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# Quarterly Credit Report

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Q4/2018

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**NUS**  
National University  
of Singapore

**RMI**  
*Advancing Risk Management  
for Singapore and Beyond*

# Introduction

The Quarterly Credit Report (QCR) is an analysis of credit outlooks across regions, economies and sectors. This analysis incorporates probabilities of default (PD) generated by the Risk Management Institute - Credit Research Initiative's (RMI-CRI) default forecast model, a part of the RMI Credit Research Initiative at the National University of Singapore (NUS). The QCR provides insights on trends in credit outlooks to credit professionals, investors and researchers.

QCR Volume 8, Issue 3 covers the fourth quarter of 2018. We discuss the general credit outlook for a selection of economies from around the world, based on relevant indicators, and relate this discussion to forecasts provided by RMI-CRI's PD model.

The appendices in this volume include a comprehensive overview of various outputs that are produced by the operational PD system of RMI-CRI. While the PD system output default forecasts at horizons ranging from one month to five years, the QCR reports only 1-year PDs in order to allow the reader to make consistent comparisons. In addition to the PD produced by the RMI-CRI system, the appendices provide important macroeconomic, corporate credit and sovereign risk indicators. These summarize the credit situation, as well as make detailed data available for reference purposes.

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The commentary in the QCR is based on median PD of *exchange-listed firms* within economies and industry sectors. Classification into economies is based on each firm's country of domicile, and classification into industry sectors is based on each firm's Level I Bloomberg Industry Classification. Exceptions are the banking and real estate sectors, where firms are included based on the Level II Bloomberg Industry Classifications. The daily frequency PD graphs in the written commentary are aggregates of firms that have a PD in both the first ten days and last ten days of the quarter. This prevents, for example, drops in the aggregate PD when high PD firms default and leave the sample.

The economies that are considered in each region are based on a selection of 87 economies covered by RMI's default forecast model.

The developed economies of Asia-Pacific include: Australia, Hong Kong, Japan, New Zealand, Singapore, South Korea and Taiwan.

The emerging economies of Asia-Pacific include: Bangladesh, China, India, Indonesia, Kazakhstan, Malaysia, Pakistan, the Philippines, Sri Lanka, Thailand and Vietnam.

Latin America includes: Argentina, Brazil, Chile, Colombia, Jamaica, Mexico, Peru and Venezuela.

North America includes: Canada and the US.

Eastern Europe includes: Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, the former Yugoslav Republic of Macedonia, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Tunisia, Turkey and Ukraine.

Western Europe includes: Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, Italy, Ireland, Luxembourg, Malta, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the UK.

Africa & the Middle East includes: Bahrain, Botswana, Egypt, Ghana, Israel, Kenya, Kuwait, Jordan, Malawi, Mauritius, Namibia, Morocco, Oman, Nigeria, Rwanda, Saudi Arabia, South Africa, Tunisia, Uganda, United Arab Emirates and the United Republic of Tanzania.

## Credit Research Initiative

The QCR is a companion publication to the Weekly Credit Brief and Credit Brief on Singapore SMEs, with all three publications produced as part of the Credit Research Initiative undertaken by RMI.

These publications supplement RMI-CRI's operational Probability of Default (PD) model. The model takes financial statements and market data from a database of more than 68,000 listed firms and estimates a PD for each firm, effectively transforming big data into smart data. The outputs from the RMI-CRI PD model are available free for all users at:

[www.rmicri.org](http://www.rmicri.org)

As of December 2018, the PD system covers 128 economies in Africa, Asia-Pacific, Latin America, North America, the Middle East and Europe. The probabilities of default include historical data for firms that are now delisted from exchanges or firms that have defaulted. PDs aggregated at the region, economy and sector level are also available. The full list of firms is freely available to users who can give evidence of their professional qualifications to ensure that they will not misuse the data. General users who do not request global access are restricted to a list of 5,000 firms. The PD system operates in a transparent manner, and a detailed description of our model is provided in a [Technical Report](#) available on our website.

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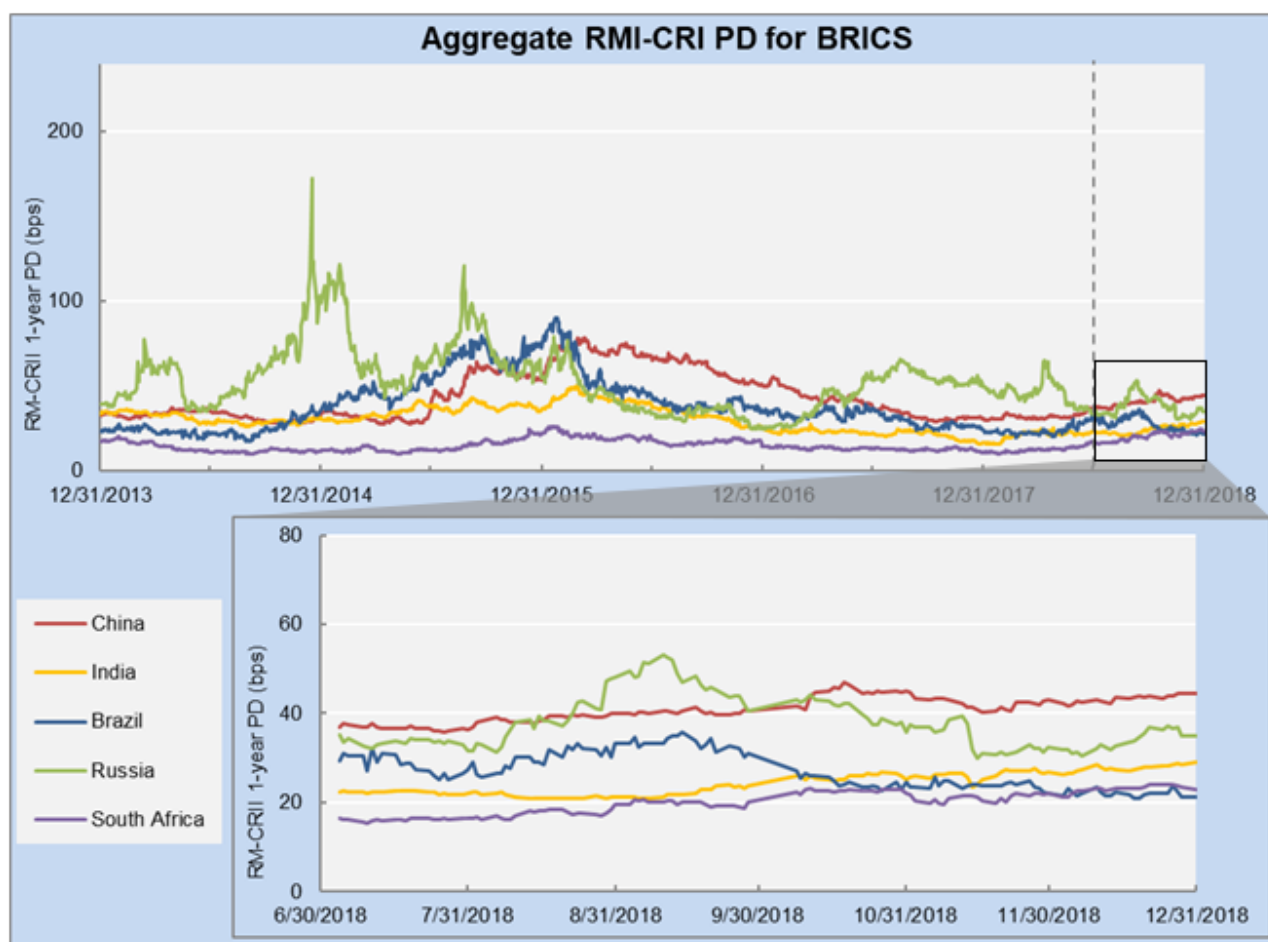
# Acronyms

ADR	Average Default Rates
BI	Bank of Indonesia
BOE	The Bank of England
CAD	Current Account Deficit
CDS	Credit Default Swap
CLI	Composite Leading Indicator
CRI	Credit Research Initiative
ECB	European Central Bank
ELA	Emergency Liquidity Assistance
ESI	Economic Sentiment Indicator
ESMA	European Securities and Markets Authority
EU	The European Union
FTV	Financing-to-value
FDI	Foreign Direct Investment
FX	Foreign Exchange
GFC	2008-2009 Global Financial Crisis
INR	Indian Rupee
ISTAT	Italian National Institute of Statistics
LATDB	Liquid assets to deposits and short-term borrowings ratio
LHS	Left-hand side of graph
LTV	Loan-to-value
MAS	Monetary Authority of Singapore
MIDF	Malaysian Industrial Development Finance Berhad
MLF	Medium term Lending Facility
MPC	Monetary Policy Committee
MOM	Ministry of Manpower
MoM	Month on Month

NIM	Net Interest margin
NODX	Non-oil domestic exports
NPA	Non-performing assets
NPL	Non-performing loan
OECD	Organisation for Economic Co-operation and Development
OJK	Otoritas Jasa Keuangan (Financial Services Authority of Indonesia)
OPR	Overnight Policy Rate
PBOC	The People's Bank of China
PCA	Prompt Corrective Action
PD	Probability of Default
PMI	Purchasing Managers Index
PCI	Performance of Construction Index
PSI	Performance of Services Index
PSL	Pledged Supplementary Lending facility
QCR	Quarterly Credit Report
QoQ	Quarter on Quarter
REITS	Real Estate Investment Trusts
RBA	Reserve Bank of Australia
RBI	Reserve Bank of India
RMI	Risk Management Institute
RMI-CRI	Risk Management Institute Credit Research Initiative
RHS	Right-hand side of graph
RRR	Reserve requirement ratio
Sebi	Securities and Exchange Board of India
SDF	Standing Deposit Facility
SLF	Standing Lending Facility
WAIR	Weighted average interest rate
WMP	Wealth Management Product
YoY	Year On Year

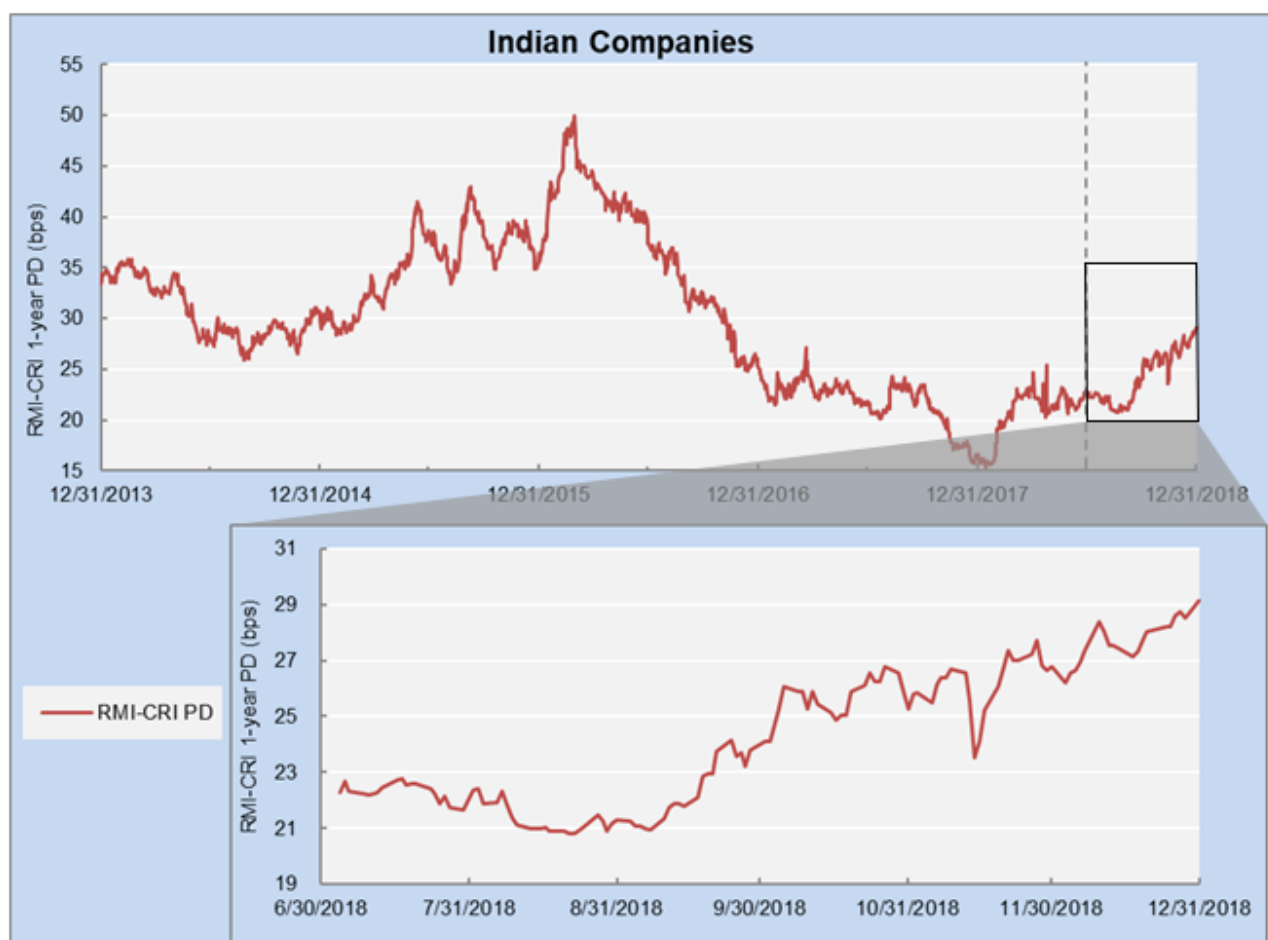
# BRICS

In the fourth quarter of 2018, listed companies in India, China and South Africa see a worsening credit outlook. The NUSCRI aggregate PDs for China, India and South Africa worsened as compared to the last quarter in line with weaker economy indicators. The weaker credit profile for Chinese companies is in line with the country's slower than expected 6.4% Q4 2018 GDP growth which is a result of the trade war with the US, which weigh on growth coupled with a wave of defaults hit the economy. India is likely to lodge a slower GDP growth for the October to December quarter attributed to the weak consumption and liquidity constraints, which are partly caused by tight financing conditions faced by the shadow banking sector. South Africa's economy growth is also expected to be weak due to the slow improvement in production and employment attributed to poor investment growth. Similar to firms in South Africa, Brazilian companies faced a sharp contraction in the fourth quarter amid falling investments. Though Brazil's economy is expected to grow for 2019, economists have cut their GDP forecast. Only Russia was able to report good developments, with its GDP growth climbing to a six-year high as it grew 2.3% in 2018, mainly attributed to the pick-up in the construction sector and stronger exports. However, it is expected to slow in 2019 as the GDP growth in 2018 is boosted by one-time factors.



## Indian Companies

The 1-year aggregate NUS-CRI PD for Indian companies increased to around 29.23bps over Q4 2018. The economy continued to expand amid lower oil prices and a slower pace of monetary tightening than previously expected. On the production side, this growth could be attributed to the growth in manufacturing, electricity, gas, water supply, and other utility services, construction, public administration, defence, and other services. Inflation rate decreased to an annual rate of 3.80% in December along with a decrease in wholesale prices in light of declining prices for fuel and power. Current account deficit increased beyond last year's level. Monetary wise, Reserve Bank of India (RBI) is monitoring liquidity conditions carefully through a purchase of Government securities under Open Market Operations (OMO).



## Economy

- India's real Gross Domestic Product for Q2 2018 grew at an annual rate of 7.1% against a 6.9% expansion in the same quarter last year. Sectors that experienced strong growth YoY include manufacturing (7.4%), electricity, gas, water supply, and other utility services (9.2%), construction (7.8%), public administration, defence, and other services (10.9%). IMF forecasts India's growth at 7.5% for FY20 and 7.7% in FY21, benefiting from lower oil prices and a slower pace of monetary tightening than previously expected.<sup>1,2</sup>



- India's manufacturing sector further improved at the end of 2018 as companies continued to scale up production and employment in response to strong inflows of new business. The Nikkei India Manufacturing PMI slightly weakened in December to reach a level of 53.2 from 54.0 in November. Rise in production, despite easing from November, was among the quickest seen in 2018 as greater sales and technological progress supported the increase in output. For the future, companies expect that marketing initiatives, capacity expansions, and forecasts of further improvements in demand will boost output in the coming year.<sup>3</sup>
- The annual rate of inflation, based on monthly Wholesale Price Index (WPI), decreased to an annual rate of 3.80% in December from an annual rate of 5.13% for the month of September. The wholesale price index decreased by 1.4% over the previous month, which was mainly due to declining prices for fuel and power. The MCX India Crude Oil Spot Index decreased to 3172 from 5240 in Q3 2018 amid oversupply and investors' concerns over the prospects for global economic growth and fuel demand.<sup>4,5</sup>
- India's current account deficit (CAD) increased to USD 19.1bn (2.9% of GDP) in Q3 2018 from USD 15.8bn (2.4% of GDP) in Q2 2018 and was higher than in the same quarter last year at USD 6.9bn (1.1% of GDP). The widening of the CAD on a YoY basis is primarily due to a higher trade deficit of USD 50.0bn as compared with USD 32.5bn a year ago. Net services receipts increased on a YoY basis due to a rise in net earnings from software and financial services. Private transfer receipts, mainly representing remittances by Indians employed overseas, increased by 19.8% to USD 20.9bn as compared to the preceding year.<sup>6</sup>
- During Q4 2018, the Indian Rupee (INR) strengthened 3.68 % against the US dollar. The Fed's signal of a slower pace of rate hikes in 2019 amid an expected weaker US economic growth was beneficial for emerging market to attract liquidity, contributing to the strengthening of the INR in late 2018. Although recording a positive net investment in November and December, high portfolio outflows in October pushed foreign portfolio outflows during the quarter to USD 2.54bn.<sup>7</sup>

## Monetary

- According to the bi-monthly monetary policy statement on December 5, 2018, the RBI kept the policy rate (repo rate) unchanged at 6.50%. Consequently, the reverse repo rate under the liquidity adjustment facility remained at 6.25%. Similarly, the Bank Rate remained at 6.75%.<sup>8</sup>
- The Reserve Bank conducted a total of two open market purchase operations in October and November to inject INR 860bn of durable liquidity. The amount of injected liquidity, on a daily net average basis, was INR 506bn in October, INR 806bn in November, and INR 105bn in December (up to December 4). The weighted average call rate (WACR), on an average, traded below the repo rate by 5bps in October, 9bps in November, and by 16bps in December.<sup>9</sup>
- The Monetary Policy Committee (MPC) stated that the benign outlook for headline inflation is driven mainly by the unexpected softening of food inflation and the drop in oil prices in a relatively short period of time. Retail inflation, measured on a YoY basis, fell from 3.7% in September to 3.3% in October as a large fall in food prices pushed food group into deflation. However, inflation within the fuel and light group continued to rise due to an increase in liquefied petroleum gas prices in October. MPC remains committed to achieving the medium-term target for headline inflation of 4% on a durable basis.<sup>10</sup>

- RBI is reluctant to relax the portfolio-level limits it introduced for foreign portfolio investors (FPIs) last year and instead asked investors to look at the voluntary retention route (VRR) to bypass existing restrictions. The VRR route would be free of the macro-prudential and other regulatory prescriptions applicable to FPI investments in debt markets provided the FPIs voluntarily commit to retain a required minimum percentage of their investments in India for a period of their choice. However, with the Fed hiking rates and emerging markets now seen as a risky proposition, India has become much less attractive for FPIs.<sup>11</sup>

### **Funding & Liquidity**

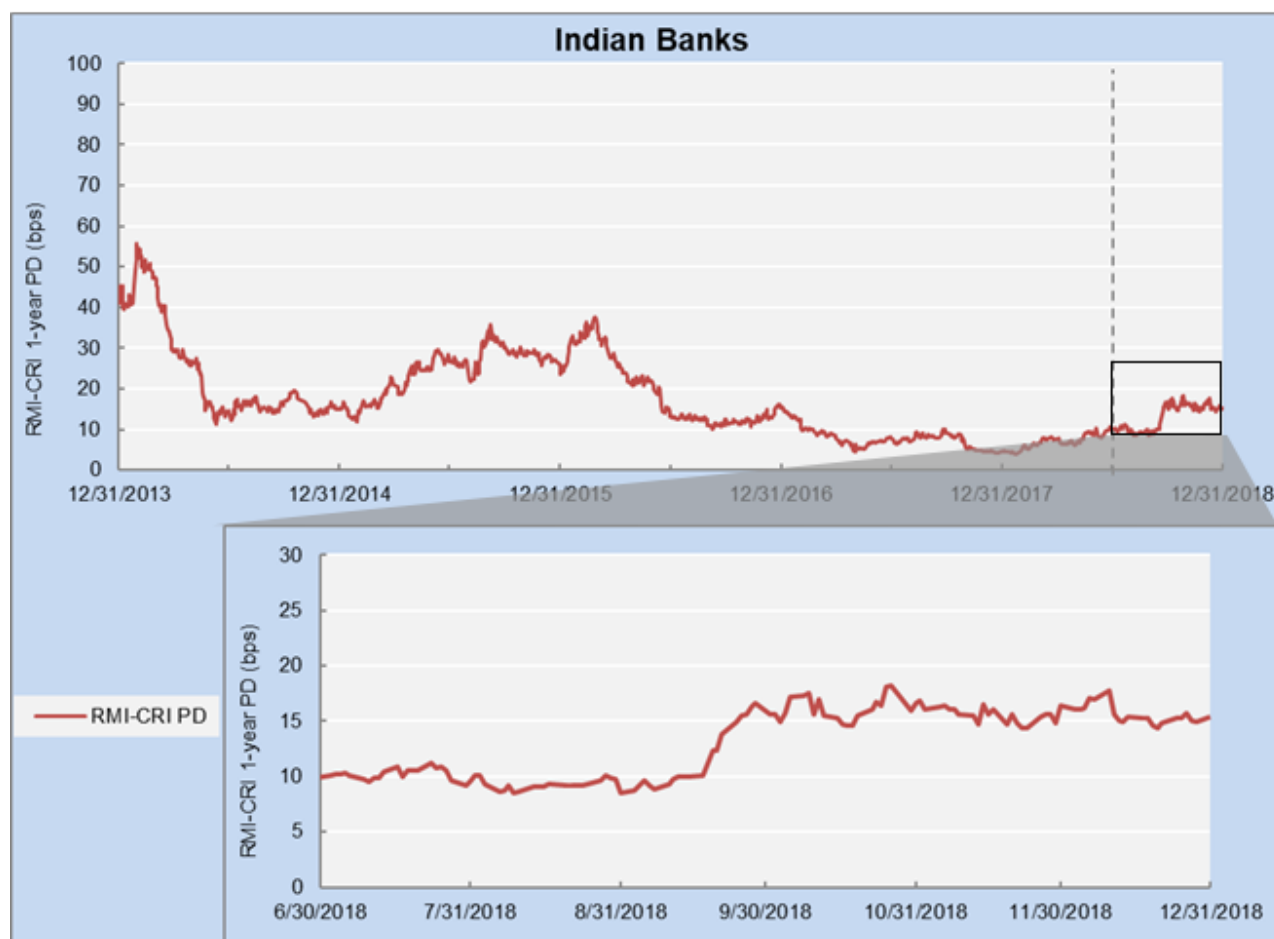
- The yield on India's 10-year government sovereign bonds generally decreased during Q4 2018 from 8.02% at the end of Q3 2018 to 7.37% at the end of Q4 2018. Its yield gradually decreased from September 2018 before reaching its 8-months low on December 19, 2018.<sup>12</sup>
- The RBI's deputy governor stated that RBI will continue to inject liquidity into the banking system through open market operation (OMO) purchases till the end of the current fiscal year. In the current fiscal year, RBI has conducted INR 1.36tn of OMO purchases with over INR 1tn of purchases coming from the last three months. Furthermore, RBI has also provided infusion of liberal liquidity through term repo in addition to the usual provision via the liquidity adjustment facility (LAF). Amid the liquidity crisis faced by the non-banking finance companies (NBFCs) and housing finance companies (HFCs), RBI stated that it has been watching the market developments closely since the end of August.<sup>13</sup>

### **Sovereign Credit Ratings**

- Fitch, S&P and Moody's kept their ratings on the sovereign bonds of India at BBB-, BBB- and Baa2 respectively in Q4 2018, all of which have 'stable' outlook, unchanged from the previous quarter.

## Indian Banks

The aggregate 1-year NUS-CRI PD for Indian banks slightly increased in Q4 2018. Indian banks' asset quality showed sign of improvements as non-performing assets ratio is expected to further improve to 10.3% in March 2019. As asset quality stabilizes, higher profitability is also expected to improve from the next fiscal year. However, RBI warned that it is essential to remain vigilant regarding the asset quality of banks and to keep watch on the resolution of stressed assets with a focus on the implementation of the new resolution framework.



## Profitability

- Non-financial borrowings decreased 4.53% to INR 3.58tn on December 21, 2018 from INR 3.75tn on September 28, 2018. Other liabilities, such as time deposits with non-financial institutions increased to INR 5.38tn in Q4 2018 from INR 5.02tn in Q3 2018.<sup>14</sup>
- The Credit-Deposit ratio for the banking system increased to 78.59% on December 21, 2018 from 76.13% on September 28, 2018. This was mainly due to the increase in bank credit from INR 89.82tn to INR 92.88tn during Q4 2018.<sup>15</sup>

- Moody's Investors Service stated that Indian banks' profitability will remain under pressure for the rest of their current fiscal year as provisions for credit losses will remain large. However, their profitability is expected to improve during the next fiscal year as asset quality stabilises. Moody's reported that Indian banks have the weakest capitalization among BRICS countries, with a tangible common equity ratio of 8.7% at the end of 2017. Currently, Indian banks are also distinctively weak in terms of profitability due to high credit costs for dominant state-owned banks.<sup>16</sup>

### Funding & Liquidity

- The weighted-average call money rate, the interest rate on short-term finance repayable on demand, increased from 6.49% as of September 28, 2018 to 6.57% as of December 28, 2018. The call money rates were generally lower than the repo rate during Q4, indicating a stable banking system.<sup>17</sup>
- The amount of cash on the balance sheet of Indian banks decreased from INR 725.1bn on September 28, 2018 to INR 691.9bn on December 21, 2018.<sup>18</sup>
- Deposit rates generally remained stable in Q4 2018. According to the Reserve Bank of India's daily call money rates, interest rates decreased to 6.65% on December 15, 2018, from 6.75% in Q3 2018.<sup>19</sup>
- During Q4 2018, the RBI withdrew a total of INR 10.14tn from the banking system via liquidity operations, with the highest figure witnessed in the month of October with a withdrawal of INR 5.55tn. The Reserve Bank of India stepped up its liquidity operations under the liquidity management framework to absorb excess liquidity in the market.<sup>20,21,22</sup>

### Asset Quality

- RBI's governor emphasized that it is essential to remain vigilant on the asset quality of banks and to keep watch on the resolution of stressed assets with a focus on the implementation of the new resolution framework. Some recent initiatives from RBI are aimed at ensuring better and timely recognition of stressed assets, sufficient provisioning and efficient resolution process. After reaching a peak of 11.5% in March 2018, the gross non-performing asset ratio improved to 10.8% in September 2018 and is expected to further improve to 10.3% by March 2019. Corporate governance in banks with a focus on transparency and accountability is another area where policy action is required, according to the RBI governor.<sup>23</sup>

<sup>1</sup> Nov 30, 2018, [Press Notes on Estimates of Gross Domestic Product for 2nd Quarter \(July-Sept\) 2018-19](#), Ministry of Statistics and Programme Implementation, [mospi.nic.in](#)

<sup>2</sup> Jan 22, 2019, [IMF forecasts India GDP](#), The Economic Times, [http://economictimes.indiatimes.com/](#)

<sup>3</sup> Jan 02, 2019, [Nikkei India Manufacturing PMI](#), Markit Economics, [markiteconomics.com](#)

<sup>4</sup> Jan 14, 2019, [Index Numbers of Wholesale Price in India](#), Ministry of Commerce & Industry Office of The Economic Advisor, [eaindustry.nic.in](#)

<sup>5</sup> Jan 01, 2019, [Crude Oil Spot Market Price](#), MCX India, [mcxindia.com](#)

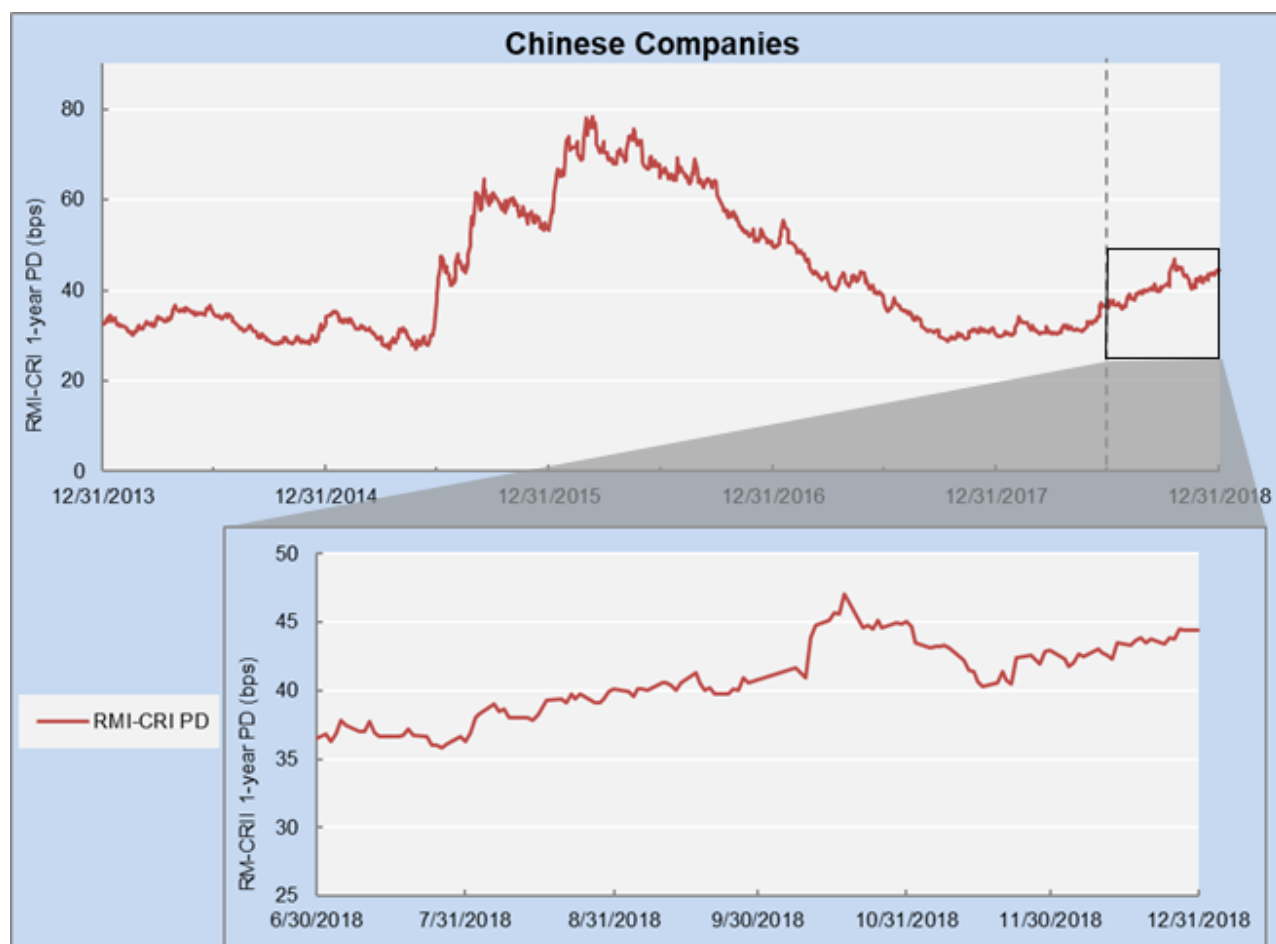
<sup>6</sup> Dec 07, 2018, [Developments in India's Balance of Payments during the Second Quarter of 2018-19](#), Reserve Bank of India, [rbi.org.in](#)

<sup>7</sup> Jan 01, 2019, [Daily Trends in FPI Investments](#), Natinoal Securities Depository Limited (NSDL) [fpi.nsdl.co.in](#)

- <sup>8</sup>Dec 05, 2018, [Fifth Bi-monthly Monetary Policy Statement, 2018-19 Resolution of the Monetary Policy Committee \(MPC\)](#) Reserve Bank of India, Reserve Bank of India, [rbi.org.in](#)
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- <sup>10</sup>Dec 05, 2018, [Fifth Bi-monthly Monetary Policy Statement, 2018-19 Resolution of the Monetary Policy Committee \(MPC\)](#) Reserve Bank of India, Reserve Bank of India, [rbi.org.in](#)
- <sup>11</sup>Jan 22, 2019, [RBI reluctant to change FPI portfolio limits introduced last year](#), Business Standard, <https://www.business-standard.com>
- <sup>12</sup>Jan 01, 2019, [India Govt Bond Generic Bid Yield 10 Year](#), Bloomberg, [bloomberg.com](#)
- <sup>13</sup>Dec 06, 2018, [Open market operations to continue till March-end: RBI deputy governor Viral Acharya](#), The New Indian Express, <http://www.newindianexpress.com>
- <sup>14</sup>Jan 04, 2019, [Scheduled Commercial Banks - Business in India](#), Reserve Bank of India, [rbi.org.in](#)
- <sup>15</sup>Jan 04, 2019, [Scheduled Commercial Banks - Business in India](#), Reserve Bank of India, [rbi.org.in](#)
- <sup>16</sup>Oct 22, 2018, [Indian banks' profitability to remain under pressure for the rest of FY19](#), The Economic Times, <https://www.thehindubusinessline.com>
- <sup>17</sup>Jan 04, 2019, [Cash Reserve Ratios and Interest Rates](#), Reserve Bank of India, [rbi.org.in](#)
- <sup>18</sup>Jan 04, 2019, [Scheduled Commercial Banks - Business in India](#), Reserve Bank of India, [rbi.org.in](#)
- <sup>19</sup>Jan 10, 2019, [Reserve Bank of India Bulletin - January 2019](#), Reserve Bank of India, [rbi.org.in](#)
- <sup>20</sup>Jan 10, 2019, [Reserve Bank of India Bulletin - January 2019](#), Reserve Bank of India, [rbi.org.in](#)
- <sup>21</sup>Dec 11, 2018, [Reserve Bank of India Bulletin - December 2018](#), Reserve Bank of India, [rbi.org.in](#)
- <sup>22</sup>Feb 13, 2019, [Reserve Bank of India Bulletin - February 2019](#), Reserve Bank of India, [rbi.org.in](#)
- <sup>23</sup>Jan 18, 2019, [Need for continued vigil on asset quality of banks: RBI governor](#), Money Control, <https://www.moneycontrol.com>

## Chinese Companies

GDP growth rate dropped down 10bps to 6.4% compared with the previous quarter. Considering full 2018, the economy expanded 6.6 percent, the weakest pace since 1990. Overall growth momentum continued to slow and pressures are strong. The 1-year aggregate PD for Chinese firms shows an upward trend in Q4 2018 as a wave of defaults and contraction in bond financing has hit the economy in Q4 2018. In terms of the current trade war, the temporary truce has provided some relief. But whether substantive breakthrough can be made will depend on the further negotiations. To prevent the small to medium companies to collapse, who hurt most in deleveraging and trade war, policy has tilted toward supporting growth, including a loosened monetary environment and lower corporate tax exemption. The central bank conducted the first targeted version of MLF (TMLF), offering cheaper funding to help guide lending to small businesses. The PBC announced plans to set up a central bank bill swap (CBS) facility to help improve the liquidity of perpetual bonds, allowing banks to be exchanged for highly-liquid central bank bills and to be used as collateral for central bank lending.



## Economy

- The Chinese economy advanced 6.4 percent year-on-year in the fourth quarter of 2018, after a 6.5 percent growth in the previous quarter and matching market expectations. It was the lowest growth rate since the global financial crisis, amid intense trade dispute with the US, weakening domestic demand and alarming off-balance-sheet borrowings by local governments. On a quarter-on-quarter basis, the GDP advanced 1.5 percent, compared to a 1.6 percent expansion in the previous period and in line with market estimates. Considering full 2018, the economy expanded 6.6 percent, the weakest pace since 1990. The Chinese government set a 2018 growth target of around 6.5 percent. <sup>24</sup>



- China's consumer price inflation slowed to a six-month low of 1.9% YoY in December 2018 from 2.5% in October and 2.2% in November. The slowdown in inflation was mainly due to non-food prices, while food inflation remained stable at a relatively low level. In December 2018, China's Producer Price Index (PPI) increased 0.9 percent from a year earlier, missing market expectations of 1.6 percent. Meanwhile, it was much slower than a 3.3 percent rise in October and 2.7 percent rise in November, and the lowest level since September 2016. On a monthly basis, producer prices fell 1.0 percent in December, after a 0.2 percent drop in November. For full 2018, the producer price index rose 3.5 percent, easing from a 6.3 percent advance in 2017.<sup>25,26</sup>
- Unemployment Rate in China decreased to 3.80 percent in the fourth quarter of 2018 from 3.82 percent in the third quarter of 2018. Unemployment Rate in China averaged 4.09 percent from 2002 until 2018, reaching an all-time high of 4.30 percent in the fourth quarter of 2003 and a record low of 3.80 percent in the fourth quarter of 2018.<sup>27</sup>
- The Caixin China Composite PMI data picked up marginally to a five-month high of 52.2 in December, reflecting easing downward pressure on China's economic growth. The neutral 50-mark divides expansion from contraction on a monthly basis. Despite the stronger rise in output, overall new business increased only slightly during December. Divergent trends were seen at the sector level, with new orders falling slightly for manufacturers, but rising modestly in the service industry.<sup>28,29</sup>
- In 2018, the investment in fixed assets (excluding rural households) reached CNY 63,563.6bn, up by 5.9 percent year-on-year, and the growth rate was unchanged from that in the first eleven months, decreased 1.3 percentage points from that in the same period of the previous year. In December, the investment in fixed assets (excluding rural households) increased 0.42 percent, month-on-month. Of these fixed assets, the private investment in fixed assets reached CNY 39,405.1bn, and the growth rate was 8.7 percentage points higher than that in the previous year, a YoY increase of 2.7 percent.<sup>30</sup>
- China's trade surplus widened to USD 57.1bn in December 2018 from USD 53.9bn in the same month a year earlier, above market consensus of a USD 51.5bn surplus. It was the largest trade surplus since December 2015, as exports fell the most in two years and imports posted the largest drop since July 2016 amid growing disruptions from an escalating trade war with the US and slowing global growth. For full year 2018, China posted a trade surplus of USD 352bn, the lowest since 2013, as exports increased 9.9 percent, its strongest performance in seven years, while imports were up 15.8 percent. The politically-sensitive surplus with the US widened 17.2 percent to USD 323bn last year, the highest on record.<sup>31</sup>

## Monetary Policy

- China's monetary policy is in flux, as the central bank tries to weed out risky lending while ensuring money keeps flowing to the economy. To achieve those sometimes competing goals, the People's Bank of China (PBC) is engaging a mix of liquidity tools and pricing signals, while keeping its historical benchmarks dormant. By the end of 2018, the two-pillar regulatory framework of monetary policy and macro-prudential policy is established. The monetary policy has overall successfully maintained the currency stability which involve both consumer prices and exchange rates. The macro-prudential policy is aimed at ensuring financial stability and forestalling systematic risks and characterized by counter-cyclical adjustments. As China's monetary policy framework moves from using quantitative targets to a more price-based framework, both quantitative targets (M2) and price controls (Market-based interest-rate pricing mechanism) are playing their part. Meanwhile, the PBC has established the macro-

prudential assessment (MPA) system to assess whether financial institutions work in line with macro-prudential requirements.<sup>32,33</sup>

- At end-December, broad money supply (M2) stood at CNY 182.67tn, increasing by 8.1 percent year-on-year, up 0.1 percentage point from a month earlier while unchanged from the pace a year earlier. Narrow money supply (M1), at CNY 55.17tn, rose by 1.5 percent year-on-year, the same pace as a month earlier but a slowdown of 10.3 percentage points from a year earlier. The amount of currency in circulation (M0) was CNY 7.32tn, increasing by 3.6 percent year-on-year. The year 2018 saw a net money injection of CNY 256bn.<sup>34</sup>
- China's central bank continued to maintain its benchmark interest rate at 4.35% since it was cut by 25bps in October 2015. The People's Bank of China (PBC) left its short-term borrowing rates unchanged on 20th December 2018, choosing not to follow its US counterpart, which raised its benchmark rate, the fourth such increase this year. The rate for 7-day reverse repurchase agreements remained at 2.55 percent, the 14-day tenor at 2.70 percent.<sup>35,36</sup>
- In October 2018, the PBC lowered the Reserve requirement ratios (RRRs) by one percentage point, currently 14.5 percent for large commercial and 12.5 percent for smaller banks. Some of the funds released by the RRRs reduction were used to repay the approximately CNY 450bn Medium-term Lending Facility (MLF) due on the same day, which further reinforced fund stability in the banking system and optimized the liquidity structure of commercial banks and financial markets. Another cut in RRR will be effective on 15th Jan, 2019 and 25th Jan, 2019 by the PBC as the economy faces its weakest growth since the global financial crisis and mounting pressure from U.S. tariffs. The cuts come ahead of the long Lunar New Year celebrations when cash conditions often get tight. About CNY 800bn of long-term capital was released by these measures.<sup>37,38</sup>
- Outstanding MLF loans reached nearly CNY 5tn (USD 730bn) at end-2018, although the speed of expansion slowed as the PBC resumed using reserve ratio reductions to add long-term funding. The central bank conducted the first targeted version of MLF (TMLF), in Jan, 2019, offering funding cheaper than the regular MLF in a move that helps guide lending to small businesses. All loans agreed under the new mechanism will be provided at an annual interest rate of 3.15 percent – 15 bps below than the standard rate – and banks will have up to three years to repay them.<sup>39</sup>
- The PBC is establishing a “corridor system” as its new monetary policy framework. Under this system, the new policy target is the pledged 7-day interbank market rate (DR007) while the rates of Standing Lending Facility (SLF) and excessive deposit reserves constitute the upper and lower bounds of the “corridor” respectively. The central bank will align the policy rate target with their desired levels via open market operation (OMO). The DR007 decreased from 2.90% on 30th Sep, 2018 to 2.20% on 29th Dec, 2018.<sup>40</sup>
- 10-year government bond yield decreased from 3.6136% at end-September 2018 to 3.2198% at the end of December 2018. 1-year government bill yield decreased from 2.9380% to 2.4523% over the same period.<sup>41</sup>
- The 3-month 5-day average SHIBOR rose from 2.8470% on 30th Sep, 2018 to 3.3248% on 29th Dec, 2018.<sup>42</sup>
- China's foreign exchange reserves rose by USD 11bn to USD 3.07tn in December 2018, up from USD 3.06tn in November and slightly above market expectations USD 3.07tn. It is the second straight increase since July, as the yuan rebounded 1.3 percent against the dollar in December after Washington and Beijing agreed to resume trade



talks. In 2018, foreign exchange reserves decreased by USD 67.2bn to USD 3.07tn, compared with a USD 129bn increase in 2017 to USD 3.14tn. It marks the third decline in four years, amid a slowing economy and trade pressures. The value of gold reserves increased to USD 76.3bn at the end of December, from USD 72.1bn at the end of November. <sup>43</sup>

## Fiscal Policy

- Mounting pressure on the world's second-biggest economy pushed growth in 2018 to its lowest since 1990. Local governments and state organizations are making efforts to find a balance between stabilizing growth and fending off risks, controlling the pace and intensity of such policies. The government stepped up fiscal stimulus measures, including bigger tax cuts and more spending on infrastructure projects. President Xi Jinping emphasized, China must be on guard against "black swan" risks while fending off "gray rhino" events. A "black swan" event refers to an unforeseen occurrence that typically has extreme consequences, while a "gray rhino" is a highly obvious yet ignored threat. <sup>44</sup>
- China's fiscal expenditure rose 8.7 percent to CNY 22.1tn (USD 3.3tn) in 2018, while revenue gained 6.2 percent to CNY 18.3tn. China achieved its 2018 fiscal revenue target despite extensive tax cuts and fees of about CNY 1.3tn. As China's economy slows, policymakers have pledged more aggressive tax reductions in 2019, fanning expectations among economists that the annual budget deficit ratio could be lifted to 3 percent of gross domestic product. In 2018, the government lowered the annual budget deficit target to 2.6 percent of GDP from 3 percent in 2017 - the first cut since 2012. <sup>45</sup>
- As local governments ramp up measures to support growth, the outstanding local government debt kept rising, standing at CNY 18.39tn at the end of 2018, compared with CNY 16.47tn at the end of 2017. Local government special bonds are usually issued to fund public works spending including infrastructure projects or land development. The issuance in 2018 was CNY 1.95tn, sharply up from CNY 800bn of special bond issuances in 2017, which brings the total outstanding local government special bond issuance to CNY 7.39tn as of end-2018, compared with CNY 6.14tn at end-2017. <sup>46</sup>

## Sovereign Credit Ratings

- Both S&P and Fitch maintained rating A+ on the Chinese government while Moody's credit rating for China stood at A1, all with a stable outlook. <sup>47</sup>

## Chinese Banks

The aggregate 1-year RMI PD over the fourth quarter of 2018 illustrated flat levels with it for the third quarter. Weighed down by weak investment and faltering consumer confidence, China's economy in 2018 grew at its slowest pace in 28 years. To encourage China's banks to actively increase support for the real economy, rather than to rely on authorities' orders to boost lending, is the key to improving the supply of credit in the economy. Problems with timely capital replenishment, bank liquidity gaps and poor rate "transmission" are three major constraints on banks' supply of credit. The PBOC is using a range of measures, including targeted reserve requirement cuts and the targeted medium-term loan facility, to encourage banks to lend to smaller companies.



## Profitability

- By the end of Jan, 2019, a total of 17 listed banks have disclosed their 2018 performance, including six joint-stock banks, who are Ping An Bank, Pudong Development Bank, China Merchants Bank, CITIC Bank, China Everbright Bank, and Industrial Bank. In addition, there are 6 city commercial firms and 5 rural commercial firms. Most of the Banks' revenue growth rate was higher than that of the previous year, while operating profit growth slowed down due to the increase in operating expenses.<sup>48</sup>

## Funding & Liquidity

- Chinese banks extended CNY 1.08tn in net new yuan loans in December 2018, compared to CNY 1.25tn in the previous month and beating market consensus of CNY 0.80tn. China's banks extended a record CNY 16.2tn in new loans in 2018. Household loans accounted for 46 percent of 2018 new loans, down from the previous year's 53 percent, while corporate loans accounted for 51 percent of the total, versus 50 percent in 2017.<sup>49</sup>

- The PBC uses the SLF and the medium-term lending facility (MLF) as tools for managing short- and medium-term liquidity in the country's banking system. In December, 2018, China's central bank lent CNY 473.5bn (USD 69.1bn) to financial institutions via its MFL. Outstanding MLF was CNY 4,931.5bn at the end of December, the same with October and November. China's central bank extended CNY 92.9bn (USD13.6bn) of loans to local financial institutions in December, 2018 via its standing lending facility (SLF). The total outstanding amount of SLF loans was CNY 92.8bn at the end of December. <sup>50,51</sup>
- In Jan 2019, the PBC announced plans to set up a central bank bill swap (CBS) facility to help improve the liquidity of perpetual bonds, a new no-maturity fundraising debt instrument for banks, allowing them to be exchanged for highly-liquid central bank bills and to be used as collateral for central bank lending. <sup>52</sup>

## Regulations

- With the Chinese economy slowing, Beijing has been leaning on banks both to absorb the build-up in shadow assets and continue lending to drive investment-dependent growth. With new loans outpacing new deposits by 20 percent in 2018, and a similar trend expected this year, capital is becoming increasingly constrained. Almost every cut to banks' reserve requirements over the past year has coincided with a significant repayment to the central bank. <sup>53</sup>

## Asset Quality

- The total domestic asset of Chinese banks stood at CNY 261.4tn at end-December, 2018, up 6.4 percent from a year earlier. The total non-performing loans (NPLs) of commercial banks amounted to CNY 2tn (USD 297bn), unchanged from the third quarter. Chinese commercial banks' NPL ratio hit a 10-year high of 1.89 percent at the end of 2018 amid an economic slowdown. Separate from NPLs, "special mention" loans, meaning lending potentially at risk of becoming non-performing, rose to CNY 3.4tn by end-December, accounting for 3.16 percent of the total loan volume for commercial banks. For Chinese lenders, the pace of bad debt build-up has shown no signs of slowing as the world's second-largest economy faces persistently weakening economy and trade friction with the United States. To handle the large amount of bad loans, Chinese banks accelerated the pace of bad loan disposal last year, resolving nearly CNY 2tn in soured assets, compared with CNY 1.4tn in 2017. <sup>54</sup>

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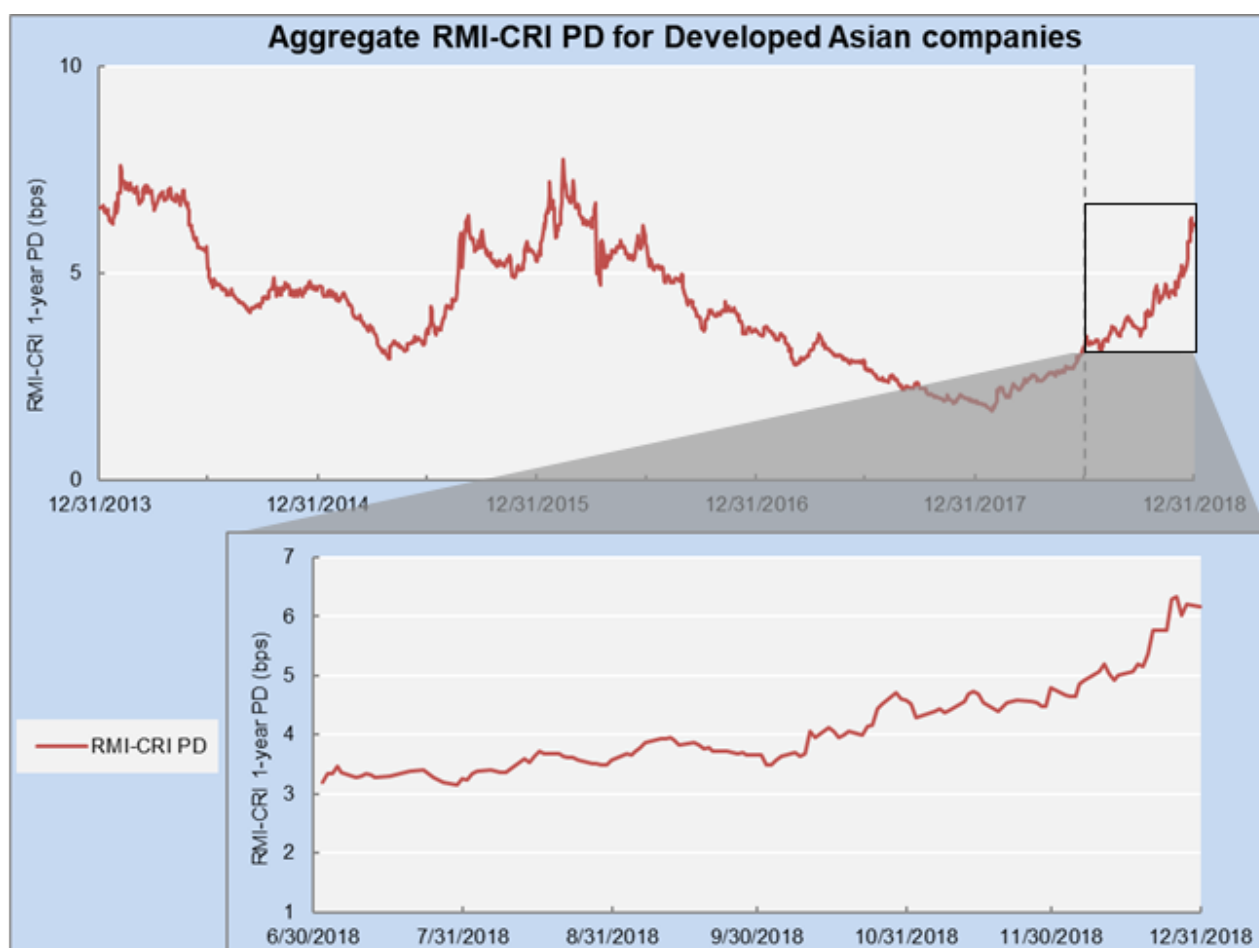
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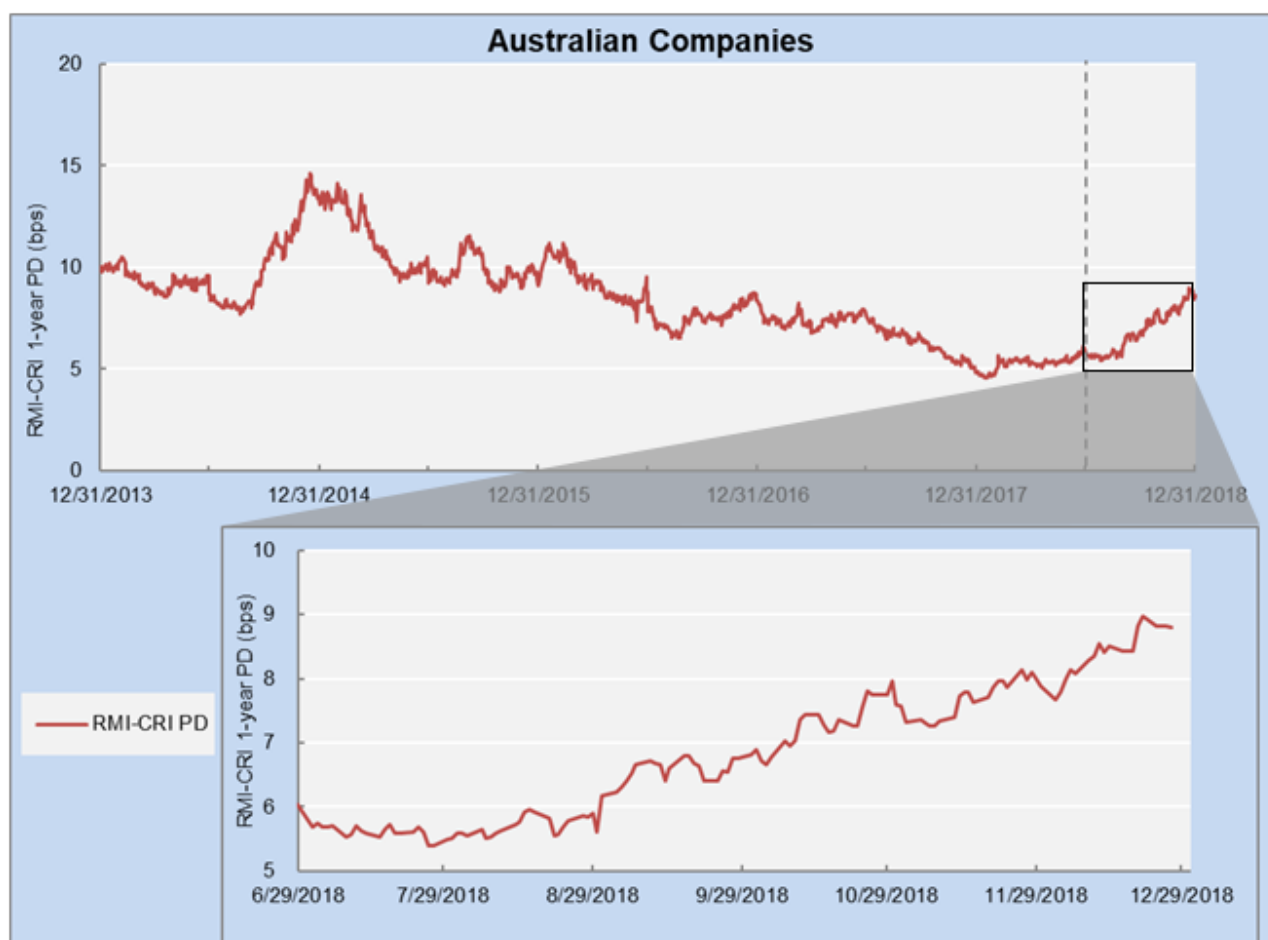
## Asia-Pacific - Developed economies

The NUS-CRI aggregate 1-year PD for listed companies in the developed Asia Pacific increased during the fourth quarter of 2018, suggesting a poorer credit outlook. The ongoing trade war, which weighs on the macro environment, affects corporate investments amid rising interest rates. The environment could among the reasons slowing down the region's growth. Despite the threats that may slow economic growth, most major countries have seen GDP YoY expansion in the latest quarter. Singapore's economy grew in Q4 with a slower than expected 2.2% GDP YoY growth. Singapore grew at a slower pace due to the contracting construction sector and a slowdown in the services industry. Likewise, Taiwan also reported a slower than expected 1.76% GDP YoY growth. The slower growth was due to the slowing technology exports. On the other hand, South Korea's economy grew the fastest in 5 quarter in the latest quarter as it saw a better than expected 3.1% YoY growth due to the government stimulus package. Developed Asia Pacific economies are expected to see slower growth going forward due to the weaker external environment outlook.



## Australian Companies

The aggregate 1-year RMI PD for Australian companies remained stable during Q4 2018. Based on Q3 data, economic growth declined with a sharp slowdown in private consumption and a pull-back in non-residential construction. Unemployment rate increased slightly. Going forward, the credit outlook for Australian firms remain dependent on the rebalancing of the economy as the increasing performances of household consumption, exports, construction sectors and decreasing unemployment rate overshadowed the concern in household debts. Credit standards have been tightened to reduce the risk profile of household borrowers. Attempts to support economic growth is also assisted by RBA's monetary policy in boosting investment and hiring. Low level of interest rates, further progress in reducing unemployment, as well as having inflation return to target are supporting the Australian economy.



## Economy

- The Australian economy expanded by 0.3% from Q2 2018 to Q3 2018, slowing sharply from a 0.9% expansion in the previous period and missing market consensus of a 0.6%. This is the weakest pace of expansion since the third quarter of 2016. The central scenario is for GDP growth to average around 3.5% over the year, before slowing in 2020 due to slower growth in exports of resources. <sup>55,56</sup>
- The lower GDP growth in Q3 was driven by a pull-back in private consumption and non-residential construction. Household final consumption expenditure increased 0.3% during the quarter, contributing 0.2% to GDP growth. Compensation of employees increased by 1.0%. Net exports contributed 0.3% due to a decline in imports. Consumer spending grew by 0.3% in the third quarter, easing from a 0.9% expansion in the previous period. The modest was driven by rises insurance and other financial services (1.6%). <sup>57</sup>



- The Reserve Bank of Australia's (RBA) had left the cash rate unchanged at 1.5%, amid a continuing global economic expansion and low unemployment rates. The economy is growing strongly with 3.5% over 2018, but is expected to grow more slowly in 2020 due to slower growth in exports of resources. Business conditions are positive and non-mining business investment is expected to increase. Higher levels of public infrastructure investment are also supporting the economy. However, household income has been growing slowly and debt levels are high. Inflation remains low over the past year and is expected to pick up over the next couple of years. The central scenario for inflation is 2.25% in 2019 and a bit higher in the following year.<sup>58</sup>
- The unemployment rate inched lower to 5.0% in December 2018, matching a 6-1/2-year low and below market expectations of 5.1%. The economy added 37,000 jobs in November while the number of unemployed increased by 12,500 as people looking for full-time jobs rose 24,800. Furthermore, the labor force participation rate rose by 0.2 percentage point from a month earlier to 65.7% in November and slightly above market consensus 65.6%.<sup>59</sup>
- The Australian Performance of Manufacturing Index (PMI), as reported by The Australian Industry Group, ended the financial year on a high note as it fell by 1.8 points to 49.5 in Dec 2018. Signaling the first contraction in manufacturing conditions in 26 months and the lowest result since August 2016. Six of the seven sub-indexes fell in December, indicating generally weaker industry conditions. The equivalent index for services (PSI) fell by 3.0 points to 52.1 in December, with consumer-oriented sectors leading growth as business-oriented sectors were largely in decline. Meanwhile, the Australian Performance of Construction Index (PCI) fell a further 1.9 points to 42.6 in December, indicating a fourth consecutive month of decline and the sharpest drop in five and a half years.<sup>60,61,62</sup>
- Key export prices rose 4.4% in December quarter 2018, following a rise in last quarter 2018 of 3.7%. Metalliferous ores and metal scrap, natural, and gas, natural and manufactured posted the highest increase in prices in this quarter. Through the year to Q4 2018, the export index price rose by 7.8%, driven by Petroleum, petroleum products and related materials. On the other hand, import prices rose 0.5% in Q4 2018, following a 1.9% rise in the previous quarter. The drop was mainly driven by higher prices in Telecommunication and sound-recording equipment. Trade surplus increased to AUD 3.68bn in Dec 2018, the largest trade surplus since Dec 2016, easily beating market consensus of a surplus of AUD 2.3 bn. Exports however dropped 2% and imports shrank 6% MoM in December, respectively.<sup>63,64</sup>

## Monetary Policy

- The Reserve Bank of Australia (RBA) has maintained its benchmark interest rate unchanged at 1.5%. Meanwhile, as household income has been growing slowly and debt levels are high, some lenders have reduced their appetite to lend, while standard variable mortgage rates are a little higher than a few month ago. Credit conditions for home buyers are tighter than they have been for some time, although mortgage rates remain low and there is strong competition for borrowers of high credit quality. While the level of interest rates remain low, further progress in reducing unemployment and have inflation return to target is expected, although this progress is likely to be gradual.

