APAC Banks: Implications of Fed Tightening

Manageable for Most Countries; Several Markets Vulnerable

Special Report

Vulnerability Level

Developed Markets	
Australia	Medium/low
Hong Kong	Medium
Japan	Low
Macao	Medium/low
New Zealand	Medium/low
Singapore	Medium
South Korea	Low
Taiwan	Medium/low

Emerging Markets	
China	Medium
India	Medium
Indonesia	Medium
Malaysia	Medium/low
Mongolia	Medium
Philippines	Medium/low
Sri Lanka	Medium
Thailand	Low
Vietnam	Medium

Source: Fitch

Mixed Picture for Region: Fitch Ratings expects US monetary tightening to be manageable for Asia-Pacific (APAC) banks. Fitch's base case for rate rises is at the higher end of industry estimates, but gradual, well-signalled tightening reduces uncertainty and provides market participants time to prepare. Primarily deposit-funded markets will benefit from higher US rates over time, but Fitch sees diverse outcomes for market, credit and liquidity risk, as each APAC market has different exposure to various transmission channels.

Market Risk Containable: Fitch sees market risk from interest-rate and foreign-exchange movements as the biggest risk, yet containable in light of the limited size of potential mismatches and how banks manage it. Emerging market economies that depend on foreign funding due to domestic market limitations are the most vulnerable. These economies may also be hurt by commodity exposure, which is affected by foreign-exchange volatility.

Developed market banks may have high US dollar usage due to market-specific reasons, such as those in Hong Kong's and Singapore's financial centres, where foreign-currency assets comprise 63% and 31% of total assets, respectively. Developed market banks, which regularly tap offshore wholesale funding, include large banks in Japan, Korea and Australia. However, funds are usually hedged or relate to dollar lending and refinancing needs are not excessive.

Local Rates Drive Credit Risk: Asset quality would be at risk from any sharp local-rate rise in many banking markets. Most APAC countries have become increasingly insulated from direct pass-through from US to local interest rates due to flexible exchange-rate policies. However, a scenario of significant fund outflow and market volatility could indirectly lead APAC central banks to raise rates. Stressed scenarios are likely to disturb emerging markets, such as Indonesia and Vietnam, more than other markets in the region.

Adequate US Dollar Lending Quality: Tightening would directly affect US dollar-denominated short-term trade-finance transactions – to which banks that offer cross-border lending would be most exposed – and floating-rate US dollar-linked lending. We believe that the credit risk of incremental rate hikes is limited in light of the quality of these borrowers. Pass-through may be delayed due to competition and abundant liquidity, as is the case with Hong Kong mortgages.

Liquidity Risk from Flow Reversals: Sharp fund withdrawals would be negative for many open economies, including financial centres, although Hong Kong may be partially protected by steady large liquidity inflow from mainland China. Many emerging markets would be affected by a flight-to-quality, although net external debt levels in most markets are low compared with prior crises. Mongolia's external debt appears high, but a large share stems from banks that source US dollars from bilateral and multilateral institutions.

Operating Environment Mostly Stable: APAC's generally stable operating environment in 2018 will support banks' ability to cope with US monetary tightening. We expect broadly stable, if not improving, profitability and impaired loans for much of the region and have Stable or Positive ratings Outlooks for banking systems across APAC, reflecting generally solid risk buffers and liquidity.

The regulatory environment also appears supportive, particularly as most markets have moved to Basel III, stress testing and macro-prudential supervision. More stringent regulation has helped raise risk awareness, buffers and confidence in most APAC markets.

Related Research

From QE to QT: Emerging Market Cross-Sector Risks (May 2018)

Fitch 2018 Outlook: Asia-Pacific Banks (November 2017)

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US Fed Tightening Continues; Impact May Broaden

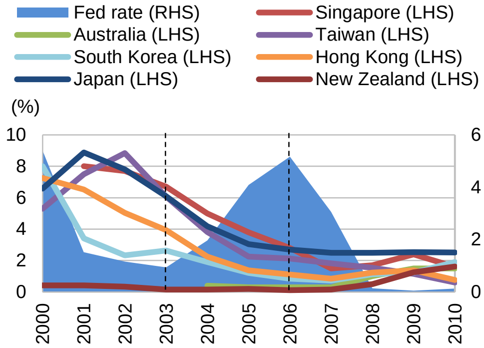
Fitch expects the US Federal Reserve's fund rate to be 2.50% at end-2018 and 3.25% at end-2019 (see our *Global Economic Outlook - March 2018*) – although there is naturally some uncertainty about the pace of tightening and there could be abrupt adjustments in market expectations along the way. US rate increases have thus far had little ramifications for banks. However, sharper-than-Fitch-expected increases over the next two years could lead to more pronounced effects on some banking sectors.

Many scenarios can arise from US rate increases, with several areas of vulnerability for banks. However, Fitch does not envisage severe stresses for APAC and notes that Fed tightening from 2004 to 2006 did not have a significant negative impact on the region's banking sectors.

Previous Tightening Cycle was Benign

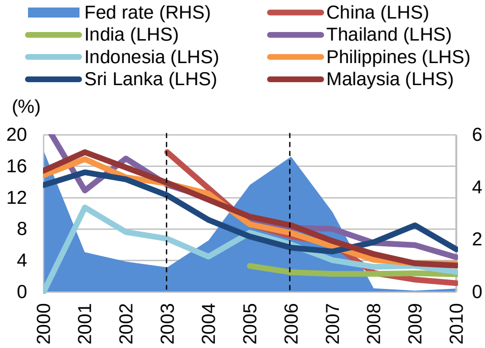
The Fed raised its policy rate from 1.00% to 5.25% in 2004-2006 and nearly all APAC markets, bar China, also raised their policy rates. However, the period mostly coincided with falling or stable non-performing loans (NPL) in 14 major APAC markets. Nearly all markets also showed stable or rising return on assets and capital adequacy.

