

# Asia Strategy

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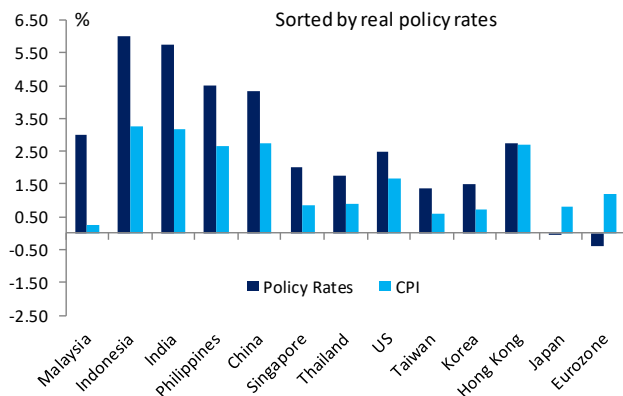
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## Fed's Greenlight for EM Easing

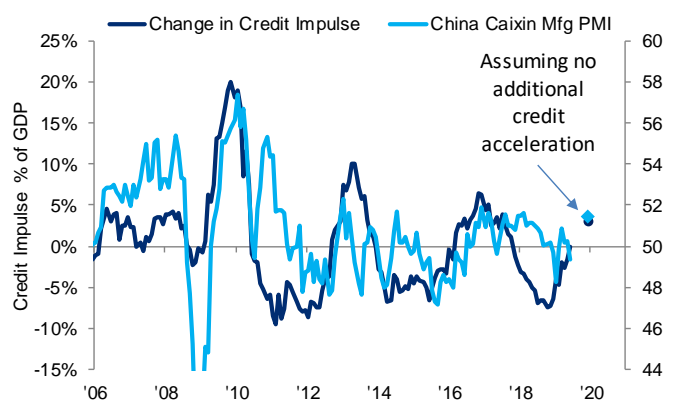
- With potentially falling US policy rates, EM central banks are likely to ease policy as well. Under trade conflicts, declines are deepening in EM Asian exports and manufacturing activity. Central banks in the region have held policy rate far above inflation, which creates notable room for easing (Figure 1).
- This is likely a positive environment for EM Asian debt. We find that Asian investment grade (IG) bond yields have converged to those of the US, but with falling rates, we suggest to extend duration. Asian high yield bonds remain substantially above US peers, but with lower USD borrowing costs and local easing, that gap is likely to narrow.
- China's authorities are tightening financing for property developers, while easing for the rest, amid ongoing trade concerns. Meanwhile, economic activity is finally responding to stimulus measures taken earlier. Renewed credit expansion is poised to lift activity (Figure 2) and valuations. We believe that China may be at an inflection point where data begins to improve, while policy remains supportive.

**Figure 1: With policy rates well above inflation across the region, there is plenty of room to ease**



Source: Bloomberg as of 16 July 2019

**Figure 2: The rise in credit impulse suggests a return of PMI to expansion**



Source: Haver, as of 16 July 2019

Note: Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary.

## Fed's Greenlight for EM Easing

Clear easing bias by the Fed and local central banks makes for a positive backdrop for both bonds and equities

In June-July, the Fed took a definitive step to signal easing. This has opened up space for many Emerging Market (EM) central banks to do the same, without having to worry about FX instability and capital outflows. Meanwhile, growth is clearly weakening under the weight of ongoing trade tensions and tepid global demand growth.

The combination of these elements makes for a relatively positive environment for both bonds and equities, as policy support takes place amid a lukewarm economy, and before asset bubbles are formed. We look at the segments of the bond market that exhibit more attractive value, while also making a case for a better-than-expected Chinese economy in 2H, which could drive equities.

### The impetus to ease

EM Asian exports have entered deeper decline under trade uncertainties

The negative impact of US-China trade conflict is becoming more visible in the trade data of neighboring Asian economies. Export growth of South Korea, Hong Kong, Singapore, Indonesia and Thailand have been in contraction since the beginning of the year and worsened further in June (Figure 3).

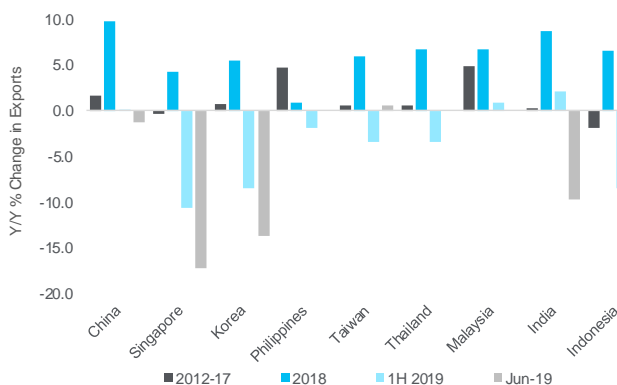
The deterioration in the June trade data was particularly visible for India. India's exports reversed the positive growth trend in year-to-May and reported a significant drop of -9.7% in June, after US terminated the beneficial status for India's export on June 5. The slowdown in export sector has dragged other growth components, including manufacturing and the broader economy. For instance, Singapore's manufacturing dropped 6%q/q in Q2 and reported -3.4%q/q annualized contraction in Q2 GDP. As a whole, EM Asia's export contracted 3% in June and average PMI was also in contraction territory.

