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# Quarterly Credit Report

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Q1/2017

*Volume 6, No 4*



**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 6, Issue 4 covers the first quarter of 2017. 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's 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. An exception is 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 78 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, Egypt, Israel, Kuwait, Jordan, Morocco, Oman, Nigeria, Saudi Arabia, South Africa, Tunisia and the United Arab Emirates.

## Credit Research Initiative

The QCR is a companion publication to the Global Credit Review and Weekly Credit Brief, 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 60,000 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 March 2017, the PD system covers 119 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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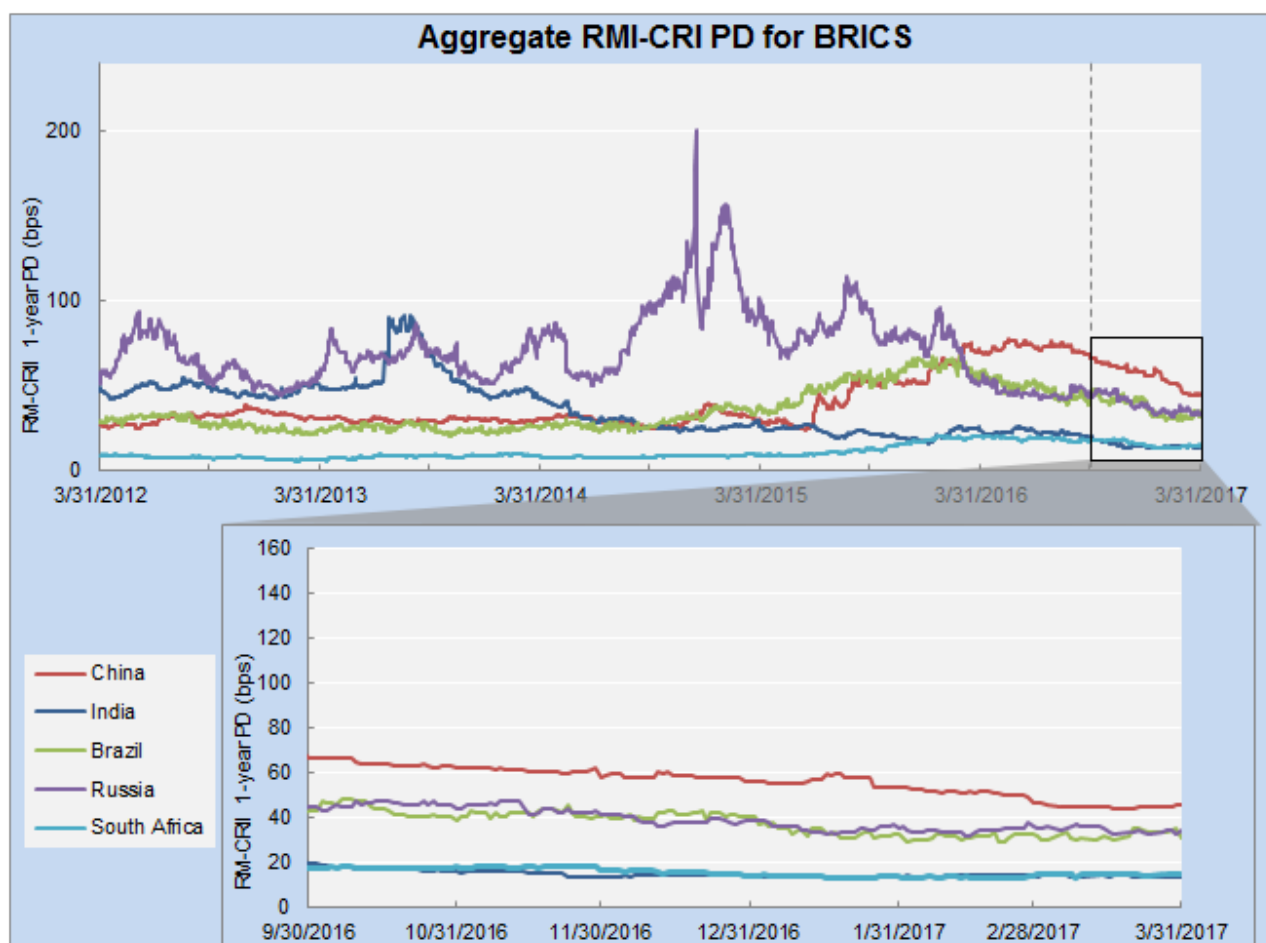
# Acronyms

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
PDiR	Probability of Default Implied Ratings
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

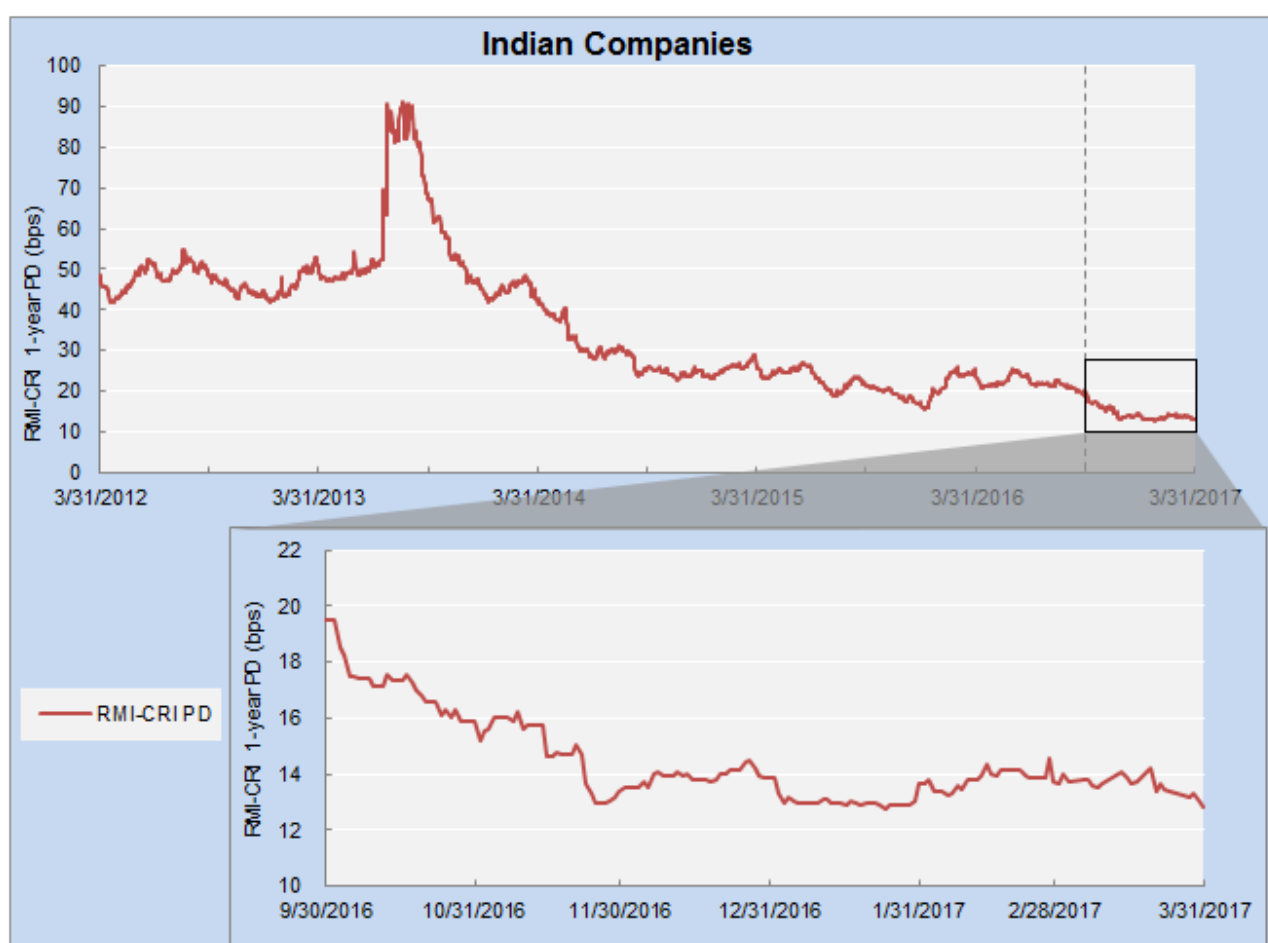
# BRICS

Listed companies in the BRICS regions generally witnessed an improvement to their aggregate credit profiles during Q1. The Russian Ruble increased against the US dollar, reaching the highest level in two years despite weaker oil prices. S&P raised the outlook on Russia to positive from stable and kept the credit rating on Russia one notch below its investment grade rating. Russian economic data showed improvements in personal income and retail sales while industrial production remained soft. In Brazil, weak economic data did not affect the credit quality of corporate issuers. The aggregate 1-year PD for Brazilian firms improved slightly on the back of falling interest rates. The aggregate 1-year PDs for Indian and Chinese firms also declined during Q1.



## Indian Companies

The aggregate 1-year RMI PD for Indian companies has remained relatively constant during the first quarter of 2017. Economic conditions were generally positive with strong growth in industrial production. Inflation rates have been maintained at a modest level due to falling oil prices. However, current account deficit continues to widen with a strong rupee and this may have negative impacts on the demand of Indian exports, adversely affecting the credit profile of Indian companies. Monetary wise, India has set up a Monetary Policy Committee (MPC) responsible for the forecast of inflation which in turn determines the interest rate. During the first quarter of 2017, the forecast error by the committee had been significant and doubts were raised on whether the MPC is able to accurately determine the optimal interest rate for the India's economy. Funding conditions look to be positive for Indian companies as the RBI and Sebi are pushing for a developed bond market, giving companies more alternatives to funding than simply relying on traditional bank loans.



## Economy

- India's real Gross Domestic Product for Q4 grew at an annual rate of 7.0% against a 7.3% expansion in the same quarter last year. Sectors that experienced strong growth YoY include mining (7.5%), manufacturing (8.3%), and public administration and defence (11.9%). The railway and transport sectors are still experiencing negative growth rates of -4.8% and -1.1% respectively even though growth rates have improved compared to the corresponding period in the previous year. Although growth may slow temporarily in India due to business disruptions caused by the withdrawal of high-denomination banknotes, the IMF maintains a positive outlook on the economic growth of India.<sup>1,2</sup>



- Industrial production increased for the fourth straight month in April as manufacturing conditions improve in India. The Nikkei India Manufacturing PMI reached 52.5, matching that of March's reading. Strong growth of new orders and lengthening delivery times managed to offset the slowing increases in output, purchases and employment. Respondents to the survey attributed phenomenon to improving demand conditions and greater advertising. However, the rate of depletion of finished goods slowed to the weakest in the year-to-date. Despite so, goods producers were optimistic and have plans for capacity expansion to meet the expect growth in output in the year ahead.<sup>3</sup>
- The annual rate of inflation, based on monthly wholesale price index, declined to an annual rate of 3.85% in April from an annual rate of 5.29% for the month of March. The wholesale price index declined slightly by 0.2% . The decline is mainly due to falling prices in fuel and power group. Crude oil prices have fallen about 7% at the end of March since its high in February 2017.<sup>4</sup>
- India's current account deficit (CAD) widened to USD 7.9bn (1.4% of GDP) in Q4 from USD 3.4bn (0.6% of GDP) in Q3. The YoY increase in the current account deficit was slightly lower from USD 7.1bn (1.4% of GDP). The widening of current account deficit is primarily caused by the decline in net invisible receipts. Net services receipts were affected by a fall in earnings from software, financial services and intellectual property rights. Transfer receipts, mainly representing remittances by Indians employed overseas declined 3.8% from a year ago.<sup>5</sup>
- During Q1, the Indian Rupee (INR) strengthened 3.49% against the US dollar. Despite the hike in the Fed Fund rate, the Indian Rupee reached a 17 month high in March as sustained foreign investments are expected to flow into the Indian equities market. Foreign portfolio inflows during the quarter amount to USD 10.6bn. This has eased previous worries of capital outflows from India due to the Fed rate hike. The Indian Rupee may continue to strengthen despite the possibility of further rate hikes by the Fed for the rest of the year.<sup>6</sup>

## Monetary

- According to the bi-monthly monetary policy statement on Apr 06, 2017, the RBI kept the policy rate (repo rate) at 6.25%. The reverse repo rate under the liquidity adjustment facility was increased to 6.0%, while the Bank Rate was reduced to 6.50%.<sup>7</sup>
- The newly formed MPC within the RBI is responsible for the forecast of future interest rates which will in turn affect interest rate decisions. However, there have been large discrepancies between the forecast and the actual inflation rate in Q1 2017. The absolute error in forecast of 1.4% is double the average error over the previous three years. There was a shift to flexible inflation targeting which considers consumer price inflation as the nominal anchor.<sup>8,9</sup>
- A new liquidity tool known as the Standing Deposit Facility (SDF) has been proposed by the RBI to manage the surplus cash in India's banking system. Cash in Indian banks swelled up after the demonization policy in 2016 and the SDF works by allowing the RBI to absorb extra funds without providing collaterals to the lenders. However, this proposal faced opposition from the Indian government on grounds that it will reduce the MPC's powers to set interest rate.<sup>10</sup>
- Inflation is projected to average 4.5% in the first half of 2017 and 5% in the second half of 2017. Upside risks have been noted with the baseline projection due to uncertainty in food inflation as probability of an El Nino event rises.<sup>11</sup>

**Funding & Liquidity**

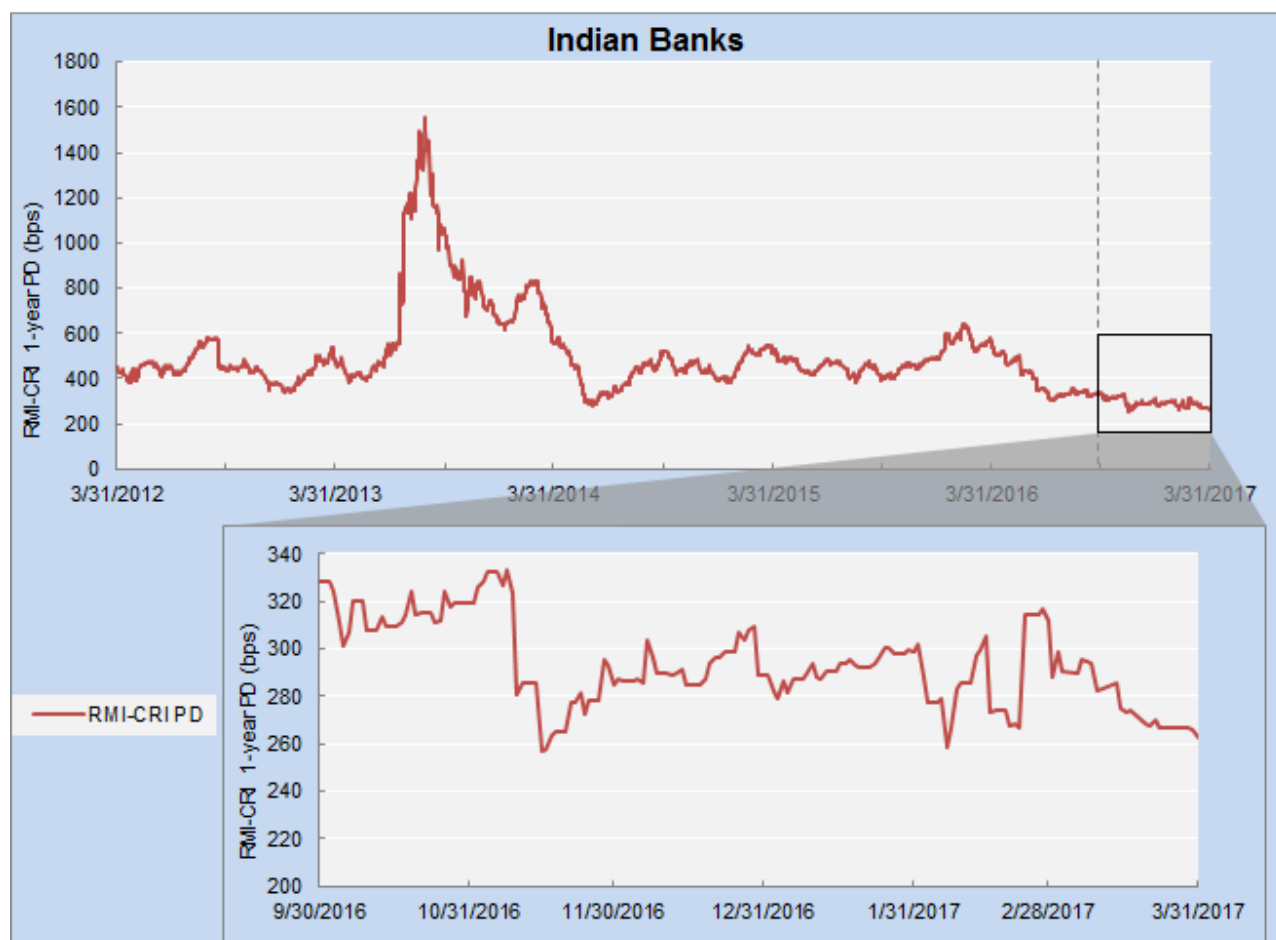
- Yields on India's 10-year government sovereign bonds increased to 6.680% at the end of Q1 from 6.515% as of Dec 30, 2016 under the expectation that US Treasury will continue to rise in the coming months.
- In terms of liquidity, both the RBI and Sebi have initiated measures to boost liquidity in the secondary bond market in order for bonds to be more attractive to investors. The idea is to make bonds as liquid as fixed deposits in banks such that more investors are willing to invest in them. India is actively trying to get companies to raise funds through corporate bonds instead of taking up bank loans and a vibrant secondary market is necessary for this transition to take place.<sup>12</sup>

**Sovereign Credit Ratings**

- Moody's, Fitch and S&P kept their ratings on the sovereign bonds of India at Baa3, BBB- and BBB- respectively in Q1. Moody's has a positive outlook on the issuer while Fitch and S&P have stable outlooks on the country.
- Fitch has retained its sovereign rating on India despite calls for a rating upgrade due to its strong economic fundamentals and political stability. Weak public finances haven been cited as the main reason hindering the rating upgrade.<sup>13</sup>

## Indian Banks

The aggregate 1-year RMI PD for Indian banks remained stable from January to March 2017. Non-performing loans continue to plague both the private and public banks and are depressing the profitability of Indian banks. However, certain banks still managed to post large increases in profits as growth in new loans outweighed losses from bad loans. In this quarter, we also witnessed liquidity levels brought back to normal by the RBI through various liquidity absorption tools. The RBI is performing measures to improve asset quality in banks, but this has instead revealed more underlying issues with asset quality in privately owned banks. As the RBI continues its reforms to shape up the financial health of Indian banks, bank earnings are expected to remain low in the coming quarter. However, the long term outlook is positive if the RBI is successful in making Indian banks more robust.