Developed Markets - NPL Ratios



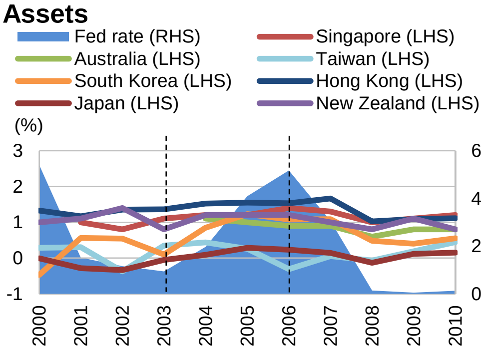
Source: Fitch estimates, national regulators

Emerging Markets - NPL Ratios



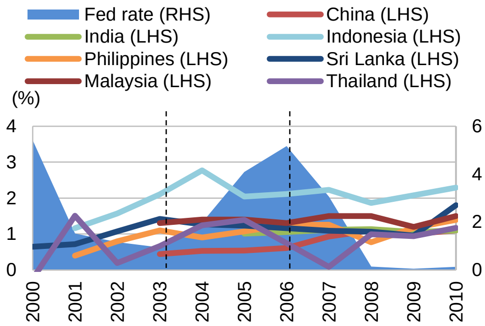
Source: Fitch estimates, national regulators

Developed Markets - Return on Assets



Source: Fitch estimates, national regulators

Emerging Markets - Return on Assets



Source: Fitch estimates, national regulators

The 2004-2006 Fed tightening episode was superseded by other factors of greater significance. The region was still recovering from the 1997 Asian financial crisis and many bank ratios were starting from a low base. Furthermore, this was a period of strong growth, which led to a supportive environment for asset quality; Asia's average real GDP growth expanded by 8.5%-10.1% during 2004-2006, versus 6.5% in 2017, based on data from the IMF's World Economic Outlook Database. Local factors, such as Indonesia's NPLs rising in 2005 due to lower fuel subsidies, also played a role.

One key difference from the previous cycle is that we are now coming out of an exceptionally long period of very low interest rates. Most APAC financial sectors are much more leveraged; the only countries that have seen little change in the private-sector credit/GDP ratio since 2003 are Japan and Malaysia.

Positively, the regulatory environment for banks has become more rigorous. Most markets have adopted Basel III and we expect a similar adoption of the latest December 2017 "endgame" regulations recommended by the Basel Committee, which should further increase banking sector resilience. In addition, regulators have used macro-prudential measures to boost bank protection against identified downside risks (see Fitch's *APAC Banks Regulatory Compendium - Update*), which can indirectly address the risk of rising interest rates; for example, Hong Kong banks are required to stress new mortgage applications for a 300bp interest rate rise.

Hence, while today's economic outlook is weaker compared with 2004-2006, the benign state of the global economy, downside risk buffers and banking-sector safeguards appear improved.

Direct and Indirect Vulnerabilities

Fitch divides the impact of Fed tightening into three main transmission channels: US dollar interest rates, foreign-exchange movements and local interest rates. These channels affect APAC banks in terms of market risk, credit risk and liquidity risk. For example, sharp US dollar appreciation could hurt credit risk through poorer asset quality and influence liquidity risk, as shifts in sentiment and reliance on foreign wholesale markets can drive fund flow.

We have summarised our assessment of banking sector vulnerability – ignoring mitigating factors – below and have highlighted the potential sources of impact for each risk type.

APAC Banking Sector Vulnerability

	Vulnerability	Market Risk	Credit Risk	Liquidity Risk
Developed Markets				
Australia	Medium/low	US dollar interest rate exposure		Market volatility
Hong Kong	Medium	US dollar interest rate exposure	Local rate rises	Fund outflow, market volatility
Japan	Low	US dollar interest rate exposure (mega banks)		
Macao	Medium/low	US dollar interest rate exposure		Fund outflow, market volatility
New Zealand	Medium/low	US dollar interest rate exposure		Market volatility
Singapore	Medium	US dollar interest rate exposure		Fund outflow, market volatility
South Korea	Low	US dollar interest rate exposure		
Taiwan	Medium/low	US dollar interest rate exposure	Local & regional rate rises	
Emerging Markets				
China	Medium		Local rate rises	Fund outflow
India	Medium	US dollar and local interest rate exposure	Local rate rises	
Indonesia	Medium	US dollar interest rates and foreign-exchange impact	Local rate rises	Fund outflow, market volatility
Malaysia	Medium/low		Local rate rises	Fund outflow, market volatility
Mongolia	Medium	US dollar interest rates and commodities	US dollar-related vulnerabilities	Fund outflow, market volatility
Philippines	Medium/low	US dollar interest rate exposure	Local rate rises	
Sri Lanka	Medium	US dollar interest rate exposure	Local rate rises	Fund outflow, market volatility
Thailand	Low		Local rate rises	
Vietnam	Medium	US dollar interest rates and foreign-exchange impact	Local rate rises	Fund outflow, market volatility