Regional central banks have begun to ease, we see additional coming in 2H in India, Indonesia, Malaysia, Thailand Singapore and China

Fortunately, a dovish Fed has been providing more room for EM Asia central banks to ease to support domestic growth, without much worries of potential subsequent capital outflows and FX depreciation. In addition, lower than expected CPI across the region provide greater policy flexibility (Figure 4).

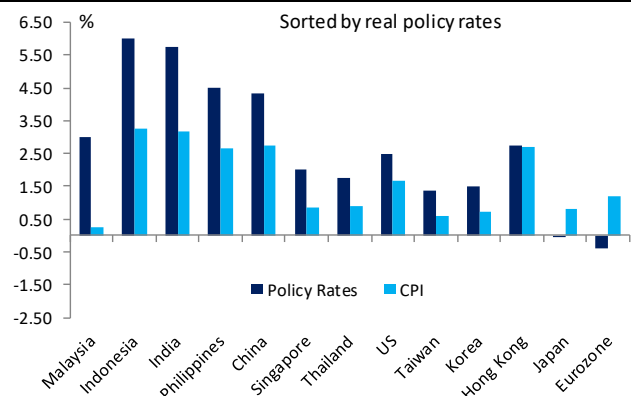
The Bank of Korea surprised markets with a cut in July, and signaled continued dovish stance. India and Indonesia may cut as soon as July and August. Malaysia is also primed for easing in September, with the highest real policy rate in the region. Singapore has room for further monetary policy easing in October and China is likely to further reduce rates on reserve requirement and lending facilities in 2H.

**Figure 3: Exports are in decline in most of the region. Those with sharpest declines are likely to be earliest to ease**



Source: Haver as of June 2019

**Figure 4: With policy rates well above inflation across the region, there is plenty of room to ease**



Source: Haver as of 16 July 2019

We prefer longer tenor 5-10 year bonds in IG portfolios, as well as short duration HY bonds under 3 years.

Although Asian IG yields have fallen to similar levels as those in the US, the prospect of lower rates can still augment returns

Asian HY bond yields are still far above their US peers

We expect this gap to narrow in 2H under more supportive policy

Among sectors, we prefer property over SOEs or industrials

With US Fed and Asian central banks likely to ease policies, investors are likely to continue to focus on income and yield enhancement in a “lower for longer” interest rate environment. We continue to like Asia USD bonds and expect it to provide investors with stable returns and relatively higher yield than their DM peers. However, investors should be more selective.

We prefer longer tenor 5-10 year bonds to add to investment grade (IG) portfolios. Meanwhile, we also like select high yield (HY) sectors, but prefer short duration of under 3 years.

In 1H, investors have strongly added Asian IG USD bonds. This has narrowed the spread over US bonds. For example, AA bonds in Asia yielded 64bps more than US peers at the end of 2018, but is only offering 14bps pickup by mid July. BBB spread also narrowed. Only A bonds still show 38bps of pickup. The range of IG yields is between 2.40% and 3.10%. That may seem low, but with the prospect of lower rates, the potential for capital gains, as well as the spread over LIBOR may widen, which could augment returns.

In the HY space, Asian bond have an average yield of 7.25%, which represents 120bps of pickup over US peers. Compared to history, Asian HY USD bond yields trade below that of the US peers in 2017. The current pickup is also much wider than the average seen over the past 5 years.

This wider HY spread is driven by rising default worries in China, as well as recent policy volatility and trade risks. Meanwhile, higher oil prices alleviated concerns in the US, where energy names dominate the HY space. We see falling default risk in China in 2H due to more relaxed monetary policy, which could potentially narrow this spread.

Among sectors, we see Chinese state owned enterprises (SOEs) as relatively expensive, as they have been the darlings of investors in 1H. Industrials, especially HY issuers, may face higher uncertainty from trade risks.

By contrast, we prefer Chinese property bonds, as the new policy effectively capped new supply, while refinancing is still open. Onshore cooling measures for developers largely affect smaller developers and those highly dependent on trust funding. This could be positive for consolidation.

**Figure 5: Comparing USD bond yields of Asian and US issuers by rating (controlling for effective duration)**

		AA	A	BBB	High Yield	BB	B
<b>16-Jul-19</b>	US	2.41	2.58	3.09	6.05	4.58	6.58
	Asia	2.55	2.96	3.32	7.25	5.74	8.10
	Asia - US	14	38	23	120	116	152
<b>23-Oct-17</b>	US	2.43	2.49	2.91	5.48	4.15	5.66
	Asia	2.88	2.90	3.20	5.24	4.54	5.52
	Asia - US	45	40	29	-24	39	-14
<b>5yr Average</b>	US	2.31	2.66	3.32	6.54	5.18	6.82
	Asia	2.82	3.09	3.61	7.01	5.95	7.74
	Asia - US	50	43	29	47	78	91

Source: Citi Velocity credit database, as of 16 July 2019

Note: Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary.

