – the economic distortions caused by its attempts to control what economists call the "impossible trinity" of the currency exchange rate, the capital account, and interest rates.

Related to that is China's heavy dependence on fixed asset investment to drive economic growth. The problems with this dependence are two-fold – it is credit-intensive and China's state-controlled credit allocation process is inefficient, resulting in a surge in non-performing loans in both the banking and shadow banking sectors.

Meanwhile, the Chinese government's failure to stem the slide in its equities market, despite its many policy interventions, has left the market bewildered. Investor confidence has been dented.

Japanese and European equities look slightly better than their US counterparts because they are still enjoying more generous monetary policies, courtesy of ongoing quantitative easing. But this is only relative. And it is important to keep in mind that they are enjoying central bank asset buying support because their economies are still troubled despite years of cheap and plentiful liquidity.

Overall, there will be trading opportunities. But over the coming months, the markets will likely be difficult for passive investors.

# **Fixed Income**

Risk aversion is rising everywhere, in all markets. As a result, corporate credit spreads have been rising from the middle of the year. There has been no let up in the rise and there is unlikely to be any respite in the coming months.

At the global level, the downside pressure on bonds comes from the imminent end of zero interest rates in the United States. Down the line, there is also the risk of quantitative easing turning into quantitative tightening as the Federal Reserve sells down its bloated balance sheet. The net impact of both should mean higher US Treasury yields.

As we suggested last quarter, we have likely seen the lows in the 10-year US Treasury yield. And indeed, the 2-year US Treasury yield has been riding an uptrend channel from late 2013. Near-term, however, the 10-year yield could soften on risk aversion/safe haven buying, while the 2-year yield continues up on the expectation of higher US rates.

While there may be some protection in government bonds, there are few safe harbours for investors in corporate credits. Slowing economic growth in Asia, and the accompanying contraction in corporate earnings for many companies, suggest deteriorating credit quality. Downside mark-to-market pressure has not let up from the middle of the year, and is unlikely to ease over coming months either. Liquidity is slowly drying up, particularly for Singapore dollar credits.

There will be opportunities to cherry pick during periods of market disruption, which we expect over coming months. But the emphasis is on quality.

The conventional wisdom in a market like this is to switch to higher credit quality and shorten duration. But for those who are unconcerned about the mark-to-market, our suggestion is to compensate the move to higher credit quality with a move to longer duration.

## **Commodities**

The base-building we had expected for commodity prices has not played out. Despite the massive destruction of prices across the commodities complex from mid-2011, the declines continue. Technically, while the selling is very advanced, there is still no sign of a sustainable rebound.

Commodities continue to struggle with downside pressures:

- 1. Lack of visibility on the bottom for China's growth rate
- 2. Slowing global economy and deflationary tendencies
- Imminent end of zero interest rates in the US and eventual start of the unwinding of the Fed's balance sheet





- 4. Prospect of an even stronger US dollar
- 5. Continued commodity oversupply and excess inventory

Key elements of the above list of negatives can reinforce one another, and so develop negative feedback loops. For example, the price of a commodity typically has to fall below the US dollar marginal cost of production before supply destruction can advance. However, cash production costs can often be a moving target, with local currency costs declining as commodity economies weaken. To aggravate matters, the stronger the US dollar, the lower the dollar cost of production. Remember that these costs are typically incurred in local currencies. And when the local currency weakens the dollar production cost is pushed yet lower, forcing another round of price decline.

Crude oil prices will likely remain under pressure from resilient US production, stubbornly high OPEC output, and the eventual return of Iranian oil.

Industrial metals, which resumed price declines in 3Q-2015, will likely remain under downside price pressure from weakness in Chinese demand, oversupply, and excess inventories. Take aluminum as an example. Here, there has been a lack of production cuts; the Chinese are likely to continue to expand exports; and so-called "financing deals" will continue to be unwound. In copper, consumption growth is likely to decline further, as a result of continued slowing of growth in China and other emerging market economies. Meanwhile, supply growth is expected to exceed consumption growth this year.

