

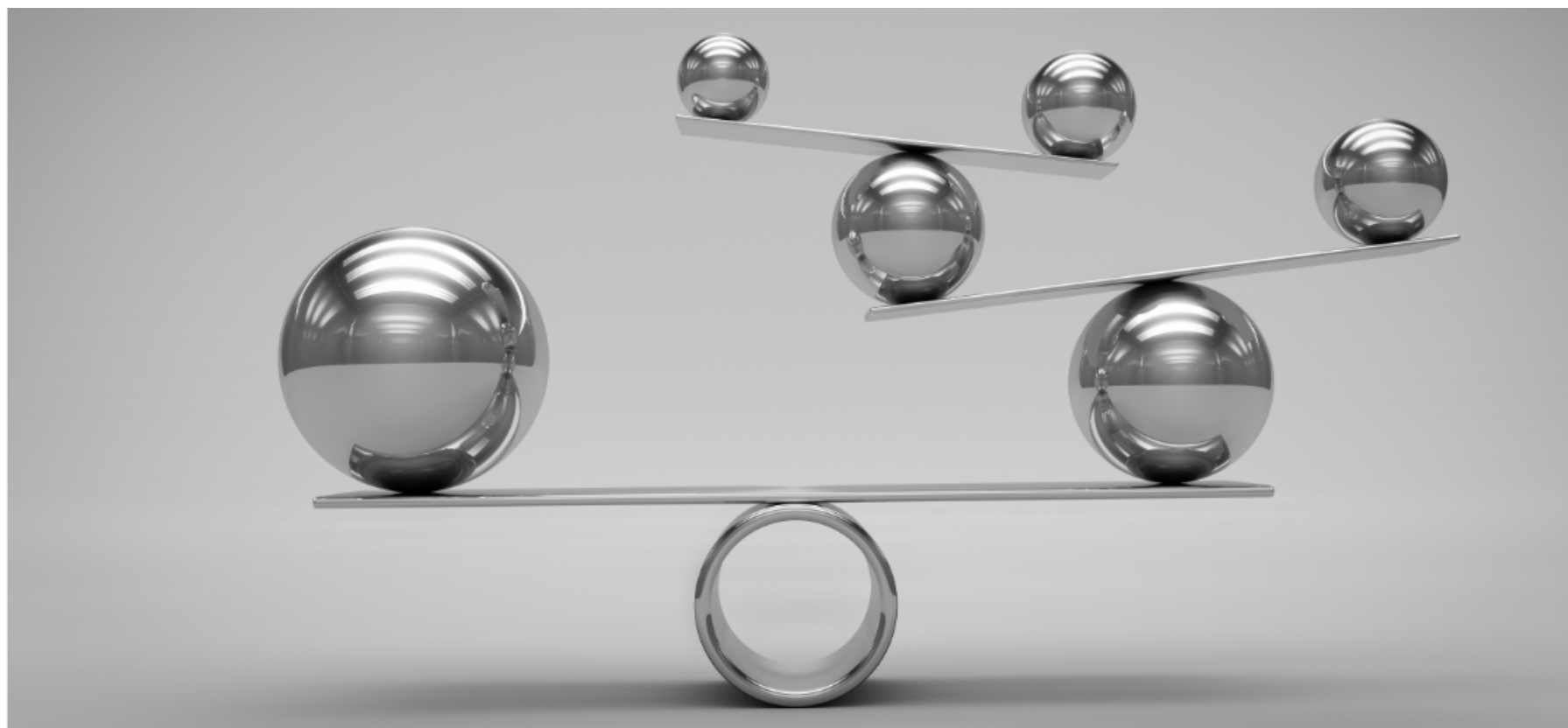
Global Banks 2020 Outlook

Emmanuel Volland
Elena Iparraguirre
Cynthia Cohen Freue

Brendan Browne
Gavin Gunning
Mohamed Damak

The Unrelenting Hunt For Returns

Nov. 18, 2019



S&P Global
Ratings

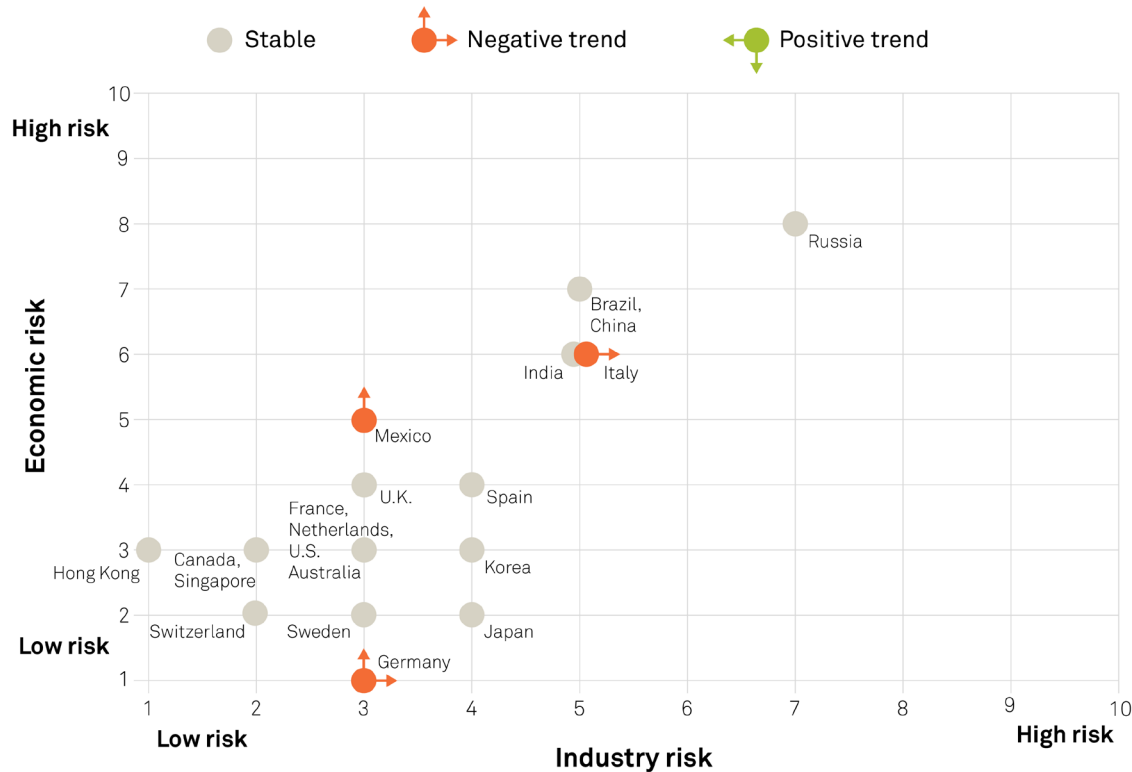
Contents

Key Takeaways	3
BICRAs, Ratings, and Outlooks	4
Low For Longer	7
Fintechs – Disruption	8
Emerging Markets	9
Regulation – Resolution	10
Brexit	11
Market Liquidity	12
Climate Change	13
North America	14
Europe	18
Asia-Pacific	23
Latin America	28
Related Research	32
Analytical Contacts	33

Key Takeaways

- Credit conditions remain broadly supportive of banks' asset quality even if **the economy is slowing down**.
- Trade and geopolitical **tensions remain elevated** and undermine confidence.
- Central banks' responses to counter the slowdown are positive for banks' funding conditions but increasingly call into question their **business models**.
- The **pressure on profitability** is mounting, especially in Europe and Japan.
- The vast **majority of outlooks on banks is stable** globally, supported by low credit losses and high capitalization.
- **Technology is disrupting** retail banking across the globe.

BICRA And Trends For Top 20 Banking Markets



*The list only includes a selection of the changes made so far in 2019. A BICRA (Banking Industry Country Risk Assessment) is scored on a scale from 1 to 10, ranging from the lowest-risk banking systems (group 1) to the highest-risk (group 10). Data as of Nov. 15, 2019.

BICRA changes in 2019*

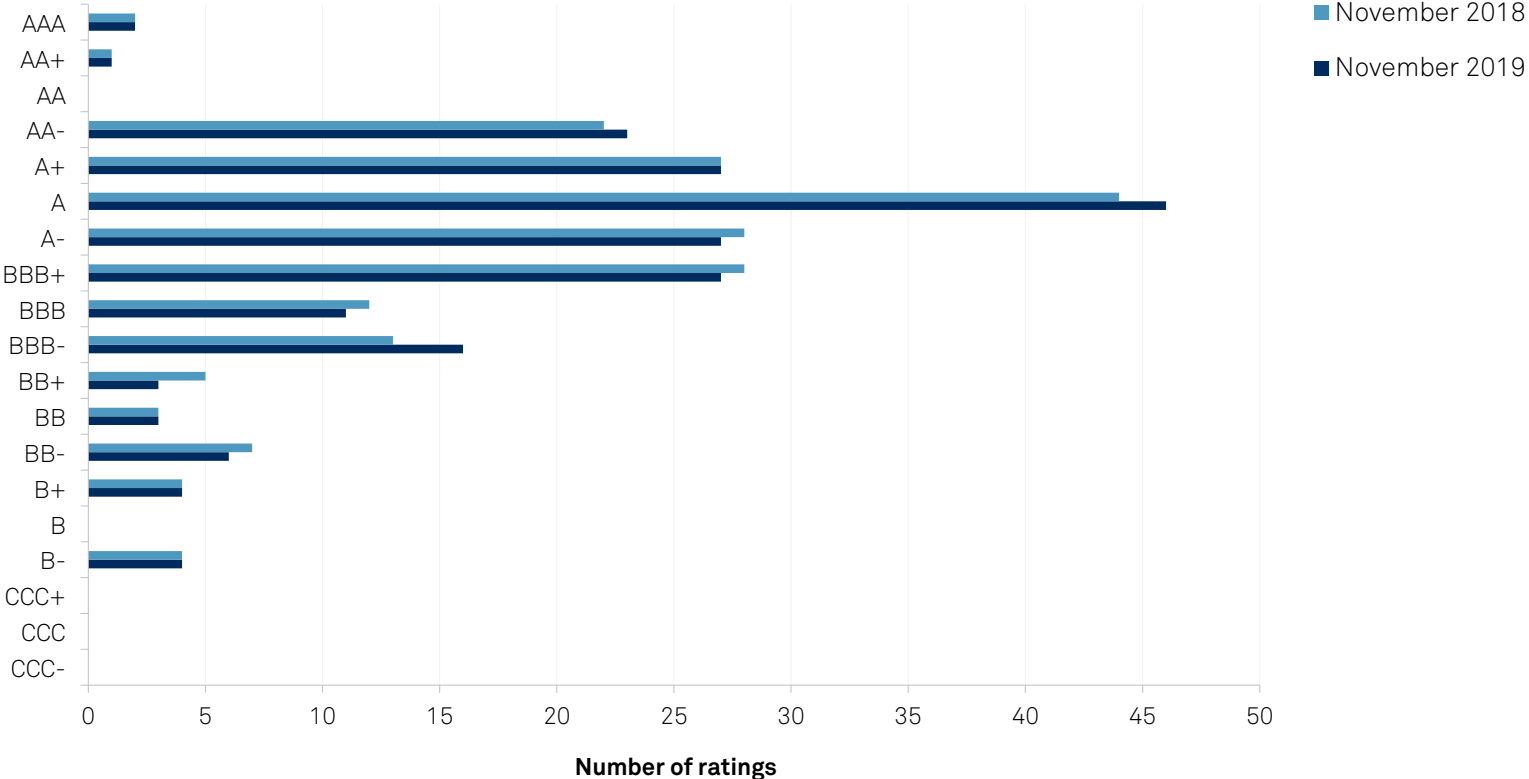
- Japan **lowered** to 3 from 2
- Argentina **lowered** to 9 from 8
- Israel **raised** to 3 from 4
- Poland **raised** to 4 from 5
- Philippines **raised** to 5 from 6
- Indonesia **raised** to 6 from 7
- Greece **raised** to 9 from 10

Trend changes in 2019*

- Economic and industry risks to **negative** from stable on Germany
- Economic risk to **negative** from stable on Mexico
- Economic and industry risks to **stable** from negative on Brazil
- Economic risk to **stable** from positive on the Netherlands