## Profitability

- Gross Non-Performing Assets (NPAs) of all scheduled banks in India increased by 29.1% in Q1. This increase is mainly due to rising bad debt in private sector banks. NPAs in private sector banks shot up by 72.46% while NPAs in state-run banks continue to grow by a magnitude of 25% in the first quarter of 2017. Profitability has been severely impacted with a total net profit of USD 3.14bn across all banks in Q1.<sup>14</sup>
- However, India's largest lender by assets, State Bank of India (SBI), stood out and more than doubled its Q4 profits in the first quarter of 2017. The spike in profits is fuelled by accelerating loan growth and falling bad-debt provisions.<sup>15</sup>
- Non-financial borrowings decreased 5% to INR 3.23tn on Mar, 17 from INR 3.4tn at the end of Q4. Other liabilities such as time deposits with non-financial institutions increased to INR 5.22tn in Q1 from INR 5.06tn in Q4.<sup>16</sup>

- The Credit-Deposit ratio for the banking system increased to 71.77% on Mar 17, 2017 from 69.87% on Dec 23, 2016. This was due to the increase in bank credit from INR 73.5tn to INR 75.6tn during the first quarter.<sup>17</sup>

### Funding & Liquidity

- The weighted-average call money rate, the interest rate on short-term finance repayable on demand, declined from 6.12% as of Dec 30, 2016 to 5.97% as of Mar 31, 2017. The call money rates were generally lower than the repo rate during Q4, indicating a stable banking system.<sup>18</sup>
- The amount of cash on the balance sheet of Indian banks decreased by a large extent from INR 1.41tn in Q3 to INR 566bn on Mar 17. This signals that cash levels are returning to normal after the large surge of deposits shown in the previous quarter in the aftermath of the demonetization policy. It also goes to show that RBI's efforts to absorb liquidity in the market have proved to work.<sup>19</sup>
- The 1-year deposit rates generally increased in Q1 2017. According to the State Bank of India's 1 year deposit rate, interest rates were increased to 6.90% on Apr 29, 2017, from 4.25% in Q4.
- During Q4, the RBI withdrew a total of INR 82.89tn from the banking system via liquidity operations, with almost INR 40tn during the month of March. The Reserve Bank of India stepped up its liquidity operations under the liquidity management framework to absorb excess liquidity in the market. Surplus liquidity has been aggressively taken out of the market and liquidity has returned to normal standards as seen from the cash balance.<sup>20,21,22</sup>

### Asset Quality

- Gross non-performing loans amounts increased by 5.25% from the previous quarter. The YoY increase is especially significant at 26.6%. Although RBI has initiated actions such as the prompt corrective action (PCA), asset quality has yet to improve substantially. Much of the problem still lies with public sector banks, and the RBI does not rule out the possibility of even re-privatizing some state-run banks to improve their lending status.<sup>23</sup>
- While private banks generally account for a smaller portion of bad loans as compared to the public banks, Q1 saw a huge increase in the amount of bad loans reported by private banks as they are forced to disclose more NPAs. There had been significant divergence in loan-loss provisions between audits by the RBI and what has been reported by the banks. In Q1, private banks are mandated to recognize these NPAs, resulting in higher losses. Although this move provides a more true and fair view of the asset quality in private banks, the share prices of private banks suffered as a result.<sup>24</sup>

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<sup>3</sup>May 2, 2017, [Nikkei India Manufacturing PMI](#), Markit Economics, markiteconomics.com

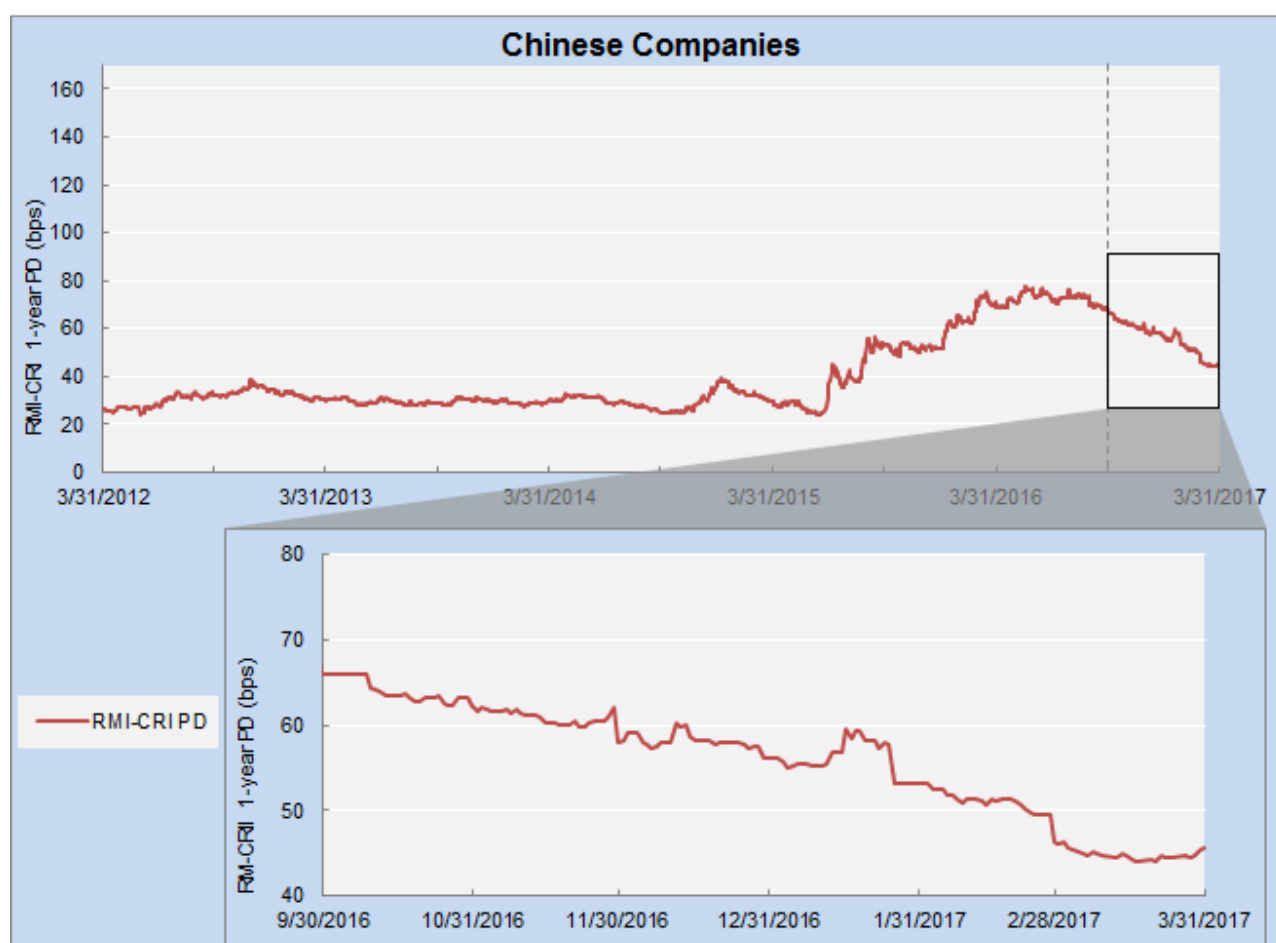
<sup>4</sup>May 14, 2017, [Index Numbers of Wholesale Price in India](#), Ministry of Commerce & Industry Office of The Economic Advisor, eaindustry.nic.in

<sup>5</sup>Mar 23, 2017, [Developments in Indias Balance of Payments during the Third Quarter \(October-December\) of 2016-17](#), The Reserve Bank of India, rbi.org.in

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- <sup>15</sup> May 20, 2017, [Top bank SBI fourth-quarter profit jumps but outlook clouded after units' merger](http://in.reuters.com), Reuters, <http://in.reuters.com>
- <sup>16</sup> Mar 17, 2017, [Scheduled Commercial Banks - Business in India](http://rbi.org.in), Reserve Bank of India, [rbi.org.in](http://rbi.org.in)
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## Chinese Companies

China managed to exceed market expectation by lodging 6.9% GDP growth YoY in the first quarter of 2017 as Chinese firms credit quality improved slightly during the same period. The 1-year aggregate PD for Chinese firms decreased slightly in Q1 2017. Amid global economic slowdown and rising trade protectionism, China's exports and imports grew more than expectations in March. The central bank in China maintained its benchmark interest rate and reserve requirement ratio, while foreign exchange reserves increased as its currency stabilize. In order to maintain growth momentum and contain financial risks at the same time, the central bank moved away from traditional monetary tools such as cutting bank reserve requirements to using medium term lending program which channels low-cost funds into banks. Deleveraging in the financial system continues to be the focus of the central bank especially in the area of off-balance-sheet investments. The impact of regulation has made lenders to exercise more caution which might have ramifications on the economy.



## Economy

- The Chinese economy advanced 6.9% YoY in the first quarter of 2017, as compared to a 6.8% growth in the fourth quarter of 2016, while exceeded market expectations of a 6.8% growth. The growth was supported by faster rises in industrial output, retail sales and fixed asset investment while fiscal spending also surged. Fixed assets investments grew by 9.2% while retail sales rose by 10.9%. Consumption accounted for 77.2% of China economy, while investment and net exports contributed 18.3% and 4.5% to growth of the economy. The government expects the country economy to grow 6.5% in 2017.<sup>25</sup>
- Consumer prices in China rose 0.9% YoY in March 2017, slower than the 2.1% growth in December 2016. Politically sensitive food prices declined by 4.4% while non-food cost rose 2.3%. Cost of consumer goods fell 0.1% while services went up by 2.7%.<sup>26</sup>



- China's official unemployment rate fell to 3.97% from 4.02% three months earlier. The Ministry of Human Resources and Social Security mentioned that the number of new jobs was 160,000 higher than in the same period a year earlier but 0.05% lower than the previous quarter. A total of 3.34 million new jobs were created in the first quarter.<sup>27</sup>
- The China Caixin PMI fell to 51.2 in March 2017, from 51.9 in December 2016 and below market consensus of 51.5. Manufacturing PMI in China averaged 49.57 from 2011 until 2016, reaching an all-time high of 52.30 in January of 2013 and a record low of 47.20 in September of 2015.<sup>28,29</sup>
- Investment in fixed assets, a crucial driver of the economy, went up by 9.2% YoY reaching CNY 9.3tn in the first three months of 2017. The growth rate also exceeded that of the first two months by 0.3 percentage points. Real estate investment continued to deliver increasing growth rate as it went up by 9.1% YoY in the first three months of 2017. The investment in residential buildings, which accounted for 67% of real estate investment, went up by 11.2%.<sup>30,31</sup>
- China's exports and imports grew more than expected in March as it reverses a decline of 1.3% in February. For the quarter, exports rose 8.2% from the same period last year while imports surged 24%. Trade surplus for the quarter was registered at USD 65.61bn. In terms of CNY, China's imports for the first quarter rose by 31.1% and a 14.8% increase for exports on a YoY basis.<sup>32</sup>

## Monetary

- China's central bank continued to maintain its interest rate at 4.35% for 18 months. The central banks cut interest rates on 23 October 2015 for the sixth time in less than a year. The central bank continues to use various policy tools to maintain liquidity and ensure reasonable growth in credit financing.<sup>33</sup>
- China's primary rates fell after surging to a multi-year high, driven by a liquidity squeeze on worries over the central bank's liquidity check in end March. The central bank has halted the open market operations of reverse repos for the last week in March citing high liquidity in the banking system. The volume-weighted average rate of the benchmark seven-day repo slipped as compared to the rates from a week earlier while the overnight Shanghai Interbank Offered Rate (SHIBOR) was slightly higher. The central bank will continue to pursue a prudent and neutral monetary policy in 2017.<sup>34</sup>
- The required reserve ratio continued to remain at 17% in Q1 2017 after cutting 0.5% in March 2016. In a series of reductions, the central bank has brought the reserve ratio down from its 2011 peak of 21.5%.<sup>35,36</sup>

- China's foreign exchange reserves increased by USD 4bn MoM to USD 3.009tn in March 2017, from an increase of USD 7bn to USD 3.005tn in February 2017. This was the second straight month of increase in foreign exchange reserves after declining for the past months bringing the reserves to the lowest level since February 2011 as the central bank slow the CNY depreciation. Meanwhile, gold reserves value had fell from USD 74.3bn in February 2017 to USD 73.7bn in March 2017. Foreign Exchange Reserves in China averaged USD 905bn from 1980 until 2017, reaching an all-time high of USD 3.99tn in June of 2014 and a record low of USD 2.26bn in December of 1980.<sup>37,38</sup>

### **Funding & Liquidity**

- 10-year government bond yield rose from 3.03% in December to 3.28% at the end of March 2017. 1-year government bill yield increased from 2.64% to 2.86% over the same period.<sup>39</sup>
- The 3-month 5-day average SHIBOR had increased steadily from 3.26% on 30 December 2016 to 4.41% on 31 March 2017.<sup>40</sup>
- The value of new yuan loans provided by the Chinese banks stood at CNY 1.02tn in March 2017 as compared to CNY 1.17tn in February 2017 and below market expectation of CNY 1.2tn. Bank's balance sheet in China averaged CNY 608.58bn from 2004 to 2017, reaching an all-time high of CNY 2.51tn in January 2016 and a record low of CNY -32.10bn in July 2005.<sup>41</sup>

### **Policy**

- China's economy accelerated for a second straight quarter at 6.9% in Q1 2017, derived from growth in investments, retail sales and factory output. Increasing credit that fuels investment have led policy makers to adopt a more neutral monetary stance as they seek to lower financial risk as well as to reduce excess industrial capacity. Aggregate financing grew CNY 2.12tn, rose more than estimated in March 2017. Policymakers have vowed repeatedly to push reforms to avert financial risk ahead of a major leadership transition later this year. Preventing and controlling financial risk will continue to be a priority for policymakers to address the debt binge that has inflated asset bubbles. With the US rates continue to rise, this could spark a resurgence in capital outflows from China and cause uncertainty for China's economy.<sup>42</sup>

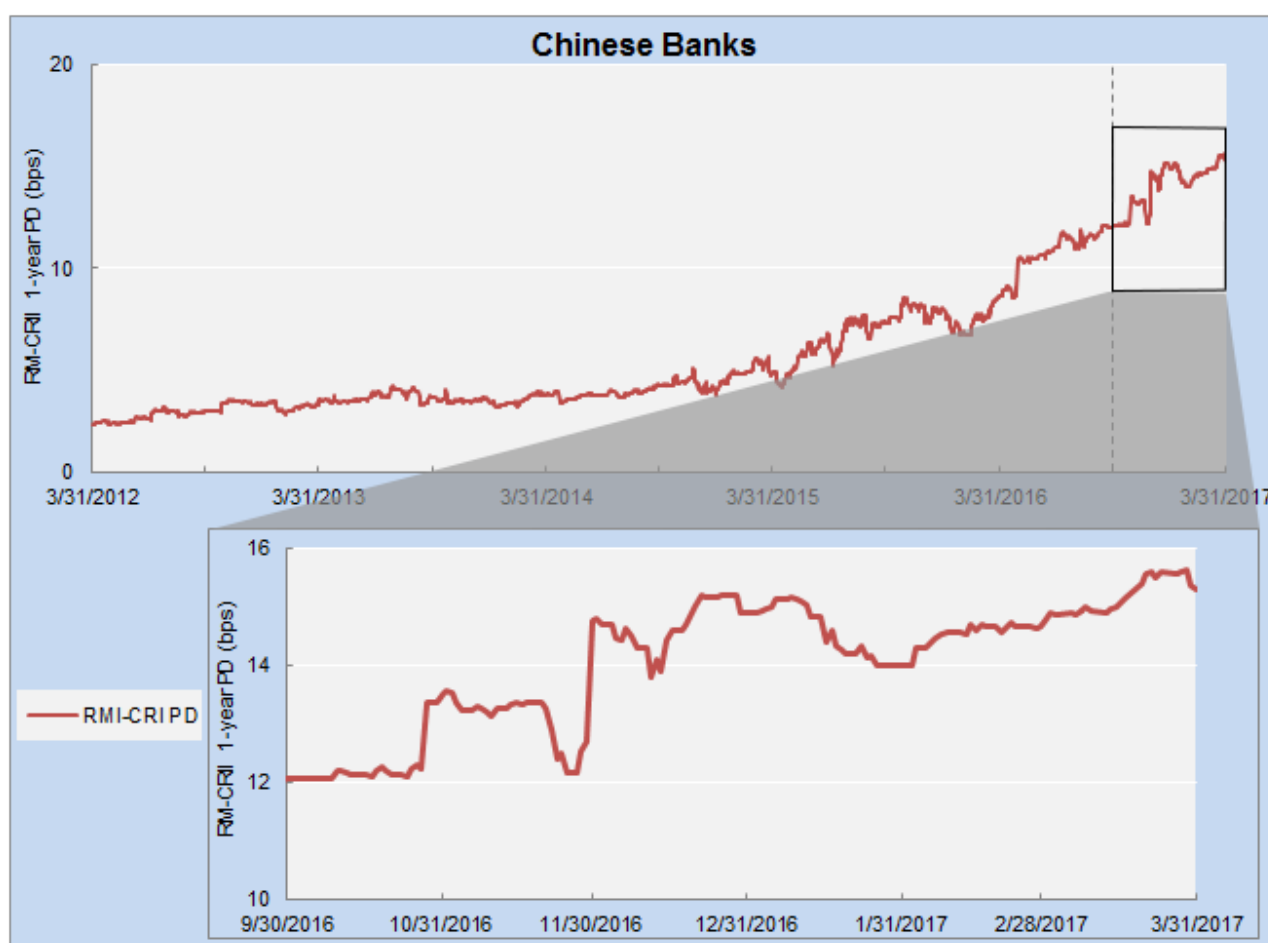
### **Sovereign Credit Ratings**

- Fitch maintained rating A+ on the Chinese government with a stable outlook while Moody's and S&P credit rating for China stood at Aa3 and AA- with a negative outlook.



## Chinese Banks

The credit quality of Chinese banks continued to weaken in the first quarter of 2017 as more bad loans were written off. Bad loans written off by the top five banks rose by 16% as compared to 2016. Net interest margins continue to be under pressure despite rising loan demand. Nevertheless, profitability at the big banks have improved as compared to the last quarter. Corporate loan demand increased especially in the areas of urban infrastructure construction and transportation. As part of the wider government campaign to restructure state-owned corporate debt and assist in deleveraging, debt-to-equity swaps have been expanded and this has helped banks in reducing their non-performing loans. Reducing risk in the Chinese financial system is still of top priority for the government as it implements measures to limit shadow banking risk. The managements of banks are cautious amidst the uncertainty in the slowing economy even though the banks are widely expected to do better this year.