<sup>65</sup>

**Funding & Liquidity**

- Yields on 10-year Australian government bonds fluctuated throughout the quarter with 2.68% in October 2018, 2.68% in November 2018, and back to 2.43% in December 2018. The previous quarter reported a different trend from the 2.64% in July 2018, 2.59% in August 2018, and back to 2.63% in September 2018. <sup>66</sup>
- The 3-year fixed lending rates to small businesses remained unchanged at 5.30% in December quarter 2018 after it increased 5bp from 5.25% in March 2018 to 5.30% in April 2018. The lending rates for owner-occupied housing loan increases to 5.35 in October from its previous value of 5.3 since September 2018. <sup>67</sup>
- Average commercial lending during the quarter increased driven mainly by lending to the business sector while total loans to financial intermediaries increased in Q4 2018. Meanwhile, total lending to individuals continued to increase over the fourth quarter of 2018 and total lending to government increased USD1.1bn after a drop of USD3.4bn in October 2018. <sup>68</sup>

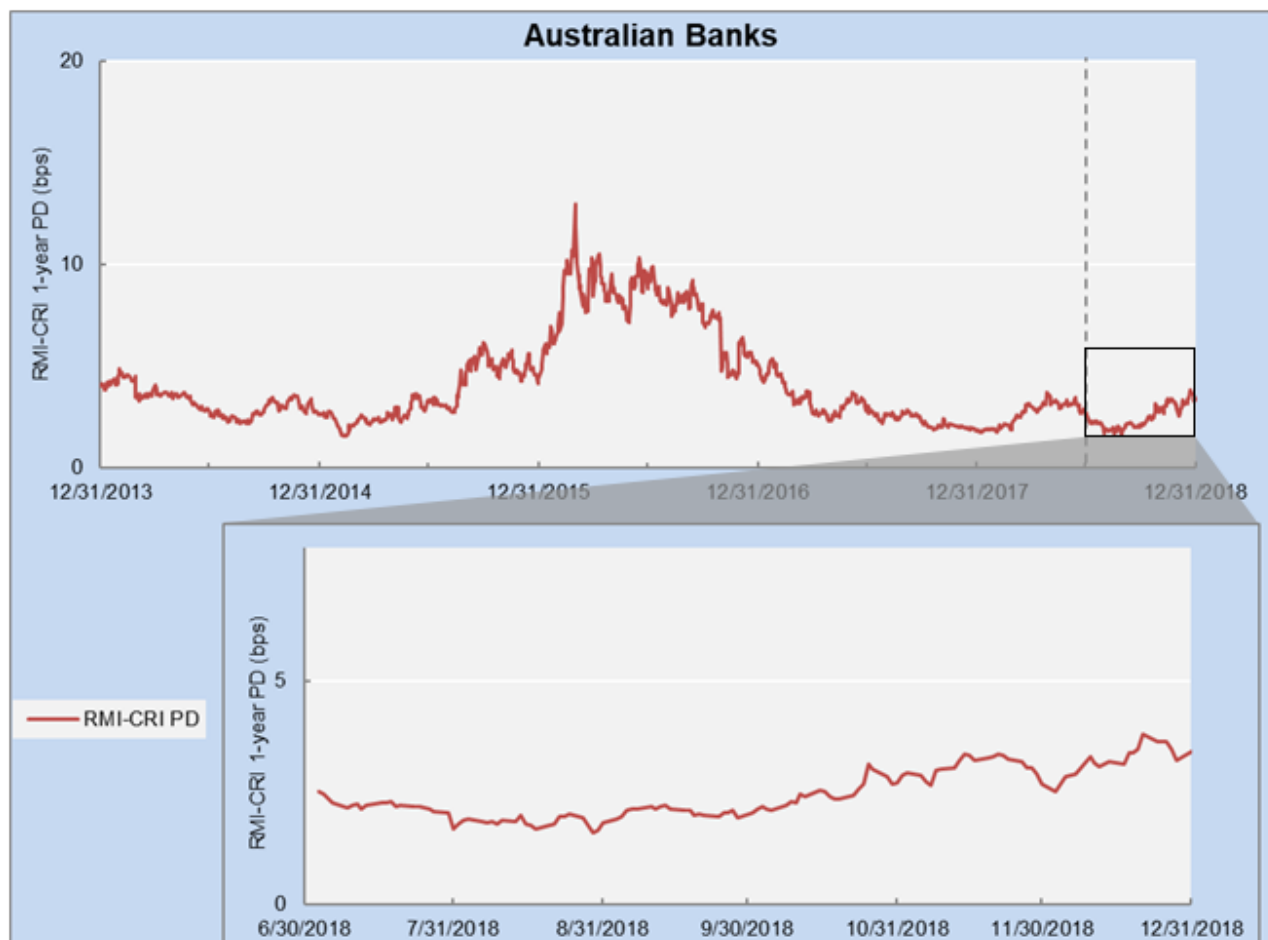
**Sovereign Credit Ratings**

- Standard & Poor's and Fitch Ratings maintained their AAA ratings on Australia, while Moody's maintained their Aaa rating. All three rating agencies had stable outlooks on the government's credit. <sup>69</sup>



## Australian Banks

The aggregate 1-year RMI PD remained increased slightly over the quarter. Earnings may come under pressure from the increasing cost of regulations as regulators attempt to increase banks' capital ratios. The profitability of banks has slightly decreased due to lower non-interest income. Housing credit continued to accelerate 3.3%, lower than prior year 5.3%. There is a risk related to high household leverage levels, higher lending rates, tightened credit conditions, maturity of interest-only mortgages and continued high consumer confidence may drive an uptick in delinquencies and impairments. Asset performances continue to improve as loan impairment expenses dropped 4 basis points from Q3. This will assist banks to record profit in 2018.



### Profitability

- Australia's major banks, including ANZ, NAB, Westpac and Commonwealth Bank, reported a cash profit after tax of AUD 29.5bn for the full year, down 5.5% compared to the previous corresponding period. The weakening financial performance is driven by lower non-interest income and higher restructuring and regulatory costs. Aggregated net interest income increased by 2.2% while aggregated non-interest income decreased by 3.7% due to asset disposals, the removal of ATM fees and regulatory changes.<sup>70</sup>

### Funding & Liquidity

- Mortgage and deposit re-pricing has offset lower earnings in capital market's income and the impact of Major Bank Levy. The largest banks recorded an average net interest margin of 200 basis points (cash basis) as of the full 2018 financial year, a decrease of 1 basis point compared with 2017. The Liquidity Coverage Ratio of Australian banks is at an average of 134%, exceeding the 100% minimum by a large margin. Leverage ratio for the majors is at an average of 5.6%, higher than the currently agreed minimum requirement of 3%.<sup>71</sup>

## Asset Quality

- The Australian Prudential Regulation Authority (APRA) has been implementing the prudential cap policy on interest-only lending. Asset quality continued to improve across the majors, with aggregated impaired assets decreasing 8.0% to AUD 8.1 bn. The decrease in aggregate impairment charge is mainly driven by the decline in individual impairment charges attributable to reduce risk profile, low levels of default in institutional portfolios and favorable macroeconomic conditions. The overdue accounts indicate a slight increase, with accounts in the "90 days past due delinquencies" up by 4 basis points from prior year. <sup>72,73</sup>
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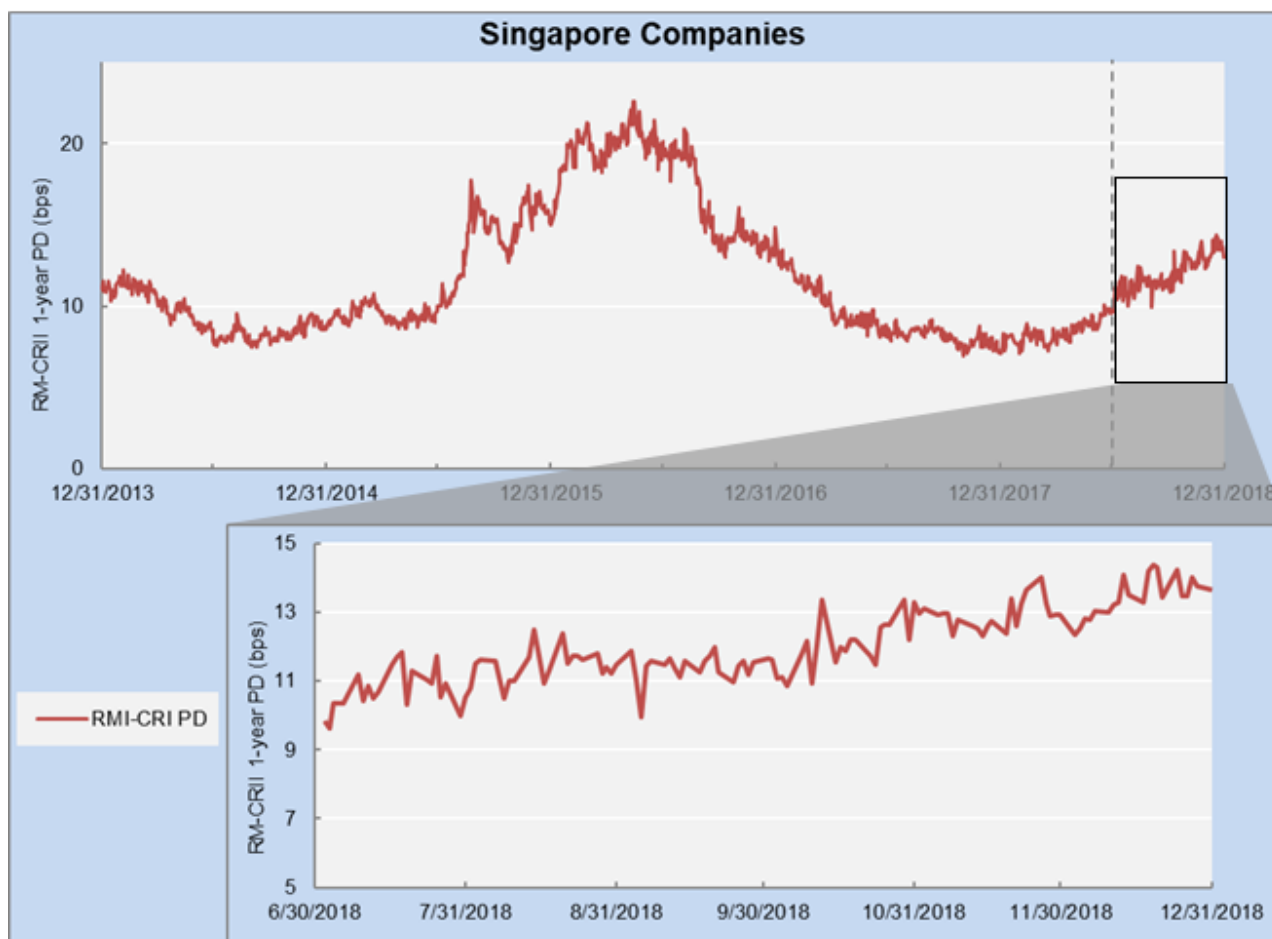
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## Singapore Companies

The RMI-CRI aggregate PD for Singapore firms increased slightly from 10.13bps in Q3 to 11.27bps in Q4. The economy grew by 2.2% on a YoY basis. The slower growth rate was due mainly to the contraction of the construction sector and moderation of the services industries. Data from December shows that the unemployment rate increased and retail sales decreased. Furthermore, export declined the most in the recent two years and manufacturing PMI came in as the lowest recorded reading since July 2017.



## Economy

- The Singapore economy grew 2.2% in Q4 2018 from a year ago, slower than the 2.3% growth rate in Q3 2018. Manufacturing remained firmly in the driving seat for growth during the quarter, picking up speed from last quarter's 3.7% to expand 5.5% on a YoY basis. The services industries, which make up two-thirds of the economy, grew 1.9% over the same period from a year earlier, moderating from a growth of 2.6% in Q3. Construction contracted 2.2% during the quarter, extending the 2.5% decline in Q3.<sup>74</sup>
- Singapore's Consumer Price Index for all items YoY change was 0.5% in December, up from 0.3% in November but lower than 0.7% at the end of Q3. Core inflation, which excludes changes in the price of accommodation and private road transport, increased to 1.9% in Q4 from 1.8% in Q3, mainly due to larger increases in the costs of services and retail items.<sup>75</sup>
- The overall unemployment rate increased to 2.2% in Q4 from 2.1% in Q3, signalling a possible softening of the labour market. The number of retrenchments in the fourth quarter was 2,800, similar to the 2,860 seen in the third quarter. Total employment increased by 15,600 in the fourth quarter of 2018, buoyed by hiring over the year-end holidays and festive season. However, the figure was slightly lower than the preceding quarter's total employment increase of 16,700.<sup>76</sup>

- The Purchasing Manager's Index (PMI), an early indicator of manufacturing activity, came in at 51.1 at the end of Q4 2018. Singapore manufacturing PMI dropped for the 4th consecutive month and the lower reading was due to slower growth recorded in the key indicators of new orders and new exports, factory output, inventory, as well as employment level. This is the lowest recorded reading since July 2017 when the reading was 51.<sup>77</sup>
- Retail sales decreased 6.0% in December 2018 compared to December 2017. Excluding motor vehicles, retail sales declined 3.0%. Compared to the same period last year, sales of food & beverage services increased 4.5% in December 2018. Compared to December 2017, sales of Motor Vehicles declined 20.7% in December 2018, as a result of fewer motor vehicles sold. Similarly, sales of Computer & Telecommunications Equipment declined 16.8% when compared to the higher sales arising from major phone launches around the same period in 2017. Sales of the Recreational Goods, Watches & Jewellery and Furniture & Household Equipment industries decreased between 3.9% and 5.8%, due to lower demand for sporting goods, jewellery and furniture. Conversely, sales of Medical Goods & Toiletries increased 1.8% in December 2018.<sup>78</sup>
- Singapore's NODX remained the same as the end of last quarter at a level of SGD 15.0bn as the decline in sales of electronic products was compensated by the increase of non-electronic products. Country wise, NODX to the top 10 markets as a whole rose despite declined shipments to China, South Korea, Malaysia, Taiwan, Japan, and Hong Kong; the US, the EU 28 and Thailand were the largest contributors. On a seasonally adjusted basis, the level of total trade reached SGD 91.1bn in September, higher than the SGD 90.5bn in June.<sup>79</sup>
- Singapore's non-oil domestic exports (NODX) experienced their worst decline in more than two years in Q4 2018, with shipments to eight out of Singapore's top 10 markets declining in December, except to the United States and China. The largest contributors to the NODX decrease were the EU (-28.7% YoY), South Korea (-39.1% YoY) and Malaysia (-15.5% YoY).<sup>80</sup>

## Monetary

- In October 2018, Singapore's central bank MAS tightened its monetary policy for the second time this year, stating an expectation that the economy should continue to expand steadily and core inflation to rise. MAS decided to increase slightly the slope of the SGD NEER policy band and leave the width of the policy band and the level at which it is centered unchanged. This measured adjustment follows the slight increase in the slope of the policy band in April 2018 from zero percent previously, and is consistent with a modest and gradual appreciation path of the SGD NEER policy band that will ensure medium-term price stability.<sup>81</sup>

## Funding & Liquidity

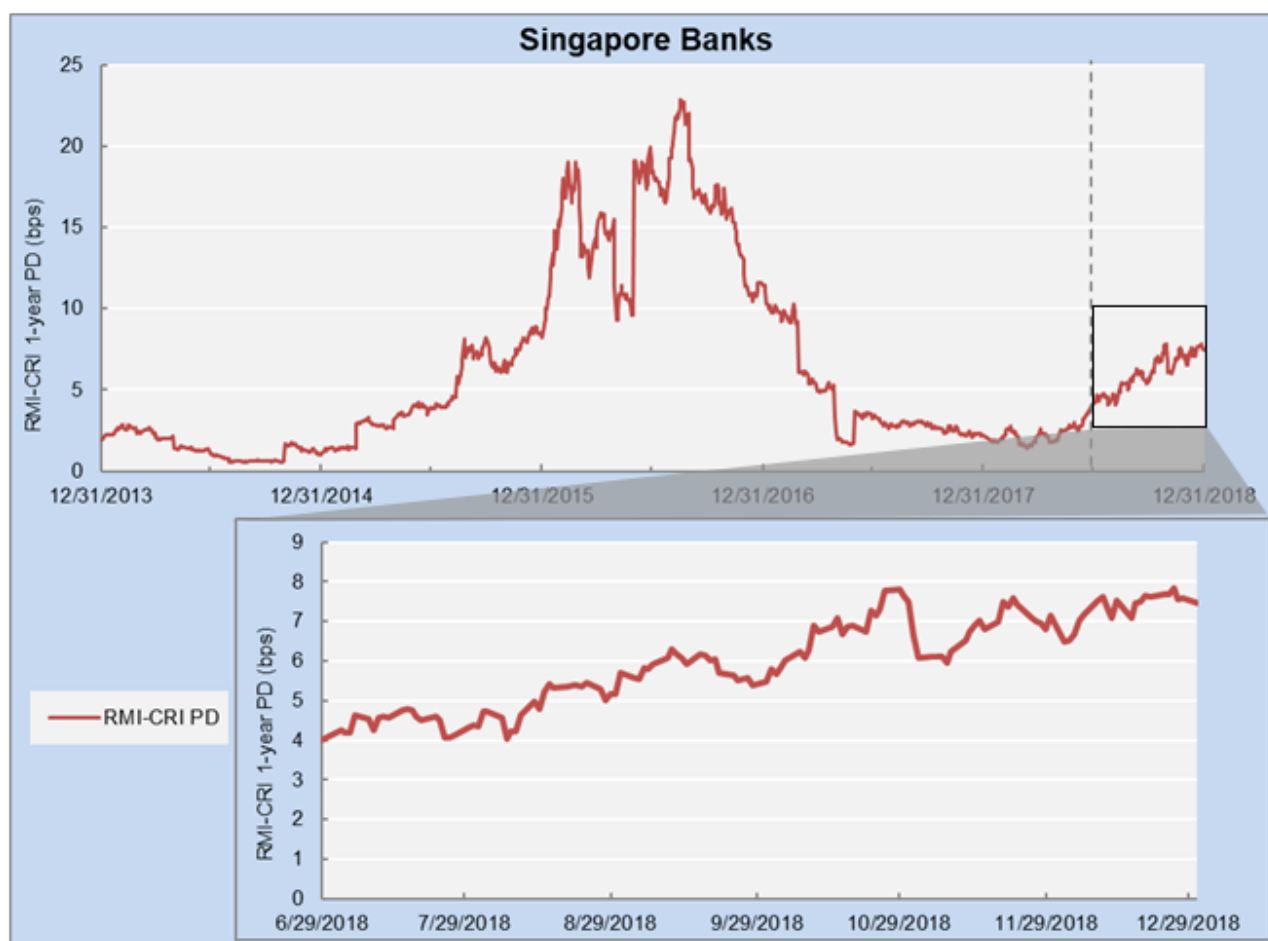
- Yields of 10-year Singapore government bonds decreased to 2.04% on Dec 31 2018 from 2.50% on Sep 30 2018.<sup>82</sup>
- Loans and advances of domestic banking units to non-bank customers rose from SGD 669bn in Q3 2018 to SGD 672bn in Q4 2018. Total loans to businesses rose from SGD 403.7bn in Sep 2018 to SGD 405.5bn in Dec 2018 while loans to consumers rose marginally from SGD 265.8bn in Q3 to SGD 266.2bn in Q4.<sup>83</sup>
- The amount of outstanding sovereign bonds remained nearly at the same level from SGD 112.2bn in Q3 to SGD 114.7bn in the end of November.<sup>84</sup>
- The prime lending rate remained constant at 5.33% in Q4 2018.<sup>85</sup>

## Sovereign Credit Ratings

- All three major rating agencies kept their highest investment grade ratings for Singapore sovereign bonds with stable outlooks over Q4 2018.

## Singapore Banks

The RMI-CRI 1-year aggregate PD for Singapore banks in Q4 followed the upward trend in the third quarter, from 5.40bps in the pervious quarter to 7.46bps by the end of December 2018. UOB and DBS showed strong performance while OCBC posted a decline in net profit due to weak performance in its insurance arm. Funding and liquidity condition slightly increased. As for capital levels and asset quality, Singapore banks remain as some of the most robust banks in the world and are compliant with all capital requirements. NPL ratios in Singapore banks however inched slightly higher over the first quarter.



## Profitability

- Profits for Singapore banks vary in the fourth quarter. UOB and DBS had a rising net profit while OCBC reported a decline in net profit. UOB reported net earnings of SGD 916mn in 4Q 2018, 7% higher from 4Q 2017, with most of the growth driven by higher net interest income. Q4 earnings for DBS increased by 8% to SGD 1.32bn. Total income grew 6% to SGD 3.25bn as sustained loan growth and net interest margin progression over the quarter were moderated by a decline in treasury markets income. OCBC Bank posted an 11% decline in net profit to SGD 926mn for its fourth quarter from SGD 1.03bn for the year-ago period, dragged down by a fall in earnings contribution from its insurance arm. <sup>86,87,88</sup>
- The amount of loans to non-financial institutions rose from SGD 301bn in Q3 2018 to SGD 306bn in Q4 2018, according to data from the Monetary Authority of Singapore.



Total business loans increased by 0.45% to SGD 405.5bn at the end of Q4 2018 from 403.7bn in the previous quarter.<sup>89</sup>

### Funding & Liquidity

- Total deposits in Singapore banks rose to SGD 628bn in Q4 2018 from SGD 621bn in Q3 2018. Local currency deposits increased by SGD 5.99bn to SGD 619bn in Q4. Foreign currency deposits increased by about 1.65% to SGD 8.72bn during Q4 2018.<sup>90</sup>
- Singapore's fixed deposit rates remained the same during Q4 2018 for 6-month deposits, staying at 0.23%. The 3-month and 12-month deposit rate increased to 0.17% and 0.45% in Q4 respectively, from 0.16% and 0.40% in Q3.<sup>91</sup>

### Capital Levels & Regulations

- All three Singapore banks kept their Tier 1 Common Equity ratios to be well above the recommended Basel III guidelines. Banks in Singapore need to have at least a Common Equity Tier 1 Capital Adequacy Ratio of 6.5%. The three banks are all sufficiently covered in this regard with DBS, UOB and OCBC having CET1 CARs of 14.5%, 13.9% and 14.8% respectively.

### Asset Quality

- Loan quality at local banks generally improved during Q4. Loans placed under the "special mention" category declined to 1.91% of total exposure at the end of Q4 2018, from 1.92% in the previous quarter. Loans classified as doubtful decreased to 0.25% of total exposure from 0.29%. Loans marked as a loss remained unchanged at 0.22% in Q4 2018.<sup>92</sup>
- All three banks had a declining NPL ratio in Q4 2018. NPL ratio at OCBC declined the most, from 1.7% in Q3 2018 to 1.5% in Q4 2018. NPL ratios in both DBS and UOB dropped to 1.5% in Q4 2018 from 1.6% in Q3 2018. <sup>93,94,95</sup>

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<sup>74</sup> Jan 2, 2019 [Singapore's Q4 GDP slows slightly to 2.2%, misses expectations: MTI advance estimates](https://www.channelnewsasia.com), Channel News Asia, <https://www.channelnewsasia.com>

<sup>75</sup> Jan 23, 2019 [Singapore's headline, core inflation pick up in December; prices expected to rise faster in 2019](https://www.businesstimes.com.sg), Business Times, <https://www.businesstimes.com.sg>

<sup>76</sup> Jan 31, 2019 [Slight uptick in unemployment in Q4, but labour market improved in 2018: MOM report](https://www.todayonline.com), Today, <https://www.todayonline.com>

<sup>77</sup> Jan 2019, [December PMI declined a further 0.4 point to 51.1](http://www.sipmm.edu.sg), Singapore Institute Of Purchasing & Materials, <http://www.sipmm.edu.sg>

<sup>78</sup> Dec 2018, [Retail Sales and Sales of Food & Beverage Services](https://www.singstat.gov.sg/), Statistics Singapore, <https://www.singstat.gov.sg/>

<sup>79</sup> Jan 17, 2019 [SINGAPORE'S EXTERNAL TRADE – December 2018](http://www.iesingapore.gov.sg/), IE Singapore, <http://www.iesingapore.gov.sg/>

<sup>80</sup> Jan 17, 2019 [SINGAPORE'S EXTERNAL TRADE – December 2018](http://www.iesingapore.gov.sg/), IE Singapore, <http://www.iesingapore.gov.sg/>

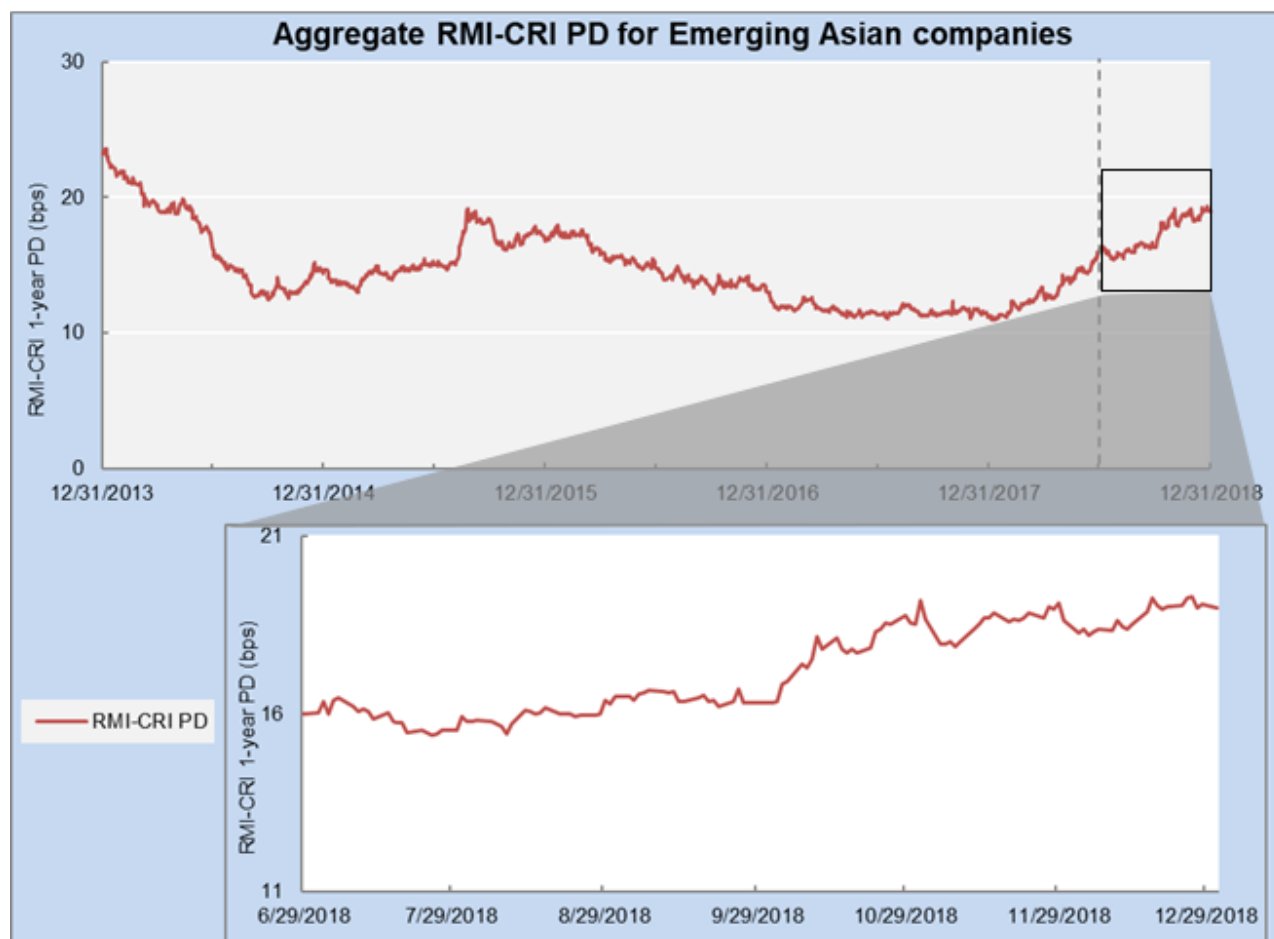
<sup>81</sup> Oct 12, 2018, [MAS Monetary Policy Statement](https://secure.mas.gov.sg/), MAS, <https://secure.mas.gov.sg/>

<sup>82</sup> Dec, 2018 [SGS Prices and Yields - Benchmark Issues](https://secure.mas.gov.sg/), MAS, <https://secure.mas.gov.sg/>

- <sup>83</sup>Dec, 2018 [Banks: Loans and Advances of DBUs to Non-Bank Customers by Industry](https://secure.mas.gov.sg/), MAS, <https://secure.mas.gov.sg/>
- <sup>84</sup>Dec, 2018 [Issuance, Redemption and Outstanding Amount](https://secure.sgs.gov.sg/), MAS, <https://secure.sgs.gov.sg/>
- <sup>85</sup>Jun, 2018 [Interest Rates of Banks and Finance Companies](https://secure.mas.gov.sg/msb/), MAS, <https://secure.mas.gov.sg/msb/>
- <sup>86</sup>Feb, 2019 [UOB Group Financial Report](http://www.uob.com.sg), UOB, [www.uob.com.sg](http://www.uob.com.sg)
- <sup>87</sup>Feb, 2019 [DBS full-year 2018 net profit rises 28% to record SGD 5.63bn](http://www.dbs.com.sg), DBS [www.dbs.com.sg](http://www.dbs.com.sg)
- <sup>88</sup>Feb, 2019 [OCBC Group Full Year 2018 Net Profit Grew 11% to a Record SGD 4.49bn](http://www.ocbc.com), OCBC Group, <http://www.ocbc.com>
- <sup>89</sup>Dec, 2018 [Banks: Loans and Advances of DBUs to Non-Bank Customers by Industry](https://secure.mas.gov.sg/), MAS, <https://secure.mas.gov.sg/>
- <sup>90</sup>Dec, 2018 [Deposits \(excluding SGD NCDs\) of DBUs by types of non-bank customers](https://secure.mas.gov.sg/), MAS, <https://secure.mas.gov.sg/>
- <sup>91</sup>Dec, 2018 [Interest Rates of Banks and Finance Companies](https://secure.mas.gov.sg/msb/), MAS, <https://secure.mas.gov.sg/msb/>
- <sup>92</sup>Dec, 2018 [Banks: Classified Exposures](https://secure.mas.gov.sg), MAS, <https://secure.mas.gov.sg>
- <sup>93</sup>Jun, 2018 [Interest Rates of Banks and Finance Companies](https://secure.mas.gov.sg/msb/), MAS, <https://secure.mas.gov.sg/msb/>
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- <sup>95</sup>Feb, 2019 [DBS full-year 2018 net profit rises 28% to record SGD 5.63bn](http://www.dbs.com.sg), DBS [www.dbs.com.sg](http://www.dbs.com.sg)

## Asia-Pacific - Emerging economies

The RMI-CRI aggregate 1-year PD for listed corporations in emerging Asia, excluding India and China, continued its upward climb during Q4 2018 as the US-China trade dispute persisted and concerns over global growth increased. The credit quality of firms in Taiwan, South Korea and China all deteriorated in the face of headwinds from trade uncertainty and disappointing earnings. Being net oil importers, the plunge in crude oil prices however lifted the credit profiles of Indonesian and Philippine companies. The Indonesian Rupiah was buoyed by the central bank's surprise interest rate increase. Central banks have been forced to react to higher US dollar rates and deteriorating trade balances to support local currencies. The escalation in the trade war between the United States and China damaged corporate confidence and has weighed on capital investment decisions. China has moved to cut reserve requirements and implemented pro-growth policies but the effects of these policies will take time to impact the credit profiles of emerging Asian companies. Given this difficult backdrop, the outlook for emerging Asian companies is negative in the next few months as many firms will struggle to survive the current slowdown.





## Indonesian Companies

The RMI-CRI aggregate 1-year PD for Indonesian companies decreased slightly at the end of December 2018 from 25.77bps at the end of Q3. Indonesia's economy experienced a growth of 5.17% YoY in Q3 2018, slightly higher than the market expectation of 5.15%. Indonesia's inflation increased for the fourth quarter of 2018, with a CPI of 3.13% from 2.88% in Q3. The trade balance improved to USD 1.10 billion deficit in December 2018, from the deficits in both October and November 2018. This was mainly due to a decreasing deficit in oil and gas trade balance. For the period from January-December 2018, Indonesia's trade balance recorded a cumulated USD 8.57bn deficit.



## Economy

- The Indonesian economy expanded by 5.17% YoY in Q3 2018, a slower pace when compared to the previous period, but still slightly above market expectations of 5.15%. Private consumption and fixed investment were the main drivers behind the growth of the economy in this quarter (at 5.01% and 6.96% respectively). Meanwhile, exports rose at a slower pace (at 7.52% compared to 7.70% in Q2 2018).<sup>96</sup>

- The Consumer Price Index (CPI) of Indonesia reached 3.13% in December. Respectively, the inflation of volatile food reached 3.39% (YoY), core inflation at 3.07% (YoY), inflation of administered prices at 3.36% (YoY). Going forward, the inflation is projected to stay at around 3.5% throughout 2019. It is important that the central and regional governments as well as Bank Indonesia strengthen their coordination to keep inflation at check.<sup>97</sup>
- Indonesia's trade balance recorded a deficit of USD 1.10bn in December 2018, improving from a trade deficit of USD 2.00bn in the previous month. This was primarily supported by a smaller deficit in oil and gas trade balance. The oil and gas trade deficit improves to USD 0.22bn in December 2018 while non-oil and gas trade balance deficit deteriorated to USD 0.88bn. The improvement was attributable to a surge of oil and gas exports and a decline in oil and gas imports. Bank Indonesia considers the recent trade balance developments in December 2018 and during the entire year a consequence of global economic headwinds. Moving forward, Bank Indonesia will continue to coordinate with the government to monitor global and domestic economic developments to strengthen external sector resilience.<sup>98</sup>
- According to Nikkei Indonesia Manufacturing Purchasing Manager's Index (PMI), Indonesia's PMI rose to fourth-month high in December, at 51.2, from 50.4 in November. This reflected a stronger expansion in output and a rebound in new orders for the manufacturing sector in December.<sup>99</sup>

### Monetary

- On 19th and 20th December 2018, the Bank Indonesia (BI) Board of Governors agreed to hold the BI 7-day repo rate, deposit facility rate and lending facility rate at 6.00%, 5.25% and 6.75% respectively. The decision is consistent with Bank Indonesia's effort to lower the current account deficit while maintaining the attractiveness of the domestic financial assets with due consideration to global interest rate trends in the next few months. Looking forward, Bank Indonesia will continue to coordinate with the Government to maintain economic stability and strengthen external resilience, which includes reducing the current account deficit to around 2.5% of GDP in 2019.<sup>100</sup>

### Funding & Liquidity

- The yield of Indonesia's 5-year bonds decreased from 8.16% at the end of September 2018 to 7.85% at the end of December 2018. Similarly, Indonesia's 10-year government bond yield decreased from 8.21% at the end of Q3 2018 to 8.00% at the end of Q4 2018.<sup>101,102</sup>
- Indonesia's official reserve assets position stood at USD 120.7bn as of late December 2018, higher than the end of August 2018 level registered at USD 117.2bn. The increase was primarily attributable to oil and gas foreign exchange receipts, global bond issuance and withdrawal of government foreign loans. Bank Indonesia considered the official reserve assets adequate in line with the confidence in the stability and upbeat outlook of the domestic economy as well as positive export performance.<sup>103</sup>

- External debt grew 5.3% (YoY) in October 2018. Long-term external debt remained dominant in Indonesia's external debt and stood at USD 313.2bn or 86.9% of total external debt. Long term external debt consisted of public sector external debt amounting to USD 177.4bn (56.6% of total long-term external debt) and private sector external debt amounting to USD 135.8bn (43.4% of total long-term external debt). Short-term external debt amounted to USD 47.4bn (13.1% of total external debt), comprised of private sector external debt amounting to USD 46.4bn (98.0% of total short-term external debt) and public sector external debt amounting to USD 940mn (2.0% of total short-term external debt). The ratio of external debt to GDP is stable at 34%.<sup>104</sup>

## Politics

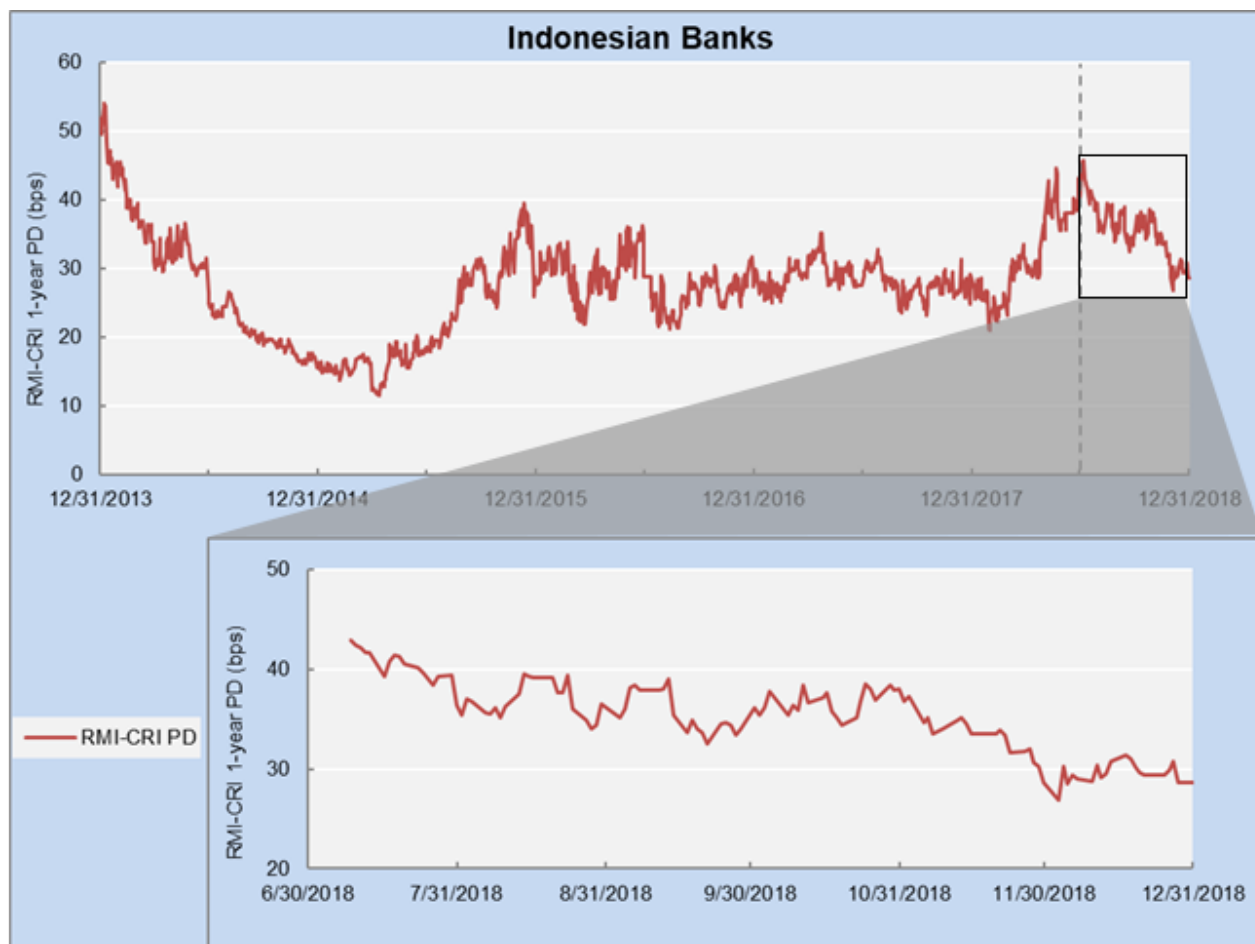
- The latest survey conducted by Charta Politika, a political consulting firm in Indonesia, revealed that the incumbent president, Joko Widodo has an approval rating of 53.2%, as compared to Prabowo's 34.1%. However, it should be noted that the gap between Jokowi and Prabowo has closed by five percentage points since September, according to Indikator Politik Indonesia. The Director of Charta Politika also suggested that Prabowo may be able to catch up with Jokowi if he successfully woos the undecided and swing voters through avenues such as the presidential debates. A research fellow at S. Rajaratnam School of International Studies also wrote that the hardline groups supporting Prabowo may help him build the momentum in the final months, before the presidential election in April 2019.<sup>105,106</sup>

## Sovereign Credit Ratings

- S&P, Moody's and Fitch kept their ratings on the local currency long-term bonds of Indonesia at BBB-, BBB and Baa2 respectively. All three credit rating agencies have maintained their stable outlook on Indonesia's sovereign debt. This reflected the Indonesian government's consistent effort to ramp up productive spending and attract foreign investments.<sup>107</sup>

## Indonesian Banks

The RMI-CRI aggregate 1-year PD for Indonesian banks decreased to 25.78bps at the end of December 2018 from 30.68bps at the end of September 2018. Loans extended by Indonesian banks grew by 12.9% in August from a year earlier. Meanwhile, non-performing loans (NPL) stood at 2.6%.<sup>108</sup>



## Profitability

- Indonesian banks in general saw a greater profitability in Q3 2018. Two of the three largest majority state-owned Indonesian banks, Bank Rakyat Indonesia and Bank Negara Indonesia, reported a QoQ increase in net income of 14.7% and 5.5% respectively, while Bank Mandiri reported a QoQ decrease in net income of -6.4%.<sup>109,110,111</sup>

## Funding & Liquidity

- The liquidity ratio (liquid asset/bank deposit) of Indonesian banks remain unchanged at 19.2% from September 2018 to October 2018.<sup>112</sup>
- The Jakarta 3-month interbank rate increased slightly from 7.35% at the beginning of Q4 2018 to 7.70% by the end of Q4 2018. Similarly, the 1-month interbank rate increased slightly from 6.99% at the beginning of Q4 2018 to 7.54% by the end of Q4 2018.<sup>113</sup>

## Regulation

- Indonesia's central bank, Bank Indonesia (BI), plans to issue short-term Islamic bonds as a new monetary instrument which would be used to manage liquidity in Indonesia's financial system. BI governor Warjiyo said that the new sukuk will be issued with 2-week, 1-month and 3-months tenors and would be backed by the government's Islamic bonds. In addition, BI is also considering to further relax the liquidity rules for the banking industry in 2019 to compensate for the increase in its interest rates. <sup>114,115</sup>

## Asset Quality

- According to Bank Indonesia, the financial system remained stable. Capital adequacy ratio and liquidity of Indonesian banks, as of October 2018, stood at 22.9% and 19.2% respectively, while non-performing loans (NPL) stood at 2.6% (gross) and 1.2% (net). Bank Indonesia projects credit growth in 2019 at 10.0-12.0% (YoY). Moving forward, Bank Indonesia will continue to monitor and maintain sufficient liquidity to support financial system stability. <sup>116</sup>

<sup>96</sup> Nov 5, 2018, [Indonesia GDP Annual Growth Rate](http://www.tradingeconomics.com), Trading Economics, <http://www.tradingeconomics.com>

<sup>97</sup> Jan 2, 2019, [Inflation Controlled within Target Corridor throughout 2018](http://www.bi.go.id), Bank Indonesia, <http://www.bi.go.id>

<sup>98</sup> Jan 15, 2019, [Trade Deficit Narrows in December 2018](http://www.bi.go.id), Bank Indonesia, <http://www.bi.go.id>

<sup>99</sup> Jan 2, 2019, [PMI rises to four-month high in December](http://www.markiteconomics.com), Markit Economics, <http://www.markiteconomics.com>

<sup>100</sup> Dec 20, 2018, [BI 7-Day Reverse Repo Rate Held: Strengthening External Resilience, Maintaining Stability](http://www.bi.go.id), Bank Indonesia, <http://www.bi.go.id>

<sup>101</sup> Dec 31, 2018, [Indonesia 5-Year Bond Yield](http://www.investing.com), Investing, <http://www.investing.com>

<sup>102</sup> Dec 31, 2018, [Indonesia 10-Year Bond Yield](http://www.investing.com), Investing, <http://www.investing.com>

<sup>103</sup> Jan 8, 2019, [Official Reserve Assets Continue to Increase](http://www.bi.go.id), Bank Indonesia, <http://www.bi.go.id>

<sup>104</sup> Dec 12, 2018, [External Debt Statistics of Indonesia - December 2018](http://www.bi.go.id), Bank Indonesia, <http://www.bi.go.id>

<sup>105</sup> Jan 17, 2019, [Indonesian Presidential Candidates Debate Corruption, Terrorism](https://www.bloomberg.com/), Bloomberg, <https://www.bloomberg.com/>

<sup>106</sup> Jan 21, 2019, [Religion and economy will take center stage as Indonesia's president seeks re-election, experts say](http://www.cnbc.com), CNBC, <http://www.cnbc.com>

<sup>107</sup> Apr 13, 2018, [Indonesian Sovereign Rating: Market Data and Info](http://www.bi.go.id), Bank Indonesia, <http://www.bi.go.id>

<sup>108</sup> Jan, 2019, [Indonesia Loan Growth](http://www.tradingeconomics.com), Trading Economics, <http://www.tradingeconomics.com>

<sup>109</sup> Oct 18, 2018, [Bank Mandiri \(Persero\)](http://quotes.wsj.com), The Wall Street Journal, <http://quotes.wsj.com>

<sup>110</sup> Oct 25, 2018, [Bank Rakyat Indonesia](http://quotes.wsj.com), The Wall Street Journal, <http://quotes.wsj.com>

<sup>111</sup> Oct 18, 2018, [Bank Negara Indonesia](http://quotes.wsj.com), The Wall Street Journal, <http://quotes.wsj.com>

<sup>112</sup> Dec 20, 2018, [BI 7-Day Reverse Repo Rate Held: Strengthening External Resilience, Maintaining Stability](http://www.bi.go.id), Bank Indonesia, <http://www.bi.go.id>

<sup>113</sup> Dec 31, 2018, [Jakarta Interbank Offered Rate \(JIBOR\)](http://www.bi.go.id), Bank Indonesia, <http://www.bi.go.id>

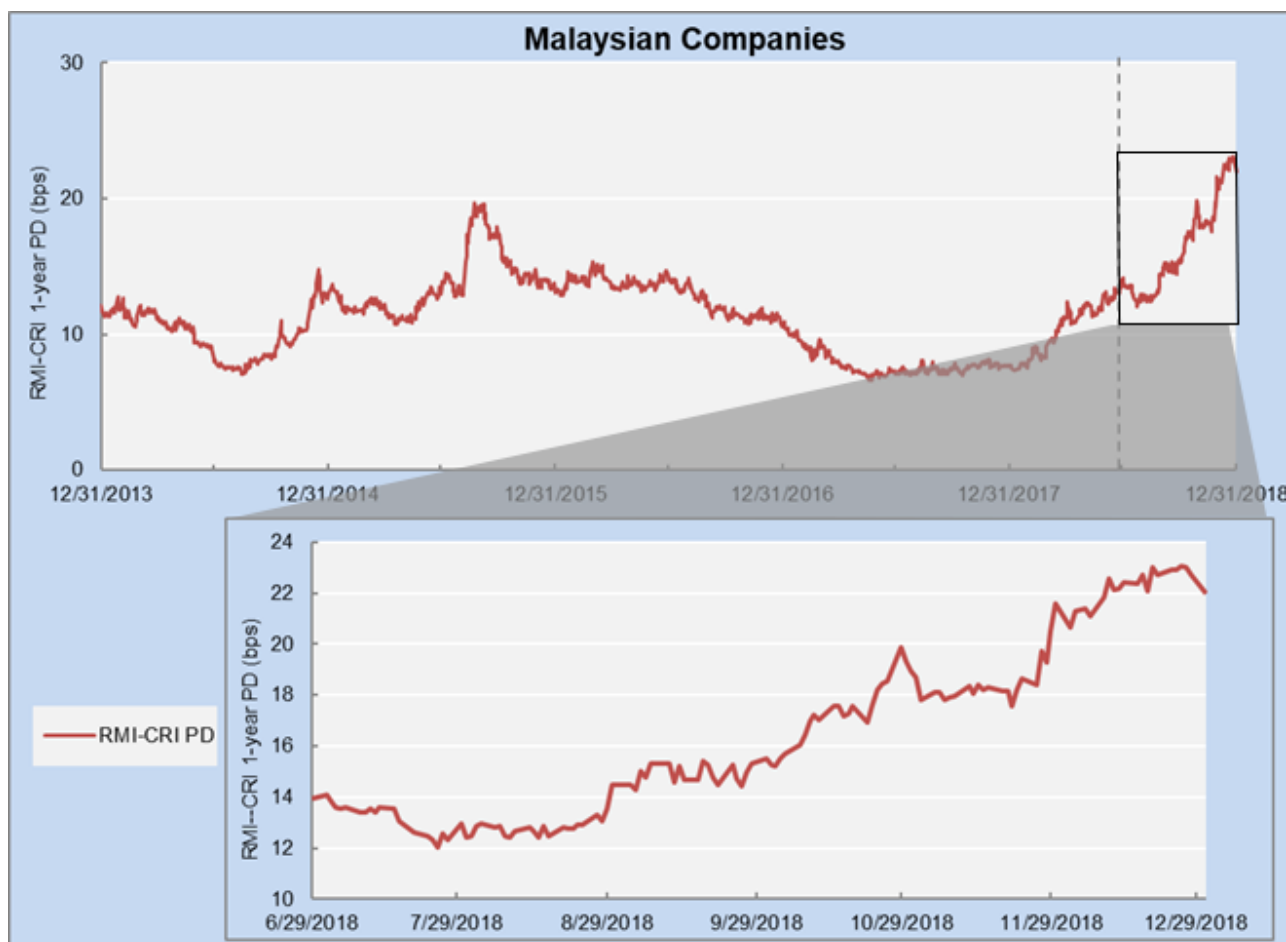
<sup>114</sup> Nov 2, 2018, [Indonesia c.bank plans to add Islamic bonds as monetary instrument](http://www.reuters.com), Reuters, <http://www.reuters.com>

<sup>115</sup> Nov 27, 2018, [Indonesia to consider more easing of liquidity rules in 2019 -c.bank gov](http://www.reuters.com), Reuters, <http://www.reuters.com>

<sup>116</sup> Dec 20, 2018, BI 7-Day Reverse Repo Rate Held: Strengthening External Resilience, Maintaining Stability, Bank Indonesia, <http://www.bi.go.id>

## Malaysian Companies

The NUS-CRI aggregate 1-year PD for Malaysian increased to around 22bps over Q4 2018. Malaysia's economy grew with a faster pace compared to Q3 2018. Exports continued to expand albeit with a lower growth due to weaker external demand and uncertainties from the ongoing trade tensions. Unemployment rate remained stable at 3.3%. <sup>117</sup>



## Economy

- GDP of Malaysia growth accelerated to 4.7% YoY in Q4 2018 from 4.4% in Q3 2018 despite global headwinds. GDP growth is mainly driven by robust household spending and continued expansion in the manufacturing sector. Private consumption growth remained robust at 8.5% despite the frontloading of purchases during the tax holiday period. Headline inflation declined to 0.3% while core inflation increased to 1.6%. <sup>118</sup>



- Malaysia's CPI rose by 0.2% on a YoY basis in December 2018. Among the major groups which recorded increases were the indices for Housing, Water, Electricity, Gas & Other Fuels (+2.0% higher YoY), Restaurants and Hotels (+1.3%), Education (+1.1%), Alcoholic Beverages & Tobacco (+1.1%), and Food & Non-Alcoholic Beverages (+0.7%).<sup>119</sup>
- Malaysia's unemployment rate remained stable at 3.3% as well as the labour force participation rate in Malaysia at 68.5% in December 2018.<sup>120</sup>
- In December 2018, Malaysia exports recorded an increase of 4.8% YoY to MYR 83.3bn. Imports also increased 1.0% YoY to MYR 72.8bn. On a YoY basis, exports rose due to higher exports to Hong Kong (+MYR 1.3bn), Singapore (+MYR 1.3bn), United States (+MYR 939.6mn), Australia (+MYR 546.7mn), and India (+MYR 518.9mn). On a YoY basis, higher imports were mainly from China (+MYR 967.2mn), United States (+MYR 615.6mn), Republic of Korea (+MYR 537.6mn), Taiwan (+MYR 498.9mn), and Brunei (+MYR 221.4mn).<sup>121</sup>

### Monetary

- Bank Negara Malaysia announced it would maintain the Overnight Policy Rate (OPR) at 3.25%, citing a continued global economic expansion, albeit with signs of moderating momentum. Despite facing some downside risks stemming from any further escalation in trade tensions and the continued weakness in the agricultural and mining sectors, the Malaysian economy is projected to remain on a steady growth path in 2019.<sup>122</sup>
- In December 2018, broad money (or M3), which measures the money supply, increased by 8.02% YoY to MYR 1.88tn.<sup>123</sup>
- Driven by market expectations for a slower pace of monetary policy normalization in the US, the ringgit appreciated by 1.2% against the USD in December 2018.<sup>124</sup>

### Funding & Liquidity

- The market indicative yield on the 10-year Malaysia government securities increased to 4.08% in December 2018, compare to 4.07% in September 2018. The same yield measure on 5-year Malaysia government securities increased to 3.78% from 3.76% over the same period.<sup>125</sup>
- Bank loans approved to finance, insurance and business activities increased to MYR 3.68bn in December 2018 from MYR 2.62bn one year ago. Meanwhile, loans approved to the manufacturing segment increased to MYR 2.66bn in December 2018 from MYR 2.12bn last year and loans approved to the wholesale, retail trade, restaurants and hotels segment increased to MYR 2.93bn, while loans approved to real estate decreased from MYR 4.86bn a year ago to MYR 3.41bn in December.<sup>126</sup>

### Regulations and Politics

- Malaysia's former Prime Minister Najib Razak managed to delay the start of his trial over the 1MDB scandal, where it was alleged that billions of dollars were stolen by Najib and his cronies. The scandal was one of the main factors that contributed to Najib's loss at the general election last May. Currently, no new date for the trial or the appeal has been set but the prosecution team hoped that the appeal would only take up to two weeks. The start of the first trial will be crucial for the government, which has been criticized for being slow to act over 1MDB.<sup>127</sup>



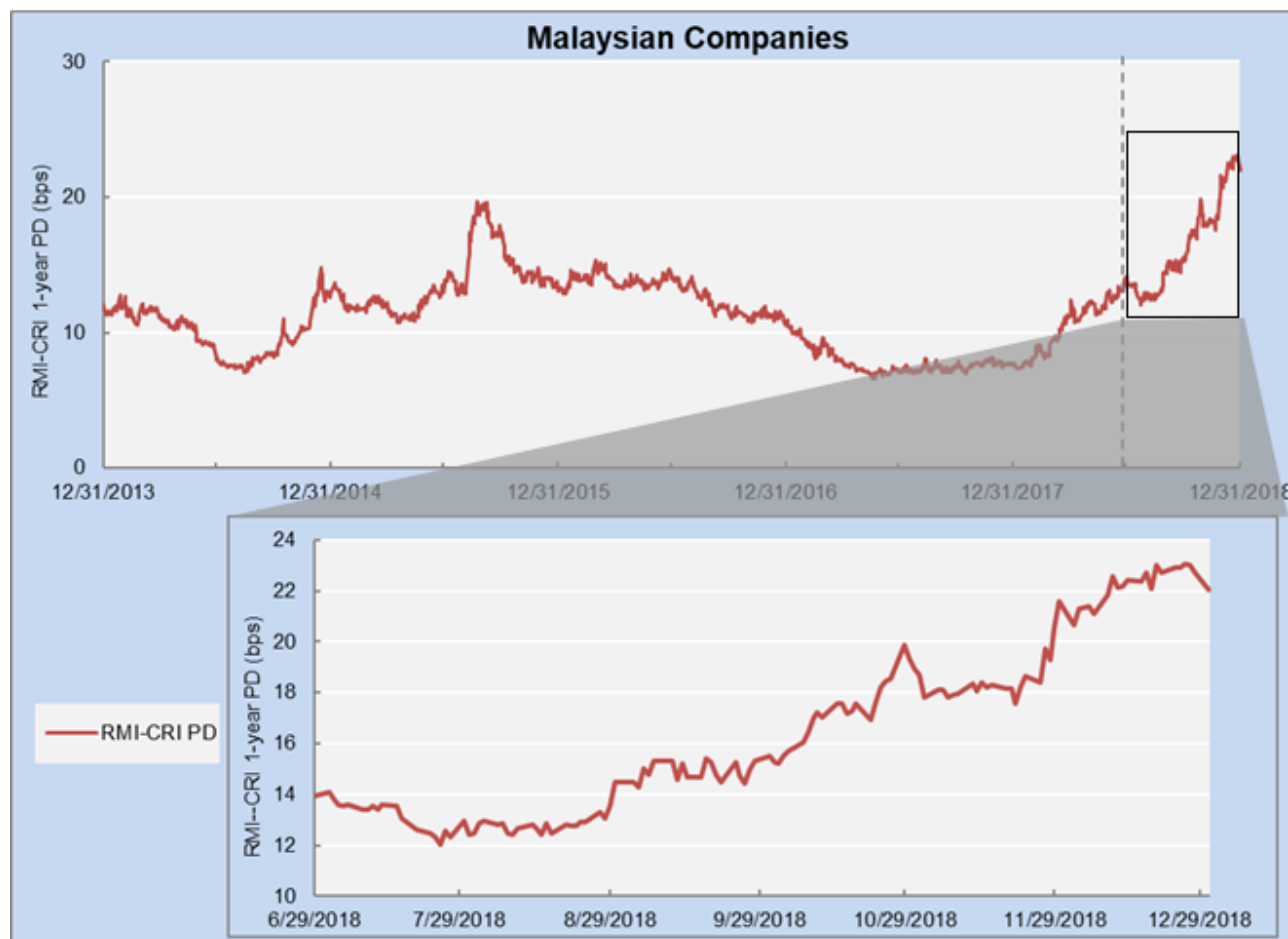
- Malaysia's securities regulator has introduced a new framework for operators of electronic trading platforms for digital assets where under the revised guidelines, operators are required to apply to the Securities Commission Malaysia (SC) and to have a minimum paid-up capital of MYR 5mn. Furthermore, operators that are publicly listed companies must have at least one independent director on their boards. Anyone found to be operating unauthorized digital asset exchanges in Malaysia will face a 10-year jail sentence and a MYR 10mn fine. The SC hoped that this new framework can ensure investor protection in the trading of digital assets.<sup>128</sup>

### **Sovereign Credit Ratings**

- The Malaysian government maintained its sovereign credit ratings at all three rating agencies. The country was rated at A3, A- and A- respectively by Moody's, S&P and Fitch. All three agencies assigned a stable outlook for their ratings on Malaysia.

## Malaysian Banks

The NUS-CRI aggregate 1-year PD for Malaysian banks slightly increased to around 9bps in Q4 2018, as the banking system remained well capitalized. Stable total bank deposits continue to ensure liquidity in Malaysian banks. The financials of Malaysian banks remained at a safe level.



## Lending

- The amount of bank loan applications has decreased to MYR 50.85bn in December from MYR 72.75bn in September. Loan application for finance, insurance and business activities had increased to MYR 4.93bn in December 2018 from MYR 4.51bn in September.<sup>129</sup>
- The base lending rate of Malaysian commercial banks remained at 6.91% in December 2018. The weighted base rate increased slightly to 3.91% in December 2018 compared to 3.90% in September 2018.<sup>130</sup>

## Funding & Liquidity

- Total bank deposits increased to MYR 1.883tn in December 2018 from MYR 1.842tn in September. The repurchase agreement increased to MYR 32.7bn in December this year from MYR 21.61bn in September.<sup>131</sup>
- Savings deposit in banking system slightly increased to MYR 157.31bn in December 2018 from MYR 155.9bn in September.<sup>132</sup>

## Capital Levels & Regulations

- The Common Equity Tier 1 Capital ratio for Malaysian banks decreased to 13.1% in December 2018 from 13.2% in September. However, the Tier 1 Capital Ratio remained at 13.9% in the same period.<sup>133</sup>

## Asset Quality

- The value of impaired loans at Malaysian banks had decreased to MYR 24.30bn in December 2018 from MYR 25.21bn in September 2018. The ratio of net impaired loans to net total loans decreased to 0.91% from 0.94% in the same period from the previous year.<sup>134</sup>
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<sup>117</sup>Feb 14, 2019, [Key Highlights on Financial and Economic Developments in 3Q 2018](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

<sup>118</sup>Feb 14, 2019, [Key Highlights on Financial and Economic Developments in 3Q 2018](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

<sup>119</sup>Jan 24, 2019, [Consumer Price Index Malaysia December 2018](https://www.statistics.gov.my), Department of Statistics Malaysia, <https://www.statistics.gov.my>

<sup>120</sup>Feb 11, 2019, [Key Statistics of Labour Force in Malaysia, December 2018](https://www.statistics.gov.my), Department of Statistics Malaysia, <https://www.statistics.gov.my>

<sup>121</sup>Jan 30, 2019, [Malaysia External Trade Statistics December 2018](https://www.statistics.gov.my), Department of Statistics Malaysia, <https://www.statistics.gov.my>

<sup>122</sup>Nov 08, 2018, [Monetary Policy Statement](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

<sup>123</sup>Jan 31, 2019, [Monthly Highlights and Statistics December 2018](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

<sup>124</sup>Jan 31, 2019, [MONTHLY HIGHLIGHTS –DECEMBER 2018](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

<sup>125</sup>Jan 31, 2019, [Monthly Highlights and Statistics December 2018](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

<sup>126</sup>Jan 31, 2019, [Monthly Highlights and Statistics December 2018](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

<sup>127</sup>Feb 11, 2019, [Malaysia's Najib Razak in last-ditch bid to delay 1MDB trial](https://www.channelnewsasia.com), Channel News Asia, <https://www.channelnewsasia.com>

<sup>128</sup>Feb 05, 2019, [Malaysia sets out regulation for digital assets](https://www.internationalinvestment.net), International Investment, <https://www.internationalinvestment.net>

<sup>129</sup>Jan 31, 2019, [Monthly Highlights and Statistics December 2018](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

<sup>130</sup>Jan 31, 2019, [Monthly Highlights and Statistics December 2018](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

<sup>131</sup>Jan 31, 2019, [Monthly Highlights and Statistics December 2018](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

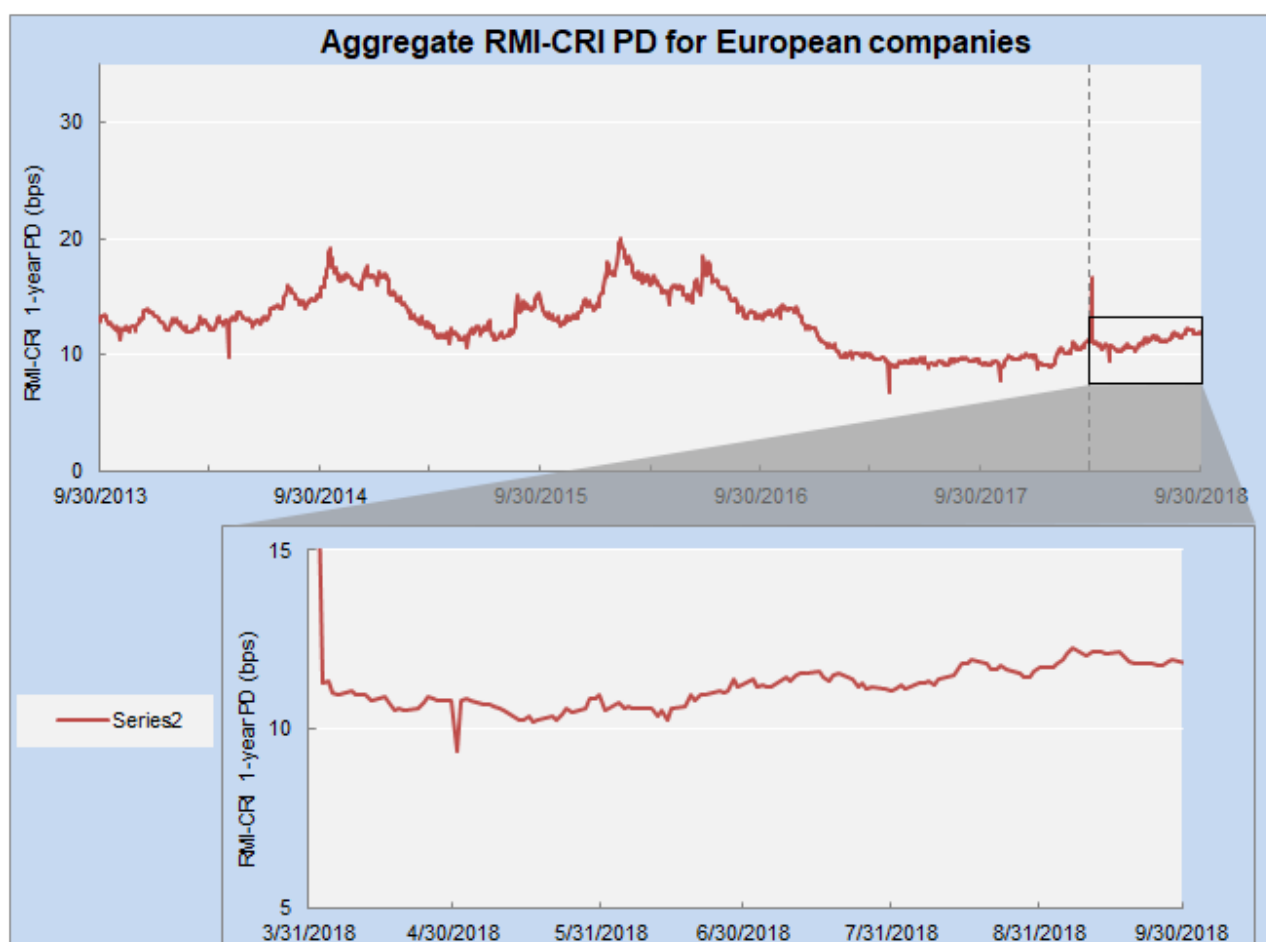
<sup>132</sup>Jan 31, 2019, [Monthly Highlights and Statistics December 2018](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

<sup>133</sup>Jan 31, 2019, [Monthly Highlights and Statistics December 2018](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

<sup>134</sup>Jan 31, 2019, [Monthly Highlights and Statistics December 2018](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

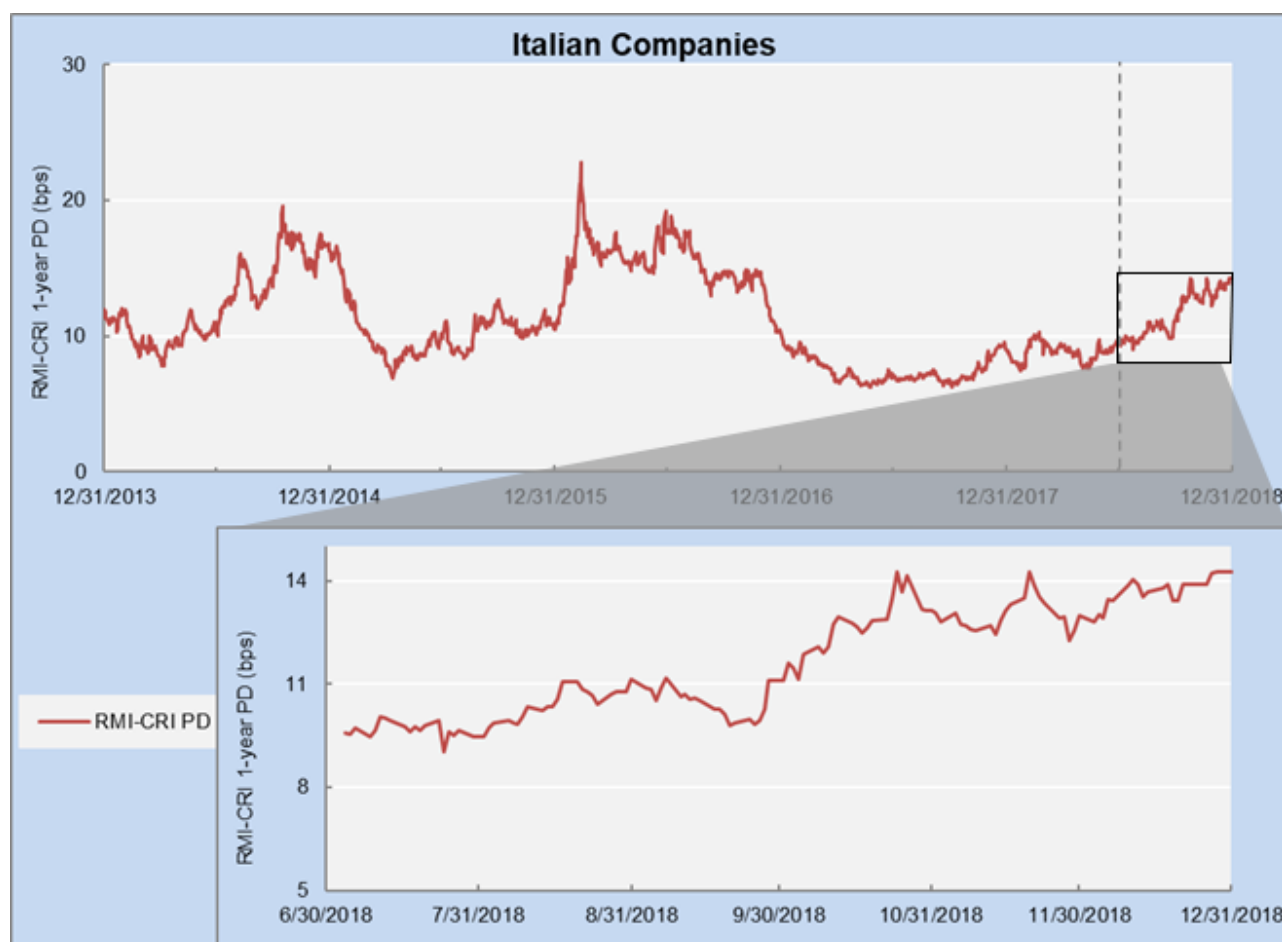
# Europe

European firms ended Q4 with higher default risks compared with the end of Q3 2018. Worries over rising funding costs, trade tariffs, slower Chinese growth and Brexit continue to combine to form a difficult environment for fixed income issuers. Economic data from the European Union point to slower momentum in the eurozone economy. The flash composite purchasing manager's index for December showed business activity slowed to the weakest level in over four years. The index came in at 51.3, down from 52.7 in November. Protests in France and the ongoing weak demand for new cars were among the factors weighing on activity. As expected, the ECB confirmed the end of its bond buying programme in December and reiterated that target interest rates would remain on hold for the first quarter of 2019. In Italy, the government agreed to delay some spending measures as part of their effort to reduce the fiscal deficit. However, concerns over Italian banks and other institutions in the financial sector remain. Overall, we expect weakness in European firm credit quality to persist in Q1 and possibly extend to Q2 this year.