Apart from supply destruction, signs of a Chinese economic recovery are critical for a sustainable rebound in commodity prices. But this is not evident yet. China's manufacturing activity continues to shrink. More critically, fixed asset investment growth has declined dramatically from over 33% in 2011 to under 11% at last count. (Figure 3)

35 30 25 20 15

2011

Figure 3: Dramatic Decline in China's Investment Growth

Source: Bloomberg, DBS CIO Office, as of end August 2015

2009

China Fixed Asset Investment Growth (% on-year)

2010



### **Currencies**

2008

10 <del>←</del> 2007

Last quarter, we wrote that the "mid-cycle pause in the advance of the US Dollar Index (DXY) could extend" into 3Q-2015. And that was pretty much how it has played out over recent months, as the DXY traded within a sideways range between 93 and 98.

2012

2013

2014

2015

Looking ahead over the next three months, US dollar appreciation is likely to be greatest against emerging market (EM), Asia ex-Japan (AXJ), and commodity currencies, such as the Kiwi and the Aussie. This will be a function of the economic problems of EM and AXJ markets as well as the likelihood of further downside in commodity prices.

Against the euro and the yen, the outlook for the dollar is likely to be for more sideways trading. This is despite the prospect of higher rates in the US versus zero to negative rates and continued quantitative easing in the Euro Area and Japan. Part of this relates to our argument last quarter that we are at an advanced stage of the dollar bull and there are limits to which the US economy can accept further broad dollar strength.

And while the US Federal Reserve is likely to raise rates in December, the pace of rate rises will probably be very slow and the trajectory shallow. This will limit the upside drivers for the US dollar beyond what is already in the price.

# **Understanding Investments**

# **Credit Ratings: 10 Things You Need to Know**

Individuals, companies, and countries rely on ratings that are issued by credit agencies. The opinions of the "big three" – Standard and Poor's, Moody's and Fitch – are still valued, even though their reputations took a beating when they failed to predict the global financial crisis in 2008. Here are some fundamental facts:

### 1. Credit ratings are letter grades of safety

They examine several fundamental questions. Will investors get their money back with interest? Or is the issuer likely to default, leaving investors with little? The more A's an issuer has, the better the bond. Conversely, the more C's or D's, the lower its credit quality. (Figure 1)

### 2. Default rates jump as ratings decrease

The chance of an issuer going into default rises significantly with each step down the rating scale. Default rates are two to three times higher for an A-rated company than an AA/Aa-rated one. The difference is largest within B-class ratings. Nearly four times as many high-yield companies (BB/Ba) default, compared to the nearest investment grade ones, which are rated BBB/Baa. (Figure 2)

Figure 1: Credit Rating Scale

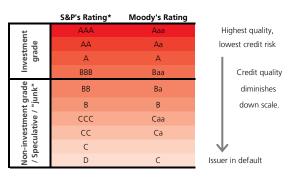


Figure 2: Annual average corporate default rates by letter rating

	ody's	Mod	&P	S
	Ave. Default	Credit Rating	Ave. Default	Credit Rating
=	0.00%	Aaa	0.00%	AAA
vest gra	0.06%	Aa	0.02%	AA
:me	0.10%	А	0.06%	Α
3	0.27%	Baa	0.23%	BBB
High	1.07%	Ва	0.98%	ВВ
Ĭ.	3.41%	В	4.61%	В
ğ	13.86%	Caa-C	23.76%	CCC-C
nvestment   High Yield	0.10% 0.27% 1.07% 3.41%	A Baa Ba B	0.06% 0.23% 0.98% 4.61%	A BBB BB

Annual corporate default rates. S&P data from 1981-2013, Moody's data from 1920-2010

Source: DBS CIO Office, S&P, Moody's

### 3. Better credit ratings = cheaper funds

Higher-rated countries and companies are able to borrow more cheaply, because the risk of holding their debt is judged to be lower. It's the age-old rule behind borrowing and lending.