High vulnerability Medium vulnerability Low vulnerability

Source: Fitch

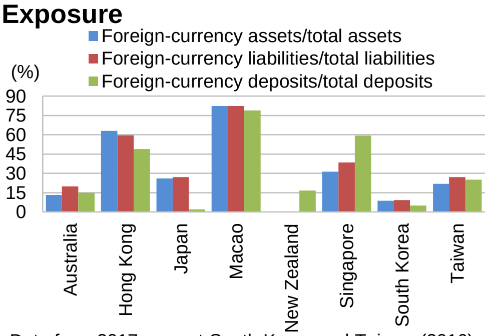
Market Risk: Exposure Varied, but Mostly Limited or Manageable

Banks' market risk arising from US interest and foreign-exchange rate movements appears manageable. Foreign-currency exposure varies across APAC, with the most exposed markets being Macau (80%-85% of assets, but linked to Hong Kong), Hong Kong (63%) and Singapore (31%). The two major financial centres cater to multinational clients. Macau's and Hong Kong's foreign-currency assets and liabilities are broadly matched and risks should be contained in light of the pegged currencies. Japan's mega banks also utilise offshore funding to support the expansion of their large overseas operations.

Emerging markets with the highest level of foreign-currency exposure – most of which we perceive to be in US dollars – include Mongolia (17% of assets), Philippines (17%) and Malaysia (15%). Sri Lanka's larger foreign-currency liabilities could also expose it to sharper funding cost rises and pressure banks' net interest margins. Vietnam's foreign-currency exposure is not large compared with other emerging markets, but structural weaknesses, such as thin buffers, increase banks' vulnerability to market risk-related financial stresses.

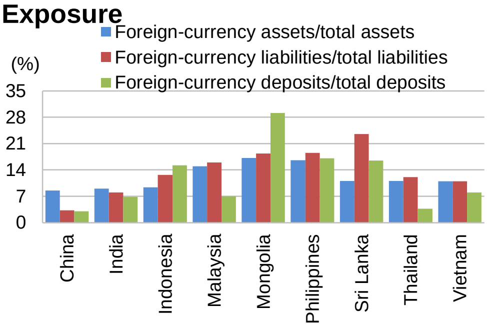
Banks with a high share of cost-insensitive deposits, such as current and savings accounts (CASA), and a larger portion of variable-rate loans should see better net interest margins from quicker repricing of assets compared with liabilities. Ultimately, however, the earnings impact of higher rates is bank-specific and hard to generalise.

Developed Market - Foreign-Currency Exposure



Data from 2017, except South Korea and Taiwan (2016)
Source: Fitch estimates based on national sources. Asset & liability data from major banks; deposit data for system

Emerging Market - Foreign-Currency Exposure



Data from 2017, except Sri Lanka and Vietnam (2016)
Source: Fitch estimates based on national sources. Asset & liability data from major banks; deposit data for system

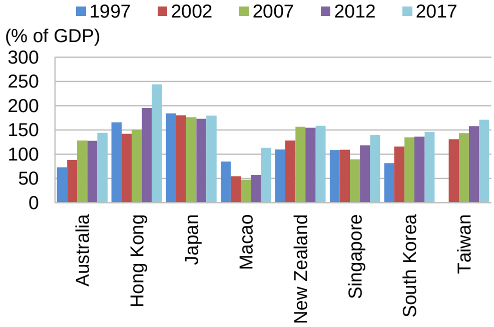
Credit Risk: Asset Quality Issues from Rate Pass-Through

Sharp rises in local interest rates are likely to damage asset quality, with NPLs in most markets at cyclical lows. More vulnerable countries are those with high levels of private-sector leverage and weaker corporate repayment ability. Among emerging markets, China, Thailand, Vietnam and Malaysia have high private-sector credit/GDP levels, while some other markets, such as the Philippines, have seen high credit growth. These countries could face sharp rises in local rates – although interest-rate pass-through is not necessarily likely in all these markets.

In the developed market, Australia and New Zealand are vulnerable from high and rising property-market exposure due to high consumer debt (see Fitch's *APAC Banks: Chart of the Month - April 2018*). That said, our base case is for the Reserve Bank of Australia to increase interest rates once in 2018 and twice in 2019. South Korean household debt is also elevated and Fitch does not expect it to fall significantly.

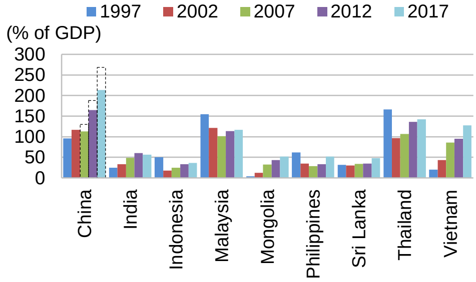
Banks' asset quality could also be damaged by US rate hikes in countries with high US-dollar external debt or where businesses could be hurt by sharp foreign-exchange movements, such as Indonesia, Mongolia and Vietnam. Fitch believes a surge in region-wide NPLs arising from US dollar appreciation is not probable – the 1997 Asia financial crisis has created an aversion to large unhedged foreign-exchange exposures and has significantly improved business and regulatory practices. However, if there were major fund outflows and excessive market volatility, central banks could be pressured to hike local interest rates to support the currency and avert undermining investor confidence. This would raise credit risk via increased borrowing costs and defaults.