## Profitability

- Despite the increase in bad debt and loan defaults in China's banking system amid slower economic growth, China's largest banks registered near-flat first quarter net profit growth. The banks however reported shrinking interest margins with Bank of China, China Construction Bank and Agricultural Bank of China reporting their lowest level of NIMs since 2011. The decrease in margins will continue to persist as senior bank executives expect 2017 to be a challenging one. Bad debts problems are expected to subside given that the lenders are showing a decline in their non-performing loans ratio. The decrease in NPLs may be a sign that the measures adopted by Chinese banks such as debt for equity swaps are working. However, analysts have been cautious given that the economy is slowing down which will put pressure on the banks' profitability.<sup>43</sup>

## Funding & Liquidity

- China's central bank injected CNY 619bn to financial institutions via its medium-term lending facility (MLF) and CNY 122bn via standing lending facility (SLF) in March. The outstanding amount of MLF and SLF were CNY 4.06tn and CNY 70bn respectively at the end of March. The central bank had also utilised the pledged supplementary lending facility (PSL) programme to boost liquidity to specific sectors by offering low-cost loans to selected lenders. The facility stood at CNY 2.21tn at the end of March.<sup>44</sup>

## Regulations

- Following the rise of off balance sheet wealth management products (WMPs) that exceed CNY 26tn at the end of 2016, up 30% a year earlier, the PBOC circulated a draft policy framework that forbid off balance sheet WMPs from investing in illiquid loans known as "non-standard" credit assets. A ban on investment in non-standard assets would reduce non-bank lenders' willingness to lend. The guidelines also set uniform leverage ratios for structured WMPs issued by all types of financial institutions to eliminate regulatory arbitrage as trusts, brokerages and insurers were all subject to different ratios previously. The new guidelines also prevent WMPs from taking other WMPs as underlying assets, a reminiscent of synthetic collateralised debt obligations in the US.<sup>45</sup>
- In the midst of China's growing corporate debt level, the China Banking Regulatory Commission announced the expansion of debt-for-equity swaps and other measures to contain financial risk. China's banks have agreed to exchange a further CNY 400bn of corporate debt for equity stakes in the companies this year. Policies such as the debt-for-equity swaps are in line with the government's policy to encourage deleveraging and mitigating risk in the economy.<sup>46</sup>
- The PBOC has removed a restriction on cross-border capital movement imposed in January 2017 to loosen capital controls which was implemented to shield its currency from downward pressure last year. Financial institutions are no longer required to maintain a balance of inflows and outflows when processing cross-border currency payments. This move suggests that the government is more confident that the country's financial system has weathered the worst of capital outflow and at the same time, to promote internationalization of China's currency.<sup>47</sup>

## Asset Quality

- The China Banking Regulatory Commission announced that the non-performing loan ratio of commercial banks in China stayed unchanged at 1.74% from the previous quarter. The banks' loan loss provisions to cover potential loan losses reached CNY 2.82tn, CNY 156bn higher than the previous quarter. The average capital adequacy ratio stood at 13.26%.<sup>48</sup>

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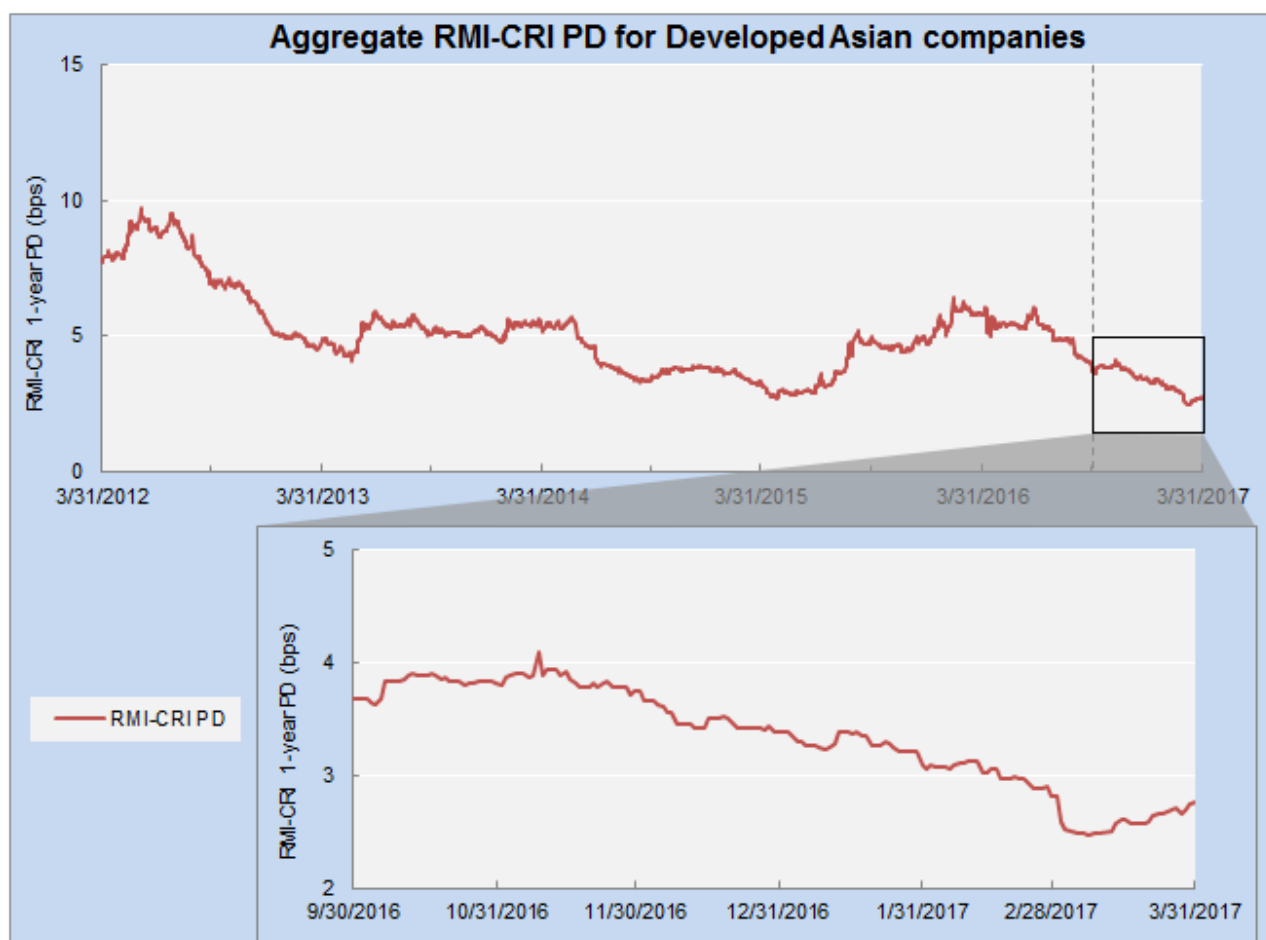
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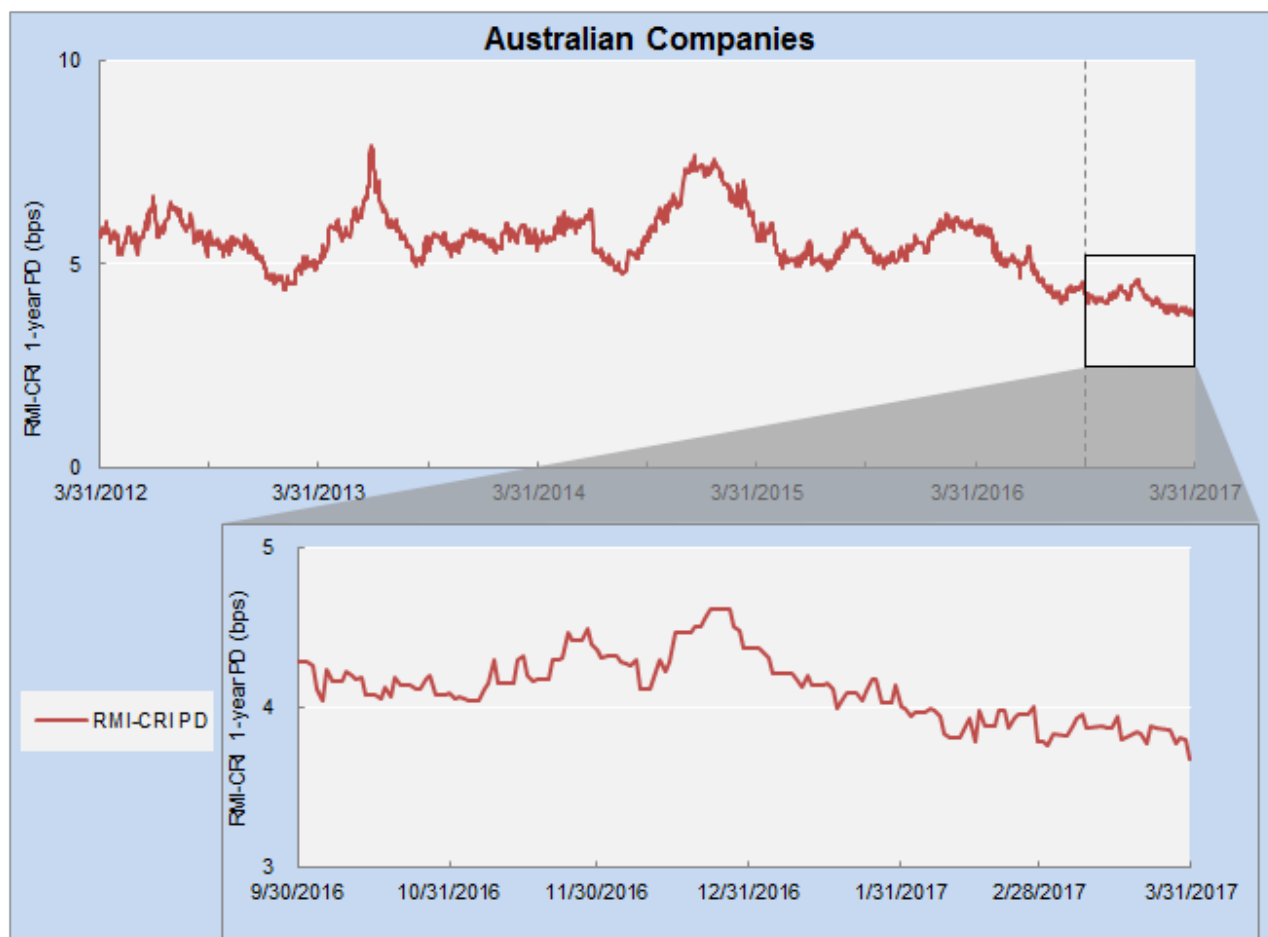
## Asia-Pacific - Developed economies

The RMI-CRI aggregate 1-year PD for listed companies in the developed Asia-Pacific improved in Q1 although the credit profiles of companies deteriorated slightly in March. The credit profiles of Japanese firms strengthened together with a stronger Yen against the US dollar. Purchasing manager indices for Japanese manufacturing firms have been improving since the middle of 2016 and global trade volume has picked up. In South Korea, political and geopolitical events did little to dampen the credit quality of Korean companies. North Korea continued missile tests and the Court's decision to impeach former President Park Guen Hye on charges of corruption and cronyism had no impact on market equity values. The credit quality of Singapore firms improved in Q1 keeping in line with a stronger GDP output during the quarter. Singapore consumer prices, total trade and industrial production expanded in Q1. The credit profiles of real estate firms strengthened due to increased residential sales volume as developers offered discounts to attract buyers.



## Australian Companies

The aggregate 1-year RMI PD for Australian companies remained stable during Q1 2017. Based on Q4 data, economic growth surprised with an increased in household spending and government investment. Unemployment rate remained relatively flat while the manufacturing sector contracted slightly and the services sector expanded. Going forward, the credit outlook for Australian firms remains dependent on the rebalancing of the economy as the mining sector fades and the concern of inflation in real estate markets. Attempts to support economic growth is also assisted by RBA's loose monetary policy.



## Economy

- The economy expanded by 1.1% in Q4, compared to a decline of 0.5% in Q3. The 2016 annual growth rate of 2.4% exceeded the Bloomberg's forecast of 2%, but dropped below the growth rate of 2.4% in 2015.<sup>49</sup>
- The GDP growth in Q4 was driven largely by increased household spending and government investment. Strong household spending contributed 0.5 percentage points to the GDP increase and public investment which surged 7.7% added 0.3 percentage points to the December quarter.<sup>50</sup>
- The Reserve Bank of Australia (RBA) left the cash rate unchanged at 1.5%, amid improvements in the global economy in areas such as trade and industrial production. The Australian economy is in transition, with moderate economic growth and inflation expected to remain low, rising to be above 2% for 2017.<sup>51</sup>

- The unemployment rate stood at 5.9% in March, 0.1 percentage points higher than a year before. However, the monthly employment rose by 60,900 between February and March 2017, the biggest gain in full-time employment in almost 30 years. Australia's labour force participation rate was 64.8% in March, up from 64.6% in February.<sup>52</sup>
- The Australian Performance of Manufacturing Index (PMI), as reported by The Australian Industry Group, stood at 57.5 in March, a decrease of 1.8 points from February. Expansion in the food & beverages, non-metallic mineral products, metal products and machinery and equipment sectors contributed to the rise. The equivalent index for services (PSI) improved by 2.7 points to stand at 51.7 points in March, moving back into modest expansion phase. However, the Australian Performance of Construction Index (PCI) was at 51.2 points in March, down by 1.9 points from February, indicating a slower rate of industry growth.<sup>53,54,55</sup>
- Key export prices increased 9.4% in Q1 2017, relative to the previous quarter and 29.1% increase from the corresponding 2016 quarter. Crude materials posted the highest increase in prices in this quarter. The rise in export prices was driven by a turn in the commodities cycle with prices for metal ores, gas and coal moving sharply higher.<sup>56,57</sup>

### Monetary Policy

- The Reserve Bank of Australia (RBA) last lowered its benchmark interest rate to a record low of 1.5% in August 2016 to stimulate economic activity, and has since maintained the rate for the past eight months. To sustain Australia's economic growth and amid concerns about below target inflation rate and soft employment growth, monetary policy is largely seen to be on hold for the near future.<sup>58,59</sup>

### Funding & Liquidity

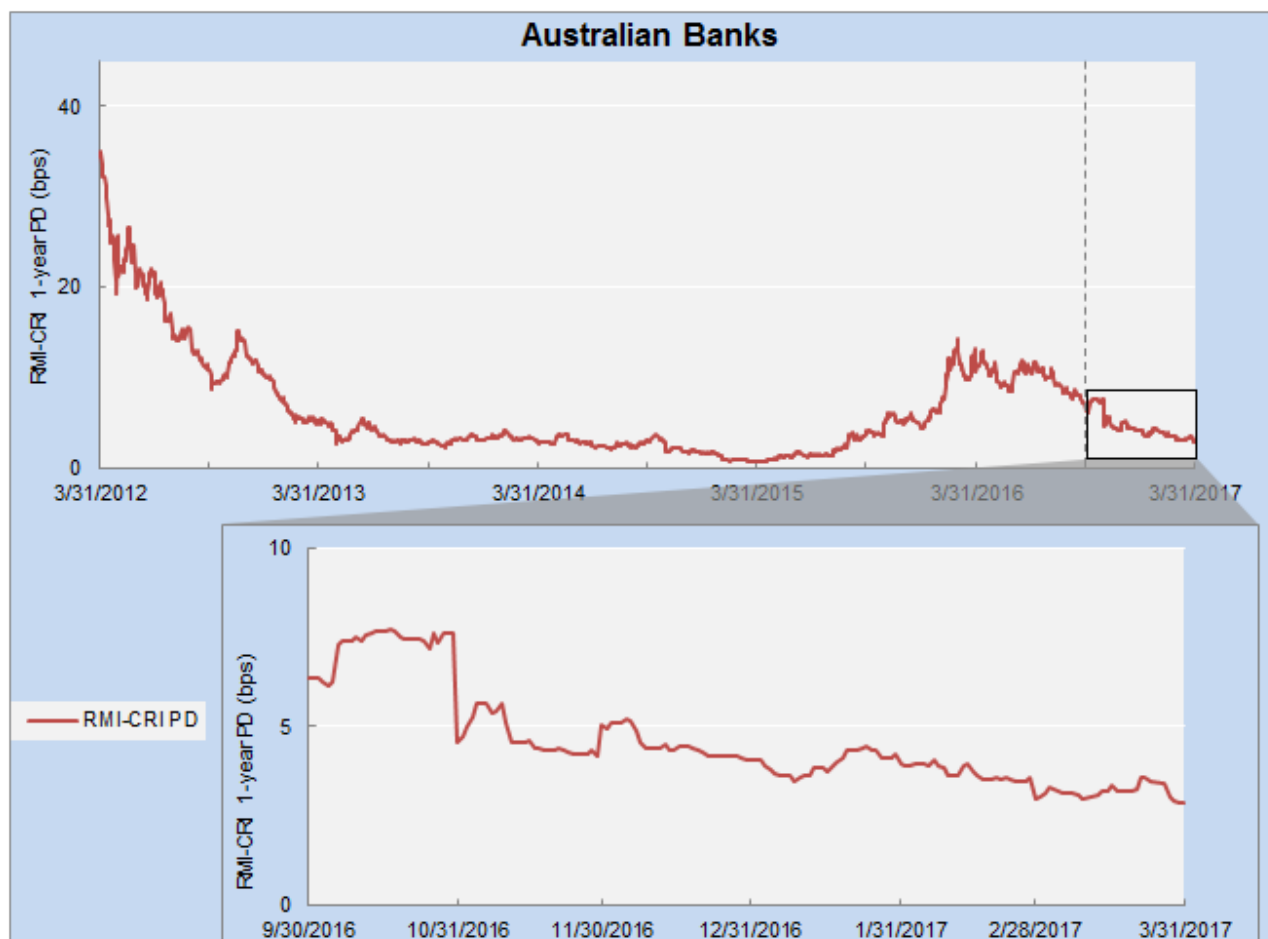
- Yields on 10-year Australian government bonds remained relatively flat throughout the quarter. The previous quarter reported a high of 2.79% in December 2016, while yields in March were 2.81%, 131 basis points higher than the RBA lending rate.<sup>60</sup>
- Indicative lending rates to large businesses decreased, with the last reported figure in Dec 2016 being 3.75% - a dip from 4.05% at the start of the year. 3-year fixed lending rates to small businesses dropped to 5.25% in March 2017, a decrease from 5.35% at the start of 2017. Rates on loans to larger businesses have historically followed fixed rates on small business loans, which are reported monthly.<sup>61</sup>
- Average commercial lending during the quarter increased driven mainly by lending to financial intermediaries as total loans to businesses remain flat in Q1 2017. Meanwhile, total lending to individuals was higher by 1.2% quarter-on-quarter.<sup>62</sup>

### Sovereign Credit Ratings

- Standard & Poor's and Fitch Ratings maintained AAA ratings on Australia's sovereign bonds. Moody's also kept Australia's Aaa sovereign rating. All three rating agencies had stable outlooks on the government bonds, with the exception of S&P, which had a negative outlook.<sup>63</sup>

## Australian Banks

The aggregate 1-year RMI PD maintained its downward trend, declining through Q1 2017. Earnings may come under pressure from the increasing cost of regulations. NIMs continue to fall through first half of 2017 and credit growth has also moderated in the past months especially in the business sectors. In states with exposures to the mining sector, economic conditions have been relatively weak with declining housing prices and rents. Asset performances will be influenced by real estate markets and the resources sector in addition to the macroeconomic environment.



### Profitability

- The big banks in Australia, ANZ, NAB, Westpac and Commonwealth Bank posted aggregate earnings of AUD 15.6bn for the first half of 2017 financial year, rising by an average of 6.2% on flat revenue. Analysts are forecasting the banks to report record profit for 2017 financial year with the exception of ANZ as it sells assets. The four banks average cost to income ratio on a cash basis fell 160 basis points to 43.41% in the first half which is much lower than banks in the United States and Britain.

### Funding & Liquidity

- Increasing funding and capital costs have resulted in net interest margins of 200 basis points during the first half of 2017 financial year. The Liquidity Coverage Ratio of Australian banks was 129%, which was above the requirement of 100%. From the start of 2018, banks will adhere to the Net Stable Funding Ratio requirement to improve the liquidity of banks, which have seen banks moving towards long term wholesale funding and deposits markets.



## Asset Quality

- The Australian Prudential Regulation Authority has indicated that banks will need to hold additional capital amidst headwinds from lower economic growth. The aggregate charge for bad and doubtful debts has decreased by AUD 318mn to AUD 2.2bn in the first half of the financial year. Impaired assets have also stabilized over the past months after increasing in second half of 2016. There are still weaknesses related to household debt as it continues to rise.<sup>64,65</sup>

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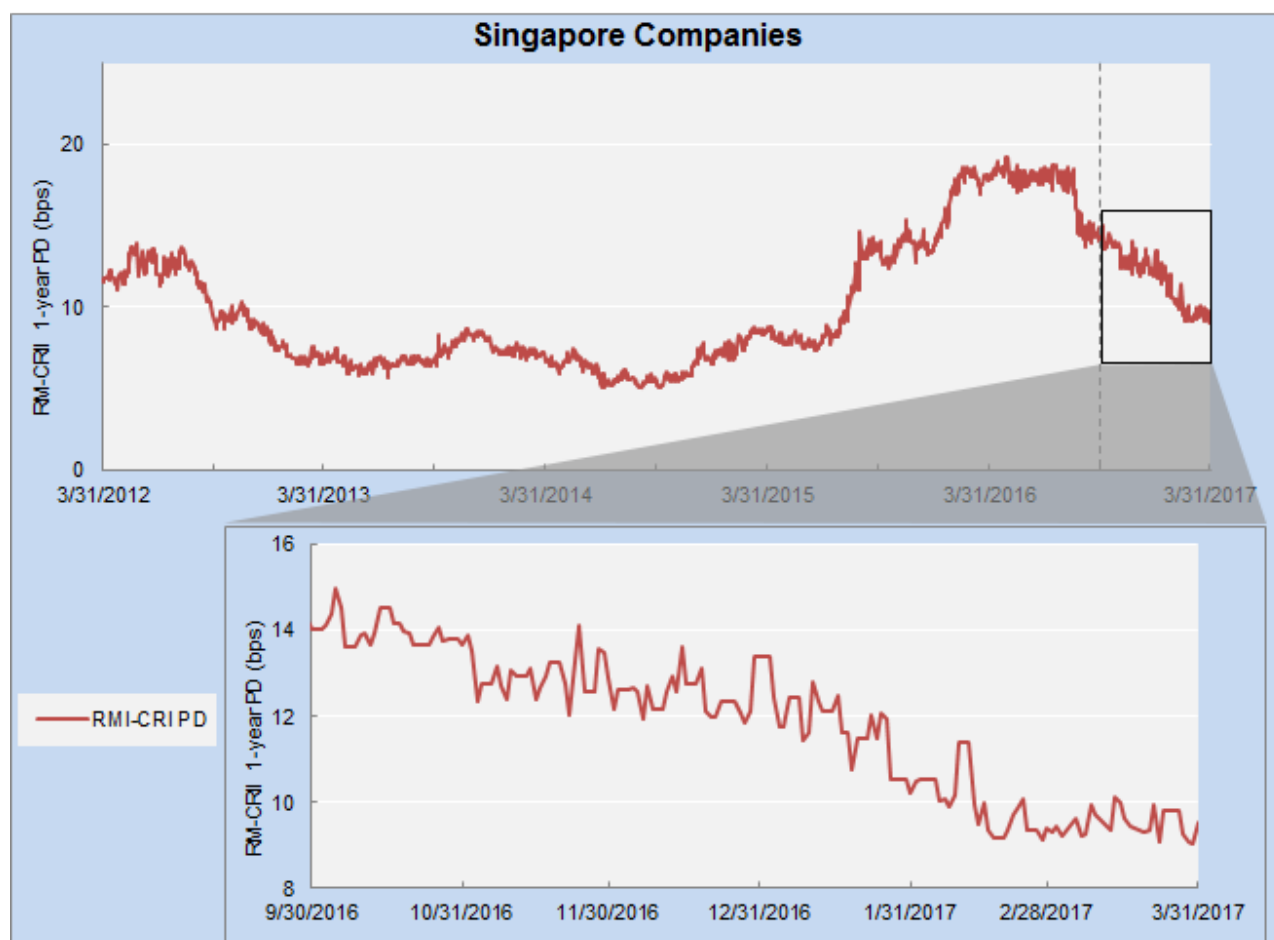
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## Singapore Companies

Although the RMI-CRI aggregate PD for Singapore firms marginally improved during the first quarter of 2017, the Singapore economy growth remained slow. The economy contracted by 1.3% QoQ, followed by a strong rebound of 12.3% in the preceding quarter. Another concern falls on the job market. The unemployment rate has further increased and reached the level during 2009 financial crisis. Despite these disappointing results, the PMI and exports keep improving and the economy is well-contained on the backdrop of loose monetary environment.