Broadly Stable Ratings In 2019

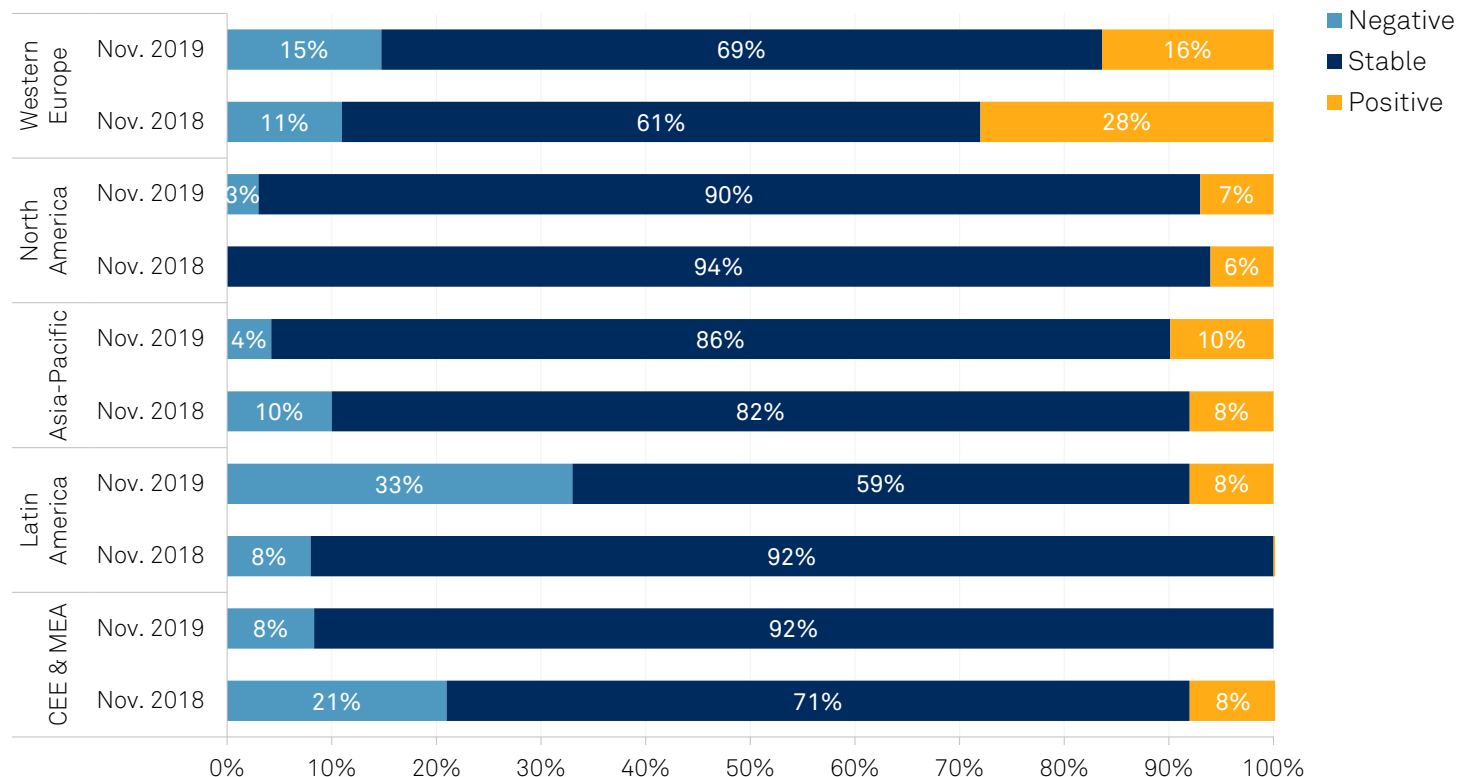
Ratings Distribution For The Top 200 Rated Banks



Operating company issuer credit ratings. Data as of Nov. 15, 2019. Source: S&P Global Ratings.

The Ratings Bias Is Now Relatively Flat

Outlooks For The Top 200 Banks By Region

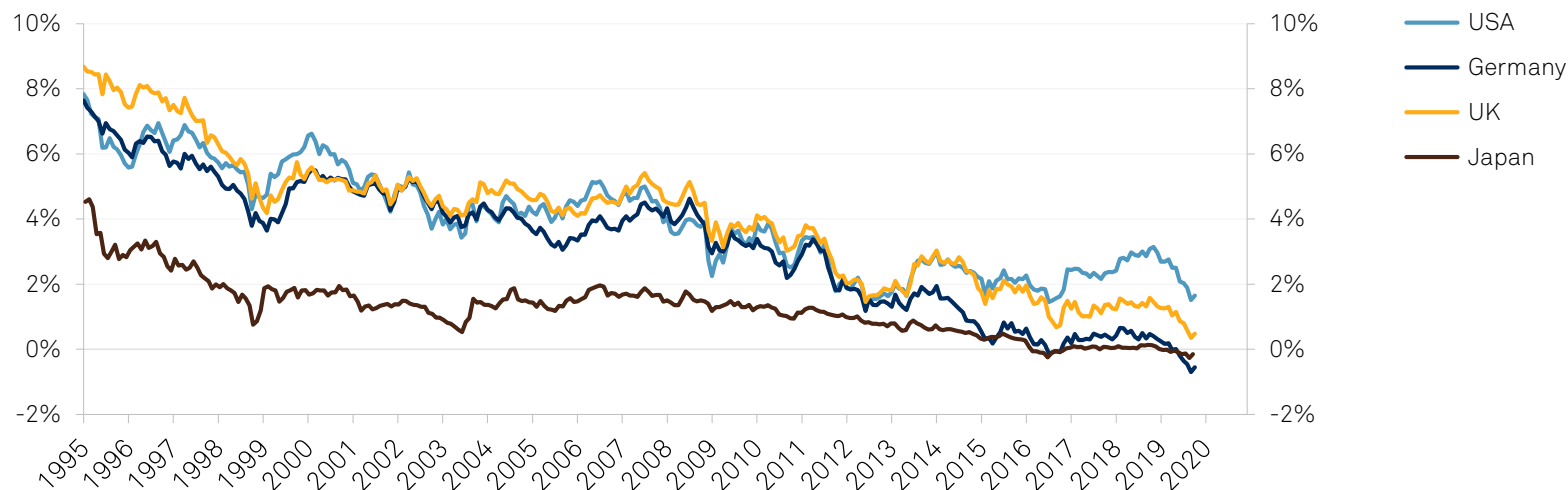


Note: Ratings bias is positive bias minus negative bias. Data as of Nov. 15, 2019. CEE--Central & Eastern Europe; MEA--Middle East & Africa. Source: S&P Global Ratings.

Low For Longer Interest Rates

- Extremely accommodative monetary policies are enabling economic imbalances to surface.
- The outlook for interest rates is also gradually pulling down banks' net interest margins.
- This is increasingly making weak profitability a structural problem.
- The pressure is particularly negative in Europe and Japan.
- Banks need to take strategic measures to improve efficiency as the pain will likely get worse before it gets better. Those less able to make structural changes will suffer more.

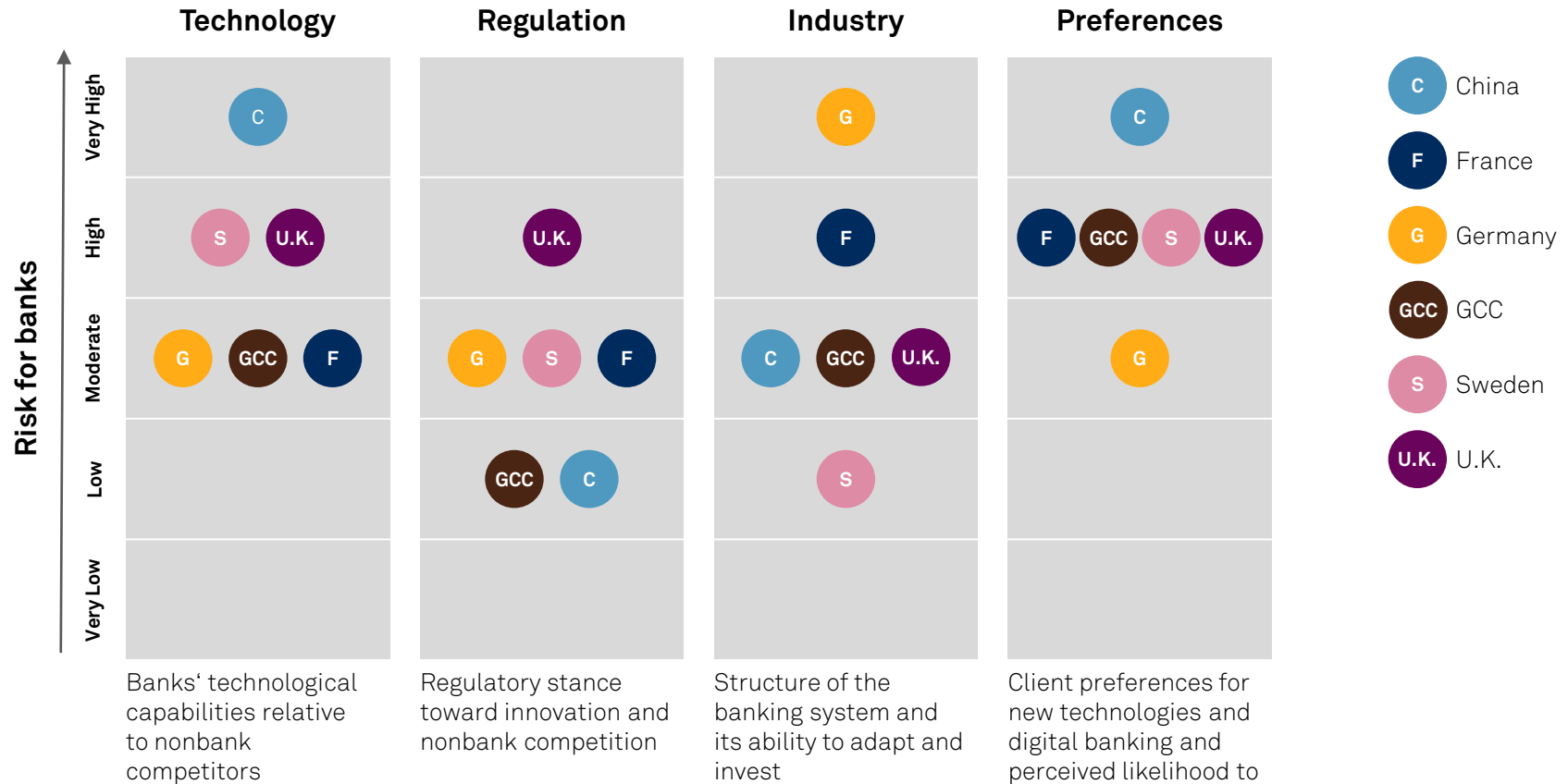
10-Year Government Bond Yields Continue Their Decline



Source: Refinitiv.

Tech Is Disrupting Retail Banking

Opportunities And Threats From Tech Disruption Relate To Four Factors

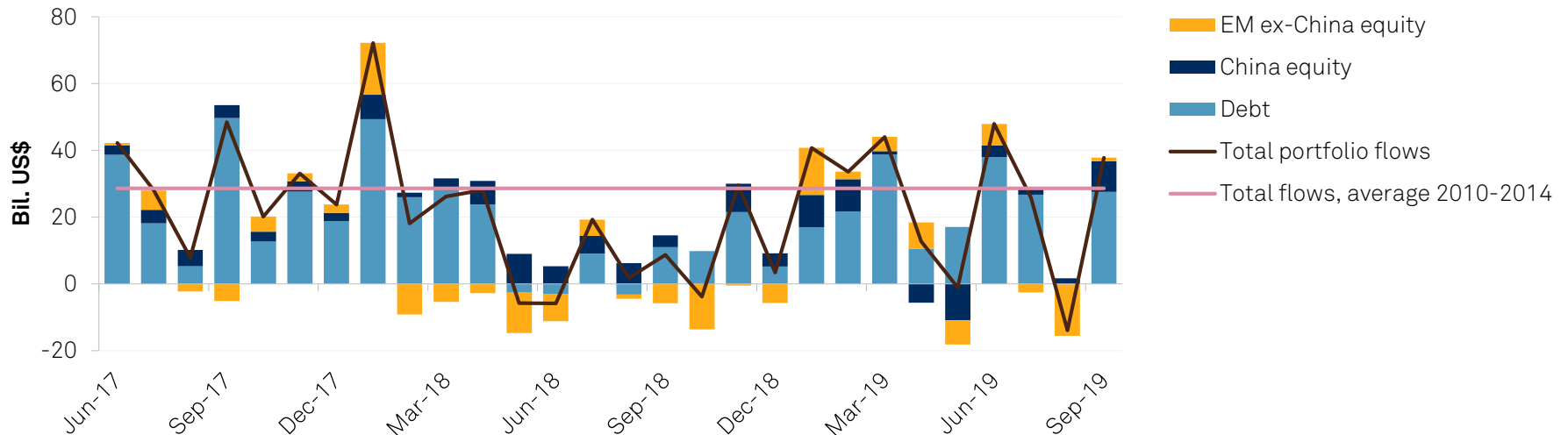


Note: GCC--Gulf Cooperation Council. Source: S&P Global Ratings.