Developed Market - Private Sector Credit



Source: IMF, Fitch estimates based on national sources

Emerging Market - Private Sector Credit



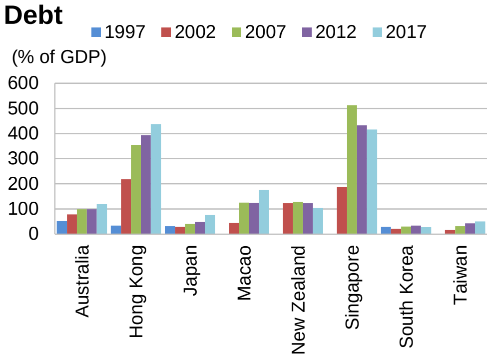
Chinese figures adjusted using Fitch add-ons for total social financing from 2007
Source: IMF, Fitch estimates based on national sources

Liquidity Risk: Fund Outflow in Stressed Scenarios

A period of market volatility that is worse than Fitch's expectations and significantly weakens investor sentiment could lead to liquidity risks and impair open economies, including financial centres. This could be partly mitigated for Hong Kong via liquidity inflow from mainland China, although the interconnection between the two could be harmful if foreign investors withdrew from greater China altogether. Banks that use offshore wholesale funding, such as Australian and Korean banks, could also be affected by a surge in volatility and a fall in market liquidity, but they too have substantially improved their debt structures.

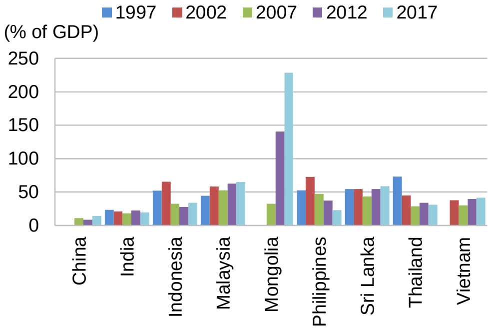
Many emerging markets are also vulnerable to fund outflows in a flight-to-safety scenario, which would lead to difficulty in accessing offshore funding markets. However, most APAC countries have low external debt, particularly when compared with past crisis periods, such as 1997. Mongolia stands out for high indebtedness, but much of it stems from Mongolian banks, which source US dollar funding from bilateral and multilateral institutions.

Developed Market - Gross External Debt



Source: Fitch Connect, Fitch estimates

Emerging Market - Gross External Debt



Source: Fitch Connect, Fitch estimates

Summary by Market

Australia

Long-Term IDR: AAA/Stable
Banking System Indicator: aa

Vulnerability to Fed tightening: **Medium/low**

Key Ratios

Impact from US dollar exposure (%)	
Banks' foreign-currency deposits/total deposits	15
Banks' foreign-currency liabilities/total liabilities	20
Banks' foreign-currency assets/total assets	13
Impact from local rate rises (%)	
Private-sector credit/GDP	146
Private-sector debt service ratio	21
Banks' variable rate loans/total loans	n.a.
Banks' CASA/total deposits	57
Impact from foreign exchange (%)	
Gross external debt/GDP	122
Net private external debt/GDP	44

Vulnerabilities

- **Market Risk**: Banks depend on offshore wholesale funding and could be affected by higher costs. Sharp US dollar rate increases may also increase competition for domestic funding.
- **Credit Risk**: Some risks are present in the banking sector, such as household leverage.
- **Liquidity Risk**: Potential impact from excessive offshore market volatility.

Supporting factors

- Australia's government has provided guarantees to support bank refinancing during previous stresses, which we expect will still be forthcoming in a severe funding-market stress.
- Offshore funding is hedged and cost increases should be gradual, as only a portion is refinanced every year.
- Banking system has sound fundamentals and strong buffers.

China

Long-Term IDR: A+/Stable
Banking System Indicator: bb

Vulnerability to Fed tightening: **Medium**

Key Ratios

Impact from US dollar exposure (%)	
Banks' foreign-currency deposits/total deposits	3
Banks' foreign-currency liabilities/total liabilities	3
Banks' foreign-currency assets/total assets	9
Impact from local rate rises (%)	
Private-sector credit/GDP	268[a]
Private-sector debt service ratio	20
Banks' variable rate loans/total loans	n.a.
Banks' CASA/total deposits	50
Impact from foreign exchange (%)	
Gross external debt/GDP	14
Net private external debt/GDP	-2

[a] Fitch bank group's estimated adjustment to total social funding

Vulnerabilities

- **Market Risk**: Higher US dollar rates will increase offshore funding costs. Chinese global systemically important banks must eventually start issuing offshore total loss-absorbing capacity.
- **Credit Risk**: China's private-sector credit is high. Local rate increases could pressure the asset quality of domestic enterprises. Loss-absorption buffers of many banks are uncomfortable.
- **Liquidity Risk**: Potential for fund outflows and foreign-exchange pressure triggered by a stronger US dollar.

Supporting factors

- Foreign funding and lending remains low, but we expect this to rise as banks expand abroad.
- Pass-through of US rate hikes may be limited by capital controls and Chinese yuan's managed float. Historically correlation between US and local interest rates has been limited, although the People's Bank of China has responded to recent Fed hikes.
- Authorities remain supportive and keen to limit volatility.

Hong Kong

Long-Term IDR: AA+/Stable
Banking System Indicator: a

Vulnerability to Fed tightening: **Medium**

Key Ratios

Impact from US dollar exposure (%)	
Banks' foreign-currency deposits/total deposits	49
Banks' foreign-currency liabilities/total liabilities	60
Banks' foreign-currency assets/total assets	63
Impact from local rate rises (%)	
Private-sector credit/GDP	245
Private-sector debt service ratio	28
Banks' variable rate loans/total loans	90[a]
Banks' CASA/total deposits	58
Impact from foreign exchange (%)	
Gross external debt/GDP	438
Net private external debt/GDP	-133

[a] Fitch's estimate

Vulnerabilities

- **Market Risk**: The Hong Kong Monetary Authority estimated that applying a 200bp interest rate shift on exposures would have led to a 3.5% decline in capital at end-2017. Foreign currency deposits are primarily in US dollars (36% of total deposits), while the proportion in Chinese yuan remains low (4%).
- **Credit Risk**: High private-sector leverage could stretch borrowers in the event of sharp rate hikes – particularly if local liquidity conditions tighten.
- **Liquidity Risk**: Abundant liquidity, yet Hong Kong is a small open economy and a regional financial centre that may be affected by external shocks and volatility in fund flows.