## Economy

- While the Ministry of Trade and Industry announced in May that it has maintained the GDP growth forecast for 2017 between 1% and 3%, the Singapore economy grew by 2.7% YoY in the first quarter of 2017, dropping from 2.9% in the previous quarter. Among all business sectors, manufacturing and accommodation & food services are the major contributors to the decline in growth. The manufacturing grew by 8% YoY, slower than 11.5% in Q4 2016. In addition, the accommodation & food services sector contracted by 1.9% YoY, extending the 0.2% drop last quarter. It was explained by the bad performance of food services segment, which contracted on the back of lower sales volume in restaurants.<sup>66</sup>

- CPI-All Items inflation and MAS Core Inflation came in at 0.7% and 1.2% respectively in March 2017. Food inflation was 1.3% in March. Although the price of restaurant meals increased at a faster pace, non-cooked food inflation slowed. Private road transport inflation eased to 6.9% from 7.1% on a monthly basis, as the faster pace of increase in car and motorcycle prices was offset by the smaller pickup in petrol prices. Services inflation edged up to 1.6% from 1.5% in February, due to a pickup in air fares despite a fall in telecommunication services fees. Accommodation cost fell by 4% in March amid continued softness in the housing rental market.<sup>67</sup>
- The overall unemployment rate including foreigners rose to 2.3% in Q1 2017 from 2.2% in Q4 2016, reaching the highest level since 2009. The unemployment rate for residents and citizens are slightly worse, holding at 3.2% and 3.5%, respectively in Q1 2017. The Ministry of Manpower revealed that the country shed 8,500 jobs in Q1 2017 compared with 2,300 jobs added as employment in manufacturing and construction fell due to a decrease in the number of work permit holders.<sup>68</sup>
- Survey results released by the Singapore Institute of Purchasing and Materials Management showed an increment of 0.3 points to 51.2 from the previous month. The increase in reading was attributed to an expansion in higher new orders and exports, higher factory output, as well as higher inventory and employment.<sup>69</sup>
- Seasonally adjusted retail sales in March 2017 decreased by 0.3% on a MoM basis and 2.1% on a YoY basis in March 2016. Excluding motor vehicles, retail sales fell by 0.2% MoM while rising by 0.7% YoY. The total retail sales value in March 2017 was estimated at SGD 3.7bn, higher than SGD 3.6bn in March last year. The seasonally adjusted sales of food & beverage services in March 2017 fell by 2.1% MoM and 4.8% YoY. The total sales value of food & beverage services in March 2017 was estimated at SGD 665mn, lower than the SGD 698mn last March.<sup>70</sup>
- Singapore's NODX grew by 16.5% YoY in March 2017, following a 21.1% expansion in the previous month, due to an increase in both electronic and non-electronic exports. The top contributors to the NODX increase were China, Taiwan and Hong Kong.<sup>71</sup>

## Monetary

- MAS announced in April 2017 that it would maintain its monetary policy of halting the appreciation of the Singapore dollar. The width of the policy band and the level at which it is centered will also be unchanged. The policy stance of maintaining zero appreciation of the Singapore dollar came in tandem with a moderate-pace expansion in Singapore economy.<sup>72</sup>

## Funding & Liquidity

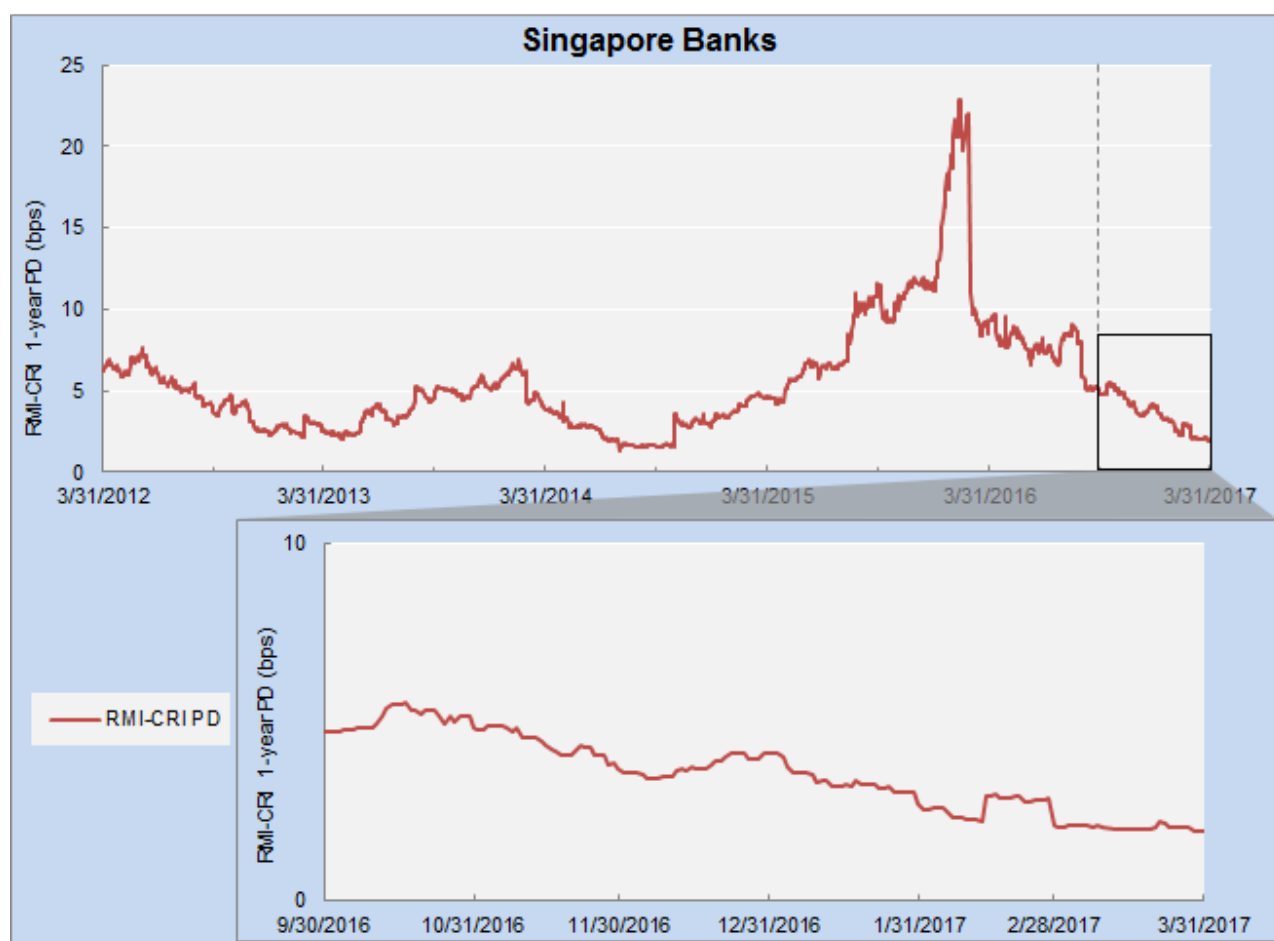
- Yields of 10-year Singapore government bonds declined to 2.244% on Mar 31 2017 from 2.475% on Dec 30 2016.
- Lending to non-bank customers rose from SGD 617bn in Q4 2016 to SGD 628bn in Q1 2017. Total loans to businesses rose by nearly SGD 10bn from a quarter ago while loans to consumers rose marginally from SGD 250bn in Dec 2016 to SGD 251bn in Mar 2017.<sup>73</sup>
- The amount of outstanding sovereign bonds increased by SGD 4.6bn to SGD 106bn in Q1 2017.<sup>74</sup>
- The prime lending rate had decreased from constant 5.35% to 5.28% since January 2017.<sup>75</sup>

## Sovereign Credit Ratings

- All three major rating agencies kept their highest investment grade ratings for Singapore sovereign bonds over Q1 2017.

## Singapore Banks

The aggregate 1-year RMI-CRI PD for Singapore banks improved during Q1. NPL ratios remained flat during Q1 2017 from Q4 2016, driven by slower NPL formation rates in the oil and gas services sector. NPL ratios could continue to increase in 2017 as sluggish growth in the Singapore economy could pose business challenges for the lenders. Profits improved on larger net interest margin during Q1 as well as increased income from the wealth management business. The banks recorded improvements in their capital levels in Q1 due to a slower growth in risk weighted assets. The credit outlook for Singapore banks is stable.



## Profitability

- Singapore banks reported higher earnings in the first quarter of 2017. Quarterly net profits of DBS, OCBC, and UOB gained by 3%, 14%, and 5%, respectively from the same period last year. Banks reported stronger growth from trade finance as well as lending to Singapore conglomerates and individuals investing overseas in properties. Interest income was nearly unchanged on a YoY basis across the banks while non-interest income was higher from Q1 2016.<sup>76,77,78</sup>
- Data from MAS showed that the amount of corporate loans issued to non-bank customers increased by 1.17% to SGD 627.9bn at the end of Q1 2017 from the previous quarter.<sup>79</sup>

## Funding & Liquidity

- Total deposits in Singapore banks expanded by SGD 13.2bn in Q1 2017. Local currency deposits expanded by SGD 12.58bn, larger than the previous quarter expansion of SGD 9.63bn, whereas foreign currency deposits increased by about SGD 659.4mn during Q1 2017.<sup>80</sup>
- Singapore's fixed deposit rates declined during Q1 2017, as the rates on 3-month deposits and 12-month deposits decreased to 0.14% and 0.33%, respectively. The prime lending rate also declined to 5.28% from 5.35% in the previous quarter.<sup>81</sup>

## Capital Levels & Regulations

- Singapore banks reported higher Tier 1 Common Equity ratios in Q1, which are well above the recommended Basel III guidelines. The three banks are well positioned for International Accounting Standards Board's IFRS9, which becomes effective in 2018.

## Asset Quality

- Loans placed under the "special mention" category declined to 2.3% of total exposure at the end of Q1 2017, from 2.42% in the quarter before. Loans classified as doubtful remained at 0.36% of total exposure. Loans marked as a loss increased to 0.19% in Q1, the highest level on record since Q1 2009. Overall, asset quality in banks deteriorated in Q1 from a QoQ and YoY basis.<sup>82</sup>
- NPL ratios at DBS, UOB and OCBC remained at an elevated level during Q1. OCBC said the bank's NPL ratio declined slightly to 1.25% at the end of March but remained higher than 1.04% recorded in Q1 last year. UOB's Q1 NPL ratio of 1.48% also exceeded the 1.36% last year. According to Moody's, oil and gas companies will continue to pose asset-quality challenges to banks over the next few quarters should oil prices remain between USD 40 to USD 60 per barrel.<sup>83,84,85</sup>

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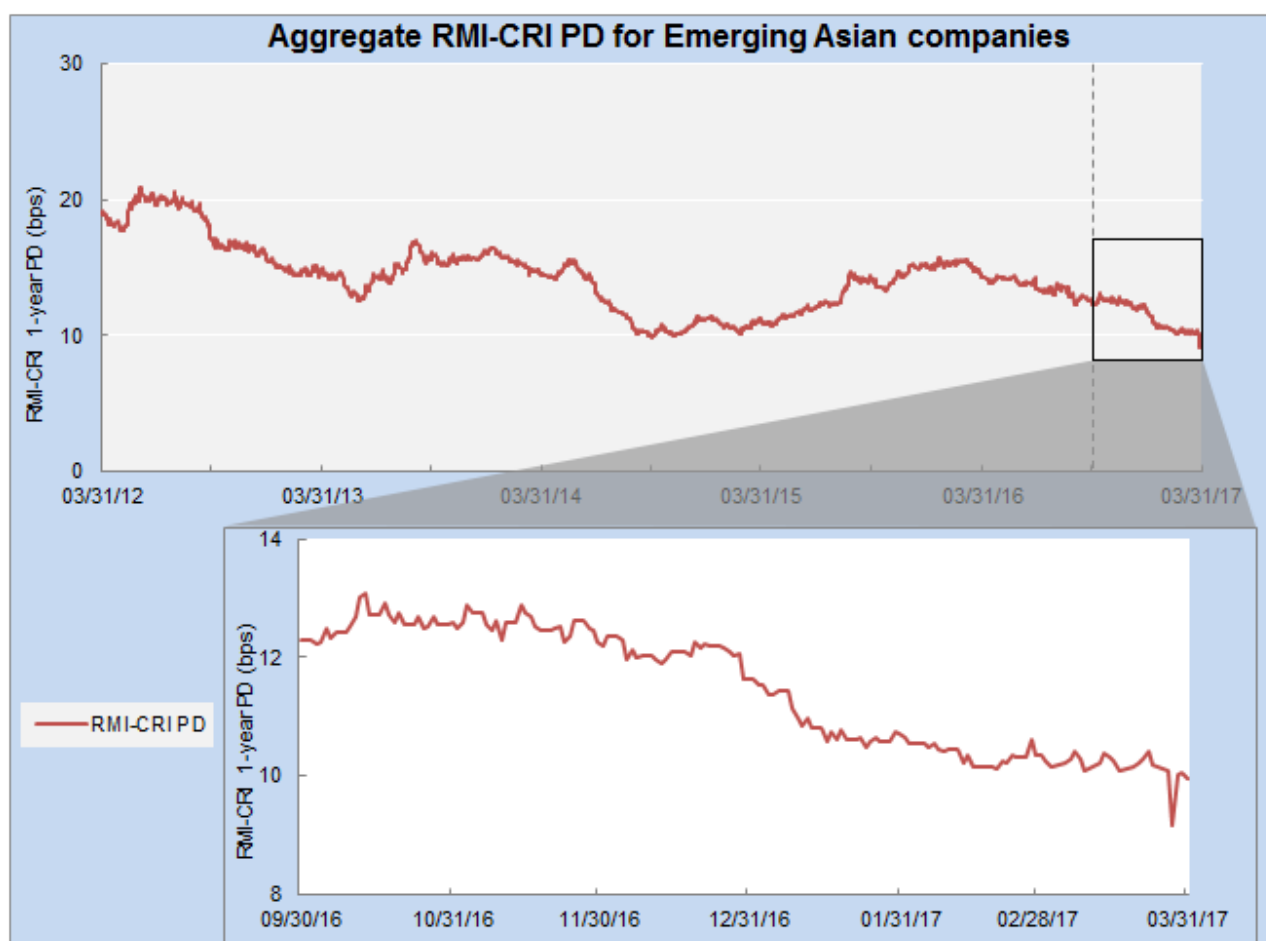
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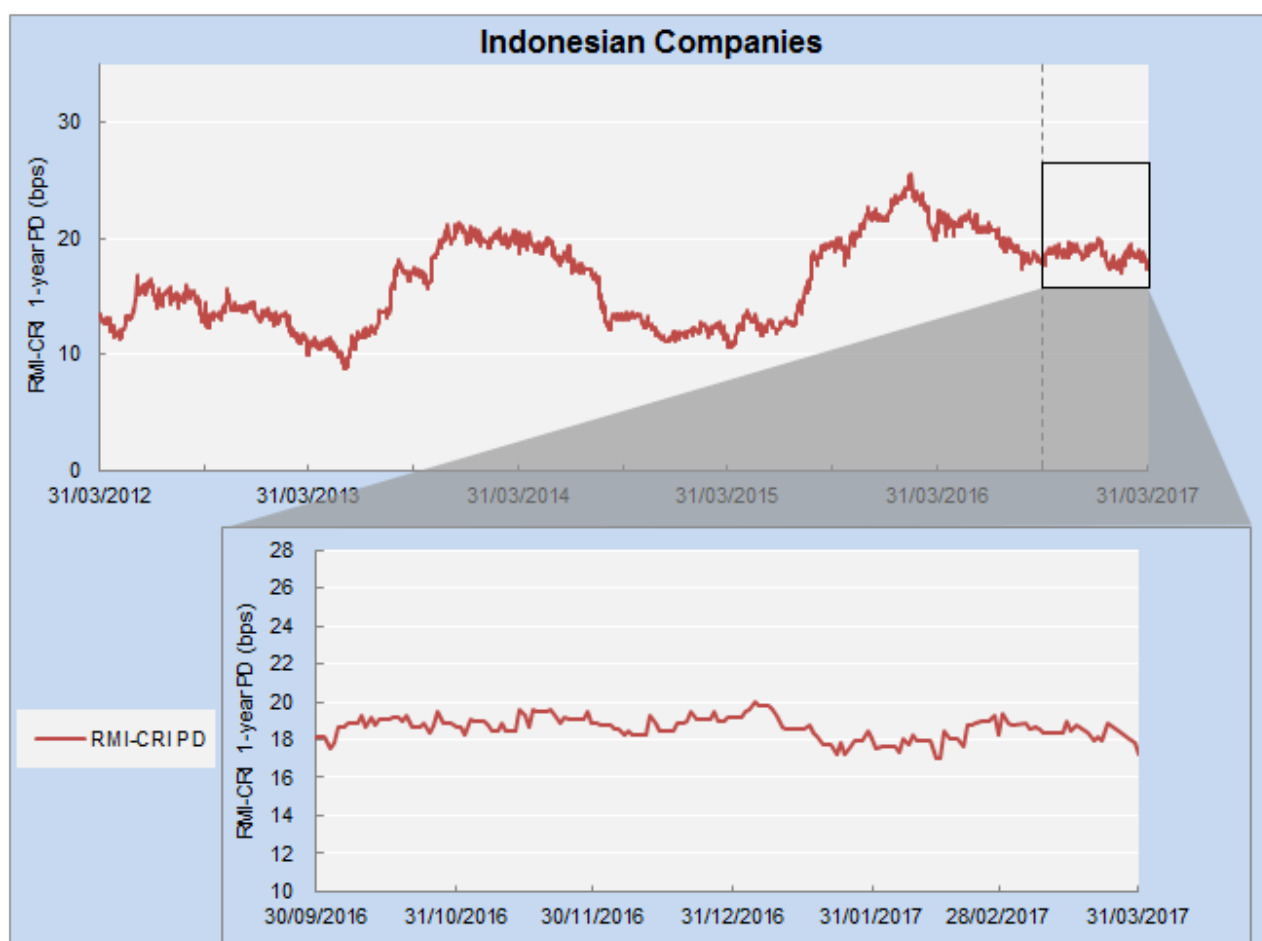
## Asia-Pacific - Emerging economies

The RMI-CRI aggregate 1-year PD for listed corporations in emerging Asia, excluding India and China, declined in Q1. The creditworthiness of Thai firms weakened slightly in Q1 as the Thai Baht declined against the US dollar. Health care, financial and telecommunication companies recorded improvements in credit quality while the 1-year PDs for real estate and information technology firms increased in Q1. The aggregate credit profile of Filipino firms improved with the introduction of a government supported infrastructure campaign and potential tax bill progress. Emerging Asian markets continued to record gains in market capitalizations despite weakening commodity prices, evolving geopolitical tensions in the Middle East and the Korean peninsula. The credit outlook for companies that are positioned towards innovation, technology and consumption has improved compared to more traditional industries with large family owned business models.