Emerging Markets See Easing Financing Conditions

- Emerging-market growth is the weakest in a decade, and the pickup in 2020 will be unspectacular.
- Financing conditions continue to ease, driven by Fed and ECB, which is positive for capital flows.
- Investors' appetite for emerging markets prevails, but selectivity is increasing.
- Geopolitical risks, political instability, and social unrests are hurting a number of banking sectors.
- Dependence on external debt is a high risk for some banks, including in Turkey, Qatar, and Lebanon.
- High leverage in China remains a key concern, although the largest banks remain resilient.

Resilient Portfolio Flows To Emerging Markets Are Expected To Continue



Sources: IIF, S&P Global Ratings calculations.

Regulation And Resolution: Coming To A Finish Line

Basel III finalization is the high point in a multiyear overhaul of prudential regulation

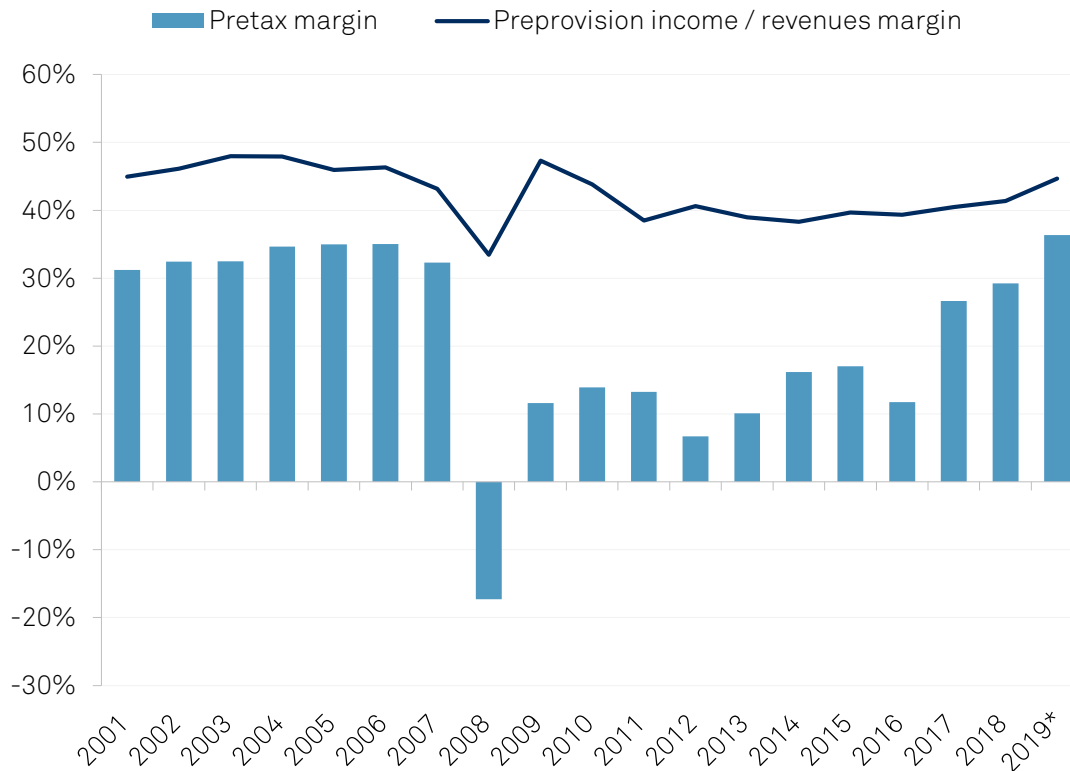
- Full implementation (in most jurisdictions) will not be completed before 2028.
- We expect an improved comparability in ratios despite areas of uneven implementation of global standards.
- Generally, we expect a much higher impact on capital ratios for European banks.
- We see policymakers taking measures to ease the burden on smaller, simpler institutions.
- We view U.S. regulators' finalized rules on the tailoring of bank regulation to the systemic risk they pose as slightly credit negative.

There are stark differences in the implementation of bank resolution frameworks

- A steady push continues to make systemic banks resolvable.
- The EU and U.S. have already transitioned to effective bail-in regimes.
- European jurisdictions remain behind the U.S. in implementation.
- Other G-20 policymakers are cautious about eliminating possibility of extraordinary government support.
- Nearly 40% of unsecured bank debt in North America and Europe is rated in the 'BBB' category, up from 25% four years ago, as loss-absorbing instruments account for a growing share of funding.

Softening Conditions Ahead Of **Brexit Endgame**

Major U.K. Banks Profit Margins Provide Some Buffer

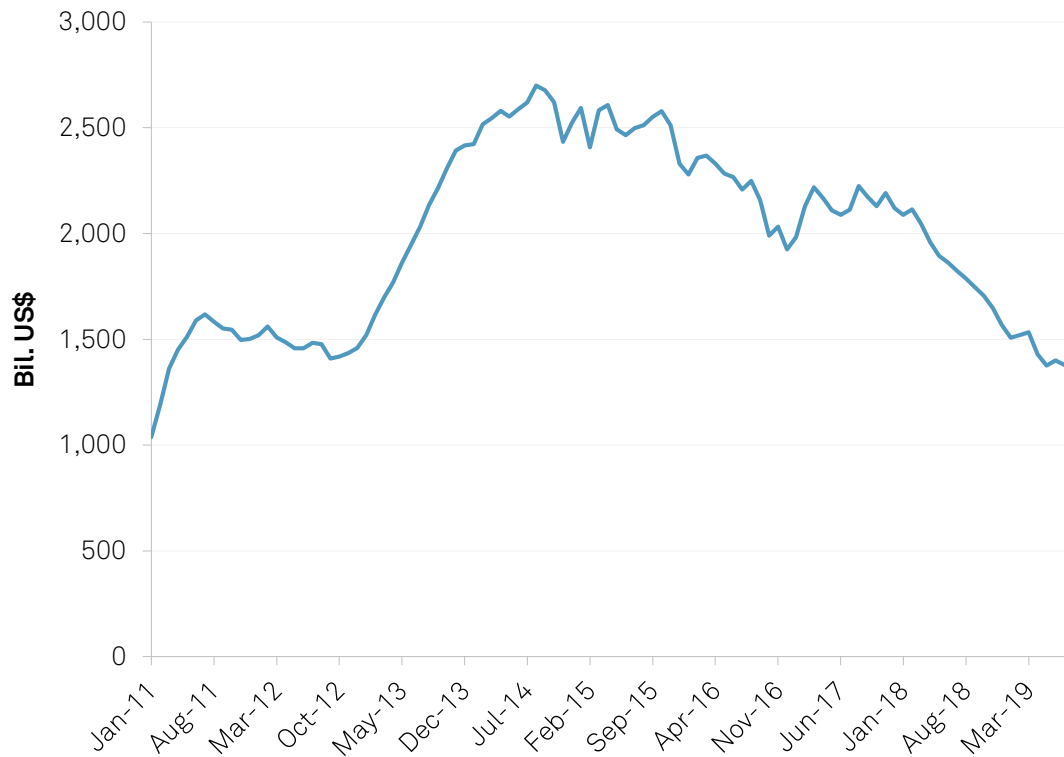


- The major U.K. banks show continuing robust asset quality metrics, stable capital, and healthy funding and liquidity.
- This provides a firm foundation to weather Brexit-related uncertainties and other risks such as trade tensions.
- While U.K. banks have built resilience, a no-deal Brexit could change our broadly stable ratings assessment.

*Data for 2019 is for the half-year. Source: S&P Global Ratings database and definitions, and company accounts. Data is based on six-bank aggregate (Barclays, HSBC, Lloyds, Nationwide, RBS, and Santander UK (where available)).

Spike In U.S. Repo Rates - Market Liquidity Is Key

Excess Reserves In U.S. Banking System Have Declined



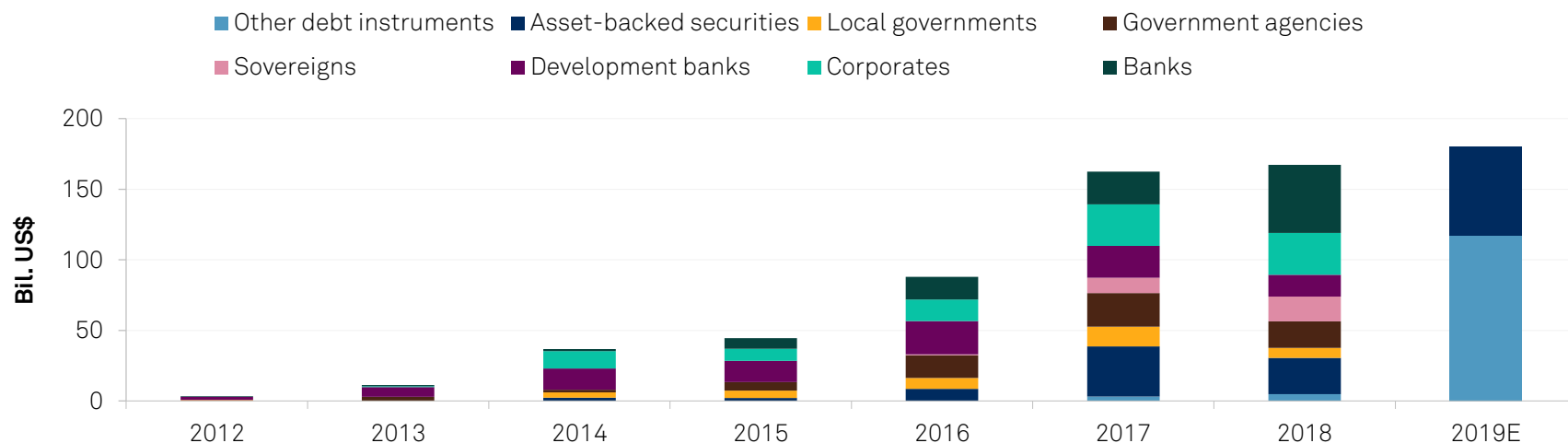
Note: Monthly, not seasonally adjusted. Source: U.S. Federal Reserve Bank of St. Louis.

- The mid-September spike in repo rates likely resulted from technical factors and financial requirements that limit banks' willingness to support market financing.
- Fed balance sheet contraction caused excess reserves in the system to fall.
- The incident doesn't reflect credit fears about participants but shows the fragility funding markets can display.

Climate Change Poses Risks For Banks

- The shift to a lower-carbon economy poses physical and transition risks for banks.
- We see as positive regulators' initiatives to encourage banks to better quantify climate-related risks and embed them in strategy and in setting risk appetite.
- However, there is an urgent need for banks to improve and standardize data transparency.
- Climate change considerations could materially transform the way banks operate and have a greater influence on their creditworthiness, since some of them will inevitably be better prepared than others.