Supporting factors

- Larger banks have a stable low-cost deposit base and could benefit from higher rates, while small banks could be more vulnerable.
- China linkages include regular inflows from the mainland, which may alleviate the impact of US dollar outflows.
- The Hong Kong dollar is pegged to the US dollar, but strong liquidity has prevented recent US rate rises from immediately affecting local interbank rates.

Summary by Market (Cont.)

India

Long-Term IDR: BBB-/Stable
Banking System Indicator: bb

Vulnerability to Fed tightening: **Medium**

Key Ratios

Impact from US dollar exposure (%)	
Banks' foreign-currency deposits/total deposits	7
Banks' foreign-currency liabilities/total liabilities	8
Banks' foreign-currency assets/total assets	9
Impact from local rate rises (%)	
Private-sector credit/GDP	57
Private-sector debt service ratio	4
Banks' variable rate loans/total loans	n.a.
Banks' CASA/total deposits	39
Impact from foreign exchange (%)	
Gross external debt/GDP	19
Net private external debt/GDP	11

Vulnerabilities

- **Market Risk:** Unexpected sharp movements in domestic rates can significantly affect banks' profit and loss statements due to large government securities holdings. Treasury losses have added to pressure on banks' accounts.
- **Credit Risk:** Sharp local rate rises could affect asset quality, which is a system weakness as bank buffers are limited. Profitability is weak and capital is stretched – Fitch estimates that banks require capital of USD65 billion by 2019.
- **Liquidity Risk**: Potentially affected during high regional volatility.

Supporting factors

- Private sector credit is moderate compared with other Asian emerging markets.
- Government is generally supportive of state-owned banks where challenges are highest – core capitalisation should be supported by the USD24 billion government recap.
- Banks are largely deposit funded. Foreign currency deposit levels and lending are low.

Indonesia

Long-Term IDR: BBB/Stable
Banking System Indicator: bb

Vulnerability to Fed tightening: **Medium**

Key Ratios

Impact from US dollar exposure (%)	
Banks' foreign-currency deposits/total deposits	15
Banks' foreign-currency liabilities/total liabilities	13
Banks' foreign-currency assets/total assets	9
Impact from local rate rises (%)	
Private-sector credit/GDP	36
Private-sector debt service ratio	7
Banks' variable rate loans/total loans	58
Banks' CASA/total deposits	55
Impact from foreign exchange (%)	
Gross external debt/GDP	34
Net private external debt/GDP	2

Vulnerabilities

- **Market Risk:** Banks have a moderate level of foreign funding dependence and exposure.
- **Credit Risk:** Higher local rates may negatively affect businesses' and banks' asset quality. Excessive currency volatility could undermine sentiment and be another cause of local rate hikes.
- **Liquidity Risk:** Some vulnerability to fund outflows and foreign-exchange volatility. Economy has a high degree of capital account openness and dependence on capital flows.

Supporting factors

- Banks' direct foreign-currency deposits and loans are generally matched or else hedged. Foreign funding partly relates to funding from foreign parents to Indonesian subsidiaries.
- Private sector credit is low compared with other Asian emerging markets.

Japan

Long-Term IDR: A/Stable
Banking System Indicator: a

Vulnerability to Fed tightening: **Low**

Key Ratios

Impact from US dollar exposure (%)	
Banks' foreign-currency deposits/total deposits	2
Banks' foreign-currency liabilities/total liabilities	27[a]
Banks' foreign-currency assets/total assets	26[a]
Impact from local rate rises (%)	
Private-sector credit/GDP	180
Private-sector debt service ratio	15
Banks' variable rate loans/total loans	50
Banks' CASA/total deposits	65
Impact from foreign exchange (%)	
Gross external debt/GDP	75
Net private external debt/GDP	-39

[a] Fitch's estimate for mega banks

Vulnerabilities

- **Market Risk:** Many banks have shifted to investments in foreign-currency bonds in a search for yield, despite some banks having limited risk-management expertise. Mega banks also have US dollar funding for their offshore operations.
- **Credit Risk:** Pressures would most likely arise from lending to borrowers outside Japan.
- **Liquidity Risk:** Possible impact to mega banks from excessive volatility in offshore or regional markets.

Supporting factors

- Low levels of system dollarisation.
- Bank access to Bank of Japan's foreign-currency liquidity facilities when necessary.
- We expect Japanese monetary policy to remain expansionary through 2019, in contrast to the tightening cycles under way in the US and eventually in the EU.

Summary by Market (Cont.)

Macao

Long-Term IDR: AA/Stable
Banking System Indicator: n.a.