## 2H Outlook for China: Bigger Policy Cushion

Despite mixed signals, China's monetary and fiscal policy stance remains to support growth

One can be forgiven for thinking China's policy signals are self-conflicting. Falling growth and inflation have brought up another round of credit boom and rate cut expectations. Yet, authorities are taking steps to restrain financing to the property sector.

In sum, we believe that the overall policy stance remains to support growth through both monetary and fiscal policies, with a dash of reforms and opening. However, authorities prefer to boost infrastructure and consumption, while capping oversupply risks in the property sector.

### *Slower growth with pickup in momentum for 2H*

China's growth is slowing down, but the pace is moderate and the momentum is picking up going into 3Q. Real GDP growth stepped down from 6.4% in 1Q to 6.2% in 2Q 2019, slowest in 29 years.

However, the June data showed a broad based rebound in activity. Earlier stimulus policies are showing effect, which may provide better-than-expected growth data in coming months, especially if the trade ceasefire can last.

In industrial production (IP), infrastructure related output like rail transport and metals picked up. In fixed asset investment (FAI), property development still led, while services sectors also gained pace. In retail sales, auto sales rebounded sharply thanks to policy subsidies (Figure 6).

### *Rebalancing from property towards infrastructure and consumption*

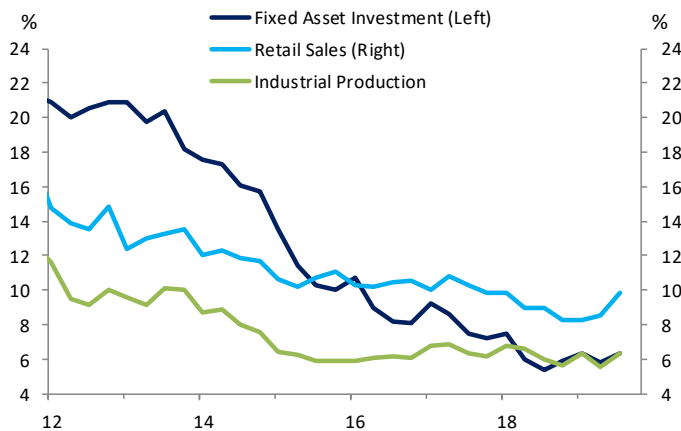
Authorities are redirecting support towards infrastructure. In 1H 2019, property investment had been the key growth driver, up 10.9%y/y. Meanwhile, nominal GDP only gained 8%y/y, and infrastructure investment growth lagged at just 3%y/y in 1H (Figure 7).

To rebalance the growth drivers, authorities accelerated local government special bond (LGSB) issuance and tightened developer financing channels. In June, special LG bond issuance amounted to CNY358bn, or 16% of aggregate financing that month (Figure 8). In Aug-Sep 2018, there was also a boom in LGSB issuance, which led to a rebound in infrastructure investment in 2H 2018 (Figure 7).

As growth slows, earlier stimulus policies are now generating some lift for growth in June

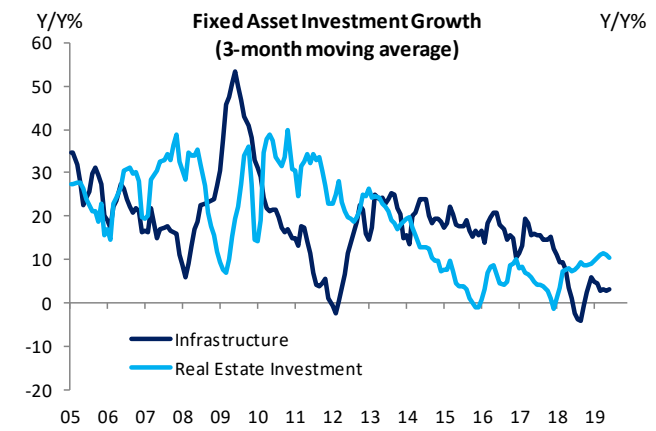
Authorities are again boosting special bond issuance to lift infrastructure...

**Figure 6: Though still near multi-year lows, all three key growth indicators have rebounded in June, as credit and fiscal easing began to take effect**



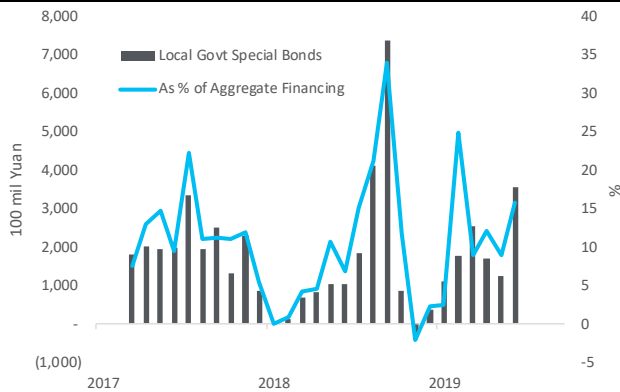
Source: Haver as of June 2019  
Past performance is no guarantee of future returns. Real results may vary.