### 4. Better credit ratings = more capital inflows

Most of the world's bond funds can only invest in a country if it has an investment grade rating from at least two of the "Big 3". Some equity funds face a similar restriction. As such, a status upgrade – or even the promise of one – can attract more inflows. For example: Moody's raised Indonesia's credit rating to Baa3, or investment-grade, in mid January 2012, joining Fitch. The Jakarta Composite Index jumped by 1.1% the next day, and inflows into Indonesia-focused equity funds were at the highest in over a year, according to funds flow tracker EPFR Global.

### 5. Credit ratings go beyond hard numbers

The determination of credit ratings is not an exact science. Yes, credit analysts pore over balance sheets, cash flows, and the reliability of future revenue (e.g. toll road fees compared to home sales). But they also consider factors like political stability, industry norms, market share, and clauses in the bond's structure that could provide added protection against default.

### 6. Credit ratings are not buy/hold/sell recommendations

Credit analysts calculate the odds of investors getting their money back at the end of the day. Investors should consider their risk profile, financial goals, and time horizon before deciding whether to buy, hold, or sell any investment. A recent example: Singapore has a coveted AAA-rating. But its citizens bought only a third of the SGD1.2 billion Singapore Savings Bond available for sale late in September 2015.

### 7. Credit ratings are not guarantees of future value

Before the 2008 global financial crisis, subprime mortgages were bundled and sold as very safe AAA-rated investments, because analysts saw a slim chance of all of them defaulting at the same time. But we now know the story. When the crisis hit, these bundles were swiftly downgraded, and the value of these AAA-rated investments plunged.

### 8. Credit ratings aren't absolute predictors of default

Credit ratings do not have 100% accuracy, and unexpected events can be devastating. For example: Analysts at the 'Big 3' gave Lehman Brothers a positive investment-grade rating of AA up until mid-September 2008, fully expecting a government or company rescue. Lehman Brothers declared bankruptcy on 15 September 2008. Major insurance company AIG took a US government bailout the next day, despite it having a top-notch AAA rating from Moody's, S&P and Fitch.

### 9. Credit ratings do not indicate liquidity risk

Liquidity risk arises when investors are unable to sell an asset quickly enough to avoid a loss. When Lehman Brothers collapsed, financial markets froze. Buying and selling simply stopped in debt markets, and even companies with solid cash balances found no takers for their new bond issues.

# 10. Credit ratings are not a pre-requisite for creditworthiness

Bonds issued by companies with no credit ratings typically offer higher yields, but not all of them have cash problems. Some issuers rely on another party's rating, for instance Singapore statutory boards, which rely on the government's AAA rating. Others may not see value in paying for a rating.

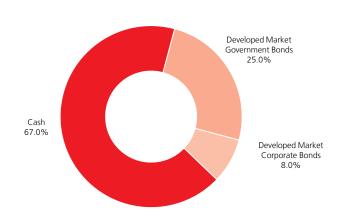
<sup>\*</sup> Method developed by Fitch Ratings, but later purchased and licensed by S&P

# **Asset Allocation**

### **DBS 3-Month Tactical Model Portfolio – Q4 2015**

#### 1. Defensive

Capital preservation with minimal risk exposure



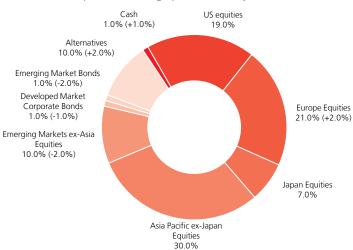
# 3. Balanced

Capturing modest capital growth through a balanced risk-and-return approach

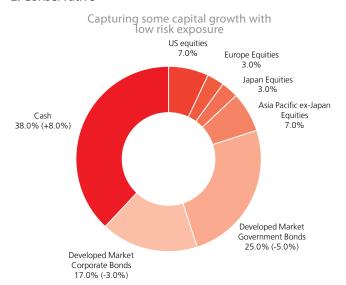


### 5. Aggressive

Maximising capital growth potential through exposure to a large portion in risky assets