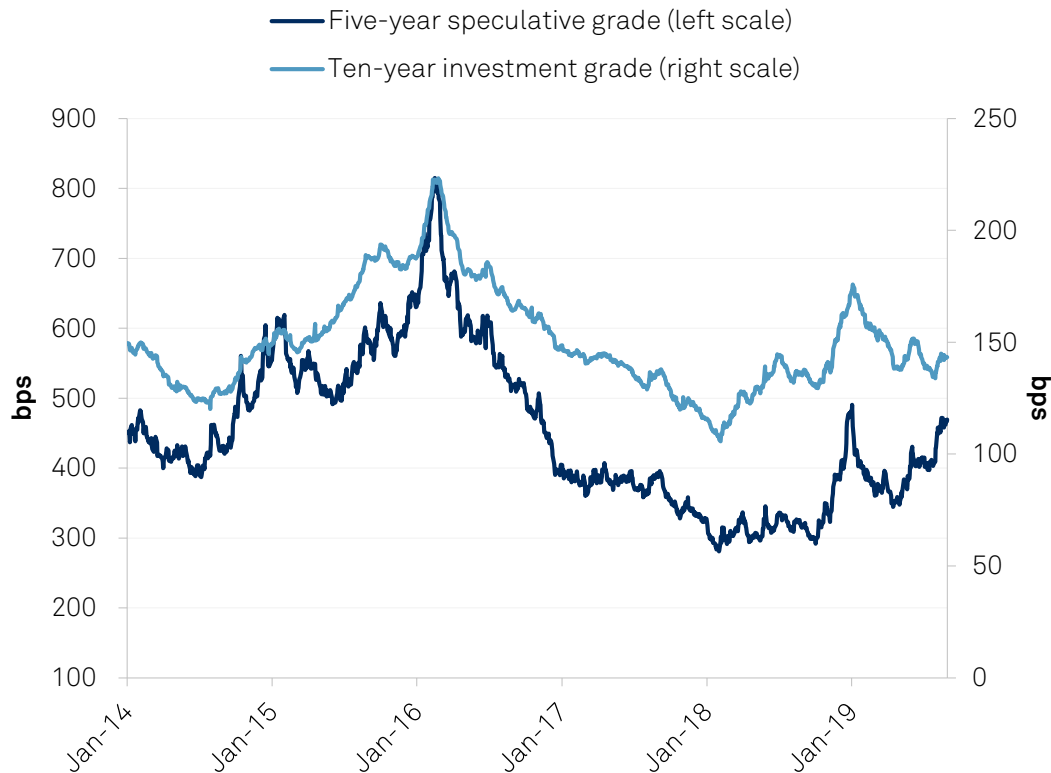
Banks Are Now The Main Issuers Of Green-Labeled Bonds



E—Estimate, includes the \$118 billion issuance as of June 30, 2019, and S&P Global Ratings' forecast of \$180 billion for the full year.
Source: Climate Bonds Initiative.

Credit Conditions: **North America**

A Divergence In Investment- And Speculative-Grade Corporate Composite Spreads



Data as of Aug. 31, 2019. Source: S&P Global Ratings Research.

- We expect the U.S. economy to slow in 2020 to 1.7%.
- We put the risk of a U.S. recession at 30%-35%.
- Following three rate cuts in 2019, we expect the Fed to hold rates flat in 2020.
- The reduction in interest rates weighs on bank margins and will fuel further growth in leveraged, student, and auto loans.
- The buildup in nonfinancial corporate debt is a source of potential instability.

North American Banks

Key Expectations

- Reduced interest rates are likely to limit earnings growth for most U.S. banks in 2020, if not cause declines.
- Loan growth is to remain in the low- to mid-single digits, which could partly offset the negative impact of lower margins.
- Banks will continue to contain costs by consolidating branches, containing head count, and further digitization.
- The 2020 implementation of new accounting standards for loan loss provisions will likely cause reserves to rise notably, particularly for banks with large consumer loan exposures.
- For Canadian banks, we expect operating performance to gradually strengthen.

Key Assumptions

- GDP growth should slow to 1.7% and 1.4% in the U.S. and Canada in 2020.
- Credit losses have likely bottomed out and may gradually increase.
- The U.S.-Mexico-Canada free trade agreement will remain on a slow path toward ratification.

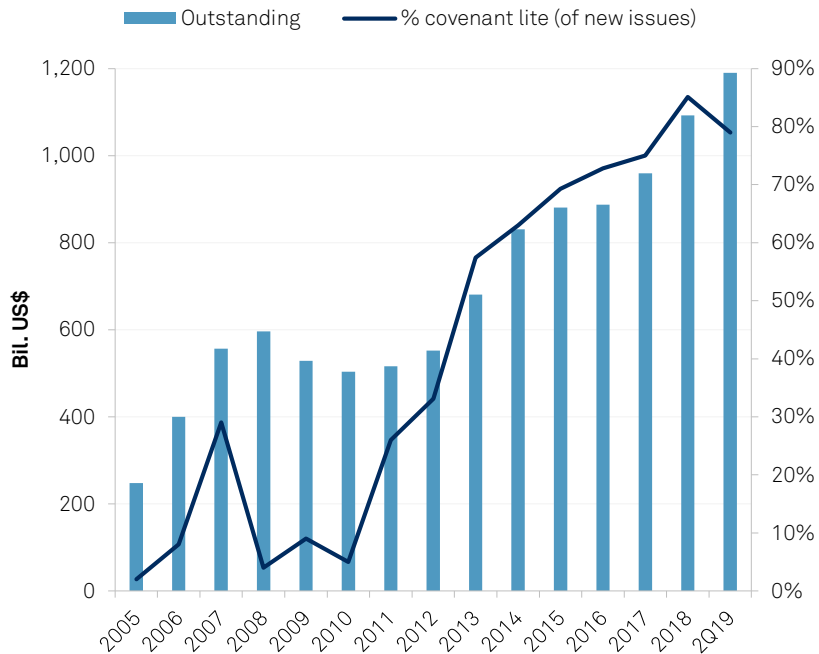
Key Risks

- Corporate credit quality, particularly in leveraged lending, could deteriorate after several years of rapid growth.
- Credit quality may also worsen in auto, student, credit card, and commercial real estate lending.
- In Canada, a sufficiently negative employment shock could trigger a substantial decline in home prices, given elevated prices. This could be accompanied by noticeably higher losses on consumer loans.

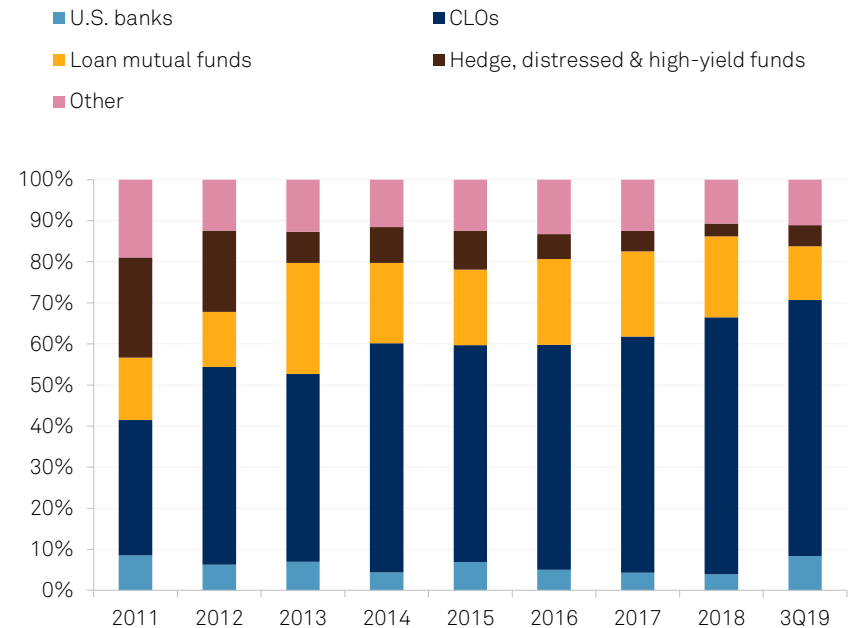
Leveraged Loans Are Mostly Held By Nonbanks

- The issuance of leveraged loans cooled materially in the first half of 2019.
- CLOs continue to be the largest buyers of leveraged loans, with banks holding only a small minority.

Leveraged Loans Continue To Rise



Nonbanks - Primary Investors Of Leveraged Loans

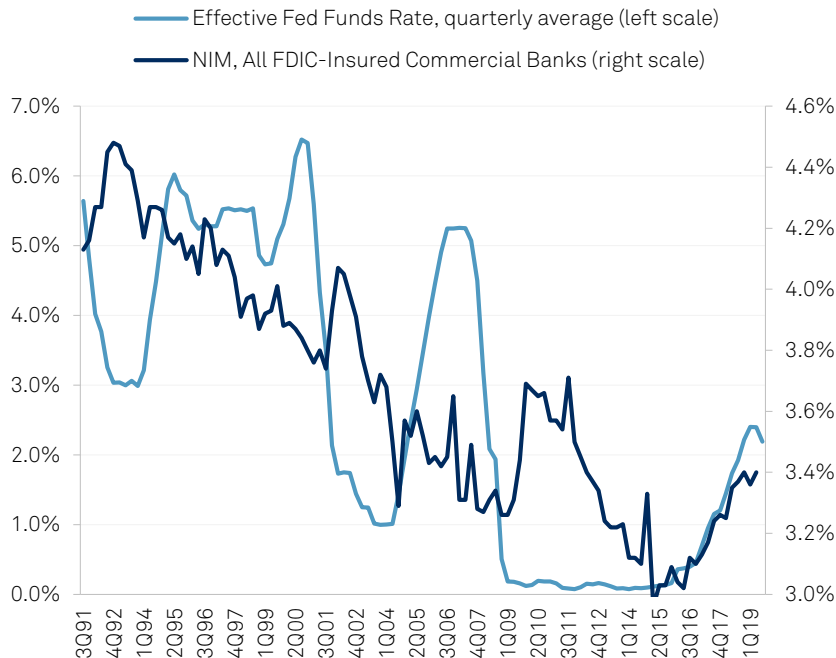


Source: Leveraged Commentary & Data (LCD).

Bank Earnings To Plateau Or Fall On **Lower Rates**

- While U.S. banks benefited from higher rates and a cut in the corporate tax, recent rate cuts by the Fed are likely to erode their earnings.
- Historically, drops in the Fed funds rate have led to lower net interest margins.

Fed Funds Rate And NIM Are Correlated



Source: U.S. Federal Reserve economic data.

Earnings And Margins Gained Strength

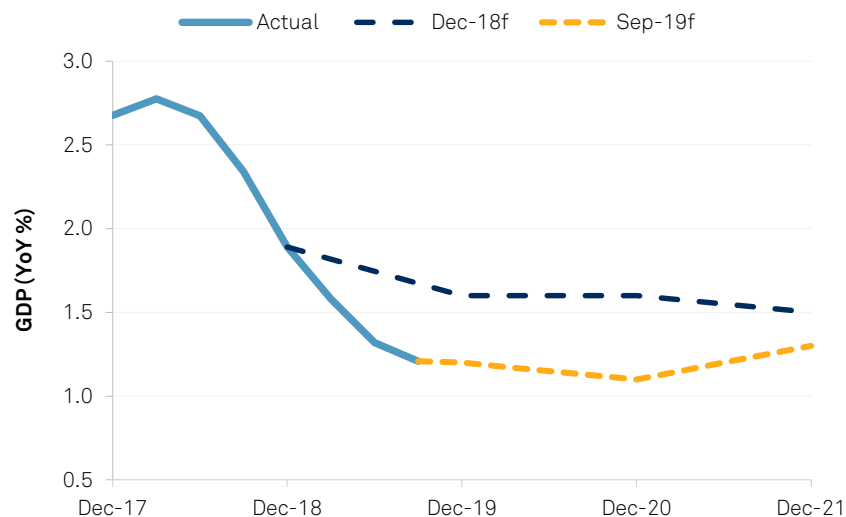


Source: S&P Global Ratings.

Credit Conditions: EMEA

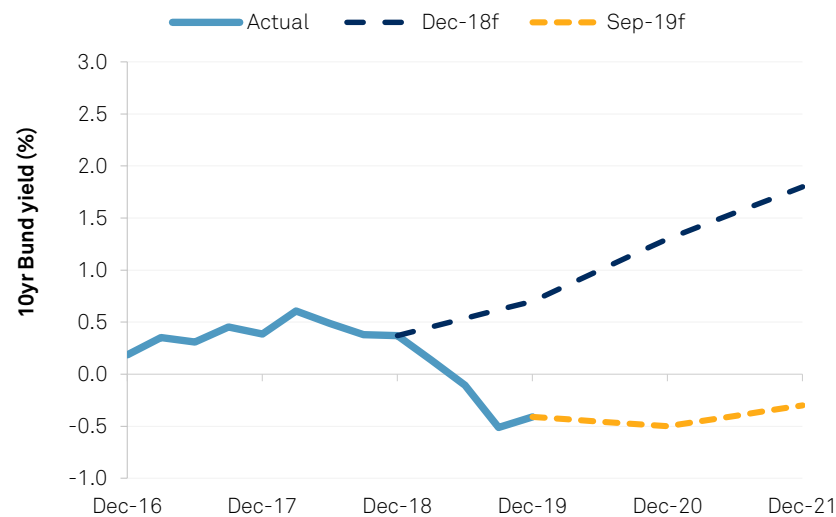
- We expect somewhat weaker eurozone growth for 2020 at 1.1%, primarily reflecting slower manufacturing conditions in Germany. The U.K. economy will continue to slow due to Brexit uncertainty.
- The ECB's new expansionary package will maintain rates in negative territories at least until 2023.
- The risks to growth and confidence remain mainly political: increasing global trade tensions, Brexit, and political fragmentation.

Germany And Italy Weigh On Eurozone Growth



Source: S&P Global Ratings. f—S&P Global Ratings forecast.