**Figure 7: Real estate investment did most of the heavy lifting for growth in 2018 to now. Authorities want to switch to infrastructure and consumption**



Source: Haver as of June 2019  
Past performance is no guarantee of future returns. Real results may vary.

**Figure 8: Local government special bonds are meant to fund infrastructure investment**



Source: Haver as of June 2019  
Past performance is no guarantee of future returns. Real results may vary.

**Figure 9: Chinese developers' offshore bond issuance far outpaced maturities in recent years**



Source: Bloomberg, as of 17 July, 2019  
Past performance is no guarantee of future returns. Real results may vary.

Meanwhile, financing is being restrained for new real estate development...

For property developers, authorities cut off trust financing and restricted offshore bond issuance to only refinancing bonds coming due. However, these restrictions only affect those with large exposure to trust lending, which is actually a very small portion of the listed developers. As for offshore bonds, the maturity schedule in the coming 2 years is so large that most of the issuance would be used for refinancing anyway.

...though refinancing channel is being kept open

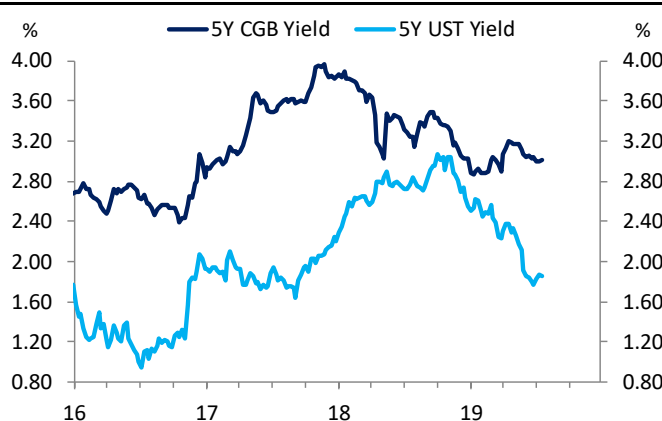
Developer financing eased since late 2018 and developers raced to bolster their land banks, creating worries of oversupply in the future. Authorities had only just brought down property inventory levels with recent years of tightening and did not want to lose that progress so soon.

Yet, authorities also wanted to avoid the defaults of 2018 that came from over-tightening policies, which shut down many refinancing channels. As a result, the latest property cooling measures aim to curb oversupply risks, but are unlikely to generate substantial disruptions.

*Monetary policy to remain supportive*

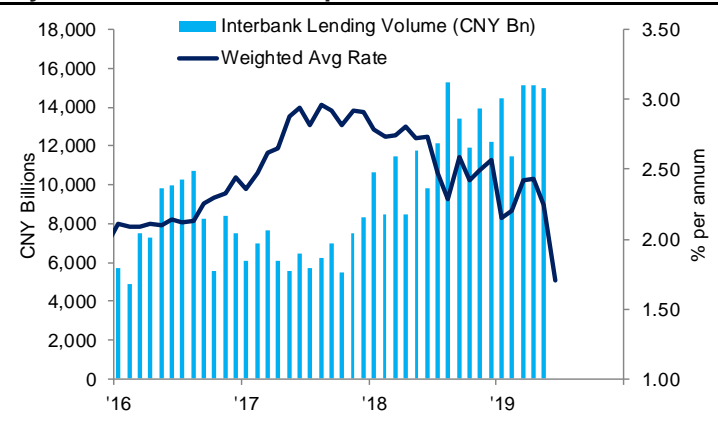
Most importantly, monetary policy is likely to remain supportive of growth. It is difficult to effectively tighten property financing when the broader monetary policy stance is to support growth. The trade war is causing producer disinflation, as manufacturers slash prices to stay in business. Consumer inflation is also at a 3-year low aside from food. This opens up space for interest rates to come down further.

**Figure 10: Chinese government bond yields are well above those of the US and are attracting investor inflows**



Source: Bloomberg, as of 16 July 2019

**Figure 11: The PBOC is guiding down interbank rates, which may support private sector lending, especially by smaller banks that depend on interbank credit**



Source: Haver as of June 2019

PBOC has already brought down interbank rates substantially, crucial for small banks

Renewed credit expansion points to a rebound in PMI back into expansion by yearend

Trade tensions are likely to remain for some time, though the upcoming US election may curtail scale of escalations