### 2. Conservative



### 4. Growth

Higher wealth enhancement through greater exposure to risky assets



### Notes

Percentages denote actual tactical asset allocation weights for a 3 month time horizon. Figures in brackets refer to the tactical weight shifts versus the strategic allocation. Taking the Balanced model as an example, "Europe equities 10.0% (+1.0%)" represents an overweight of 1.0% compared to the neutral weight of 9%.

Asset Class	Region	3m view	12m view	Rationale
	US	Neutral	Neutral	Maintain 3M and 12M Neutral. Medium-term headwinds include: (1) Valuation concerns; (2) Operating margins and earnings concerns; (3) US dollar strength; and (4) Monetary tightening concerns. The peaking of operating margins and the negative impact from dollar strength will continue to weigh on US equities. US equities currently trade at 16.4x forward P/E and consensus forecasts earnings growth at 4.8% in 2015.
	Europe	Overweight	Overweight	Maintain 3M and 12M Overweight given monetary accommodation on the back of ECB QE. Benefits of ECB QE: (1) EUR depreciation boosts export competitiveness; (2) Low real rates support property prices; (3) Portfolio reallocation, with banks re-investing funds in riskier assets; and (4) Boost to banks securitisation. Europe trades at 14.8x forward P/E – a 9.8% discount relative to the US. Based on consensus forecast, Europe is forecast to register 8.9% EBITDA growth in 2015.
Equities	Japan	Neutral	Neutral	Maintain both 3M and 12M Neutral. Medium-term headwinds include: (1) China growth risks; and (2) Fed policy normalisation risks. However, the following medium-term factors should support the Japanese equities market in the event of a broad-based correction: (1) Rebound in economic fundamentals; (2) Subdued oil prices; and (3) Support from government pension fund. At 13.5x forward P/E, MSCI Japan trades at a discount to Developed Markets while consensus forecasts EBITDA growth of 11.5% in 2015.
	Asia Pacific ex- Japan	Neutral	Neutral	Maintain 3M and 12M Neutral. Medium-term challenges include: (1) Imminence of Fed policy lift-off impacting Asia Pacific ex-Japan (APxJ) emerging economies; (2) Sell-down in Chinese equities; and (3) Regional economic growth concerns. APxJ trades at 12.1x forward P/E and market consensus forecasts earnings to fall 12.0% this year.
	Emerging Markets (EM) ex-Asia	Underweight	Underweight	Maintain 3M and 12M Underweight. We expect EM ex-Asia (especially those with large current account imbalances) to face renewed selling pressure as the US moves towards policy normalisation. The downtrend in commodity prices will also be negative for commodity producers in the region. EM (ex-Asia) equities trades at 12.0x forward P/E. Market consensus expects earnings to plunge 24.4% in 2015.
Bonds	Developed Markets (DM)	Underweight	Underweight	<ul> <li>Maintain 3M and 12M Underweight. On a cross-asset basis, equities remain more attractive than bonds.</li> <li>Government Bonds (3M and 12M Underweight) – Maintain Underweight given: (1) UST 10-yr yield trading below fair value; (2) Rising wages and strengthening economy translating into stronger 'core' inflation; and (3) Prevailing market complacency on US interest rate risks. UST 10-yr yield expected at 2.4% in 3Q15 and 2.6% in 4Q15 for the UST 10-yr yield.</li> <li>Corporate Bonds (3M and 12M Underweight) – Maintain Underweight given likelihood of funds outflow and further spreads widening as the Fed moves towards policy normalisation. Stay cautious on US high yield bonds as spreads have not become sufficiently wide at 5.9%.</li> </ul>
	Emerging Markets (EM)	Underweight	Underweight	Maintain 3M and 12M Underweight despite current "carry-friendly" environment of moderate growth, weak inflation, and still accommodative monetary policy. Risks for EM bonds remain on the downside given: (1) Imminent US policy normalisation; and (2) Potential rise in default rates.
Alternatives	N/A	Overweight	Overweight	<ul> <li><u>Commodities</u> (3M and 12M Neutral) – Despite massive destruction of prices across the commodities complex from mid-2011, the declines continue. Commodities are struggling with downside pressures amid: (1) Weak Chinese growth; (2) Dollar strength; and (3) Continued oversupply and excess inventories in a range of commodities.</li> <li><u>Gold</u> (3M and 12M Overweight) – Maintain 3M and 12M Overweight amid rising volatility posed by (1) The undeclared "currency war" between China and other emerging markets; and (2) Imminence of Fed policy normalisation.</li> <li><u>Hedge Funds</u> (3M and 12M Overweight) – Maintain 3M and 12M Overweight. Volatility expected to rise should the Fed tighten monetary policy. Increase hedge funds exposure to protect against downside risks.</li> </ul>
Cash	N/A	Overweight	Overweight	Maintain at 3M and 12M Overweight amid rising volatility and in anticipation of broad-based portfolio de-risking.