## Indonesian Companies

The RMI-CRI aggregate 1-year PD for Indonesian companies remained at the same level during Q1 from the previous quarter. Indonesia's economy expanded by 5.01% in Q1, faster than the 4.94% growth in Q4 2016. Indonesia's inflation remained under control for the first quarter of 2017, with a CPI of 3.61% while trade surplus in Q1 2017 stood at USD 1.23bn, where most of which was derived from non-oil and gas trade. Political tensions started to cool down a bit after March saw the end of Jakarta's gubernatorial election. Indonesian President Joko Widodo's attempt to bolster and ease foreign and local investment may also be a contributing factor to the decline in the 1-year PD. Investment grew by 13.2% to USD 12.5bn in Q1 2017.



## Economy

- Economic growth increased to 5.01% YoY in Q1 from 4.94% in the previous quarter. According to Bank Indonesia (BI), household consumption, the main growth engine, had probably weakened during January-March, but exports and investment had improved. Data from the statistics bureau showed exports were up more than 20 per cent in the first quarter compared to a year ago by value.<sup>86</sup>



- Indonesia's CPI reached 3.61% YoY in March. Respectively, the inflation of volatile food increased 2.89% YoY, core inflation increased 3.30% YoY, while inflation of administered prices reaches 5.50% YoY. Going forward, inflation will remain directed to be within the targeted inflation in 2017 of 3% and 5%. Therefore, coordination of policies adopted by the Government and BI on inflation control needs further reinforcement, primarily to face risks of adjustment to administered prices in line with further policy on energy subsidy reform by the Government as well as the increasing price of volatile food approaching the fasting month.<sup>87</sup>
- Wages of Indonesian workers likely increased in Q4. Nominal wage of farmers per day increased by 1.74% during Q1 2017 from IDR 48,627 in December 2016 to IDR 49,473 in March 2017.<sup>88</sup>
- Indonesia's trade balance recorded another surplus in March 2017, primarily supported by non-oil and gas trade surplus. Trade balance surplus in March 2017 is recorded USD 1.23bn. The non-oil and gas trade surplus stood at USD 2.02bn in March 2017 while the oil and gas trade deficit stood at USD 0.78bn in March. Indonesia's trade balance throughout the first quarter of 2017 recorded a surplus of USD 3.93bn, an increase compared to the surplus of both Q4 2016 of USD 3.12bn and Q1 2016 of USD 1.66bn. Compared to the first quarter of 2016, the improving trade balance in the first quarter of 2017 is boosted by the increasing surplus in non-oil and gas trade balance exceeding the increasing deficit in oil and gas trade balance.<sup>89</sup>
- The Nikkei Indonesia PMI increased from 50.5 in March to a ten-month high of 51.2 in April. This pointed to a more marked improvement in manufacturing operating conditions, with the upward movement in the PMI reading reflecting stronger contributions from four of its five sub-components, the exception being suppliers' delivery times.<sup>90</sup>

## Monetary

- In April 2017, the BI Board of Governors agreed to maintain the BI 7-day repo rate, deposit facility rate, and lending facility rate at 4.75%, 4.00%, and 5.50% respectively. The decision is consistent with BI's efforts to maintain macroeconomic and financial system stability by driving the domestic economic recovery process. Looking forward, BI will continue to monitor various global and domestic risks, especially those coming from a change in the US Fed's balance sheet, geopolitical factors and the corporate and banking sector. It will also continue coordinating with Indonesian government to ensure that inflation is within the target level and accelerate structural reforms to support sustainable economic growth.<sup>91</sup>

## Funding & Liquidity

- The 10 year yield on Indonesia's sovereign bonds dropped to 7.01% in end March 2017 from 7.91% in end December 2016. The drop in yield might be attributed to President Jokowi's stance on accommodating foreign investments during the past few periods, shortly after Saudi Arabia king's visit to Indonesia amid political tensions during Jakarta's gubernatorial election. These events may factor in to the purchases of these medium-term government bond.<sup>92</sup>



- Indonesia's official reserve assets position stood at USD 121.8bn as of end-March 2017, higher than the end of February 2017 level registered at USD 119.9bn. The increase was primarily attributable to foreign exchange receipts, among other from tax revenues and government oil & gas export proceeds, the issuance of government global bonds, as well as auction of BI foreign exchange bills. Bank Indonesia considers the official reserve assets to be able to strengthen the resilience of the external sector and maintain the sustainability of Indonesian economic growth.<sup>93</sup>
- Long-term external debt grew 0.8% YoY in February 2017. Long-term external debt remained dominant in Indonesia's external debt and stood at USD 278.1bn or 86.4% of total external debt in February 2017. Long-term external debt consisted of public sector external debt amounted to USD 159.5bn (57.4% of total long-term external debt) and private sector external debt amounted to USD 118.5bn (42.6% of total long-term external debt). Meanwhile, short-term external debt grew 17.0% YoY. Short-term external debt amounted to USD 43.6bn (13.6% of total external debt), comprised of private sector external debt amounted to USD 41.2bn (94.4% of total short-term external debt) and public sector external debt amounted to USD 2.4bn (5.6% of total short-term external debt).<sup>94</sup>

## Politics

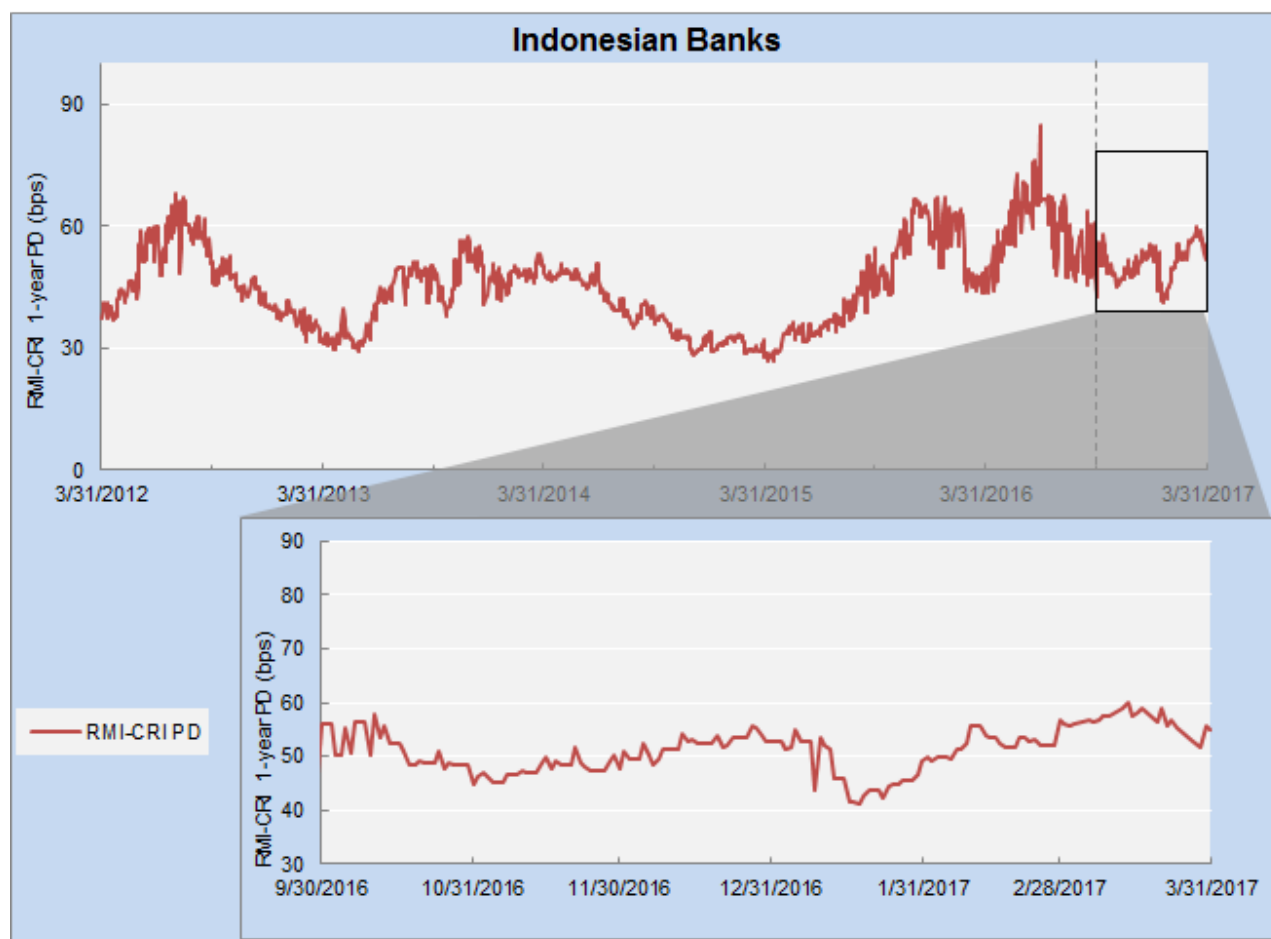
- After a long contentious duel between Jakarta gubernatorial election candidates, conservative party-backed candidate pair Anies Baswedan and Sandiaga Uno emerged victorious, clinching 58% of the votes against the then incumbent pair Basuki Tjahaja Purnama (Ahok) and Djarot Saiful Hidayat, which garnered only 42% of the votes. The election outcome, which Indonesian netizens described as being akin to US presidential election and Brexit results, would be seen as a barometer for the 2019 presidential election, given Jakarta's position as Indonesia's capital and commercial center. Shortly after, Ahok, who would then receive a two-year prison sentence due to a presumed blasphemy case, withdrew his appeal with regards to the decision made by the North Jakarta district court. In a press conference by Ahok's lawyers and family representatives, Ahok's handwritten statement on the recent decision cited great losses in the form of traffic congestion and economic losses the rally might cause if the process were to be continued further.<sup>95</sup>

## Sovereign Credit Ratings

- Moody's and Fitch kept their ratings on the local currency long term bonds of Indonesia at Baa3 and BBB- ratings respectively in Q1, with a positive outlook. As of May 19, S&P revised its rating on Indonesia's sovereign bond to BBB- from BB+ with a stable outlook, bringing it to investment grade level. This reflected the government's successful tax amnesty program which generated more than USD 11bn in revenue to push infrastructure and also its new focus on realistic budgeting which brings reduced risk to Indonesia's fiscal metrics.<sup>96</sup>

## Indonesian Banks

The RMI-CRI aggregate 1-year PD for Indonesian banks deteriorated in Q1 2017 from Q4 2016. Total loan values witnessed a YoY increase of 9.2% in Q1 2017, above a previously forecasted rate of 8.1%, amid government austerity measures and commitment to allocate budget for productive investment, especially in the infrastructure sector. A previous slump in commodity prices led NPL in the banking sector to climb during the second half of 2016, and most likely prompted Indonesia's bank deposit insurance agency (LPS) to bolster its current IDR 75tn stash of reserves in April 2017.



## Profitability

- Indonesian banks in general saw a slight recovery in profitability after a devastating slump in commodity prices which led to increase in NPL. The three largest majority state-owned Indonesian banks (Bank Mandiri, Bank Negara Indonesia and Bank Rakyat Indonesia) reported a QoQ increase in net income of 127.44% and 10.9%, as well as a QoQ decrease in net income of 8.27%, respectively.

## Funding & Liquidity

- The liquidity ratio (liquid asset/bank deposit) of Indonesian banks improved from 20.9% at end of Q4 2016 to 22.2% in February 2017.<sup>97</sup>
- The Jakarta 3-month interbank rate decreased from 7.32% at the beginning of Q1 2017 to 6.86% by the end of Q1 2017. Similarly, the 1-month interbank rate decreased from 6.93% at the beginning of Q1 2017 to 5.86% by the end of Q1 2017.<sup>98</sup>

## Regulation

- In April, Indonesia's bank deposit insurance agency (LPS) was thinking of ways to bolster its IDR 75tn war chest as there are talks that its current funds are insufficient for its new mandate of restructuring banks in addition to bailing out depositors. Plans are being proposed for LPS to implement a new premium on top of current fees paid by Indonesian banks to the agency. The premiums paid may be dependent on the riskiness of the banks. LPS' new mandate include the ability to restructure troubled banks by transferring their good assets to other institutions and focusing on resolving the bad assets. It can also issue bonds to the central bank in the event of a crisis.<sup>99</sup>

## Asset Quality

- According to BI, the financial system remained stable. Capital adequacy ratio and liquidity ratio of Indonesian banks, as of February 2017, stood at 23.0% and 22.2% respectively, while non-performing loans (NPL) stood at 3.2% (gross) or 1.4% (net). The transmission of easing monetary and macroprudential policy continued, albeit restrained by banks' prudence in managing credit risks.<sup>100</sup>

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<sup>86</sup>Mar 2017, [Indonesia GDP Annual Growth Rate](http://www.tradingeconomics.com/), Trading Economics, <http://www.tradingeconomics.com/>

<sup>87</sup>Mar 4, 2017, [Food supply causes deflation in 2017](http://www.bi.go.id), Bank Indonesia, <http://www.bi.go.id>

<sup>88</sup>April 17, 2017, [Real and nominal wages for farmworker in Indonesia \(IDR\)](http://www.bps.go.id/index.php), Indonesian Statistics Bureau (BPS), <http://www.bps.go.id/index.php>

<sup>89</sup>April 17, 2017, [Surplus in Indonesia's trade balance continues](http://www.bi.go.id), Bank Indonesia, <http://www.bi.go.id>

<sup>90</sup>May 2, 2017, [Strongest rise in manufacturing production since mid-2016](https://www.markiteconomics.com), Markit Economics, <https://www.markiteconomics.com>

<sup>91</sup>April 20, 2017, [BI 7-Day reverse repo rate held at 4.75% maintaining stability and promoting sustainable economic recovery](http://www.bi.go.id), Bank Indonesia, <http://www.bi.go.id>

<sup>92</sup>February 22, 2017, [Jokowi to welcome Saudi Arabia's King Salman, Investment](http://www.thejakartapost.com), The Jakarta Post, <http://www.thejakartapost.com>

<sup>93</sup>Apr 7, 2017, [Official Reserve Assets Increased to USD 121.8bn at the end of March 2017](http://www.bi.go.id), Bank Indonesia, <http://www.bi.go.id>

<sup>94</sup>April 2017, [External Debt Statistics of Indonesia - April 2017](http://www.bi.go.id), Bank Indonesia, <http://www.bi.go.id>

<sup>95</sup>April 19, 2017, [Indonesian Muslim candidate wins Jakarta election - pollsters](http://www.reuters.com/), Reuters, <http://www.reuters.com/>

<sup>96</sup>May 19, 2017, [Indonesia raised to investment grade by S&P on budget curbs](https://www.bloomberg.com), Bloomberg, <https://www.bloomberg.com>

<sup>97</sup>April 20, 2017, [BI 7-Day reverse repo rate held at 4.75% maintaining stability and promoting sustainable economic recovery](http://www.bi.go.id), Bank Indonesia, <http://www.bi.go.id>

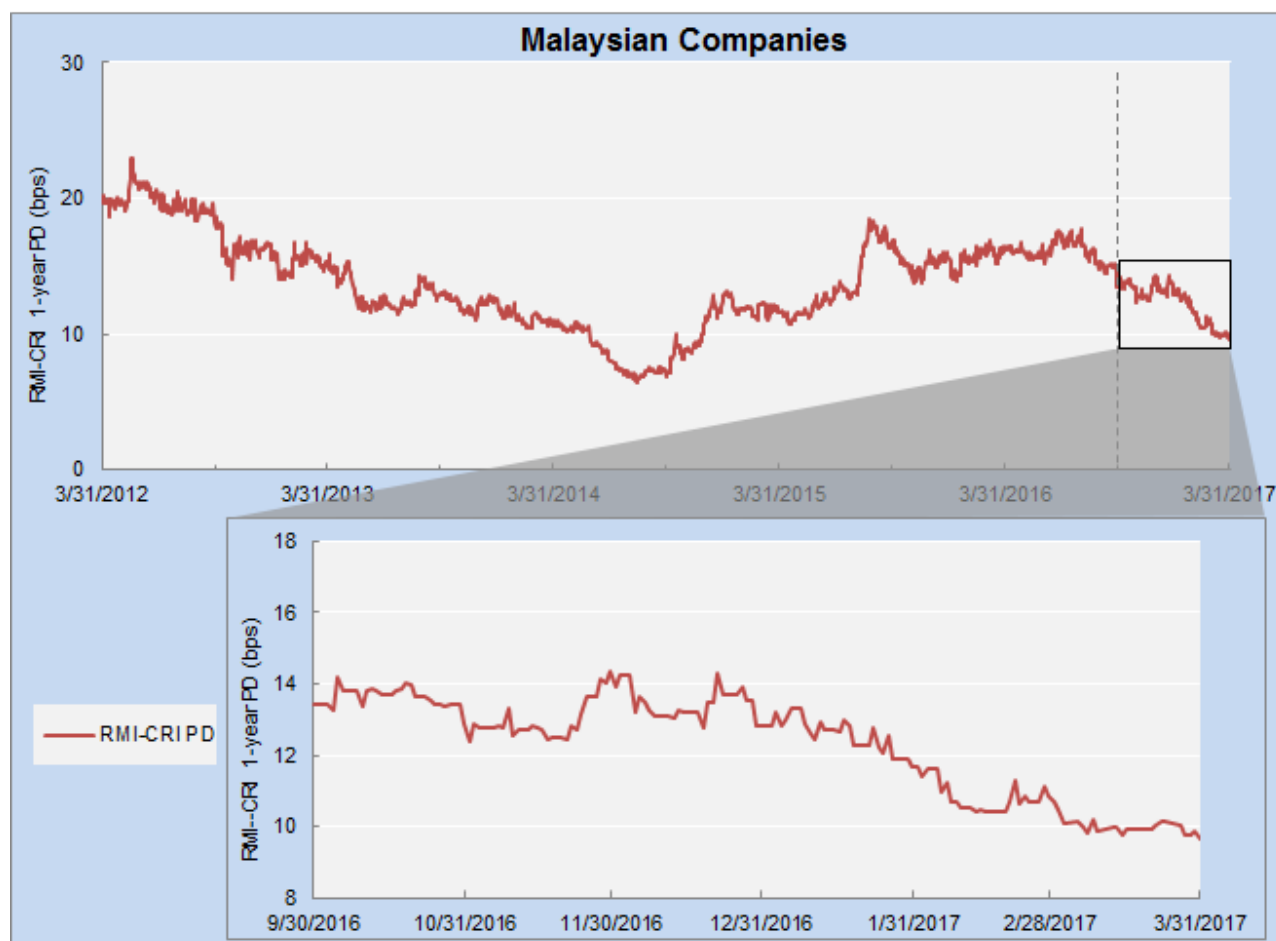
<sup>98</sup>March 31, 2017, [Jakarta Interbank Offered Rate \(JIBOR\)](http://www.bi.go.id), Bank Indonesia, <http://www.bi.go.id>

<sup>99</sup>April 12, 2017, [Indonesia bailout fund too small for bank restructuring mandate](http://www.businesstimes.com.sg), Business Times, <http://www.businesstimes.com.sg>

<sup>100</sup>Feb 16, 2017, [BI 7-Day reverse repo rate held at 4.75% maintaining stability and promoting sustainable economic recovery](http://www.bi.go.id), Bank Indonesia, <http://www.bi.go.id>

## Malaysian Companies

The RMI-CRI aggregate 1-year PD for Malaysian companies decreased over Q1. Malaysia experienced steady economic growth over the past quarter with strong domestic consumption as well as exports. However, a record level of inflation calls for concern after the implementation of GST. Monetary prospects remain stable with the MYR fluctuating slightly against the USD. Malaysia did experience some political disturbances at the start of the year with the death of Kim Jong Nam, but the turmoil did not translate to adversely impact the economy. Tensions between Malaysia and North Korea have since decreased and the outlook of the Malaysian economy looks to be positive if it is able to keep its inflation in check.