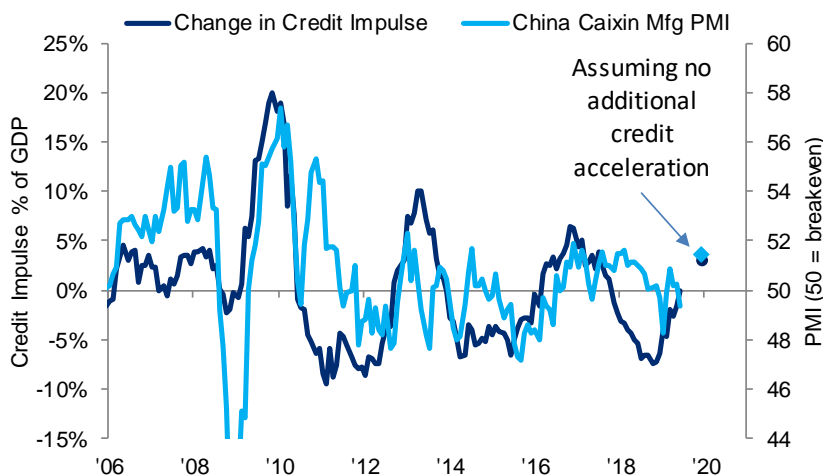
Policy could cushion trade risks and provide a supportive backdrop for asset markets in 2H

Chinese interest rates remain well above those of the US. Five-year Chinese government bond yields are 115bps higher than those in the US (Figure 10). As a result, inflows have resumed into China's sovereign bond market, also helping to stabilize the exchange rate.

In the private sector, however, financing remains scarce and borrowing costs remain elevated. The PBOC to guiding down interbank rates, partly to alleviate pressures on smaller banks that depend on interbank borrowing (Figure 11).

More importantly, the pace of credit expansion has again picked up. This has moved China's credit impulse (change in aggregate credit outstanding as % of GDP) to higher than our original expectations in 2Q. Assuming a much more subdued pace of credit growth in 2H, the rise in credit impulse suggests a PMI of 51.5 by yearend, which is 2 points higher than current (Figure 12). Both the credit impulse and the higher PMI would point to higher valuations for Chinese equities.

**Figure 12: The rise in credit impulse suggests a return of PMI to expansion**



Source: Haver, as of 16 July 2019

### *Trade uncertainties cushioned by policy*

The supportive policy backdrop helps to offset some remaining risks in trade. Indeed, the recent eruption of trade tensions between Japan and Korea may reflect a broader attempt for the US to pressure other trading partners to help in the US' trade negotiations with China.

By restricting key material exports to the Korea, there could be further supply pressure of chips to China. This is likely a temporary issue since the restricted materials aren't rare and alternative capacity can be developed over time. But if the spat expands to other parts of Japan-Korea trade, there could be deeper economic impact. The US is also pressuring Europe, especially the UK, to aid its negotiations with China, though so far with little visible effect.

In this backdrop, the US-China negotiations may take on the next step. It is uncertain whether major progress can be made. But we do believe that the closer we get to the 2020 US election, the less incentive for the US to wage another round of damaging trade wars. We believe that so long as tariffs do not rise further, market sentiment can stabilize.

The combination of these three factors may imply something that markets are not priced for—a stronger Chinese economy in the second half.

- Growth responding to earlier stimulus
- Trade ceasefire likely to hold
- Policymakers staying supportive of growth

## Appendix 1: Asia Pacific portfolio allocations

### Core Positions

The Citi Private Bank Global Investment Committee held our overall asset allocation unchanged in July but made minor shifts in national equity allocations. Overall, we are overweight global fixed income by 1.5 percentage points, largely by way of US and select emerging market (EM) debt. We are 2 percentage points overweight global equities and 0.5 percentage points overweight US cash. These weightings continue to reflect our balanced view of risk and opportunity between the two major public asset classes, with some strong relative value preferences within fixed income. We continue to favor high quality, income-producing assets across both equities and fixed income, even as overall risk assets rally.

In the past month, global financial markets have added further to their already substantial gains of the first four months of 2019. Last year's weakening in nearly every asset class created attractive return opportunities and kept our investment views constructive in early 2019.

The global equity valuation contraction of 2018 has not yet completely reversed in the year to date. Investor positioning has also not become excessively bullish. Global trade fears remain acute, with US continuing to expand the reach of trade conflicts. But more importantly, both the US Fed and the ECB seem poised to ease monetary policy again, while growth and inflation disappointments have only been modest.

Monetary easing at the current juncture should boost asset values and brighten the global economic outlook marginally. However, it also reduces policy flexibility to deal with some future crisis, beyond the immediate horizon.

As discussed in Mid-Year Outlook 2019, such policies increase the risk of bubbles inflating. This is the upside case for markets now, with the closest comparison being the Fed's easing steps in late 1998. A US recession did not ensue until early 2001. Economic growth was much stronger in the US in 1998 than now. External economic weakness back then was also much more closely linked to earlier Fed tightening steps than in the present case, which is instead linked to US trade policy.

Investors in recent years have reacted positively to the earliest indications that central banks would act to stimulate growth or reduce risks. We therefore would caution against expecting markets to stage a full-scale repeat of their 1998-99 performance from current levels.

One near term hurdle to this moderately positive view is the 2Q earnings season in the US and across the globe, where 1H difficulties are likely to be reflected, while the effect of additional easing not yet evident.