Vulnerability to Fed tightening: **Medium/Low**

Key Ratios

Impact from US dollar exposure (%)	
Banks' foreign-currency deposits/total deposits	79
Banks' foreign-currency liabilities/total liabilities	80-85
Banks' foreign-currency assets/total assets	80-85
Impact from local rate rises (%)	
Private-sector credit/GDP	113
Private-sector debt service ratio	n.a.
Banks' variable rate loans/total loans	90[a]
Banks' CASA/total deposits	32
Impact from foreign exchange (%)	
Gross external debt/GDP	176
Net private external debt/GDP	-55

[a] Fitch's estimate

Vulnerabilities

- **Market Risk:** High levels of foreign-currency deposits reflect the limited size of the local banking market and dependence on other major currencies, such as the US dollar (20% of deposits) and Hong Kong dollar (51% of deposits). The Macanese patacas is indirectly pegged to the US dollar through the Hong Kong dollar.
- **Credit Risk:** Some sectors, such as casinos, may be affected by sharp rate rises, but there appears to be a low level of vulnerability for now as direct lending to these sectors is moderate.
- **Liquidity Risk:** Potential indirect impact from Hong Kong's vulnerabilities.

Supporting factors

- Macao's most significant banks are subsidiaries or branches of foreign entities.
- Increasing linkages to the Chinese yuan may, particularly over the medium term, lessen dependence on the US dollar.

Malaysia

Long-Term IDR: A-/Stable
Banking System Indicator: bbb

Vulnerability to Fed tightening: **Medium/Low**

Key Ratios

Impact from US dollar exposure (%)	
Banks' foreign-currency deposits/total deposits	7
Banks' foreign-currency liabilities/total liabilities	16
Banks' foreign-currency assets/total assets	15
Impact from local rate rises (%)	
Private-sector credit/GDP	117
Private-sector debt service ratio	13
Banks' variable rate loans/total loans	78
Banks' CASA/total deposits	28
Impact from foreign exchange (%)	
Gross external debt/GDP	65
Net private external debt/GDP	-10

Vulnerabilities

- **Market Risk:** Foreign-currency exposure reflects the open banking system, but aggregate exposure is well-matched.
- **Credit Risk:** Sharply higher interest rates would weaken consumer asset quality, as household leverage remains high.
- **Liquidity Risk:** Vulnerable to shifts in external investor sentiment in light of large foreign holdings of government debt, particularly against a backdrop of rising US interest rates.

Supporting factors

- Foreign currency balance sheets are moderate, while foreign-currency lending and deposits in the local banking system are low.
- A robust economy supports household and corporate debt servicing ability. The system's impaired loan ratio is sound, notwithstanding pockets of weaker performance.
- The impact of sharp rate increases is buffered by banks' sound loss-absorption buffers.

Mongolia

Long-Term IDR: B-/Positive
Banking System Indicator: b

Vulnerability to Fed tightening: **Medium**

Key Ratios

Impact from US dollar exposure (%)	
Banks' foreign-currency deposits/total deposits	29
Banks' foreign-currency liabilities/total liabilities	18
Banks' foreign-currency assets/total assets	17
Impact from local rate rises (%)	
Private-sector credit/GDP	52
Private-sector debt service ratio	n.a.
Banks' variable rate loans/total loans	n.a.
Banks' CASA/total deposits	42
Impact from foreign exchange (%)	
Gross external debt/GDP	228
Net private external debt/GDP	144

Vulnerabilities

- **Market Risk:** High external indebtedness creates vulnerability. Some banks' disclosed sensitivities show earnings could fall by up to 10%-20% from a 100bp rate increase.
- **Credit Risk:** US dollar rate increases could lead to repayment pressure in the corporate sector, which has a high level of US dollar debt. System-wide foreign-currency lending has declined, yet corporate-focused banks are more exposed.
- **Liquidity Risk:** Banks have some dependence on foreign funding and central bank policies for foreign-exchange management.

Supporting factors

- Banks' foreign funding is primarily from bilateral and multilateral institutions.
- Banks' US dollar lending exposure is partially to corporates that have US dollar cash flows.
- Refinancing risks on US dollar borrowings appear to have receded, as Mongolia is on an IMF programme, leading to improved stability and investor confidence.

Summary by Market (Cont.)

New Zealand

Long-Term IDR: AA/Stable
Banking System Indicator: a

Vulnerability to Fed tightening: Medium/Low

Key Ratios

Impact from US dollar exposure (%)	
Banks' foreign-currency deposits/total deposits	17
Banks' foreign-currency liabilities/total liabilities	n.a.
Banks' foreign-currency assets/total assets	n.a.
Impact from local rate rises (%)	
Private-sector credit/GDP	159
Private-sector debt service ratio	n.a.
Banks' variable rate loans/total loans	n.a.
Banks' CASA/total deposits	n.a.
Impact from foreign exchange (%)	
Gross external debt/GDP	104
Net private external debt/GDP	51

Vulnerabilities

- **Market Risk:** Similar dynamic to Australia, as New Zealand's main banks are subsidiaries of Australia's major banks, with some dependence on offshore wholesale funding.
- **Credit Risk:** Borrowers would have some exposure to higher rates, but we deem the level of vulnerability as low.
- **Liquidity Risk**: More susceptible to offshore market sentiment compared with Australia, due to a high dependence on selected commodities and a small domestic market.

Supporting factors

- Foreign currency borrowings are hedged, similarly to the Australian parents.
- Banking system buffers appear reasonable, with banks on a sound footing. The main banks also benefit from institutional support from their Australia-based parents.