Low Yields Pose Challenges To Banks



Source: S&P Global Ratings. Refinitiv. Actual yields are quarterly averages.

EMEA Banks

Key Expectations

- The ratings bias is flat and likely to turn negative through 2020.
- In the absence of meaningful strategic initiatives to tackle costs and restructure, the business models of some banks will come under more pressure.
- Capitalization and asset quality should hold up, and we could see further asset quality improvement in some markets.
- Systemic banks will continue making progress in the buildup of bail-in buffers.
- The rationale for consolidation is stronger than ever, but most banks are unwilling to pursue it.

Key Assumptions

- The U.K. will not leave the EU without a deal.
- Economic growth will be modest, but the region will not enter into recession.
- The success of monetary policy actions in boosting growth will be limited in the absence of fiscal stimulus.
- Credit conditions will remain favorable and support refinancing and asset quality.

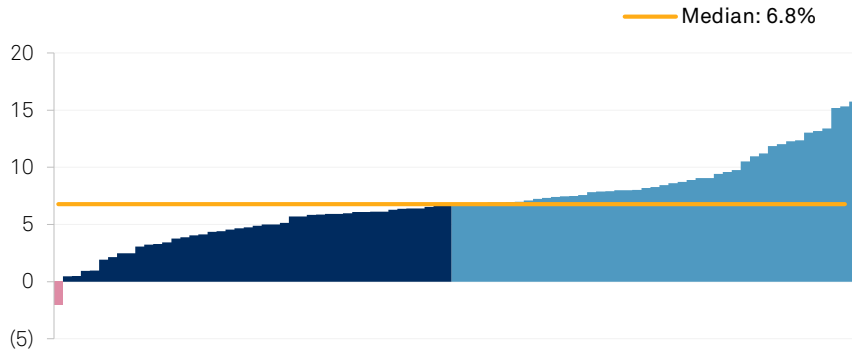
Key Risks

- A disruptive Brexit that leads to a severe economic downturn in the U.K.
- Economic growth challenges spread to eurozone countries other than Germany and Italy.
- A lack of a decisive response from banks to their low profitability.
- A build-up of asset bubbles, higher risk taking, or irrational pricing dynamics.

The Challenges Of **Low-For-Much-Longer** Rates

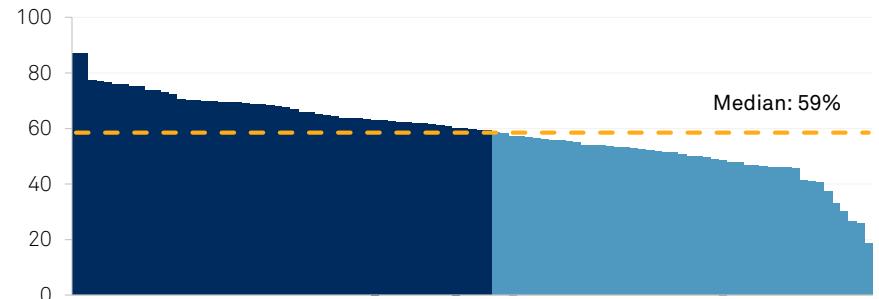
1. Low Profitability Is Becoming A Structural Issue

2020 projected ROE (%)

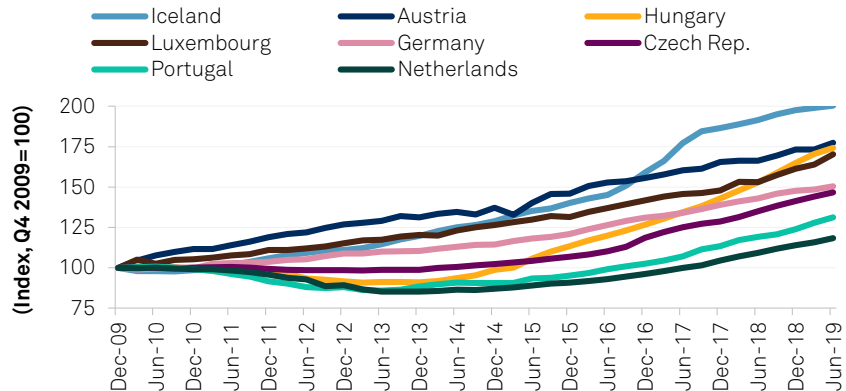


2. Banks Need To Tackle Their Costs

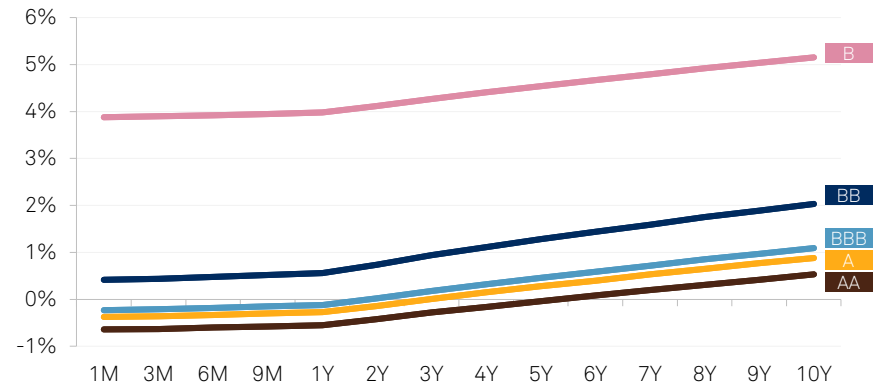
2020 projected cost-to-income ratio (%)



3. Risk Of Build Up Of Bubbles In Property Markets



4. Too Low Pricing For Risk In Corporate Europe

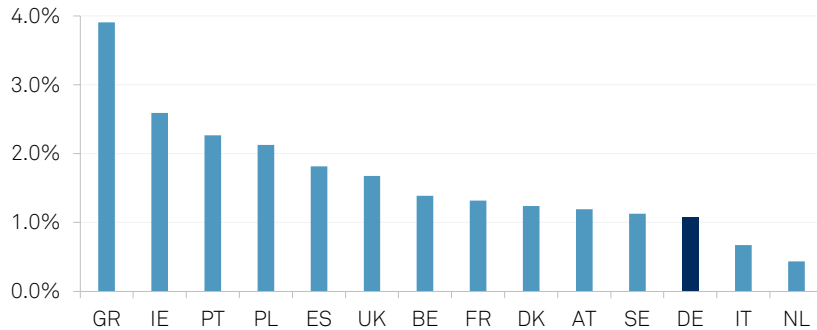


1. Projected 2020 return on equity for top 100 EMEA banks. 2. Projected 2020 cost to income ratio for top 100 EMEA banks. 3. Increase in nominal house prices. 4. Yield curves for EMEA nonfinancials by rating category. Source: S&P Global Ratings.

Key Issues In EMEA Banking Systems

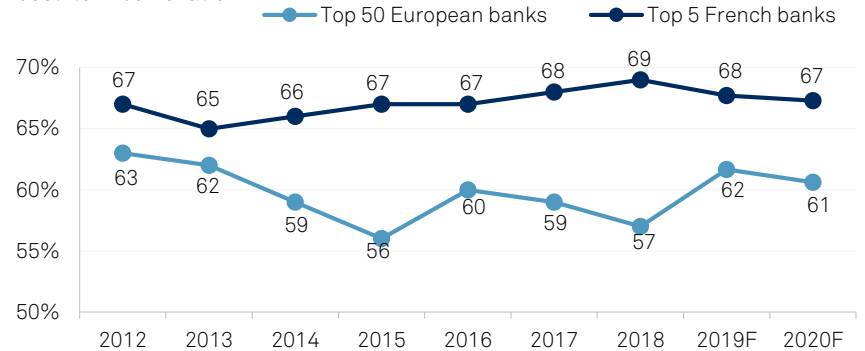
1. Germany: Profitability Is Under Pressure

Lending margin



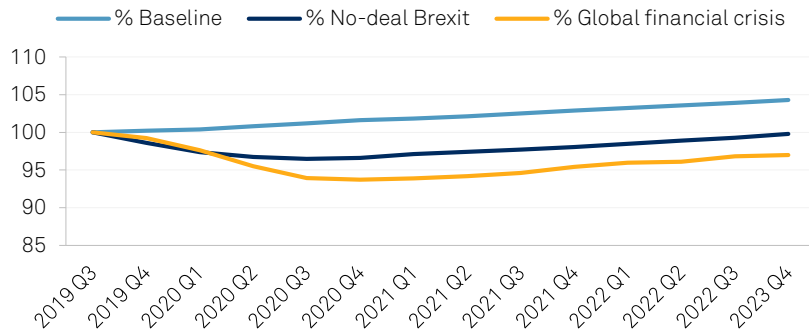
2. France: Need To Address Inefficiencies

Cost-to-income ratio

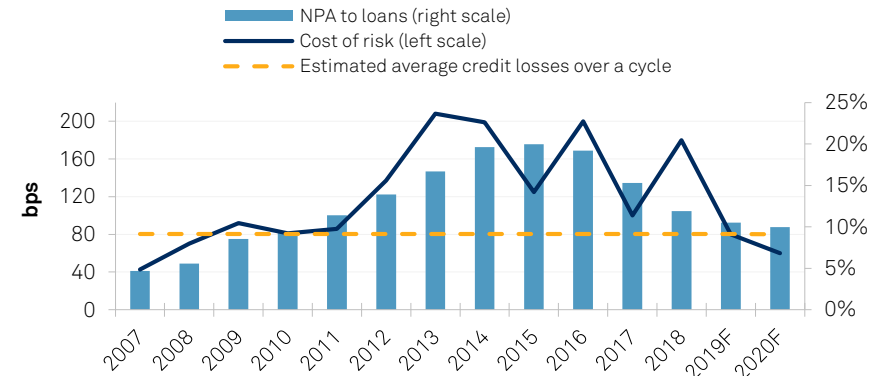


3. UK: Impact Of Brexit On The Economy

UK GDP (volumes)



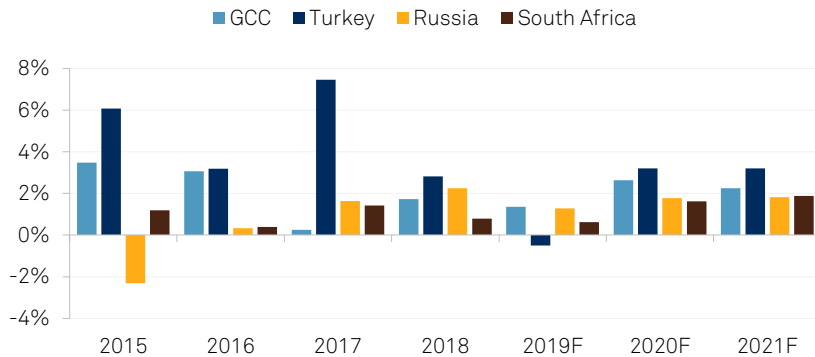
4. Italy: Workout Of Legacy NPAs



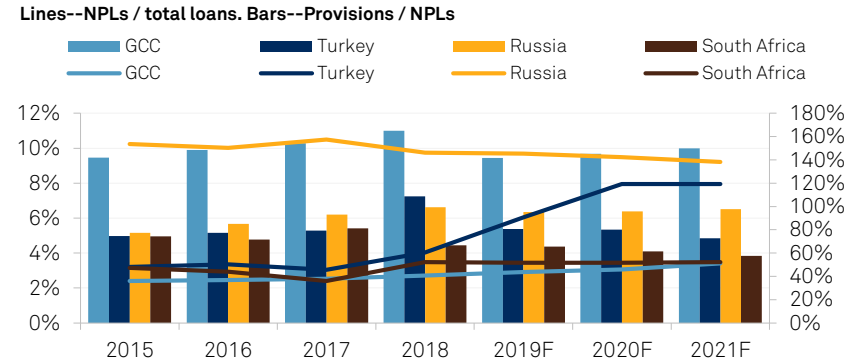
1. Lending margins are measured as the difference between interest rates for new business loans and a weighted average rate of new deposits. Sources: ECB, S&P Global Ratings. 2. Inefficiencies measure based on the cost-to-income ratio (%). F--S&P Global Ratings forecast.