Among small shifts we've made in our tactical allocations, we've reduced Brazil equities to neutral from overweight following a 15% rally over the past month. We've used the proceeds to fund a slight reduction of equity underweights for SMID and large-cap US equities, where we continue to favor relatively defensive over cyclical industries.

### Asset Classes



Source: Citi Private Bank showing Office of the Chief Investment Strategist (OCIS)'s asset allocation for Asia as of last Global Investment Committee, July 17, 2019. Note: -2=very underweight; -1=underweight; 0=neutral; 1=overweight; 2=very overweight. All allocations are subject to change at discretion of the GIC of Citi Private Bank.

## Appendix 2: Asia Regional Bias Asset Allocations – Risk Level 3

This section below shows the GIC's asset allocation of a Asia regional bias global USD portfolio for a Risk Level 3 investor. The Strategic asset allocation employs CPB's proprietary Adaptive Valuation Strategies (AVS) methodology. The GIC adds Tactical under- and over-weights relative to the strategic allocations based on near-term opportunities and views, with the aim of achieving superior returns in the 12- to 18-month horizon.

Risk level 3 is designed for investors with a blended objective who require a mix of assets and seek a balance between investments that offer income and those positioned for a potentially higher return on investment. Risk level 3 may be appropriate for investors willing to subject their portfolio to additional risk for potential growth in addition to a level of income reflective of his/her stated risk tolerance.

	Strategic	Tactical	Active
<b>Equities</b>	<b>46.3%</b>	<b>44.3%</b>	<b>-2.0%</b>
<b>Developed</b>	<b>28.2%</b>	<b>26.7%</b>	<b>-1.5%</b>
<b>Dev. Large</b>	<b>24.2%</b>	<b>23.3%</b>	<b>-1.0%</b>
<b>North America</b>	<b>13.7%</b>	<b>13.1%</b>	<b>-0.6%</b>
US	13.0%	12.4%	-0.6%
Canada	0.7%	0.7%	0.0%
<b>Europe</b>	<b>4.3%</b>	<b>4.1%</b>	<b>-0.1%</b>
UK	1.3%	1.2%	-0.1%
Cont. Europe	2.6%	2.6%	0.0%
<b>Asia x Japan</b>	<b>4.4%</b>	<b>4.3%</b>	<b>-0.1%</b>
Hong Kong	1.7%	1.7%	0.1%
Singapore	0.7%	0.8%	0.2%
Australia	2.0%	1.7%	-0.3%
<b>Japan</b>	<b>1.8%</b>	<b>1.7%</b>	<b>-0.1%</b>
<b>Dev. Small/Mid</b>	<b>4.0%</b>	<b>3.5%</b>	<b>-0.6%</b>
<b>North America</b>	<b>2.0%</b>	<b>1.7%</b>	<b>-0.3%</b>
United States	1.9%	1.6%	-0.3%
<b>Europe</b>	<b>1.0%</b>	<b>0.8%</b>	<b>-0.2%</b>
<b>Asia x Japan</b>	<b>0.6%</b>	<b>0.6%</b>	<b>-0.1%</b>
<b>Japan</b>	<b>0.4%</b>	<b>0.4%</b>	<b>0.0%</b>
<b>Emerging</b>	<b>18.0%</b>	<b>17.5%</b>	<b>-0.5%</b>
<b>EM Asia</b>	<b>17.3%</b>	<b>17.1%</b>	<b>-0.2%</b>
China	9.2%	9.0%	-0.2%
India	2.1%	2.1%	-0.1%
Indonesia	0.4%	0.4%	0.0%
Korea	2.2%	2.2%	0.0%
Malaysia	0.4%	0.4%	0.0%
Philippines	0.2%	0.2%	0.0%
Taiwan	2.0%	2.0%	0.0%
Thailand	0.8%	0.8%	0.0%
<b>EM EMEA</b>	<b>0.4%</b>	<b>0.1%</b>	<b>-0.3%</b>
Russia	0.1%	0.0%	-0.1%
South Africa	0.1%	0.0%	-0.1%
Turkey	0.0%	0.0%	0.0%
<b>EM Latin America</b>	<b>0.3%</b>	<b>0.4%</b>	<b>0.0%</b>
Brazil	0.2%	0.2%	0.0%
Mexico	0.1%	0.1%	0.0%
<b>Fixed income</b>	<b>39.7%</b>	<b>41.2%</b>	<b>1.5%</b>
<b>Dev Inv Grade</b>	<b>22.2%</b>	<b>23.0%</b>	<b>0.8%</b>
<b>Dev. Govt</b>	<b>16.6%</b>	<b>16.0%</b>	<b>-0.7%</b>
<b>North America</b>	<b>6.1%</b>	<b>9.4%</b>	<b>3.3%</b>
US	5.2%	8.6%	3.4%
<b>Europe</b>	<b>6.4%</b>	<b>4.2%</b>	<b>-2.2%</b>
UK	1.1%	0.8%	-0.3%
Cont. Europe	5.1%	3.3%	-1.9%
<b>Asia x Japan</b>	<b>1.2%</b>	<b>1.2%</b>	<b>0.0%</b>
<b>Japan</b>	<b>2.9%</b>	<b>1.2%</b>	<b>-1.7%</b>
<b>Supranational</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Dev. Corp IG</b>	<b>5.6%</b>	<b>7.1%</b>	<b>1.5%</b>
<b>North America</b>	<b>3.5%</b>	<b>5.3%</b>	<b>1.8%</b>
US	3.3%	5.1%	1.8%
<b>Europe</b>	<b>1.8%</b>	<b>1.4%</b>	<b>-0.4%</b>
UK	0.3%	0.2%	-0.1%
Eurozone	1.5%	1.2%	-0.3%
<b>Asia x Japan</b>	<b>0.3%</b>	<b>0.3%</b>	<b>0.1%</b>
<b>Japan</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Dev. Hi-Yld</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>US</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Europe</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Emerging</b>	<b>17.5%</b>	<b>18.2%</b>	<b>0.7%</b>
<b>EM Asia</b>	<b>17.1%</b>	<b>17.8%</b>	<b>0.7%</b>
Local Currency	8.5%	8.9%	0.3%
China	3.8%	4.0%	0.2%
India	1.8%	1.9%	0.1%
Indonesia	0.3%	0.4%	0.0%
Malaysia	0.4%	0.4%	0.0%
Philippines	0.1%	0.2%	0.0%
South Korea	1.7%	1.7%	0.1%
Thailand	0.3%	0.4%	0.0%
Hard Currency	8.5%	8.9%	0.4%
<b>EM EMEA</b>	<b>0.2%</b>	<b>0.1%</b>	<b>-0.1%</b>
<b>EM LatAm</b>	<b>0.3%</b>	<b>0.3%</b>	<b>0.0%</b>
<b>Cash</b>	<b>2.0%</b>	<b>2.5%</b>	<b>0.5%</b>
<b>Hedge Funds</b>	<b>12.0%</b>	<b>12.0%</b>	<b>0.0%</b>
<b>Commodities</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Private Equity</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>
<b>Real Estate</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>