## Italian Companies

The aggregate 1-year RMI PD for Italian companies increased during the fourth quarter of 2018, from 10.87 bps in last quarter to 14.08 bps by the end of December 2018. Q4 saw credit outlook of Italian companies worsen amid the political uncertainty. The economy contracted by 0.2%, and recorded a 0.1% YoY growth. This second consecutive contraction in GDP indicates that Italy has fallen back into a technical recession. While the Italian government has lowered its 2019 economic growth forecast to 1.0% from 1.5%, it is still considered overly optimistic according to several analysts.



## Economy

- The GDP of Italy is estimated to decrease by 0.2% from Q3 2018 to Q4 2018. The economy expanded 0.1% year-over-year. The slowdown is attributed to the decrease of value added in agriculture, forestry and fishing as well as in industry. The contraction followed a 0.1% drop in the third quarter's GDP, indicating that Italy is in a technical recession.<sup>135,136</sup>
- Italy's unemployment rate was 10.3% in December 2018, a slight decrease over November 2018. The country ended the quarter with 23.269mn people employed. 2.682mn people were unemployed, a 0.2% decrease over the previous month. Youth unemployment (aged 15-24) was 31.6%, up 0.2% over the previous month.<sup>137</sup>
- Italy's manufacturing Purchasing Managers' Index (PMI) – a single-figure measure of developments in overall business conditions – increased slightly to 49.2 in December 2018, from 48.6 in November 2018. This marks the third month running for which the index fell below the 50.0 no-change mark. Both output and new orders underwent further reductions and manufacturers' confidence continued to fall, dropping to the lowest figure in six years.<sup>138</sup>

- Italy's services PMI reported the fastest growth of the service sector in three months during December, as a faster rise in new orders encouraged the increase of business activity. Italy's services PMI registered 50.5 in December, up from 50.3 in November. Overall, the growth in staffing numbers is still solid, and the latest reading marked the twenty-seventh consecutive month of payroll expansion. According to surveyed firms, factors contributing to the growth include business expansion plans as well as rising levels of outstanding business. Business confidence reached an eight-month high, as firms were hopeful of greater sales activity and increased economic growth over the coming year.<sup>139</sup>
- The European Commission Italy Economic Sentiment Indicator (ESI), which assesses the economic outlook of EU countries as a weighted average of the industrial, services, construction, retail and consumer sectors, reported a reading of 107.1 in October, 105.9 in November and 104.5 in December. These figures are lower than the 108.4 average reported over Q3 2018.<sup>140</sup>
- The confidence climate in December 2018 worsened from 114.3 to 113.1. All components lowered: economic from 131.5 to 129.4, personal from 108.9 to 107.0, current from 111.5 to 110.0 and future component from 118.7 to 116.0. The balance concerning expectations on unemployment increased from 22.8 to 29.6. The balance on inflation perceptions referring to the last 12 months decreased from -4.6 to -6.5, while the balance on inflation expectations for next 12 months improved from -2.2 to -6.0.<sup>141 142</sup>

### Funding & Liquidity

- Yield on 10-year Italian bonds generally decreased during Q4 2018, from the 3.32% high on 1st October 2018 to the 2.77% low on 31st December 2018. The decrease is largely a result of a deal between Italy's coalition government and the European Commission over Italy's controversial 2019 spending plans. In December 2018, Italy's government said that it would aim to lower its deficit target to 2.04%, down from an original target of 2.4%. The news of such a breakthrough has buoyed investor spirit and as a result investors demand less interest on government bonds as the perceived risk of holding such bonds decreases.<sup>143</sup>
- Interest rates on loans (other than bank overdrafts) to non-financial corporations fell during Q3 2018, down from 2.07% in September 2018 to 2.05% in December 2018. Bank interest rates (including revolving loans, overdrafts and extended credit card credit) to corporations rose for October 2018 before decreasing to 2.79% in December 2018. Loans for house purchases increased from 1.79% to 1.88% in the fourth quarter.<sup>144, 145, 146</sup>
- Preliminary estimates for the number of outstanding loans to non-financial institutions stood at 690048. Total outstanding loans overall decreased by 2.73% from the previous quarter.<sup>147</sup>

### Politics

- Italy's new populist government finally reached a deal with the European Union commission over its 2019 budget, after agreeing to cut its deficit for 2019 to 2.04% of GDP. It also lowered its 2019 economic growth forecast to 1.0%, from 1.5% previously. However, after taking into account Italy's weakening economic growth outlook, several analysts remain skeptical of Italy's ability to meet its revised deficit target. In comparison to the government's projection, Morgan Stanley and Barclays Capital forecasted Italian GDP growth of just 0.5% and 0.4% respectively.<sup>148</sup>
- Italy's latest published public accounts were that of Q3 2018. Total revenues for General government grew by 0.1% while total expenditures remained unchanged as compared

to the same quarter of the previous year. The growth of total revenues results from an increase in current revenues (+1.7%) and a decrease in total capital revenues (-9.2%). The trend in expenditure results from an increase in current expenditures (+3.0%) and a fall in capital expenditures (-15.9%). The General government deficit (net borrowing) to GDP ratio was 1.7% in the third quarter of 2018, as compared to the -1.8% in the third quarter of 2017. Italy's debt-to-GDP ratio is set to stand at 133.0% based on latest data in Q3 2018.<sup>149,150</sup>

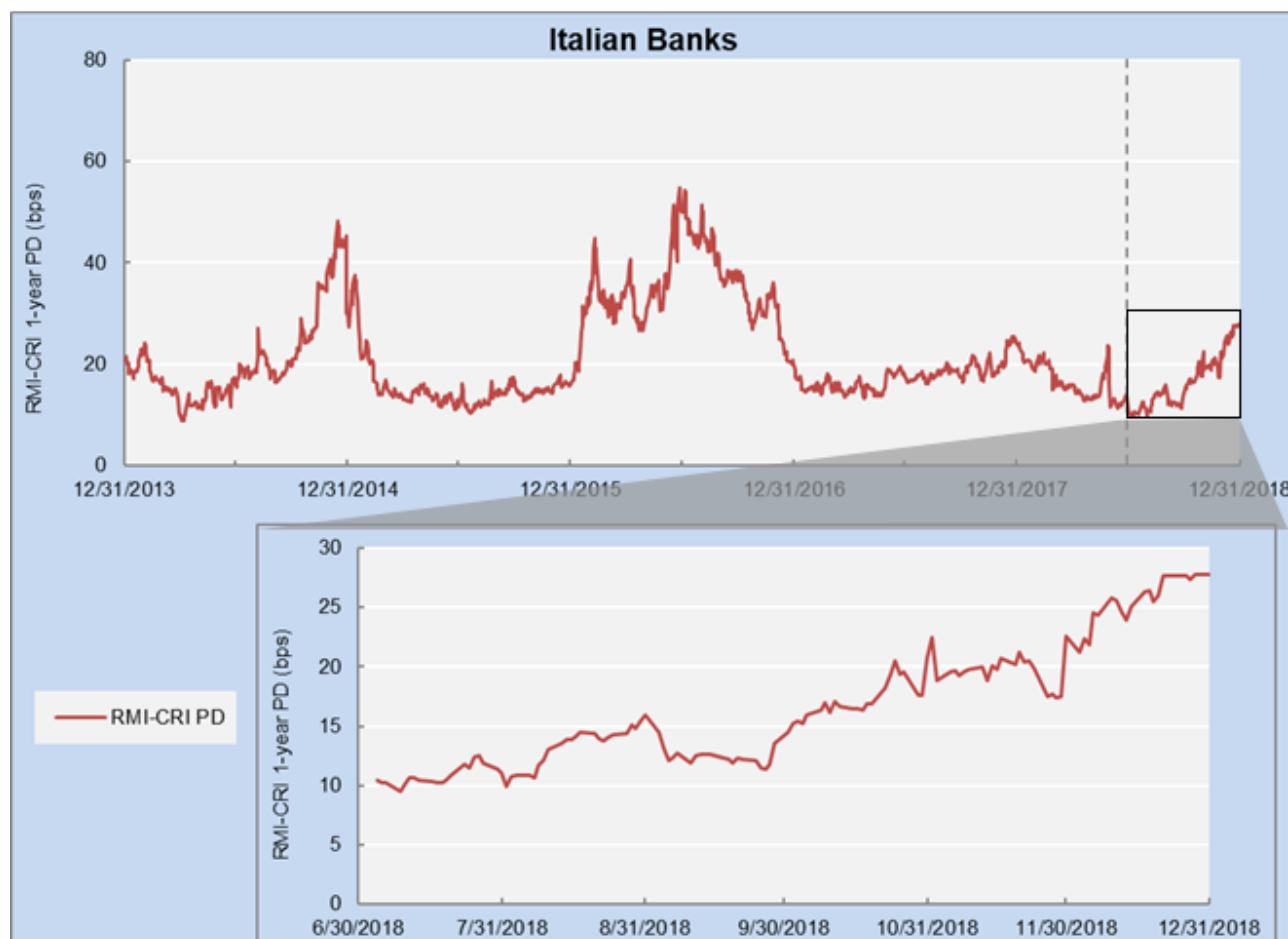
### **Sovereign Credit Ratings**

- Moody's downgraded Italy's rating of Baa2 to Baa3 with a stable outlook. Fitch revised its ratings to BBB with a negative outlook while S&P retained its rating of BBB but lowered its outlook to negative from stable.<sup>151</sup>



## Italian Banks

The aggregate 1-year RMI PD for Italian banks increased significantly over Q4 2018 amid the challenging political uncertainties. Funding and liquidity have been adequate for Italian banks over Q4, although there are some signs of tightening. Nevertheless, the demand for business lending continued to grow. In the meantime, asset quality at Italian banks worsens with the ratio of new non-performing loans to outstanding loans increasing. Meanwhile, coverage ratio for Italian banks remained unchanged at 54.5%.



## Profitability

- Italy's biggest bank Unicredit posted its strongest fourth quarter since 2008 as its fourth quarter net profit increase by 19.9% as compared to a year ago. Its gross non-performing exposure ratio improved to 4.1% with a coverage ratio of 57.8% while its CET1 ratio deteriorated to 12.07% from 12.11% in Q3 2018. For Intesa Sanpaolo, another major Italian bank, its net interest income is down 5.4% as compared to a year ago while its CET1 ratio worsens to 13.6% from 13.7% in September. Intesa's loans loss provisions increases to EUR 698mn in Q4 2018 from EUR 519mn in Q2 2018. Intesa meets its fiscal year target despite the soft fourth quarter. <sup>152,153</sup>

## Funding & Liquidity

- The 12-month percentage change in deposits of funds by Italian residents was 1.17% in December 2018, while the total deposits of non-domestic residents was 7.47%. Bank funding from Eurosystem decreased by 3.04% as compared to December 2017, while debt securities issued by banks decreased by 12.49% as compared to the same period last year. <sup>154</sup>
- Interest charged on business loans (other than bank overdrafts) of over EUR 1mn to non-financial institutions was 1.12% in December 2018, up from the 1.01% reported in

September 2018. Similar loans with collateral and/or guarantees were charged with an interest rate of 1.15% down from 1.23% charged in September 2018. Bank interest rate on loans to sole proprietors was 3.08% in December 2018, up from 3.01% in September 2018.<sup>155</sup>

- The Bank of Italy's liabilities to Euro-area financial counterparties totaled EUR 88.703bn in December 2018.<sup>156</sup>
- Italian bank liabilities towards the Eurosystem decreased to EUR 244bn in November 2018 from EUR 245bn in August 2018. Lenders decreased their funds held at the ECB by 3.3% YoY in November 2018 while capital and reserves decreased to EUR 392bn during the three months ending November 2018.<sup>157</sup>
- According to the latest bank lending survey, Italian banks reported that in the third quarter of 2018 credit supply conditions remained relaxed overall, although there are some signs of tightening. The demand for business lending continued to grow moderately in the third quarter of 2018. The main contributory factors were low interest rates and the favorable outlook for the real estate market, which increased the demand for household mortgage loans.<sup>158</sup>

### Asset Quality

- The Bank of Italy said that the ratio of new non-performing loans to outstanding loans remained very low, although it increased to 1.7% in the third quarter of 2018 from 1.5% in the previous quarter. The non-performing ratio for loans to firms also increased to approximately 2.8% from 2.3% in Q2 while a similar measure for loans to households fell by 0.1 points to 1.1%.<sup>159</sup>
- Share of non-performing loans to total loans fell from 9.7% to 9.4% in Q3 2018. The coverage ratio at Italian banks remained unchanged at 54.5%.<sup>160</sup>

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<sup>135</sup> Jan 31, 2019, [Preliminary estimate of GDP](#), Italian National Institute of Statistics, [istat.it](#)

<sup>136</sup> Jan 31, 2019, [Italy Falls Back Into Recession – Raising Concerns for E.U.](#), Time <http://time.com/>

<sup>137</sup> Jan 31, 2019, [Employment and unemployment: provisional data](#), Italian National Institute of Statistics, [istat.it](#)

<sup>138</sup> Jan 2, 2019, [Falling new orders contribute to further deterioration in Italian manufacturing performance](#), Markit, <https://www.markiteconomics.com/>

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<sup>140</sup> Jan, 2019, [Economic sentiment indicator for Italy](#), Eurostat, [ec.europa.eu/eurostat](http://ec.europa.eu/eurostat)

<sup>141</sup> Dec 21, 2018, [Consumer and business confidence](#), Italian National Institute of Statistics, [istat.it](#)

<sup>142</sup> Dec 21, 2018, [Consumer and business confidence](#), Italian National Institute of Statistics, [istat.it](#)

<sup>143</sup> Dec 19, 2018, [Italy's bonds, banks and equities boosted by budget breakthrough](#), CNBC, <http://www.cnn.com>

<sup>144</sup> Jan, 2019, [Italian MFIs: Interest per annum on new loans to non-financial corporations](#), ECB, [sdw.ecb.europa.eu](http://sdw.ecb.europa.eu)

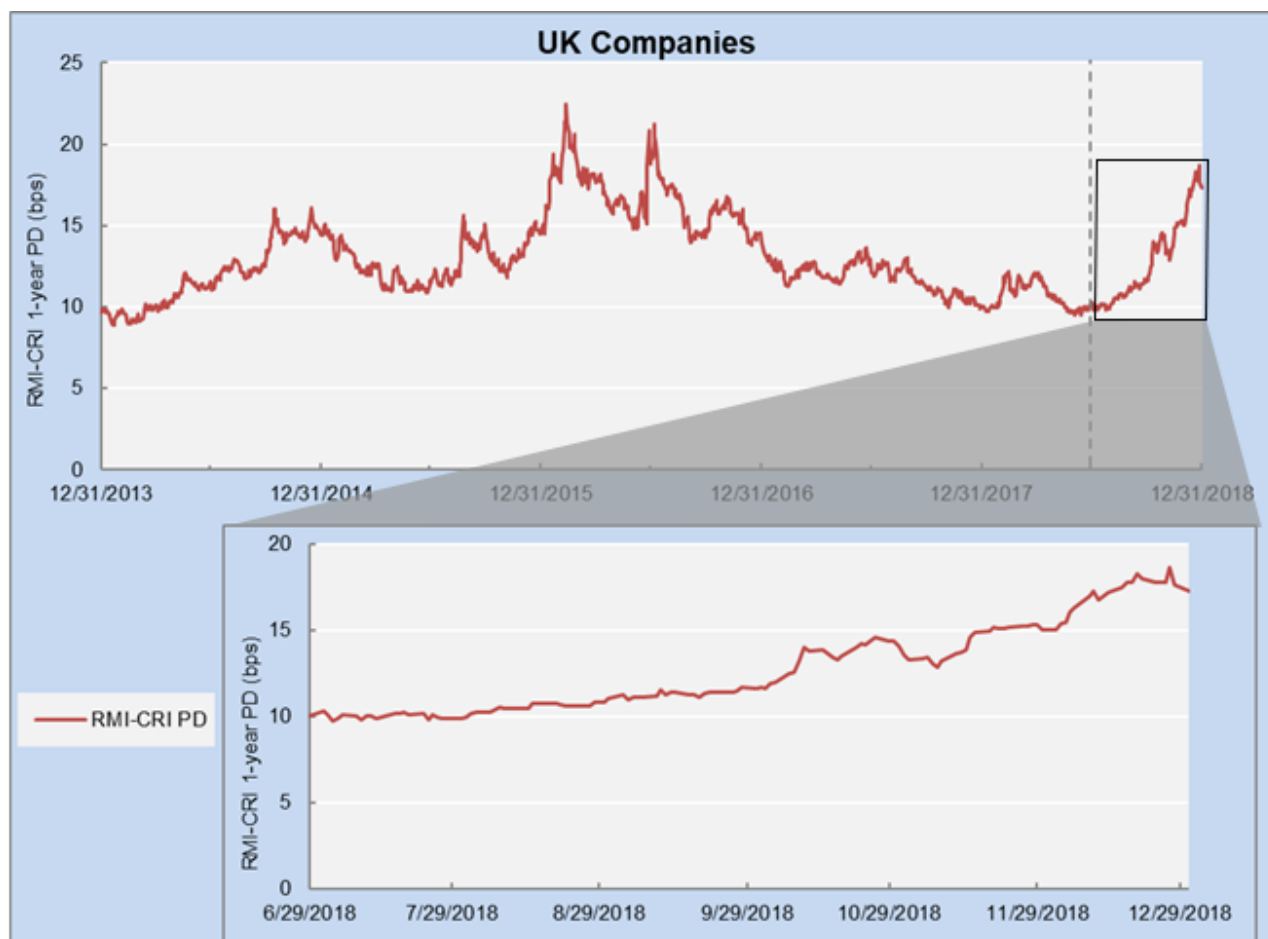
<sup>145</sup> Jan, 2019, [Italian MFIs: Revolving loans & overdrafts, convenience & extended credit card credit to corporations](#), ECB, [sdw.ecb.europa.eu](http://sdw.ecb.europa.eu)

<sup>146</sup> Jan, 2019, [Italian MFIs: Cost of borrowing for households for house purchase](#), ECB, [sdw.ecb.europa.eu](http://sdw.ecb.europa.eu)

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- <sup>148</sup> Dec 19, 2018, [Italy and markets cheer budget deal with EU, but doubts persist](http://www.reuters.com), Reuters, <http://www.reuters.com>
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- <sup>150</sup> Jan, 2019, [General Government gross debt - quarterly data](http://ec.europa.eu/eurostat), Eurostat, [ec.europa.eu/eurostat](http://ec.europa.eu/eurostat)
- <sup>151</sup> Oct, 2018 [Rating: Italy Credit Rating](https://countryeconomy.com/), CountryEconomy, <https://countryeconomy.com/>
- <sup>152</sup> Feb 7, 2019, [UniCredit: a pan-European winner. 4Q18 and FY18 Group Results](https://www.unicreditgroup.eu/), UniCredit, <https://www.unicreditgroup.eu/>
- <sup>153</sup> Feb 5, 2019, [INTESA SANPAOLO: CONSOLIDATED RESULTS AS AT 31 DECEMBER 2018](https://www.bloomberg.com/), Intesa Sanpaolo Bank, <https://www.bloomberg.com/>
- <sup>154</sup> Feb, 2019, [\[TSC40600\] Bank funding \(12-month percentage changes\)](https://infostat.bancaditalia.it), Banca Italia, <https://infostat.bancaditalia.it>
- <sup>155</sup> Jan, 2019, [Bank interest rates on euro loans to non-financial corporations](http://www.bancaditalia.it), Banca Italia, <http://www.bancaditalia.it>
- <sup>156</sup> Jan, 2019, [Bank of Italy balance sheet: liabilities - liabilities to euro area financial counterparties denominated in euros](http://www.bancaditalia.it), Banca Italia, <http://www.bancaditalia.it>
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## UK Companies

The aggregate RMI-CRI 1-year PD for companies in the UK remained stable in Q4 but displayed a subtle uptrend, from 10.96bps in Q3 to 17.03 bps in Q4. GDP growth slowed to 0.1% QoQ. Consumer spending for the quarter declined when compared to previous quarter, in line with a marked drop in consumer confidence. Trade deficit widened on the account of rising imports of cars, material manufactures and chemicals. The UK continues to be hassled by the uncertainty brought about by Brexit and its complex dealings on various areas, such as trade, migration, etc.



## Economy

- The UK's Q4 2018 GDP slowed from 0.6% QoQ in Q3 2018 to 0.2% QoQ in Q4, with the manufacturing of cars and steel products seeing steep falls and construction also declining. Economic growth in the full year 2018 was estimated to have slowed to 1.4%, which was the weakest since 2009. <sup>161</sup>
- The unemployment rate was 4.1% for Q3 2018, slightly higher than for Q2 2018 (4.0%) but lower than for a year earlier (4.3%). The employment rate was 75.5%, little changed compared with April to June 2018 but higher than for a year earlier (75.0%). Latest estimates show that average weekly earnings for employees in Great Britain in real terms (adjusted for price inflation) increased by 0.9% excluding bonuses, and by 0.8% including bonuses, compared with a year earlier. <sup>162</sup>
- Consumer spending likely decreased during the quarter following Visa's UK Consumer Spending Index. Overall spending declined 1% YoY in December, accelerated from 0.7% decline in November and 0.2% decline in October. Visa said that the lower expenditure was largely driven by a disappointing performance in Face-to-Face spending while growth in eCommerce spend remained relatively subdued. The sustained fall in expenditure throughout the fourth quarter of 2018 coincides with a marked drop

in consumer confidence, as uncertainty around the UK's impending exit from the EU continues to dampen sentiment.<sup>163</sup>

- In the 3 months to Dec 2018, the deficit on trade in goods and services widened by GBP 0.9bn to GBP 10.4bn, due mainly to a GBP 1.5bn rise in goods imports. Rising imports of cars, material manufactures and chemicals were the main contributors to the rise in goods imports.<sup>164</sup>
- The IHS Markit/CIPS Manufacturing Purchasing Managers' Index (PMI) rose to 54.2 from an upwardly revised 53.6 in November, the highest reading in six months. Markit said the improvement did not herald a big change in the outlook for Britain's stuttering economy and was caused in large part by manufacturers stockpiling inputs and finished goods, both of which were near record highs. Many manufacturers are building up inventories to protect themselves against the risks of customs delays at the border after March 29 when Britain is due to leave the EU.<sup>165</sup>
- In the construction sector, the PMI index was at 52.8 for Dec 2018, slightly higher than that for Sep 2018 at 52.1. Commercial building was the worst performing category, with activity expanding at the slowest rate since May 2018, while civil engineering was the strongest underpinned by residential building expanding. With a slight rise in new orders and a softening in overall activity growth, firms continued to be impacted by Brexit-related uncertainty and reluctance by clients to place orders especially for commercial projects.<sup>166</sup>

## Monetary

- At its meeting ending on December 19 2018, the Monetary Policy Committee (MPC) voted unanimously to maintain Bank Rate at 0.75%. The Committee voted unanimously to maintain the stock of sterling non-financial investment-grade corporate bond purchases, financed by the issuance of central bank reserves, at GBP 10bn. The Committee also voted unanimously to maintain the stock of UK government bond purchases, financed by the issuance of central bank reserves, at GBP 435bn. Since the MPC's previous meeting, the near-term outlook for global growth has softened and downside risks to growth have increased. These uncertainties are weighing on UK financial markets.<sup>167</sup>
- CPI 12-month rate was 2.1% in December 2018, down from 2.4% in September. The largest downward contributions to change in the 12-month rate came from falls in petrol prices and from air fares, where ticket prices rose between November and December 2018, but by less than a year ago. These downward effects were offset by upward contributions from a variety of categories including accommodation services and, to a lesser extent, mobile phone chargers, games, toys and hobbies, and food.<sup>168</sup>

**Politics**

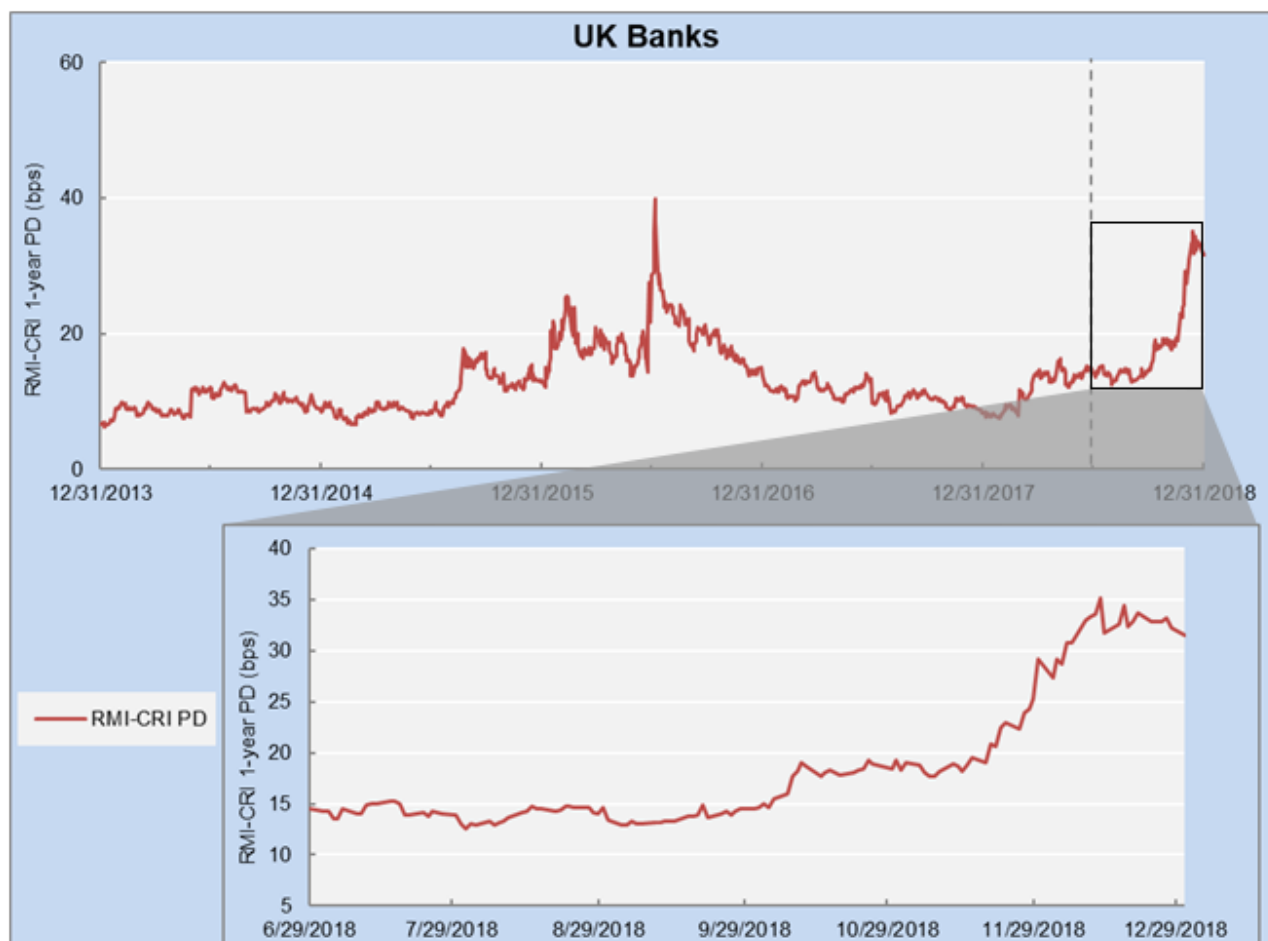
- MPs rejected Theresa May's Brexit deal on January 15 this year by a record majority of 230. They returned to the House of Commons on January 29 to debate the government's response. A majority voted in favour of a non-binding amendment that rejected a no-deal Brexit. They also voted in favour of an amendment that called for the backstop to be replaced with "alternative arrangements to avoid a hard border" in Ireland, but otherwise supported the prime minister's deal. The next step is for the prime minister to seek the change MPs have backed. If the EU were to agree to changes and MPs backed the adjusted deal that would be a great result for the prime minister. But senior EU politicians have said they will not reopen the legal text of the withdrawal agreement that they negotiated with the UK.<sup>169</sup>

**Sovereign Credit Ratings**

- Moody's long term rating on the UK remains at Aa2, two notches below the highest possible Aaa rating. Meanwhile, S&P's rating kept unchanged on the country's foreign and local currency long term debt at AAu, one notch below the coveted AAA. Fitch Ratings also kept the sovereigns long term debt rating at AA, one rank from its highest rating of AAA.

## UK Banks

The RMI-CRI aggregate 1-year PD for banks in the United Kingdom showed an upward trend in Q4 2018, from 1.45bps to 3.15bps. The FTSE 350 Banks Index showed a fall of 7.3% over the quarter.



## Profitability

- HSBC missed analysts' expectations according to its 2018 financial report. The bank posted a 15.9% increase in pre-tax profit for the full year 2018 to reach USD 19.89bn. Lower revenue in Q4 2018 in comparison with the previous quarter was due to the tough trading environment at the end of the last year, according to HSBC Group CFO.<sup>170</sup>
- Barclays reported a full-year net profit of GBP 1.4bn for 2018, swinging back to profit from 2017 losses. In Q4 2018, the bank took a special impairment charge of £150 million, given the uncertainty around Brexit.<sup>171</sup>
- Profits at Lloyds Banking Group increased 6% to GBP 8.1bn. Net interest income was up 3% with increased margin of 2.93% and other income was GBP 6.0bn with strong performance from insurance new business.<sup>172</sup>
- Royal Bank of Scotland delivered a good financial performance in 2018, despite an uncertain economic outlook and a highly competitive environment. Operating profit before tax was GBP 3.4bn in 2018, up from GBP 2.2bn a year prior.<sup>173</sup>
- Standard Chartered's pre-tax profit surged to USD 3.9bn in 2018, after previously warning it had set aside nearly USD 1bn for regulatory fines in the US and Britain.<sup>174</sup>

## Funding & Liquidity



- According to the Bank Liabilities Survey produced by the Bank of England, UK banks and building societies reported that their total funding volumes increased significantly in the three months to end-November 2018. Lenders expected total funding volumes to remain unchanged in the three months to end-February 2019, although 'other' funding was expected to increase significantly.<sup>175</sup>
- Lenders reported that their total capital levels decreased slightly in Q4, and were expected to remain unchanged in Q1.
- Lenders reported that the internal price charged to business units to fund the flow of new loans had increased significantly in Q4. This was reported to have been driven by a significant increase in wholesale funding spreads. Lenders expected a significant increase in the transfer price in Q1.

### Asset Quality

- The total write-offs of sterling denominated loans rose from GBP 1049mn in Q2 2018 to GBP 1094mn in Q3, attributed mainly to write-offs to individuals, which increased from GBP 678mn to GBP 822mn. Non-financial loan write-offs to businesses decreased from GBP 367mn to GBP 233mn and write-offs to non-residents decreased slightly from GBP 18mn to GBP 15mn.<sup>176</sup>
- Write-offs on loans denominated in foreign currency decreased from GBP 146mn in Q2 2018 to GBP 126mn in Q3 2018, driven by decrease in the write-offs on loans to non-residents, which constituted the largest share of the total write-offs.

<sup>161</sup> Feb 11, 2019 [GDP first quarterly estimate, UK: October to December 2018](http://www.ons.gov.uk), ONS, <http://www.ons.gov.uk>

<sup>162</sup> Jan 22, 2019 [UK labour market: January 2019](http://www.ons.gov.uk), ONS, <http://www.ons.gov.uk>

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<sup>164</sup> Feb 11, 2019 [UK trade: December 2018](http://www.ons.gov.uk), ONS, <http://www.ons.gov.uk>

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<sup>166</sup> Jan 3, 2019 [Construction growth slips to three-month low](https://www.cips.org), CIPS, <https://www.cips.org>

<sup>167</sup> Dec 20, 2018 [Monetary Policy Summary and minutes of the Monetary Policy Committee meeting ending on 19 December 2018](http://www.bankofengland.co.uk/), Bank of England, <http://www.bankofengland.co.uk/>

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<sup>170</sup> Feb 19, 2019 [HSBC Reports Declined Growth for 2018 Following a Challenging Fourth Quarter](https://weeklywall.com), Weekly Wall, <https://weeklywall.com>

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<sup>174</sup> Feb 26, 2019 [Standard Chartered's 2018 profits rise despite setting aside cash for fines](https://www.channelnewsasia.com), Channel News Asia, <https://www.channelnewsasia.com>

<sup>175</sup> Jan 17, 2019 [Bank Liabilities Survey - 2018 Q4](http://www.bankofengland.co.uk/), Bank of England, <http://www.bankofengland.co.uk/>

<sup>176</sup>Dec, 2018 [Bankstats \(Monetary & Financial Statistics\) - December 2018](http://www.bankofengland.co.uk/), Bank of England,  
<http://www.bankofengland.co.uk/>

# Appendices

The appendices provide readers with a comprehensive overview of various outputs that are produced by RMI-CRI's operational PD system. While the PD system provides default forecasts at horizons ranging from one month to five years, here only RMI-CRI 1-year PDs are reported. In addition to the PD produced by the RMI-CRI system, important macroeconomic, corporate credit and sovereign risk indicators are provided. These summarize the credit situation at a glance, as well as provide detailed data for reference purposes.

Appendix [A](#) and Appendix [B](#) give RMI-CRI 1-year aggregate PD where the aggregations are by region, economy and sector. In these sections, the RMI-CRI 1-year aggregate PD is based on the median PD of active listed firms. These are given as month-end data, and are based on RMI's default forecast model calibrated on February 11, 2019, using data up to December 31, 2018. For a detailed description of RMI-CRI's default forecast model, the [Technical Report](#) is available on our website.

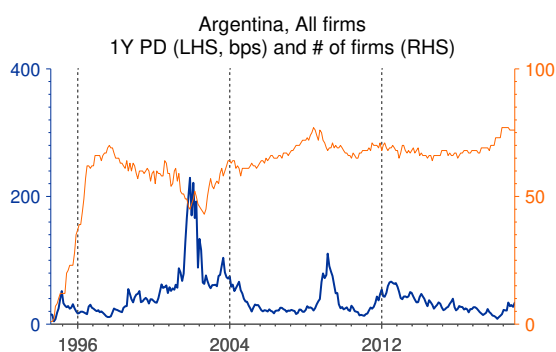
Appendix [A](#) provides 1-year aggregate PD by economy and sector. For each economy, the graph on the left shows the time series of 1-year aggregate PD for all exchange-listed firms within the economy (thick blue, left axis), and the time series of the number of firms with PD (thin orange, right axis). The table on the right provides the median and standard deviation of PDs for firms within ten industry sectors at the end of Q3 2018 and Q4 2018. Note that the statistics are for firms that have a PD at both dates so that consistent comparisons can be made. The median and standard deviation of the difference of individual PD is also given. The industry sectors are based on the Level I Bloomberg Industry Classification.

Appendix [B](#) gives 1-year aggregate PD by the seven regions of Asia-Pacific developed, Asia-Pacific emerging, North America, Latin America, Eastern Europe, Western Europe and Africa & the Middle East. The 12 graphs in each region show the time series of RMI-CRI 1-year aggregate PD for all exchange-listed firms in the region, all non-financial firms in the region, and firms in each of the ten industry sectors in the region. Each graph shows the PD in thick blue on the left axis and the number of firms with PD in thin orange on the right axis.

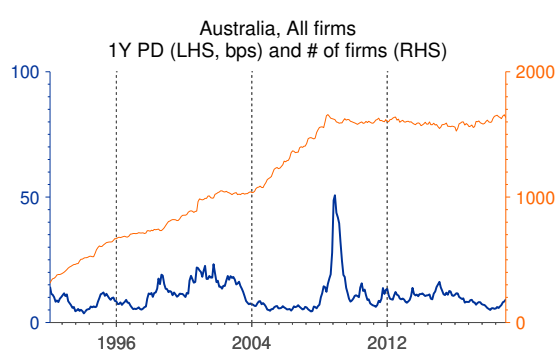
Appendix [C](#) provides common macroeconomic, corporate credit and sovereign risk indicators for each economy along with the RMI-CRI 1-year aggregate PD for financial and non-financial firms. The graphs on the left give historical context to the values, and the table on the right gives the data from the previous five quarters. For variables that are more frequent than quarterly, the last value in the quarter is used. But if a variable is available at a monthly frequency and the end of March data was not available at the time this report was compiled, the previous month's data is given with an asterisk.

Appendix [D](#) gives a more detailed description of the data in Appendix [C](#)

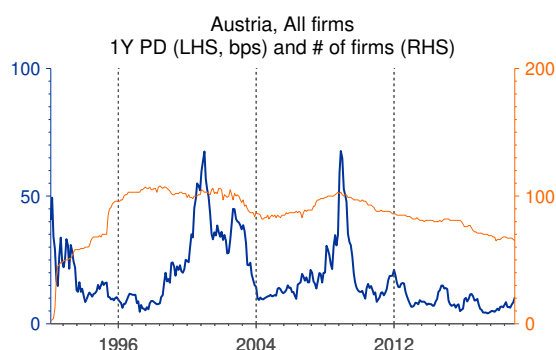
## A PD by economies



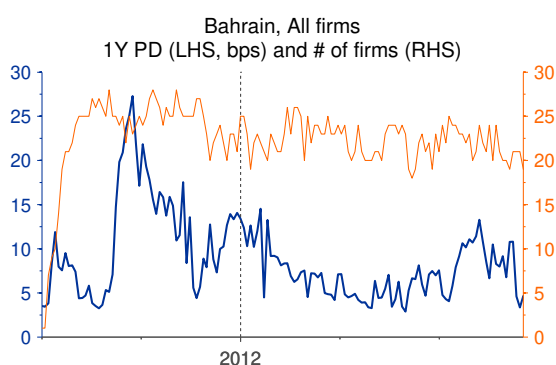
Argentina	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	12	17.7	26.3	20.1	23.4	1.0	7.1
Basic Materials	6	130.7	190.1	70.7	76.9	-60.0	114.2
Communications	5	76.3	87.7	55.9	72.0	2.8	73.8
Consumer Cyclical	5	39.6	160.2	62.2	37.3	5.1	137.7
Consumer Non-cyclical	21	17.6	63.9	15.5	75.8	0.1	54.7
Diversified	1	60.1	—	80.8	—	20.7	—
Energy	2	47.0	62.3	33.2	43.9	-13.8	18.5
Industrial	10	23.5	29.4	15.6	30.8	0.2	15.1
Technology	1	0.0	—	0.0	—	-0.0	—
Utilities	13	41.3	81.9	35.5	64.9	-3.0	18.2



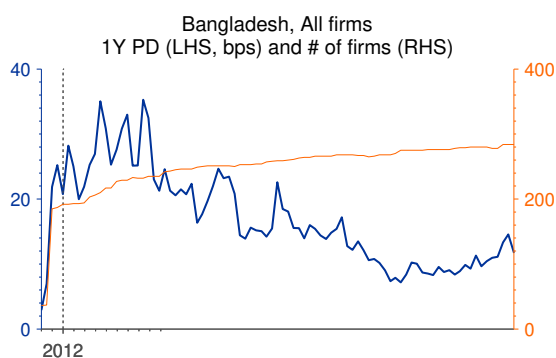
Australia	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	179	1.1	12.3	0.7	13.7	-0.0	7.0
Basic Materials	563	6.7	67.0	8.9	91.7	0.7	46.3
Communications	103	9.2	43.2	11.6	47.0	0.0	31.8
Consumer Cyclical	88	4.3	32.6	3.7	60.1	-0.0	35.1
Consumer Non-cyclical	248	4.5	66.9	5.1	69.1	0.1	21.6
Diversified	5	0.1	2.6	0.3	2.7	0.0	1.2
Energy	154	11.4	148.9	11.5	127.2	-0.1	71.4
Industrial	119	6.3	27.2	6.3	31.3	0.1	14.9
Technology	133	10.6	58.5	12.4	44.5	0.3	33.1
Utilities	18	5.9	52.1	15.3	40.6	0.1	30.2



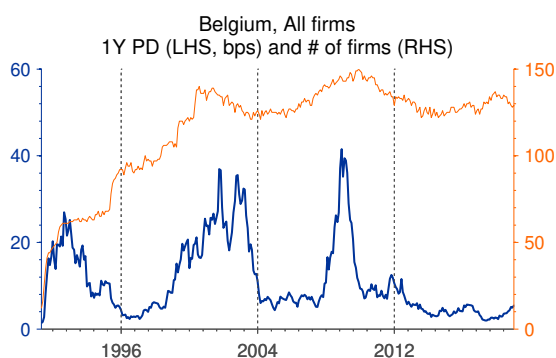
Austria	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	22	2.8	12.8	1.2	8.3	-0.2	6.4
Basic Materials	4	2.4	2.1	2.6	2.3	0.2	0.2
Communications	1	4.3	—	5.6	—	1.3	—
Consumer Cyclical	9	10.6	58.9	7.2	43.7	0.0	16.5
Consumer Non-cyclical	6	12.0	15.9	14.0	19.3	2.0	5.0
Energy	3	7.2	9.3	8.7	9.3	3.4	1.5
Industrial	16	9.5	23.6	10.0	25.3	0.2	8.1
Technology	4	16.4	17.9	11.9	27.3	-1.3	10.8
Utilities	2	1.7	0.9	2.1	2.2	0.4	1.2



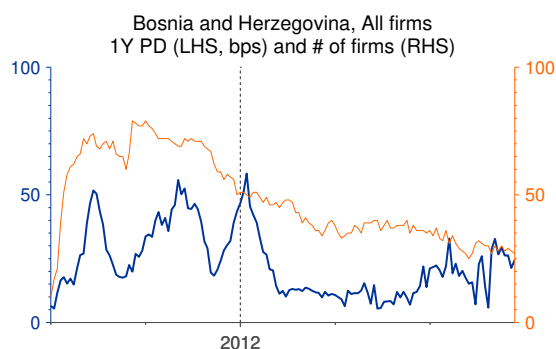
Bahrain	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	12	11.2	22.2	13.1	24.1	0.3	6.1
Basic Materials	1	1.6	—	2.9	—	1.3	—
Communications	1	1.9	—	1.5	—	-0.4	—
Consumer Cyclical	3	0.1	10.7	0.1	8.5	0.0	2.2
Industrial	1	79.6	—	81.5	—	1.9	—



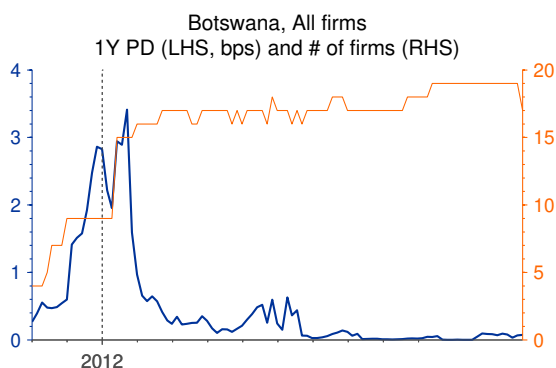
Bangladesh	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	99	19.0	26.1	18.1	29.8	-0.1	9.1
Basic Materials	17	5.4	23.0	5.9	33.7	0.9	12.1
Communications	7	0.9	4.2	1.5	4.1	0.3	0.9
Consumer Cyclical	66	12.0	41.2	15.0	53.6	2.7	18.5
Consumer Non-cyclical	40	3.7	27.2	6.4	41.6	1.9	16.6
Energy	5	9.9	25.4	10.7	24.4	-0.3	1.4
Industrial	35	6.7	22.7	9.7	28.2	1.1	16.3
Technology	1	1.0	—	1.2	—	0.2	—
Utilities	8	3.0	12.2	5.1	10.5	-0.2	2.1



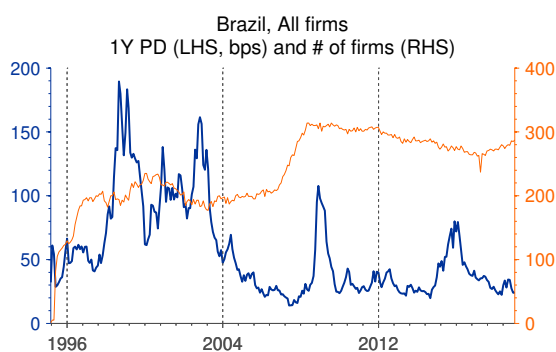
Belgium	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	38	0.3	17.1	0.3	12.1	0.0	5.5
Basic Materials	6	3.2	25.8	7.9	100.0	2.2	82.3
Communications	9	6.5	25.3	6.3	22.2	-0.6	5.6
Consumer Cyclical	8	11.0	27.6	9.1	18.7	-0.5	22.1
Consumer Non-cyclical	28	8.6	13.9	8.7	24.6	0.7	14.1
Diversified	5	0.1	1.5	0.1	2.0	0.0	0.6
Energy	1	18.4	—	7.9	—	-10.5	—
Industrial	28	8.3	25.5	10.6	29.4	0.4	6.7
Technology	4	8.4	10.4	6.1	41.7	0.6	33.1
Utilities	2	2.3	2.1	1.0	0.7	-1.2	1.3



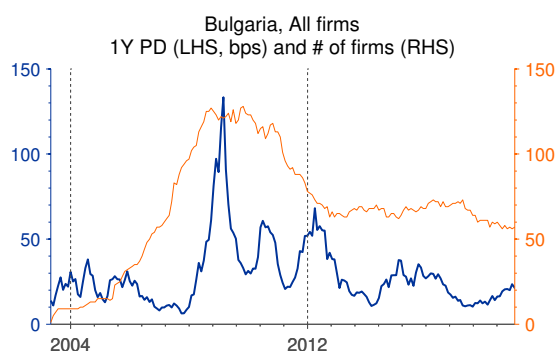
Bosnia and Herzegovina	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	2	29.2	8.0	16.3	0.1	-12.9	7.9
Basic Materials	5	42.9	97.6	57.4	94.1	-0.2	18.8
Communications	2	2.9	2.7	3.1	3.0	0.2	0.3
Consumer Cyclical	1	168.6	—	44.0	—	-124.5	—
Consumer Non-cyclical	5	27.6	81.3	13.9	65.2	-4.2	20.3
Energy	3	14.5	6.2	15.3	10.3	2.9	14.3
Industrial	2	48.8	62.0	50.9	65.5	2.1	3.5
Utilities	7	96.6	256.4	107.6	206.7	-14.1	52.3



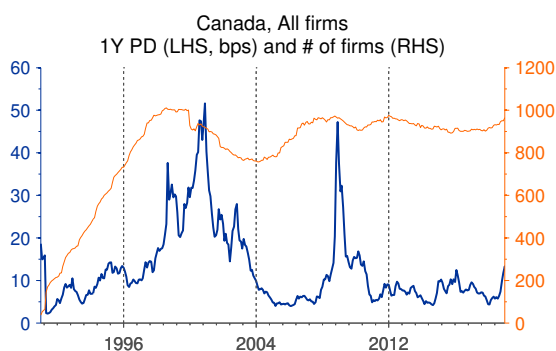
Botswana	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	10	0.2	5.8	0.1	5.6	0.0	0.3
Communications	1	0.1	—	0.4	—	0.3	—
Consumer Cyclical	4	0.0	0.1	0.0	0.7	0.0	0.6
Consumer Non-cyclical	3	1.1	0.8	6.0	57.3	4.9	56.7
Energy	1	0.0	—	0.0	—	-0.0	—



Brazil	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	59	18.0	59.3	17.1	69.6	-1.1	33.5
Basic Materials	22	35.3	249.9	33.1	295.4	0.3	97.9
Communications	9	46.1	463.9	44.5	279.1	2.4	215.6
Consumer Cyclical	52	29.1	422.3	34.5	458.4	0.4	61.5
Consumer Non-cyclical	49	61.8	216.6	44.4	190.2	0.7	77.2
Diversified	8	57.2	191.1	21.1	259.8	-7.3	111.9
Energy	13	54.9	210.5	65.6	169.9	8.8	105.7
Industrial	23	64.1	596.4	69.5	436.1	-0.4	177.8
Technology	6	35.8	773.3	5.9	413.1	-1.3	365.6
Utilities	29	22.8	73.8	28.0	51.4	-0.1	31.4



Bulgaria	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	14	13.9	12.5	14.5	15.6	1.7	9.8
Basic Materials	3	9.1	4.8	8.8	10.2	-0.3	14.7
Communications	2	66.6	87.3	52.0	64.5	-14.6	22.8
Consumer Cyclical	2	21.5	10.0	29.0	4.9	7.5	14.9
Consumer Non-cyclical	10	27.5	86.2	38.7	74.5	1.9	60.4
Diversified	8	30.1	35.9	17.7	35.2	-1.7	10.9
Energy	1	35.9	-	21.3	-	-14.6	-
Industrial	15	10.6	37.0	7.3	54.0	0.5	19.2
Utilities	1	16.0	-	20.1	-	4.1	-



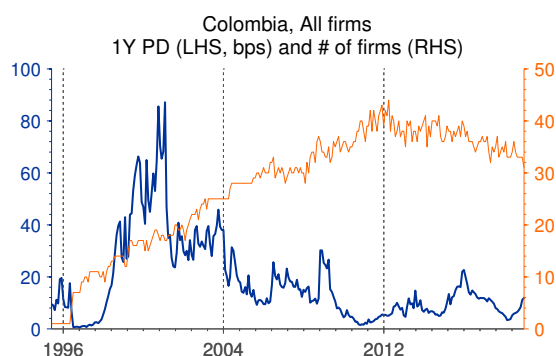
Canada	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	149	0.3	40.5	0.5	36.7	-0.0	13.7
Basic Materials	270	18.6	172.2	17.9	166.3	0.2	150.0
Communications	45	30.2	258.1	11.0	498.7	-0.0	282.5
Consumer Cyclical	63	1.1	156.6	1.7	408.2	-0.0	256.8
Consumer Non-cyclical	127	10.2	355.6	12.1	208.2	0.2	330.2
Diversified	6	33.8	1545.1	37.4	836.2	1.8	709.7
Energy	125	15.7	221.4	9.9	247.1	-0.0	183.9
Industrial	73	3.4	209.4	3.4	350.7	0.0	164.6
Technology	47	41.8	281.5	58.4	258.4	0.0	215.5
Utilities	16	0.2	35.2	0.2	42.4	0.0	13.1



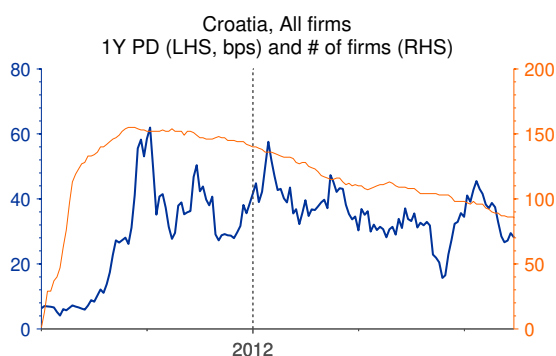
Chile	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	35	1.2	4.6	1.8	7.8	0.8	3.5
Basic Materials	16	6.3	288.8	8.2	50.9	0.1	243.9
Communications	2	12.4	6.5	16.7	8.6	4.3	2.1
Consumer Cyclical	14	11.6	35.6	11.0	24.1	0.9	28.8
Consumer Non-cyclical	32	3.9	30.9	3.0	31.0	0.0	18.8
Diversified	6	6.7	35.5	8.4	28.7	0.2	7.4
Energy	2	1.3	1.9	1.8	2.4	0.4	0.6
Industrial	21	9.0	22.2	7.2	19.9	0.0	14.0
Technology	1	3.2	-	2.5	-	-0.7	-
Utilities	15	3.0	22.0	3.9	23.0	0.1	11.1



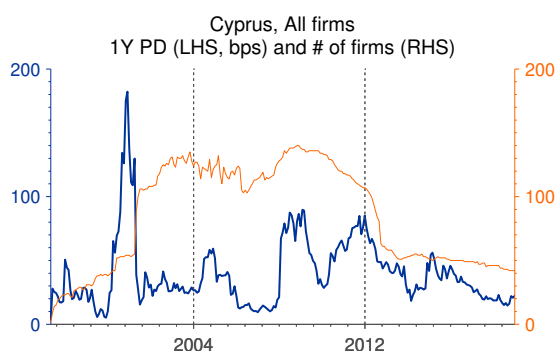
China	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	335	49.9	99.6	61.5	99.2	3.4	29.7
Basic Materials	443	36.0	122.6	39.9	127.4	0.4	56.9
Communications	256	26.2	134.9	32.5	159.6	2.3	51.1
Consumer Cyclical	701	33.8	116.3	38.9	130.5	2.5	35.1
Consumer Non-cyclical	673	13.2	95.4	17.0	149.9	1.2	89.8
Diversified	16	49.8	65.2	54.7	78.7	3.3	20.3
Energy	131	41.2	99.9	40.1	122.7	0.2	62.7
Industrial	1205	37.7	71.0	41.4	91.5	2.0	44.4
Technology	293	23.9	84.1	26.8	123.1	1.3	83.6
Utilities	111	44.6	103.7	52.9	102.8	0.6	27.6



Colombia	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	11	4.1	14.2	3.2	13.9	0.5	2.0
Basic Materials	2	10.9	13.3	16.6	18.9	5.8	5.6
Communications	1	5.3	—	8.3	—	3.1	—
Consumer Cyclical	2	63.8	20.1	73.6	20.9	9.7	0.8
Consumer Non-cyclical	1	0.0	—	0.1	—	0.0	—
Diversified	1	0.0	—	0.0	—	0.0	—
Energy	4	7.7	2.8	8.8	4.0	0.6	3.3
Industrial	8	6.4	6.5	12.2	14.1	3.2	14.1
Utilities	3	3.8	5.6	5.4	7.7	1.6	2.1

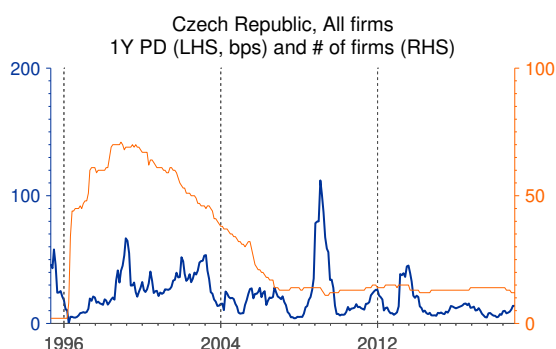


Croatia	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	12	6.2	24.0	5.5	26.1	-0.8	5.5
Basic Materials	2	667.5	815.2	380.3	439.0	-287.3	376.2
Communications	3	157.0	112.0	175.5	135.5	18.5	25.1
Consumer Cyclical	30	15.6	108.3	20.3	108.2	-0.7	68.1
Consumer Non-cyclical	20	54.3	329.5	38.7	415.2	-1.9	140.6
Energy	2	0.6	0.8	0.7	0.9	0.1	0.1
Industrial	17	58.4	234.3	64.2	330.7	14.9	100.7
Technology	1	5.7	—	4.4	—	-1.3	—

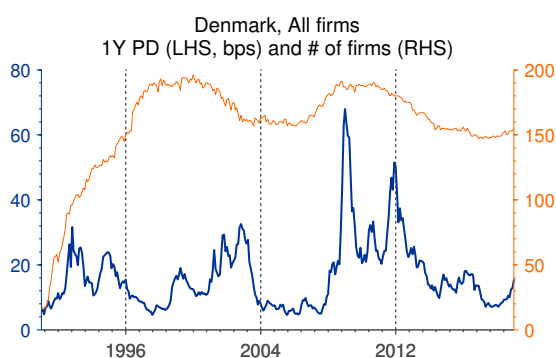


Cyprus	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	16	13.9	71.9	13.8	37.0	0.1	38.6
Basic Materials	4	34.6	61.4	30.6	61.2	-1.8	3.8
Consumer Cyclical	7	34.1	29.0	35.3	34.6	3.7	11.0
Consumer Non-cyclical	6	30.7	23.7	19.6	45.3	3.0	36.0
Energy	4	10.6	49.0	11.9	89.8	1.3	40.9
Industrial	3	2.7	2.9	3.1	3.4	0.4	0.4
Technology	2	106.2	136.6	98.5	124.1	-7.8	12.5

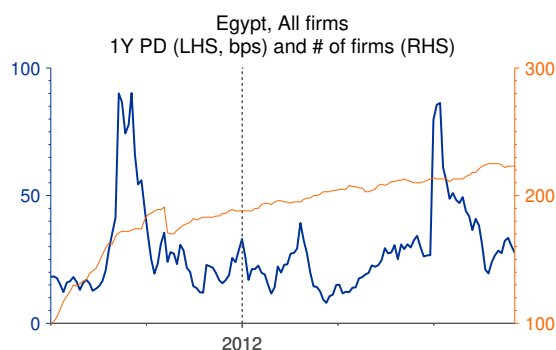




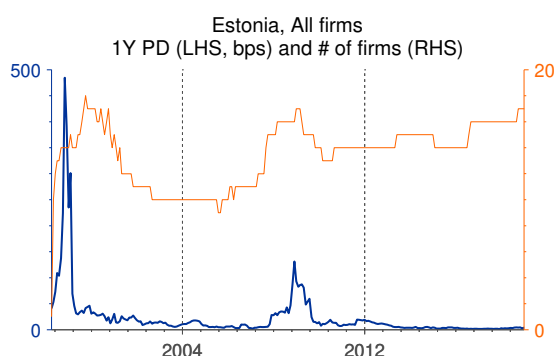
Czech Republic	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	3	8.0	7.3	6.9	13.5	-0.6	6.3
Communications	2	10.5	13.5	14.1	17.3	3.6	3.8
Consumer Cyclical	1	9.9	—	4.5	—	-5.4	—
Consumer Non-cyclical	2	13.1	13.7	11.8	11.4	-1.3	2.3
Energy	2	12.9	14.1	8.0	10.4	-4.9	3.7
Industrial	1	12.6	—	10.1	—	-2.5	—
Utilities	2	7.3	3.3	9.5	0.5	2.2	2.8



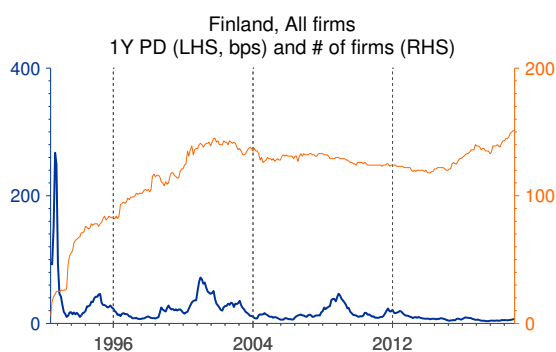
Denmark	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	39	5.7	14.6	8.2	12.5	0.2	6.8
Basic Materials	1	0.1	—	0.1	—	-0.1	—
Communications	8	25.8	28.2	28.9	68.1	1.5	43.7
Consumer Cyclical	17	27.7	26.1	21.2	36.0	-0.2	30.7
Consumer Non-cyclical	30	3.6	61.4	4.0	53.3	-0.0	34.4
Diversified	1	322.5	—	322.6	—	0.1	—
Energy	3	26.3	16.4	31.3	19.1	-3.8	9.9
Industrial	37	14.7	65.6	21.8	41.6	0.6	50.9
Technology	11	10.2	44.6	16.0	78.4	-0.1	37.9
Utilities	2	27.7	35.4	4.4	2.3	-23.3	33.1