### Investment Objectives of the Model Portfolios

The DBS Strategic Model Portfolios have been developed in consultation with Morningstar Associates, LLC based on a set of capital market assumptions. Morningstar Associates, LLC, the industry leader in fund of funds management, investment consulting and retirement advisory services, has developed five portfolios for DBS Bank.

Each portfolio is diversified across many types of asset classes and investment styles in order to benefit from the top performing asset classes and reduce the impact of lower performing asset classes.

- Defensive This model is ideally suited for investors who are seeking to preserve their capital and are uncomfortable sustaining losses. Its 0% allocation to equities means the portfolio will have lower returns while striving to reduce risk exposure over the medium to long term. To help minimize risk; this model has a sizeable allocation to cash and Developed Market bonds.
- Conservative This model is ideally suited for investors who are fairly risk adverse and are seeking more stable returns. Its 20% allocation to equities strives to capture some growth potential, without assuming too much risk over the medium to long term.
- Balanced This portfolio is ideally suited for investors who are seeking to strike a balance between risk and returns. Although the 47% allocation to equities and 3% allocation to alternative investments give this model a riskier profile than either the Defensive or Conservative models, it is better positioned for modest growth over the medium-to-long term.
- Growth This model is ideally suited for investors seeking to grow their capital and who can tolerate higher risk and considerable market volatility over the medium-to-long term. Although its 68% allocation to equities (with a bias to Asian equities) and 5% exposure to alternative investments position the model for growth, it also exposes the investor to potentially high losses.
- Aggressive This model is ideally suited for investors who are seeking to maximize growth and can tolerate losses and market fluctuations over the medium-to-long term. Its 87% allocation to equities and 8% exposure to alternative investments position the investor to capture the upside of the market, but also expose them to the potential of sustaining extensive losses on the downside. This model has the highest allocation to Asia Pacific ex-Japan, US and Europe equities, while still maintaining some exposure to bonds and cash.

The target investment horizon of a Strategic Asset Allocation Model portfolio is five years.

### Strategic Asset Allocation Models for 2015

		Defensive	Conservative	Balanced	Growth	Aggressive
	US	0%	7%	12%	17%	19%
	Europe	0%	3%	9%	16%	19%
Faccitation	Japan	0%	3%	6%	6%	7%
Equities	Asia Pacific ex Japan	0%	7%	16%	21%	30%
	Emerging Markets ex Asia	0%	0%	4%	8%	12%
	Equities	0%	20%	47%	68%	87%
	Developed Market – Government Bonds	25%	30%	15%	6%	0%
Bonds	Developed Market – Corporate Bonds	8%	20%	15%	10%	2%
	Emerging Markets (EM) Bonds	0%	0%	8%	6%	3%
	Bonds	33%	50%	38%	22%	5%
Alter	rnatives	0%	0%	3%	5%	8%
C	Cash		30%	12%	5%	0%
Expected	Expected Return (%)			6.8%	8.6%	10.2%
Expecte	ed Risk (%)	3.0%	6.1%	11.0%	15.0%	19.0%

To find out more, talk to any of our Relationship Managers now!