Prospect For Emerging Market Banks In EMEA

1. GDP Growth Will Only Recover Slightly

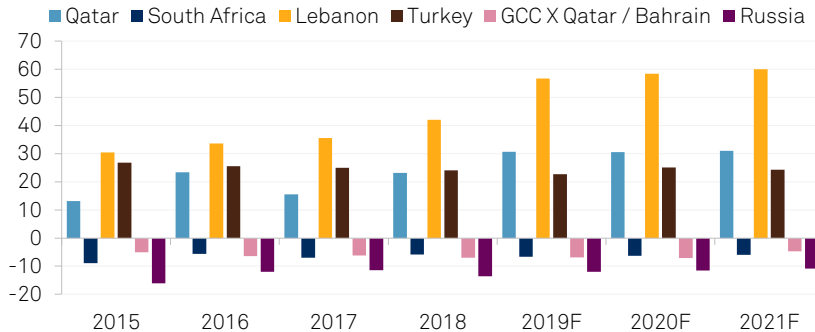


2. Asset Quality Is Broadly Stable Except In Turkey



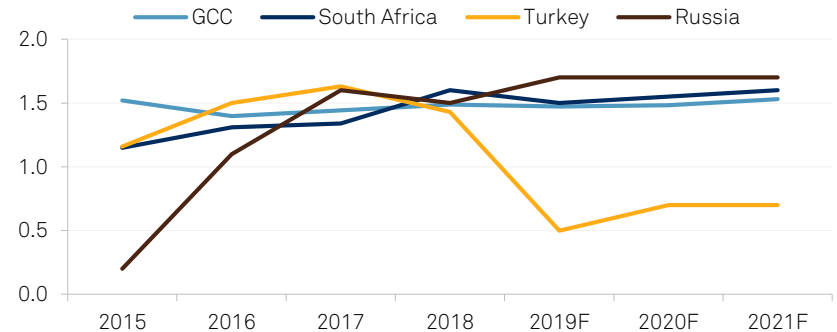
3. Turkey, Qatar, Lebanon: Vulnerable Funding

Net banking sector external debt as a % of system wide domestic loans



4. Profitability Is Stabilizing

Return on assets (%)



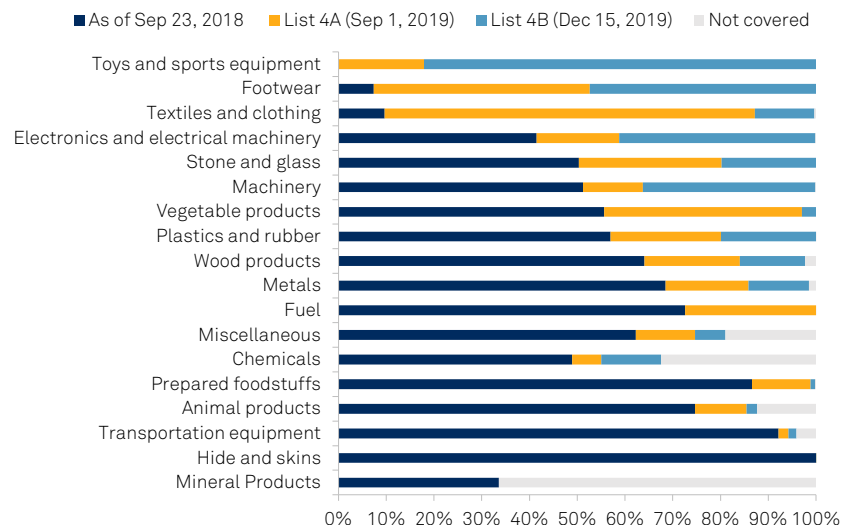
F--S&P Global Ratings forecast. Source: S&P Global Ratings.

Credit Conditions: **Asia-Pacific**

- We expect credit conditions to be bumpy. While interest rates should trend lower or hold steady, China's economic slowdown and the trade war is dampening consumer and lender sentiment. In turn, this is holding down revenue and profit growth, intensifying refinancing risk.
- U.S.-China trade-tech tensions have dragged on and growth has come in below our expectations.
- The greatest near-term risk for banks is the strategic conflict between the U.S. and China. Other top risks include corporate refinancing and market liquidity, property repricing, and China's debt leverage.

U.S. - China Trade Dispute

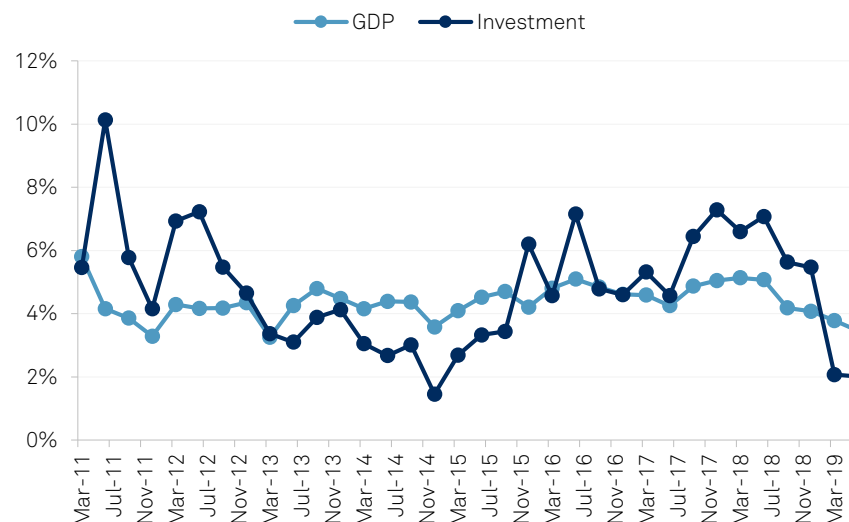
U.S. imposed tariffs on remaining US\$300 Bil. of Chinese imports



Source: U.S. International Trade Commission Dataweb.

Asia-Pacific's Investment-Led Slowdown

Real GDP growth and investments



Note: GDP weighted by purchasing power parity, excluding China and Vietnam due to data availability. Sources: CEIC, S&P Global Ratings Economics.

Asia-Pacific Banks

Key Expectations

- The majority of outlooks is stable and are likely to remain so in 2020.
- The regional slowdown means that banks may see a slight erosion in their asset quality.
- Nonperforming assets in India – a negative outlier – will remain high.
- Earnings and capital should remain generally supportive of ratings at current levels.

Key Assumptions

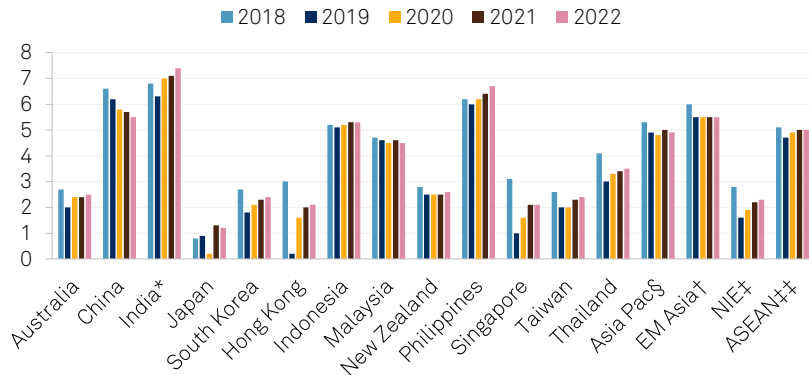
- A slower macroeconomic outlook. The cyclical downturn in Asia-Pacific trade will likely challenge asset quality and profitability but should be manageable at current rating levels for most banks.
- No significant increase in geopolitical stresses, including in Hong Kong where protests have remained contained, with limited spillover to other economies.
- Governments will remain supportive. In contrast with Western Europe and the U.S., systemically important banks in most jurisdictions will likely benefit from government support in case of need.

Key Risks

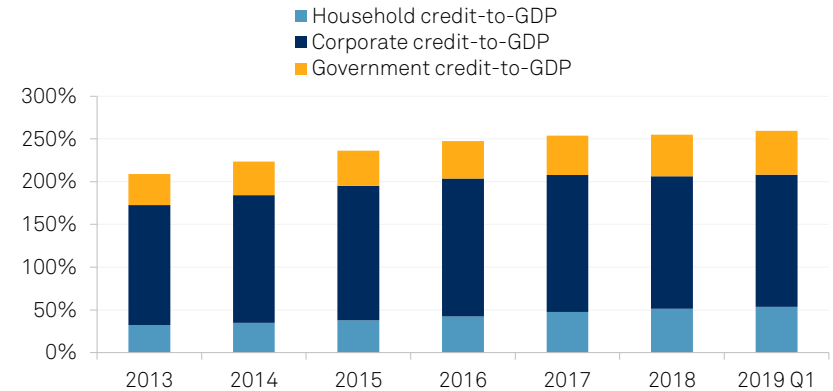
- High private-sector indebtedness and high asset prices amid a protracted low interest rate environment across much of the region. These factors set the stage for a potential deterioration in credit quality.
- A range of property risks across much of Asia-Pacific banking--including banks' high exposure to property, high property prices, and corporate-sector property risks--are a risk for asset quality.

Asia-Pacific Banks

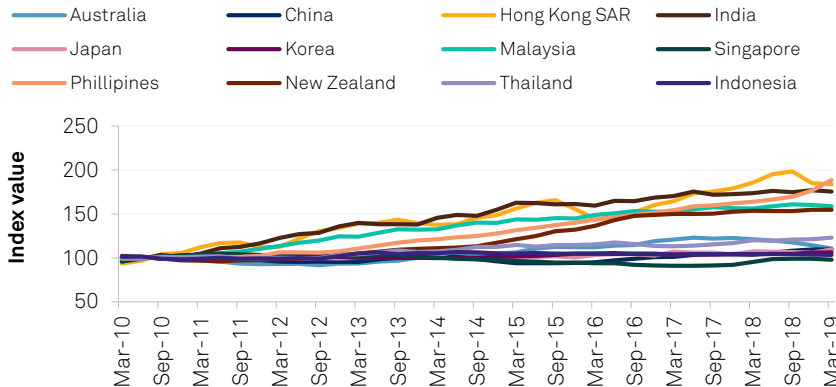
1. GDP Softens Due To Trade Tensions



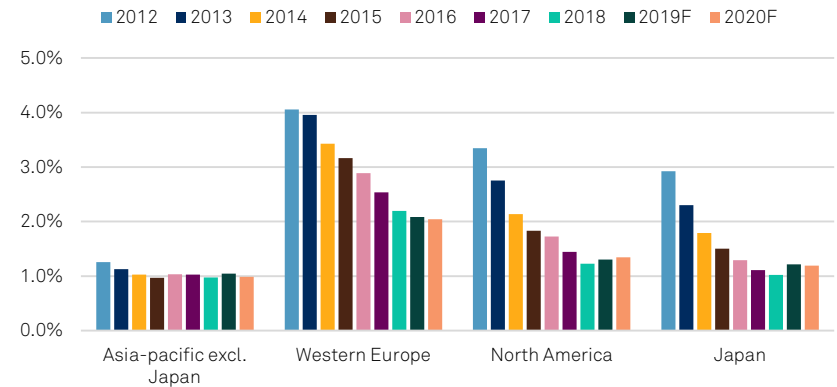
2. China Debt Ratios Shift Higher



3. Residential Property Prices Trend Higher



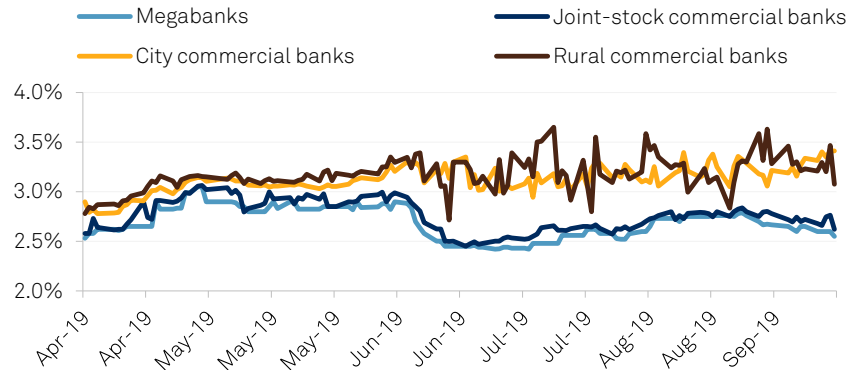
4. NPAs Are Lower For Strong Banks



1. *For India, 2018 = FY2018-19, 2019 = FY 2019-20, 2020 = FY 2020-21, 2021 = FY 2021-22. §Asia Pac: Australia, Japan, and emerging markets Asia. †EM Asia: emerging markets Asia = China, India, NIEs, and ASEAN. ‡NIE: Newly industrialized economies = Hong Kong, Singapore, South Korea, Taiwan; ‡‡ASEAN: Indonesia, Malaysia, Philippines, Thailand. 2 & 3. Source: BIS 4. Graph shows average ratio of nonperforming assets to gross loans by region for banks within the Global Top 200 that have a stand-alone credit profile assessment in the 'a' category. Source: S&P Global Ratings.