## Economy

- Malaysia's GDP expanded by 5.6% in Q1 2017 YoY, up from 4.5% in the previous quarter. Malaysia's economy grew at the fastest pace in two years during Q1, buoyed by strong domestic demand, higher exports and a rise in manufacturing activity.

- GDP of Malaysia increased by 5.6% from Q4 last year to MYR 280.1bn in Q1 2017. This expansion is led by higher private consumption which recorded a growth of 6.6%. Exports remained strong in this quarter after increasing 9.8%. However, the rise of imports outpaced that of exports as it expanded at a rate of 12.9% with increased demand for imported goods. Production wise, all sectors of Malaysia expanded in Q1 2017, with agriculture leading the growth at 8.3%. Oil palm and rubber has performed strongly in the first quarter to drive the expansion in agriculture.<sup>101</sup>
- Malaysia's CPI rose at a higher rate of 5.1% in March 2017 owing to the low base last year and higher retail fuel prices compared to March 2016. Among the major groups which recorded increases were the indices for Transport (+23.0%), Food & Non-Alcoholic Beverages (+4.1%), Recreation Services & Culture (+3.0%), Health (+2.6%), Restaurants and Hotels (+2.3%) and Housing, Water, Electricity, Gas & Other Fuels (+2.1%).<sup>102</sup>
- Malaysia's unemployment rate dropped to 3.4% after remaining at 3.5% for the past three months. According to MIDF Research, 20,000 new jobs were added in March while the number of unemployed declined to 0.51mn.<sup>103</sup>
- The labour force participation rate in Malaysia is stable between 67% to 68% during the first quarter of 2016. Unemployment rate fell slightly to 3.4%. However, this drop in unemployment rate could be due to the reduction of labour force participation rate as more of the unemployed exited the labour force.<sup>104</sup>
- In March 2017, Malaysia's export expanded MYR 16.0bn, up by 24.1% YoY to MYR 82.6bn. Imports also recorded a strong increase of MYR 21.8bn (+39.4%) to MYR 77.2bn. Exports increased due to the higher exports to China (+MYR 3.1bn), Singapore (+MYR 2.4bn), European Union (+MYR 1.9bn), United States (+MYR 1.1bn) and Japan (+MYR 740.0bn). Higher imports were mainly from China (+MYR 4.7bn), United States (+MYR 4.3bn), Republic of Korea (+MYR 1.8bn), Singapore (+RM1.5 bn) and European Union (+RM1.4 bn).<sup>105</sup>

## Monetary

- Bank Negara Malaysia announced that it decided to maintain the Overnight Policy Rate (OPR) at 3%, with ceiling and floor rates unchanged at 3.25% and 2.75% respectively.<sup>106</sup>
- In March 2017, broad money (or M3), which measures the money supply, increased by 4.5% YoY to MYR 1.67tn.<sup>107</sup>
- In March, the ringgit and most major and regional currencies appreciated against the US dollar amid the broad weakening of the US currency. The ringgit's performance against the currencies of other major trade partners was mixed. The international reserves of Bank Negara Malaysia amounted to USD 95.7bn (equivalent to MYR 423.2bn) as at April 14, 2017.

## Funding & Liquidity

- The market indicative yield on the 10-year Malaysia government securities increased to 4.15% in March 2017 from 4.06% in the previous month. The same yield measure on 5-year Malaysia government securities increased to 3.82% from 3.71% over the same period.<sup>108</sup>
- Bank lending to finance, insurance and business activities increased to MYR 11.5bn in March 2017 from MYR 11.0bn one year ago. Meanwhile, loans disbursed to the manufacturing and the wholesale, retail trade, restaurants and hotels segments increased to MYR 19.0bn and MYR 18.9bn respectively.<sup>109</sup>

## Regulations and Politics

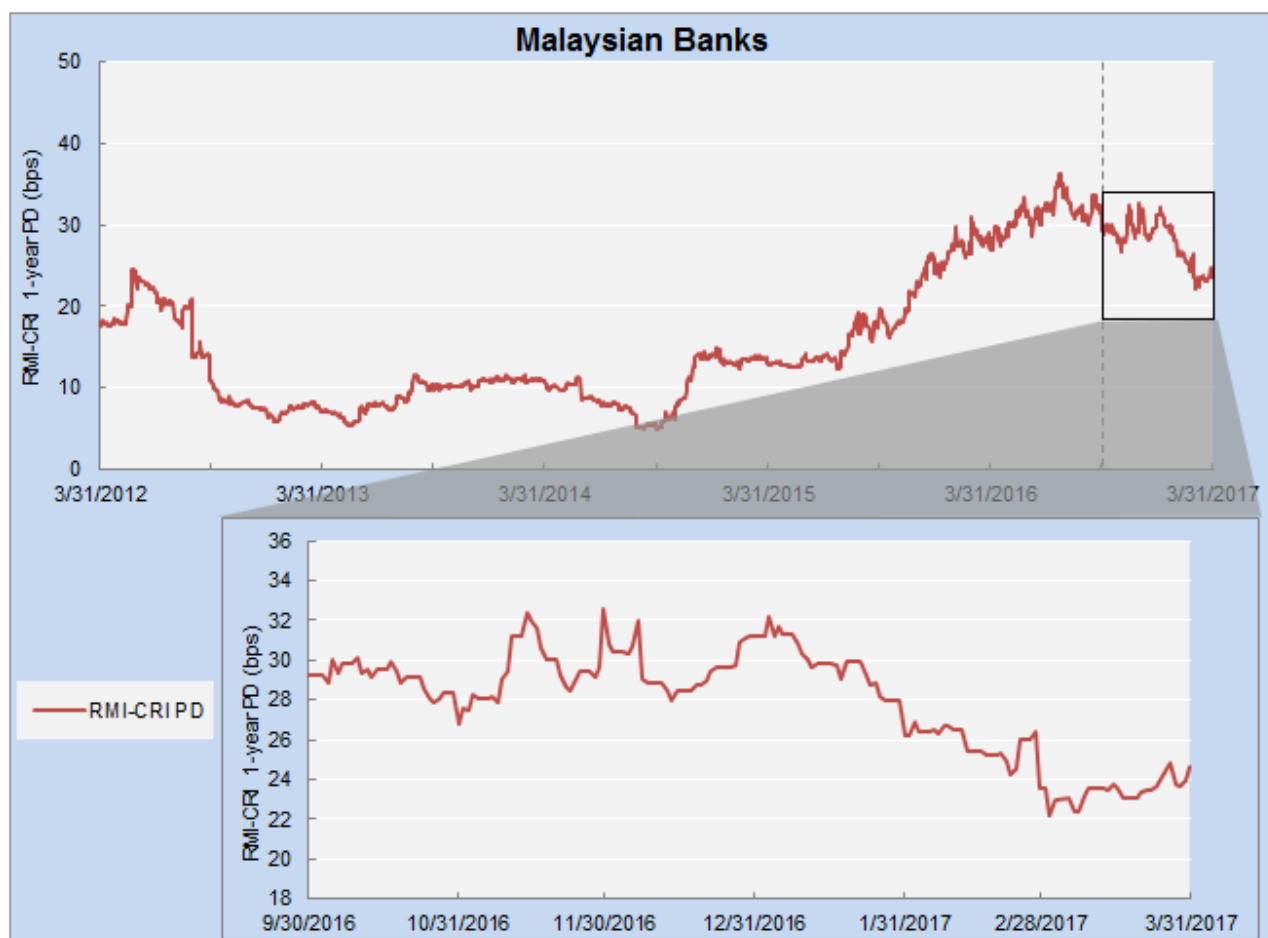
- The central bank of Malaysia has relaxed the capital rules for banks as lenders will no longer have to maintain a reserve fund. Previously, banks had to maintain a percentage of net profit as reserves. Domestic banks should maintain MYR 2bn as minimum capital funds, while Islamic banks and locally incorporated foreign banks are required to maintain MYR 300mn.<sup>110</sup>
- Bank Negara has issued a draft which sets out the requirements on credit risk management for licensed persons. The proposal addresses the need to manage exceptional credits and elevate credit loss estimation standards in an environment of heightened competition and uncertainty.<sup>111</sup>
- Rising costs of living in Malaysia has undermined the support the Najib government receives from public servants. Inflation was at an eight-year high of 5.1% in Q1 due to the launch of GST. However, wages of public servants grew at 2 to 3% in the same period and are unable to keep up with inflation. Though the next election is only due in 2018, rising costs can spell trouble for Najib's road to getting re-elected.<sup>112</sup>
- The death of Kim Jong Nam, brother of North Korea's leader Kim Jong Un, in Malaysia shook the international community. The event occurred in February and had both domestic and international implications for the Najib government. Domestically, the case was considered well-handled with investigations conducted in a transparent manner. The incident served to reverse the falling popularity of Najib due to the 1Malaysia Development Berhad scandal. On the international front, relations with North Korea did turn sour with the eviction of ambassadors on both sides and the ban on citizens of each nation from leaving the country. However, this incident did not have much impact economically and Malaysia's trade figures were not affected during the quarter.<sup>113</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. Moody's, S&P and all other agencies assigned a stable outlook for their ratings on Malaysia.

## Malaysian Banks

The RMI-CRI aggregate 1-year PD for Malaysian banks declined in Q1 as banks remain well capitalized with a surge in the amount of bank loan applications. High levels of deposits also ensured sufficient liquidity in Malaysian banks and capital adequacy levels are high above regulatory requirements. Though asset quality worsened slightly over the quarter, the financials of Malaysian banks are still very healthy.



## Lending

- The amount of bank loan applications has increased to MYR 76.6bn in March 2017 from MYR 58.3bn in December 2016. Loan application for finance, insurance and business activities had fallen to MYR 3.5bn in March 2017 from MYR 4.2bn in December 2016.<sup>114</sup>
- The base lending rate of Malaysian commercial banks increased to 6.66% in Q1 2017 on a QoQ basis. The weighted base rate also increased to 3.62% in Q1 2017 from Q4 2016.<sup>115</sup>



## Funding & Liquidity

- Total bank deposits increased to MYR 17.8bn from December 2016 to March 2017. The repurchase agreement decreased from MYR 15.6bn in December 2016 to MYR 14.6bn in March 2017.<sup>116</sup>
- Savings deposit in banking system increased to MYR 15.2bn from MYR 14.5bn in December 2016.<sup>117</sup>

## Capital Levels & Regulations

- The Malaysian banking system remained well capitalized. The Common Equity Tier 1 Capital Ratio increased to 17.0% and Tier 1 Capital Ratio had decreased to 13.9% in March 2017 from 13.1% and 14.0% in December 2016, respectively.<sup>118</sup>
- The aggregate Common Equity Tier 1 Capital ratio for Malaysian banks increased to 17.0% in March 2017 from 13.1% in December 2016 while the Tier 1 Capital Ratio decreased to 13.9% from 14.0% in the same period.

## Asset Quality

- The value of impaired loans at Malaysian banks had increased slightly to MYR 24.98bn in March from MYR 24.48bn in December 2016. The ratio of net impaired loans to net total loans decreased to 1.2% on a QoQ basis.<sup>119</sup>

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<sup>101</sup> May 19, 2017, [PRESS RELEASE GROSS DOMESTIC PRODUCT FIRST QUARTER 2017](https://www.statistics.gov.my), Department of Statistics Malaysia, <https://www.statistics.gov.my>

<sup>102</sup> Apr 19, 2017, [Consumer Price Index Malaysia March 2017](https://www.statistics.gov.my), Department of Statistics Malaysia, <https://www.statistics.gov.my>

<sup>103</sup> May 17, 2017, [Unemployment rate dips as economy picks up](http://www.theedgemarkets.com), The Edge Markets, <http://www.theedgemarkets.com>

<sup>104</sup> May 15, 2017, [PRESS RELEASE KEY STATISTICS OF LABOUR FORCE IN MALAYSIA, MARCH 2017](https://www.statistics.gov.my), Department of Statistics Malaysia, <https://www.statistics.gov.my>

<sup>105</sup> Feb 8, 2017, [Monthly External Trade Statistics December 2016](https://www.statistics.gov.my), Department of Statistics Malaysia, <https://www.statistics.gov.my>

<sup>106</sup> Nov 23, 2016, [Monetary Policy Statement](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

<sup>107</sup> 23 May, 2017, [Economic and Financial Data for Malaysia](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

<sup>108</sup> Mar 31, 2017, [Monthly Statistical Bulletin March 2017](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

<sup>109</sup> May 6, 2017, [After facing down scandal, Malaysia's Najib vulnerable on rising costs](http://www.reuters.com), Reuters, <http://www.reuters.com>

<sup>110</sup> May 4, 2017, [Bank Negara removes reserve fund requirement for banks](http://www.theedgemarkets.com), The Edge Markets, <http://www.theedgemarkets.com>

<sup>111</sup> Jan 21, 2017, [Bank Negara issues draft on credit risk management](http://www.thestar.com.my/), The Star Online, <http://www.thestar.com.my/>

<sup>112</sup> May 6, 2017, [After facing down scandal, Malaysia's Najib vulnerable on rising costs](http://www.reuters.com), Reuters, <http://www.reuters.com>

<sup>113</sup> Apr 12, 2017, [Kim Jong Nams Death: What It Means For Malaysia](https://www.rsis.edu.sg), S. Rajaratnam School of International Studies <https://www.rsis.edu.sg>

<sup>114</sup> Mar 31, 2017, [Monthly Statistical Bulletin March 2017](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

<sup>115</sup> Mar 31, 2017, [Monthly Statistical Bulletin March 2017](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

<sup>116</sup> Mar 31, 2017, [Monthly Statistical Bulletin March 2017](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

<sup>117</sup> Mar 31, 2017, [Monthly Statistical Bulletin March 2017](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

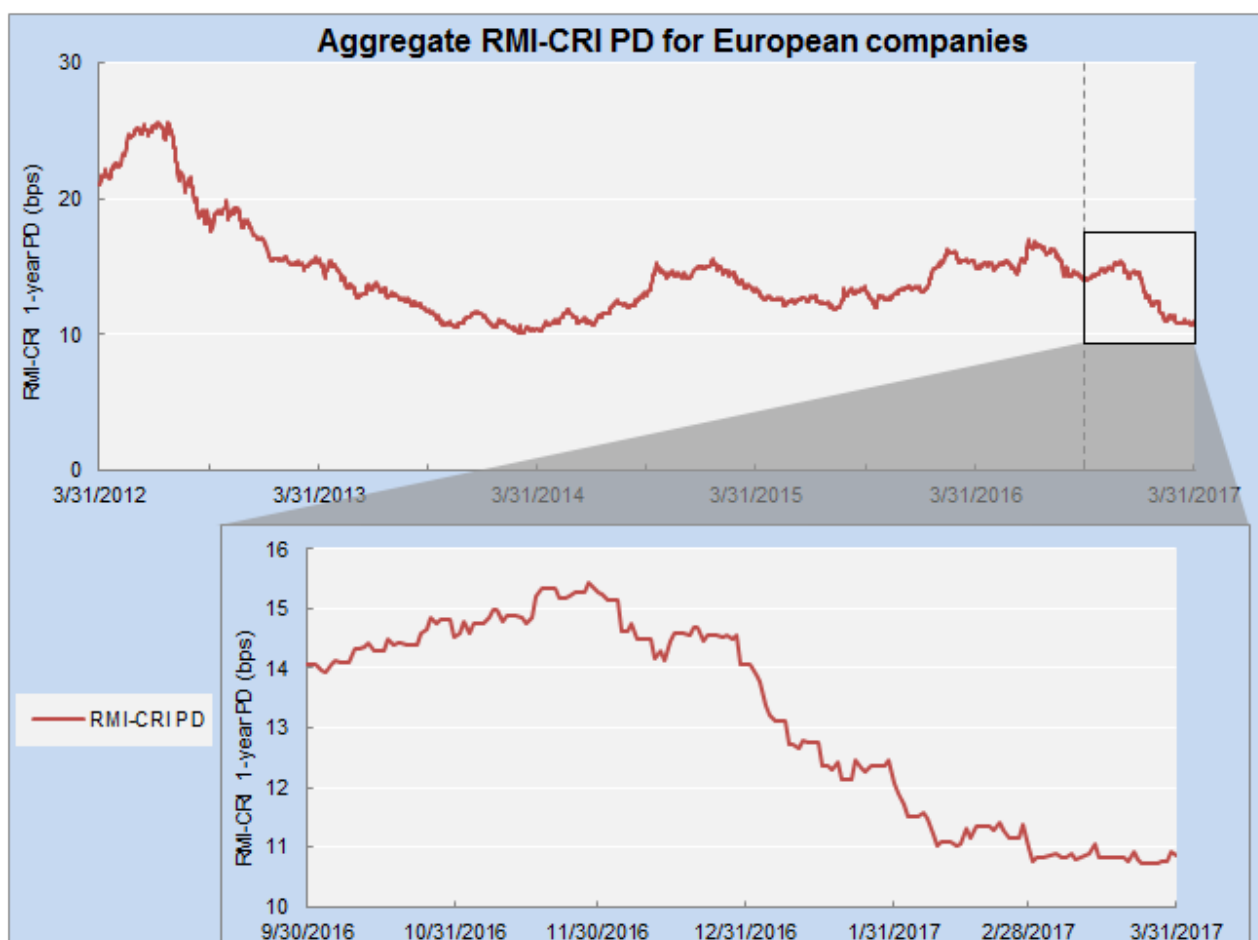


<sup>118</sup> Apr 28, 2017, [Monetary and Financial Developments March 2017](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

<sup>119</sup> Mar 31, 2017, [Monthly Statistical Bulletin March 2017](http://www.bnm.gov.my), Bank Negara Malaysia, <http://www.bnm.gov.my>

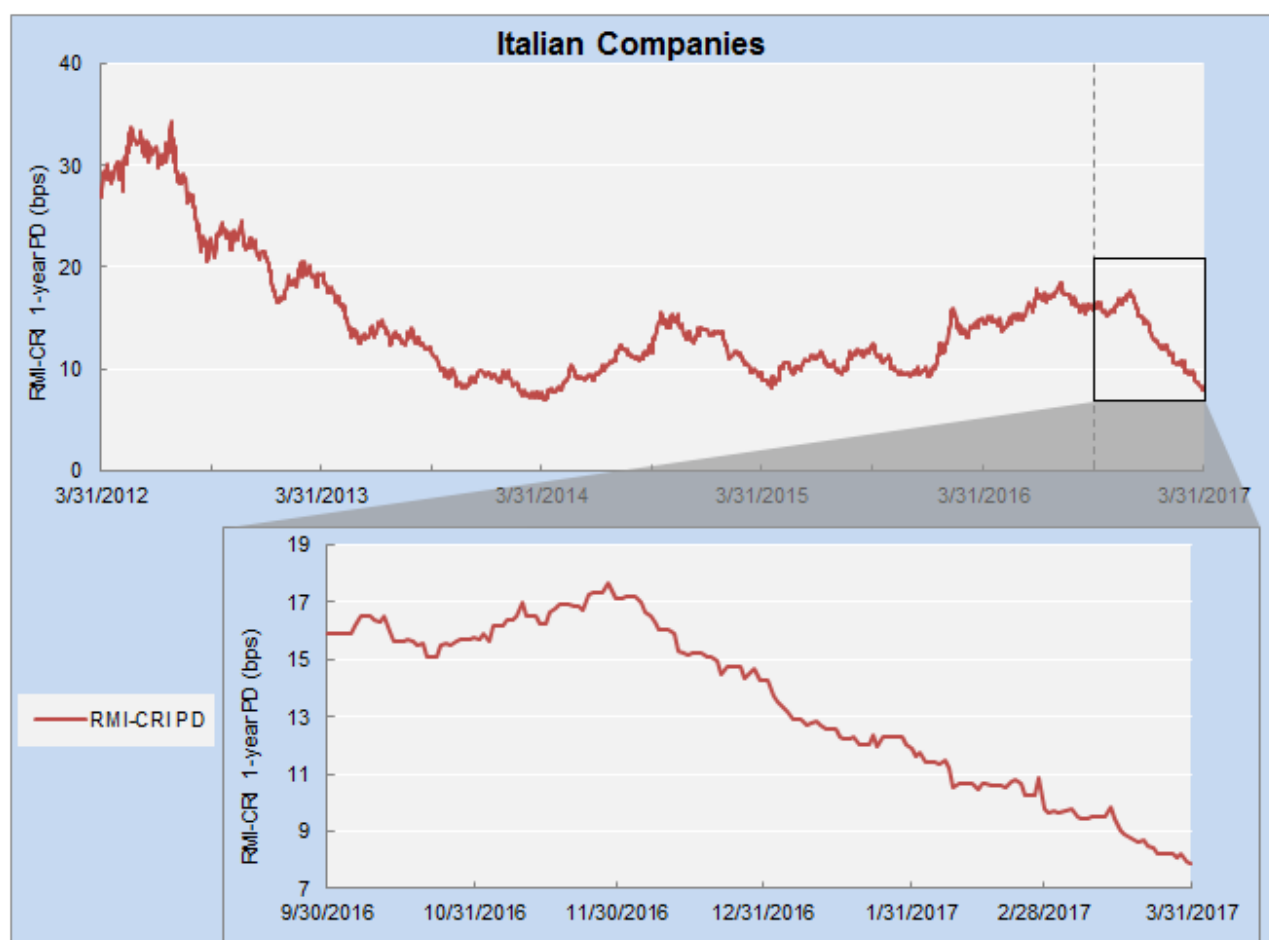
# Europe

The RMI-CRI aggregate 1-year PD for European firms continued to decrease in Q1 2017, alongside with the expected 0.5% Eurozone GDP growth in Q1. Unemployment rate and business sentiment performed much better than expected, reaching to a six year high. Although better economic data has been produced in recent months, risks to growth are still present though to a much lesser extent. Concerns about wage growth is strong and unemployment in Italy and France is still relatively high. The European central bank will continue to keep monetary policy loose to help expand economic growth given that inflation rate is still below the target of 2%.