#### Notes:

- The expected annual return of the strategic portfolio is based on capital market assumptions derived from Morningstar's econometric model that relies on historic, current and forecasted data on the indices highlighted below. The information is for reference only.
- The expected risk (or annual standard deviation) of the strategic portfolio represents the expected risk level of the portfolio based on historical asset class relationships (correlations) and volatility, using monthly returns from 2004 to 2015 based on the indices highlighted below. The information is for reference only.
- Morningstar Associates' model portfolios started on 1 October 2010. Morningstar reviews the strategic asset allocation on an annual basis. The current Strategic Asset Allocation (SAA) is as of end November 2014.
- Based on the model portfolios, the Aggressive model has the highest risk, followed by Growth, Balanced and Conservative, with Defensive being the least risky. The risk consideration that was used in formulating the Strategic Asset Allocation was the annualized quarterly average drawdown. A maximum annualized average quarterly drawdown constraint is in place for the different portfolios, with the defensive portfolio having the most restrictive and the aggressive portfolio having the most accommodative risk constraints.
- The investor type classification for the portfolio has no direct relationship with the Financial Needs Analysis customer risk profile types and the portfolios are not assigned any product risk rating based on the bank's proprietary risk rating methodology.
- · The above model portfolios are effective from January to December 2015 and are subject to change.
- The expected return and expected risk are based on the following indices for calculation:
  - o Equity: US MSCI USA GR; Europe MSCI Europe GR; Japan MSCI Japan GR; Asia Pacific ex Japan MSCI AC Asia Pacific ex –Japan GR; Emerging Market (EM) ex Asia MSCI EM-ex Asia GR
  - o Bond: Developed Markets (DM) Government Bonds Citigroup WGBI All Maturities USD; Developed Markets (DM) Corporate Bonds Citigroup WorldBIG Corporate A USD; Emerging Markets (EM) Bonds JPMorgan EMBI Global Diversified
  - o Alternatives: Commodities Bloomberg Commodity Index Total Return; Gold S&P GSCI Gold Official Close TR; Hedge Funds Credit Suisse Hedge Fund
  - o Cash: Bank of America Merrill Lynch USD LIBOR 3 Month Constant Maturity

### Morningstar Associates' Asset Allocation Approach:

A hallmark of Morningstar Associates' asset allocation approach is to diversify the models across investment styles, sectors, sub-asset classes, market caps, and regions. This approach aims to ensure that some part of the portfolio will be performing well in most markets while limit the downside risks.

In determining the asset allocation targets, Morningstar Associates uses a multifaceted approach that features of a number of sophisticated mathematical models to forecast returns on various asset classes. The modelling process is designed to provide asset targets appropriately aligned with current market conditions and investor expectations. Morningstar Associates also subjects the asset allocation models to 10,000 simulations to determine how well or poorly they stand up to different market conditions over a five-year period and then make any necessary adjustments.

Morningstar Associates refines the asset allocation targets based on local market characteristics and behaviours. This results in significant overweight to the Asian markets, both equity and fixed income, in the DBS Strategic Asset Allocation Models, although each model retains varying degrees of exposure to the global markets.

There are five DBS Strategic Asset Allocation Models, namely Defensive, Conservative, Balanced, Growth and Aggressive. These are risk-based asset allocation models, where expected risks are agreed upon with DBS. In determining the most efficient asset targets for the DBS Strategic Asset Allocation Models, Morningstar Associates factored in a number of constraints imposed by DBS. First, DBS stipulates that there should be no allocation to Emerging Market bonds and no allocation to Alternative asset classes for the Global Defensive and Conservative Models. Second, there should be no allocation to Equity asset classes for the Defensive Models.