Active = the difference between tactical and strategic allocations. Minor differences may result due to rounding.

Source: Citi Private Bank showing asset allocation as of last Global Investment Committee (GIC) meeting on July 17, 2019. All allocations are subject to change at discretion of the GIC of Citi Private Bank.



## Asset allocation definitions

Asset classes	Benchmarked against
Global equities	MSCI All Country World Index, which represents 48 developed and emerging equity markets. Index components are weighted by market capitalization.
Global bonds	Barclays Capital Multiverse (Hedged) Index, which contains the government -related portion of the Multiverse Index, and accounts for approximately 14% of the larger index.
Hedge funds	HFRX Global Hedge Fund Index, which is designed to be representative of the overall composition of the hedge fund universe. It comprises all eligible hedge fund strategies; including but not limited to convertible arbitrage, distressed securities, equity hedge, equity market neutral, event driven, macro, merger arbitrage and relative value arbitrage. The strategies are asset-weighted based on the distribution of assets in the hedge fund industry.
Commodities	Dow Jones-UBS Commodity Index, which is composed of futures contracts on physical commodities traded on US exchanges, with the exception of aluminum, nickel and zinc, which trade on the London Metal Exchange (LME). The major commodity sectors are represented including energy, petroleum, precious metals, industrial metals, grains, livestock, softs, agriculture and ex-energy.
Cash	Three-month LIBOR, which is the interest rates that banks charge each other in the international inter -bank market for three-month loans (usually denominated in Eurodollars).
Equities	
Developed market large cap	MSCI World Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure the equity market performance of the large cap stocks in 23 developed markets. Large cap is defined as stocks representing roughly 70% of each market's capitalization.
US	Standard & Poor's 500 Index, which is a capitalization -weighted index that includes a representative sample of 500 leading companies in leading industries of the US economy. Although the S&P 500 focuses on the large cap segment of the market, with over 80% coverage of US equities, it is also an ideal proxy for the total market.
Europe ex UK	MSCI Europe ex UK Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure large cap stock performance in each of Europe's developed markets, except for the UK.
STOXX 600	The STOXX Europe 600 Index has a fixed number of 600 components, representing large, mid and small capitalization companies across 18 countries of the European region.
Japan	MSCI Japan Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure large cap stock performance in Japan.
Asia Pacific ex Japan	MSCI Asia Pacific ex Japan Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure the performance of large cap stocks in Australia, Hong Kong, New Zealand and Singapore.
China & HK	The MSCI China Index is a free-float weighted equity index, representing Chinese companies listed in Hong Kong, as well as American Depository Receipts listed in the US. MSCI HK Index is a free-float weighted equity index, representing HK companies listed in HK.
Emerging market	MSCI Emerging Markets Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure equity market performance of 22 emerging markets.