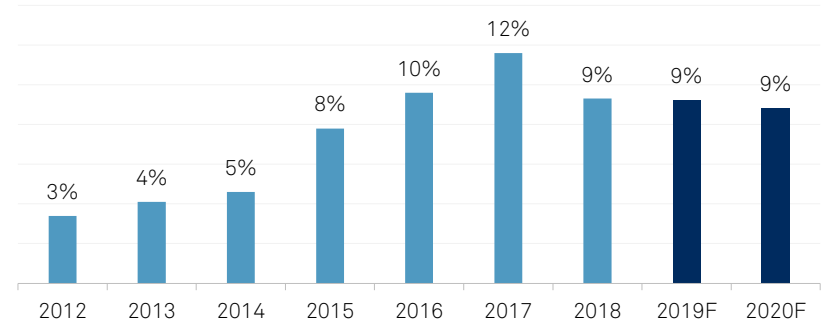
Key Asian Banking Systems Update

1. China: Interbank Spreads Widened After Baoshang Bank Takeover In May

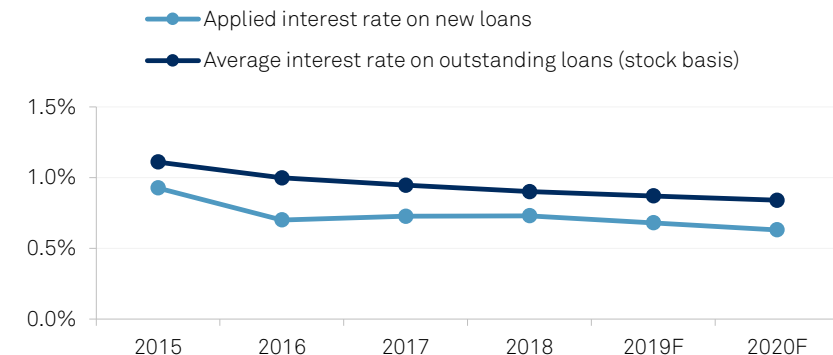


2. India: Asset Quality Recovery Delayed Amid Macro Headwinds

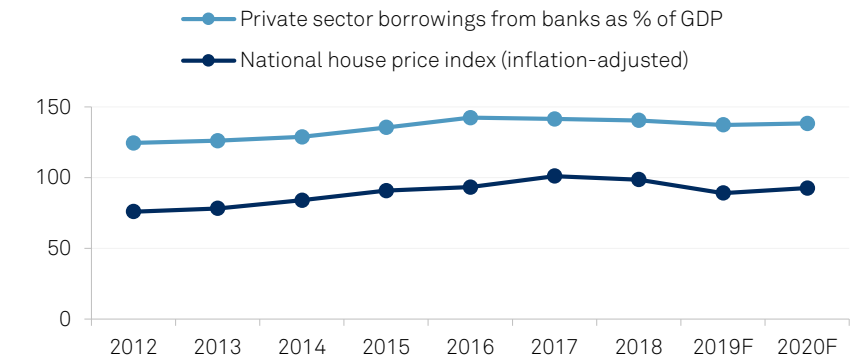
Nonperforming loans vs. total loans



3. Japan: Wafer-Thin Interest Margins Continue



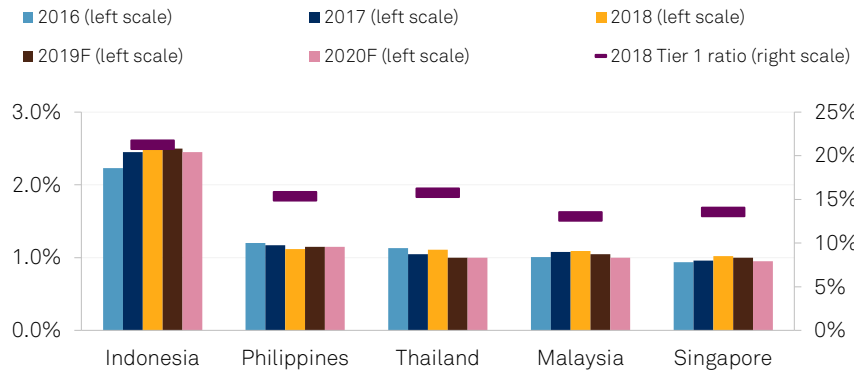
4. Australia: Imbalances Ease



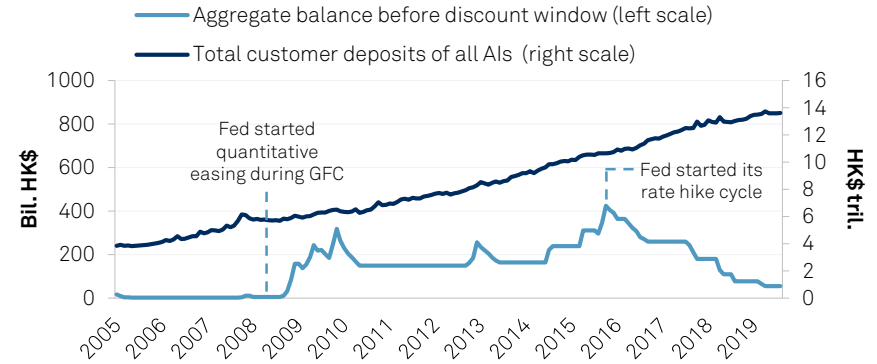
1. See "China's Bailout Of A Troubled Bank Isn't Surprising," May 27, 2019. 2. NPLs--Nonperforming loans. F--Forecast. Sources: Reserve Bank of India, S&P Global Ratings. 3. Sources: Government data, S&P Global Ratings. 4. Note: National house price index: March 2012=100. F--S&P Global Ratings forecast.

Key Asian Banking Systems Update

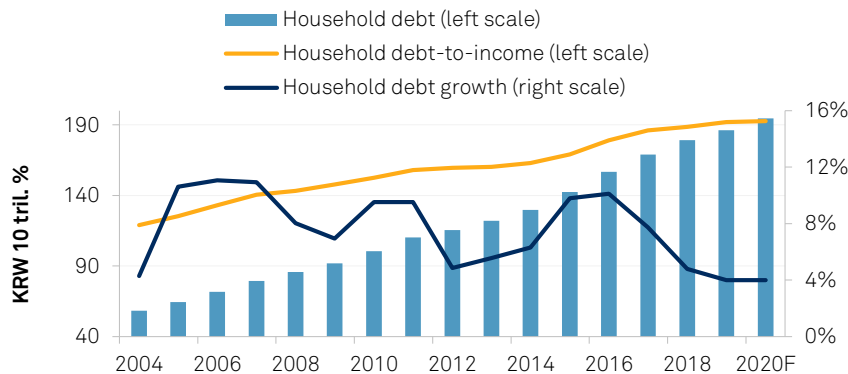
1. ASEAN: Good Profitability But Downward Pressure From Interest Rate Cuts



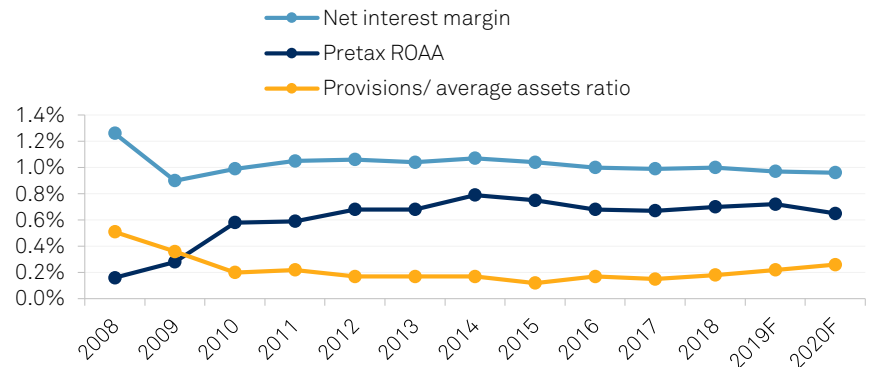
2. Hong Kong: Short-Term Money Flows Have Little Impact On Customer Deposit Balance



3. Korea: Household Debt Growth To Moderate



4. Taiwan: Profitability Constrained By Low Interest Rates And High Competition



1. Source: S&P Global Ratings. 2. Source: Hong Kong Monetary Authority 3. Source: Bank of Korea. F--S&P Global Ratings forecast. 4. ROAA--Return on average assets. F--S&P Global Ratings forecast. Sources: Taiwan's Financial Supervisory Commission, Taiwan Ratings Corp.

Credit Conditions: Latin America

- We expect another year of weak growth in 2020, with significant downside risks due to political tensions and rising social protests in some countries.
- Brazil's recently approved pension reform is an important step in addressing the government's rapidly rising debt levels, but further measures are needed to control public spending.
- We expect Argentina to default again at some point after the new administration takes office.
- We expect a rise in GDP growth in Mexico in 2020. However, the risks are mostly to the downside because of the uncertainty that some of the government's policies have created, especially regarding the energy sector.

S&P Global Ratings' Forecasts For Latin American GDP Growth

	Baseline Scenario						Downside Scenario			
	2017	2018	2019F	2020F	2021F	2022F	2019F	2020F	2021F	2022F
Argentina	2.7	-2.5	-3.0	-1.0	1.5	2.0	-4.0	-2.5	0.0	1.0
Brazil	1.1	1.1	0.8	2.0	2.2	2.5	0.5	1.0	1.2	1.5
Chile	1.5	4.0	2.4	2.8	3.0	3.0	2.0	2.4	2.5	2.5
Colombia	1.4	2.6	3.2	3.2	3.3	3.3	2.7	2.5	2.5	2.5
Mexico	2.4	2.0	0.4	1.3	1.7	1.9	0.2	0.6	0.9	1.0
Panama	5.3	3.7	3.5	4.0	4.5	5.0	2.5	3.0	3.5	3.5
Peru	2.5	4.0	2.6	3.0	3.2	3.5	2.0	2.5	2.8	2.8
Uruguay	2.6	1.6	0.5	1.5	2.3	2.8	0.2	1.0	1.8	2.0
Venezuela	-15.7	-20.0	-20.0	-5.0	0.0	3.5	-30.0	-15.0	-5.0	-5.0
Latin America	0.9	0.4	-0.3	1.3	2.1	2.5	-1.2	0.0	1.0	1.2
Latin America ex. Venezuela	1.7	1.4	0.7	1.6	2.2	2.4	0.3	0.8	1.2	1.5

F--forecast. Source: S&P Global Economics. Note the Latin American GDP aggregate forecasts are based on three-year average (2015-2017) PPP GDP weights. Our GDP numbers are based on seasonally adjusted series when available.

Latin American Banks

Key Expectations

- Uncertain political dynamics, weakening investment and domestic demand, and volatile external conditions will curb economic growth pace and credit demand.
- Modest credit expansion and pressure on asset quality, but mitigated by good provisioning coverage.

Key Assumptions

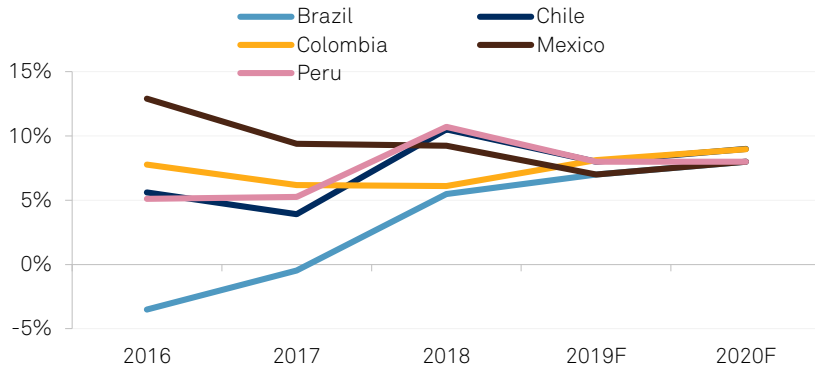
- As a result of the Fed's monetary policy, we expect the potential easing cycle in interest rates--in most countries--to weaken banks' profitability with a lag of 12-18 months.
- Banks' operating performance in Brazil should remain fairly stable, while Mexico could face economic headwinds and conditions in Argentina will remain weak for some time.
- Credit losses will remain manageable across the region.