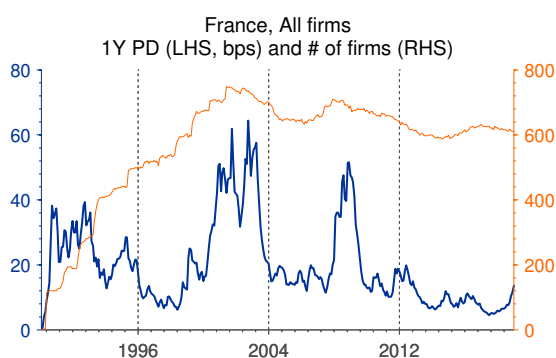
Egypt	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	69	21.6	37.4	37.9	74.8	20.0	41.3
Basic Materials	24	21.4	79.5	31.4	90.7	2.5	26.9
Communications	7	73.9	101.4	96.5	145.4	14.7	62.3
Consumer Cyclical	28	29.9	39.2	28.6	51.5	2.8	23.0
Consumer Non-cyclical	55	24.2	63.2	23.3	75.8	2.2	27.0
Diversified	1	357.5	—	258.9	—	-98.6	—
Energy	1	72.1	—	101.2	—	29.1	—
Industrial	35	33.7	50.3	39.3	73.9	7.3	35.9
Technology	1	2.2	—	2.9	—	0.6	—
Utilities	1	120.1	—	127.0	—	6.9	—



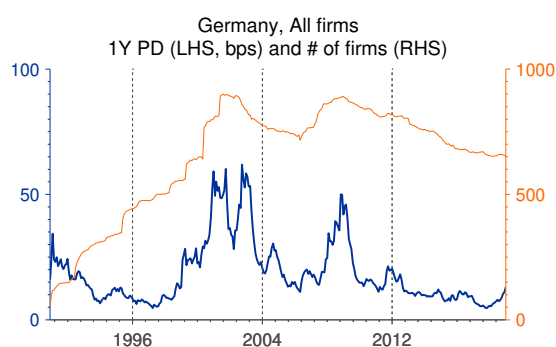
Estonia	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	4	6.3	3.1	5.0	3.5	-0.5	1.6
Communications	1	1.5	—	3.9	—	2.4	—
Consumer Cyclical	4	0.5	6.8	0.9	7.1	0.4	0.7
Consumer Non-cyclical	1	20.1	—	25.8	—	5.7	—
Industrial	5	4.3	25.7	5.1	21.6	0.8	5.4
Utilities	1	1.6	—	2.2	—	0.6	—



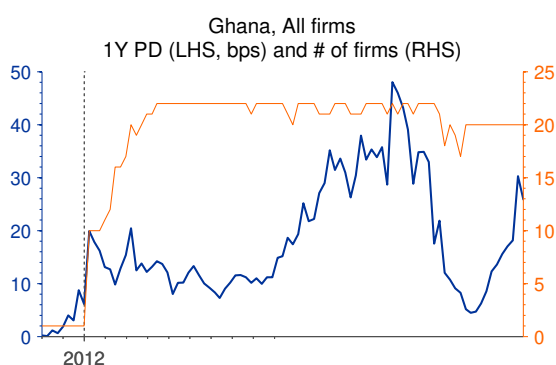
Finland	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	21	2.2	3.4	2.0	4.4	-0.0	2.7
Basic Materials	6	4.2	13.4	3.9	12.7	-0.1	4.0
Communications	15	3.9	33.7	3.4	32.7	-0.0	2.0
Consumer Cyclical	16	4.0	16.9	4.8	19.1	0.0	10.1
Consumer Non-cyclical	30	5.9	164.3	7.5	79.7	1.0	116.3
Energy	2	101.2	142.0	46.4	64.1	-54.8	77.8
Industrial	33	5.8	26.5	6.7	40.0	0.3	22.5
Technology	21	6.1	13.7	3.1	11.0	-0.2	5.1
Utilities	1	1.4	-	1.5	-	0.1	-



France	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	89	1.2	10.5	1.5	10.4	0.0	3.7
Basic Materials	19	9.9	93.3	12.5	49.4	-0.0	68.1
Communications	59	10.0	39.3	14.0	44.2	-0.0	23.4
Consumer Cyclical	86	9.5	38.4	9.6	48.7	0.2	24.8
Consumer Non-cyclical	144	9.8	32.2	11.1	33.4	-0.0	17.1
Diversified	4	4.6	161.2	3.3	153.7	-1.4	7.6
Energy	14	9.4	24.9	12.9	34.0	1.8	17.4
Industrial	113	6.4	27.5	10.2	54.0	0.4	40.1
Technology	73	7.9	53.4	10.0	59.4	0.3	35.3
Utilities	11	4.0	14.6	4.5	13.1	-0.5	3.7



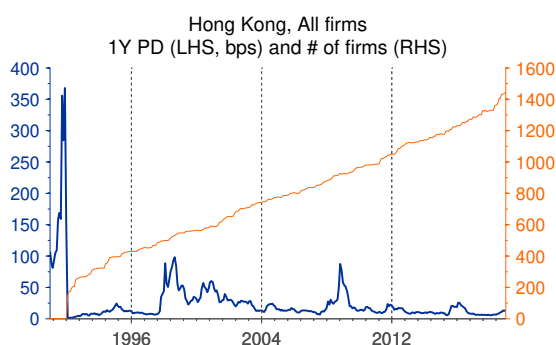
Germany	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	156	3.9	29.9	4.3	40.5	0.1	31.8
Basic Materials	28	8.3	332.5	11.0	463.1	0.4	138.8
Communications	65	17.0	162.4	13.2	202.1	0.4	172.5
Consumer Cyclical	74	11.2	38.8	10.3	47.5	0.2	32.3
Consumer Non-cyclical	98	8.6	51.4	9.8	35.8	0.1	31.5
Diversified	4	30.7	21.0	36.7	20.6	0.9	7.0
Energy	20	21.7	74.4	16.4	95.0	1.0	52.3
Industrial	118	8.9	143.1	10.4	111.2	0.2	39.1
Technology	76	7.8	117.5	11.0	57.6	0.5	84.2
Utilities	10	4.4	7.7	4.5	17.4	-0.0	11.9



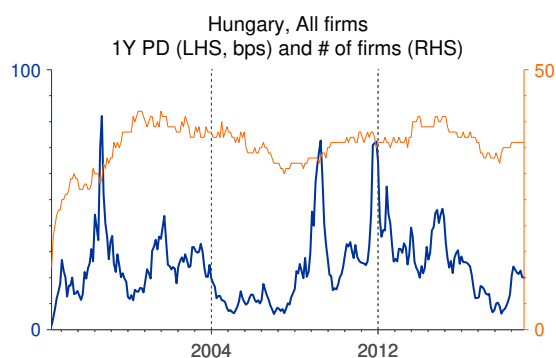
Ghana	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	7	12.6	8.0	19.4	13.2	6.9	11.9
Basic Materials	2	134.3	188.2	1133.1	1598.6	998.8	1410.4
Consumer Cyclical	1	14.0	-	286.5	-	272.5	-
Consumer Non-cyclical	8	2.3	234.9	5.7	359.6	0.4	134.3
Energy	2	21.1	23.3	22.5	10.0	1.5	13.3



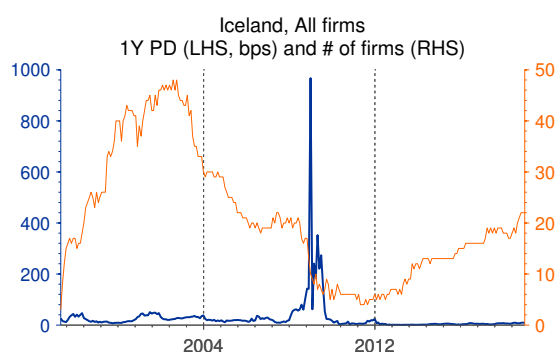
Greece	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	21	19.7	53.6	24.4	60.3	0.9	17.3
Basic Materials	12	21.5	238.3	19.1	111.5	-0.3	135.4
Communications	7	77.4	329.3	71.1	258.5	3.2	299.5
Consumer Cyclical	38	44.8	103.7	48.5	79.1	0.1	63.4
Consumer Non-cyclical	35	30.9	129.9	42.1	197.9	2.3	86.8
Diversified	1	11.4	—	12.0	—	0.6	—
Energy	8	19.1	787.8	24.5	263.5	-0.9	537.2
Industrial	45	79.9	158.1	90.4	238.4	8.5	191.8
Technology	12	16.4	23.1	20.9	31.6	-1.0	14.1
Utilities	4	1.2	49.1	1.9	119.6	0.6	70.5



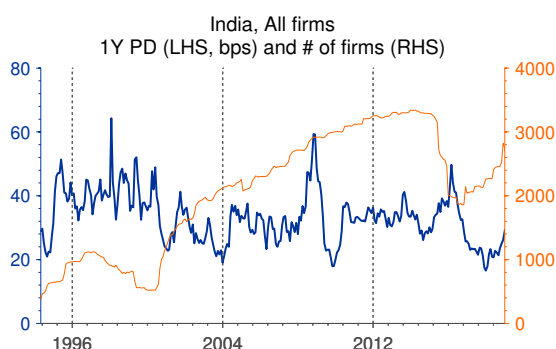
Hong Kong	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	323	7.9	28.6	10.9	44.6	0.7	24.4
Basic Materials	62	17.9	134.6	22.1	183.9	2.3	155.0
Communications	85	5.9	54.7	11.6	95.9	1.5	58.6
Consumer Cyclical	311	5.7	38.9	9.4	44.9	1.0	23.1
Consumer Non-cyclical	192	5.5	36.0	8.2	57.5	0.9	35.3
Diversified	23	5.5	31.9	4.6	51.5	-0.1	22.1
Energy	51	25.7	219.1	23.7	284.0	3.0	119.0
Industrial	228	9.1	117.5	13.9	114.1	1.8	33.2
Technology	63	8.7	30.2	13.8	42.9	1.6	19.5
Utilities	26	8.8	47.5	11.8	51.7	2.8	17.8



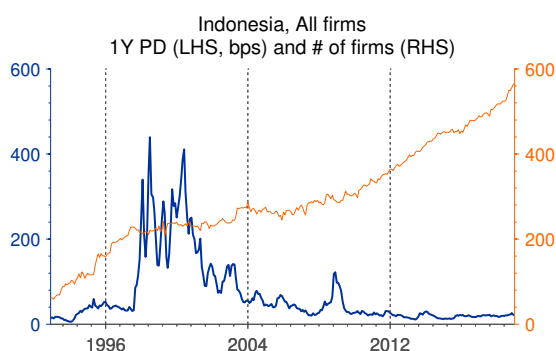
Hungary	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	12	16.6	11.3	17.5	13.0	0.8	6.1
Communications	5	27.5	18.5	46.4	19.3	5.3	24.4
Consumer Cyclical	3	108.8	61.2	118.4	61.9	-0.6	23.9
Consumer Non-cyclical	6	18.8	60.3	6.7	83.0	-1.6	43.4
Energy	1	20.7	—	18.1	—	-2.6	—
Industrial	4	57.7	9.9	79.4	26.4	20.6	22.7
Technology	1	48.9	—	29.7	—	-19.2	—
Utilities	4	15.2	11.8	10.4	8.2	-3.7	3.8



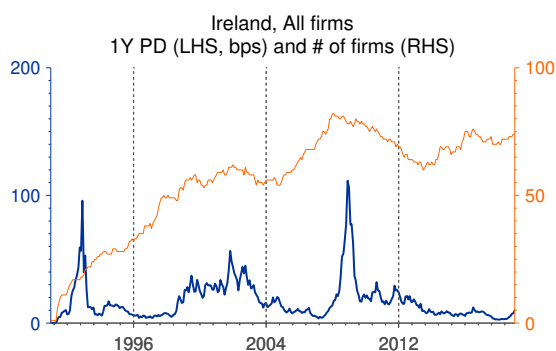
Iceland	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	6	4.5	2.6	5.7	1.9	0.3	2.0
Communications	2	21.9	24.9	28.8	34.6	6.9	9.7
Consumer Cyclical	3	10.2	23.5	11.3	101.1	1.1	77.9
Consumer Non-cyclical	3	5.4	9.0	4.0	8.0	-1.4	1.1
Energy	1	22.6	—	9.3	—	-13.2	—
Industrial	3	14.2	7.7	16.4	9.6	2.2	1.9
Technology	1	17.4	—	16.6	—	-0.9	—



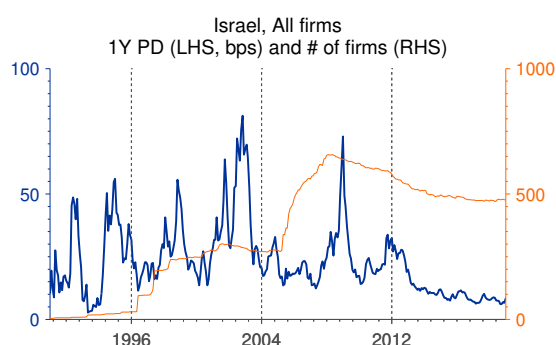
India	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	391	0.2	7.8	0.4	8.9	0.0	3.3
Basic Materials	311	39.4	512.6	43.4	541.7	0.1	281.8
Communications	88	29.6	295.6	36.8	259.2	0.3	71.7
Consumer Cyclical	475	36.0	386.3	40.2	319.9	1.3	153.0
Consumer Non-cyclical	382	23.7	299.3	24.3	368.2	0.1	114.6
Diversified	15	68.4	474.7	103.1	606.2	-0.0	143.7
Energy	42	42.4	520.9	40.7	555.2	-0.7	51.0
Industrial	544	39.7	500.6	44.5	630.6	1.2	257.4
Technology	122	20.4	229.1	23.8	295.2	0.2	93.2
Utilities	35	134.4	1741.5	184.8	1806.4	1.0	383.2



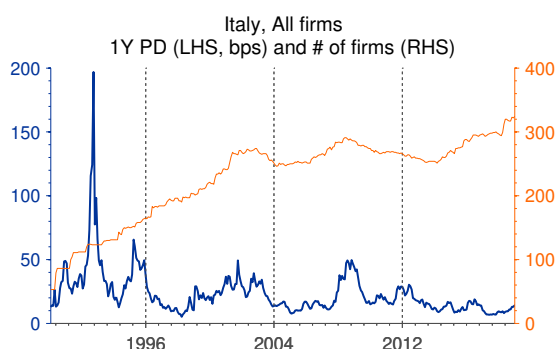
Indonesia	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	139	19.0	25.7	19.4	24.3	-0.0	9.6
Basic Materials	51	30.2	258.0	34.4	228.5	3.5	53.9
Communications	28	28.0	136.2	38.0	113.3	1.0	38.8
Consumer Cyclical	78	22.2	57.8	24.7	67.6	0.6	37.9
Consumer Non-cyclical	85	19.4	103.3	20.7	125.2	0.0	51.3
Diversified	2	43.4	33.1	51.4	37.6	8.0	4.4
Energy	32	11.0	118.7	13.8	87.0	-0.2	48.0
Industrial	92	38.5	62.4	39.3	69.3	0.5	44.2
Technology	8	17.6	95.0	11.4	75.4	-2.3	23.1
Utilities	7	10.7	34.9	16.2	75.4	3.7	45.3



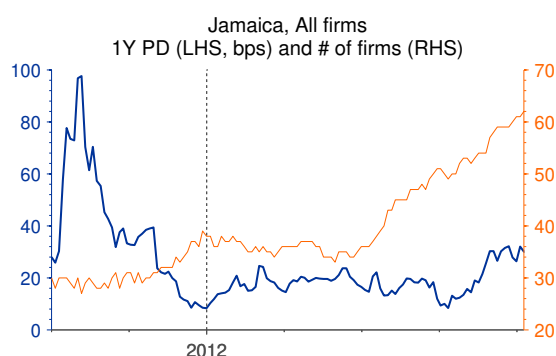
Ireland	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	11	1.5	3.7	1.5	3.9	0.3	1.1
Basic Materials	10	22.9	48.5	15.5	66.1	-0.2	32.3
Communications	2	11.9	12.9	16.5	19.1	4.6	6.3
Consumer Cyclical	7	1.2	3.1	1.4	3.5	0.9	1.1
Consumer Non-cyclical	24	5.5	45.3	6.7	38.4	-0.1	32.3
Energy	7	105.5	161.9	94.8	104.6	-24.3	92.1
Industrial	8	0.8	4.0	4.4	6.5	0.8	4.2
Technology	3	2.1	1.4	5.2	3.2	3.1	1.8



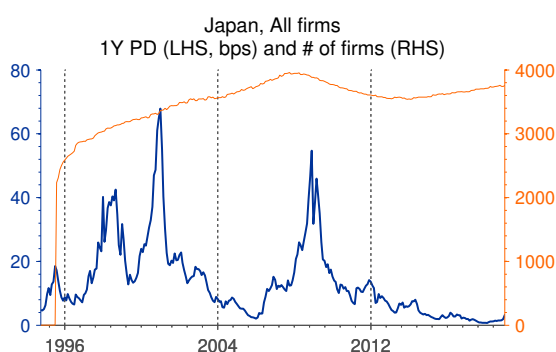
Israel	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	117	3.9	13.3	3.1	10.4	-0.5	4.8
Basic Materials	13	4.5	61.7	4.4	39.9	-0.3	24.3
Communications	38	11.4	413.7	11.6	437.7	0.0	44.4
Consumer Cyclical	51	13.3	44.2	10.4	32.8	-3.1	17.0
Consumer Non-cyclical	89	9.9	45.8	8.0	34.9	-0.5	25.2
Diversified	8	8.5	21.1	5.4	19.0	-1.2	4.3
Energy	31	11.0	30.1	8.8	20.7	-2.7	13.5
Industrial	84	9.3	104.4	8.2	62.3	-0.6	47.9
Technology	40	5.6	36.5	4.6	74.6	-0.0	47.2
Utilities	2	32.8	3.5	28.1	17.3	-4.7	13.8



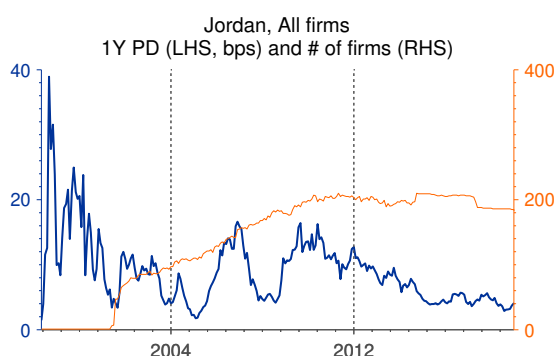
Italy	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	63	9.5	19.4	11.4	17.1	0.3	8.5
Basic Materials	4	4.5	11.8	4.9	10.5	0.5	1.5
Communications	42	16.1	35.0	17.2	35.7	0.6	18.3
Consumer Cyclical	58	10.0	22.8	9.1	38.2	0.3	21.5
Consumer Non-cyclical	46	5.3	19.7	7.9	17.4	0.8	11.3
Diversified	3	0.0	26.0	0.0	21.6	-0.0	4.4
Energy	18	12.5	77.1	16.7	43.0	-0.2	41.9
Industrial	52	7.7	36.9	9.6	65.9	0.2	40.3
Technology	17	10.2	24.3	6.6	26.5	0.2	9.2
Utilities	12	5.0	11.8	5.6	15.6	0.2	4.8



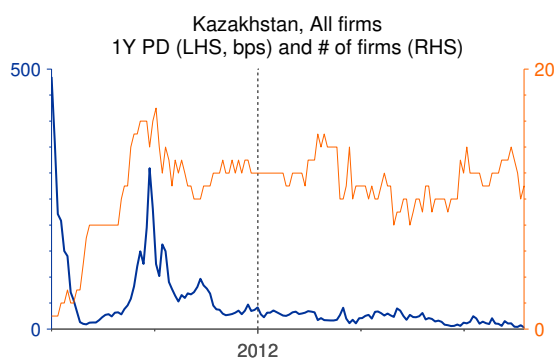
Jamaica	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	19	28.7	48.8	21.6	67.5	1.3	21.2
Basic Materials	1	30.2	—	27.5	—	-2.7	—
Communications	2	117.9	43.5	135.9	37.1	18.0	6.3
Consumer Cyclical	10	16.1	29.8	17.7	29.9	-2.8	11.0
Consumer Non-cyclical	18	39.9	35.7	47.5	52.5	4.7	25.5
Diversified	2	17.2	0.7	54.5	45.9	37.2	46.6
Industrial	5	36.0	49.0	28.2	48.0	-4.3	39.5
Technology	2	18.1	25.7	12.8	18.1	-5.4	7.6



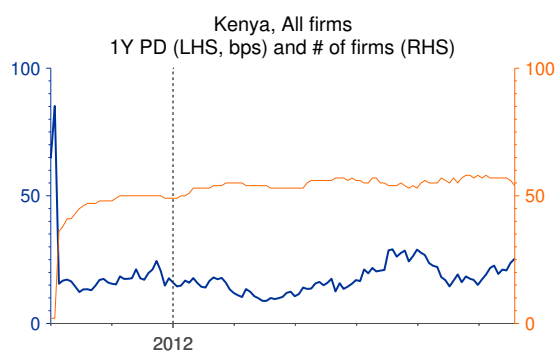
Japan	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	362	2.5	15.9	2.8	14.9	-0.0	6.9
Basic Materials	233	2.1	6.8	2.0	7.2	-0.0	3.5
Communications	292	1.0	9.2	1.0	8.4	0.0	4.7
Consumer Cyclical	872	1.5	7.4	1.6	8.2	0.0	3.7
Consumer Non-cyclical	633	0.5	4.6	0.6	4.6	0.0	2.8
Energy	18	7.7	15.8	5.8	17.3	-0.0	9.1
Industrial	967	1.8	9.2	1.9	9.1	0.0	4.1
Technology	329	0.9	5.0	0.8	5.4	0.0	2.5
Utilities	24	1.9	7.6	2.1	8.5	0.1	2.2



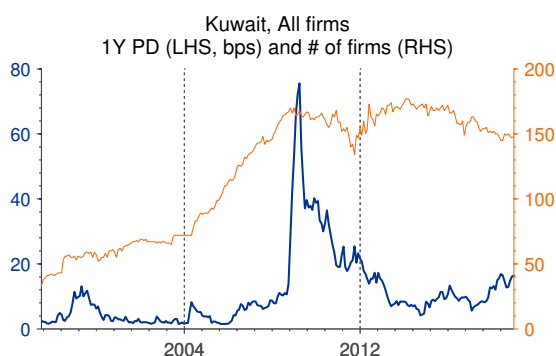
Jordan	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	98	1.7	5.5	1.2	4.6	-0.1	1.7
Basic Materials	15	12.8	30.4	9.8	37.5	-1.4	13.7
Communications	2	80.1	98.9	137.9	167.4	57.8	68.5
Consumer Cyclical	15	9.0	76.5	10.0	53.5	-0.0	25.2
Consumer Non-cyclical	28	8.0	21.2	11.3	28.2	0.5	9.7
Diversified	2	99.7	132.2	67.2	87.4	-32.5	44.8
Energy	1	41.7	—	44.4	—	2.8	—
Industrial	21	19.1	47.5	22.8	43.9	0.6	20.5
Technology	1	95.2	—	55.4	—	-39.8	—
Utilities	2	63.6	44.2	66.1	46.6	2.5	2.4



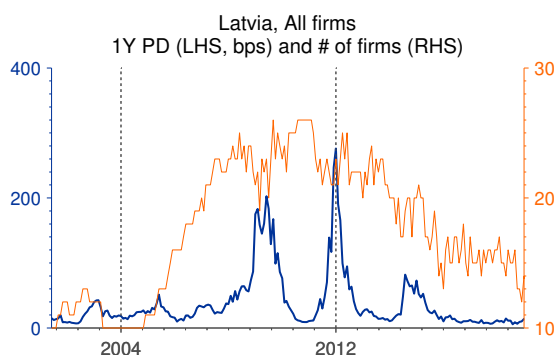
Kazakhstan	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	5	32.5	20.0	51.9	24.8	12.7	6.6
Basic Materials	1	23.7	—	17.4	—	-6.3	—
Communications	2	4.5	2.2	4.5	0.0	-0.0	2.2
Consumer Non-cyclical	2	0.7	0.9	0.5	0.7	-0.2	0.3
Energy	1	1.7	—	3.4	—	1.7	—
Utilities	1	0.9	—	0.9	—	0.0	—



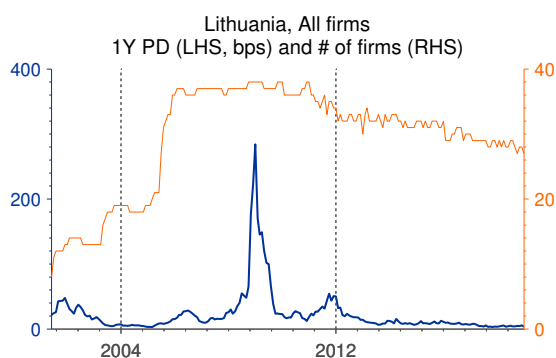
Kenya	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	21	9.9	28.3	10.7	28.0	1.8	8.0
Basic Materials	2	21.0	3.6	24.4	2.0	3.5	1.6
Communications	5	20.3	41.5	15.2	30.4	0.0	12.9
Consumer Cyclical	7	173.7	323.4	174.3	560.3	17.2	239.5
Consumer Non-cyclical	10	12.7	431.9	15.2	535.9	0.1	104.1
Diversified	3	101.2	64.6	124.6	74.1	12.8	11.4
Energy	2	25.5	30.0	23.8	27.2	-1.7	2.8
Industrial	5	49.9	120.1	115.1	118.0	53.8	31.4
Utilities	1	336.7	—	492.3	—	155.6	—



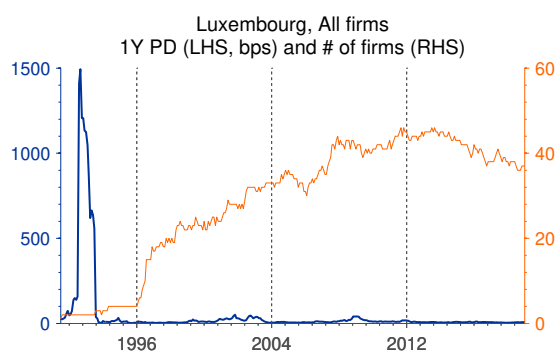
Kuwait	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	87	12.3	30.8	10.2	25.4	-1.2	14.9
Basic Materials	3	4.0	4.6	1.6	7.7	-0.2	3.4
Communications	7	35.4	137.3	48.3	85.1	-4.3	58.7
Consumer Cyclical	12	30.4	61.8	20.8	73.5	0.1	26.2
Consumer Non-cyclical	6	10.6	68.1	6.2	43.3	-3.2	26.4
Diversified	4	22.9	126.1	24.2	108.6	-0.8	18.2
Energy	6	68.8	60.4	60.0	52.2	-4.2	34.7
Industrial	17	40.3	73.8	38.3	66.0	0.4	14.8
Technology	2	87.9	88.3	61.3	53.6	-26.6	34.7



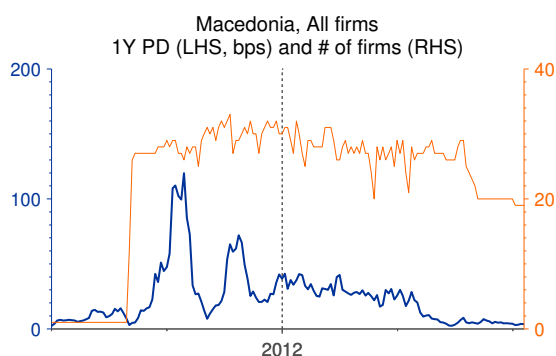
Latvia	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Communications	1	2.4	—	6.5	—	4.1	—
Consumer Cyclical	3	68.8	29.4	51.5	31.4	1.9	30.6
Consumer Non-cyclical	4	3.7	5.0	3.4	2.2	-1.0	3.2
Industrial	2	111.1	150.7	79.4	100.7	-31.6	50.0
Utilities	1	3.1	—	5.5	—	2.3	—



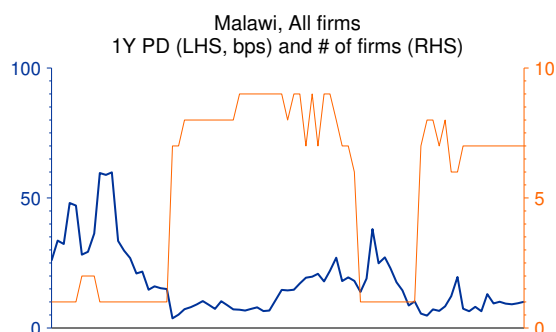
Lithuania	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	5	0.5	0.5	0.4	0.7	-0.1	0.2
Communications	1	0.0	—	0.1	—	0.0	—
Consumer Cyclical	5	53.7	74.6	56.1	55.9	1.1	23.8
Consumer Non-cyclical	7	5.7	29.8	9.4	46.1	0.4	16.6
Energy	1	0.9	—	0.9	—	0.1	—
Industrial	3	26.4	28.6	17.6	18.3	-8.8	10.4
Utilities	5	1.4	10.0	0.9	38.4	0.2	32.9



Luxembourg	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	12	2.5	10.3	2.3	10.9	0.0	1.5
Basic Materials	4	6.4	7.1	10.0	8.4	2.3	5.5
Communications	4	15.0	23.8	14.3	10.9	-2.0	14.9
Consumer Non-cyclical	5	5.7	7.7	6.0	7.1	0.0	2.8
Energy	1	281.6	—	294.2	—	12.5	—
Industrial	8	4.3	14.8	7.1	22.7	0.3	11.8
Technology	2	6.9	9.0	5.8	7.2	-1.1	1.8

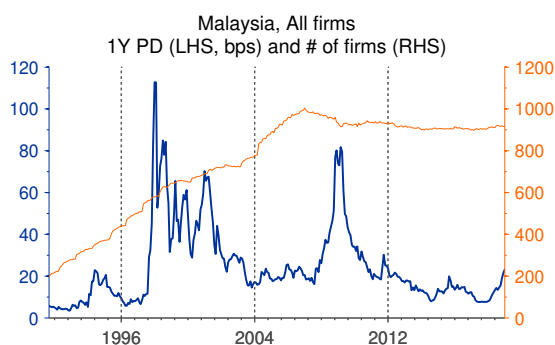


Macedonia	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	5	7.1	6.4	6.2	3.7	-0.8	5.2
Basic Materials	2	16.5	22.5	12.8	15.9	-3.7	6.6
Communications	1	1.2	—	0.7	—	-0.5	—
Consumer Cyclical	2	2.8	3.8	2.0	2.9	-0.7	0.9
Consumer Non-cyclical	5	2.5	5.9	0.8	2.8	-0.5	3.2
Energy	1	12.2	—	9.1	—	-3.1	—
Industrial	3	6.7	6.1	6.5	4.8	-0.2	1.6

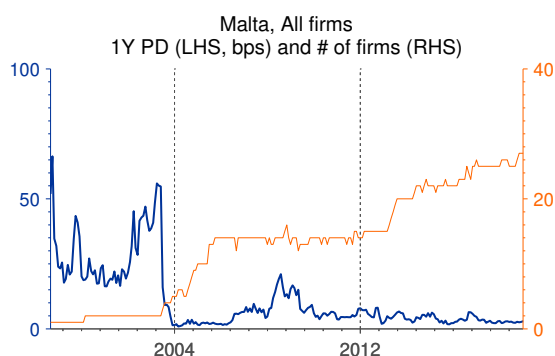


Malawi	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	5	21.7	75.5	11.9	28.7	-6.5	54.3
Communications	1	9.9	—	1.4	—	-8.5	—
Consumer Non-cyclical	1	13.0	—	9.4	—	-3.6	—

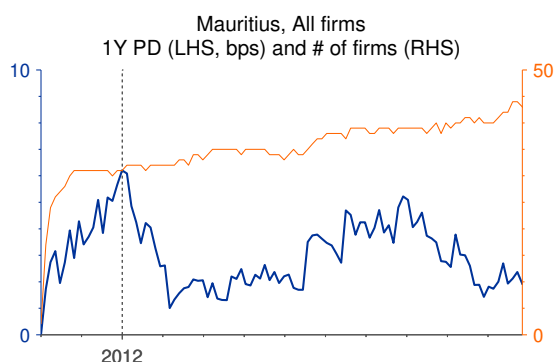




Malaysia	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	138	4.4	18.5	5.5	20.0	0.5	9.2
Basic Materials	64	30.0	68.2	30.3	86.6	-0.0	31.9
Communications	44	19.4	89.8	20.5	132.2	1.1	56.8
Consumer Cyclical	134	16.3	126.5	18.3	102.2	0.6	36.5
Consumer Non-cyclical	142	5.5	94.1	7.0	69.0	0.1	50.3
Diversified	16	12.4	621.5	21.5	639.9	0.3	24.1
Energy	35	48.7	289.8	59.8	448.3	0.0	200.8
Industrial	271	24.4	156.6	28.3	157.3	1.0	30.7
Technology	60	15.8	68.7	12.2	82.1	-1.0	42.8
Utilities	6	27.7	25.0	20.1	23.6	-0.7	7.1



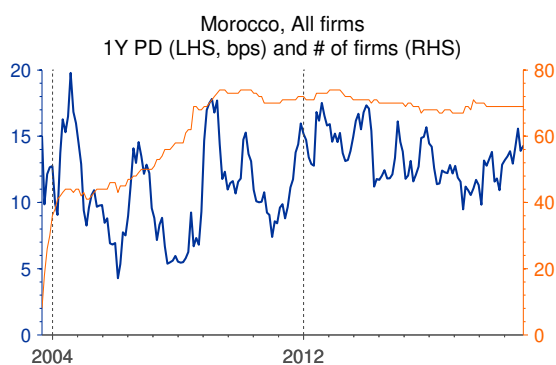
Malta	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	13	2.8	2.8	2.4	4.4	0.1	2.4
Communications	4	15.7	9.0	27.8	22.2	10.0	15.5
Consumer Cyclical	4	2.5	3.2	2.6	4.4	0.1	1.3
Consumer Non-cyclical	2	0.2	0.3	0.3	0.4	0.1	0.1
Energy	1	25.4	—	22.7	—	-2.8	—
Industrial	1	0.0	—	0.0	—	0.0	—



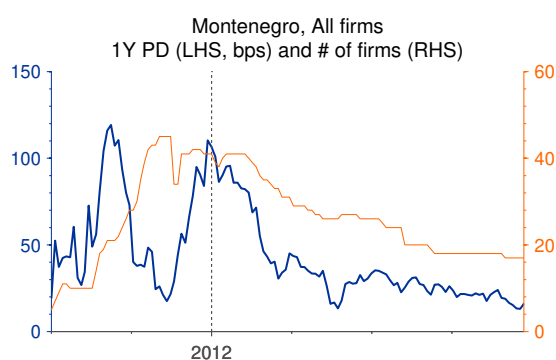
Mauritius	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	17	1.2	4.4	0.8	4.0	-0.0	1.2
Basic Materials	2	5.4	5.1	5.6	4.7	0.2	0.4
Consumer Cyclical	7	4.1	34.1	2.1	90.9	-0.2	57.0
Consumer Non-cyclical	5	1.4	30.1	1.9	51.7	0.0	23.7
Diversified	1	0.0	—	0.0	—	0.0	—
Energy	1	0.0	—	0.0	—	0.0	—
Industrial	7	2.2	70.6	1.7	82.6	-0.4	13.6



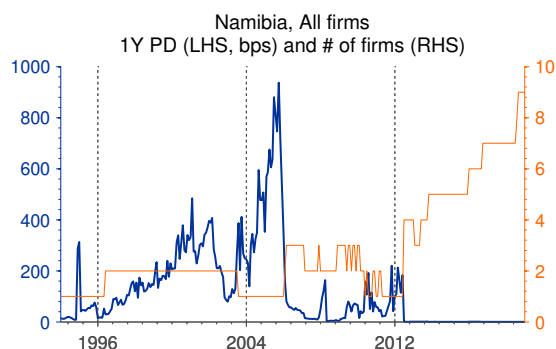
Mexico	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	33	1.7	7.3	1.6	4.4	-0.2	3.5
Basic Materials	10	6.7	20.7	7.3	23.2	1.0	3.5
Communications	7	33.7	32.0	37.7	34.7	0.6	5.7
Consumer Cyclical	26	5.0	62.0	4.6	80.1	-0.1	42.8
Consumer Non-cyclical	17	2.6	8.5	2.7	7.3	0.1	2.6
Diversified	4	1.6	12.6	2.7	10.4	0.5	2.3
Industrial	22	5.5	294.4	5.7	284.3	-0.4	58.5
Utilities	2	5.5	5.8	5.3	5.6	-0.1	0.2



Morocco	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	20	13.6	9.0	14.1	9.1	0.9	5.3
Basic Materials	10	11.5	44.3	16.5	35.5	2.7	9.9
Communications	1	0.0	—	0.1	—	0.0	—
Consumer Cyclical	7	29.1	19.8	35.3	28.5	4.7	11.7
Consumer Non-cyclical	11	7.2	12.1	9.4	11.9	0.1	3.4
Energy	1	10.3	—	11.7	—	1.4	—
Industrial	11	52.0	192.5	39.1	175.5	-0.2	17.8
Technology	5	16.3	167.9	18.1	160.9	2.1	8.0
Utilities	3	13.4	36.1	9.1	36.1	-0.8	3.0



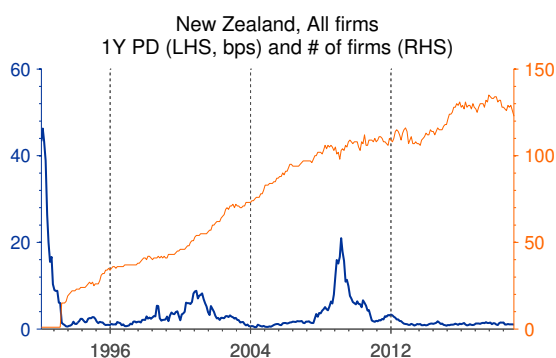
Montenegro	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Communications	1	20.8	—	13.8	—	-7.0	—
Consumer Cyclical	4	28.6	15.9	10.8	20.7	-5.9	14.6
Consumer Non-cyclical	8	22.1	56.3	17.9	31.0	-9.4	28.2
Energy	1	10.4	—	13.8	—	3.5	—
Industrial	1	39.7	—	34.5	—	-5.3	—
Utilities	2	17.7	0.4	13.0	3.4	-4.7	3.8



Namibia	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	4	0.8	2.2	1.4	4.3	0.6	2.1
Consumer Non-cyclical	3	0.0	4.9	0.0	6.8	-0.0	1.9



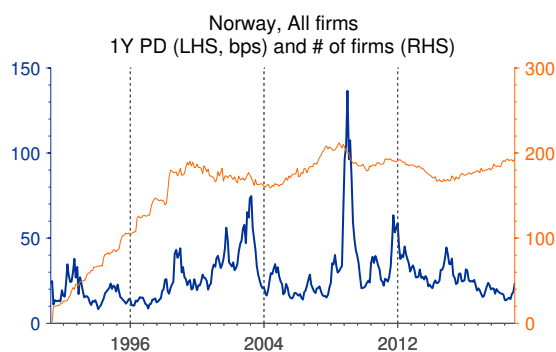
Netherlands	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	27	2.4	16.2	3.0	21.7	0.2	7.3
Basic Materials	7	1.0	27.5	1.0	25.6	-0.3	9.6
Communications	9	10.6	141.8	13.8	143.4	3.1	28.2
Consumer Cyclical	12	6.2	20.3	6.3	31.0	0.3	20.5
Consumer Non-cyclical	28	1.6	51.3	2.3	63.1	0.2	27.5
Energy	9	5.7	33.4	4.1	21.1	-0.3	13.4
Industrial	17	6.5	71.4	11.7	68.9	0.4	4.3
Technology	16	4.5	34.2	5.4	25.3	0.1	12.1



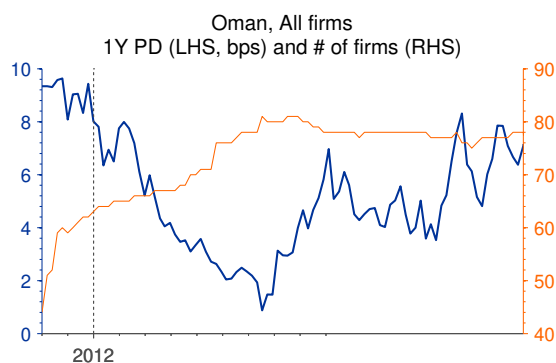
New Zealand	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	19	0.0	10.1	0.0	11.6	0.0	3.3
Basic Materials	2	17.5	22.4	26.0	35.8	8.5	13.4
Communications	8	2.9	22.1	3.3	36.4	-0.0	22.4
Consumer Cyclical	18	1.0	32.0	0.9	36.9	-0.0	11.7
Consumer Non-cyclical	40	1.3	15.2	1.2	17.0	0.0	3.8
Energy	6	0.5	9.8	0.3	5.2	-0.1	4.6
Industrial	13	2.4	5.6	1.8	18.7	-0.0	17.3
Technology	13	14.5	42.6	9.5	30.9	-0.1	20.6
Utilities	7	0.1	1.8	0.1	2.3	-0.0	0.5



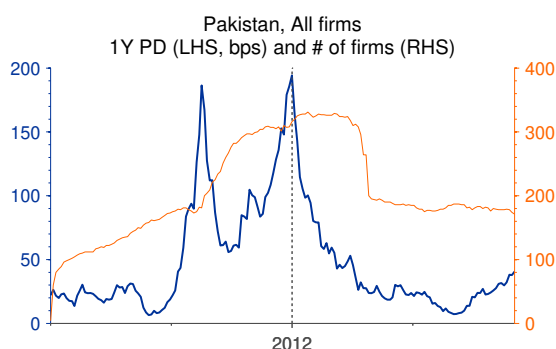
Nigeria	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	48	52.6	92.3	86.7	128.5	20.4	52.9
Basic Materials	9	11.6	212.2	12.2	175.3	-0.1	61.6
Communications	4	28.3	14.0	30.7	19.1	2.6	8.8
Consumer Cyclical	13	56.4	205.3	72.0	293.5	1.1	99.9
Consumer Non-cyclical	31	28.8	148.5	41.4	149.4	7.6	41.6
Energy	9	87.4	138.0	110.3	170.2	22.9	34.9
Industrial	19	40.0	173.6	51.3	224.5	3.9	66.5
Technology	2	75.3	79.6	87.3	111.6	12.1	32.0
Utilities	1	193.9	—	218.8	—	24.9	—



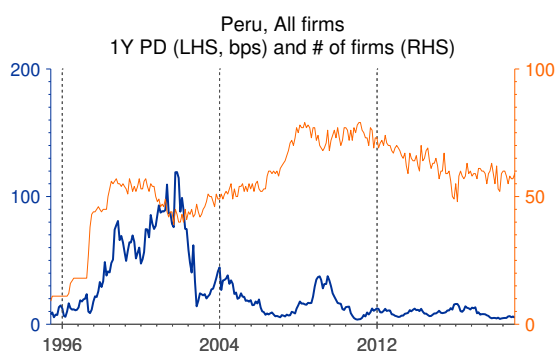
Norway	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	52	7.2	13.9	5.5	16.1	-0.2	6.2
Basic Materials	6	6.9	22.9	7.2	42.6	0.5	19.8
Communications	7	17.4	68.1	18.6	70.1	-0.2	3.5
Consumer Cyclical	6	9.3	25.4	13.1	33.4	2.5	15.1
Consumer Non-cyclical	29	10.2	27.0	12.2	17.5	-0.2	17.1
Energy	27	24.8	81.2	30.1	546.1	0.4	476.4
Industrial	46	28.7	228.0	28.2	429.1	3.1	339.9
Technology	16	24.2	61.2	29.2	56.3	1.3	45.3
Utilities	2	6.9	8.3	11.8	15.7	5.0	7.4



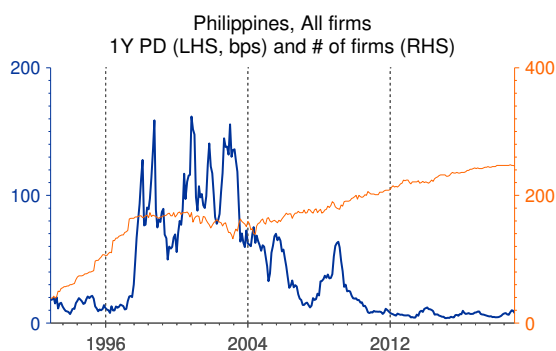
Oman	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	28	7.6	8.2	7.4	9.8	0.2	4.4
Basic Materials	6	2.4	15.9	2.4	14.5	-0.0	1.9
Communications	2	44.5	58.7	54.2	73.4	9.7	14.7
Consumer Non-cyclical	13	3.5	28.1	3.8	30.2	-0.0	6.4
Diversified	1	0.0	—	0.0	—	0.0	—
Energy	6	11.4	125.0	8.9	153.8	-0.4	29.0
Industrial	13	8.5	69.6	11.9	52.1	0.1	18.3
Utilities	8	11.0	35.8	7.6	34.5	-0.8	2.4



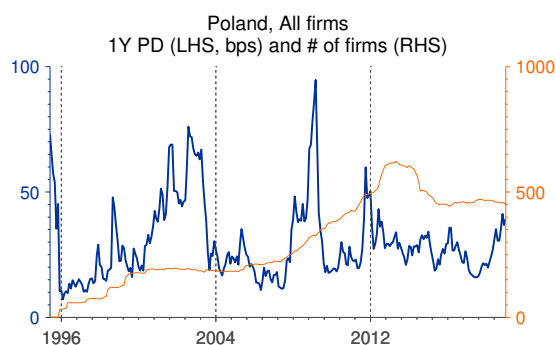
Pakistan	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	39	44.6	55.8	51.0	80.6	7.9	40.6
Basic Materials	24	22.0	216.6	25.8	135.1	-0.3	84.9
Communications	5	100.4	204.9	101.5	223.8	1.6	26.9
Consumer Cyclical	28	44.5	246.0	42.9	182.1	-1.5	65.5
Consumer Non-cyclical	31	6.4	42.5	7.9	36.2	0.1	15.8
Energy	11	37.6	70.1	43.9	111.3	0.0	46.8
Industrial	29	29.1	33.1	30.3	58.6	1.1	29.3
Technology	2	3.3	3.4	3.3	3.3	-0.0	0.1
Utilities	8	34.5	79.2	52.1	95.9	12.0	22.6



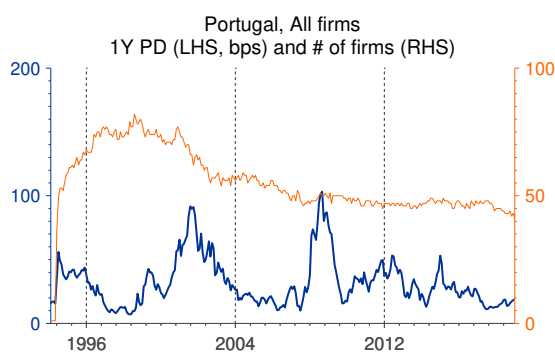
Peru	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	11	2.4	2.5	3.0	3.0	0.0	1.0
Basic Materials	16	5.1	36.5	7.6	27.9	0.6	12.1
Communications	2	12.9	18.3	21.1	29.9	8.2	11.6
Consumer Cyclical	2	10.7	9.0	13.1	12.9	2.4	3.9
Consumer Non-cyclical	11	10.2	52.1	13.1	63.6	1.8	17.9
Diversified	1	117.3	—	128.8	—	11.4	—
Energy	2	59.5	82.7	89.0	124.9	29.4	42.2
Industrial	4	5.5	1.1	7.4	2.6	2.2	2.6
Utilities	4	2.2	3.6	1.7	2.4	-0.5	1.2



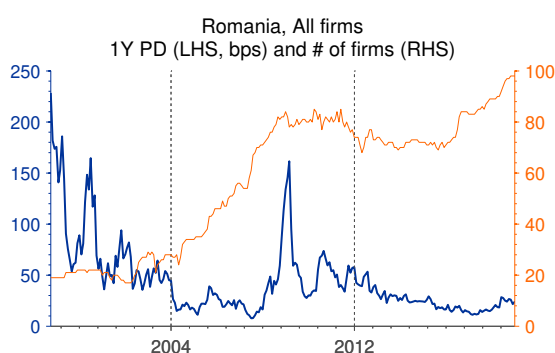
Philippines	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	84	5.7	9.4	6.1	9.9	0.0	3.0
Basic Materials	24	6.2	50.7	4.3	62.1	-0.0	17.8
Communications	15	7.7	14.3	8.0	27.4	0.0	22.2
Consumer Cyclical	30	9.3	44.4	8.5	53.9	-0.1	31.7
Consumer Non-cyclical	35	11.1	29.9	18.1	34.8	0.9	12.8
Diversified	9	4.8	10.5	7.0	10.4	-0.1	2.8
Energy	14	5.8	31.7	6.1	32.5	0.1	8.1
Industrial	16	16.4	46.5	19.0	30.8	3.6	26.3
Technology	5	27.0	36.0	52.6	40.8	2.6	25.6
Utilities	15	18.7	46.7	21.9	32.7	-3.0	15.5



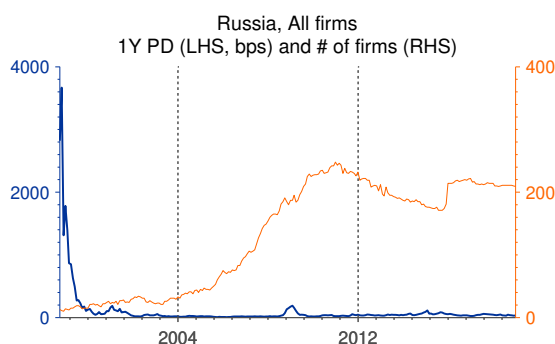
Poland	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	91	25.2	65.9	26.3	171.0	-2.2	161.1
Basic Materials	26	24.7	315.9	22.5	407.1	-0.9	275.0
Communications	38	23.0	201.3	28.7	189.1	2.4	54.6
Consumer Cyclical	60	37.2	317.2	44.6	614.0	0.1	435.4
Consumer Non-cyclical	65	45.8	156.2	40.2	164.3	0.6	100.0
Energy	15	45.4	89.9	39.9	57.3	-5.6	57.2
Industrial	105	44.5	284.7	39.8	171.2	-2.8	131.6
Technology	43	17.0	137.4	25.0	91.1	1.8	69.9
Utilities	8	55.3	73.5	48.8	70.6	0.0	8.8



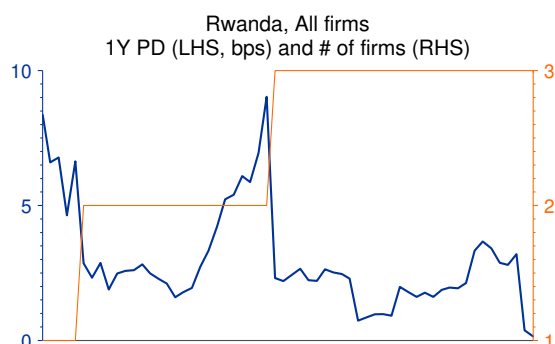
Portugal	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	4	6.8	7.9	8.0	18.6	2.5	11.0
Basic Materials	6	1.5	20.9	4.6	13.5	0.5	7.7
Communications	6	7.9	53.0	11.6	40.8	-1.4	13.9
Consumer Cyclical	6	97.2	54.2	111.0	70.3	9.1	29.4
Consumer Non-cyclical	6	26.2	130.1	28.9	210.3	2.6	80.9
Diversified	2	16.6	17.2	22.1	11.6	5.5	5.5
Energy	1	0.6	—	0.7	—	0.0	—
Industrial	6	31.1	211.4	47.9	64.7	2.5	155.5
Technology	3	36.4	114.8	43.8	97.0	-2.0	19.5
Utilities	2	4.9	2.0	7.4	1.2	2.4	0.8



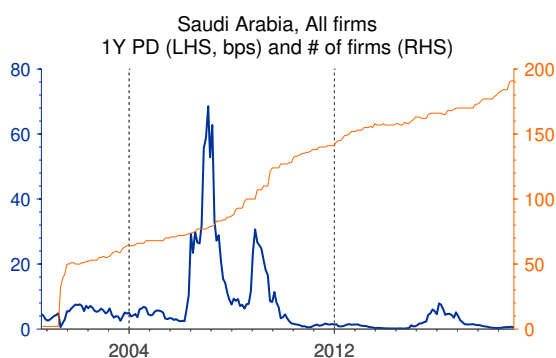
Romania	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	13	7.5	23.0	7.3	16.7	-0.2	7.5
Basic Materials	11	49.6	78.4	49.5	125.9	0.7	81.8
Communications	2	5.8	3.7	10.9	3.4	5.1	0.3
Consumer Cyclical	14	22.2	74.7	40.8	64.9	3.4	18.4
Consumer Non-cyclical	12	10.8	31.9	11.2	25.9	-1.3	12.8
Energy	9	13.4	129.3	17.3	105.8	2.7	27.2
Industrial	29	33.7	91.3	35.1	107.2	1.9	29.5
Utilities	4	3.4	4.3	4.3	3.3	-0.6	2.0



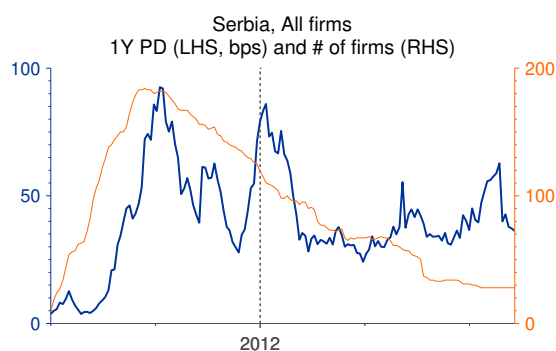
Russia	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	23	27.8	20.5	33.3	20.2	3.7	10.6
Basic Materials	34	11.7	53.2	17.2	74.5	0.2	59.2
Communications	11	17.5	59.2	17.9	85.1	0.5	61.9
Consumer Cyclical	18	57.0	79.8	92.9	50.8	13.3	68.1
Consumer Non-cyclical	18	38.5	54.5	45.6	59.1	2.4	39.5
Diversified	2	107.6	67.1	165.4	200.9	57.8	133.7
Energy	21	13.3	35.2	15.4	52.1	-0.5	24.1
Industrial	25	35.8	62.8	35.1	107.5	-1.2	65.3
Technology	3	23.8	11.3	26.9	60.5	-0.6	60.9
Utilities	54	80.6	98.6	65.0	96.7	-6.6	45.9



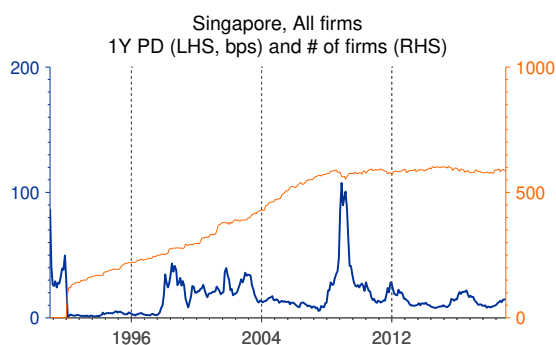
Rwanda	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	2	1.8	2.6	1.4	2.0	-0.4	0.6
Consumer Non-cyclical	1	9.3	—	3.3	—	-6.0	—



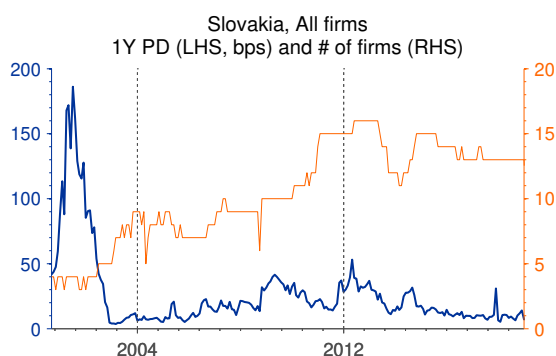
Saudi Arabia	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	60	0.0	0.1	0.0	0.2	0.0	0.1
Basic Materials	19	2.8	9.3	3.4	12.8	0.0	4.9
Communications	6	21.2	61.2	19.8	50.6	-5.0	11.8
Consumer Cyclical	26	3.8	8.3	5.6	9.9	0.1	4.1
Consumer Non-cyclical	27	1.1	4.3	1.3	5.1	0.1	2.3
Diversified	4	10.1	3.2	16.2	2.8	4.5	4.2
Energy	2	7.4	2.7	9.2	0.8	1.8	1.8
Industrial	37	1.4	10.7	2.2	32.2	0.4	23.8
Technology	1	13.8	—	13.4	—	-0.5	—
Utilities	1	66.2	—	89.9	—	23.7	—



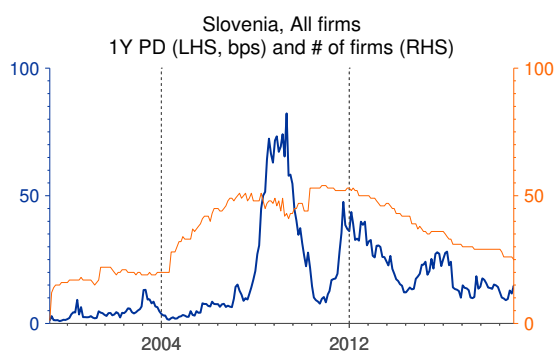
Serbia	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	4	28.3	11.5	23.2	13.8	-0.9	6.3
Basic Materials	4	24.3	90.5	19.4	57.8	-4.9	33.0
Consumer Cyclical	2	46.2	62.9	69.9	97.1	23.7	34.2
Consumer Non-cyclical	6	102.4	143.3	71.4	124.4	-30.8	21.7
Diversified	2	249.7	237.0	167.4	176.5	-82.3	60.5
Energy	1	4.8	—	3.3	—	-1.5	—
Industrial	9	72.8	102.8	56.4	88.6	-3.2	49.0



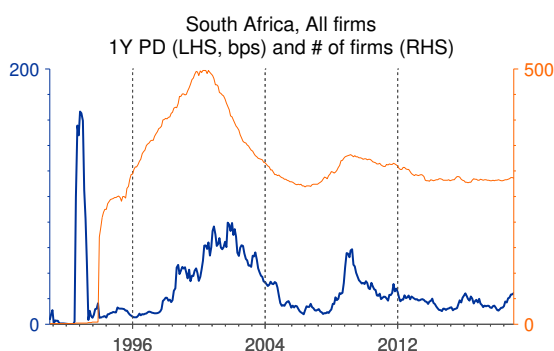
Singapore	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	126	1.9	23.6	2.4	20.2	0.1	13.2
Basic Materials	24	19.1	251.6	21.8	190.0	0.4	65.0
Communications	22	7.9	76.1	7.9	62.7	-0.0	33.6
Consumer Cyclical	89	12.4	80.0	13.8	46.9	0.0	62.4
Consumer Non-cyclical	72	3.8	76.2	5.3	66.1	0.1	36.5
Diversified	5	1.2	26.8	1.8	41.0	0.2	14.2
Energy	29	39.5	317.4	65.7	385.5	0.4	119.7
Industrial	174	23.2	127.2	27.0	138.3	0.8	55.6
Technology	26	11.2	81.7	9.3	72.8	-0.2	19.1
Utilities	4	44.9	727.7	65.2	176.2	1.6	560.6



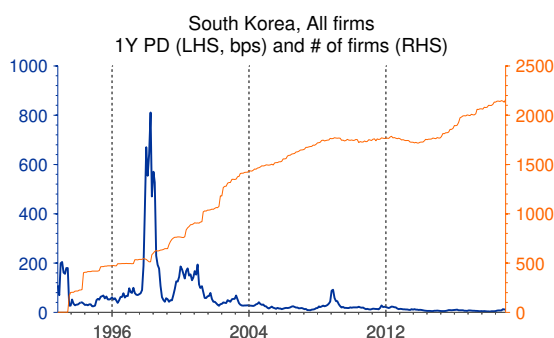
Slovakia	2018Q3			2018Q4		Q4-Q3	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	6	7.7	11.9	7.5	19.8	0.4	10.6
Basic Materials	1	50.5	—	55.4	—	4.9	—
Consumer Cyclical	2	0.0	0.0	0.0	0.0	0.0	0.0
Consumer Non-cyclical	2	8.5	6.0	11.8	10.2	3.2	4.2
Energy	1	20.4	—	14.2	—	-6.2	—
Industrial	1	87.0	—	124.7	—	37.7	—



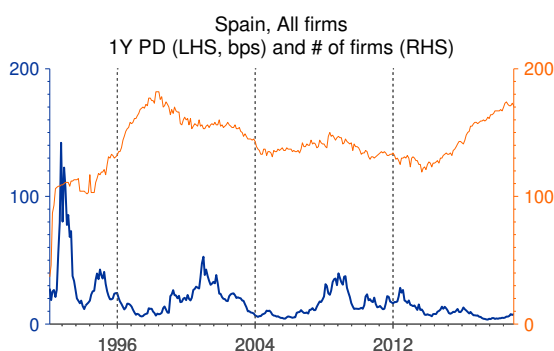
Slovenia	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	5	2.3	7.1	3.4	9.5	1.1	2.7
Basic Materials	3	7.8	6.5	8.6	9.1	0.9	2.7
Communications	1	0.7	—	11.5	—	10.8	—
Consumer Cyclical	5	22.2	54.2	24.5	45.9	-0.9	11.6
Consumer Non-cyclical	7	5.7	34.5	7.1	73.2	0.8	41.8
Diversified	1	18.6	—	25.5	—	6.9	—
Energy	1	2.2	—	9.6	—	7.4	—
Industrial	2	22.7	3.5	26.1	4.6	3.4	1.1
Technology	1	9.4	—	9.5	—	0.1	—



South Africa	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	82	6.4	31.3	8.8	50.0	1.9	24.4
Basic Materials	34	34.5	221.0	37.4	158.7	-0.8	83.4
Communications	13	22.5	67.4	31.9	131.0	9.4	65.7
Consumer Cyclical	42	25.6	449.9	29.9	380.2	2.0	469.1
Consumer Non-cyclical	42	14.3	154.3	20.8	145.4	2.4	25.4
Diversified	6	1.2	12.3	2.1	11.0	0.2	3.6
Energy	7	36.7	223.9	35.0	94.8	0.2	131.3
Industrial	44	47.9	617.7	49.3	639.4	2.5	532.7
Technology	11	44.5	612.1	50.6	514.5	-4.0	104.3

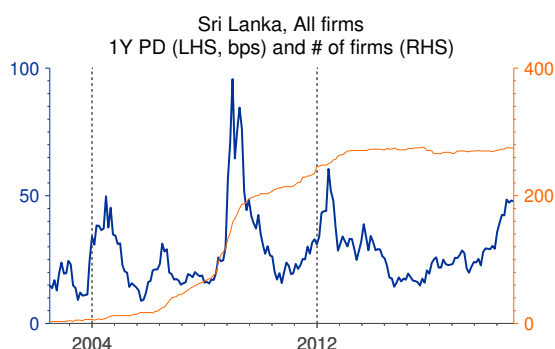


South Korea	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	96	23.0	35.5	20.9	32.2	-0.3	13.8
Basic Materials	185	6.9	34.1	7.7	45.1	0.1	17.3
Communications	181	3.9	32.4	4.8	65.9	0.0	60.6
Consumer Cyclical	357	9.9	48.5	10.0	66.8	0.0	35.2
Consumer Non-cyclical	402	3.6	18.7	4.1	20.1	0.0	8.7
Diversified	28	0.0	4.2	0.0	4.2	-0.0	0.1
Energy	18	6.7	41.7	6.4	37.8	-0.0	22.1
Industrial	557	10.4	42.6	11.7	92.6	0.4	81.6
Technology	289	4.8	22.6	5.5	23.8	0.1	13.4
Utilities	19	20.8	69.6	19.2	26.5	-2.1	54.5