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# **Funds Select List**



	Japan Equities		Fund Size <sup>1</sup> (Million)	Performance <sup>1</sup> (%)					3yr Ann Volatilitv²	3yr Sharpe	Morningstar Overall	Risk
Japan Equities				3 Mths	6 Mths	1 Yr	3 Yrs	5 Yrs	(%)	Ratio <sup>3</sup>	Rating⁴	Level
	Nikko AM Japan Div. Equity SGD Hdg	1/7/2013	91	-9.15	-2.53	12.47	-	-	-	-	-	P4

<b>A</b>	₩ ★ US Equities				Perfo	ormance¹ (	(%)	3yr Ann Volatility <sup>2</sup>	3yr Sharpe	Morningstar Overall	Risk	
		(D/M/Y)	(Million)	3 Mths	6 Mths	1 Yr	3 Yrs	5 Yrs	(%)	Ratio <sup>3</sup>	Rating⁴	Level⁵
	Franklin Mutual Beacon A Acc	7/7/1997	1,218	-4.65	-13.14	4.34	13.73	10.1	7.97	1.12	**	P4
	Franklin US Opportunities A Acc	3/4/2000	6,532	-2.33	-6.36	15.00	19.41	13.44	13.85	1.34	****	P4

	Europe Equities	Launch Date <sup>1</sup>	Fund Size <sup>1</sup>		Perfo	ormance <sup>1</sup>	(%)		3yr Ann Volatilitv²	3yr Sharpe	Morningstar Overall	Risk
E	Lurope Equities	(D/M/Y)	(Million)	3 Mths	6 Mths	1 Yr	3 Yrs	5 Yrs	(%)	Ratio <sup>3</sup>	Rating⁴	Level⁵
	BlackRock Glb - European Equity Income	3/12/2010	4,029	-5.36	-7.92	10.34	16.15	-	10.63	1.55	****	P4
	Threadneedle Pan European	17/10/1995	184	-7.39	-9.42	10.20	14.61	8.89	10.85	1.35	****	P4

11:	Emerging Market Equities	Launch Date <sup>1</sup>			Perfo	rmance¹ (	%)		3yr Ann Volatility <sup>2</sup>	3yr Sharpe	Morningstar Overall	Risk
emerging	, , , , , , , , , , , , , , , , , , ,	(D/M/Y)	(Million)	3 Mths	6 Mths	1 Yr	3 Yrs	5 Yrs	(%)	Ratio <sup>3</sup>	Rating⁴	Level⁵
	Fidelity Emerging Markets	18/10/1993	4,568	-9.14	-12.34	-0.34	5.75	2.3	13.96	0.24	****	P4

Developed Market Bonds	Launch Date <sup>1</sup> (D/M/Y)	Fund Size <sup>1</sup> (Million)		Perfo	rmance <sup>1</sup>	(%)	3yr Ann Volatility²	3yr Sharpe	Morningstar Overall	Risk	
			3 Mths	6 Mths	1 Yr	3 Yrs	5 Yrs	(%)	Ratio <sup>3</sup>	Rating⁴	Level⁵
Templeton Global Total Return A	29/08/2003	39,760	-2.18	-4.70	0.40	4.90	4.34	5.87	0.29	****	P3
UBS Euro High Yield	15/05/1998	5,380	3.49	4.33	-1.30	7.06	3.98	4.25	1.93	****	P3