## Italian Companies

The aggregate 1-year RMI PD for Italian companies declined during Q1 2017 amid positive sentiments in the market due to the Italian government's continuous effort to deleverage on the country's mounting debt and its commitment to improve economic growth. The economy underwent a YoY growth of 0.8%, and is expected to grow by 1.0% over the year 2017. The manufacturing and services sectors reported stellar performance over the quarter, with the former being driven by increasing inflow of overseas new orders and the latter by strong demand amid rising costs. Economic sentiment indicators were relatively stable with a slightly positive tone, while retail sales improved by a little due to Easter, with a positive outlook. Bond yields increased over the quarter due to the persistently weak banking environment and political uncertainty surrounding the 2018 Italian election. Sovereign credit ratings are pretty much similar to last year's, with currently Moody's upgrading its ratings and adopting a stable from negative outlook. Interest rates for non-financial companies decreased considerably throughout the quarter, while total outstanding loans have been increasing since the start of 2017.



## Economy

- The GDP of Italy is estimated to increase by 0.2% moving from Q4 2016 to Q1 2017, keeping the same rate from that in the previous quarter. The economy expanded 0.8% YoY, and is expected to grow by 1.0% over the course of 2017 - an upward revision of the previous Italian National Institute of Statistics' (ISTAT) forecast of 0.9%. It also, however, noted Italy's GDP growth level gap with the rest of the EU, which is 1.9% compared to 3.5% in Q1 2017. ISTAT forecasts the economy to grow moderately in 2017, as it noted that household spending will constitute an important contribution to growth though at a less intense pace due to price hike, followed by investments. Slight

improvements in unemployment and ongoing tensions on the financial markets support ISTAT's reasons to project the economy on a moderate note.<sup>120,121</sup>

- Italy's unemployment rate was moderately lower at 11.5% in March 2017, down from 11.7% in February and 12.0% in January. The country ended the quarter with 22.78mn people employed. 3.022mn people were unemployed. Youth unemployment (aged 15-24) was 34.1%, down 0.4 percentage points over February.<sup>122</sup>
- Italy's manufacturing PMI - an index of sentiment in the manufacturing sector - recorded a six-year high reading of 56.2 in April. Growth rate in manufacturing output accelerated for the third month in a row, reaching the highest for six years in April. Increasing inflow of overseas new orders helped create strong demand for Italian manufactured goods, boosting output levels.<sup>123</sup>
- Italy's services PMI also reported a record high April 2017 reading of 56.2 - marking an eleventh consecutive increase of output in the service sector. April also marked the largest increase in order books for close to ten years, pointing strong demand as the underlying factor. April's increase in backlogs was the most marked since March 2010. Job creation rate remained solid and was among the fastest since 2007-08 GFC. April also recorded marginal decrease in average prices charged by Italian service providers and rising costs for businesses due to input prices and salary pressure. Input cost inflation was at a five-month low. Outlook remained positive as service providers expect a rise in business activity over the next 12 months.<sup>124</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 105.6 in March, 105.7 in February and 105.5 in January. These figures are notably higher than the 104.1 average reported over Q4 2016.<sup>125</sup>
- The confidence climate index is relatively stable in April 2017 at 107.5 compared to 107.6 in March. The personal and current components of the index improved from 101.0 to 101.5, and 104.5 to 105.6 respectively. The outlook on unemployment was brighter - the reading improved from 24 to 29, while outlook on the expectations on inflation was negative, increasing to -17 from -11.<sup>126</sup>
- Retail sales, indexed by the Markit Retail PMI climbed to 48.3 in April amid weak demand and marginally increasing sales. Sales hike during Easter for retailers contributed to the slight increase. Average purchase price continued to edge higher, leading to an underperforming sales target below average. This led to a slower decrease in average gross margin across the sector. Retailers also attributed higher raw material costs to lower profitability.<sup>127</sup>

## Funding & Liquidity

- Yields on 10-year Italian bonds are on a somewhat increasing trend in Q1 2017, standing at 2.318% on March 31, 2017 compared to the value on December 31, 2016 at 1.613%. Yields at the end of Q4 2016 were 1.815%. The positive 10-year Italian bond yield trend may be attributed to uncertainty in Italy's politics and upcoming election in 2018.
- Interest rates on loans (other than bank overdrafts) to non-financial corporations decreased considerably throughout Q1 2017, down from 2.56% in December 2016 to 2.46% in March 2017. Bank interest rates (including revolving loans, overdrafts and extended credit card credit) to corporations decreased throughout Q1 2017, from 3.65% in December 2016 to 3.28% in March 2017. Loans for house purchases increased from 2.00% to 2.06% in March 2017.<sup>128</sup>

- Preliminary estimates for outstanding loans to non-financial institutions stood at 784,014, the second lowest number in Q1 2017. Total outstanding loans overall increased by 1.66% from the start of 2017.<sup>129</sup>

## Politics

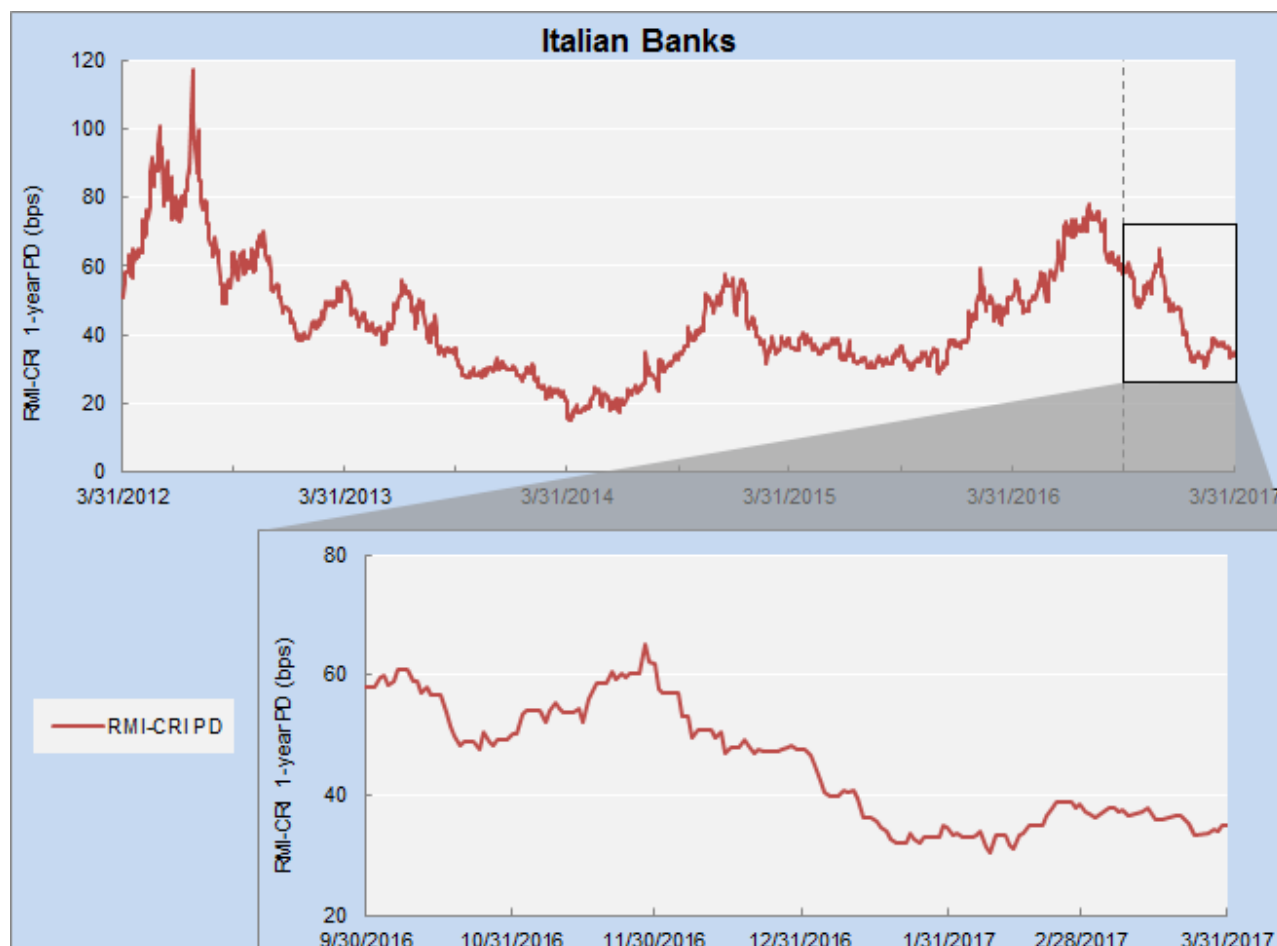
- A recent development on the upcoming 2018 Italian election highlights possible early elections by Italy's constitutional court after changing parts of the country's electoral law. This idea was championed by Matteo Renzi, the former center-left prime minister who stepped down after losing a referendum on constitutional reforms in December, creating political uncertainties and proposals for early election. Five Star Movement, an emerging populist party, is also set to shake up Italian politics as the anti-euro, anti-immigrant Northern League pushes for early election amid rising popularity among voters. Sergio Mattarella, the current Italian president who has power over the parliament, on the other hand may resist outside pressure to kick off an early election due to possible risks incurred during an upcoming G7 summit hosted by Italy in Sicily and possible clashes with Italy's budget law.<sup>130</sup>
- Meanwhile, the Italian banking system remained fragile as regional banks are currently in need of bail outs. After a proposed plan to inject EUR 6.6bn to fill in EUR 8.8bn capital shortfall of Banca Monte dei Paschi di Siena, Italy's fourth biggest bank and the world's oldest surviving bank, Italy, whose government has been trying its best to avoid losses by ordinary Italians who put their savings in the bank, has once again been trapped in a dilemma to save its two regional banks, Banca Popolare di Vicenza and Veneto Banca. The ECB, European Commission and Germany were concerned about this plan as not only this might be interpreted as an attempt to avoid banking resolution, but also the plan is seen to be unlikely sustainable in covering losses already incurred or likely in the near future. This is in light of total writedowns of EUR 10.2bn for the two banks, which is almost double their combined equity capital of EUR 5.7bn and a cost-income ratio of 100% for both of the banks.<sup>131</sup>
- Italy's latest published public accounts were that of Q4 2016. Total expenditures and total revenues for Q4 both decreased by 0.9%. The decrease in total expenditures was attributed to an increase in current expenditures by 2.4% and a fall of 30.7% in total capital expenditures. Decreases in total revenues were driven by lower current revenues (-0.7%) and lower capital revenues (-16.7%). The government deficit to GDP ratio was 2.3%, unchanged compared with the second quarter of 2015. Italy's debt-to-GDP ratio is set to stand at 132.5% as of Q4 2016.<sup>132,133</sup>
- In an attempt to cut 2017 budget deficit, the Italian government would raise taxes on tobacco and gambling and crack down on evasion of value added tax. The proposed cut, which was demanded by the EU and approved by the cabinet, amounted to EUR 3.4bn or 0.2% of GDP. Doing so made the government revise this year's deficit target to 2.1% of GDP from 2.3%, with next year's confirmed at 1.2%. Most of the extra savings came from a change in Value Added Tax (VAT) scheme, where Italian public bodies will pay VAT directly to the Treasury instead of going through the supplier. The Treasury is also set to forecast Italy's economy this year at a stable public debt to GDP ratio of 132.5%, and 131% for 2018.<sup>134</sup>

**Sovereign Credit Ratings**

- As of January 6, 2017, Moody's rated Italy under Baa2 with a negative outlook amid Italy's banking problems, uncertainty due to upcoming Italian election, and global political risk. Fitch revised its outlook on Italy to stable from negative and downgraded its rating at BBB on April 21, citing weak growth, frail banking sector, high debt and political instability as 2018 Italian election draws near. Standard & Poor's has yet to publish its ratings on Italy.<sup>135,136</sup>

## Italian Banks

The aggregate 1-year RMI PD for Italian banks declined marginally over Q1 2017 as the Italian government has stepped up measures to bail out two of its recently failing regional banks, namely Banca Popolare di Vicenza and Veneto Banca apart from Banca Monte dei Paschi di Siena and save its weakening banking system. The external support from the European Commission and the ECB to save Monte dei Paschi and a recent remarkable performance by Intesa Sanpaolo, the largest bank in Italy in terms of market capitalization, has also helped to reduce upward pressure to the credit risk of Italian banks and improve its credit quality. Not only has Italy seen a fall in the ratio of NPL to outstanding loans since Q4 2016, loans to firms and households are increasingly being controlled to prevent bad loans from sprouting out. A positive current account surplus recorded at the end of Q4 2016 at EUR 249.6bn (or 14.9% of GDP), an improvement of more than 2% of GDP compared to Q3 2016, also suggests that the Italian government will have more budget to improve liquidity across its banking institutions. Looking ahead, with a marginally improving credit performance, household consumption and investment, coupled with increasing political instability as the 2018 Italian election draws near, Italy may need to step up its game even further to get back on track and compete with developed economies.



## Profitability

- Italian banks reported higher profits during Q1. Total profits of banks in the FTSE Italia All-Share Banks Index, increased to EUR 10.174bn as of March 31, 2017 from a value of EUR 8.125bn on December 31, 2016. Its corresponding index fund also reported an increase in T12M earnings to EUR -2,647.73mn on Q1 2017 from EUR -1,843.20mn on Q4 2016 amid mounting bad debt problems faced by Italian banks, such as Banca Monte dei Paschi, Banca Popolare di Vicenza and Veneto Banca. Meanwhile, Intesa Sanpaolo, Italy's largest bank by market capitalization, on the other hand, reported



excellent performance where its net income rose 11.8% in Q1 2017 to EUR 901m due to income from fees and commission while still being able to commit to a EUR 10bn cash dividend for its investors. The bank is also going all out to generate higher income overseas through possibly many more loan-organizing, share selling and M&A activities in Russia. This came shortly after it advised on the sale of a stake in sanctioned Russian oil major Rosneft.<sup>137,138</sup>

### Funding & Liquidity

- Coupons on new 5-year euro-denominated Italian bank bond issuances increased to 1.99% during Q1 on the back of a stable 3m Euribor rate during the quarter.
- The 12-month percentage change in deposits of funds by Italian residents was 2.77% in March 2017, while total deposits of non-domestic residents fell by 6.95%. Bank funding from the Eurosystem grew by 70.9% compared to March 2016, while debt securities issued by banks fell 15.71% compared to this month last year. Total deposits and postal savings by residents and non-financial corporations was EUR 1.65tn, based on latest data published in Q4 2016.<sup>139,140</sup>
- Interest charged on business loans (other than bank overdrafts) of over EUR 1mn to non-financial institutions was 1.221% in March 2017, up from the 1.06% reported in January 2017. Similar loans with collateral and/or guarantees were charged with an interest rate of 1.677%, down from last year's 2.028% during 2016. Bank interest rates on loans to sole proprietors was 3.202% in March 2017, down from 3.582% last year.
- The Bank of Italy's liabilities to Euro-area financial counterparties (overnight deposits including reserve requirements) totaled EUR 88.14bn in March 2017.
- Italian bank liabilities towards the Eurosystem increased to EUR 200bn on February 2017 from EUR 185bn in November 2016. Lenders increased their funds held at the ECB by 31.7% YoY on February 2017 while capital and reserves increased to EUR 462bn during the three months ending February 2017.
- According to the latest bank lending survey, the first quarter of the year has seen credit access conditions differentiated by firm categories and sector of economic activity. Categorically, medium-sized and large manufacturing firms are currently benefitting from accommodative lending firms. Sector wise, credit supply policies for service and manufacturing firms remained relatively constant, while construction firms still have challenging access to financing.

### Asset Quality

- The Bank of Italy said that the ratio of new non-performing loans to outstanding declined during Q4 to 2.3% from 2.6% in the preceding quarter. The non-performing ratio for loans to firms dropped from 4.1% to 3.6% while a similar measure for loans to households fell from 1.7% to 1.5%.<sup>141</sup>
- The percentage of write-downs over non-performing loans increased to 51.7% from 47.3%, where part of which was due to UniCredit's massive write-downs.