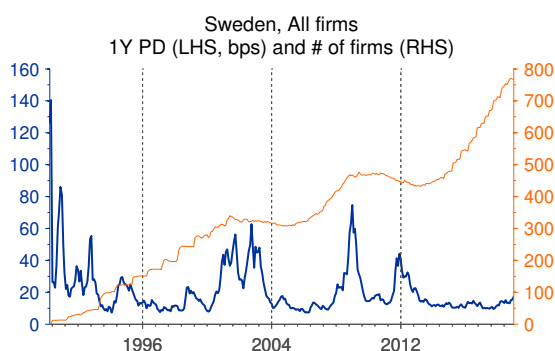


Spain	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	35	1.5	6.0	2.6	5.4	0.1	1.7
Basic Materials	9	3.4	52.5	3.1	41.8	-0.1	11.2
Communications	19	11.3	16.4	11.8	30.6	0.7	17.8
Consumer Cyclical	19	5.2	30.9	4.6	50.7	0.3	21.0
Consumer Non-cyclical	38	6.3	29.8	6.4	71.0	0.2	53.7
Energy	6	8.0	39.6	9.1	10.2	0.7	33.0
Industrial	30	7.6	85.7	10.2	73.8	0.2	37.5
Technology	7	7.2	4.8	7.6	4.7	-0.0	1.9
Utilities	7	1.3	0.8	1.2	1.1	-0.1	1.1

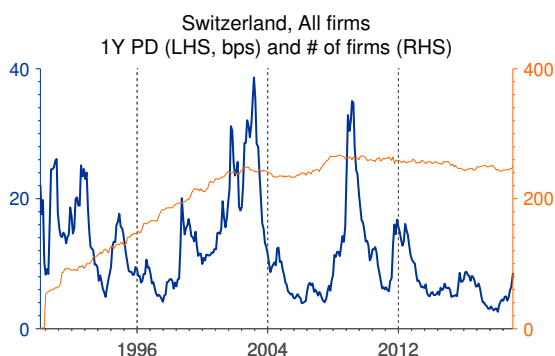




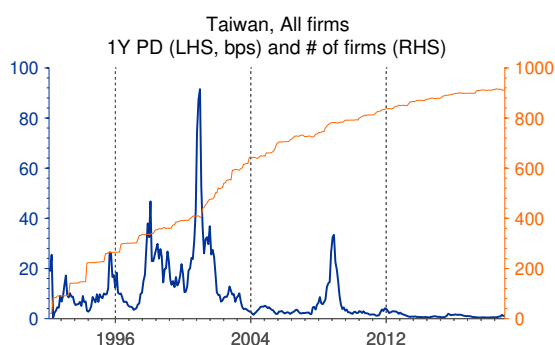
Sri Lanka	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	89	65.1	62.2	81.8	86.6	13.9	34.2
Basic Materials	11	25.3	34.0	36.6	32.1	3.6	16.5
Communications	4	6.5	25.8	6.7	39.9	2.8	14.5
Consumer Cyclical	64	26.5	131.3	41.2	116.0	5.6	83.6
Consumer Non-cyclical	61	29.7	88.6	40.2	109.5	3.2	32.1
Diversified	7	33.6	135.3	27.2	133.4	-0.6	4.3
Energy	3	9.9	8.2	8.5	5.1	-1.4	3.5
Industrial	25	40.1	257.4	50.2	239.7	5.8	127.4
Technology	2	14.6	8.3	15.1	3.4	0.6	4.8
Utilities	5	25.6	52.8	24.4	76.0	-0.1	24.1



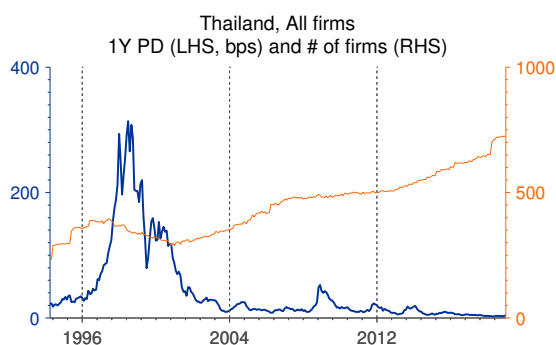
Sweden	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	99	3.4	18.4	2.5	43.0	-0.2	42.1
Basic Materials	29	15.1	76.6	10.0	43.4	-0.3	61.7
Communications	74	34.7	133.2	33.8	138.9	0.4	92.1
Consumer Cyclical	89	19.6	70.1	19.7	67.7	-0.9	47.9
Consumer Non-cyclical	215	13.1	59.7	11.3	42.8	-0.2	42.6
Diversified	4	18.9	21.8	14.6	21.2	-0.0	5.4
Energy	22	30.6	71.8	23.9	102.3	-6.1	57.4
Industrial	140	17.7	88.5	15.9	63.1	-0.4	57.0
Technology	77	19.8	94.2	22.4	75.2	0.8	75.2
Utilities	2	4.5	5.5	3.8	3.2	-0.6	2.3



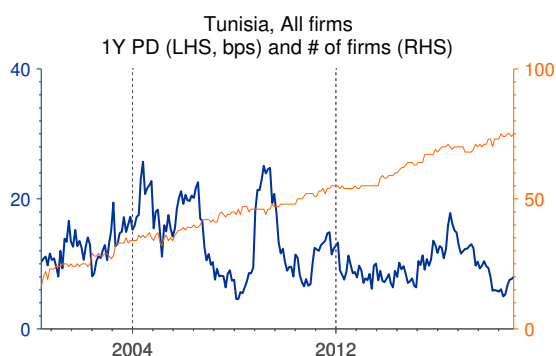
Switzerland	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	67	3.0	17.1	3.0	17.2	-0.0	2.1
Basic Materials	14	4.1	160.6	3.8	175.2	0.3	15.1
Communications	12	10.3	40.8	10.1	77.7	0.5	44.2
Consumer Cyclical	21	6.0	68.5	6.7	100.0	1.1	32.8
Consumer Non-cyclical	47	7.5	250.2	4.2	110.8	-0.0	151.3
Diversified	3	2.7	27.0	4.2	38.5	2.4	11.7
Energy	5	68.5	76.8	34.3	115.5	4.7	44.8
Industrial	57	5.5	31.8	5.4	20.0	0.2	15.4
Technology	10	8.0	24.6	10.2	31.0	1.0	15.3
Utilities	6	15.2	63.4	14.0	82.2	-0.4	25.9



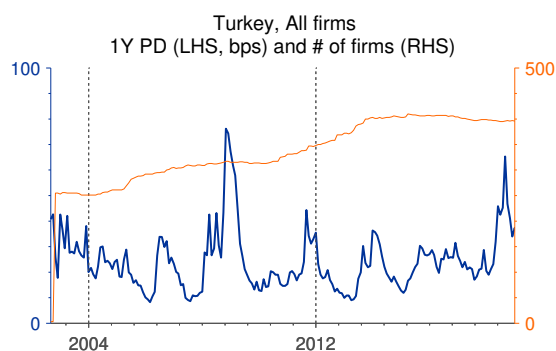
Taiwan	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	88	0.2	2.9	0.3	4.9	0.0	2.1
Basic Materials	78	0.2	3.5	0.4	4.8	0.0	2.5
Communications	44	0.5	9.1	1.2	7.7	0.2	2.8
Consumer Cyclical	157	0.4	8.6	0.5	5.8	0.0	6.4
Consumer Non-cyclical	64	0.0	1.9	0.1	3.4	0.0	1.7
Diversified	1	0.0	—	0.0	—	-0.0	—
Energy	11	2.8	3.8	3.7	3.7	1.0	1.7
Industrial	316	1.0	12.1	1.5	11.8	0.2	4.3
Technology	150	1.0	4.8	1.7	7.8	0.4	3.5
Utilities	5	0.0	0.0	0.0	0.1	0.0	0.0



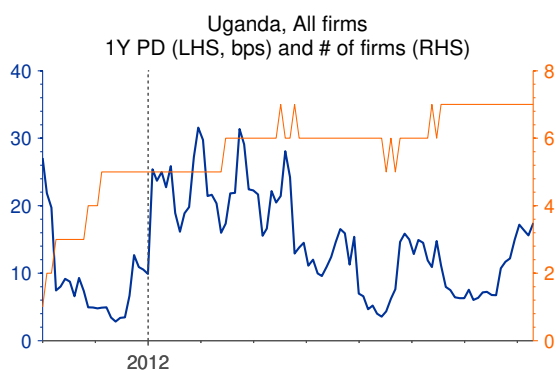
Thailand	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	157	0.8	4.2	0.4	2.4	-0.2	2.2
Basic Materials	56	7.8	92.9	5.9	97.0	-0.3	9.5
Communications	45	19.9	63.3	12.7	51.4	-1.1	19.9
Consumer Cyclical	141	4.8	37.9	4.2	43.9	-0.2	21.8
Consumer Non-cyclical	108	2.5	61.1	2.0	84.3	-0.1	33.4
Diversified	6	2.1	71.0	3.3	75.6	0.2	6.9
Energy	25	5.9	27.2	4.9	19.2	-0.8	9.1
Industrial	146	8.1	44.5	6.6	50.3	-0.6	25.2
Technology	13	12.8	152.0	9.6	124.1	-0.2	46.2
Utilities	20	2.0	19.1	2.5	14.3	0.0	8.1



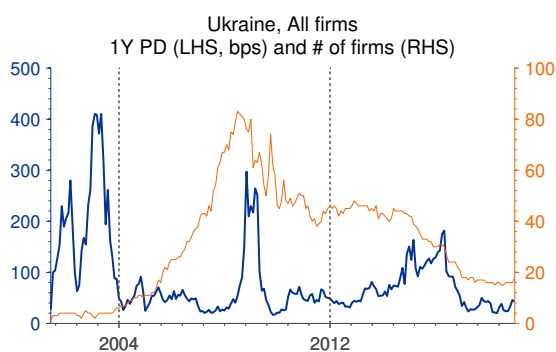
Tunisia	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	25	5.6	17.5	6.2	17.8	0.5	2.7
Basic Materials	3	2.1	37.6	1.4	37.3	-0.7	0.5
Communications	4	26.5	19.1	38.7	31.8	12.2	12.9
Consumer Cyclical	13	5.1	59.7	6.1	82.3	0.8	26.3
Consumer Non-cyclical	11	8.9	152.8	13.1	182.9	0.9	45.7
Diversified	1	3.1	—	4.3	—	1.2	—
Energy	1	0.2	—	0.3	—	0.2	—
Industrial	14	7.4	192.8	11.9	170.9	1.3	24.8
Technology	2	71.8	99.5	88.2	122.4	16.4	22.9



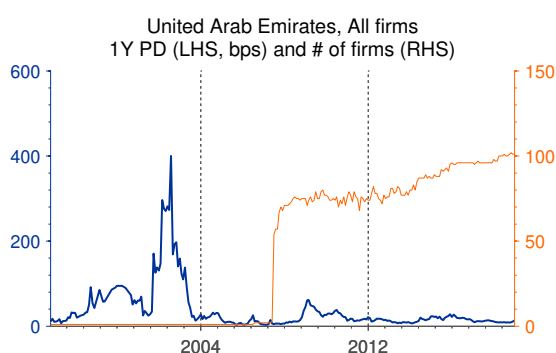
Turkey	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	106	41.7	94.0	47.5	185.1	9.0	112.9
Basic Materials	35	23.6	33.6	29.4	44.5	1.0	21.0
Communications	13	44.1	31.1	50.0	35.4	8.3	21.3
Consumer Cyclical	90	54.4	116.8	58.7	128.4	7.1	42.1
Consumer Non-cyclical	54	40.2	58.3	47.6	84.9	3.3	37.3
Diversified	5	76.5	605.0	105.2	989.3	17.5	385.0
Energy	5	27.4	39.8	20.3	71.0	-1.6	41.1
Industrial	72	27.6	79.1	33.3	137.7	3.9	74.3
Technology	5	8.1	32.3	11.0	39.7	2.9	7.7
Utilities	9	91.5	67.0	65.7	110.7	32.7	53.2



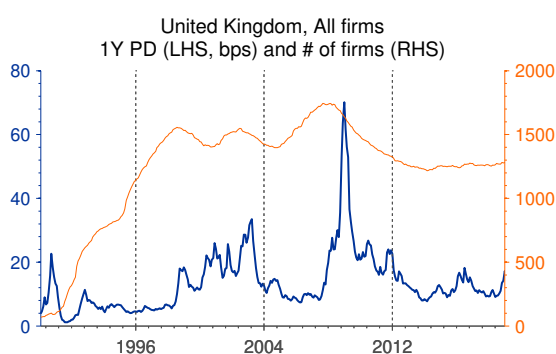
Uganda	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	4	10.0	5.1	15.8	7.5	5.0	2.9
Consumer Non-cyclical	1	0.0	—	0.0	—	0.0	—
Industrial	1	19.2	—	28.8	—	9.6	—
Utilities	1	49.9	—	61.9	—	12.0	—



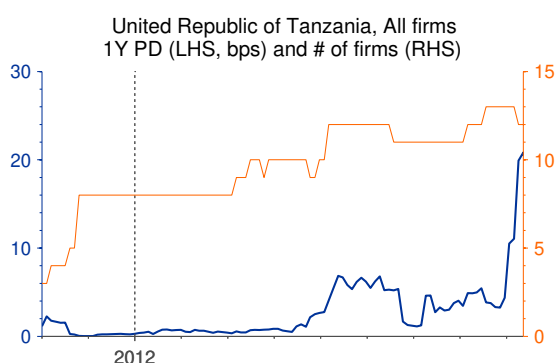
Ukraine	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	1	66.2	—	63.9	—	-2.3	—
Consumer Non-cyclical	9	38.4	122.5	25.2	121.9	-6.1	13.4
Energy	1	593.8	—	292.0	—	-301.8	—
Industrial	3	2.0	80.3	1.9	105.1	-0.1	24.8
Utilities	1	37.1	—	23.2	—	-13.9	—



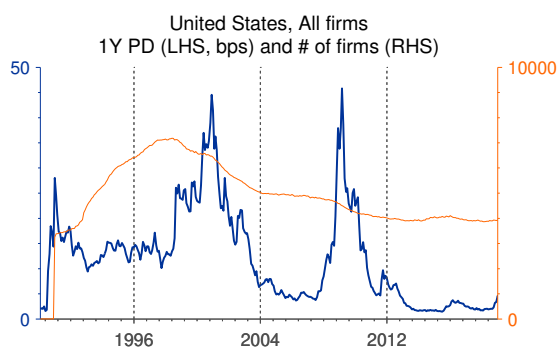
United Arab Emirates	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	53	5.4	9.2	5.2	9.4	-0.2	3.3
Communications	2	0.5	0.1	0.2	0.1	-0.3	0.2
Consumer Cyclical	7	21.7	119.5	17.4	80.6	-8.7	41.5
Consumer Non-cyclical	14	24.1	117.9	26.8	172.0	2.6	59.1
Energy	6	22.2	18.9	27.7	27.6	3.1	16.6
Industrial	17	27.7	72.2	35.5	147.9	2.5	88.2
Utilities	1	78.8	—	79.9	—	1.1	—



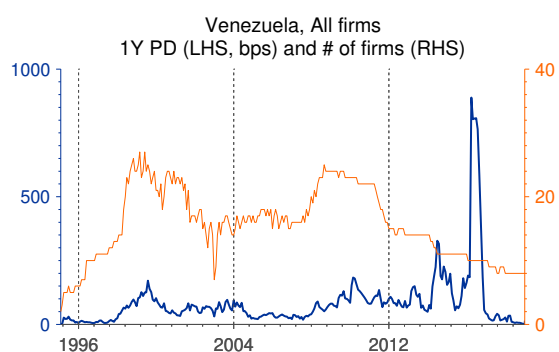
United Kingdom	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	259	2.2	11.5	2.6	13.5	0.1	7.6
Basic Materials	91	21.8	312.6	31.7	297.2	0.4	59.1
Communications	103	19.9	407.5	21.0	456.9	1.1	133.7
Consumer Cyclical	157	10.2	60.9	13.7	159.7	0.6	149.1
Consumer Non-cyclical	248	8.4	92.5	11.1	115.4	0.0	84.4
Diversified	6	8.2	37.4	11.2	57.4	3.1	21.6
Energy	101	31.9	115.9	35.2	111.0	0.7	67.5
Industrial	169	14.4	58.8	12.8	64.0	0.1	27.0
Technology	101	9.8	66.0	12.3	68.1	0.4	37.9
Utilities	14	9.0	1506.7	12.8	1541.3	1.9	40.8



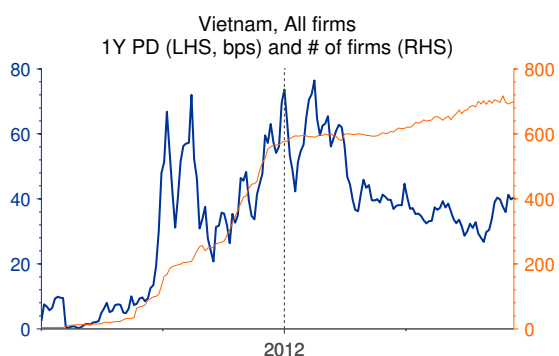
United Republic of Tanzania	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	5	14.8	16.8	14.8	19.1	0.3	3.0
Basic Materials	1	0.0	—	0.0	—	0.0	—
Communications	1	34.9	—	27.1	—	-7.8	—
Consumer Non-cyclical	2	0.8	1.1	1.6	2.2	0.8	1.0
Energy	1	3.3	—	65.2	—	61.9	—
Industrial	3	1.1	53.8	4.3	58.5	3.2	4.7



United States	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	903	0.6	14.1	0.7	19.0	0.0	7.3
Basic Materials	121	2.6	339.4	1.7	315.5	0.0	105.3
Communications	253	4.7	295.8	4.5	337.2	-0.0	206.8
Consumer Cyclical	455	4.2	289.6	4.7	372.7	0.0	223.7
Consumer Non-cyclical	929	7.6	220.1	7.6	321.6	0.0	215.8
Diversified	11	0.0	78.3	0.0	109.1	0.0	30.9
Energy	295	9.9	196.0	11.6	526.5	0.2	460.1
Industrial	475	1.6	140.9	1.7	243.4	0.0	138.2
Technology	329	1.7	89.9	2.0	162.2	0.0	119.9
Utilities	76	0.1	16.3	0.2	54.5	0.0	42.2



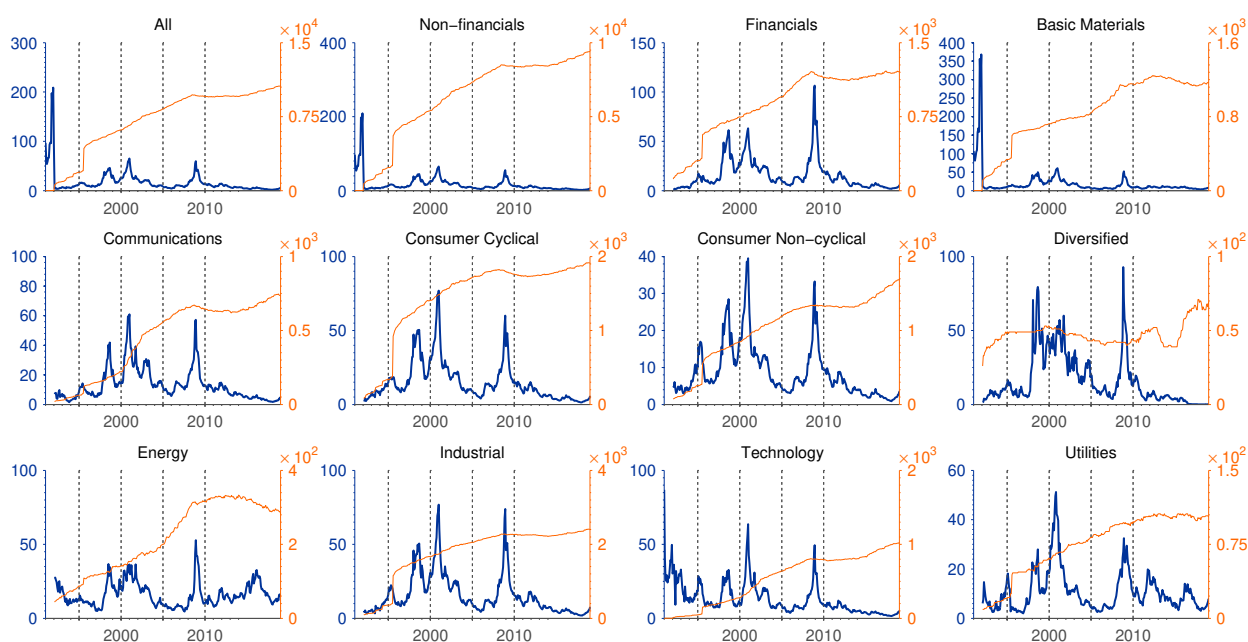
Venezuela	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	5	3.2	7.7	3.7	4.3	-0.6	4.1
Basic Materials	2	646.7	397.2	493.8	261.4	-152.9	135.8
Industrial	1	1.2	-	1.2	-	0.1	-



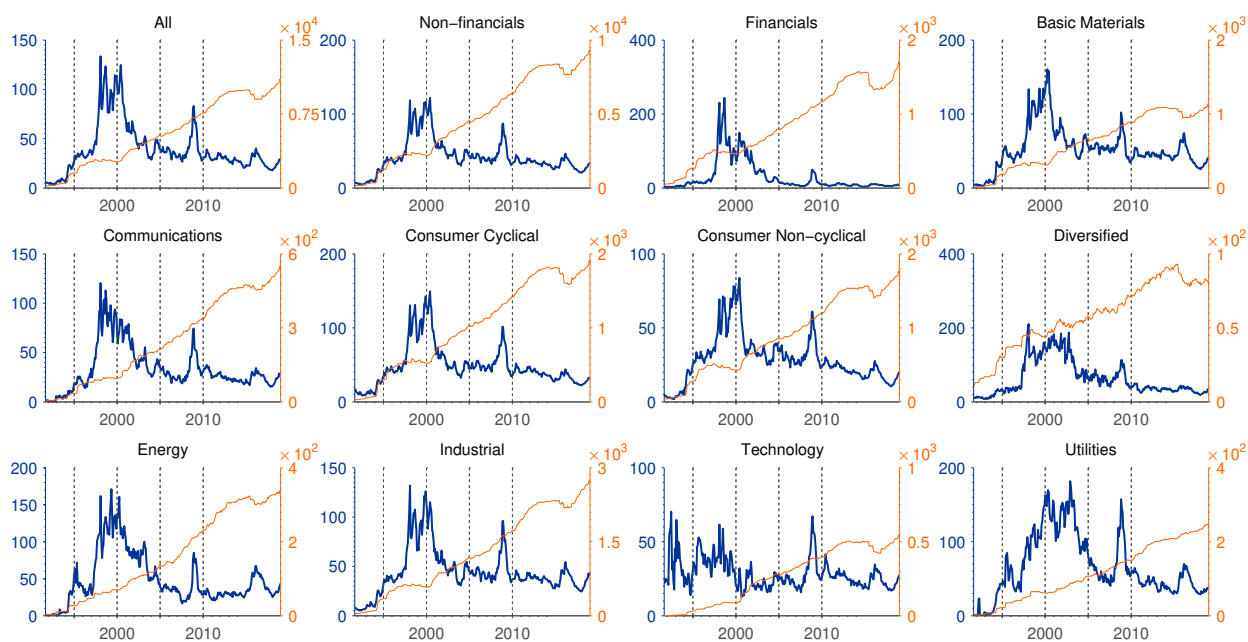
Vietnam	#	2018Q3		2018Q4		Q4-Q3	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	95	22.3	25.4	18.6	19.3	-2.2	10.9
Basic Materials	72	43.3	130.1	38.0	166.8	-2.5	67.3
Communications	21	66.9	74.2	65.7	68.5	-11.6	25.8
Consumer Cyclical	73	45.5	61.1	35.2	69.4	-0.0	31.5
Consumer Non-cyclical	110	34.1	82.9	25.6	61.2	-0.5	50.5
Diversified	9	32.1	66.9	20.8	102.3	0.1	38.4
Energy	26	93.5	110.5	83.8	102.7	-7.1	28.2
Industrial	244	56.8	83.3	57.5	90.4	0.3	40.8
Technology	5	11.1	51.4	6.4	47.2	-6.8	5.2
Utilities	24	17.4	35.3	20.3	32.5	-0.5	7.0

## B PD by regions

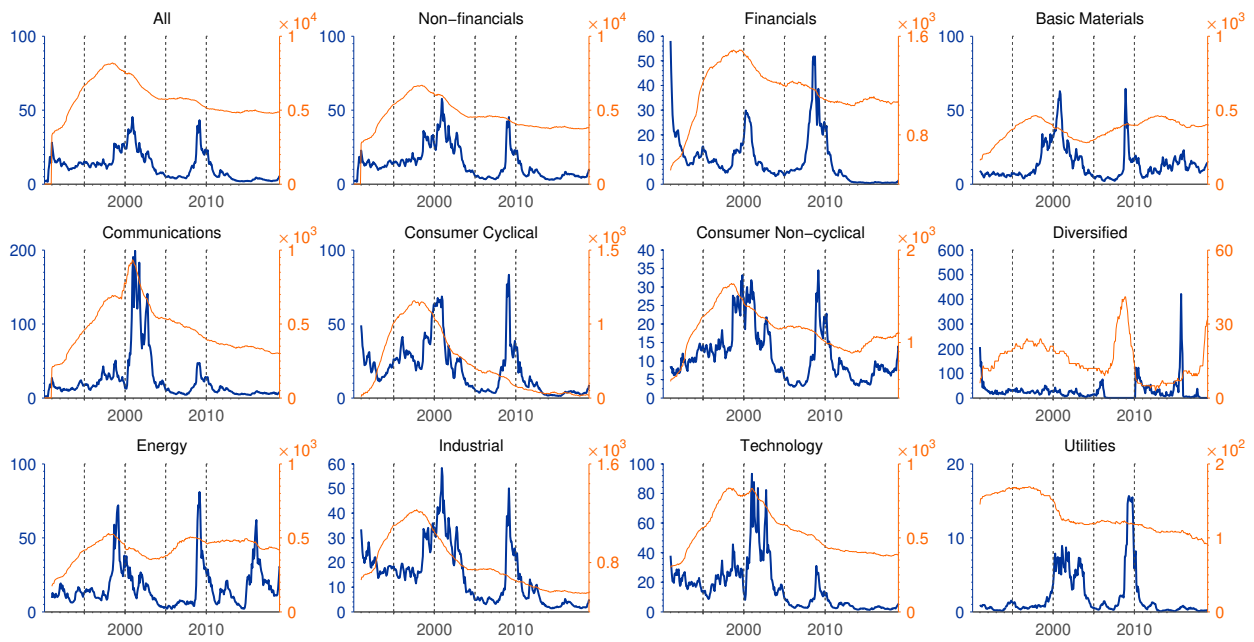
### Asia Pacific - developed economies



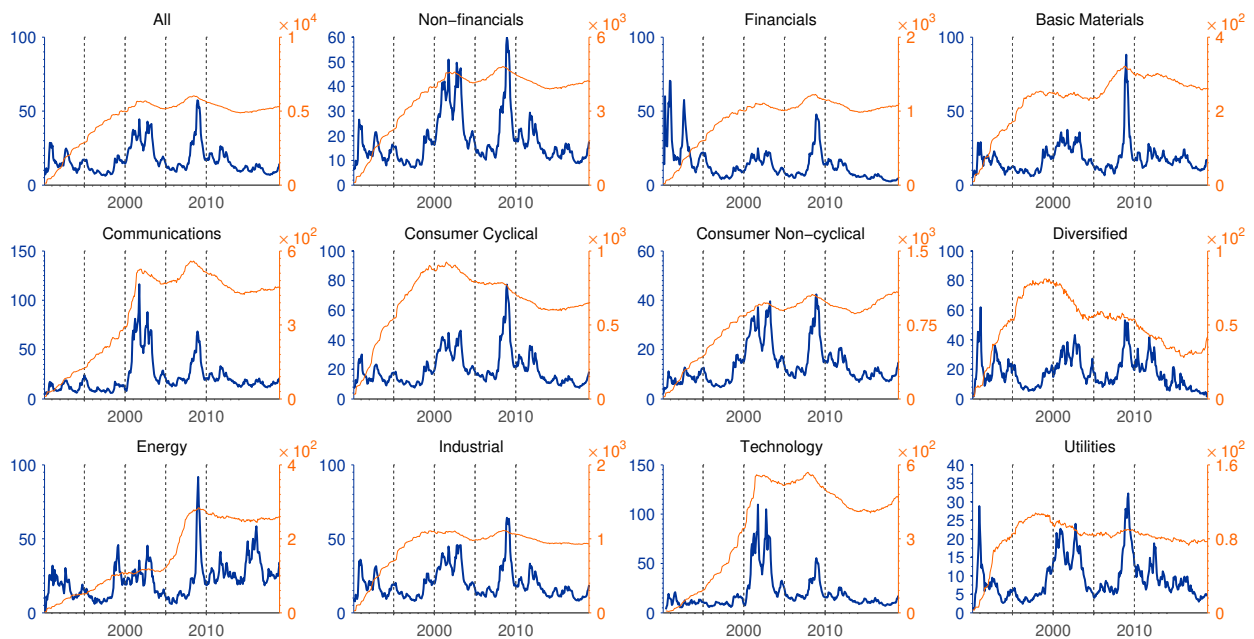
### Asia Pacific - emerging economies



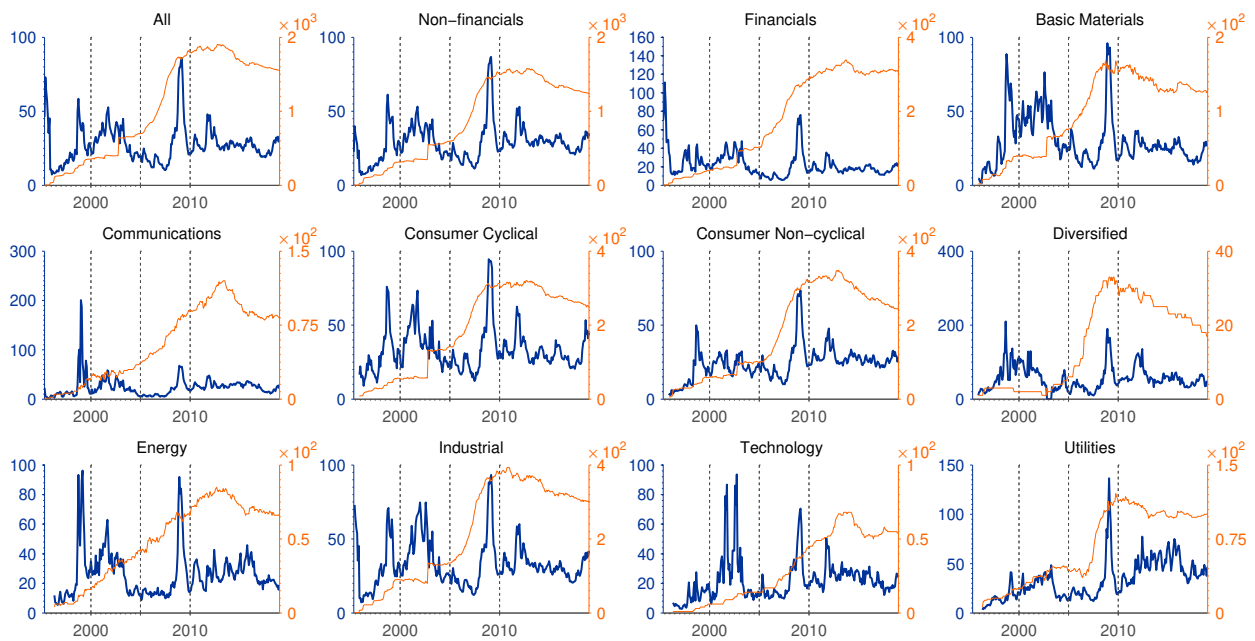
## North America



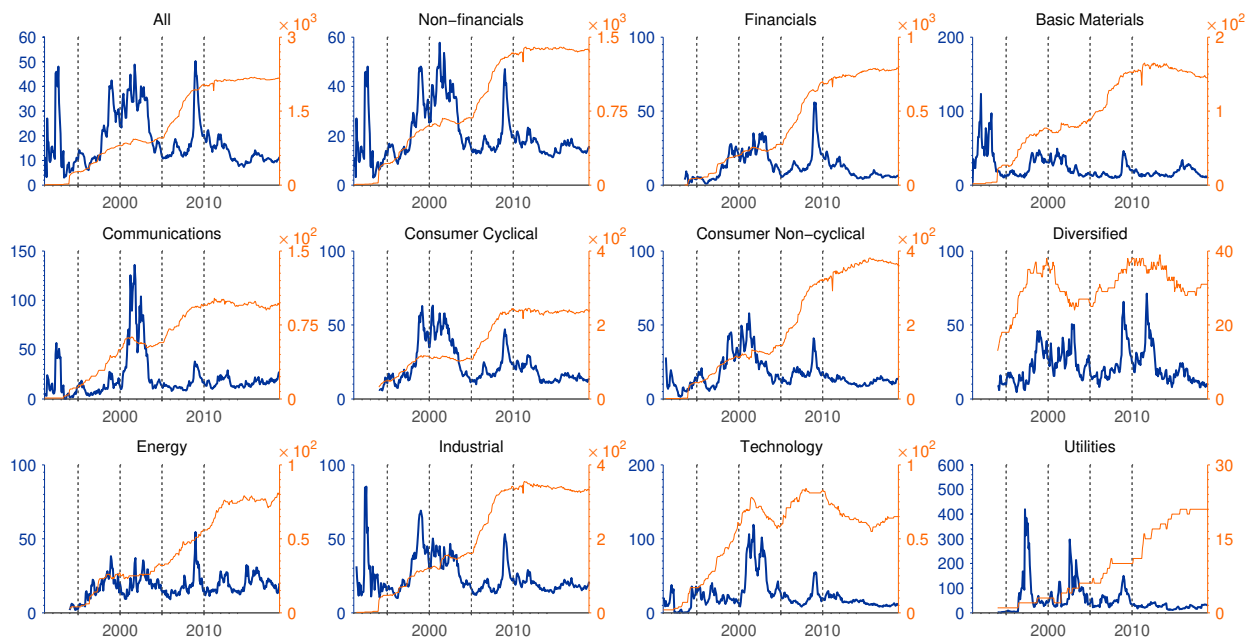
## Western Europe



## Eastern Europe

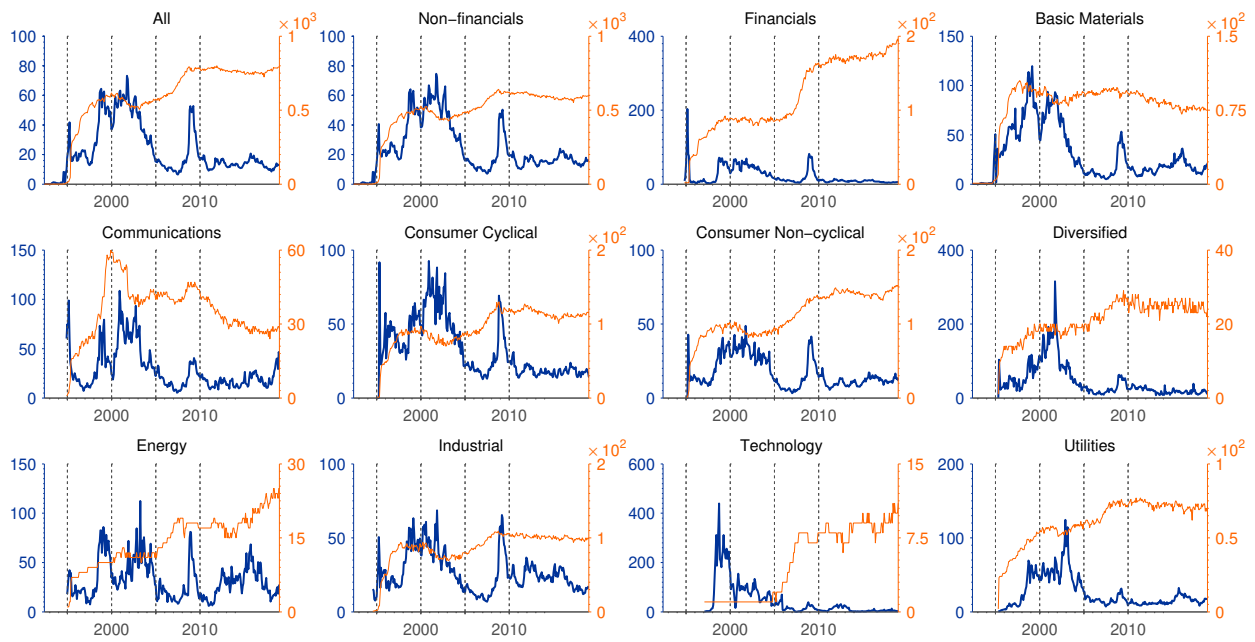


## Africa ME



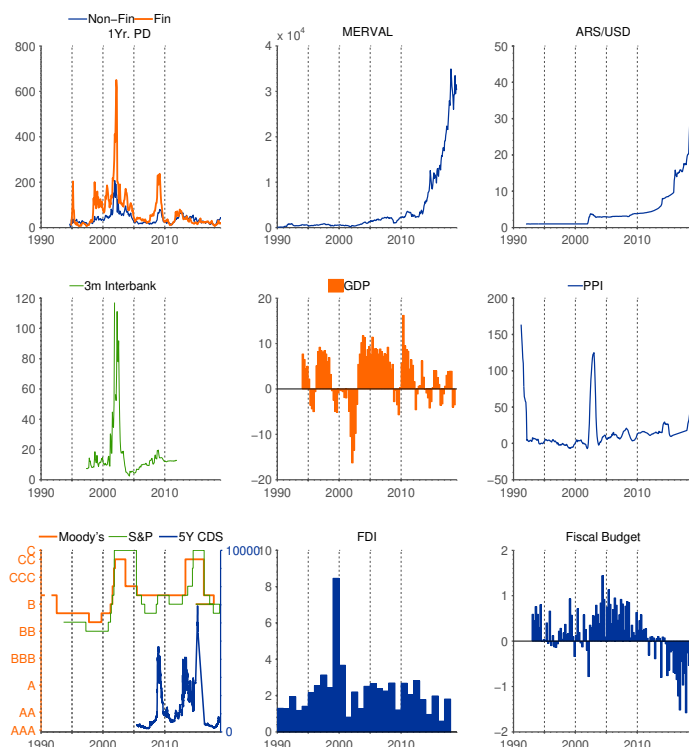


## Latin America

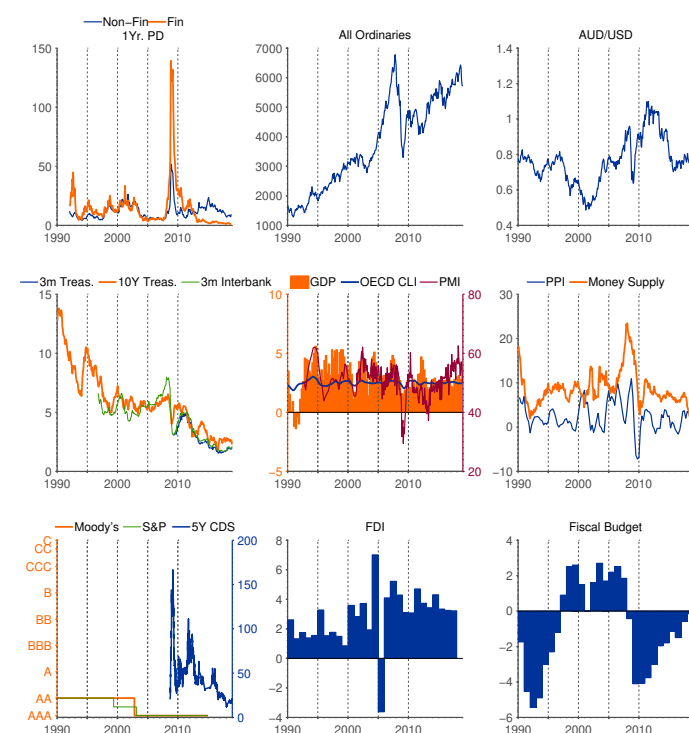


## C Macroeconomic Indicators

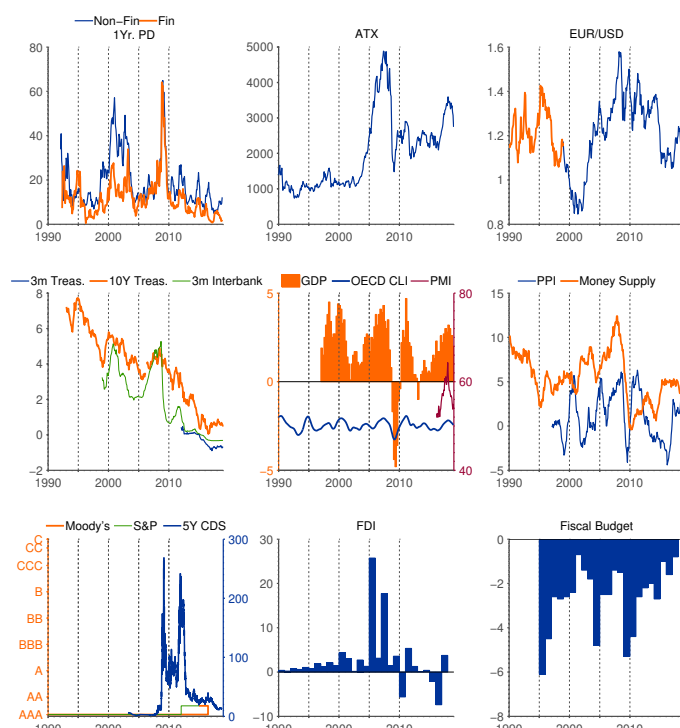
Descriptions of the data contained in this section are provided in Appendix D.



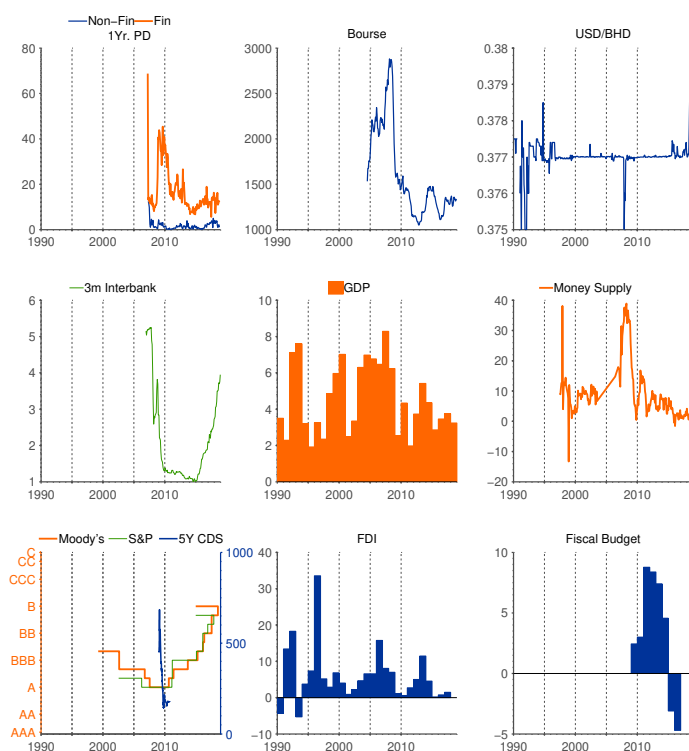
Argentina	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	12.17	14.91	34.36	32.05	44.21
1Yr. PD, Fin.	8.50	11.47	17.68	20.12	19.72
MERVAL	30066	31115	26037	33462	30293
ARS/USD	18.62	20.14	28.93	41.31	37.67
GDP (YoY%)	3.9	3.9	-4.0	-3.5	—
PPI (YoY%)	17.9	29.9	32.4*	77.8	79.6*
Sov. Rating, Moody's	B2	B2	B2	B2	B2
Sov. Rating, S&P	B	B	B	B	B
5Y CDS (bps)	232.25	272.14	450.36	586.17	793.91
FDI (%GDP)	1.81	—	—	—	—
Fiscal Budget (%GDP)	-1.58	-0.26	-0.53	-0.32	—



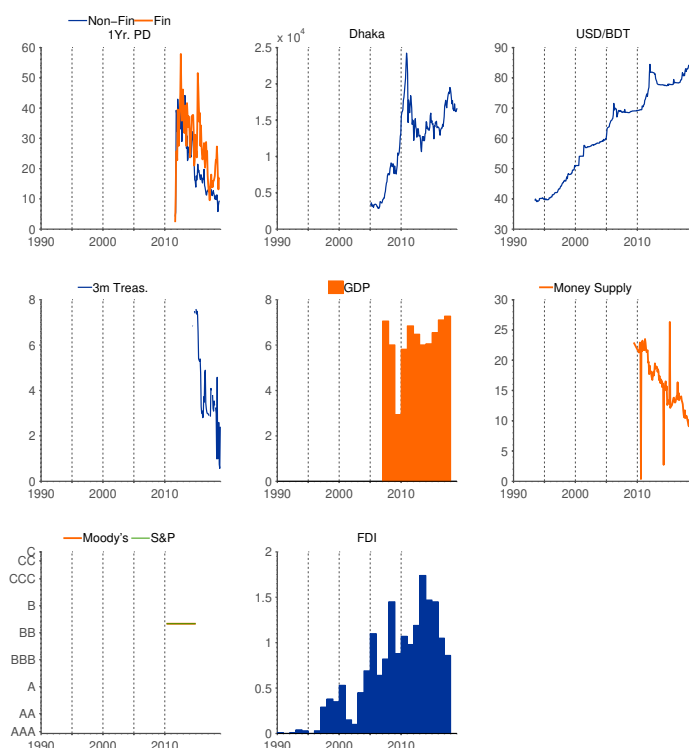
Australia	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	7.53	7.82	8.78	7.19	9.41*
1Yr. PD, Fin.	1.21	1.89	1.70	0.63	0.78*
All Ordinaries	6167	5869	6290	6326	5709
AUD/USD	0.78	0.77	0.74	0.72	0.70
3m Treas. Yield (%)	1.74	2.03	1.92	1.89	2.01
10Y Treas. Yield (%)	2.63	2.60	2.63	2.67	2.32
3m Interbank (%)	1.78	2.02	2.10	1.93	2.09
GDP (YoY%)	2.4	3.0	3.1	2.8	—
OECD CLI	99.93	99.77	99.82	99.81	99.74*
PMI	57.0	62.5	55.6	57.1	50.0
PPI (YoY%)	3.5	3.3	5.2	6.9	5.4
Money Supply (YoY%)	4.5	3.7	1.9	2.2	2.4
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
5Y CDS (bps)	17.60*	14.48	—	16.60	21.46
FDI (%GDP)	3.22	—	—	—	—
Fiscal Budget (%GDP)	-0.57	—	—	—	-0.15



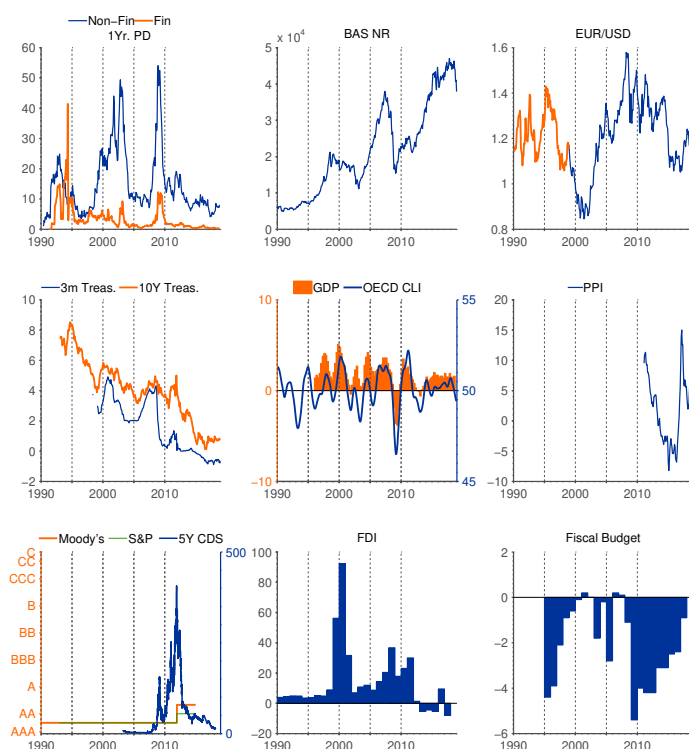
Austria	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	6.72	8.37	10.41	9.38	12.15*
1Yr. PD, Fin.	6.17	4.16	2.63	1.44	2.01*
ATX	3420	3429	3256	3344	2746
EUR/USD	1.20	1.23	1.17	1.16	1.15
3m Treas. Yield (%)	-0.70	-0.69	-0.69	-0.63	-0.67
10Y Treas. Yield (%)	0.58	0.70	0.58	0.68	0.50
3m Interbank (%)	-0.33	-0.33	-0.32	-0.32	-0.31
GDP (YoY%)	2.8	3.2	3.0	2.6	2.0
OECD CLI	101.25	101.20	100.91	100.55	100.22*
PMI	64.3	58.0	56.6	55.0	53.9
PPI (YoY%)	1.5	1.7	3.6	4.2	2.3
Money Supply (YoY%)	4.7	3.7	4.5	3.6	4.0
Sov. Rating, Moody's	Aa1	Aa1	Aa1	Aa1	Aa1
Sov. Rating, S&P	AA+	AA+	AA+	AA+	AA+
5Y CDS (bps)	13.1	12.1	14.0	13.4	-
FDI (%GDP)	3.75	-	-	-	-
Fiscal Budget (%GDP)	-0.80	-	-	-	-



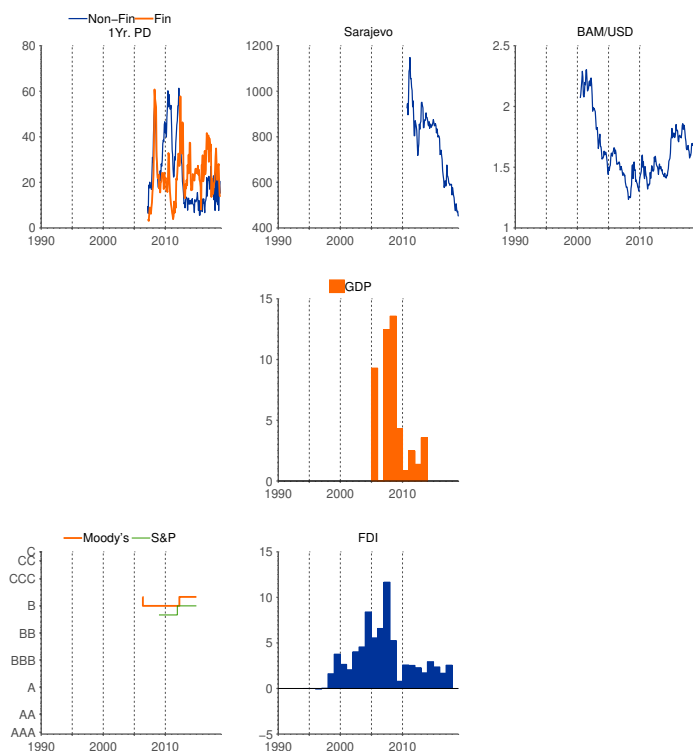
Bahrain	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	4.10	3.89	1.75	2.13	1.05*
1Yr. PD, Fin.	14.85	10.22	16.21	12.62	12.23*
Bourse	1332	1318	1311	1339	1337
USD/BHD	0.38	0.38	0.38	0.38	0.38
3m Interbank (%)	2.73	3.05	3.50	3.73	3.95
GDP (YoY%)	3.75	-	-	-	3.24
Money Supply (YoY%)	4.15	0.64	0.19	0.59	-0.14*
Sov. Rating, Moody's	B2	B2	B2	B2	B2
Sov. Rating, S&P	B+	B+	B+	B+	B+
FDI (%GDP)	1.47	-	-	-	-



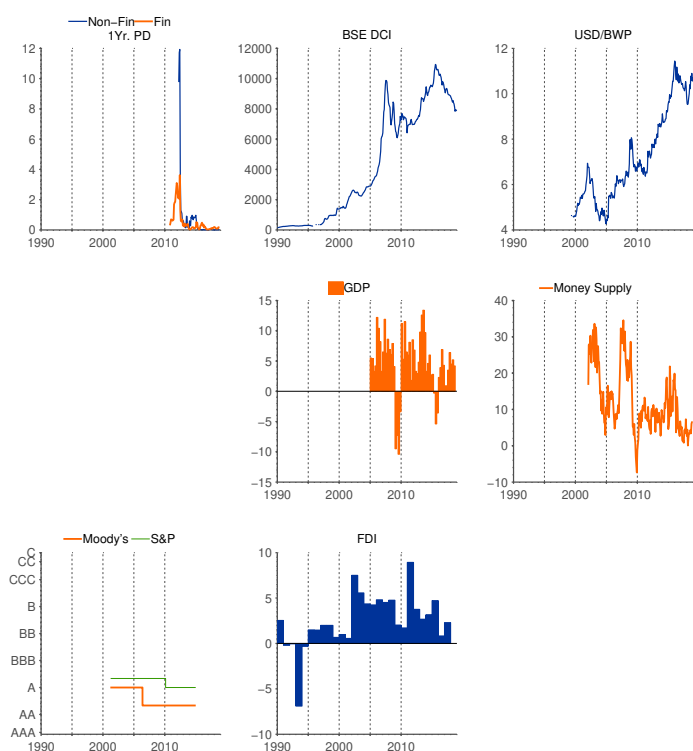
Bangladesh	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	11.11	11.03	9.36	9.07	9.37*
1Yr. PD, Fin.	16.67	22.89	23.07	16.95	16.94*
Dhaka	19268	17252	16540	16483	16450
USD/BDT	82.69	83.22	83.78	83.97	83.60
3m Treas. Yield (%)	3.54	3.25	4.58	2.59	2.40
GDP (YoY%)	7.3	—	—	—	—
Money Supply (YoY%)	10.7	9.3	9.2	8.8	8.8*
Sov. Rating, Moody's	Ba3	Ba3	Ba3	Ba3	Ba3
Sov. Rating, S&P	BB-	BB-	BB-	BB-	BB-
FDI (%GDP)	0.86	—	—	—	—



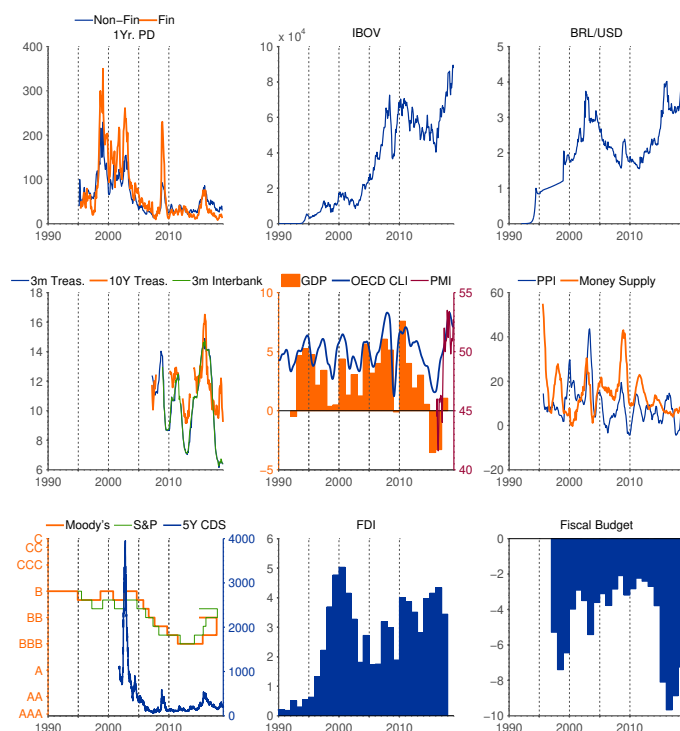
Belgium	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	5.70	8.52	7.29	7.16	8.07*
1Yr. PD, Fin.	0.54	0.32	0.25	0.32	0.26*
BAS NR	45177.2	44075.4	44656.8	43923.4	37906.2
EUR/USD	1.20	1.23	1.17	1.16	1.15
3m Treas. Yield (%)	-0.77	-0.61	-0.61	-0.58	-0.80
10Y Treas. Yield (%)	0.64	0.77	0.69	0.83	0.78
GDP (YoY%)	1.9	1.5	1.4	1.6	—
OECD CLI	100.70	100.45	100.12	99.67	99.41*
PPI (YoY%)	4.1	2.6	7.1	6.8	4.4
Sov. Rating, Moody's	Aa3	Aa3	Aa3	Aa3	Aa3
Sov. Rating, S&P	AA	AA	AA	AA	AA
5Y CDS (bps)	13.55	14.05	—	—	—
FDI (%GDP)	-8.01	—	—	—	—
Fiscal Budget (%GDP)	-0.90	—	—	—	—



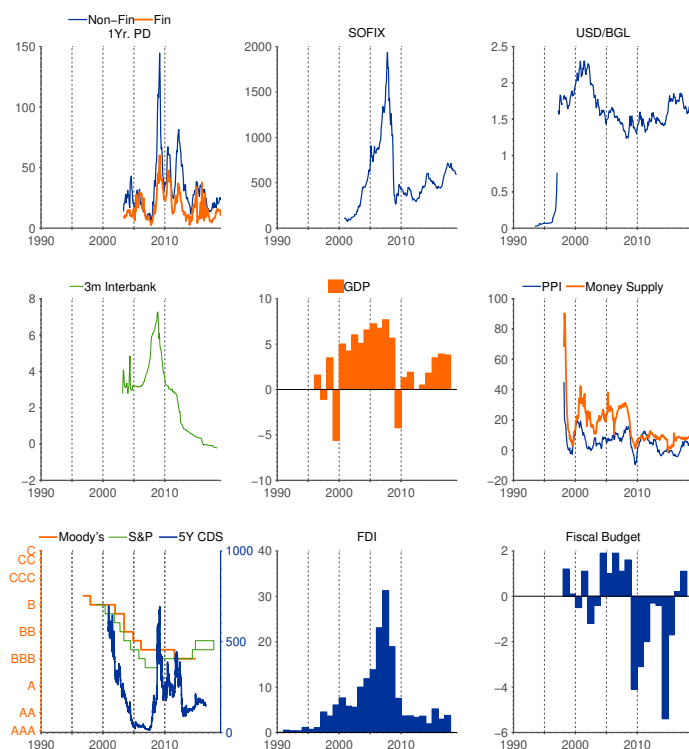
Bosnia and Herzegovina	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	7.66	11.63	27.25	20.52	15.06*
1Yr. PD, Fin.	25.40	27.65	27.08	14.23	13.64*
Sarajevo	545	545	476	482	452
BAM/USD	1.63	1.59	1.69	1.69	1.73
Sov. Rating, Moody's	B3	B3	B3	B3	B3
Sov. Rating, S&P	B	B	B	B	B
FDI (%GDP)	2.56	—	—	—	—



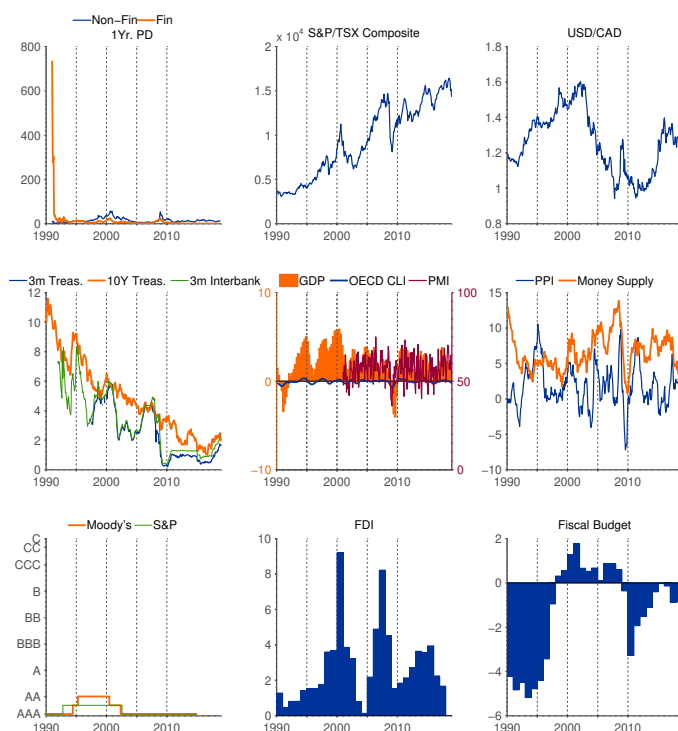
Botswana	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	0.00	0.00	0.01	0.01	0.00*
1Yr. PD, Fin.	0.19	0.10	0.09	0.16	0.17*
BSE DCI	8860	8590	8403	7837	7852
USD/BWP	9.83	9.56	10.39	10.59	10.71
GDP (YoY%)	6.4	4.5	5.2	4.2	—
Money Supply (YoY%)	2.7	2.1	3.4	6.0	6.5*
Sov. Rating, Moody's	Aa3	Aa3	Aa3	Aa3	Aa3
Sov. Rating, S&P	A	A	A	A	A
FDI (%GDP)	2.30	—	—	—	—



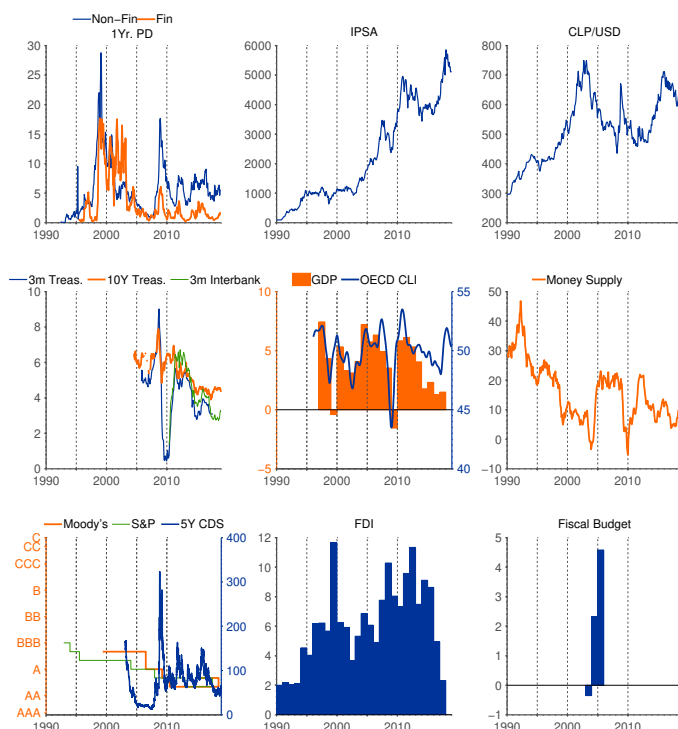
Brazil	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	32.17	28.36	37.38	39.96	29.82*
1Yr. PD, Fin.	10.26	11.43	17.83	18.08	12.57*
IBOV	76402.1	85365.6	72762.5	79342.4	87887.3
BRL/USD	3.31	3.31	3.88	4.05	3.87
3m Treas. Yield (%)	6.76	6.49	6.45	6.58	6.37
10Y Treas. Yield (%)	10.26	9.49	11.68	11.76	9.23
3m Interbank (%)	6.78	6.31	6.52	6.69	6.43
GDP (YoY%)	1.1	—	—	—	—
OECD CLI	102.71	103.31	102.95	102.27	102.07*
PMI	52.4	53.4	49.8	50.9	52.6
PPI (YoY%)	-2.5	-1.2	8.7	13.3	9.4
Money Supply (YoY%)	5.5	8.2	7.6	9.5	9.6
Sov. Rating, Moody's	Ba2	Ba2	Ba2	Ba2	Ba2
Sov. Rating, S&P	BB-	BB-	BB-	BB-	BB-
5Y CDS (bps)	161.97	164.20	269.96	262.96	207.52
FDI (%GDP)	3.44	—	—	—	—
Fiscal Budget (%GDP)	-8.87	—	—	—	-7.25