Philippines

Long-Term IDR: BBB/Stable
Banking System Indicator: bb

Vulnerability to Fed tightening: Medium/Low

Key Ratios

Impact from US dollar exposure (%)	
Banks' foreign-currency deposits/total deposits	17
Banks' foreign-currency liabilities/total liabilities	19
Banks' foreign-currency assets/total assets	17
Impact from local rate rises (%)	
Private-sector credit/GDP	52
Private-sector debt service ratio	n.a.
Banks' variable rate loans/total loans	n.a.
Banks' CASA/total deposits	71
Impact from foreign exchange (%)	
Gross external debt/GDP	23
Net private external debt/GDP	1

Vulnerabilities

- **Market Risk:** Moderate foreign-currency balance-sheet exposure may be affected by repricing mismatches.
- **Credit Risk:** Sharply higher local rates would weigh on banks' credit quality, particularly in light of high levels of credit growth.
- **Liquidity Risk:** As a small emerging market, there is possible vulnerability to volatile fund outflows.

Supporting factors

- Prudential foreign-exposure guidelines partly mitigate mismatch risks and aggregate balances are well-matched as a rule.
- Aggregate private-sector leverage remains moderate and favourable economic fundamentals support debt-servicing ability.
- Steady inflows of overseas remittances support local liquidity – low system loans/deposit ratio of 76% – and could mitigate impact of portfolio movements.

Singapore

Long-Term IDR: AAA/Stable
Banking System Indicator: aa

Vulnerability to Fed tightening: Medium

Key Ratios

Impact from US dollar exposure (%)	
Banks' foreign-currency deposits/total deposits	59
Banks' foreign-currency liabilities/total liabilities	39
Banks' foreign-currency assets/total assets	31
Impact from local rate rises (%)	
Private-sector credit/GDP	140
Private-sector debt service ratio	n.a.
Banks' variable rate loans/total loans	92
Banks' CASA/total deposits	53
Impact from foreign exchange (%)	
Gross external debt/GDP	416
Net private external debt/GDP	-151

Vulnerabilities

- **Market Risk:** Banks have high levels of foreign exposure, which are likely to rise.
- **Credit Risk:** Significantly higher rates could pressure leveraged borrowers and possibly the housing market.
- **Liquidity Risk:** As a key financial centre, Singapore is exposed to regional financial market sentiment.

Supporting factors

- High levels of foreign-currency exposure reflect banks' client base and Singapore's status as a global financial centre.
- Tight macro-prudential settings.
- Regulators have room to lean against home price declines by reversing macro-prudential tightening if needed. Households have healthy balance sheets and well-diversified assets.
- The banks' strong loss-absorption buffers and disciplined underwriting standards should limit the impact should rates rise more sharply than Fitch's expectations.

Summary by market (Cont.)

South Korea

Long-Term IDR: AA-/Stable
Banking System Indicator: a

Vulnerability to Fed tightening: Low

Key Ratios

Impact from US dollar exposure (%)	
Banks' foreign-currency deposits/total deposits	5
Banks' foreign-currency liabilities/total liabilities	9
Banks' foreign-currency assets/total assets	9
Impact from local rate rises (%)	
Private-sector credit/GDP	146
Private-sector debt service ratio	20
Banks' variable rate loans/total loans	65
Banks' CASA/total deposits	37
Impact from foreign exchange (%)	
Gross external debt/GDP	27
Net private external debt/GDP	-8

Vulnerabilities

- **Market Risk:** Some wholesale offshore-funding market usage by local banks lead to possibility of higher funding costs.
- **Credit Risk:** Sharp rises in local rates could increase banking-system asset-quality problems, particularly if economic growth also dissipates.
- **Liquidity Risk:** Potential impact from high volatility, though we assess vulnerability as low.

Supporting factors

- Bank exposure to foreign-currency deposits and liabilities is low compared with other Asian countries.
- Small net bank and private-sector foreign exposure.
- Banks' fundamentals are sound, with adequate buffers against downside risks.

Sri Lanka

Long-Term IDR: B+/Stable
Banking System Indicator: b

Vulnerability to Fed tightening: Medium

Key Ratios

Impact from US dollar exposure (%)	
Banks' foreign-currency deposits/total deposits	17
Banks' foreign-currency liabilities/total liabilities	24
Banks' foreign-currency assets/total assets	11
Impact from local rate rises (%)	
Private-sector credit/GDP	48
Private-sector debt service ratio	n.a.
Banks' variable rate loans/total loans	n.a.
Banks' CASA/total deposits	37
Impact from foreign exchange (%)	
Gross external debt/GDP	59
Net private external debt/GDP	17

Vulnerabilities

- **Market Risk:** High levels of foreign-currency liabilities compared with other Asian emerging markets.
- **Credit Risk:** Potential negative impact to credit quality from higher local rates – as seen from past experiences showing correlation between higher rates and weaker asset quality.
- **Liquidity Risk:** Could be affected by volatile markets and fund outflows.

Supporting factors

- Banks hedge most of their foreign-exchange exposure and earnings or capital impact of rate movements should be manageable.
- Sri Lanka is on an IMF programme aimed at fiscal consolidation and a disciplined monetary policy.
- There may not be direct pass-through of US rate hikes in light of the current monetary policy framework.

Taiwan

Long-Term IDR: AA-/Stable
Banking System Indicator: bbb

Vulnerability to Fed tightening: Medium/Low

Key Ratios

Impact from US dollar exposure (%)	
Banks' foreign-currency deposits/total deposits	25
Banks' foreign-currency liabilities/total liabilities	27
Banks' foreign-currency assets/total assets	22
Impact from local rate rises (%)	
Private-sector credit/GDP	171
Private-sector debt service ratio	n.a.
Banks' variable rate loans/total loans	n.a.
Banks' CASA/total deposits	59
Impact from foreign exchange (%)	
Gross external debt/GDP	51
Net private external debt/GDP	-106

Vulnerabilities

- **Market Risk:** High level of foreign exposure, particularly in mainland China and Hong Kong. Smaller banks may have less sophisticated market risk management systems compared with larger institutions.
- **Credit Risk:** Private sector leverage is moderately high. Possible negative impact of rate hikes, perhaps more so for exposure outside Taiwan, for example, to mainland China.
- **Liquidity Risk:** Could be affected by regional volatility.