## Asset allocation definitions

Bonds	
Developed sovereign	Citi World Government Bond Index (WGBI), which consists of the major global investment grade government bond markets and is composed of sovereign debt, denominated in the domestic currency. To join the WGBI, the market must satisfy size, credit and barriers-to-entry requirements. In order to ensure that the WGBI remains an investment grade benchmark, a minimum credit quality of BBB-/Baa3 by either S&P or Moody's is imposed. The index is rebalanced monthly.
Emerging sovereign	Citi Emerging Market Sovereign Bond Index (ESBI), which includes Brady bonds and US dollar -denominated emerging market sovereign debt issued in the global, Yankee and Eurodollar markets, excluding loans. It is composed of debt in Africa, Asia, Europe and Latin America. We classify an emerging market as a sovereign with a maximum foreign debt rating of BBB+/Baa1 by S&P or Moody's. Defaulted issues are excluded.
Supranationals	Citi World Broad Investment Grade Index (WBIG)—Government Related, which is a subsector of the WBIG. The index includes fixed rate investment grade agency, supranational and regional government debt, denominated in the domestic currency. The index is rebalanced monthly.
Corporate investment grade	Citi World Broad Investment Grade Index (WBIG)—Corporate, which is a subsector of the WBIG. The index includes fixed rate global investment grade corporate debt within the finance, industrial and utility sectors, denominated in the domestic currency. The index is rebalanced monthly.
Corporate high yield	Bloomberg Barclays Global High Yield Corporate Index. Provides a broad-based measure of the global high yield fixed income markets. It is also a component of the Multiverse Index and the Global Aggregate Index.
Securitized	Citi World Broad Investment Grade Index (WBIG)—Securitized, which is a subsector of the WBIG. The index includes global investment grade collateralized debt denominated in the domestic currency, including mortgage -backed securities, covered bonds (Pfandbriefe) and asset -backed securities. The index is rebalanced monthly.
Indices	
CFETS RMB Basket Index	The China Foreign Exchange Trade System (CFETS) RMB currency basket measures the RMB versus foreign exchange currency pairs listed on CFETS. This index refers to the currency basket accepted by CFETS and the 13 currencies which make up the basket were selected based upon international trade-weights with adjustment of re-export trade factors.
DXY Dollar Index	The U.S. Dollar Index (USDIX) indicates the general international value of the USD. The USDIX does this by averaging the exchange rates between the USD and major world currencies. The ICE US computes this by using the rates supplied by some 500 banks.
ADXY Index / Asian Currency Index	This Bloomberg JPMorgan Asia Dollar Index is a trade and liquidity weighted index of 10 EM Asian currencies' exchange rate versus the US dollar.
Bloomberg Barclays Multiverse Total Return Index	The Multiverse Index provides a broad-based measure of the global fixed-income bond market. The index represents the union of the Global Aggregate Index and the Global High-Yield Index and captures investment grade and high yield securities in all eligible currencies.
Bloomberg Barclays Asian-Pacific ex-Japan local currency bond index	The Bloomberg Barclays Asian-Pacific Non-Japan Total Return Index Value Unhedged USD is a market capitalisation weighted index and measures the performance of local currency denominated government-related and corporate bonds of the Asia ex-Japan region.
iBoxx Asian US dollar Bond Index	Markit is a global index provider which is involved in designing, administering and calculating this index that covers USD segments of Asian fixed income markets.
CRB Industrial Commodities Price Index	A Thomson Reuters/Core Commodity Excess Return Index which uses an arithmetic average of commodity futures prices with monthly rebalancing.
CRB Industrial Metals Index	This data represents Commodity Research Bureau BLS Spot Indices (1967=100). The metals sub-index includes aluminum, copper, gold, iron ore, nickel, silver and steel rebar.
MSCI Asia ex-Japan Index	The MSCI Asia ex-Japan Index captures large- and mid-cap representation across 2 of 3 Developed Market countries (excluding Japan) and 9 Emerging Market countries in Asia. With 955 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country. DM countries in the index include: Hong Kong and Singapore. EM countries include: China, India, Indonesia, Korea, Malaysia, Pakistan, the Philippines, Taiwan and Thailand.

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**Bond rating equivalence**

Alpha and/or numeric symbols used to give indications of relative credit quality. In the municipal market, these designations are published by the rating services. Internal ratings are also used by other market participants to indicate credit quality.

Bond credit quality ratings	Rating agencies		
	Moody's <sup>1</sup>	Standard and Poor's <sup>2</sup>	Fitch Ratings <sup>2</sup>
<b>Credit risk</b>			
<b>Investment Grade</b>			
Highest quality	Aaa	AAA	AAA
High quality (very strong)	Aa	AA	AA
Upper medium grade (Strong)	A	A	A
Medium grade	Baa	BBB	BBB
<b>Not Investment Grade</b>			
Lower medium grade (somewhat speculative)	Ba	BB	BB
Low grade (speculative)	B	B	B
Poor quality (may default)	Caa	CCC	CCC
Most speculative	Ca	CC	CC
No interest being paid or bankruptcy petition filed	C	D	C
In default	C	D	D

1 The ratings from Aa to Ca by Moody's may be modified by the addition of a 1, 2, or 3 to show relative standing within the category.

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