Bulgaria	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	21.06	18.04	20.00	21.12	23.47
1Yr. PD, Fin.	8.36	13.17	13.93	14.52	10.61
SOFIX	677	649	634	624	594
USD/BGL	1.63	1.59	1.67	1.69	1.71
3m Interbank (%)	-0.18	-0.19	-0.23	—	—
GDP (YoY%)	3.8	—	—	—	—
PPI (YoY%)	5.1	3.0	5.7	3.1	2.9
Money Supply (YoY%)	7.7	8.3	9.9	9.2	8.8
Sov. Rating, Moody's	Baa2	Baa2	Baa2	Baa2	Baa2
Sov. Rating, S&P	BBB-	BBB-	BBB-	BBB-	BBB-
FDI (%GDP)	3.75	—	—	—	—
Fiscal Budget (%GDP)	1.10	—	—	—	—

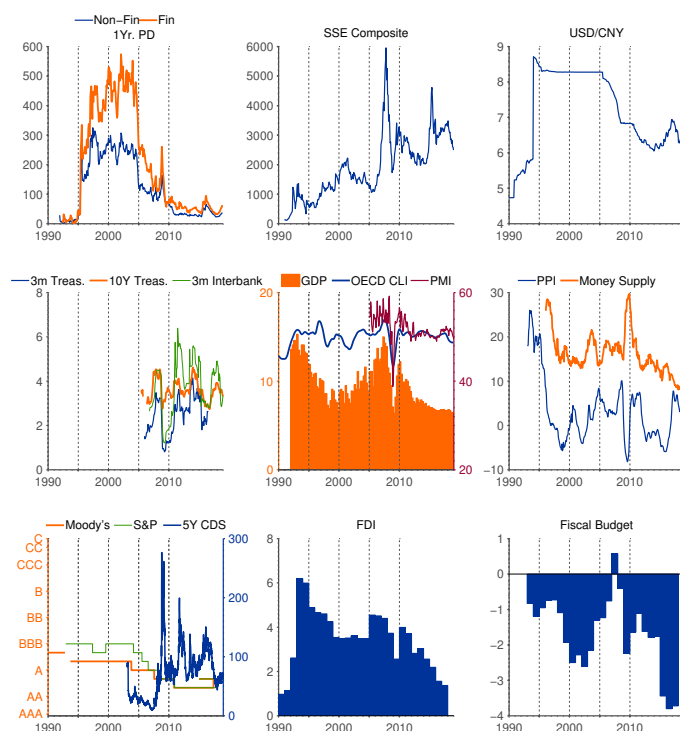


Canada	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	8.32	9.01	12.30	10.88	14.37*
1Yr. PD, Fin.	0.24	0.39	0.43	0.48	0.61*
S&P/TSX Composite	16209	15367	16278	16073	14323
USD/CAD	1.26	1.29	1.31	1.29	1.36
3m Treas. Yield (%)	1.06	1.15	1.26	1.58	1.65
10Y Treas. Yield (%)	2.04	2.09	2.17	2.43	1.97
3m Interbank (%)	1.54	1.73	1.77	2.02	2.31
GDP (YoY%)	2.9	2.3	1.9	2.1	—
OECD CLI	100.56	100.24	99.95	99.54	99.13*
PMI	49.3	64.7	65.1	56.5	48.2
PPI (YoY%)	2.3	2.4	5.4	6.2	2.2
Money Supply (YoY%)	4.8	4.7	4.3	5.7	6.4
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
FDI (%GDP)	1.67	—	—	—	—
Fiscal Budget (%GDP)	-0.87	—	—	—	-0.85

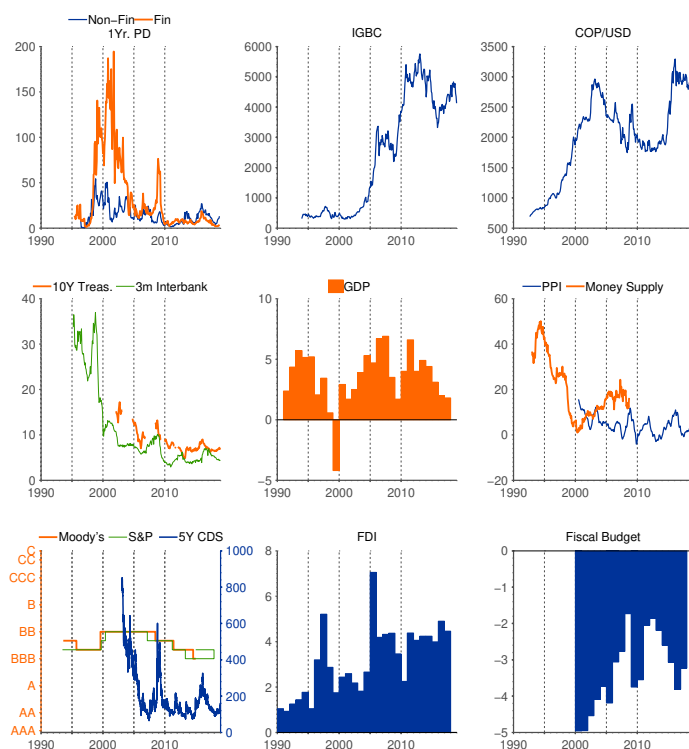


Chile	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	5.76	5.46	5.89	4.64	5.63*
1Yr. PD, Fin.	0.56	0.79	1.07	1.31	1.79*
IPSA	5564.6	5542.2	5301.3	5283.5	5105.4
CLP/USD	615.4	603.9	654.4	656.9	693.6
10Y Treas. Yield (%)	4.62	4.49	4.58	4.50	4.34
3m Interbank (%)	3.04	2.81	2.83	2.83	3.24
GDP (YoY%)	1.5	—	—	—	—
OECD CLI	101.73	101.87	101.31	100.58	100.31*
Money Supply (YoY%)	4.62	7.41	10.57	9.91	10.40
Sov. Rating, Moody's	A1	A1	A1	A1	A1
Sov. Rating, S&P	A+	A+	A+	A+	A+
5Y CDS (bps)	48.90	51.06	60.78	44.23	62.71
FDI (%GDP)	2.32	—	—	—	—

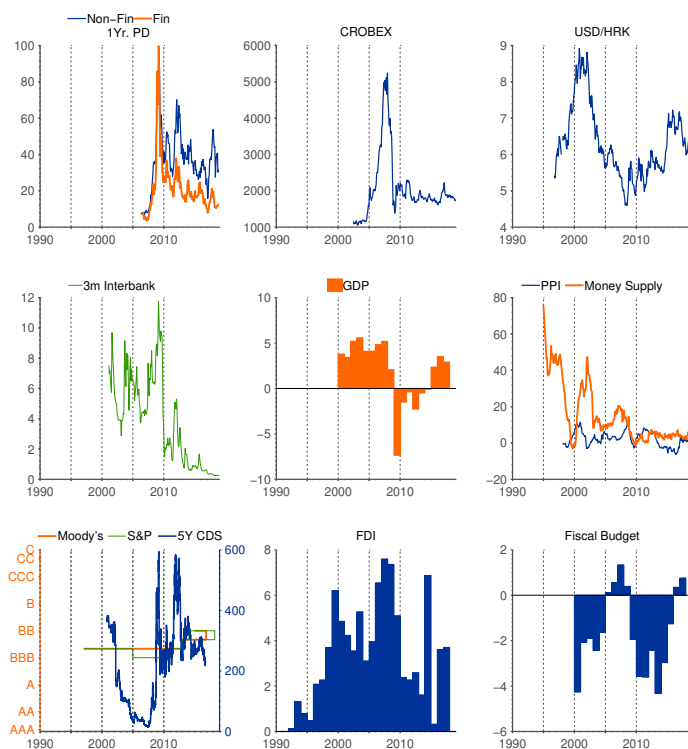




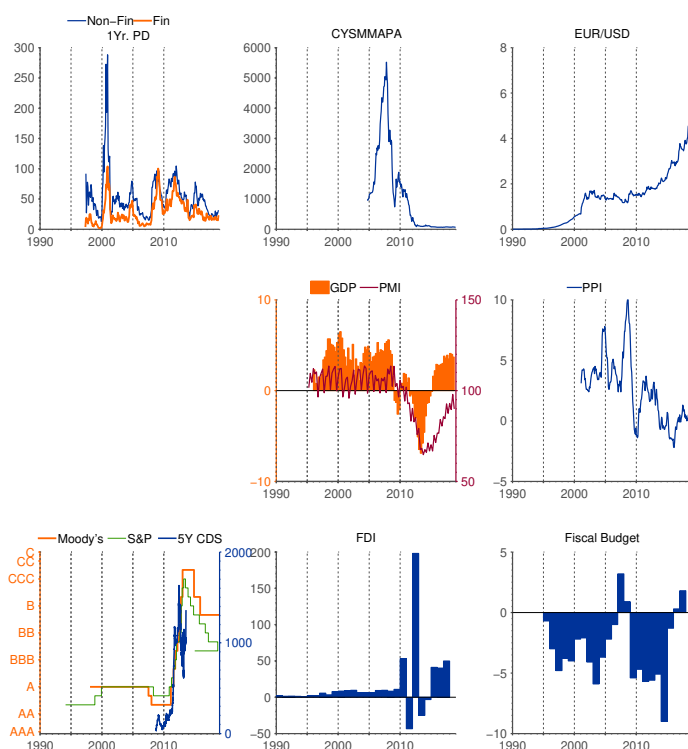
China	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	23.64	24.10	29.62	33.72	37.91*
1Yr. PD, Fin.	31.75	36.24	44.93	54.89	62.85*
SSE Composite	3307	3169	2847	2821	2494
USD/CNY	6.51	6.28	6.62	6.87	6.88
10Y Treas. Yield (%)	3.90	3.75	3.48	3.63	3.31
3m Interbank (%)	4.91	4.46	4.16	2.85	3.35
GDP (YoY%)	6.7	6.8	6.7	6.5	6.4
OECD CLI	99.76	99.12	98.85	98.72	98.78*
PMI	51.6	51.5	51.5	50.8	49.4
PPI (YoY%)	4.90	3.10	4.70	3.60	0.90
Money Supply (YoY%)	8.10	8.20	8.00	8.30	8.10
Sov. Rating, Moody's	A1	A1	A1	A1	A1
Sov. Rating, S&P	A+	A+	A+	A+	A+
5Y CDS (bps)	50.09	63.80	67.64	55.96	66.85
FDI (%GDP)	1.37	—	—	—	—
Fiscal Budget (%GDP)	-3.72	—	—	—	—



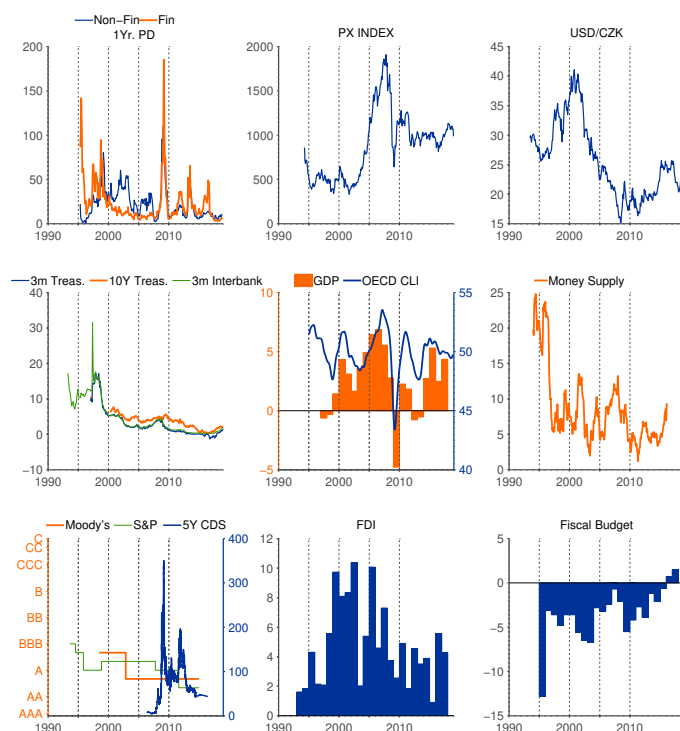
Colombia	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	6.44	4.63	8.25	10.78	13.07*
1Yr. PD, Fin.	2.90	2.19	2.20	3.15	3.84*
IGBC	4493	4340	4832	4777	4126
COP/USD	2987	2795	2931	2972	3250
10Y Treas. Yield (%)	6.48	6.51	6.58	6.89	6.75
3m Interbank (%)	5.34	5.04	4.52	4.66	4.28
GDP (YoY%)	1.8	—	—	—	—
PPI (YoY%)	1.86	1.65	3.08	3.77	3.09
Sov. Rating, Moody's	Baa2	Baa2	Baa2	Baa2	Baa2
Sov. Rating, S&P	BBB-	BBB-	BBB-	BBB-	BBB-
5Y CDS (bps)	104.7	106.7	125.2	110.1	157.1
FDI (%GDP)	4.46	—	—	—	—
Fiscal Budget (%GDP)	-3.23	—	—	—	—



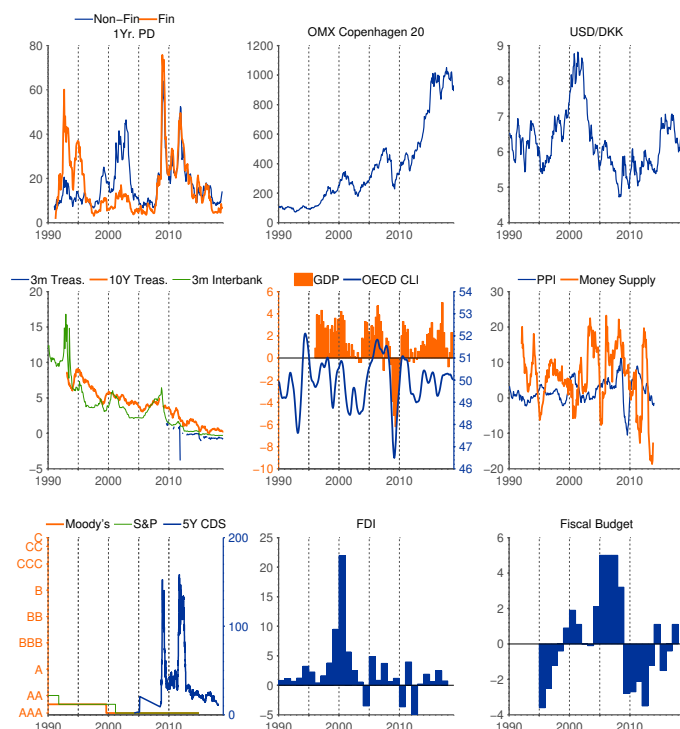
Croatia	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	53.85	44.41	39.13	30.23	31.61*
1Yr. PD, Fin.	19.47	11.06	10.62	11.89	12.95*
CROBEX	1843	1805	1816	1782	1749
USD/HRK	6.19	6.03	6.32	6.41	6.46
3m Interbank (%)	0.30	0.25	0.25	0.26	0.24
GDP (YoY%)	2.9	—	—	—	—
PPI (YoY%)	1.7	1.3	3.5	3.4	0.2
Money Supply (YoY%)	2.1	4.4	4.7	5.0	5.5
Sov. Rating, Moody's	Ba2	Ba2	Ba2	Ba2	Ba2
Sov. Rating, S&P	BB+	BB+	BB+	BB+	BB+
FDI (%GDP)	3.70	—	—	—	—
Fiscal Budget (%GDP)	0.76	—	—	—	—



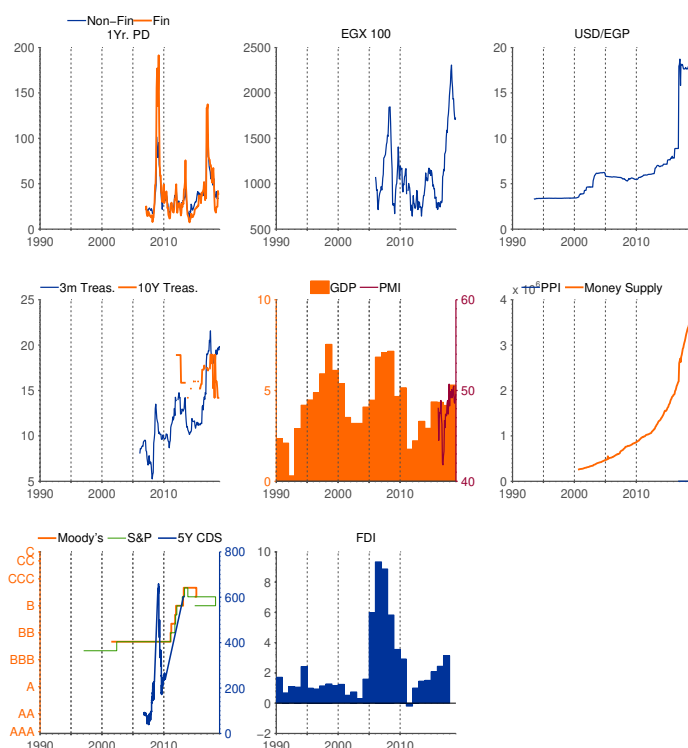
Cyprus	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	20.39	22.41	19.70	28.28	31.41*
1Yr. PD, Fin.	18.95	19.56	15.31	14.69	23.17*
CYSMMAPA	69.5	66.9	75.0	72.6	66.8
EUR/USD	3.80	3.96	4.59	6.06	5.29
GDP (YoY%)	3.50	4.10	4.00	3.70	—
PMI	92.9	89.6	97.9	89.9	—
PPI (YoY%)	0.2	0.1	0.3	0.3	0.0
Sov. Rating, S&P	BBB-	BBB-	BBB-	BBB-	BBB-
FDI (%GDP)	49.96	—	—	—	—
Fiscal Budget (%GDP)	1.80	—	—	—	—



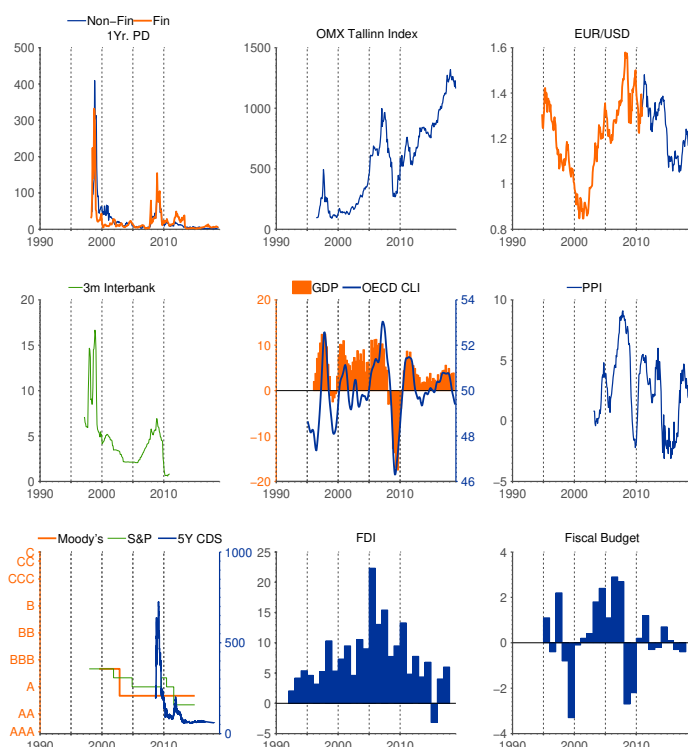
Czech Republic	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	5.92	8.32	9.87	9.04	10.88*
1Yr. PD, Fin.	3.60	3.48	4.98	5.37	7.05*
PX INDEX	1078	1124	1064	1102	987
USD/CZK	21.29	20.56	22.24	22.21	22.43
3m Treas. Yield (%)	0.32	0.46	0.66	1.06	1.46
10Y Treas. Yield (%)	1.61	1.85	2.20	2.19	2.04
3m Interbank (%)	0.76	0.90	1.16	1.70	2.01
GDP (YoY%)	4.3	—	—	—	—
OECD CLI	99.87	99.64	99.45	99.59	99.62*
Sov. Rating, Moody's	A1	A1	A1	A1	A1
Sov. Rating, S&P	AA-	AA-	AA-	AA-	AA-
FDI (%GDP)	4.27	—	—	—	—
Fiscal Budget (%GDP)	1.50	—	—	—	—



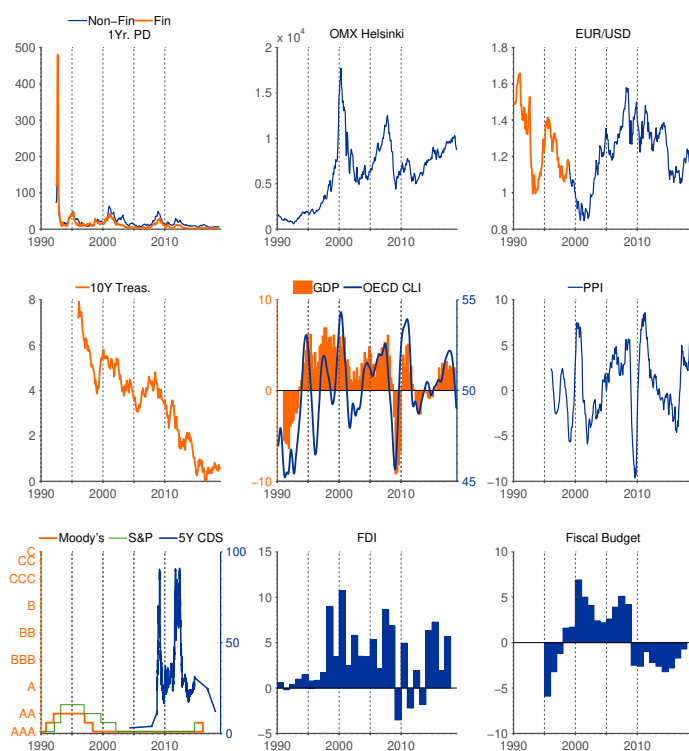
Denmark	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	8.18	8.71	9.69	12.69	14.15*
1Yr. PD, Fin.	4.36	6.59	4.55	6.45	6.98*
OMX Copenhagen 20	1024.2	976.6	961.8	978.9	891.6
USD/DKK	6.21	6.05	6.38	6.43	6.51
3m Treas. Yield (%)	-0.84	-0.68	-0.65	-0.66	-0.69
10Y Treas. Yield (%)	0.48	0.55	0.32	0.41	0.23
3m Interbank (%)	-0.31	-0.30	-0.30	-0.30	-0.28
GDP (YoY%)	0.9	-0.8	0.5	2.3	—
OECD CLI	100.29	100.24	100.23	100.07	100.02*
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
5Y CDS (bps)	12.86	11.47	—	—	—
FDI (%GDP)	0.73	—	—	—	—
Fiscal Budget (%GDP)	1.10	—	—	—	—



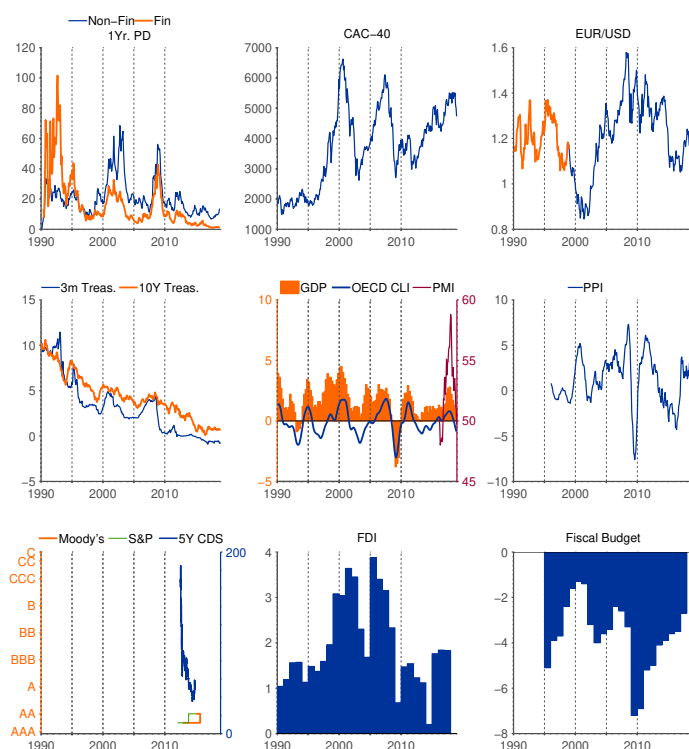
Egypt	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	54.24	34.82	41.37	34.17	33.49*
1Yr. PD, Fin.	67.27	21.17	23.80	42.09	37.87*
EGX 100	1971.8	2238.3	2062.1	1810.8	1727.2
USD/EGP	17.81	17.65	17.92	17.91	17.92
3m Treas. Yield (%)	18.77	18.00	19.47	19.62	19.85
10Y Treas. Yield (%)	15.25	14.18	16.00	14.18	14.18
GDP (YoY%)	4.2	—	—	—	5.3
PMI	48.3	49.2	49.4	48.7	49.6
PPI (YoY%)	176.1	180.5	196.6	207.6	200.3*
Money Supply (YoY%)	3202657.0	3343484.0	3454321.0	3549306.0	3581583.0*
Sov. Rating, Moody's	B3	B3	B3	B3	B3
Sov. Rating, S&P	B	B	B	B	B
FDI (%GDP)	3.14	—	—	—	—



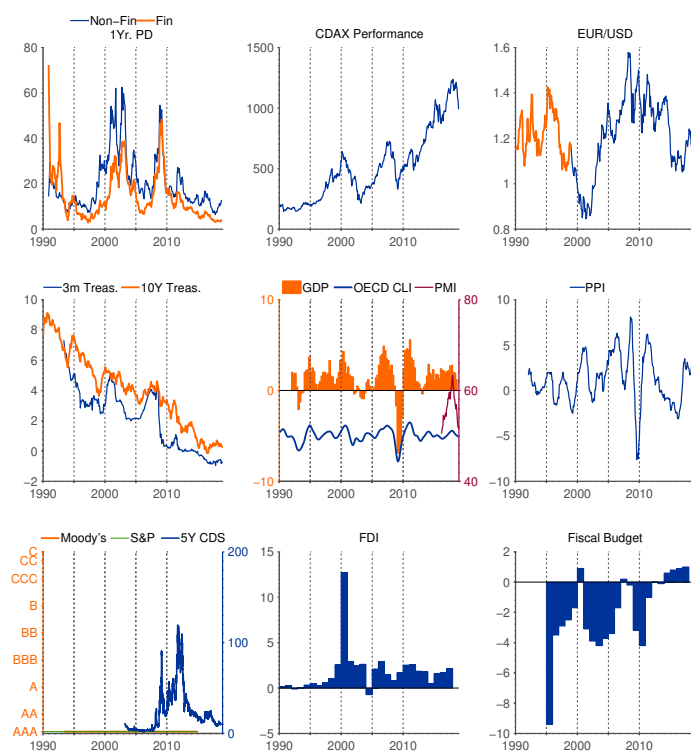
Estonia	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	1.34	1.59	1.94	3.83	4.52*
1Yr. PD, Fin.	6.91	5.28	8.14	5.91	6.11*
OMX Tallinn Index	1242	1269	1262	1216	1163
EUR/USD	1.20	1.23	1.17	1.16	1.15
GDP (YoY%)	4.9	3.5	3.8	3.9	—
OECD CLI	100.62	100.22	99.84	99.54	99.39*
PPI (YoY%)	2.7	2.9	2.9	2.9	1.6
Sov. Rating, Moody's	A1	A1	A1	A1	A1
Sov. Rating, S&P	AA-	AA-	AA-	AA-	AA-
5Y CDS (bps)	—	58.2	—	—	—
FDI (%GDP)	6.00	—	—	—	—
Fiscal Budget (%GDP)	-0.40	—	—	—	—



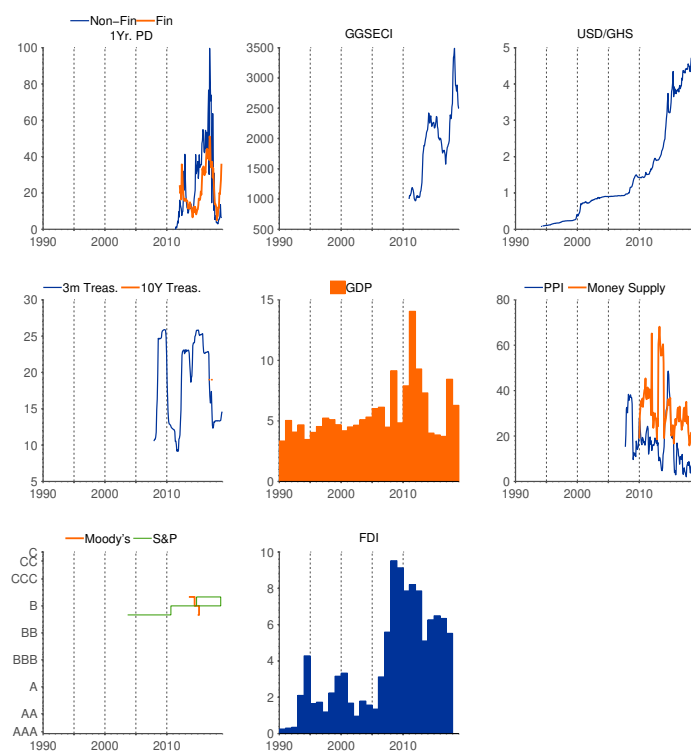
Finland	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	6.22	6.95	6.48	6.58	7.34*
1Yr. PD, Fin.	2.17	2.24	2.01	1.53	2.97*
OMX Helsinki	9472	9590	9996	10212	8710
EUR/USD	1.20	1.23	1.17	1.16	1.15
10Y Treas. Yield (%)	0.60	0.60	0.48	0.72	0.55
GDP (YoY%)	2.7	2.5	2.3	2.5	—
OECD CLI	102.16	101.81	101.00	99.90	99.02*
PPI (YoY%)	2.4	3.1	6.2	6.0	3.8
Sov. Rating, Moody's	Aa1	Aa1	Aa1	Aa1	Aa1
Sov. Rating, S&P	AA+	AA+	AA+	AA+	AA+
5Y CDS (bps)	—	11.9	—	—	—
FDI (%GDP)	5.64	—	—	—	—
Fiscal Budget (%GDP)	-0.70	—	—	—	—



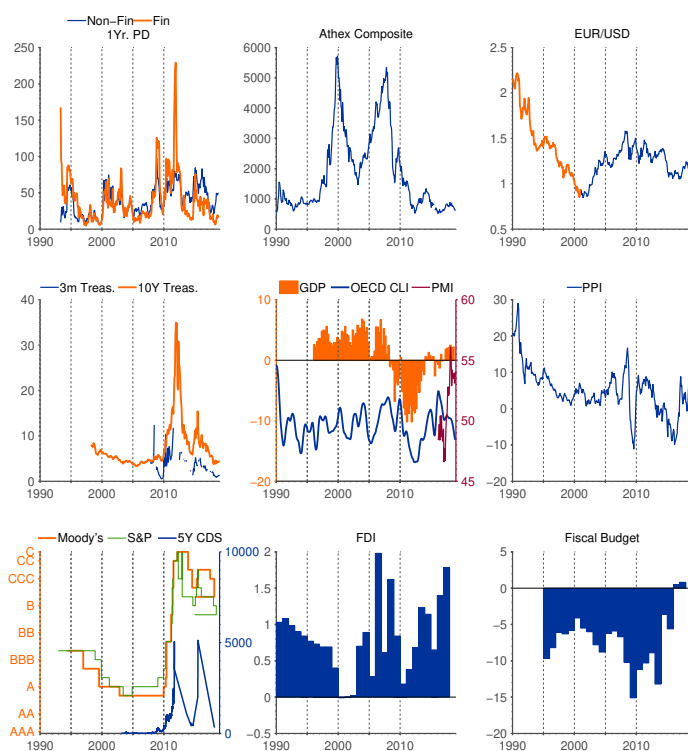
France	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	8.79	9.62	9.65	11.11	13.60*
1Yr. PD, Fin.	1.40	1.39	1.42	1.24	1.78*
CAC-40	5313	5167	5324	5493	4731
EUR/USD	1.20	1.23	1.17	1.16	1.15
3m Treas. Yield (%)	-0.78	-0.58	-0.63	-0.56	-0.86
10Y Treas. Yield (%)	0.79	0.72	0.67	0.80	0.71
GDP (YoY%)	2.8	2.2	1.7	1.3	0.9
OECD CLI	100.72	100.40	100.01	99.47	99.13*
PMI	58.8	53.7	52.5	52.5	49.7
PPI (YoY%)	2.2	2.2	3.3	3.8	1.2
Sov. Rating, Moody's	Aa2	Aa2	Aa2	Aa2	Aa2
Sov. Rating, S&P	AA	AA	AA	AA	AA
FDI (%GDP)	1.83	—	—	—	—
Fiscal Budget (%GDP)	-2.70	—	—	—	—



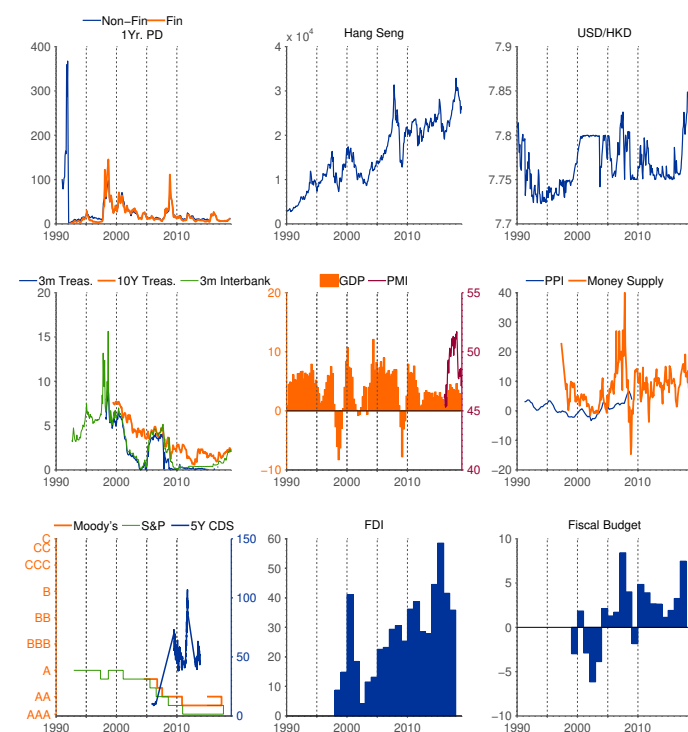
Germany	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	7.76	9.28	11.26	11.31	12.86*
1Yr. PD, Fin.	3.60	3.94	3.64	3.52	4.28*
CDAX Performance	1210	1145	1162	1160	990
EUR/USD	1	1	1	1	1
3m Treas. Yield (%)	-0.69	-0.75	-0.59	-0.56	-0.77
10Y Treas. Yield (%)	0.43	0.50	0.30	0.47	0.24
GDP (YoY%)	2.8	2.0	1.9	1.2	—
OECD CLI	101.09	100.68	100.26	99.99	99.76*
PMI	63.3	58.2	55.9	53.7	51.5
PPI (YoY%)	2.4	1.8	2.9	3.2	2.8
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
5Y CDS (bps)	9.5	10.5	11.6	10.6	—
FDI (%GDP)	2.12	—	—	—	—
Fiscal Budget (%GDP)	1.00	—	—	—	—



Ghana	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	3.72	2.89	5.55	6.88	6.17*
1Yr. PD, Fin.	11.55	7.41	20.07	27.25	36.06*
GGSECI	2580	3367	2879	2883	2499
USD/GHS	4.50	4.34	4.73	4.84	4.92
3m Treas. Yield (%)	13.31	13.32	13.33	13.41	14.59
GDP (YoY%)	8.4	—	—	—	6.3
PPI (YoY%)	8.7	3.7	7.7	5.8	4.4
Money Supply (YoY%)	19.8	20.2	16.6	25.3	16.1
Sov. Rating, Moody's	B1	B1	B1	B1	B1
Sov. Rating, S&P	B	B	B	B	B
FDI (%GDP)	5.52	—	—	—	—

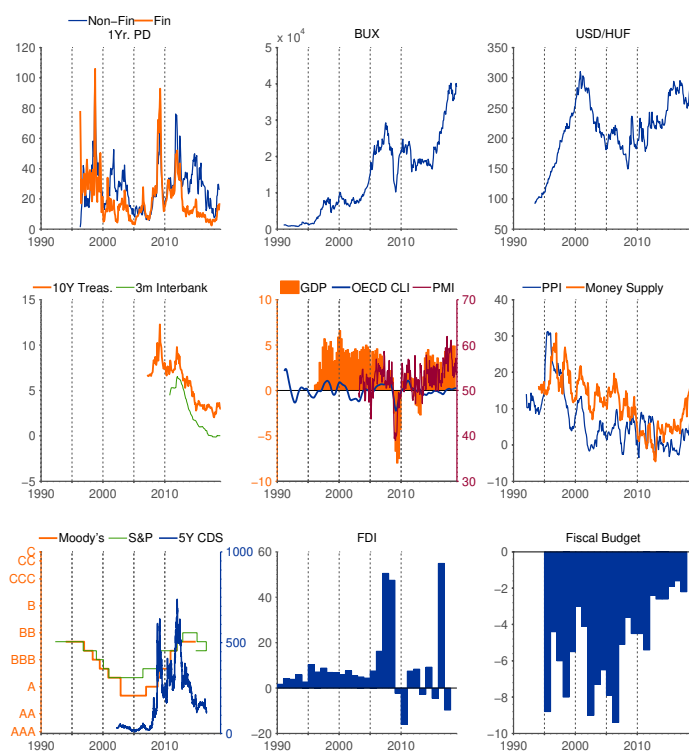


Greece	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	28.36	30.49	49.26	48.73	50.04*
1Yr. PD, Fin.	10.57	6.72	15.11	16.21	18.29*
Athex Composite	802.4	780.5	757.6	691.7	613.3
EUR/USD	1.20	1.23	1.17	1.16	1.15
3m Treas. Yield (%)	1.93	1.30	1.04	1.12	1.30
10Y Treas. Yield (%)	4.12	4.32	3.96	4.18	4.40
GDP (YoY%)	2.1	2.5	1.7	2.2	—
OECD CLI	100.21	100.12	99.65	98.83	98.42*
PMI	53.1	55.0	53.5	53.6	53.8
PPI (YoY%)	1.7	-0.2	6.2	5.3	-0.1
Sov. Rating, Moody's	B3	B3	B3	B3	B3
Sov. Rating, S&P	B+	B+	B+	B+	B+
5Y CDS (bps)	—	317.43	—	—	—
FDI (%GDP)	1.78	—	—	—	—
Fiscal Budget (%GDP)	0.80	—	—	—	—

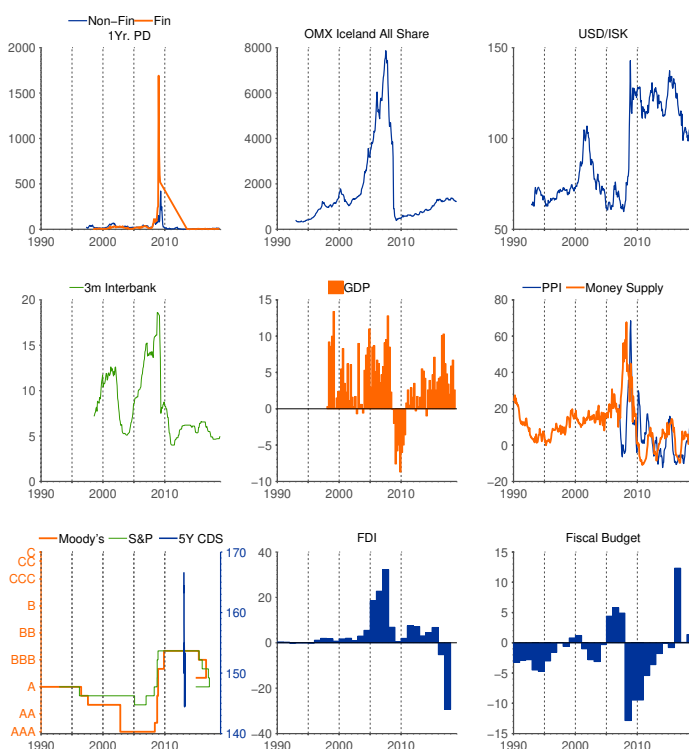


Hong Kong	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	5.47	6.25	7.75	10.39	13.50*
1Yr. PD, Fin.	7.17	7.34	9.07	11.31	12.25*
Hang Seng	29919	30093	28955	27789	25846
USD/HKD	7.81	7.85	7.85	7.83	7.83
10Y Treas. Yield (%)	1.83	1.99	2.25	2.47	2.01
3m Interbank (%)	1.31	1.21	2.10	2.28	2.33
GDP (YoY%)	3.4	4.6	3.5	2.9	—
PMI	51.5	50.6	47.7	47.9	48.0
Money Supply (YoY%)	11.60	9.60	6.30	4.30	3.70
Sov. Rating, Moody's	Aa2	Aa2	Aa2	Aa2	Aa2
Sov. Rating, S&P	AA+	AA+	AA+	AA+	AA+
FDI (%GDP)	35.85	—	—	—	—
Fiscal Budget (%GDP)	7.47	—	—	—	—

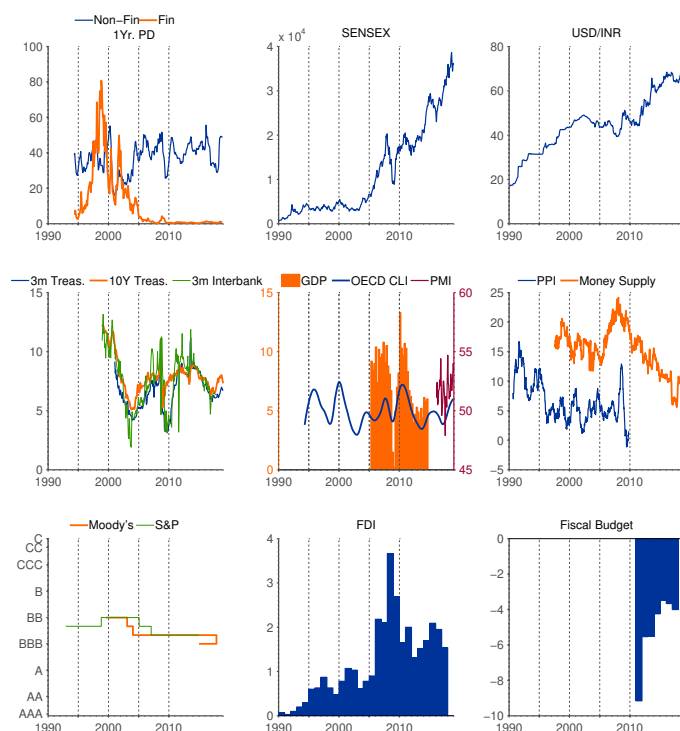




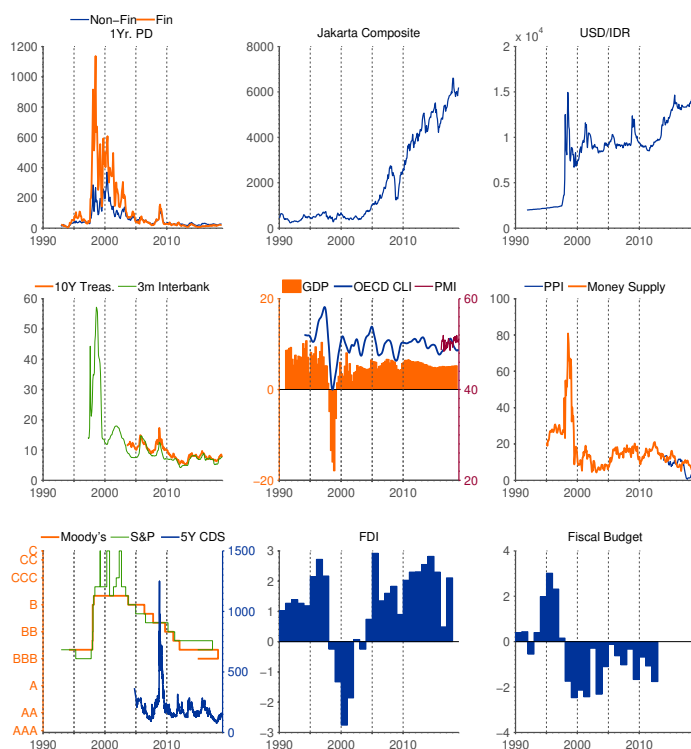
Hungary	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	7.47	13.64	22.42	26.49	25.99*
1Yr. PD, Fin.	5.11	7.03	13.31	12.78	17.09*
BUX	39377	37259	36128	37171	39139
USD/HUF	258.91	253.55	281.79	278.82	279.94
10Y Treas. Yield (%)	2.03	2.39	3.62	3.54	2.97
3m Interbank (%)	-0.12	-0.13	0.05	0.02	0.01
GDP (YoY%)	4.50	4.50	4.90	4.90	—
OECD CLI	100.28	100.26	100.39	100.48	100.53*
PMI	60.5	56.6	52.9	54.1	54.3
PPI (YoY%)	3.9	3.5	7.5	6.7	4.7
Money Supply (YoY%)	7.82	13.72	15.73	13.15	11.82
Sov. Rating, Moody's	Ba1	Ba1	Ba1	Ba1	Ba1
Sov. Rating, S&P	BBB-	BBB-	BBB-	BBB-	BBB-
FDI (%GDP)	-9.69	—	—	—	—
Fiscal Budget (%GDP)	-2.20	—	—	—	—



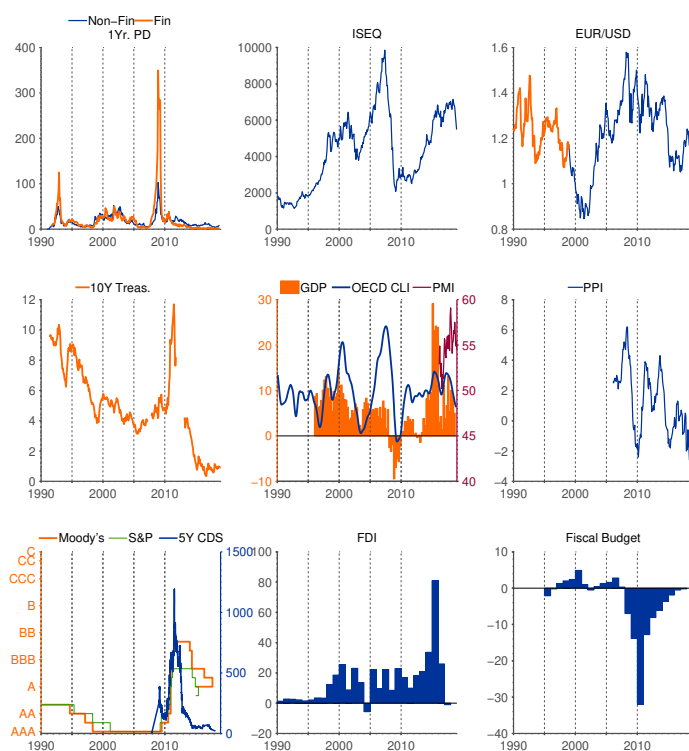
Iceland	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	9.25	8.11	10.51	7.83	12.61*
1Yr. PD, Fin.	3.86	2.45	3.63	4.84	7.67*
OMX Iceland All Share	1290	1361	1325	1252	1218
USD/ISK	103.56	98.61	105.45	110.87	116.21
3m Interbank (%)	4.65	4.65	4.70	4.70	4.92
GDP (YoY%)	2.0	5.9	6.7	2.6	—
PPI (YoY%)	2.40	3.70	11.70	5.50	9.50
Money Supply (YoY%)	5.03	0.57	5.01	7.32	6.99
Sov. Rating, Moody's	A3	A3	A3	A3	A3
Sov. Rating, S&P	A	A	A	A	A
FDI (%GDP)	-29.35	—	—	—	—
Fiscal Budget (%GDP)	0.07	—	—	—	1.35



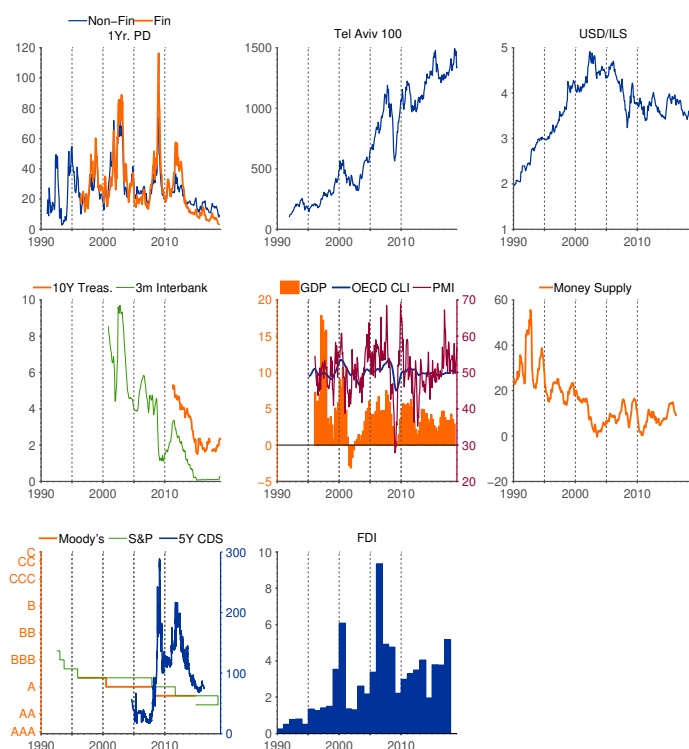
India	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	28.87	33.10	48.60	49.19	48.57*
1Yr. PD, Fin.	0.48	0.55	1.20	1.03	1.00*
SENSEX	34057	32969	35423	36227	36068
USD/INR	63.87	65.18	68.47	72.49	69.77
3m Treas. Yield (%)	6.20	6.11	6.46	6.99	6.75
10Y Treas. Yield (%)	7.33	7.40	7.90	8.02	7.37
3m Interbank (%)	6.42	—	—	—	—
OECD CLI	99.87	100.31	100.65	100.88	100.99*
PMI	54.7	51.0	53.1	52.2	53.2
Money Supply (YoY%)	10.0	9.6	9.8	9.4	10.2
Sov. Rating, Moody's	Baa2	Baa2	Baa2	Baa2	Baa2
Sov. Rating, S&P	BBB-	BBB-	BBB-	BBB-	BBB-
FDI (%GDP)	1.54	—	—	—	—
Fiscal Budget (%GDP)	-4.01	—	—	—	—



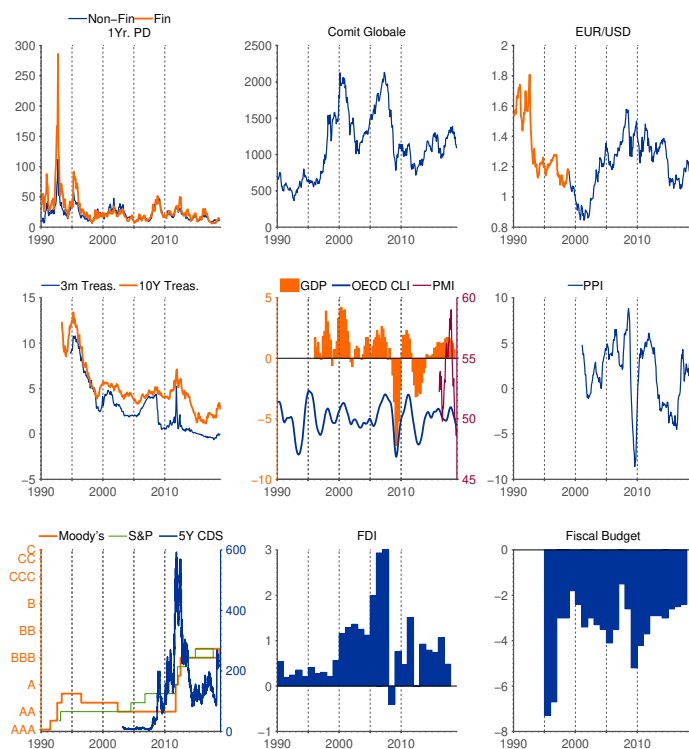
Indonesia	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	23.54	21.57	26.40	27.03	29.24*
1Yr. PD, Fin.	18.54	17.55	21.58	20.90	23.64*
Jakarta Composite	6356	6189	5799	5977	6194
USD/IDR	13555.00	13728.00	14330.00	14903.00	14390.00
10Y Treas. Yield (%)	6.32	6.67	7.80	8.12	8.03
3m Interbank (%)	5.48	5.36	7.10	7.35	7.70
GDP (YoY%)	5.1	5.2	5.2	5.2	—
OECD CLI	100.21	99.33	98.79	98.55	98.82*
PMI	49.3	50.7	50.3	50.7	51.2
PPI (YoY%)	1.3	1.6	3.5	4.3*	—
Money Supply (YoY%)	8.3	7.5	5.9	6.7	6.3
Sov. Rating, Moody's	Baa2	Baa2	Baa2	Baa2	Baa2
Sov. Rating, S&P	BBB-	BBB-	BBB-	BBB-	BBB-
5Y CDS (bps)	85.25	102.01	136.20	130.12	137.45
FDI (%GDP)	2.11	—	—	—	—



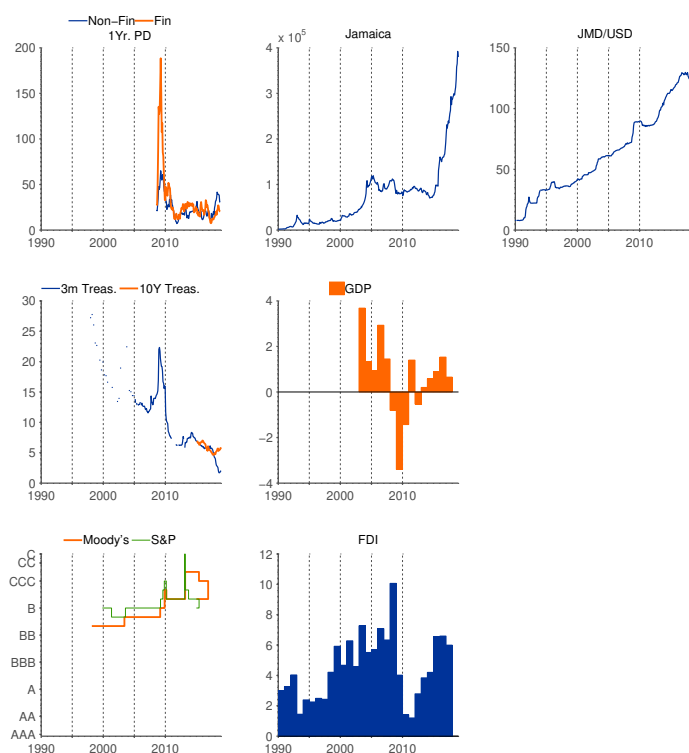
Ireland	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	5.03	3.89	6.11	7.86	8.59*
1Yr. PD, Fin.	0.49	1.41	2.13	1.58	1.53*
ISEQ	7038	6594	6983	6522	5480
EUR/USD	1.20	1.23	1.17	1.16	1.15
10Y Treas. Yield (%)	0.67	0.91	0.81	0.99	0.90
GDP (YoY%)	5.4	10.0	8.7	5.0	—
OECD CLI	101.03	100.16	99.27	98.45	98.16*
PMI	59.1	54.1	56.6	56.3	54.5
PPI (YoY%)	-1.9	-1.6	-2.5	-2.7	-0.4
Sov. Rating, Moody's	A2	A2	A2	A2	A2
Sov. Rating, S&P	A+	A+	A+	A+	A+
5Y CDS (bps)	25.25*	19.99	—	—	—
FDI (%GDP)	-1.03	—	—	—	—
Fiscal Budget (%GDP)	-0.20	—	—	—	—



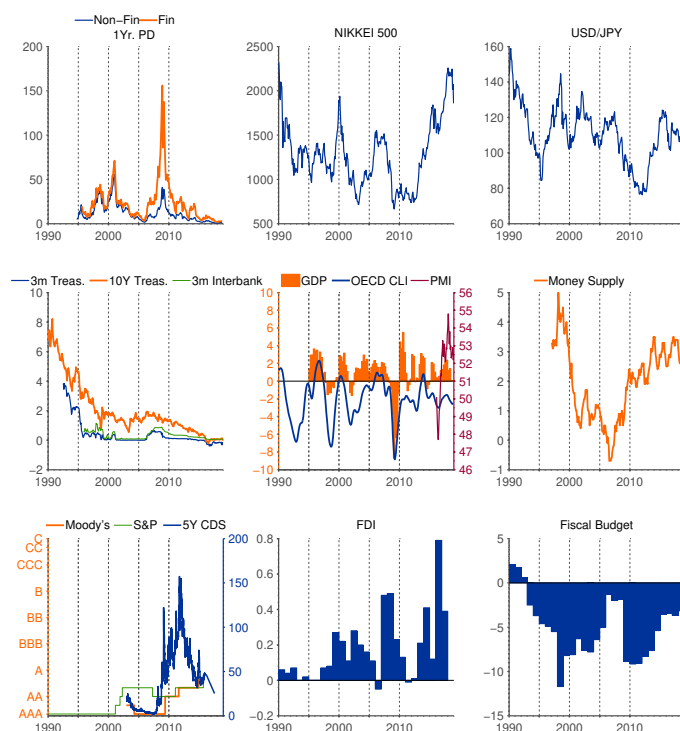
Israel	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	14.96	14.81	13.10	8.08	9.59*
1Yr. PD, Fin.	7.76	7.39	5.48	3.28	3.66*
Tel Aviv 100	1364	1310	1363	1485	1333
USD/ILS	3.48	3.49	3.66	3.64	3.74
10Y Treas. Yield (%)	1.70	1.65	1.99	2.00	2.32
3m Interbank (%)	0.10	0.10	0.10	0.12	0.29
GDP (YoY%)	3.4	4.3	3.5	2.9	—
OECD CLI	100.36	100.54	100.27	99.91	99.71*
PMI	53.4	54.7	52.6	50.0	57.0
Sov. Rating, Moody's	A1	A1	A1	A1	A1
Sov. Rating, S&P	AA-	AA-	AA-	AA-	AA-
FDI (%GDP)	5.18	—	—	—	—



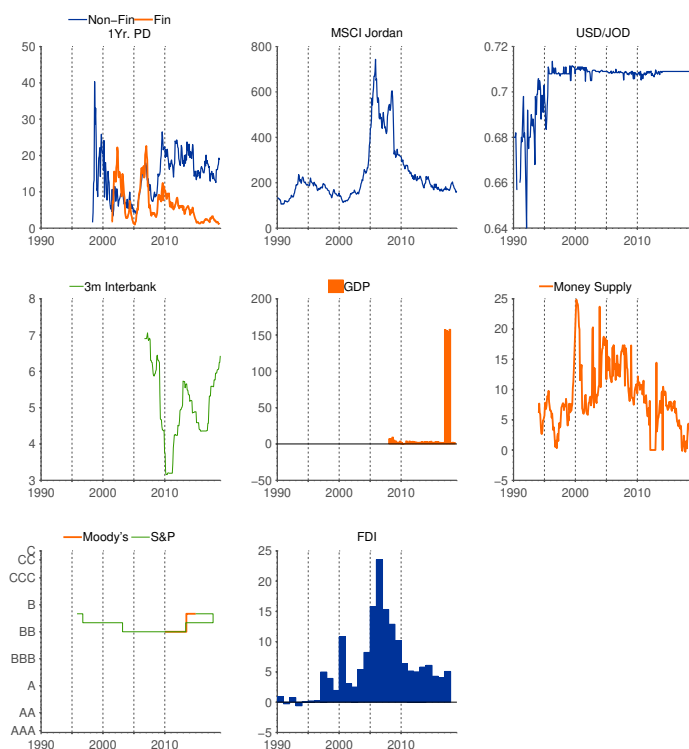
Italy	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	12.11	11.51	10.30	10.66	13.50*
1Yr. PD, Fin.	7.51	8.32	11.86	15.08	12.21*
Comit Globale	1297	1308	1284	1243	1086
EUR/USD	1.20	1.23	1.17	1.16	1.15
3m Treas. Yield (%)	-0.60	-0.43	-0.12	0.01	-0.06
10Y Treas. Yield (%)	2.02	1.79	2.68	3.15	2.74
GDP (YoY%)	1.6	1.4	1.2	0.7	—
OECD CLI	100.97	100.71	100.23	99.72	99.40*
PMI	57.4	55.1	53.3	50.0	49.2
PPI (YoY%)	2.2	2.2	3.2	5.6	5.2
Sov. Rating, Moody's	Baa3	Baa3	Baa3	Baa3	Baa3
Sov. Rating, S&P	BBB	BBB	BBB	BBB	BBB
5Y CDS (bps)	117.37	102.31	229.00	221.22	—
FDI (%GDP)	0.48	—	—	—	—
Fiscal Budget (%GDP)	-2.40	—	—	—	—



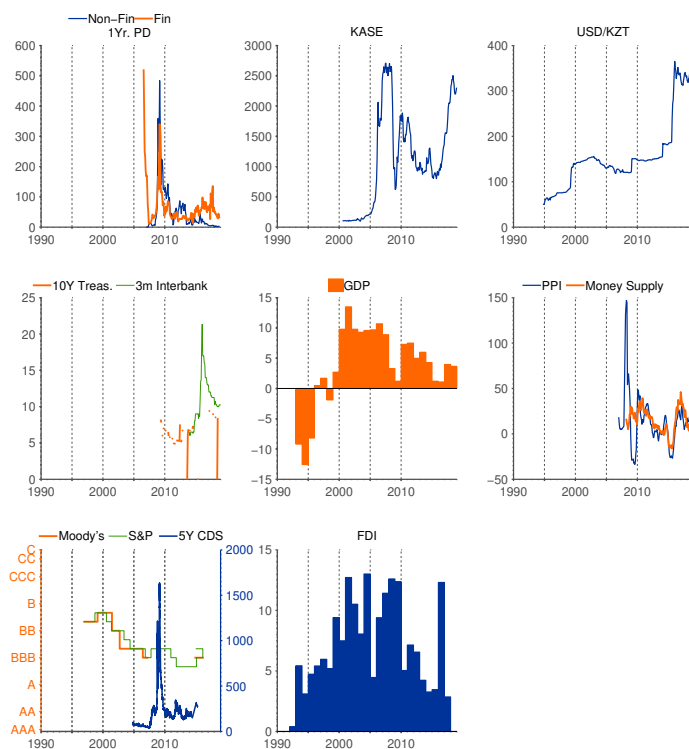
Jamaica	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	27.02	35.38	39.05	30.85	30.45*
1Yr. PD, Fin.	15.99	16.67	27.12	20.52	20.32*
Jamaica	288382	294533	305736	358320	379791
JMD/USD	124.58	126.22	130.15	134.54	128.59
3m Treas. Yield (%)	4.18	2.98	2.54	1.71	2.05
10Y Treas. Yield (%)	4.96	5.20	5.72	5.46	5.75
GDP (YoY%)	0.7	—	—	—	—
Sov. Rating, Moody's	B3	B3	B3	B3	B3
Sov. Rating, S&P	B	B	B	B	B
FDI (%GDP)	5.99	—	—	—	—