Key Risks

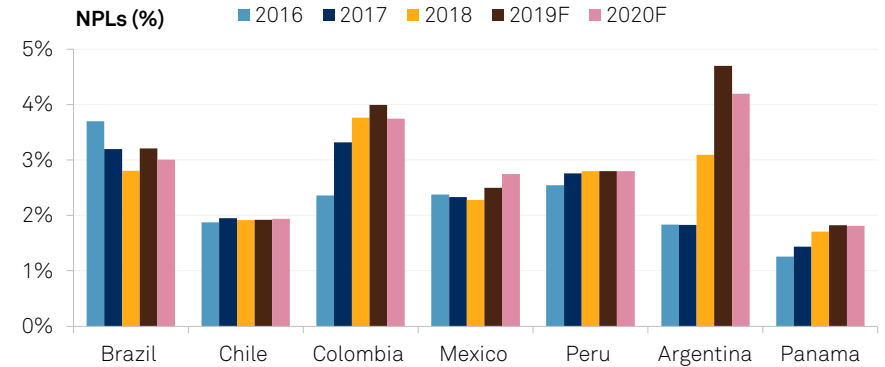
- A prolonged period of poor economic growth--if political uncertainties prevail discouraging business and consumer confidence--could mute credit demand and cause nonperforming assets to rise.
- Volatile deposits in Argentina could continue pressuring banks' funding.
- Venezuelan immigration could pressure employment and wages in countries such as Colombia, Peru, Chile, and Argentina, potentially affecting asset quality.
- Even though banking losses related to cybersecurity are currently manageable, risks keep rising.

Latin American Banks

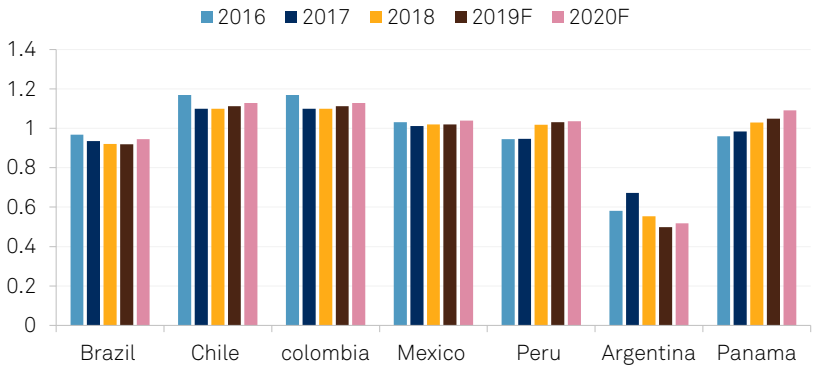
1. Lending Growth To Converge



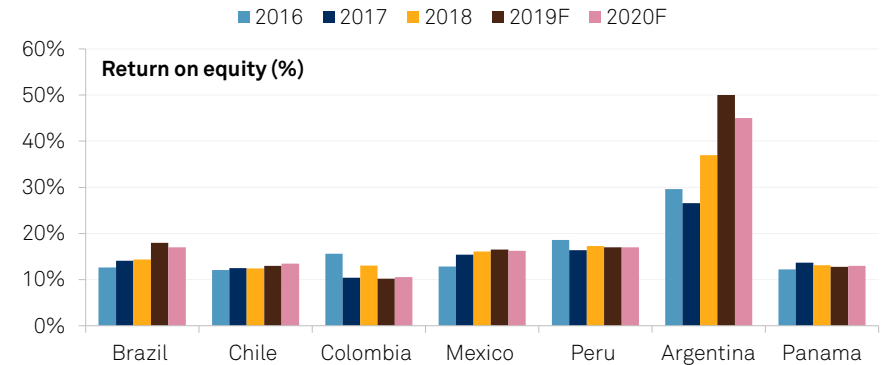
2. Stable Asset Quality With Downside Risk



3. Low Loan-To-Deposit Ratios



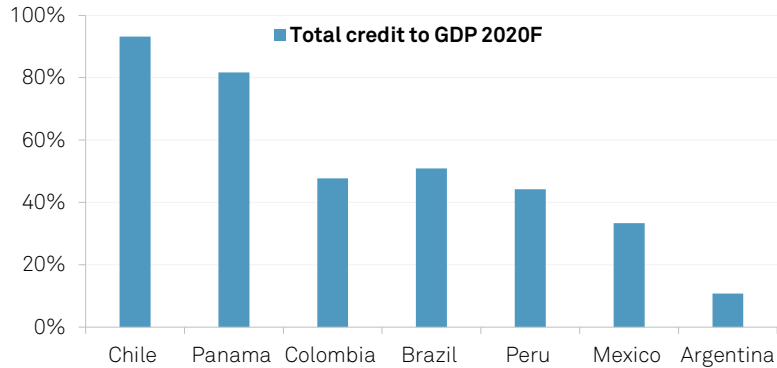
4. Sound Profitability Despite Challenges



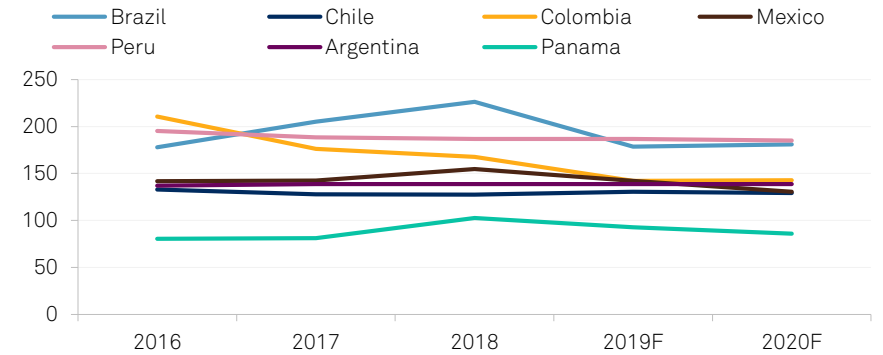
F--S&P Global Ratings forecast. Source: S&P Global Ratings.

Latin American Banks

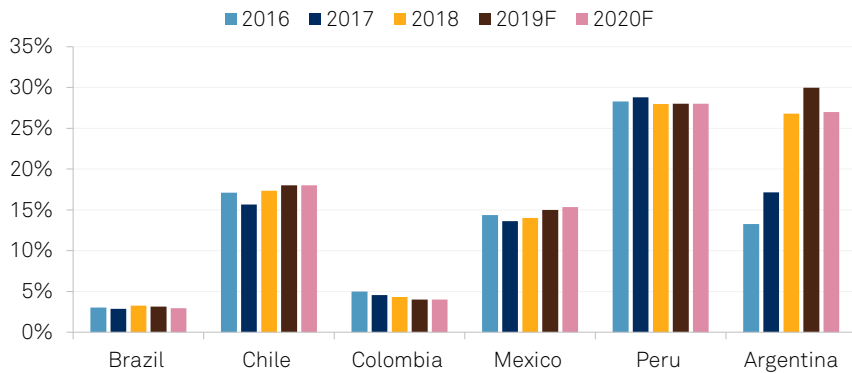
1. Low Credit Penetration, Apart From Chile and Panama



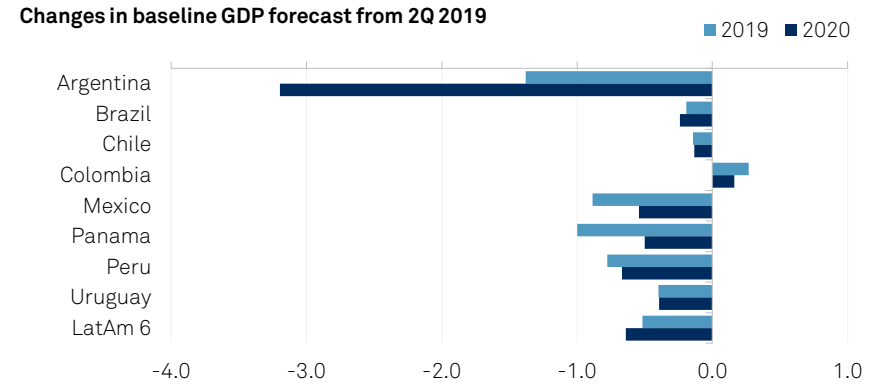
2. Comfortable Provisioning Coverage



3. Share Of Foreign Currency Loans Is Mainly Directed To Exporters (Except in Peru)



4. Regional Political Challenges Are The Main Drag On Investor Confidence



F--S&P Global Ratings forecast. Source: S&P Global Ratings. 2. Provisioning coverage as measures by the ratio of loan loss reserves to nonperforming assets.

Related Research

- [Indian Financial Sector Braces For Fat Contagion Tail Risk](#), Oct. 23, 2019
- [The U.S. Banking Sector Should Remain Stable Despite Easing Regulatory Oversight](#), Oct. 22, 2019
- [European Banks Count The Cost Of Inefficiency](#), Oct. 22, 2019
- [Top 100 Banks: Capital Buildup Is Slowing](#), Oct. 16, 2019
- [ECB's 2019 Stress Test Confirms Eurozone Banks Have Adequate Liquidity](#), Oct. 10, 2019
- [The Fed's Rate Cuts Will Likely Pressure U.S. Bank Spread Income And May Spark Greater Credit Risk](#), Oct. 8, 2019
- [Asia-Pacific Financial Institutions Monitor 4Q 2019: Profitability Woes Weigh On Japan's Banks](#), Oct. 8, 2019
- [What Will Change With The New Euro Short-Term Rate](#), Oct. 1, 2019
- [Bail-In Debt Remodels The Risk Profile Of Bank Funding In Europe And North America](#), Sept. 26, 2019
- [For German Landesbanken In 2019, The Risk Is Down, But Long-Term Questions Remain](#), Sept. 26, 2019
- [What Volcker Rule Changes Mean For Bank Ratings](#), Sept. 24, 2019
- [How To Say Goodbye To LIBOR Without Creating Market Chaos](#), Sept. 23, 2019
- [The Role Of Environmental, Social, And Governance Credit Factors In Our Ratings Analysis](#), Sept. 12, 2019
- [Climate Change: Can Banks Weather The Effects](#), Sept. 9, 2019
- [China Credit Spotlight: The Coming Exit Of Struggling Banks](#), Aug. 28, 2019
- [The Future Of Banking: Virtual Banks Chase The Dream In Asia-Pacific](#), July 17, 2019
- [The Future Of Banking: Will Retail Banks Trip Over Tech Disruption](#), May 14, 2019
- [Europe's Banks Must Step Up To Crack Down On Financial Crime](#), April 18, 2019
- [Why Japan's Regional Banks Aren't As Profitable As German And U.S. Peers](#), March 11, 2019

Analytical Contacts



Global FI Sector Lead

Emmanuel Volland

Paris
+33 1 4420 6696
emmanuel.volland
@spglobal.com



North America

Brendan Browne

New York
+1 212 438 7399
brendan.browne
@spglobal.com



Asia Pacific

Gavin Gunning

Melbourne
+61 3 9631 2092
gavin.gunning
@spglobal.com



Western Europe

Elena Iparraguirre

Madrid
+34 91 389 6963
elena.iparraguirre
@spglobal.com



Latin America

Cynthia Cohen Freue

Buenos Aires
+54 11 4891 2161
cynthia.cohenfreue
@spglobal.com



Middle East & Africa

Mohamed Damak

Dubai
+971 4372 7153
mohamed.damak
@spglobal.com

Copyright © 2019 by Standard & Poor's Financial Services LLC. All rights reserved.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED, OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. S&P's opinions, analyses, and rating acknowledgment decisions (described below) are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives. Rating-related publications may be published for a variety of reasons that are not necessarily dependent on action by rating committees, including, but not limited to, the publication of a periodic update on a credit rating and related analyses.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P reserves the right to assign, withdraw, or suspend such acknowledgement at any time and in its sole discretion. S&P Parties disclaim any duty whatsoever arising out of the assignment, withdrawal, or suspension of an acknowledgment as well as any liability for any damage alleged to have been suffered on account thereof.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain nonpublic information received in connection with each analytical process.

S&P may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P reserves the right to disseminate its opinions and analyses. S&P's public ratings and analyses are made available on its Web sites, www.standardandpoors.com (free of charge), and www.spcapitaliq.com (subscription) and may be distributed through other means, including via S&P publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.

Australia: S&P Global Ratings Australia Pty Ltd holds Australian financial services license number 337565 under the Corporations Act 2001. S&P Global Ratings' credit ratings and related research are not intended for and must not be distributed to any person in Australia other than a wholesale client (as defined in Chapter 7 of the Corporations Act).

STANDARD & POOR'S, S&P and RATINGSDIRECT are registered trademarks of Standard & Poor's Financial Services LLC.

spglobal.com/ratings