Supporting factors

- Foreign exposure is tightly monitored and regulated. For instance, 100% bank equity as a regulatory cap on China exposure.
- Foreign currency assets are largely funded by foreign-currency deposits.
- Taiwan's strong foreign reserves counterbalance the foreign-currency market risk.

Summary by Market (Cont.)

Thailand

Long-Term IDR: BBB+/Stable
Banking System Indicator: bbb

Vulnerability to Fed tightening: **Low**

Key Ratios

Impact from US dollar exposure (%)	
Banks' foreign-currency deposits/total deposits	4
Banks' foreign-currency liabilities/total liabilities	12
Banks' foreign-currency assets/total assets	11
Impact from local rate rises (%)	
Private-sector credit/GDP	142
Private-sector debt service ratio	10
Banks' variable rate loans/total loans	79
Banks' CASA/total deposits	62
Impact from foreign exchange (%)	
Gross external debt/GDP	31
Net private external debt/GDP	-7

Vulnerabilities

- **Market Risk:** Some foreign exposure, particularly to regional countries.
- **Credit Risk:** High private-sector leverage and household debt compared with other emerging markets. This raises downside risk to asset quality in the event of sharp rate rises or economic turbulence.
- **Liquidity Risk**: Could be affected by excess volatility, though we deem vulnerability as low.

Supporting factors

- Banks have little reliance on foreign funding, with sound local liquidity; average liquidity coverage ratio of 177% at end-2017.
- Banking sector buffers have improved over the past several years; common equity Tier 1 ratio of 15% and loan-loss reserve coverage of 135%.
- Limited US rate impact – inflation is below the Bank of Thailand's target range and the currency has continued to strengthen, providing space for local rates to remain low.

Vietnam

Long-Term IDR: BB/Stable
Banking System Indicator: b

Vulnerability to Fed tightening: **Medium**

Key Ratios

Impact from US dollar exposure (%)	
Banks' foreign-currency deposits/total deposits	8
Banks' foreign-currency liabilities/total liabilities	11
Banks' foreign-currency assets/total assets	11
Impact from local rate rises (%)	
Private-sector credit/GDP	127
Private-sector debt service ratio	n.a.
Banks' variable rate loans/total loans	n.a.
Banks' CASA/total deposits	25
Impact from foreign exchange (%)	
Gross external debt/GDP	42
Net private external debt/GDP	10

Vulnerabilities

- **Market Risk:** Structural weaknesses, such as large legacy NPLs, thin capital buffers and weak profitability, make banks vulnerable to financial stresses emanating from gyrations in interest rates and foreign exchange.
- **Credit Risk:** High private-sector leverage by emerging market standards, with rapid recent credit growth and loose liquidity conditions.
- **Liquidity Risk:** Small market, vulnerable to fund outflows and market volatility.

Supporting factors

- The banking system has seen declining dollarisation in the previous few years amid a benign operating environment.
- Major banks are state-owned with support-driven ratings. We have a Positive Outlook on Vietnam's banks, mirroring our Positive Outlook on the sovereign.

Source: Fitch

Appendix – Details of Key Ratios

Banks' foreign-currency deposits/total deposits: The ratio of foreign-currency denominated deposits as a percentage of total deposits in the banking system. Source: Fitch Connect, Fitch estimates based on national sources.

Banks' foreign-currency liabilities/total liabilities: The ratio of foreign-currency denominated liabilities as a percentage of total liabilities. Calculated from major or systemically important banks in a banking sector, where available. Source: Fitch estimates based on national sources.

Banks' foreign-currency assets/total assets: The ratio of foreign-currency denominated assets as a percentage of total assets. Calculated from major and systemically important banks in a banking sector, where available. Source: Fitch estimates based on national sources.

Private-sector credit/GDP: Year-end stock of domestic credit to the private sector by banks and other financial corporations, based on national residency criterion, expressed as a percentage of gross domestic product at current prices in local currency. Source: Fitch Connect, IMF IFS, national authorities.

Private-sector debt service ratio: Ratio of interest payments plus amortisation to income for the total private non-financial sector. Source: BIS debt service ratios statistics (a detailed compilation methodology is available at the BIS website).

Banks' variable rate loans/total loans: The ratio of variable rate loans as a percentage of total loans in the banking system. Source: Fitch estimates based on national sources.

Banks' CASA/total deposits: The ratio of CASA deposit accounts as a percentage of total deposits in the banking system. Source: Fitch estimates based on national sources.

Gross external debt/GDP: Outstanding (disbursed) debt liabilities of residents to non-residents, converted into US dollars at year-end exchange rates and expressed as a percentage of GDP. These liabilities may be denominated in foreign or local currency. Source: Fitch Connect, national authorities, international institutions, Datastream.

Net private external debt/GDP: Calculated by deducting certain gross external asset glasses from a country's gross external debt, excluding sovereign net external debt. All figures are converted into US dollars at year-end exchange rates and are expressed as a percentage of GDP. A minus sign indicates that the country is a net external creditor, that is, contractual external claims exceed liabilities. Source: Fitch Connect, IMF IFS, national authorities, international institutions.