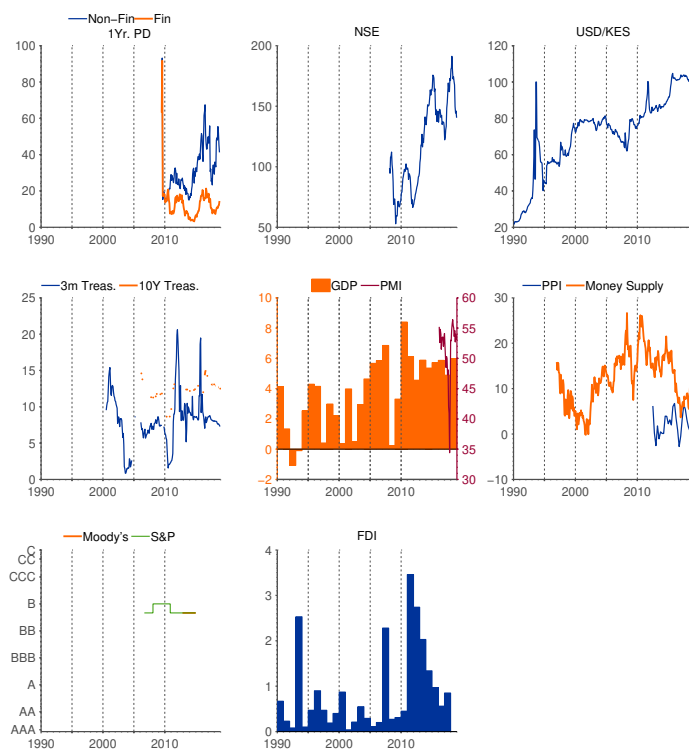
Japan	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	0.64	1.07	1.27	1.33	1.31*
1Yr. PD, Fin.	1.95	2.73	2.92	2.85	2.72*
NIKKEI 500	2208	2165	2174	2246	1859
USD/JPY	112.69	106.28	110.76	113.70	109.69
3m Treas. Yield (%)	-0.16	-0.16	-0.14	-0.13	-0.15
10Y Treas. Yield (%)	0.05	0.05	0.04	0.13	0.00
3m Interbank (%)	0.07	0.07	0.07	0.07	0.07
GDP (YoY%)	2.4	1.2	1.4	0.1	—
OECD CLI	100.18	99.98	99.83	99.71	99.75*
PMI	54.0	53.1	53.0	52.5	52.6
Money Supply (YoY%)	3.10	2.60	2.70	2.50	2.10
Sov. Rating, Moody's	A1	A1	A1	A1	A1
Sov. Rating, S&P	A+	A+	A+	A+	A+
FDI (%GDP)	0.39	—	—	—	—
Fiscal Budget (%GDP)	-3.68	—	—	—	-3.16



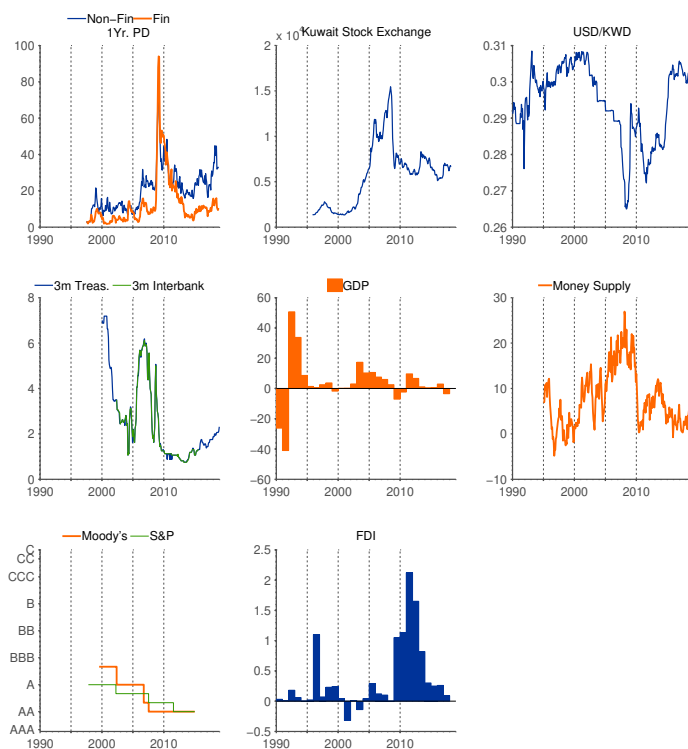
Jordan	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	13.43	12.55	16.10	19.29	18.87*
1Yr. PD, Fin.	2.14	1.80	1.74	1.20	1.03*
MSCI Jordan	179	199	187	171	164
USD/JOD	0.71	0.71	0.71	0.71	0.71
3m Interbank (%)	5.76	5.95	6.03	6.09	6.42
GDP (YoY%)	157.7	2.0	2.3	2.0	—
Money Supply (YoY%)	0.25	4.36	2.09	2.37	0.76*
Sov. Rating, Moody's	B1	B1	B1	B1	B1
Sov. Rating, S&P	B+	B+	B+	B+	B+
FDI (%GDP)	5.07	—	—	—	—



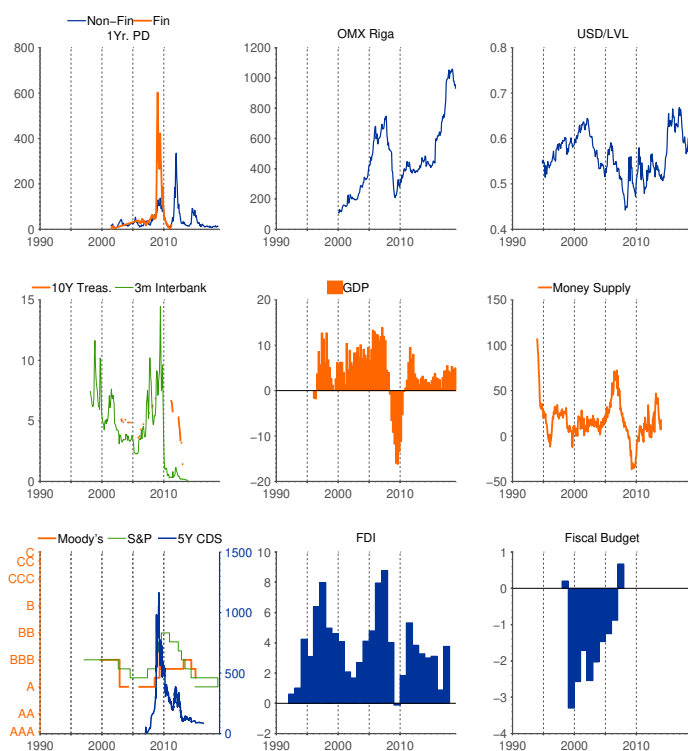
Kazakhstan	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	3.23	2.21	2.32	2.73	1.89*
1Yr. PD, Fin.	56.53	41.35	30.52	38.23	29.31*
KASE	2163	2437	2412	2195	2305
USD/KZT	332.85	318.73	341.28	363.11	380.88
10Y Treas. Yield (%)	8.97*	8.52	0.00	8.43*	—
3m Interbank (%)	11.25	10.50	10.00	10.00	10.25
GDP (YoY%)	4.0	—	—	—	3.7
PPI (YoY%)	17.6	13.5	22.2	23.9	12.4
Money Supply (YoY%)	7.54	4.75	6.03	-2.97	7.05
Sov. Rating, S&P	BBB-	BBB-	BBB-	BBB-	BBB-
FDI (%GDP)	2.86	—	—	—	—



Kenya	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	29.26	33.23	48.03	45.49	41.24*
1Yr. PD, Fin.	9.40	8.71	10.47	12.11	14.45*
NSE	171	191	174	150	140
USD/KES	103.18	101.25	101.01	100.85	101.85
3m Treas. Yield (%)	8.08	8.00	7.73	7.61	7.34
10Y Treas. Yield (%)	13.09	12.91	—	12.66	12.50
GDP (YoY%)	4.9	—	—	—	6.0
PMI	53.0	55.7	55.0	52.7	53.6
PPI (YoY%)	3.2	1.5	0.7	0.4	1.5
Money Supply (YoY%)	8.91	5.94	10.45	8.50	9.10*
Sov. Rating, Moody's	B1	B1	B1	B1	B1
Sov. Rating, S&P	B+	B+	B+	B+	B+
FDI (%GDP)	0.85	—	—	—	—

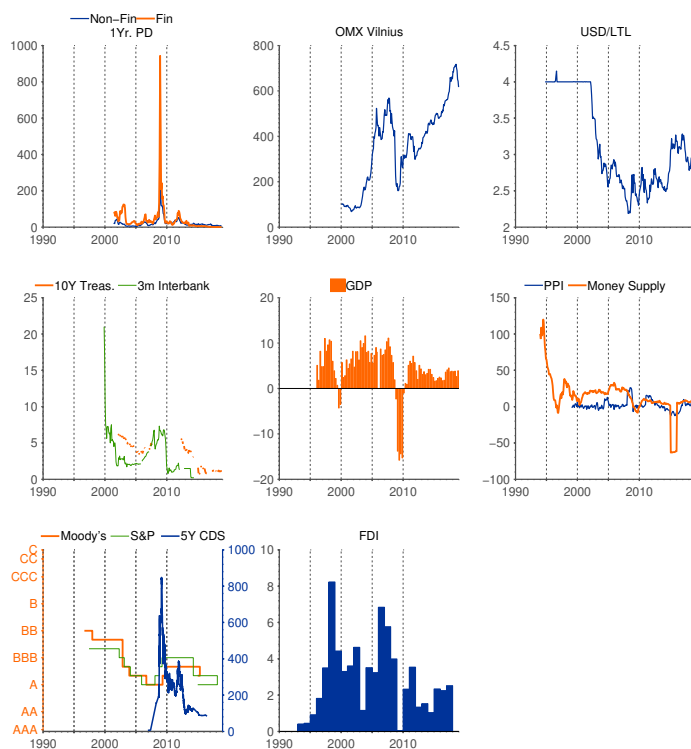


Kuwait	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	32.45	44.87	44.60	32.62	33.18*
1Yr. PD, Fin.	15.73	13.54	15.92	9.34	10.38*
Kuwait Stock Exchange	6408	6633	—	—	—
USD/KWD	0.30	0.30	0.30	0.30	0.30
3m Treas. Yield (%)	1.88	2.00	2.00	2.06	2.31
GDP (YoY%)	-3.5	—	—	—	—
Money Supply (YoY%)	3.81	1.02	5.25	4.81	4.44*
Sov. Rating, Moody's	Aa2	Aa2	Aa2	Aa2	Aa2
Sov. Rating, S&P	AA	AA	AA	AA	AA
FDI (%GDP)	0.09	—	—	—	—

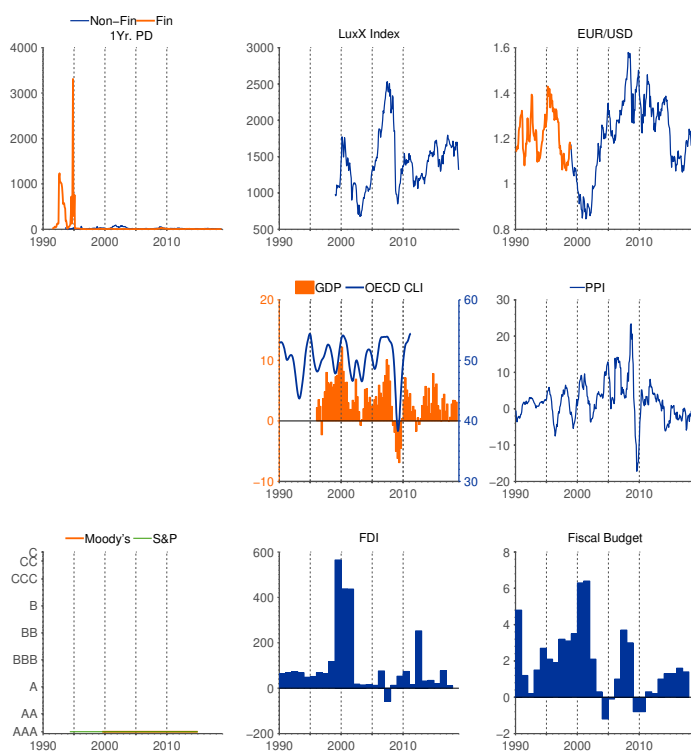


Latvia	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	13.42	10.01	9.45	11.99	11.72*
OMX Riga	996	1046	1057	978	929
USD/LVL	0.59	0.57	0.60	0.61	0.61
GDP (YoY%)	4.3	4.0	5.3	4.7	5.0
Sov. Rating, Moody's	A3	A3	A3	A3	A3
Sov. Rating, S&P	A	A	A	A	A
FDI (%GDP)	3.76	—	—	—	—

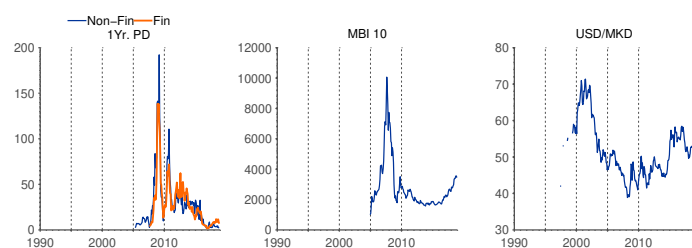




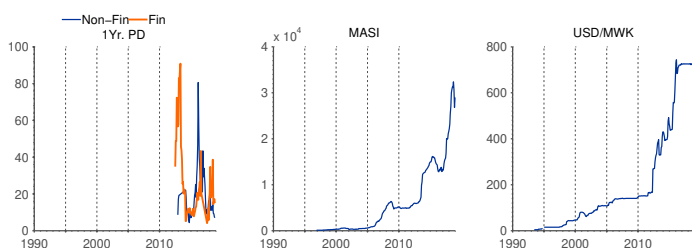
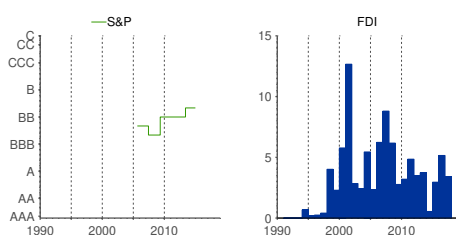
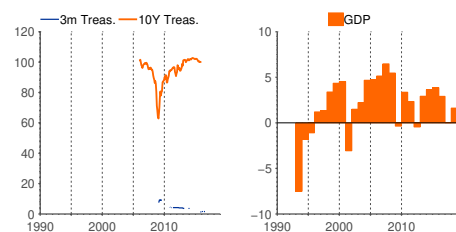
Lithuania	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	9.03	9.01	6.12	7.72	7.93*
1Yr. PD, Fin.	0.56	0.57	0.56	0.44	0.47*
OMX Vilnius	653	702	710	689	617
USD/LTL	2.88	2.80	2.96	2.98	3.01
10Y Treas. Yield (%)	1.10*	1.16*	1.08	1.10	1.14*
GDP (YoY%)	3.8	3.7	3.8	2.6	3.9
PPI (YoY%)	3.5	1.3	8.8	8.9	1.0
Money Supply (YoY%)	5.90	6.50	9.30	9.50	11.40
Sov. Rating, Moody's	A3	A3	A3	A3	A3
Sov. Rating, S&P	A	A	A	A	A
FDI (%GDP)	2.52	—	—	—	—



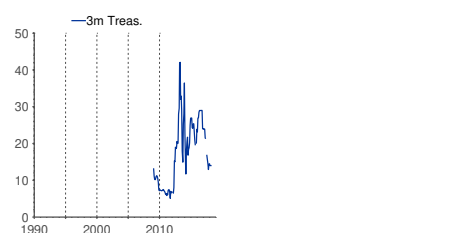
Luxembourg	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	11.02	7.93	6.38	7.30	11.56*
1Yr. PD, Fin.	2.24	3.27	3.27	2.63	3.62*
LuxX Index	1638	1506	1590	1698	1317
EUR/USD	1.20	1.23	1.17	1.16	1.15
GDP (YoY%)	2.8	3.4	3.3	3.1	—
PPI (YoY%)	-1.9	-2.0	-1.9	3.2	1.9
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
FDI (%GDP)	10.61	—	—	—	—
Fiscal Budget (%GDP)	1.40	—	—	—	—

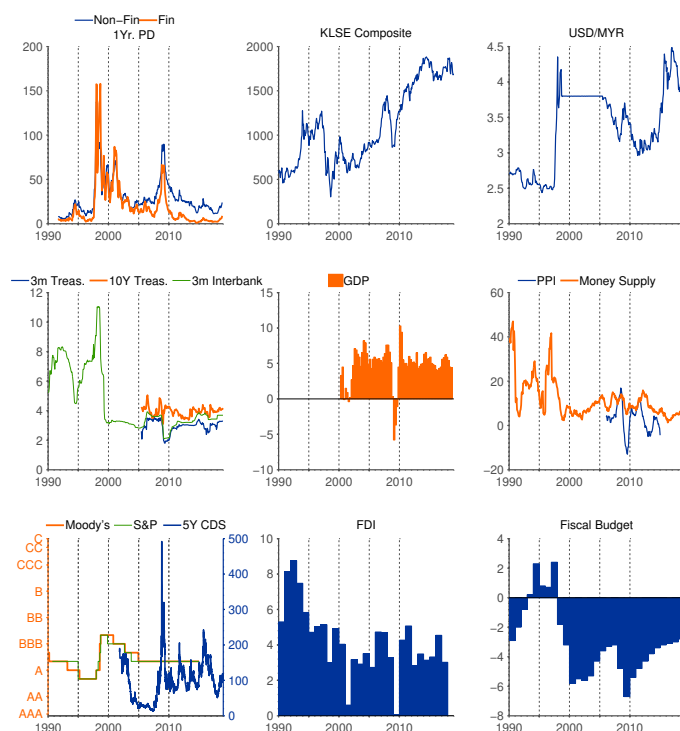


Macedonia	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	5.55	3.30	2.98	2.28	2.16*
1Yr. PD, Fin.	8.73	8.37	8.70	8.67	6.80*
MBI 10	2539	2766	3333	3530	3469
USD/MKD	51.25	50.01	52.78	53.06	53.65
GDP (YoY%)	0.0	—	—	—	1.6
Sov. Rating, S&P	BB-	BB-	BB-	BB-	BB-
FDI (%GDP)	3.38	—	—	—	—

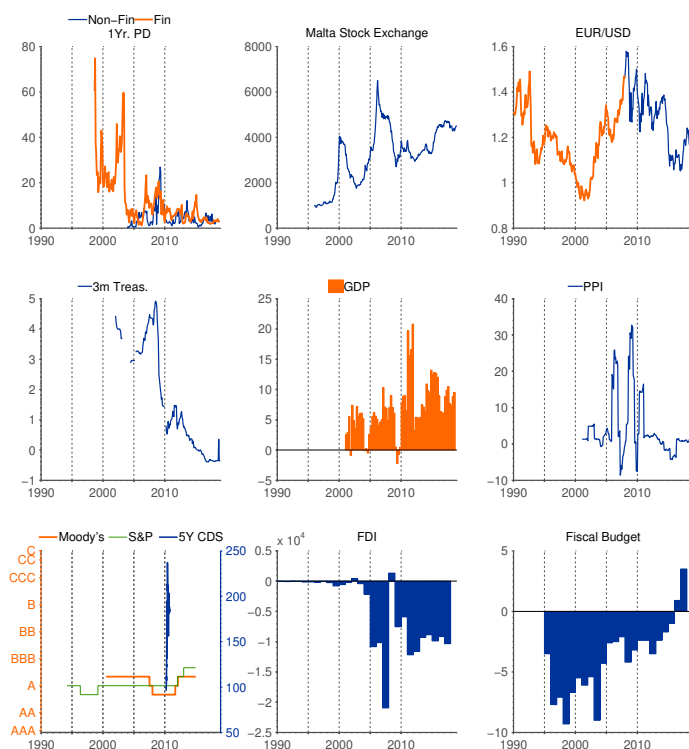


Malawi	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	20.45	11.12	14.09	7.56	7.04*
1Yr. PD, Fin.	19.73	18.42	38.63	17.16	15.07*
MASI	21598	25287	30737	32373	28984
USD/MWK	725.52	726.50	726.28	727.78	736.78
3m Treas. Yield (%)	14.50	14.00	14.00*	—	—
FDI (%GDP)	4.40	—	—	—	—

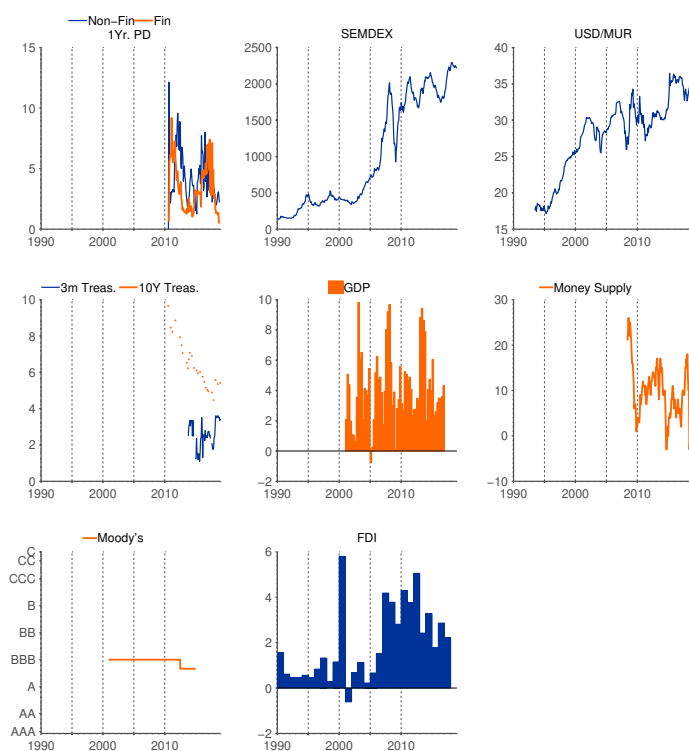




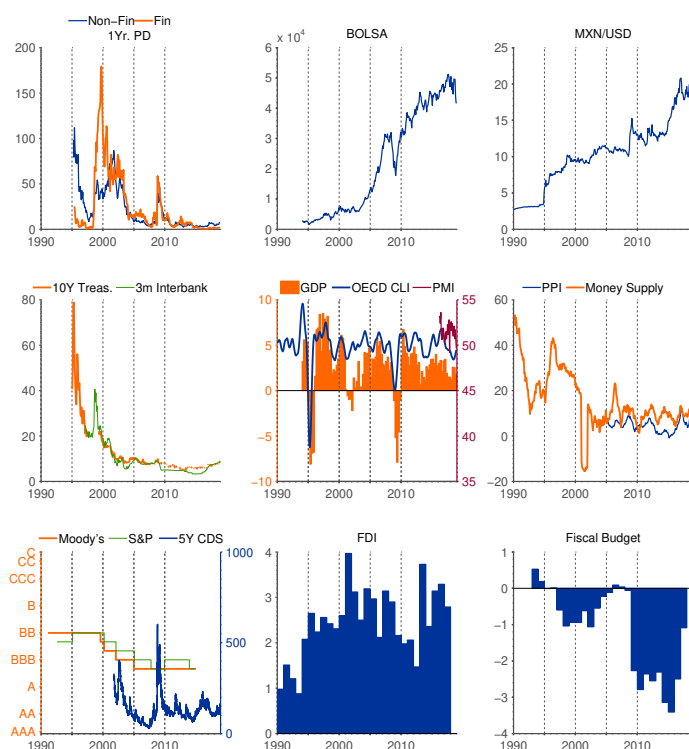
Malaysia	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	11.75	15.56	19.98	21.08	23.95*
1Yr. PD, Fin.	2.29	3.52	5.89	6.42	8.90*
KLSE Composite	1797	1863	1692	1793	1691
USD/MYR	4.05	3.86	4.04	4.14	4.13
3m Treas. Yield (%)	2.86	3.19	3.28	3.27	3.29
10Y Treas. Yield (%)	3.91	3.95	4.20	4.07	4.08
3m Interbank (%)	3.44	3.69	3.69	3.69	3.69
GDP (YoY%)	5.9	5.4	4.5	4.4	—
Money Supply (YoY%)	4.90	6.10	6.20	6.30	8.00
Sov. Rating, Moody's	A3	A3	A3	A3	A3
Sov. Rating, S&P	A-	A-	A-	A-	A-
5Y CDS (bps)	58.37	73.09	107.56	92.57	109.81
FDI (%GDP)	3.02	—	—	—	—
Fiscal Budget (%GDP)	-3.00	—	—	—	-2.80



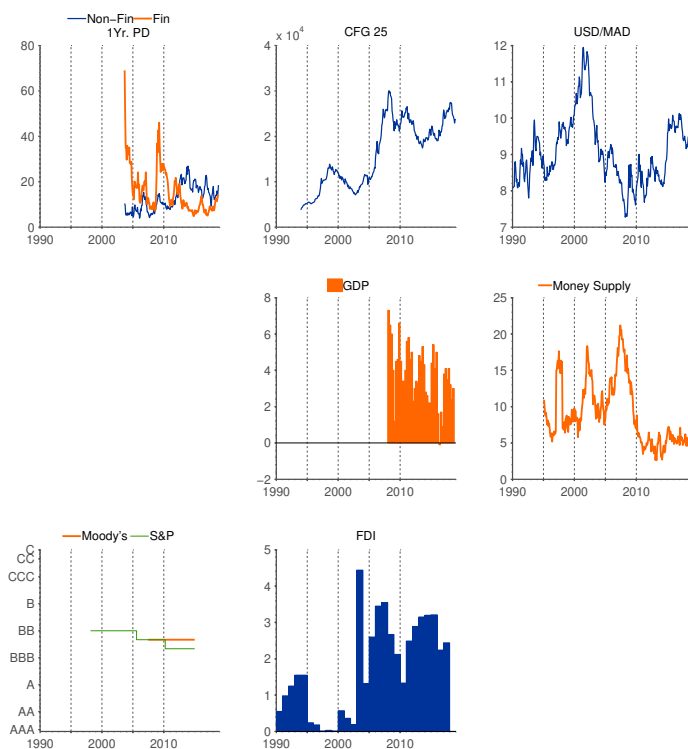
Malta	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	3.25	3.10	2.91	3.06	2.89*
1Yr. PD, Fin.	3.37	3.13	3.40	2.87	2.70*
Malta Stock Exchange	4509	4474	4361	4383	4514
EUR/USD	1.20	1.23	1.17	1.16	1.15
3m Treas. Yield (%)	-0.38	-0.35	-0.35	0.35	-0.35
GDP (YoY%)	7.6	7.3	8.8	9.5	—
PPI (YoY%)	0.9	0.6	1.2	1.2	0.8
Sov. Rating, Moody's	A3	A3	A3	A3	A3
Sov. Rating, S&P	BBB+	BBB+	BBB+	BBB+	BBB+
FDI (%GDP)	-10340.40	—	—	—	—
Fiscal Budget (%GDP)	3.50	—	—	—	—



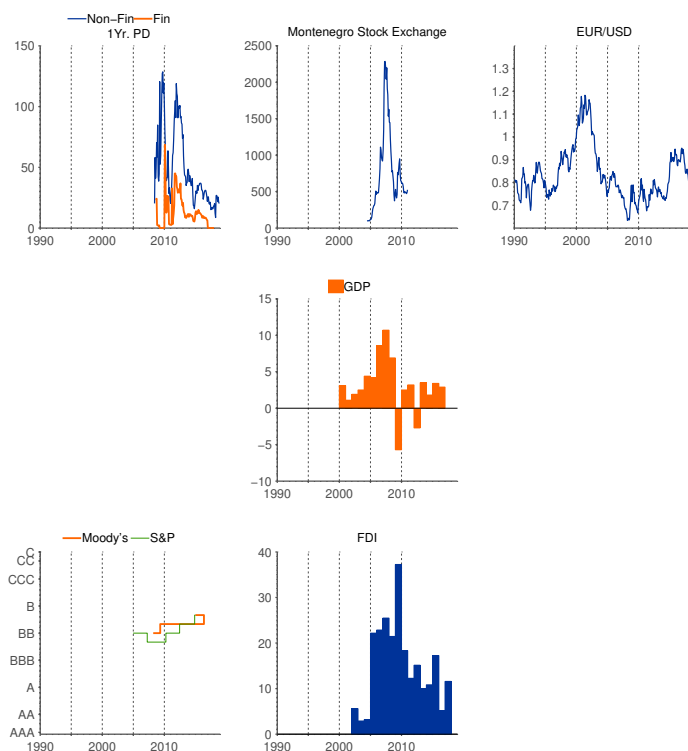
Mauritius	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	3.31	2.22	2.62	2.59	2.21*
1Yr. PD, Fin.	2.53	1.51	1.34	0.51	0.59*
SEMDEX	2202	2288	2245	2251	2219
USD/MUR	33.57	33.45	34.56	34.37	34.30
3m Treas. Yield (%)	2.40	3.60	3.60	3.50	3.40
10Y Treas. Yield (%)	4.47*	5.58	—	5.35*	5.42
Money Supply (YoY%)	16.00	10.00	-1.00	-7.00	—
Sov. Rating, Moody's	Baa1	Baa1	Baa1	Baa1	Baa1
FDI (%GDP)	2.21	—	—	—	—



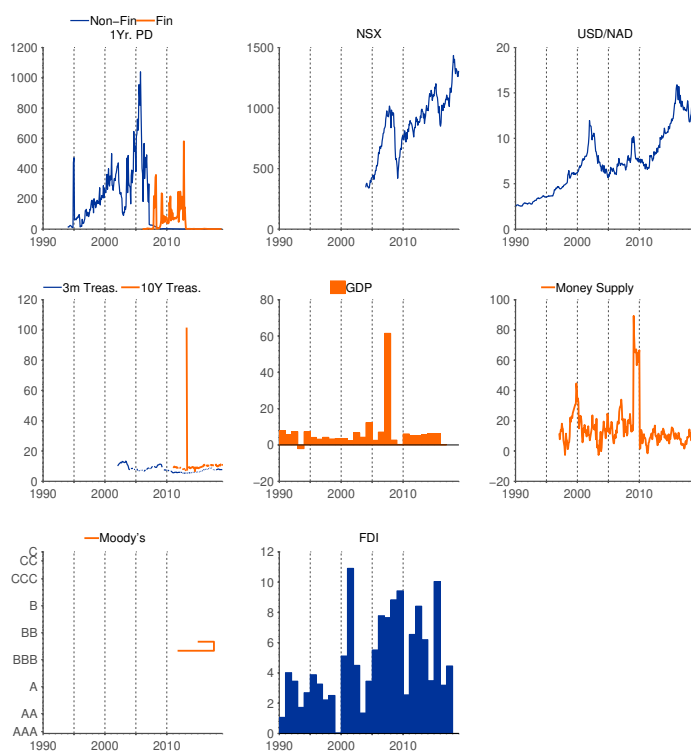
Mexico	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	4.22	4.36	4.90	5.64	8.15*
1Yr. PD, Fin.	1.87	1.19	1.41	1.53	2.71*
BOLSA	49354	46125	47663	49504	41640
MXN/USD	19.66	18.18	19.91	18.72	19.65
10Y Treas. Yield (%)	7.53	7.52	7.88	7.83*	9.11*
3m Interbank (%)	7.67	7.87	8.14	8.17	8.64
GDP (YoY%)	1.5	1.2	2.6	2.5	1.8
OECD CLI	99.21	98.66	98.41	98.93	99.48*
PMI	51.7	52.4	52.1	51.7	49.7
PPI (YoY%)	5.2	4.6	9.2	8.6	6.1
Money Supply (YoY%)	9.40	10.30	11.60	8.10	5.90
Sov. Rating, Moody's	Baa1	Baa1	Baa1	Baa1	Baa1
Sov. Rating, S&P	BBB+	BBB+	BBB+	BBB+	BBB+
5Y CDS (bps)	106.11	109.35	134.23	112.97	154.73
FDI (%GDP)	2.79	—	—	—	—
Fiscal Budget (%GDP)	-1.09	—	—	—	—



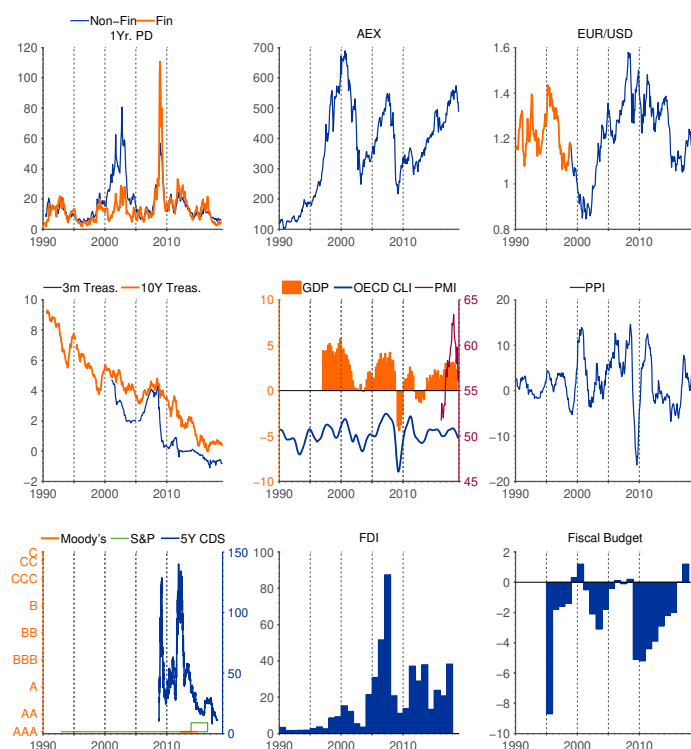
Morocco	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	17.93	12.85	13.90	14.99	18.50*
1Yr. PD, Fin.	9.11	9.59	12.37	13.93	14.27*
CFG 25	25864	27191	24763	23808	23804
USD/MAD	9.33	9.20	9.48	9.43	9.56
GDP (YoY%)	4.1	3.2	2.4	3.0	—
Money Supply (YoY%)	5.50	5.70	4.55	3.60	4.04
Sov. Rating, Moody's	Ba1	Ba1	Ba1	Ba1	Ba1
Sov. Rating, S&P	BBB-	BBB-	BBB-	BBB-	BBB-
FDI (%GDP)	2.44	—	—	—	—



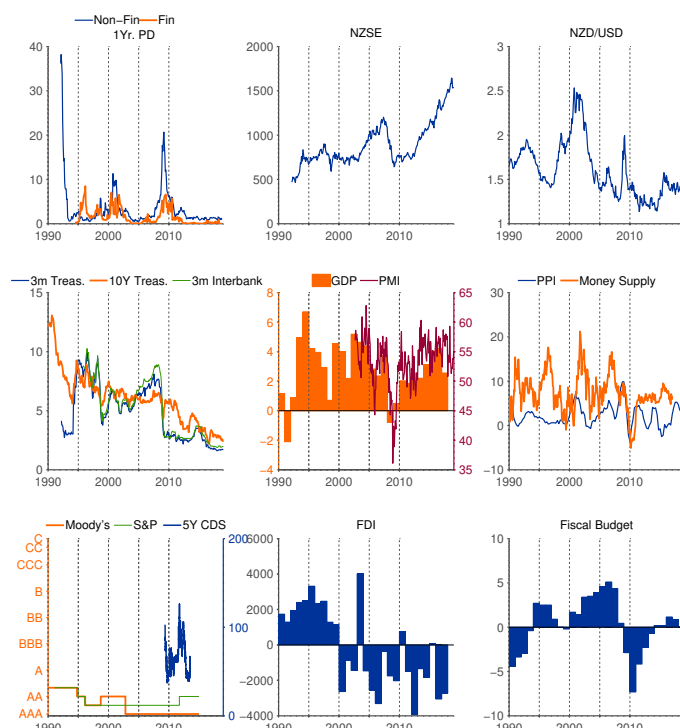
Montenegro	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	18.07	8.58	25.68	21.15	20.13*
1Yr. PD, Fin.	0.00	—	—	—	—
EUR/USD	0.83	0.81	0.86	0.86	0.87
Sov. Rating, Moody's	B1	B1	B1	B1	B1
Sov. Rating, S&P	B+	B+	B+	B+	B+
FDI (%GDP)	11.57	—	—	—	—



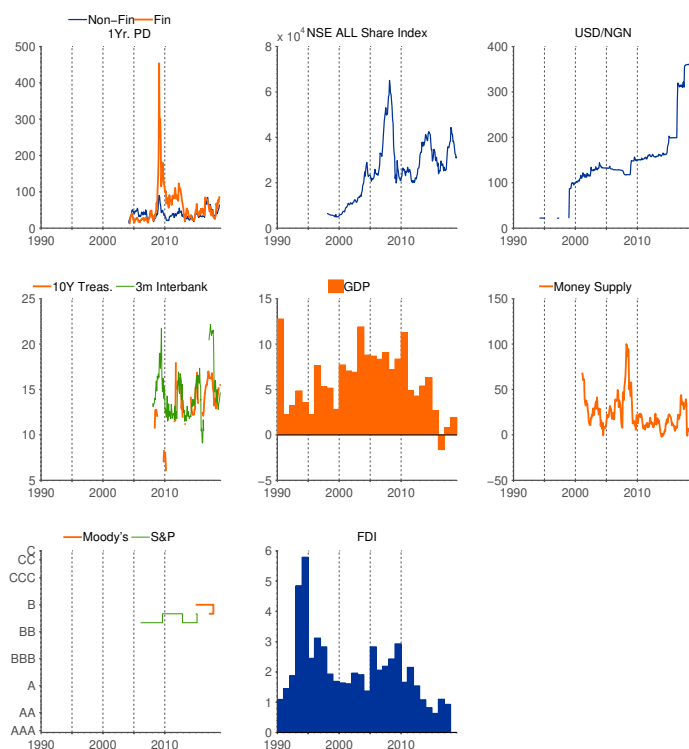
Namibia	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	0.03	0.03	0.95	0.40	0.91*
1Yr. PD, Fin.	0.38	0.47	0.83	0.05	0.03*
NSX	1300	1378	1284	1303	1307
USD/NAD	12.38	11.84	13.73	14.14	14.35
3m Treas. Yield (%)	7.70	7.87	7.94	7.68	7.69
10Y Treas. Yield (%)	11.07	9.75	10.72	11.19	10.80
Money Supply (YoY%)	9.53	11.61	10.92	12.53	6.40
Sov. Rating, Moody's	Ba1	Ba1	Ba1	Ba1	Ba1
FDI (%GDP)	4.46	—	—	—	—



Netherlands	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	6.63	6.41	6.62	6.21	6.17*
1Yr. PD, Fin.	2.42	4.07	4.06	4.55	4.03*
AEX	545	530	552	550	488
EUR/USD	1.20	1.23	1.17	1.16	1.15
3m Treas. Yield (%)	-0.84	-0.62	-0.63	-0.60	-0.85
10Y Treas. Yield (%)	0.53	0.64	0.46	0.58	0.39
GDP (YoY%)	3.1	3.1	2.9	2.3	—
OECD CLI	100.85	100.74	100.44	100.02	99.74*
PMI	62.2	61.5	60.1	59.8	57.2
PPI (YoY%)	1.7	1.0	4.5	5.0	2.0
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
5Y CDS (bps)	13.27	11.11	—	—	—
FDI (%GDP)	38.31	—	—	—	—
Fiscal Budget (%GDP)	1.20	—	—	—	—

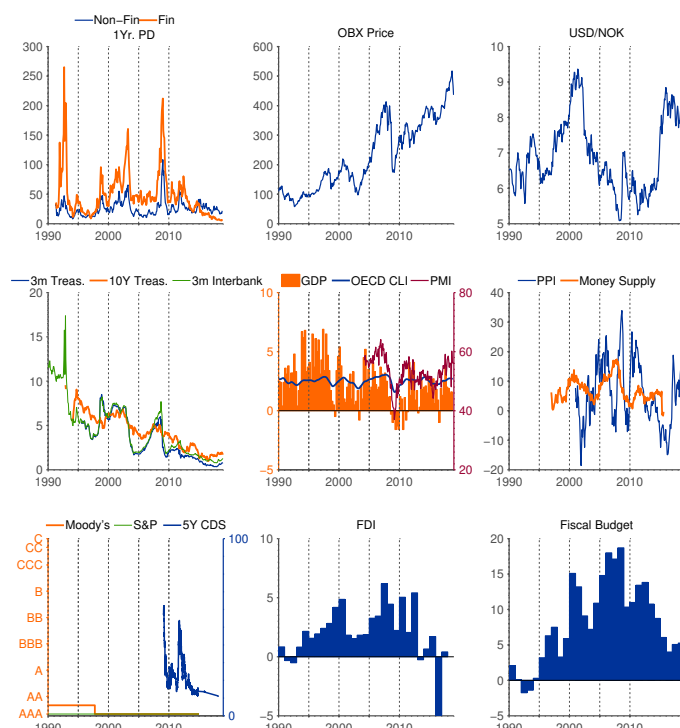


New Zealand	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	0.84	1.47	0.91	0.99	1.04*
1Yr. PD, Fin.	0.24	0.85	0.01	0.02	0.02*
NZSE	1511	1482	1583	1636	1531
NZD/USD	1.41	1.38	1.48	1.51	1.49
3m Treas. Yield (%)	1.60	1.65	1.67	1.70	1.71
10Y Treas. Yield (%)	2.72	2.72	2.85	2.61	2.37
3m Interbank (%)	1.88	1.96	2.00	1.92	1.97
GDP (YoY%)	2.5	—	—	—	—
PMI	50.8	53.2	52.8	52.1	55.1
PPI (YoY%)	4.7	3.5	3.1	3.6	—
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AA	AA	AA	AA	AA
FDI (%GDP)	-2727.80	—	—	—	—
Fiscal Budget (%GDP)	0.87	—	—	—	0.03

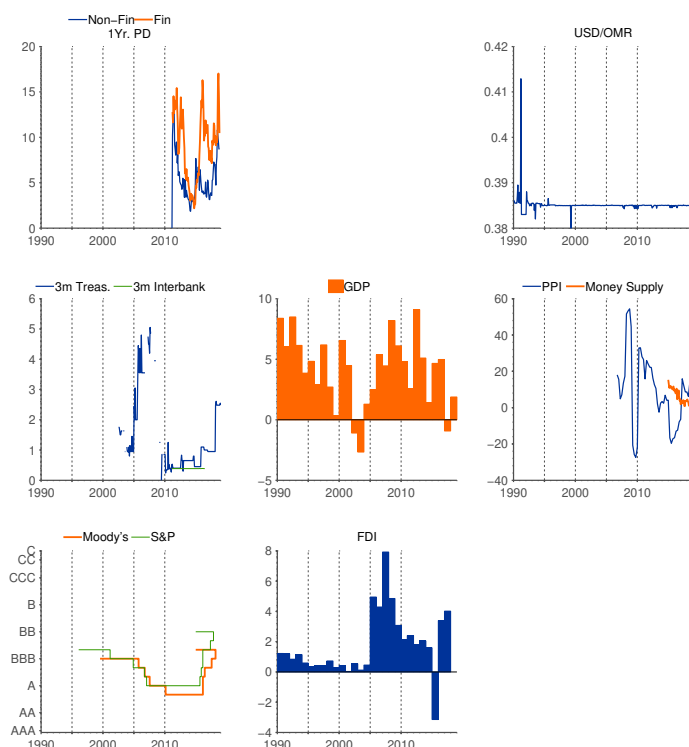


Nigeria	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	31.68	39.42	40.41	54.84	65.04*
1Yr. PD, Fin.	30.44	35.45	53.48	77.88	87.69*
NSE ALL Share Index	38243	41505	38279	32766	31431
USD/NGN	359.99	360.00	361.24	362.79	362.59
10Y Treas. Yield (%)	13.21	13.60	13.81	15.25	15.50
3m Interbank (%)	15.39	16.01	15.00	13.47	14.66
GDP (YoY%)	0.8	—	—	—	1.9
Money Supply (YoY%)	0.59	4.08	3.62	3.37	-5.50
Sov. Rating, Moody's	B2	B2	B2	B2	B2
Sov. Rating, S&P	B+	B+	B+	B+	B+
FDI (%GDP)	0.93	—	—	—	—

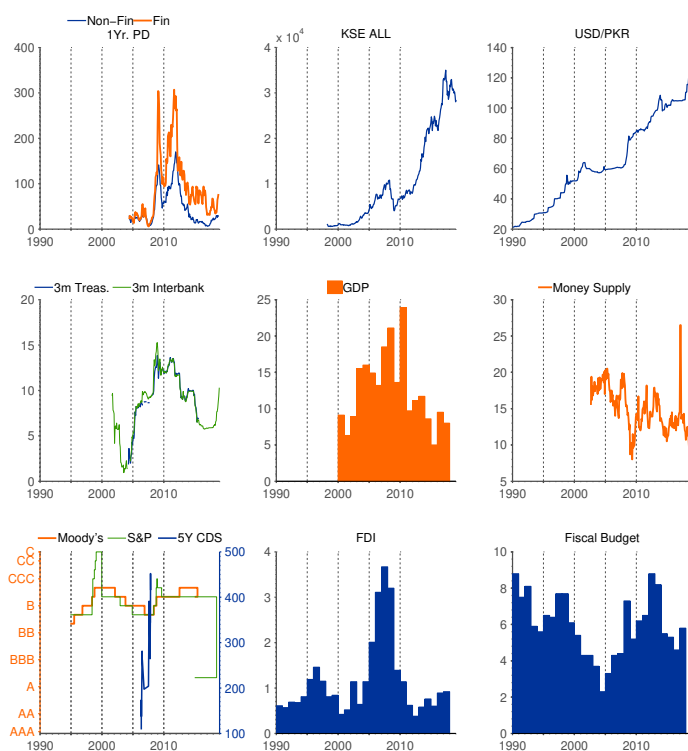




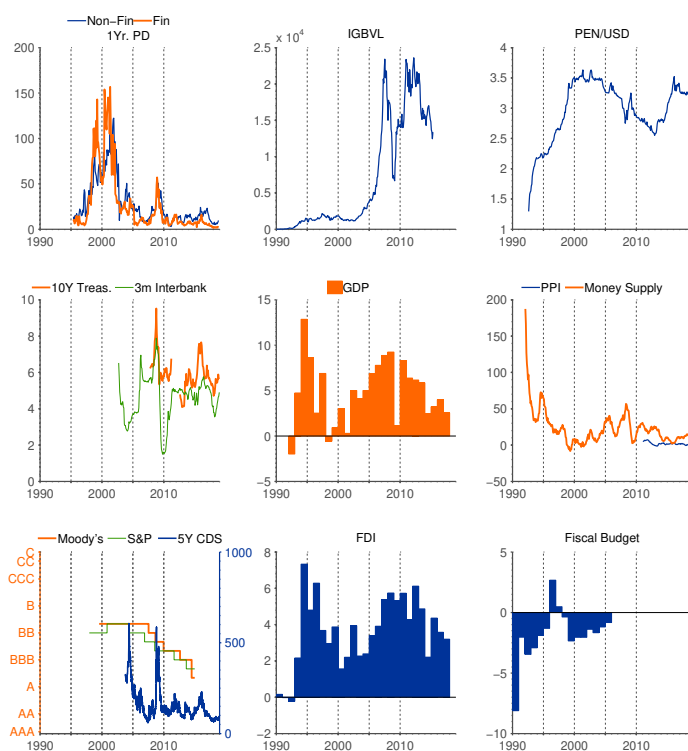
Norway	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	25.33	21.82	16.44	17.28	21.77*
1Yr. PD, Fin.	7.12	7.72	5.77	5.21	7.45*
OBX Price	456	451	486	517	436
USD/NOK	8.20	7.84	8.15	8.15	8.64
3m Treas. Yield (%)	0.35	0.50	0.61	0.72	0.80
10Y Treas. Yield (%)	1.59	1.85	1.78	1.94	1.77
3m Interbank (%)	0.81	1.17	0.98	1.10	1.27
GDP (YoY%)	2.0	1.9	1.5	1.6	—
OECD CLI	100.70	100.92	100.92	100.81	100.77*
PMI	57.9	54.7	56.0	56.2	55.9
PPI (YoY%)	7.3	6.4	20.0	21.1	7.8
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
5Y CDS (bps)	—	10.71	—	—	—
FDI (%GDP)	0.41	—	—	—	—
Fiscal Budget (%GDP)	5.06	—	—	—	5.26



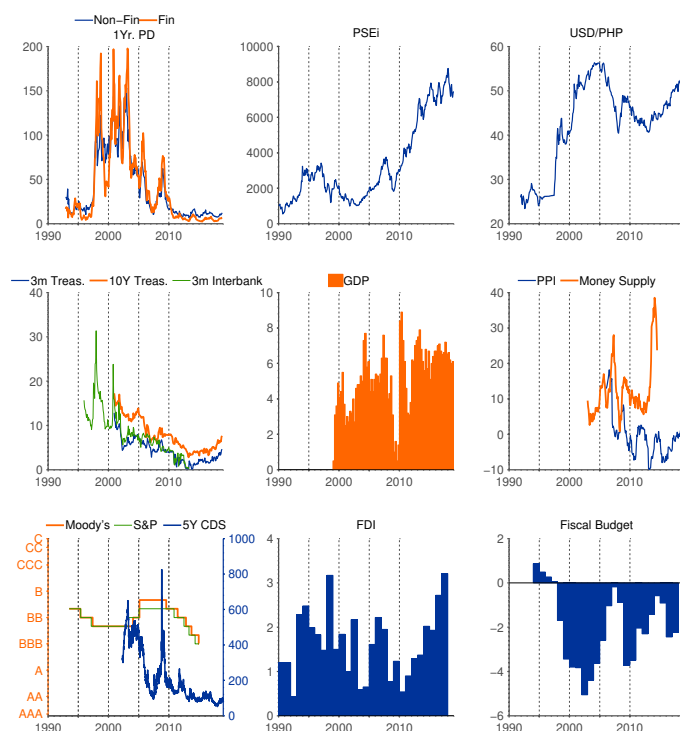
Oman	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	6.89	4.74	10.80	8.71	8.69*
1Yr. PD, Fin.	11.30	9.11	9.86	14.48	10.47*
USD/OMR	0.38	0.38	0.38	0.38	0.39
3m Treas. Yield (%)	0.95	2.48	2.48	2.48	2.55
GDP (YoY%)	-0.9	—	—	—	1.9
PPI (YoY%)	8.6	6.2	14.7	15.8	—
Money Supply (YoY%)	4.18	2.77	3.02	2.62	4.62*
Sov. Rating, Moody's	Baa3	Baa3	Baa3	Baa3	Baa3
Sov. Rating, S&P	BB	BB	BB	BB	BB
FDI (%GDP)	4.02	—	—	—	—



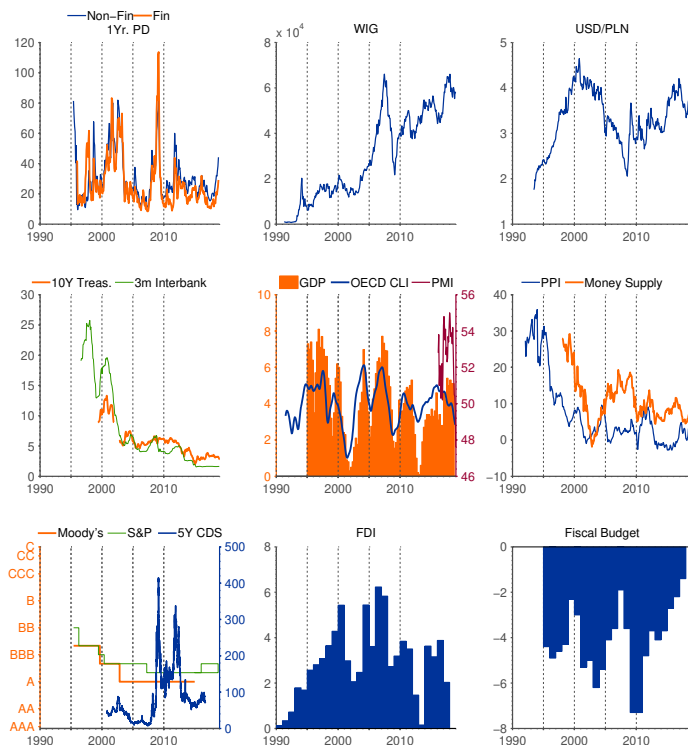
Pakistan	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	24.32	22.58	29.70	29.73	27.92*
1Yr. PD, Fin.	60.98	40.43	36.54	69.91	77.38*
KSE ALL	29774	32727	30583	29944	28043
USD/PKR	110.45	115.58	121.51	124.25	138.87
3m Interbank (%)	5.91	6.25	6.67	8.07	10.30
GDP (YoY%)	8.0	—	—	—	—
Money Supply (YoY%)	10.70	12.50	9.70	10.50	11.80*
Sov. Rating, Moody's	B3	B3	B3	B3	B3
Sov. Rating, S&P	A-	A-	A-	A-	A-
FDI (%GDP)	0.92	—	—	—	—
Fiscal Budget (%GDP)	5.80	—	—	—	—



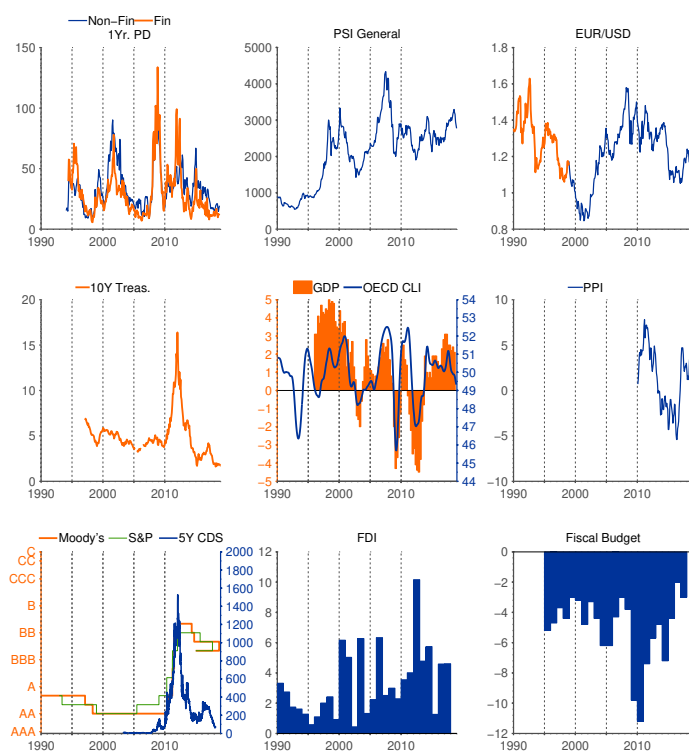
Peru	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	5.89	5.22	6.94	7.86	9.66*
1Yr. PD, Fin.	2.35	2.34	2.44	2.80	2.36*
PEN/USD	3.24	3.23	3.28	3.30	3.37
10Y Treas. Yield (%)	5.17	4.83	5.58	5.61	5.64
3m Interbank (%)	4.16	3.55	3.97	4.44	4.90
GDP (YoY%)	2.5	—	—	—	—
PPI (YoY%)	-0.6	0.3	1.7	2.3	3.2
Money Supply (YoY%)	12.50	14.90	12.40	11.70	12.10
Sov. Rating, Moody's	A3	A3	A3	A3	A3
Sov. Rating, S&P	BBB+	BBB+	BBB+	BBB+	BBB+
5Y CDS (bps)	71.96	81.63	89.15	73.53	94.28
FDI (%GDP)	3.20	—	—	—	—



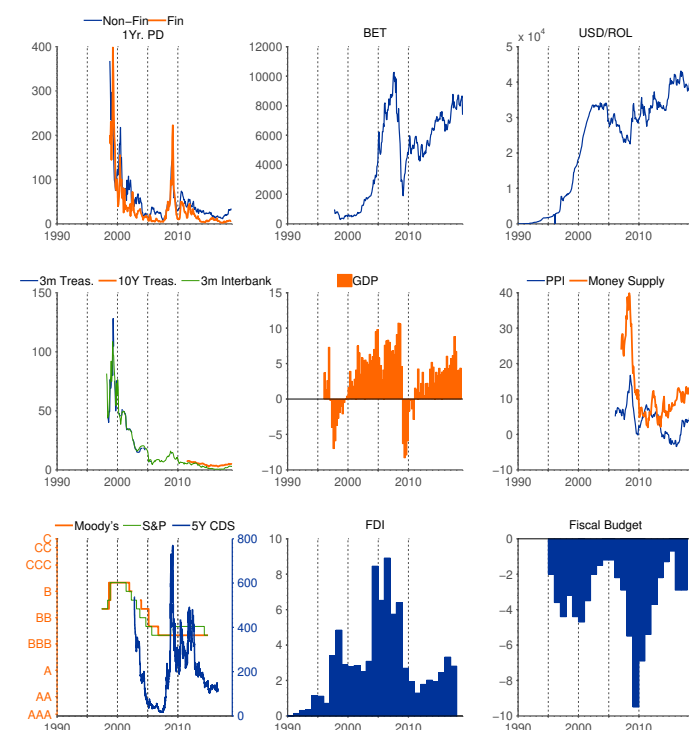
Philippines	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	7.83	8.14	11.20	11.29	12.29*
1Yr. PD, Fin.	3.28	4.91	6.02	6.61	6.90*
PSEI	8558	7980	7194	7277	7466
USD/PHP	49.85	52.20	53.37	54.03	52.56
3m Treas. Yield (%)	2.50	3.09	3.91	4.37	4.64*
10Y Treas. Yield (%)	5.70	6.00	6.41	7.39	7.66*
GDP (YoY%)	6.5	6.6	6.2	6.0	6.1
PPI (YoY%)	-1.1	-0.6	1.0	1.8	0.8
Sov. Rating, Moody's	Baa2	Baa2	Baa2	Baa2	Baa2
Sov. Rating, S&P	BBB	BBB	BBB	BBB	BBB
5Y CDS (bps)	67.28	74.09	91.31	76.69	88.23
FDI (%GDP)	3.21	—	—	—	—
Fiscal Budget (%GDP)	-2.22	—	—	—	—



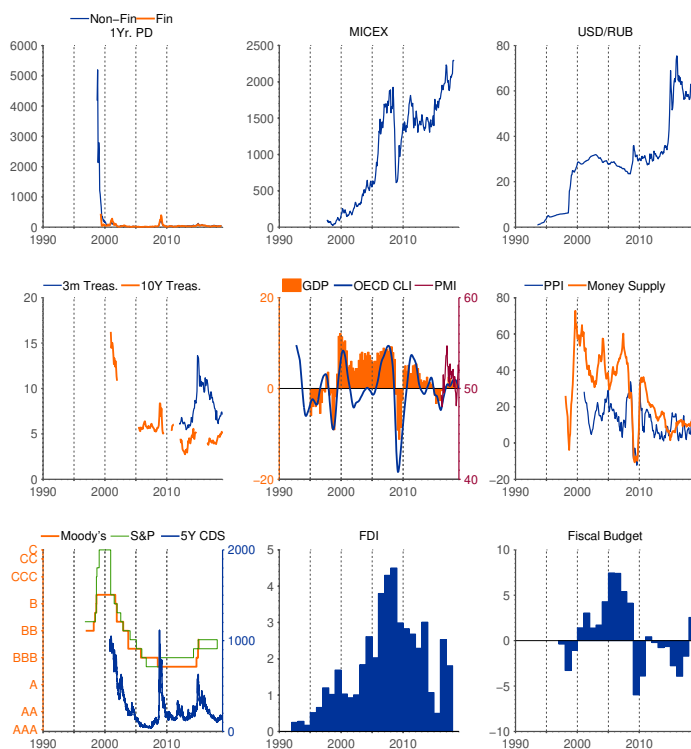
Poland	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	20.18	23.60	32.14	38.34	44.14*
1Yr. PD, Fin.	16.51	14.85	21.38	24.62	29.14*
WIG	63746	58377	55954	58975	57691
USD/PLN	3.48	3.42	3.74	3.69	3.74
10Y Treas. Yield (%)	3.30	3.17	3.22	3.24	2.83
3m Interbank (%)	1.62	1.60	1.60	1.62	1.62
GDP (YoY%)	5.0	5.3	5.1	5.1	—
OECD CLI	99.91	100.03	99.74	99.13	98.84*
PMI	55.0	53.7	54.2	50.5	47.6
PPI (YoY%)	0.3	0.5	3.7	3.0	2.2
Money Supply (YoY%)	4.60	5.80	7.20	7.90	9.20
Sov. Rating, Moody's	A2	A2	A2	A2	A2
Sov. Rating, S&P	A-	A-	A-	A-	A-
FDI (%GDP)	2.03	—	—	—	—
Fiscal Budget (%GDP)	-1.40	—	—	—	—



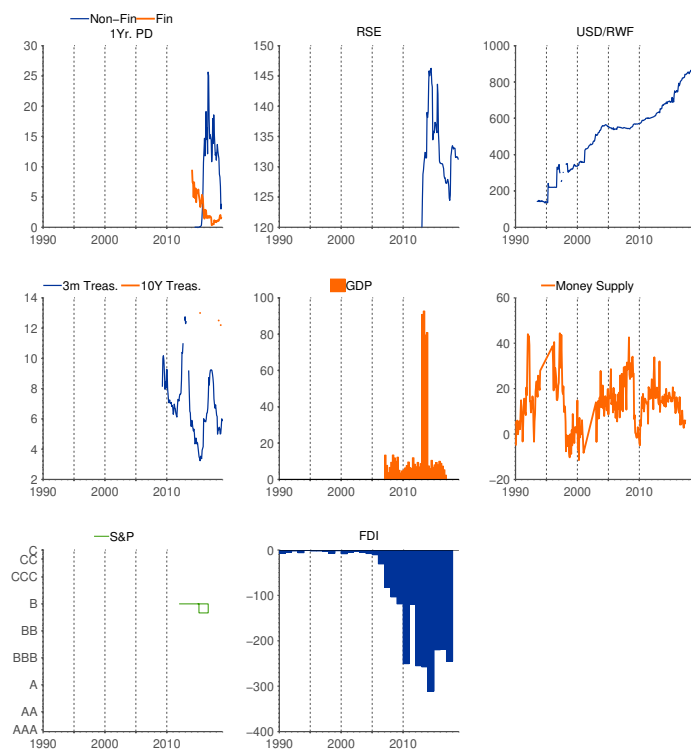
Portugal	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	15.41	19.86	20.84	17.33	19.34*
1Yr. PD, Fin.	12.80	14.80	11.22	12.01	12.61*
PSI General	2970	3008	3229	3161	2776
EUR/USD	1.20	1.23	1.17	1.16	1.15
10Y Treas. Yield (%)	1.94	1.61	1.79	1.88	1.72
GDP (YoY%)	2.5	2.2	2.4	2.1	—
OECD CLI	100.28	99.99	99.88	99.62	99.32*
PPI (YoY%)	2.2	1.2	4.0	4.8	2.7
Sov. Rating, Moody's	Baa3	Baa3	Baa3	Baa3	Baa3
Sov. Rating, S&P	BBB-	BBB-	BBB-	BBB-	BBB-
5Y CDS (bps)	80.64	63.21	—	—	—
FDI (%GDP)	4.61	—	—	—	—
Fiscal Budget (%GDP)	-3.00	—	—	—	—



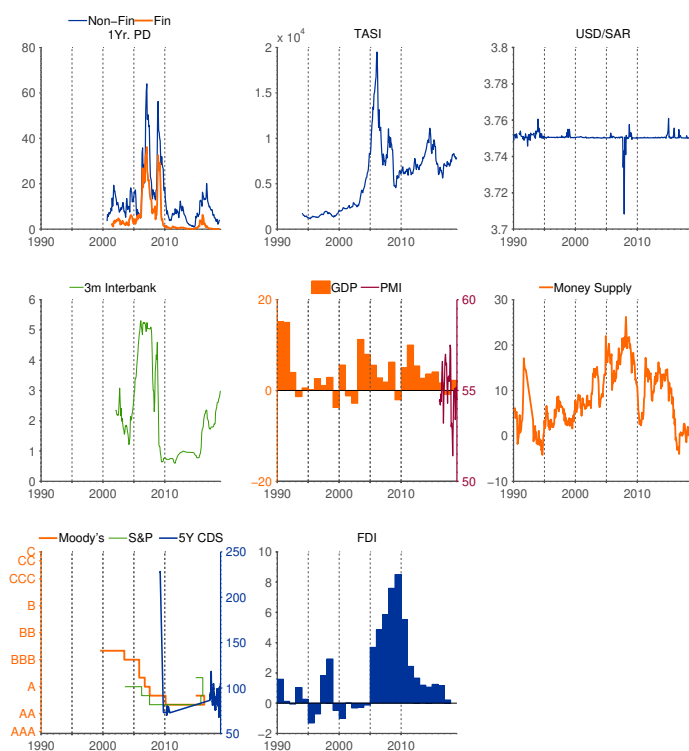
Romania	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	21.16	20.68	30.13	30.93	34.61*
1Yr. PD, Fin.	5.32	5.51	7.23	6.04	6.63*
BET	7754	8714	8087	8413	7384
USD/ROL	38970.50	37768.50	39913.00	40057.00	40589.50
10Y Treas. Yield (%)	4.31	4.46	5.21	4.98	4.81
3m Interbank (%)	1.86	1.90	2.99	3.00	2.86
GDP (YoY%)	6.7	4.0	4.1	4.3	—
PPI (YoY%)	3.4	3.8	6.1	5.6	4.5
Money Supply (YoY%)	11.46	11.68	12.87	10.25	8.90
Sov. Rating, Moody's	Baa3	Baa3	Baa3	Baa3	Baa3
Sov. Rating, S&P	BBB-	BBB-	BBB-	BBB-	BBB-
FDI (%GDP)	2.81	—	—	—	—
Fiscal Budget (%GDP)	-2.90	—	—	—	—