BONDS	Emerging Market Bonds	Launch Date <sup>1</sup> Fund Size			Perfo	ormance <sup>1</sup>	(%)	3yr Ann Volatility <sup>2</sup>	3yr Sharpe	Morningstar Overall	RISK	
	Zmergmg marker zonas	(D/M/Y)	(Million)	3 Mths	6 Mths	1 Yr	3 Yrs	5 Yrs	(%)	Ratio <sup>3</sup>	Rating <sup>4</sup>	Level
	Deutsche Lion Bond	9/6/1997	219	0.17	0.47	1.33	1.61	1.73	1.84	0.61	**	P2
	Legg Mason Western Asset Asian Opportunities Fund A Inc (M) \$	7/1/2010	627	-1.25	-4.50	2.65	2.07	1.84	6.36	-0.32	***	P3
	Fullerton Lux Asian Short Duration Bond A	14/1/2014	124	-0.23	0.22	1.53	-	-	-	-	-	P3

50%	Alternative Investments	Launch Date <sup>1</sup> (D/M/Y)				Perfo	ormance <sup>1</sup> (	(%)		3yr Ann Volatility²	3yr Sharpe	Morningstar Overall	KISK
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			(Million)	3 Mths	6 Mths	1 Yr	3 Yrs	5 Yrs	(%)	Ratio <sup>3</sup>	Rating⁴	Level⁵	
	Schroder AS Commodity Fund	31/10/2005	1,397	-8.59	-7.46	-28.26	-15.89	-9.5	14.13	-1.51	-	P4	
	Schroder AS Gold and Precious Metals Fund	7/7/2008	140	-6.33	-10.46	-10.65	-19.49	-10.11	22.16	-1.09	-	P5	

#### Notes:

- DBS Fund Selection Team quarterly selects a list of quality funds. A Qualitative Approach is used to systematically analyse each fund's characteristics, risk and performance
  attributes to identify funds we believe could add value. Through interviews with each fund's manager that we conduct, 5 key areas are reviewed: People, Product, Process,
  Portfolio and Performance.
- 2. Fund launch dates, performance and fund sizes are sourced from the Morningstar Workstation. 3-month, 6-month and 1-year performance returns are cumulative, while 3-year and 5-year performance returns are annualized. All data presented are as of 30 September 2015. Fund size, cumulative and annualized performance data are bid-to-bid, in SGD terms.
- 3. Volatility is a statistical measure of risk. 3 year Annual Volatility is calculated here by using the annualised standard deviation of the previous 36 monthly returns. The higher the standard deviation, the greater the volatility, therefore, the risk is higher. Approximately 68% of the annual total return of the fund is expected to range between +1 and -1 standard deviation from the annual average return, assuming a fund's return falls in a standard normal distribution.
- 4. The Sharpe ratio is calculated for the past 36-month period by dividing a fund's monthly annualized excess returns (measured by a fund's performance in excess of the risk-free rate) by the standard deviation of a fund's monthly annualized excess returns. The higher the positive ratio, the higher is the historical risk-adjusted performance of the fund. The risk free rate in the Sharpe ratio calculation is 0.36% p.a. (as of 30 September 2015).
- 5. The rating is assigned by Morningstar Asia Limited in accordance with the principle of NAV-to-NAV or bid-to-bid, based on the NAV or Bid price of the relevant fund captured by it on 30 September 2015 No rating will be assigned for the funds which have been established for less than three years or with performance data less than three years; for investment market sector with less than five funds, no rating will be assigned to the funds in such group. Within each investment market sector, five stars will be assigned to the top 10% of the funds in such sector, the next 22.5% of the funds will be assigned two stars, and the remaining 10% of the funds will be assigned one star. A fund with high rating does not mean that it is suitable for all investors, nor does it suggest that it will continue to provide good performance as it has in the past.
  - The Morningstar Overall Rating attempts to provide investors with a tool for a simplified screening process for fund selection and should not be considered as recommendations to buy or sell the relevant funds.
- 6. The risk level is assigned to a fund by DBS Bank Limited based on its assessment of the risk level of the respective fund, data as of 30 September 2015 and is for information and reference only. DBS Bank Limited may revise the risk level assigned to a fund from time to time without prior notice. P1 refers to the lowest risk rating while P5 is the highest.

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