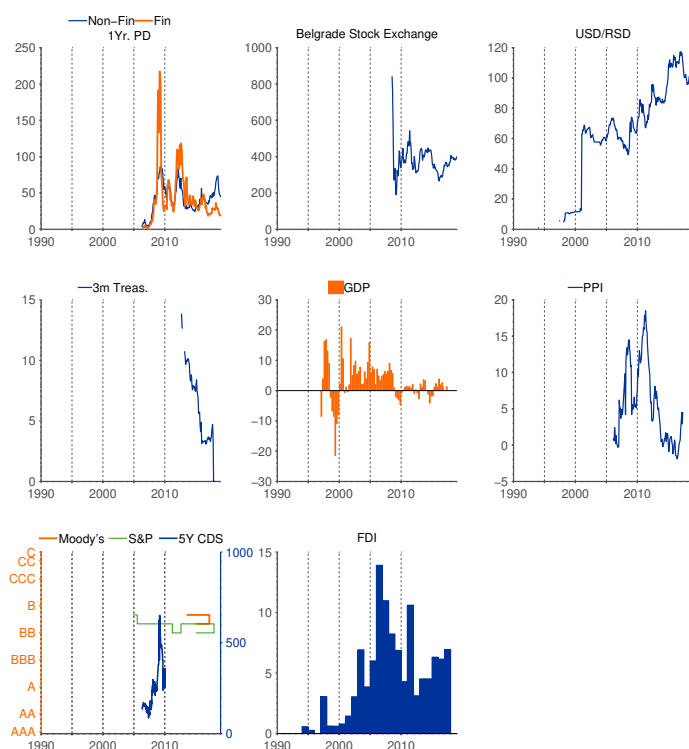
Russia	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	45.68	36.54	35.20	41.67	31.21*
1Yr. PD, Fin.	30.88	23.37	27.60	34.65	28.50*
MICEX	2110	2286	—	—	—
USD/RUB	57.63	57.13	62.74	65.55	69.72
3m Treas. Yield (%)	6.55	6.39	6.64	6.97	7.12
10Y Treas. Yield (%)	3.87	4.53	4.79	4.88	5.05
GDP (YoY%)	0.9	1.3	1.9	1.5	—
OECD CLI	100.84	101.01	100.91	100.54	100.01*
PMI	52.0	50.6	49.5	50.0	51.7
PPI (YoY%)	8.4	4.8	16.1	14.4	11.7
Money Supply (YoY%)	10.50	9.90	11.40	11.80	11.00
Sov. Rating, Moody's	Ba1	Ba1	Ba1	Ba1	Ba1
Sov. Rating, S&P	BBB-	BBB-	BBB-	BBB-	BBB-
5Y CDS (bps)	127.58	123.53	141.22	143.29	153.13
FDI (%GDP)	1.81	—	—	—	—
Fiscal Budget (%GDP)	-1.72	—	—	—	2.56



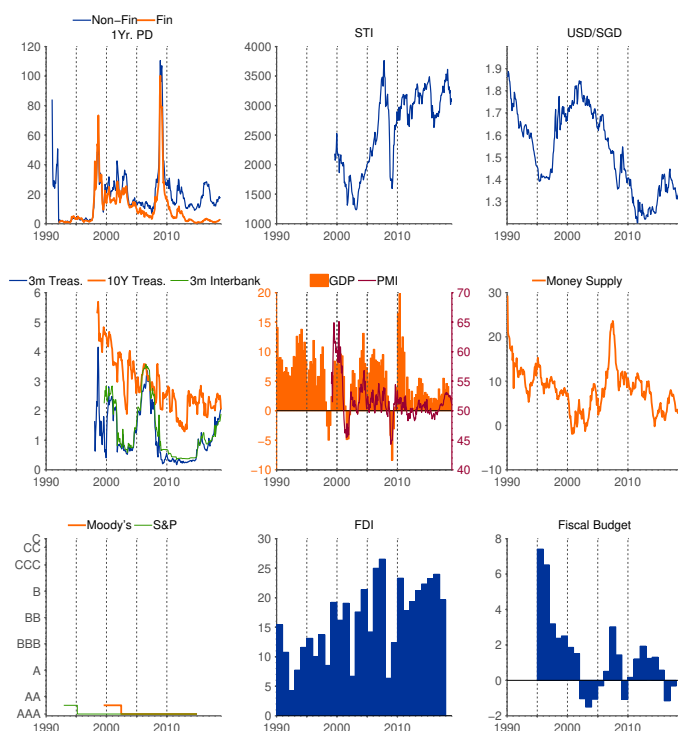
Rwanda	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	11.08	12.61	8.76	3.01	3.86*
1Yr. PD, Fin.	0.83	1.17	1.42	1.43	1.65*
RSE	133	133	132	132	131
USD/RWF	854.00	855.00	876.45	872.70	894.10
3m Treas. Yield (%)	6.59	4.99	5.45	5.02	5.85
10Y Treas. Yield (%)	—	—	12.50*	12.20	—
Sov. Rating, S&P	B	B	B	B	B
FDI (%GDP)	-245.10	—	—	—	—



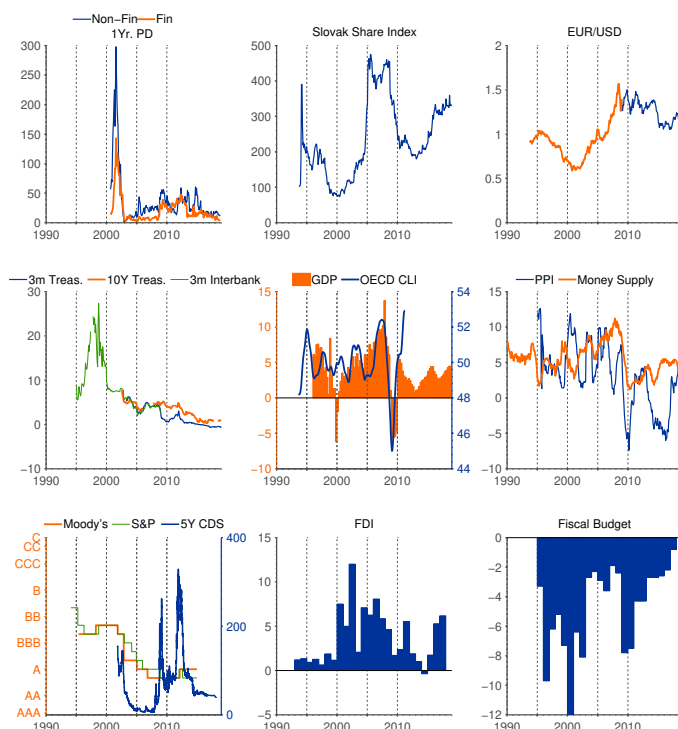
Saudi Arabia	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	5.06	3.71	3.67	3.32	4.12*
1Yr. PD, Fin.	0.04	0.02	0.01	0.01	0.01*
TASI	7226	7871	8314	8000	7827
USD/SAR	3.75	3.75	3.75	3.75	3.75
3m Interbank (%)	1.90	2.27	2.59	2.72	2.98
GDP (YoY%)	-0.9	—	—	—	2.2
PMI	57.3	52.8	55.0	53.4	54.5
Money Supply (YoY%)	0.20	0.20	-0.80	2.40	2.80
Sov. Rating, Moody's	A1	A1	A1	A1	A1
Sov. Rating, S&P	A-	A-	A-	A-	A-
5Y CDS (bps)	91.94	84.56	91.02	68.22	105.09
FDI (%GDP)	0.21	—	—	—	—



Serbia	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	47.58	64.98	73.11	52.13	45.61
1Yr. PD, Fin.	26.81	36.12	28.26	23.17	19.92
Belgrade Stock Exchange	380	395	384	380	399
USD/RSD	98.49	95.91	100.99	101.87	103.18
3m Treas. Yield (%)	0.00	0.00*	—	—	—
Sov. Rating, Moody's	Ba3	Ba3	Ba3	Ba3	Ba3
Sov. Rating, S&P	BB	BB	BB	BB	BB
FDI (%GDP)	6.95	—	—	—	—

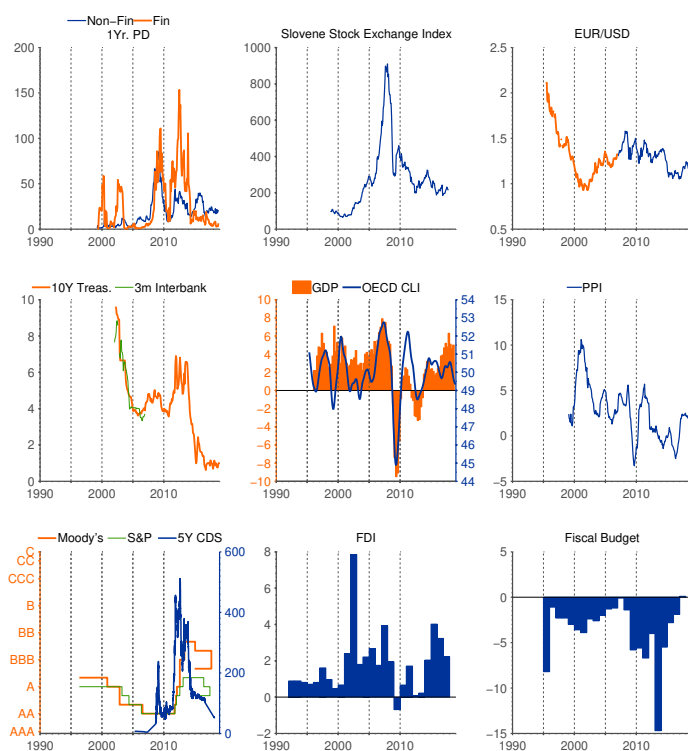


Singapore	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	12.33	14.47	16.42	17.27	18.03*
1Yr. PD, Fin.	1.17	1.51	1.95	2.69	2.25*
STI	3403	3428	3269	3257	3069
USD/SGD	1.34	1.31	1.36	1.37	1.36
3m Treas. Yield (%)	1.79	1.63	1.74	1.81	2.08
10Y Treas. Yield (%)	2.00	2.29	2.53	2.50	2.04
3m Interbank (%)	1.50	1.45	1.52	1.64	1.89
GDP (YoY%)	3.6	4.6	4.1	2.2	2.2
PMI	52.8	53.0	52.5	52.4	51.1
Money Supply (YoY%)	3.20	2.80	2.70	3.50	3.90
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
FDI (%GDP)	19.65	—	—	—	—
Fiscal Budget (%GDP)	-0.32	—	—	—	—

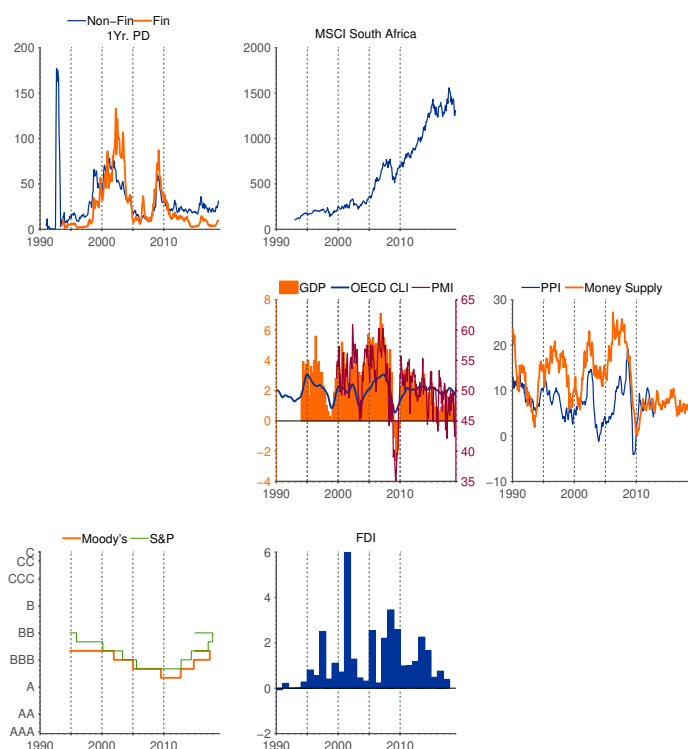


Slovakia	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	16.33	16.84	13.25	12.21	11.11*
1Yr. PD, Fin.	4.71	11.40	5.56	3.87	4.56*
Slovak Share Index	326	330	326	331	332
EUR/USD	1.20	1.23	1.17	1.16	1.15
3m Treas. Yield (%)	-0.64	-0.57	-0.46	-0.49	-0.56
10Y Treas. Yield (%)	0.82*	—	0.87	0.94	0.79
GDP (YoY%)	3.7	3.9	4.3	4.5	—
PPI (YoY%)	2.0	3.3	5.5	6.1	4.3
Money Supply (YoY%)	5.20	4.40	4.90	4.20	4.20
Sov. Rating, Moody's	A2	A2	A2	A2	A2
Sov. Rating, S&P	A+	A+	A+	A+	A+
5Y CDS (bps)	43.76*	37.90	—	—	—
FDI (%GDP)	6.18	—	—	—	—
Fiscal Budget (%GDP)	-0.80	—	—	—	—

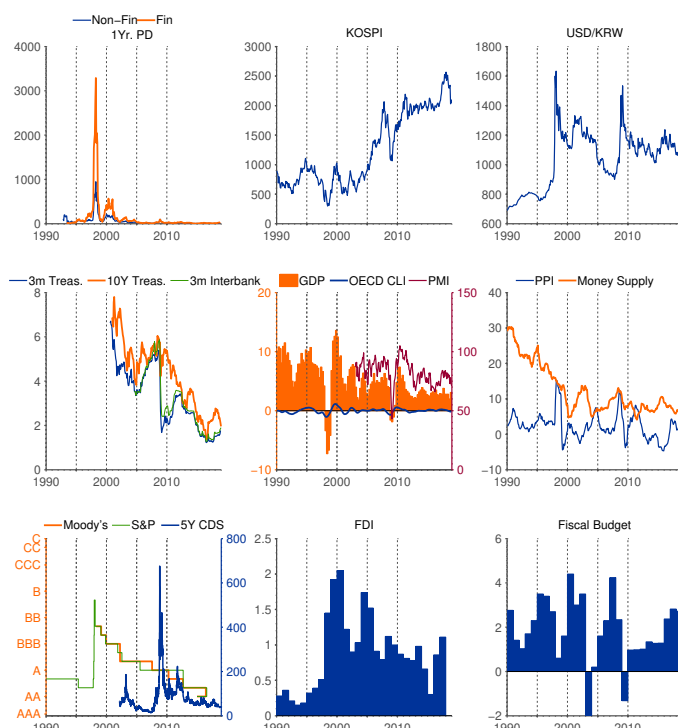




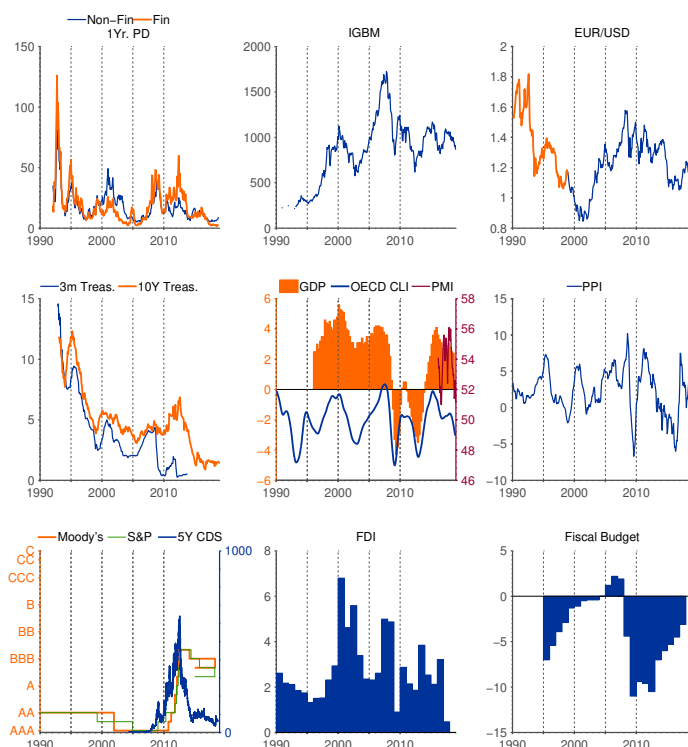
Slovenia	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	20.23	19.18	18.46	19.53	20.89*
1Yr. PD, Fin.	3.98	7.49	2.74	3.13	6.35*
Slovene Stock Exchange Index	214*	—	—	—	—
EUR/USD	1.20	1.23	1.17	1.16	1.15
10Y Treas. Yield (%)	0.69	1.11	0.99	0.75	0.96
GDP (YoY%)	6.3	5.1	4.6	5.0	—
OECD CLI	100.57	100.37	99.89	99.47	99.33
PPI (YoY%)	2.2	2.2	2.4	2.2	1.4
Sov. Rating, Moody's	Baa1	Baa1	Baa1	Baa1	Baa1
Sov. Rating, S&P	A+	A+	A+	A+	A+
5Y CDS (bps)	—	49.88	—	—	—
FDI (%GDP)	2.22	—	—	—	—
Fiscal Budget (%GDP)	0.10	—	—	—	—



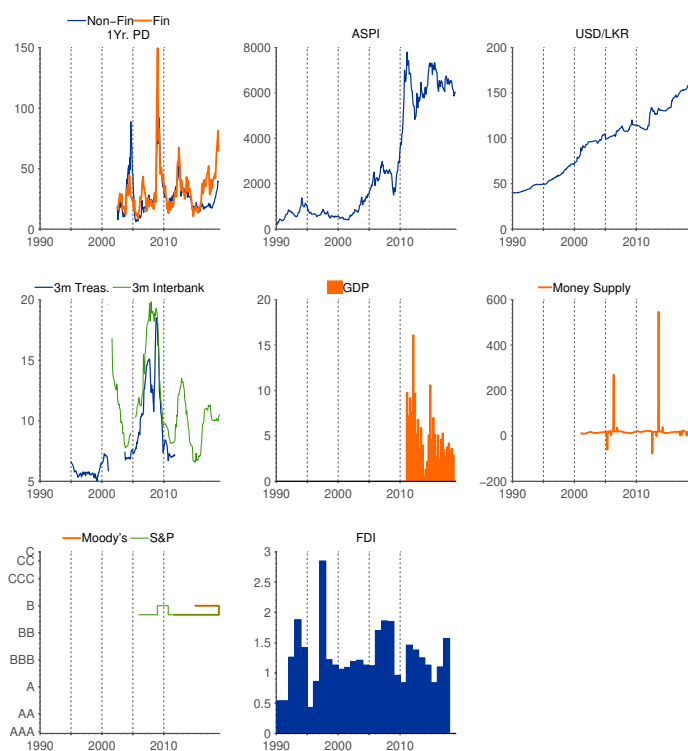
South Africa	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	19.93	20.28	25.39	26.53	31.60*
1Yr. PD, Fin.	4.14	3.55	5.70	8.90	10.50*
MSCI South Africa	1537	1402	1421	1347	1313
GDP (YoY%)	1.4	0.8	0.4	1.1	—
OECD CLI	100.44	100.25	99.97	99.60	99.23*
PMI	45.9	46.7	48.0	44.5	50.7
Money Supply (YoY%)	6.42	6.43	5.77	7.00	5.59
Sov. Rating, Moody's	Baa3	Baa3	Baa3	Baa3	Baa3
Sov. Rating, S&P	BB	BB	BB	BB	BB
FDI (%GDP)	0.39	—	—	—	—



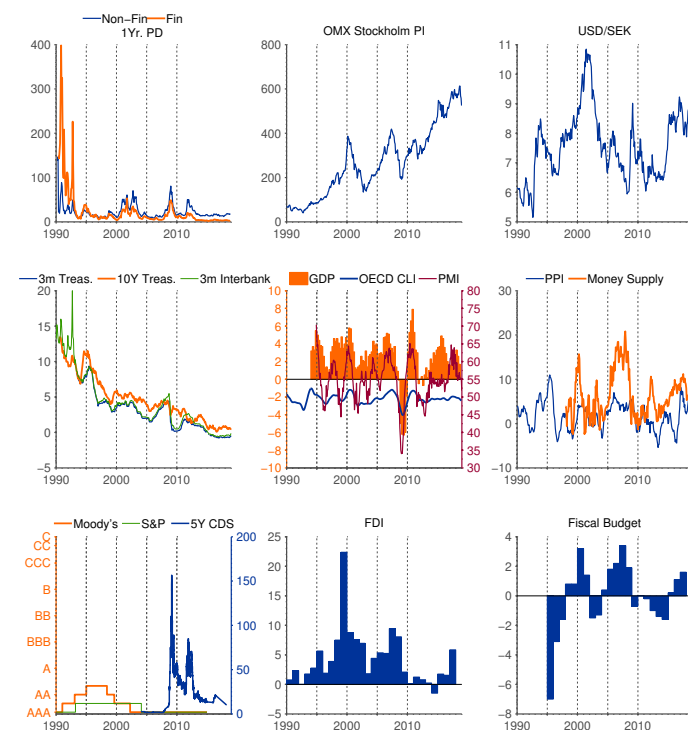
South Korea	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	3.18	3.20	5.56	6.87	11.59*
1Yr. PD, Fin.	15.00	14.67	22.35	21.81	32.06*
KOSPI	2467	2446	2326	2343	2041
USD/KRW	1067.40	1063.63	1114.67	1109.30	1110.95
3m Treas. Yield (%)	1.51	1.52	1.58	1.57	1.75
10Y Treas. Yield (%)	2.47	2.62	2.56	2.36	1.96
3m Interbank (%)	1.70	1.65	1.68	1.71	1.90
GDP (YoY%)	2.8	2.8	2.8	2.0	3.1
OECD CLI	100.57	100.19	99.68	99.29	99.19*
PMI	82.0	82.0	79.0	77.0	71.0
PPI (YoY%)	2.2	1.3	2.6	2.7	1.0
Money Supply (YoY%)	6.10	6.70	6.70	7.20	7.50*
Sov. Rating, Moody's	Aa2	Aa2	Aa2	Aa2	Aa2
Sov. Rating, S&P	AA	AA	AA	AA	AA
5Y CDS (bps)	52.23	54.92	49.68	38.36	39.03
FDI (%GDP)	1.11	-	-	-	-
Fiscal Budget (%GDP)	2.82	-	-	-	2.72



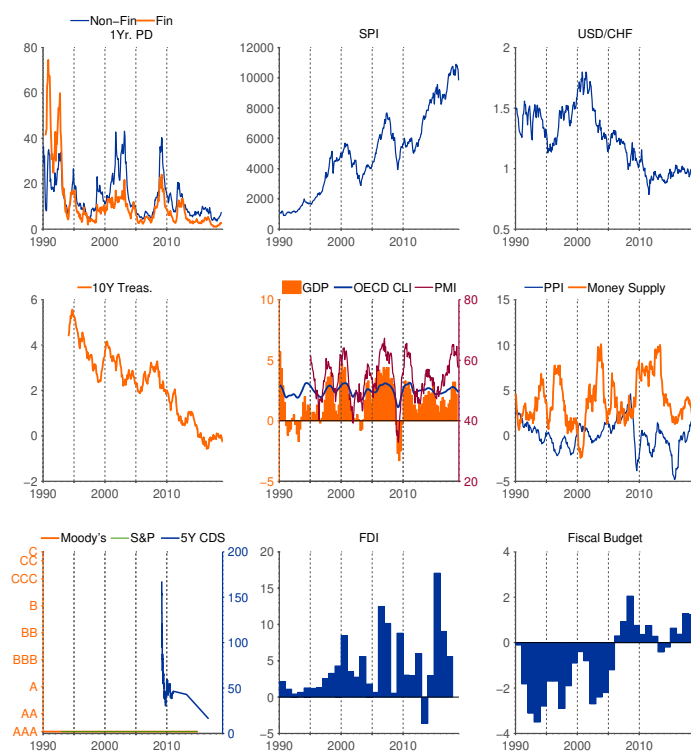
Spain	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	5.80	6.32	6.58	7.52	9.04*
1Yr. PD, Fin.	3.13	2.34	1.51	2.41	2.88*
IGBM	1015	976	975	951	863
EUR/USD	1.20	1.23	1.17	1.16	1.15
10Y Treas. Yield (%)	1.57	1.16	1.32	1.50	1.42
GDP (YoY%)	3.1	2.8	2.5	2.4	-
OECD CLI	100.42	100.29	99.92	99.33	98.94*
PMI	55.8	54.8	53.4	51.4	51.1
PPI (YoY%)	1.7	1.2	4.0	5.3	1.6
Sov. Rating, Moody's	Baa1	Baa1	Baa1	Baa1	Baa1
Sov. Rating, S&P	A-	A-	A-	A-	A-
5Y CDS (bps)	55.76	40.90	69.26	64.87	-
FDI (%GDP)	0.47	-	-	-	-
Fiscal Budget (%GDP)	-3.10	-	-	-	-



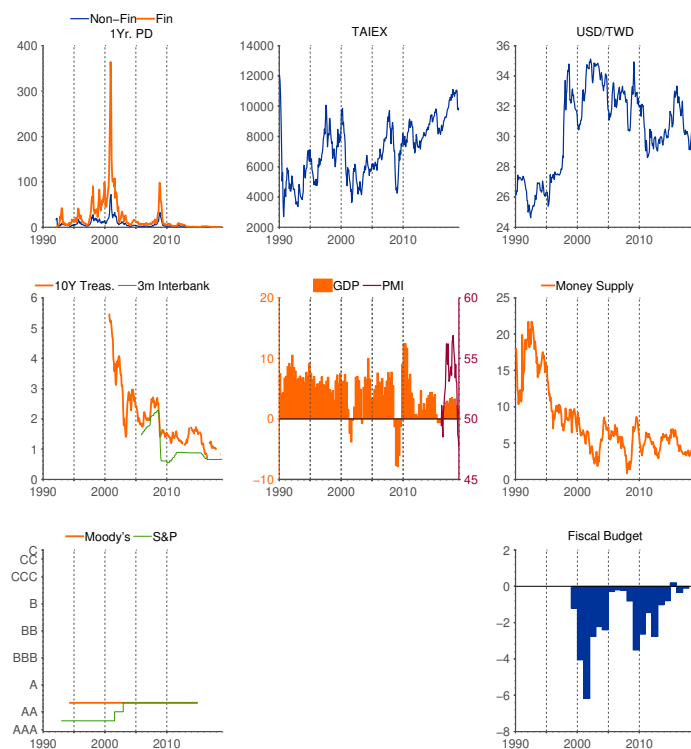
Sri Lanka	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	20.35	25.12	30.92	39.66	38.91*
1Yr. PD, Fin.	40.62	45.84	61.53	81.25	64.03*
ASPI	6369	6477	6195	5862	6052
USD/LKR	153.50	155.70	158.30	169.15	182.90
3m Interbank (%)	10.05	10.08	10.02	10.01	10.50
GDP (YoY%)	4.2	3.4	3.6	2.9	—
Money Supply (YoY%)	17.50	17.60	15.90	14.20	14.50*
Sov. Rating, Moody's	B2	B2	B2	B2	B2
Sov. Rating, S&P	B	B	B	B	B
FDI (%GDP)	1.57	—	—	—	—



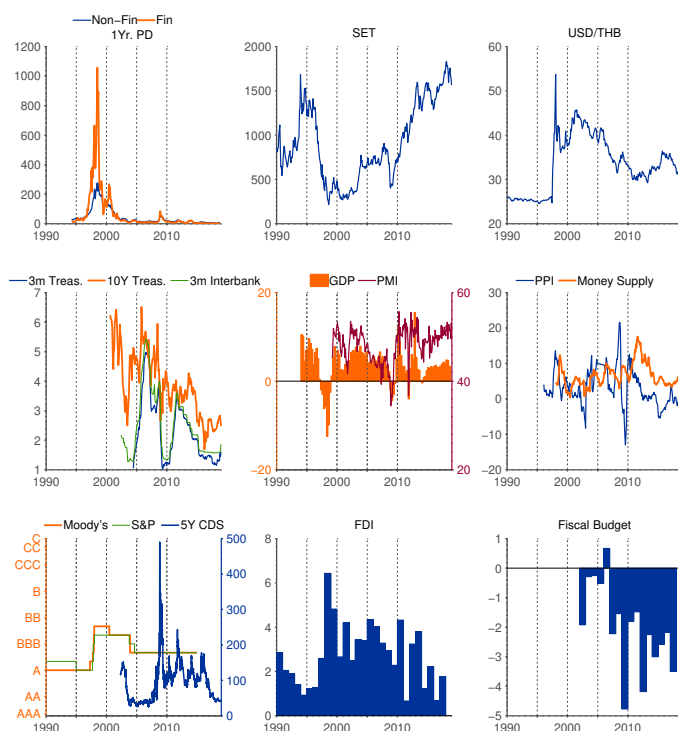
Sweden	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	14.88	18.19	18.47	16.63	18.75*
1Yr. PD, Fin.	3.88	3.94	3.15	2.52	3.20*
OMX Stockholm PI	569	560	574	613	525
USD/SEK	8.18	8.34	8.94	8.89	8.85
3m Treas. Yield (%)	-0.73	-0.70	-0.65	-0.70	-0.45
10Y Treas. Yield (%)	0.78	0.69	0.50	0.64	0.47
3m Interbank (%)	-0.47	-0.36	-0.35	-0.46	-0.13
GDP (YoY%)	2.7	3.3	2.6	1.7	—
OECD CLI	99.91	99.76	99.64	99.29	98.97*
PMI	59.2	55.4	55.2	55.3	51.8
PPI (YoY%)	2.2	4.0	8.0	10.1	5.6
Money Supply (YoY%)	8.04	6.33	5.43	4.46	5.67
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
5Y CDS (bps)	—	10.55	—	—	—
FDI (%GDP)	5.86	—	—	—	—
Fiscal Budget (%GDP)	1.60	—	—	—	—



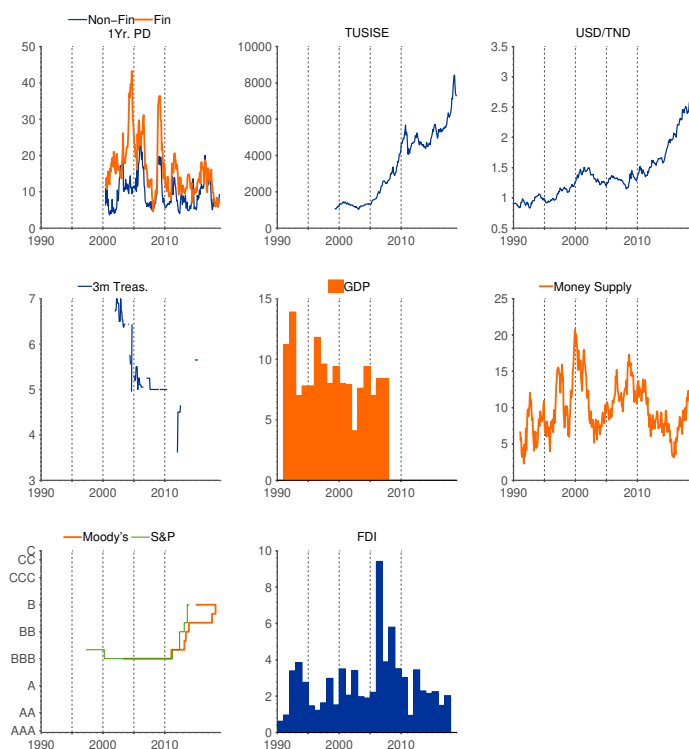
Switzerland	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	4.27	4.53	5.54	6.91	7.49*
1Yr. PD, Fin.	1.04	1.63	1.90	2.43	2.93*
SPI	10752	10190	10327	10808	9830
USD/CHF	0.97	0.95	0.99	0.98	0.98
10Y Treas. Yield (%)	-0.15	0.03	-0.06	0.04	-0.25
GDP (YoY%)	2.6	3.2	3.2	2.2	—
OECD CLI	101.18	100.97	100.54	99.90	99.44*
PMI	65.2	61.4	61.8	59.9	57.5
PPI (YoY%)	0.5	1.1	1.9	1.6	0.4
Money Supply (YoY%)	3.53	3.24	2.29	2.29	3.10
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
FDI (%GDP)	5.58	—	—	—	—
Fiscal Budget (%GDP)	1.28	—	—	—	1.24



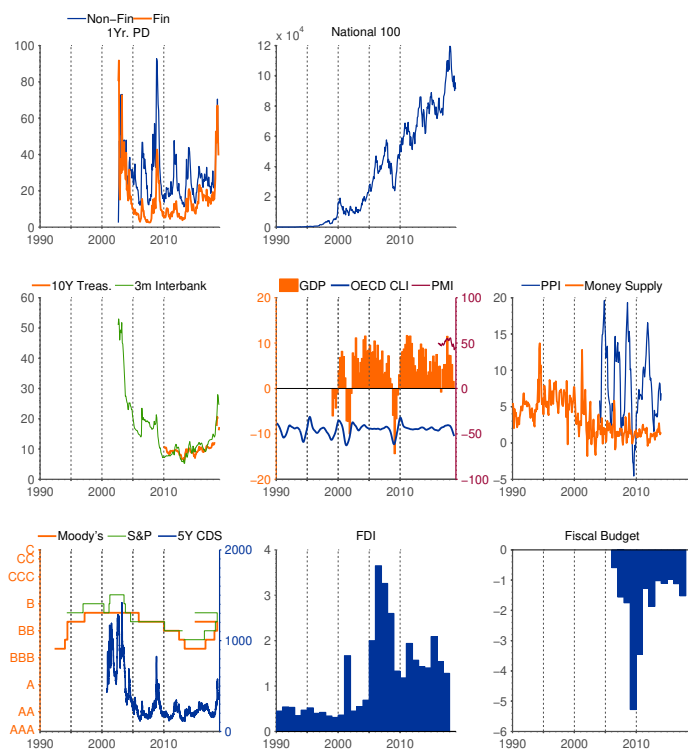
Taiwan	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	0.41	0.47	0.50	0.91	1.37*
1Yr. PD, Fin.	0.34	0.24	0.24	0.30	0.51*
TAIEX	10643	10919	10837	11006	9727
USD/TWD	29.73	29.11	30.48	30.53	30.55
10Y Treas. Yield (%)	0.98	—	—	0.83	—
3m Interbank (%)	0.66	0.66	0.66	0.66	0.67
GDP (YoY%)	3.5	3.1	3.3	2.3	1.8
PMI	56.6	55.3	54.5	50.8	47.7
Money Supply (YoY%)	3.56	3.45	3.76	3.33	2.65
Sov. Rating, Moody's	Aa3	Aa3	Aa3	Aa3	Aa3
Sov. Rating, S&P	AA-	AA-	AA-	AA-	AA-
Fiscal Budget (%GDP)	-0.11	—	—	—	—



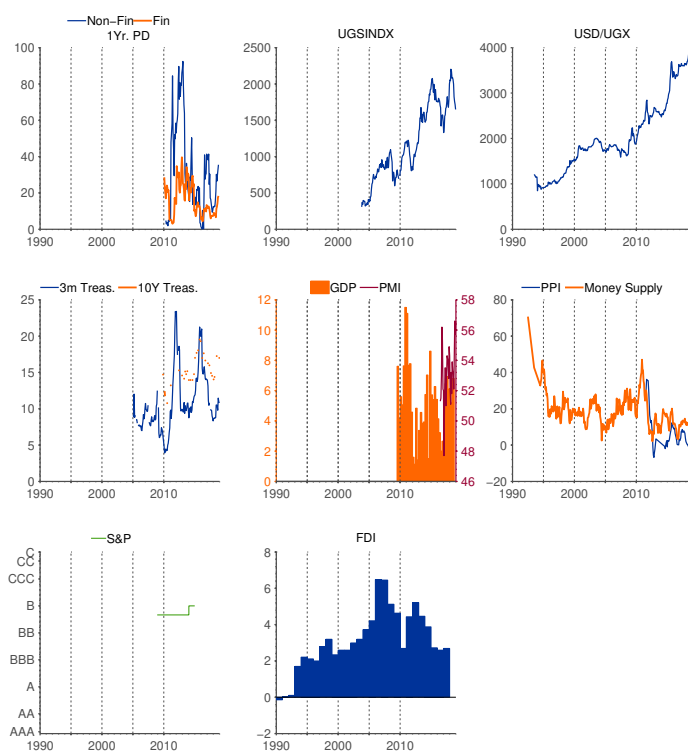
Thailand	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	4.96	4.42	6.14	5.57	6.38*
1Yr. PD, Fin.	1.31	0.83	0.91	0.42	0.43*
SET	1754	1776	1596	1756	1564
USD/THB	32.57	31.18	33.04	32.32	32.33
3m Treas. Yield (%)	1.19	1.15	1.29	1.31	1.61
10Y Treas. Yield (%)	2.32	2.40	2.58	2.80	2.48
3m Interbank (%)	1.57	1.57	1.58	1.59	1.86
GDP (YoY%)	4.0	4.8	4.6	3.3	—
PMI	50.2	53.3	52.8	51.5	49.5
PPI (YoY%)	-0.6	-1.4	1.8	1.3	-0.5
Money Supply (YoY%)	5.00	6.16	5.15	4.85	4.74
Sov. Rating, Moody's	Baa1	Baa1	Baa1	Baa1	Baa1
Sov. Rating, S&P	BBB+	BBB+	BBB+	BBB+	BBB+
5Y CDS (bps)	45.00	47.06	49.38	41.28	44.00
FDI (%GDP)	1.77	—	—	—	—
Fiscal Budget (%GDP)	-3.49	—	—	—	—



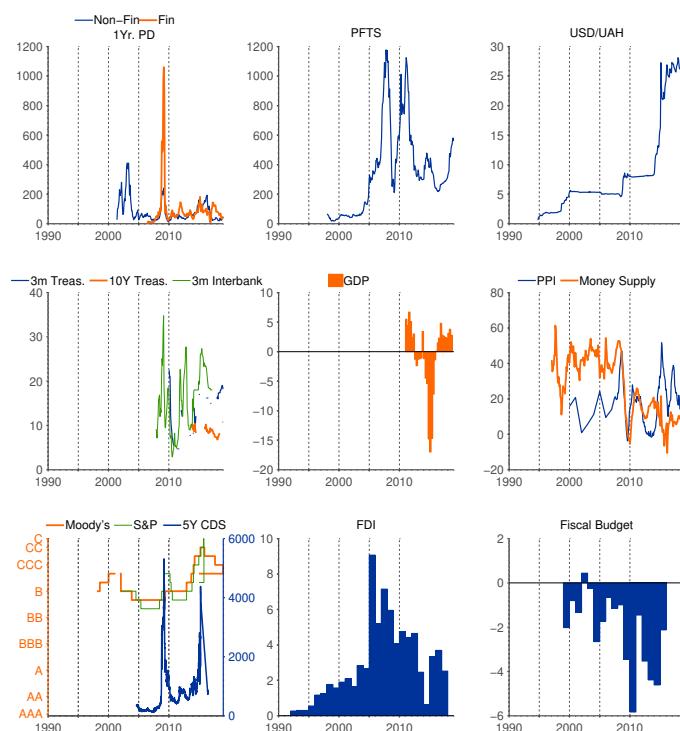
Tunisia	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	8.14	6.05	7.62	7.83	9.36*
1Yr. PD, Fin.	7.24	6.08	6.62	7.04	7.96*
TUNISE	6282	7143	8059	7802	7272
USD/TND	2.46	2.41	2.61	2.80	3.00
Money Supply (YoY%)	11.36	12.33	9.94	9.24	8.63*
Sov. Rating, Moody's	B2	B2	B2	B2	B2
FDI (%GDP)	2.03	—	—	—	—



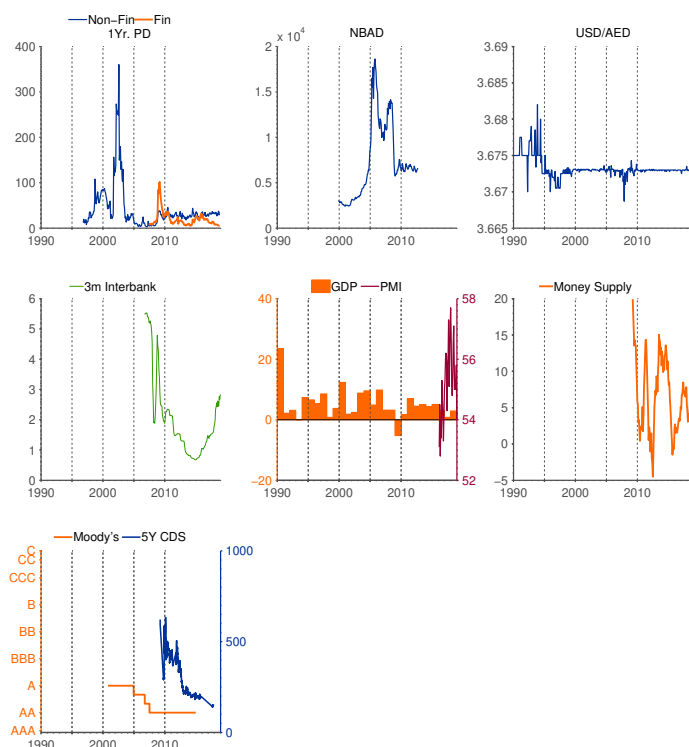
Turkey	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	22.43	23.95	48.35	49.94	45.73*
1Yr. PD, Fin.	14.62	20.49	46.60	49.99	39.46*
National 100	115333	114930	96520	99957	91270
10Y Treas. Yield (%)	11.35	12.27	—	20.03	17.25
3m Interbank (%)	14.96	13.98	19.29	27.96	24.65
GDP (YoY%)	7.3	7.2	5.3	1.6	—
OECD CLI	9.04	6.86	2.19	-2.35	—
PMI	54.9	51.8	46.8	42.7	44.2
Sov. Rating, Moody's	Ba3	Ba3	Ba3	Ba3	Ba3
Sov. Rating, S&P	B+	B+	B+	B+	B+
5Y CDS (bps)	164.79	195.74	299.91	377.04	361.57
FDI (%GDP)	1.28	—	—	—	—
Fiscal Budget (%GDP)	-1.52	—	—	—	—



Uganda	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	12.54	12.54	30.23	32.75	35.52*
1Yr. PD, Fin.	7.46	7.94	11.35	17.49	18.35*
UGSINDEX	2001	2203	2089	1825	1649
USD/UGX	3643.25	3688.05	3884.15	3816.02	3705.94
3m Treas. Yield (%)	8.32	8.77	10.52	9.79	10.80
10Y Treas. Yield (%)	14.54*	14.38	—	17.25*	17.00
GDP (YoY%)	6.1	6.2	5.2	6.8	—
PMI	54.3	53.2	53.2	54.2	56.6
PPI (YoY%)	2.1	0.2	1.2	-2.4	-3.2*
Money Supply (YoY%)	12.78	11.14	12.74	10.53	7.75
Sov. Rating, S&P	B	B	B	B	B
FDI (%GDP)	2.69	—	—	—	—

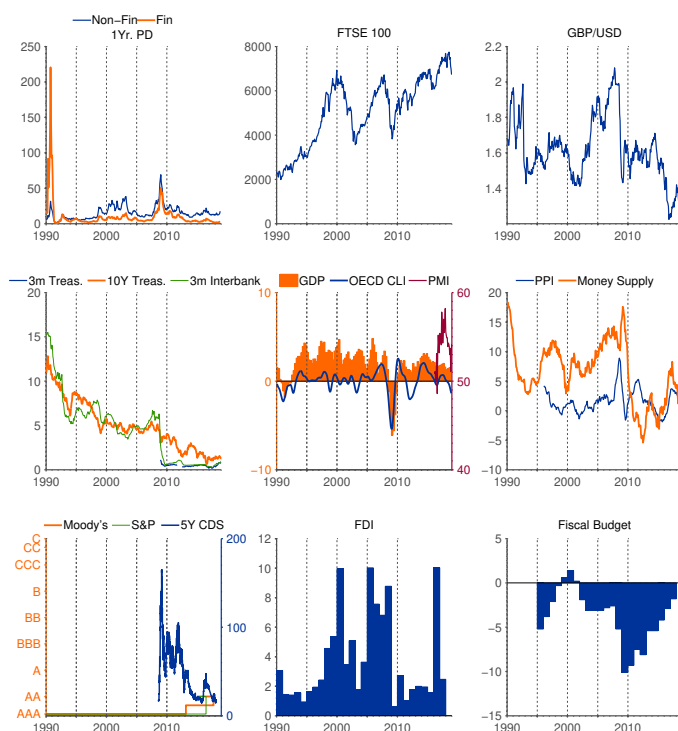


Ukraine	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	33.68	20.40	37.74	24.20	42.09
1Yr. PD, Fin.	83.43	74.26	66.19	33.32	39.62
PFTS	315	354	463	538	559
USD/UAH	28.10	26.27	26.34	28.24	27.72
3m Treas. Yield (%)	16.00	17.33	17.35	18.50	18.19
10Y Treas. Yield (%)	7.29	7.42	8.20	—	10.79
GDP (YoY%)	2.2	3.1	3.8	2.8	—
PPI (YoY%)	16.5	15.9	18.4	18.9	14.2
Money Supply (YoY%)	9.60	8.70	9.90	11.10	8.80*
Sov. Rating, Moody's	Caa1	Caa1	Caa1	Caa1	Caa1
Sov. Rating, S&P	B-	B-	B-	B-	B-
FDI (%GDP)	2.52	—	—	—	—

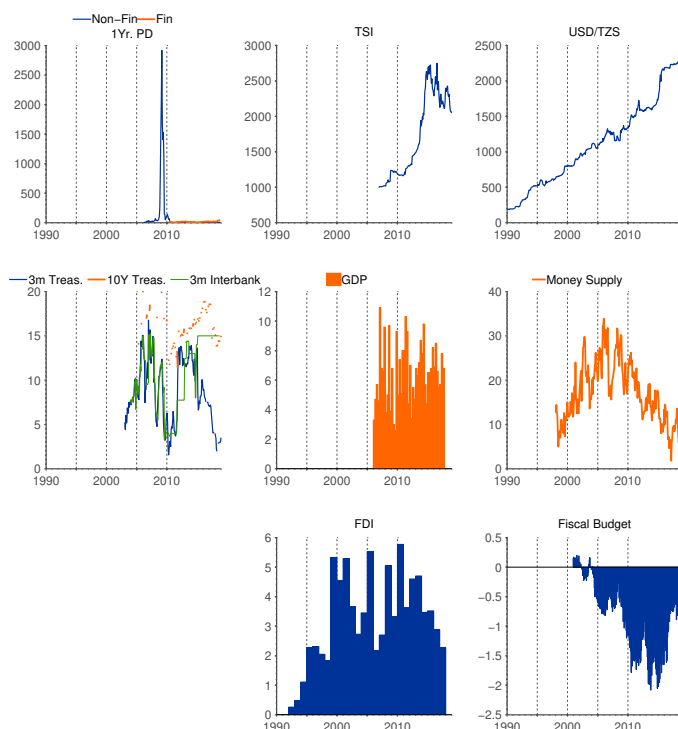


United Arab Emirates	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	32.44	34.94	31.75	35.95	28.34*
1Yr. PD, Fin.	8.06	7.87	7.84	5.37	6.25*
USD/AED	3.67	3.67	3.67	3.67	3.67
3m Interbank (%)	1.79	2.33	2.43	2.45	2.84
GDP (YoY%)	0.8	—	—	—	2.9
PMI	57.7	54.8	57.1	55.3	54.0
Money Supply (YoY%)	5.36	4.15	6.19	8.35	7.75
Sov. Rating, Moody's	Aa2	Aa2	Aa2	Aa2	Aa2
5Y CDS (bps)	153.21*	—	—	—	—

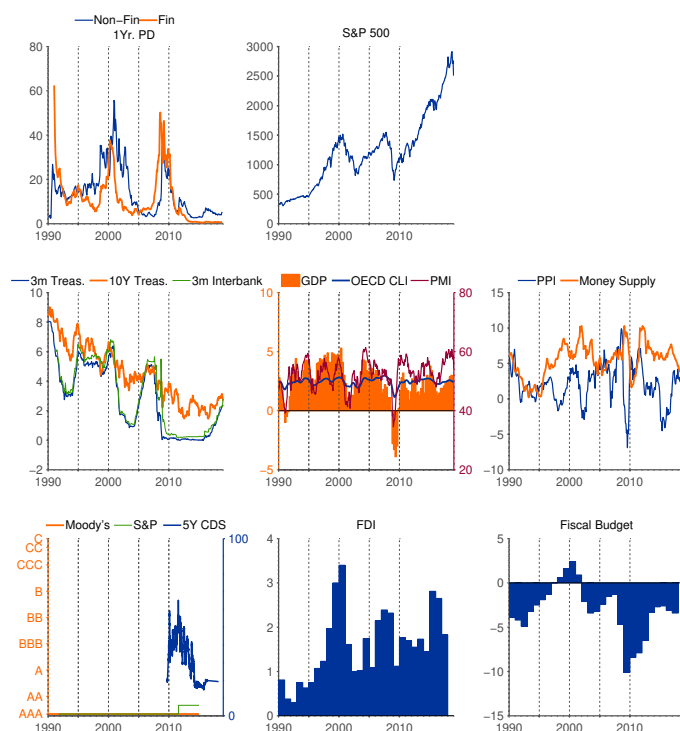




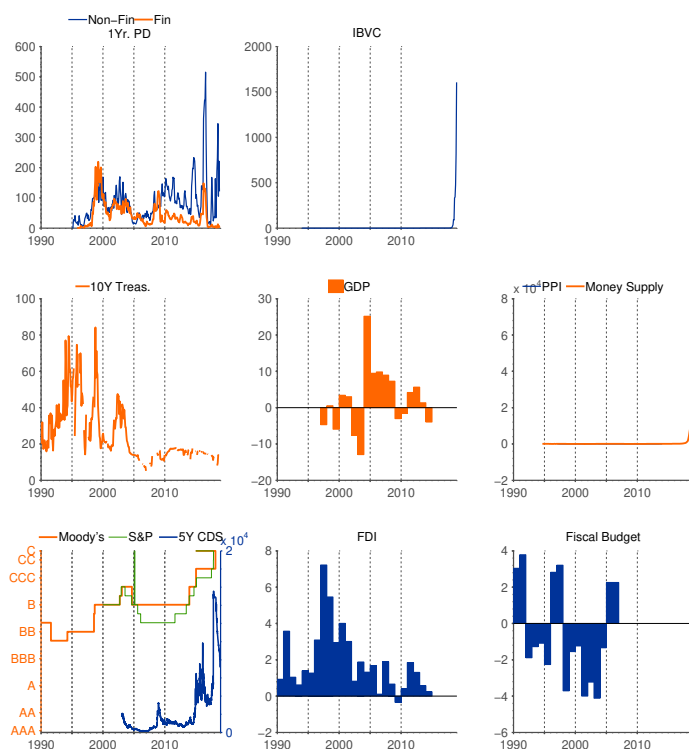
United Kingdom	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	13.10	15.02	12.55	14.50	17.60*
1Yr. PD, Fin.	1.68	2.09	1.96	2.70	3.09*
FTSE 100	7688	7057	7637	7510	6728
GBP/USD	1.35	1.40	1.32	1.30	1.28
3m Treas. Yield (%)	0.40	0.49	0.61	0.77	0.72
10Y Treas. Yield (%)	1.19	1.35	1.28	1.57	1.28
3m Interbank (%)	0.52	0.71	0.67	0.80	0.91
GDP (YoY%)	1.6	1.3	1.4	1.5	—
OECD CLI	100.13	99.94	99.71	99.13	98.62*
PMI	55.6	54.9	54.2	53.7	54.2
PPI (YoY%)	3.1	2.5	3.3	3.1	2.5
Money Supply (YoY%)	3.80	2.30	1.70	0.80	2.00
Sov. Rating, Moody's	Aa2	Aa2	Aa2	Aa2	Aa2
Sov. Rating, S&P	AA	AA	AA	AA	AA
5Y CDS (bps)	18.26	16.31	—	—	—
FDI (%GDP)	2.47	—	—	—	—
Fiscal Budget (%GDP)	-1.80	—	—	—	—



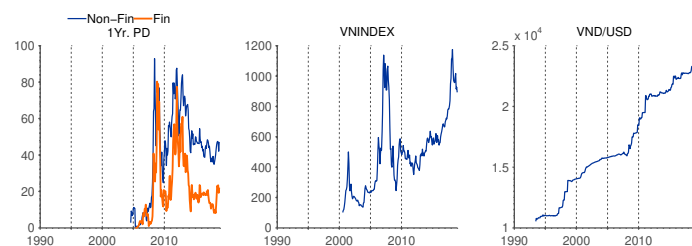
United Republic of Tanzania	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	1.97	1.71	1.86	3.45	7.46*
1Yr. PD, Fin.	17.82	19.11	36.32	42.94	43.08*
TSI	2396	2409	2281	2105	2046
USD/TZS	2234.63	2255.94	2270.03	2284.92	2298.73
3m Treas. Yield (%)	4.00	2.25	2.85	2.99	3.50
10Y Treas. Yield (%)	15.89*	13.86	13.94*	14.39	14.94
3m Interbank (%)	15.00	15.00	15.00	15.00	—
Money Supply (YoY%)	10.40	10.80	7.10	7.20	3.60*
FDI (%GDP)	2.27	—	—	—	—
Fiscal Budget (%GDP)	-0.63	-0.82	-0.62*	—	—



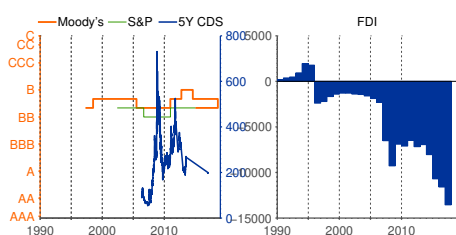
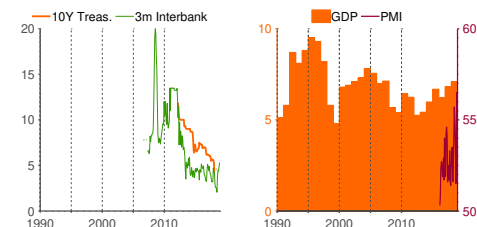
United States	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	4.09	4.43	4.11	4.83	5.32*
1Yr. PD, Fin.	0.70	0.81	0.64	0.73	0.88*
S&P 500	2674	2641	2718	2914	2507
3m Treas. Yield (%)	1.38	1.70	1.91	2.20	2.35
10Y Treas. Yield (%)	2.41	2.74	2.86	3.06	2.68
3m Interbank (%)	1.67	1.67	2.25	2.25	2.80
GDP (YoY%)	2.5	2.6	2.9	3.0	—
OECD CLI	100.10	100.30	100.20	99.93	99.59*
PMI	59.4	59.3	60.0	59.5	54.3
PPI (YoY%)	3.2	3.0	4.1	3.0	1.4
Money Supply (YoY%)	4.70	4.00	4.20	3.90	4.50
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AA+	AA+	AA+	AA+	AA+
5Y CDS (bps)	—	19.42	—	—	—
FDI (%GDP)	1.83	—	—	—	—
Fiscal Budget (%GDP)	-3.40	—	—	—	—



Venezuela	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	36.78	33.77	233.47	221.28	121.30*
1Yr. PD, Fin.	5.12	6.61	6.19	7.39	2.30*
IBVC	1	5	93	343	1605
10Y Treas. Yield (%)	13.07	—	8.11	13.66	—
Money Supply (YoY%)	1121.40	3011.60	8209.20	34490.20	68025.10
Sov. Rating, Moody's	C	C	C	C	C
Sov. Rating, S&P	CSD	CSD	CSD	CSD	CSD
5Y CDS (bps)	15047.35*	—	11154.47	9283.97	8281.03



Vietnam	2017	2018			
	Q4	Q1	Q2	Q3	Q4
1Yr. PD, Non-Fin. (bps)	34.89	39.96	47.05	42.06	47.15*
1Yr. PD, Fin.	8.22	8.11	22.98	19.21	22.02*
VNINDEX	984	1174	961	1017	893
VND/USD	22698.00	22794.00	22938.00	23315.00	23175.00
10Y Treas. Yield (%)	5.30	4.30*	4.60*	—	—
3m Interbank (%)	4.30	2.60	2.05	4.40	5.25
GDP (YoY%)	6.8	—	—	—	7.1
PMI	52.5	51.6	55.7	51.5	53.8
Sov. Rating, Moody's	Ba3	Ba3	Ba3	Ba3	Ba3
Sov. Rating, S&P	BB-	BB-	BB-	BB-	BB-
FDI (%GDP)	-13560.00	—	—	—	—



## D Data notes

This appendix provides a comprehensive list of the macroeconomic and capital market data provided in Appendix C as well as their sources. Most of the data was obtained from Bloomberg. In some cases, the data was not available in Bloomberg and was obtained directly from primary sources. In either case, the primary sources for the data are listed in the tables below. The data was retrieved during October 2017 and every effort has been made to verify its accuracy.

**Stock index (top-center graph)** The one-year return on an economy's stock index is one input variable for RMI's default forecast model. The stock indices used in the model are the ones that are displayed in Appendix C. A list of the stock indices included in Appendix C can be found [here](#).

**FX rate (top-right graph)** Foreign exchange (FX) rates are quoted by market convention against the US dollar. For Eurozone countries, a fixed official rate is used to convert the domestic currency to the Euro prior to the introduction of the common currency. In the graphs, the FX rate for the domestic currency before the economy adopted the Euro is in orange, and the FX rate for the Euro after the Euro was adopted is in blue. The table below shows the conversion dates and rates. The exchange rate for the Cypriot Pound is excluded due to scaling reasons.

*Conversion to Euro*

Economy	Conversion Date	Conversion Rate (per Euro)	Economy	Conversion Date	Conversion Rate (Per Euro)
Austria	31/12/1998	13.7603	Italy	31/12/1998	1936.27
Belgium	31/12/1998	40.3399	Luxembourg	31/12/1998	40.3399
Estonia	31/12/2010	15.6466	Malta	31/12/2007	0.4293
Finland	31/12/1998	5.94573	Netherlands	31/12/1998	2.20371
France	31/12/1998	6.55957	Portugal	31/12/1998	200.482
Germany	31/12/1998	1.95583	Slovakia	31/12/2008	30.126
Greece	31/12/2000	340.75	Slovenia	31/12/2006	239.64
Ireland	31/12/1998	0.787564	Spain	31/12/1998	166.386

**10-year treasury bond yield (middle-left graph)** All 10-year treasury bond yields are based on Bloomberg indices except for the following list: Bank Negara Malaysia for Malaysia, Korea Financial Investment Association for South Korea and Philippine Dealing & Exchange Corp for Philippines.

**3-month government bond yield (middle-left graph)** The primary sources of the 3-month government bond yields are listed in [here](#).<sup>†</sup>

**3-month interbank rate (middle-left graph)** The primary sources of the 3-month interbank rates can be found [here](#).

**GDP (middle-center graph, left axis)** Real GDP YoY changes are seasonally-adjusted except for China, Hong Kong, Iceland, India, Malaysia, Philippines, Singapore, South Korea, Taiwan and Thailand. A list of primary sources of the GDP data can be found [here](#).

<sup>†</sup>The RMI CRI model uses Germany's three-month Bubill rate for all eurozone countries after their adoption of the euro. For the period before joining the eurozone, their own interest rates are used where available.

**OECD CLI (middle-center graph, right axis)** The OECD Composite Leading Indicator for each economy is intended to provide early signals of turning points between different trends in the economic cycle. For forecasting purposes, peaks in CLI are candidate early signals of downturns in the economic cycle, and troughs in the CLI are candidate early signals of upturns in the economic cycle. More information can be obtained at [www.oecd.org/std/clits](http://www.oecd.org/std/clits). The OECD CLI shown in Appendix C is amplitude adjusted with a deduction of 50 for the purpose of presentation along with the PMI.

**PMI (middle-center graph, right axis)** The Purchasing Manager's Index or similar indices are used to reflect an economy's manufacturing activities. An index reading above 50 indicates an expansion of manufacturing activity while a reading below 50 indicates a contraction. An exception is the Business Survey Index used in South Korea, which has 100 as its benchmark. A list of primary sources of the Purchasing Managers Index data can be found [here](#).

**PPI (middle-right graph)** The Producers' Price Index or similar indices are presented as YoY changes. A list of primary sources of the Producers' Price Index data can be found [here](#).

**Money Supply (middle-right graph)** YoY growth of money supply uses M3 when it is available for an economy. The exceptions are: Brazil, Chile, China, Cyprus, the Czech Republic, Indonesia, Jordan, Kazakhstan, Latvia, Lithuania, Mexico, Nigeria, Norway, Pakistan, Peru, Romania, Russia, Sri Lanka, Taiwan, Thailand and the US where M2 is used; and Croatia and the UK where M4 is used. For Eurozone countries, data after the adoption of the Euro represents total money supply growth of the Euro. A list of primary sources of the Money Supply data can be found [here](#).

**Sovereign credit ratings (bottom-left graph, left axis)** For most of the economies, the Standard & Poor's and Moody's sovereign ratings are for foreign currency long term debt. Moody's ratings for France, Germany, India, Japan, Netherlands, Singapore, Switzerland, Taiwan, United Kingdom and the United States are foreign currency long term issuer ratings instead. Among the above mentioned economies, France, Germany, Switzerland, United Kingdom and the United States ratings are cited from Moody's website directly, with the remainder of the data from Moody's and S&P retrieved from Bloomberg. For graphical purposes, selective or restricted defaults are reflected as C grades in the graphs. For example, according to S&P data, Indonesia had selective default events on March 29, 1999; April 17, 2000 and April 23, 2002, seen as C grades in the graphs above.

**5Y CDS spread (bottom-left graph, right axis)** 5-year Credit Default Swap spreads are for each economy's long term sovereign debt. All of the CDS data is sourced from Bloomberg.

**FDI (bottom-center graph)** FDI into each economy is presented as a percentage of GDP. The World Bank is the primary source of all FDI data.

**Fiscal budget (bottom-right graph)** Fiscal budget is presented as a percentage of GDP. A list of primary sources of the Fiscal Budget data can be found [here](#).

# About The Credit Research Initiative

The Credit Research Initiative (CRI) was launched by Professor Jin-Chuan Duan in July 2009 at the Risk Management Institute of the National University of Singapore. Aiming at "Transforming Big Data into Smart Data", the CRI covers over 68,000 public firms and produces daily updated Probabilities of Default (1-month to 5-year horizon), Actuarial Spreads (1-year to 5-year contract) and Probability of Default implied Ratings on over 34,000 currently active, exchange-listed firms in 128 economies. The CRI also distributes historical time series of over 34,000 inactive firms due to bankruptcy, corporate consolidation or delisting for other reasons. In addition, the CRI produces and maintains Corporate Vulnerability Indices (CVI), which can be viewed as stress indicators, measuring credit risk in economies, regions and special portfolios.

As a further step, the CRI converts smart data to actionable data to meet the customized demands of its users and offers bespoke credit risk solutions leveraging on its expertise in credit risk analytics. A concrete example is our development of the BuDA (Bottom-up Default Analysis) toolkit in collaboration with the IMF. BuDA is an automated analytic tool based on the CRI PD system, enabling IMF economists to conduct scenarios analyses for the macro-financial linkage.

The CRI publishes Weekly Credit Brief and Quarterly Credit Report, highlighting key credit-related events, offering insights based on the CRI PD of the entities involved, and providing useful statistics on credit risk of economies and sectors.

For more information about the CRI project, please visit our main site at <http://rmicri.org>

## Usage, redistribution and publication of data

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