<sup>120</sup> May 16, 2017, [Preliminary estimate of GDP](#), Italian National Institute of Statistics, [istat.it](http://istat.it)

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<sup>122</sup> May 2, 2017, [Employment and unemployment \(provisional estimates\)](#), Italian National Institute of Statistics, [istat.it](http://istat.it)

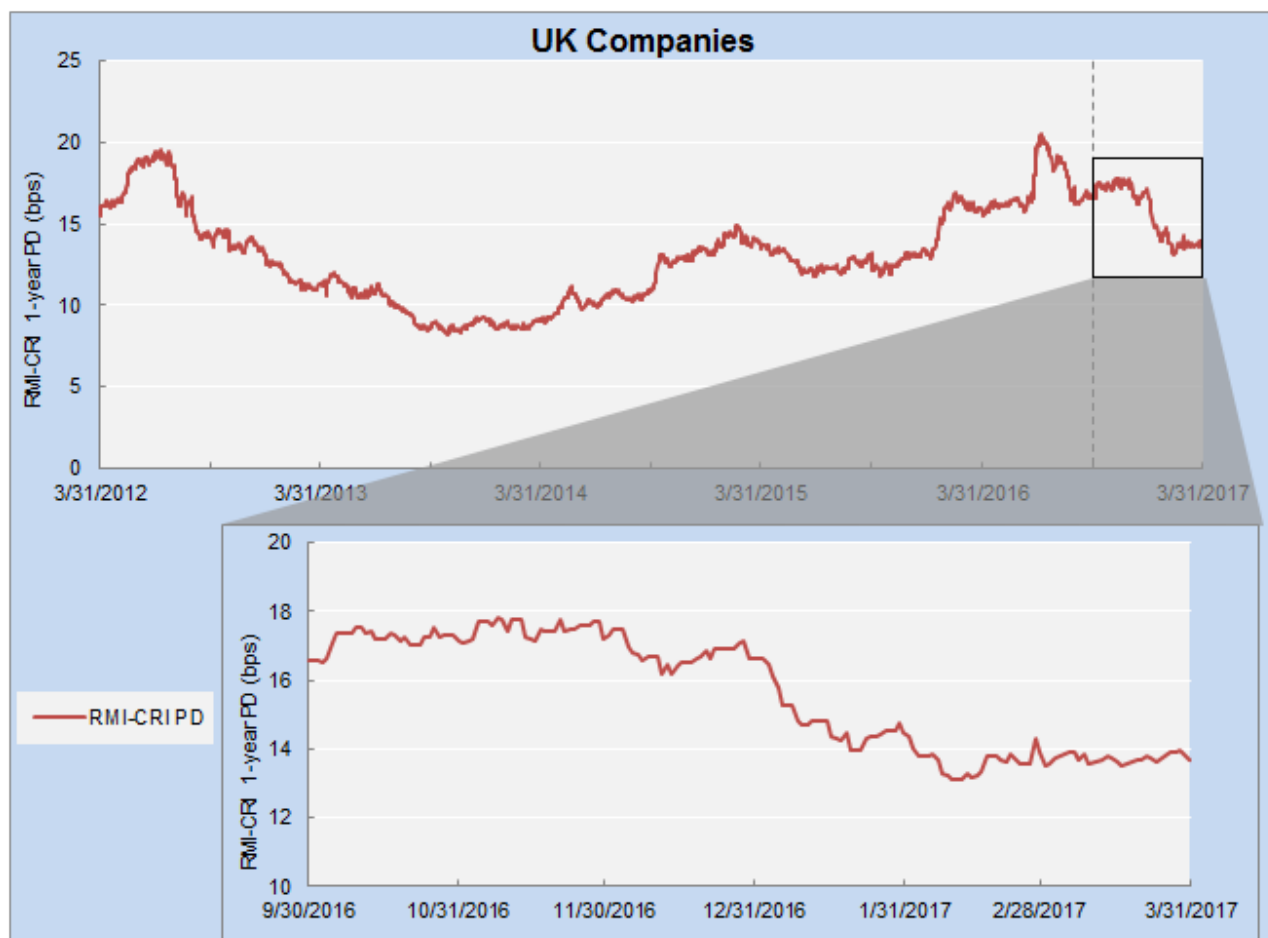
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- <sup>127</sup> May 5, 2017, [Retail PMI shows slowest fall in sales for five months](https://www.markiteconomics.com/), Markit, <https://www.markiteconomics.com/>
- <sup>128</sup> May 8, 2017, [Italian MFIs: Interest per annum on new loans to non-financial corporations](http://sdw.ecb.europa.eu), ECB, [sdw.ecb.europa.eu](http://sdw.ecb.europa.eu)
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- <sup>131</sup> March 22, 2017, [Italy to test EU rules again with Veneto banks bailout](http://www.reuters.com/), Reuters, <http://www.reuters.com/>
- <sup>132</sup> April 4, 2017, [Quarterly non-financial accounts for General Government, households income and savings and non-financial corporation profits](http://www.istat.it), Italian National Institute of Statistics, [istat.it](http://www.istat.it)
- <sup>133</sup> April 24, 2017, [Quarterly government debt \(unit of measure: Percentage of gross domestic \(GDP\)\)](http://ec.europa.eu/eurostat), Eurostat, [ec.europa.eu/eurostat](http://ec.europa.eu/eurostat)
- <sup>134</sup> April 25, 2017, [Italy hikes taxes to rein in 2017 budget deficit](https://www.rte.ie/), RTE, <https://www.rte.ie/>
- <sup>135</sup> April 26, 2017, [Frexit makes way for Quitaly atop bond investor worry list](http://www.cnbc.com/), CNBC, <http://www.cnbc.com/>
- <sup>136</sup> Dec 7, 2016, [Moody's changes outlook on Italy's Baa2 issuer rating to negative; affirms rating](https://www.moody's.com), Moody's, <https://www.moody's.com>
- <sup>137</sup> May 5, 2017, [Intesa posts surprise profit gain as bet on fees pays off](https://www.ft.com/), FT, <https://www.ft.com/>
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## UK Companies

The aggregate RMI-CRI 1-year PD for companies in the UK maintained fairly stable with a slight downtrend amid a slowing economy. GDP growth missed forecasts, growing by 0.3% QoQ, while unemployment dipped. While the manufacturing and construction sectors still posted positive growth, it was slower than the preceding quarter. Rising inflation chipped into the consumer spending, while a sterling depreciation increased exports and narrowed UK's trade deficit. The official triggering of the Brexit process is expected to bring along further economic uncertainty, while a general slowdown in the EU might also weigh on UK's economy.



## Economy

- The UK's Q1 2017 GDP missed forecasts, growing by 0.3% QoQ, a slowdown from the 0.6% in Q4 2016, and the slowest rate of growth since Q1 2016. The slower growth was mainly due to slower growth of the services sector, which grew 0.3%, compared to 0.8% in the preceding quarter. Within the services sector, the distribution, hotels and restaurants industries decreased by 0.5% caused in part by prices increasing more than spending, while the transport, storage and communications industries fell by 0.2%, due to a decline in publishing activities, telecommunications, and programming activities. Production, construction and agriculture grew by 0.3%, 0.2% and 0.3% respectively during the quarter. Manufacturing grew by 0.5%, suggesting that the sterling depreciation has boosted export demand. Growth, compared to Q1 2016, was 2.1%.<sup>142</sup>

- The unemployment rate was 4.7% for the period of December 2016 to February 2017, down from 5.1% recorded during this same period one year ago, and lower than the 4.9% recorded in the preceding three months of September to November 2016. The employment rate was 74.6%, 0.1 percentage points higher than the previous three months, and the joint highest since comparable records started in 1971. Estimates indicate that average weekly earnings for employees in real terms increased by 0.1% excluding bonuses, compared to last year. 79.4% of men aged 16 to 64 were in work, while 69.9% of women were in work, higher than the 79.2% and 69.1% respectively one year ago.<sup>143</sup>
- Consumer spending began to slow in Q1 2017 after strong growth seen in the late 2016. The average growth rate of consumer spending was 0.9% – the weakest level in 3 years, compared to 2.7% in Q4 2016, based on Visa's UK Consumer Spending Index. In March 2017, online retailers saw customer spending increase by 8.2%, marking the strongest monthly growth rate since November 2016's Black Friday online shopping festival. High street spending was down 1.3% due to milder weather and longer days.<sup>144</sup>
- In the 3 months up to February 2017, the deficit on trade in goods and services narrowed to GBP 8.5bn from a deficit of GBP 8.8bn for the 3 months up to November 2016. The narrowing deficit is attributed to a greater rise in exports (3.1%) than the rise in imports (2.7%). Machinery, transport equipment, oil and chemicals exports saw an increase over the period. Over the same 3 months, the trade deficit of goods to the EU widened by 1.11%, while to non-EU countries, the same number widened by 1.93%. Sterling fluctuations continue to affect trade prices. Export prices decreased by 0.5% while import prices dropped by 0.9%, coinciding with a sterling appreciation of 0.8% compared to its January 2017 average.<sup>145</sup>
- The Markit/CIPS PMI for the manufacturing sector declined for a third straight month and stood at 54.2 in March 2017, but it was the eighth month the index stayed above the neutral 50.0 mark. The index read 55.4 in January and 54.5 in February, making the average over the opening quarter of 2017 to read 54.7. The slowdown is centered on consumer goods producers, while intermediate and investment good sectors showed accelerated rates of increase.<sup>146</sup>
- In the construction sector, the PMI index read 52.2 for March, after readings of 52.2 and 52.5 in January and February respectively. The general slowdown is attributed to the slowing residential construction sector, but was offset by civil engineering and construction work. The average over the first quarter of 2017 was 52.3.<sup>147</sup>

## Monetary

- In its most recent meeting on 15 March 2016, the Monetary Policy Committee (MPC) of the Bank of England voted 8-1 to maintain the Bank Rate at 0.25% to meet its 2% inflation target. The Committee also voted unanimously to continue sterling non-financial investment-grade corporate bond purchases totaling up to GBP 10bn, and maintain the stock of UK government bond purchases at GBP 435bn. Both programmes will continue to be financed by the issuance of central bank reserves. The Bank of England expects inflation to rise beyond 2% over the next few months before peaking at 2.75% in early 2018 and dropping gradually back to its 2% target thereafter. The overshoot is said to be reflective effects resulting from the drop in the sterling.<sup>148</sup>
- CPI grew by 2.3% YoY in March 2017, unchanged from its growth in February 2017, but higher than the 1.8% increase recorded in January 2017. All broad categories, for the first time since June 2014, contributed to the growth of CPI in March 2017. Housing and housing services (owner occupiers housing costs) and transport categories, driven

by rising fuel prices, were the largest contributors to the uptick in CPI. Food prices also rose by 0.3% on the year, the first positive record since June 2014. The furniture and household goods prices category was the smallest contributor to inflation.<sup>149</sup>

## Politics

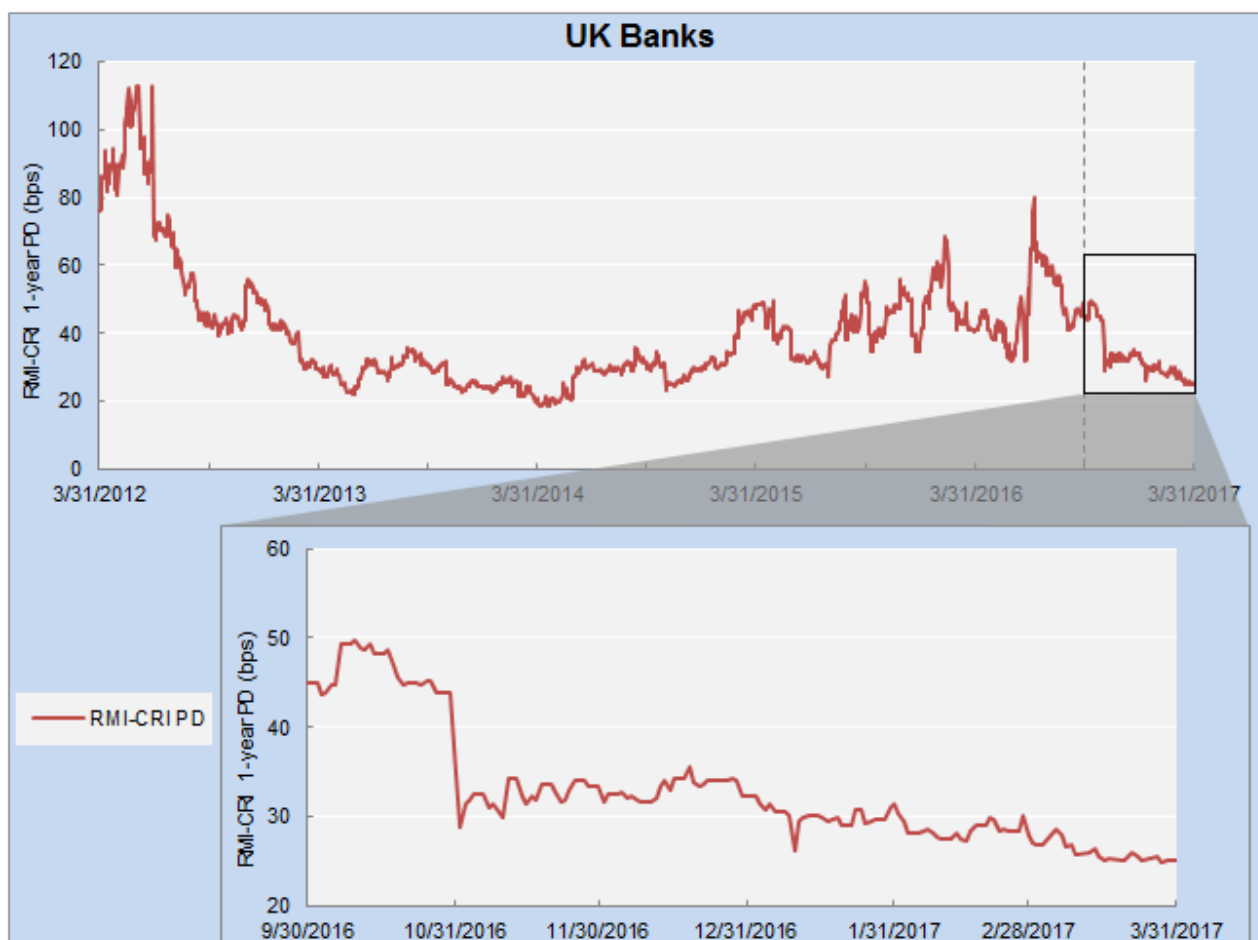
- The Brexit process officially began on March 28, following British Prime Minister (PM) Theresa May's diplomatic letter sent to European Union President Donald Tusk, formally notifying him on Britain's intention to leave the bloc. May has called for unity amidst triggering the Brexit process, and reiterated her intention to seek the best Brexit deal for all of Britain. Her comments come amidst Scotland's intention to hold a second referendum on its independence from the UK. Scotland's previous referendum took place on September 18, 2014, with 55.3% voting against independence from the UK.<sup>150</sup>
- In a somewhat shocking move, PM May has announced plans to call for a snap general election on the 8th of June, reasoning that Britain needed stability and strong leadership following the Brexit referendum. Her announcement is a reversal on her previous stance that she will not call an early election as in line with the Fixed-term Parliaments Act 2011, an election had not been due until May 7, 2020. The UK Parliament voted 522-13 in favour of having the election early. Theresa May's Conservative party holds 330 seats, or 36.9%, while Labour, led by Jeremy Corbyn, holds 232 seats, or 30.4%.<sup>151</sup>
- Under Article 50 of the Lisbon Treaty, any country exiting the EU must agree to a deal and exit the EU within 2 years of formal notification. This means that the UK is scheduled to leave the EU on March 29, 2019, unless all 28 EU members agree to extend the date. Negotiations for Brexit will be headed by a Brexit committee, led by veteran Conservative MP and Leave campaigner David Davis. Former French Foreign Affairs Minister and European Commissioner Michael Barnier will be EU's chief negotiator in the talks.<sup>152,153</sup>
- The UK Government also published details on a Great Repeal Bill, aimed to ensure European law will no longer apply in the UK. The Bill will repeal the 1972 European Communities Act, the law which took the UK into the EU and put precedence on European law over laws passed in the British Parliament. The Bill will also end the jurisdiction of the European Court of Justice. However, a lower house committee in the Parliament has warned that some UK law will not work after completing the Brexit, as it refers to EU institutions.<sup>154</sup>

## Sovereign Credit Ratings

- Moody's long term rating on the UK remains unchanged since June 2016 at Aa1, one notch below the highest possible Aaa. S&P's rating was also unchanged on the country's foreign and local currency long term debt at AAu, one notch below the coveted AAA. Fitch Ratings also rated the sovereign long term debt at AA, one rank from its highest rating of AAA. All three rating agencies maintained a negative outlook on the UK, with impending uncertainty over the Brexit process affecting the ratings.

## UK Banks

The RMI-CRI aggregate 1-year PD for banks in the United Kingdom improved slightly in Q1 2017 similar to the trend exhibited by the RMI-CRI aggregate 1-year PD for UK companies. In terms of fundamentals, profitability in terms of net income has improved greatly, despite a fall in net interest receivable. The FTSE 350 Banks Index declined by a marginal 0.09% over the quarter.



## Profitability

- According to the Monetary financial institutions quarterly income and expenditure tables released by the Bank of England, the net interest receivable fell from GBP 16.58bn in Q3 2016 to GBP 16.53bn in Q4 2016. Interest receivable was GBP 32.3bn, while interest payable was GBP 15.77bn. While interest payable on deposits dropped by over 7%, interest receivable from loans and advances dropped by just under 3%.<sup>155</sup>
- Banks reported a surge in net fees and commissions, up to GBP 5.22bn across Q4 2016 from GBP 4.55bn in Q3 2016. Dividends paid by banks fell by over 58%, from GBP 2.86bn in Q3 2016 to GBP 1.19bn in Q4 2016.
- In terms of net income, Barclays reported a net profit of GBP 329mn in Q1 2017, up from GBP 238mn in Q4 2016. Lloyds also reported an increase in net profit, which more than doubled to GBP 871mn in Q1 2017 from GBP 413mn in Q4 2016. HSBC returned to black with a USD 3.465bn net profit in Q1 2017 after bleeding USD 4.229bn in the last quarter of 2016. The Royal Bank of Scotland also reported a net income of GBP 375bn in the first quarter of 2017 after losing GBP 4.28bn in Q4 2016.

## Funding & Liquidity

- According to the Bank Liabilities Survey produced by the Bank of England, UK banks and building societies reported that total funding volumes decreased slightly in Q1 2017. More specifically, within the total, retail deposit funding (which includes deposits from households and from private non-financial firms) and other funding, which includes wholesale deposits and wholesale debt funding, had both fallen. Lenders also reported that their average cost of capital decreased significantly in the quarter, and their total capital levels had increased slightly.<sup>156</sup>
- Investor demand for wholesale debt increased in Q1 2017, although demand from retail investors decreased by -0.6%. Lenders largely expect demand for wholesale debt to remain broadly unchanged in Q2 2017.
- Wholesale debt funding from commercial paper declined by -10.9% in Q1 2017 but is expected to rise by 27.9% in the next quarter, while funding from short-term repo/securities lending was up 5.8% this quarter.

## Asset Quality

- The total write-offs of sterling denominated loans dropped from GBP 1.43bn in Q3 2016 to GBP 1.19bn in Q4 2016, attributed in part to credit-card write-offs to individuals, which decreased from GBP 584mn to GBP 394mn. Write-offs to private non-financial corporations declined from GBP 552mn to GBP 431mn from Q3 to Q4 2016. Write-offs to non-residents increased to GBP 51mn from GBP 13mn in the previous quarter.<sup>157</sup>
- Write-offs on loans denominated in foreign currency increased from GBP 218mn in Q3 2016 to GBP 325mn in Q4 2016, driven by a 49% spike in the write-offs on loans to non-residents, which constitute the largest share of the total write-offs.

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<sup>142</sup>April 28th 2017 [Gross domestic product, preliminary estimate: Jan to Mar 2017](http://www.ons.gov.uk), ONS, <http://www.ons.gov.uk>

<sup>143</sup>April 12th 2017 [UK labour market: Apr 2017](http://www.ons.gov.uk), ONS, <http://www.ons.gov.uk>

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<sup>148</sup>March 16th 2017 [Bank Rate held at 0.25%, government bond purchases at GBP 435bn and corporate bond purchases at up to GBP 10bn](http://www.bankofengland.co.uk/), Bank of England, <http://www.bankofengland.co.uk/>

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<sup>151</sup>April 18th 2017 [Theresa May to seek general election on 8 June](http://www.bbc.com), BBC, <http://www.bbc.com>

<sup>152</sup>April 25th 2017 [Brexit: All you need to know about the UK leaving the EU](http://www.bbc.com), BBC, <http://www.bbc.com>

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<sup>155</sup>May 4th 2017 [Bankstats \(Monetary & Financial Statistics\) - March 2017](http://www.bankofengland.co.uk/), Bank of England, <http://www.bankofengland.co.uk/>

<sup>156</sup>April 13th 2017 [Bank Liabilities Survey - Survey Results 2017 Q1](http://www.bankofengland.co.uk/), Bank of England, <http://www.bankofengland.co.uk/>

<sup>157</sup> May 4th 2017 [Bankstats \(Monetary & Financial Statistics\) - March 2017](http://www.bankofengland.co.uk/), Bank of England,  
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# 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 April 05, 2017, using data up to March 31, 2017. 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 Q4 2016 and Q1 2017. 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 top two graphs of each regions show the time series of the distribution of Probability of Default implied Ratings (PDiR). The PDiR methodology is described in the last section of Appendix [D](#). The different colored areas in the graph indicate different PDiR classes. From the bottom, the blue area indicates the percentage of CCC/C firms, the bottom-most white area indicates B firms, the orange area indicates BB firms, the middle white area indicates BBB firms, the green area indicates A firms, the top-most white area indicates AA firms, and the maroon area indicates AAA firms.

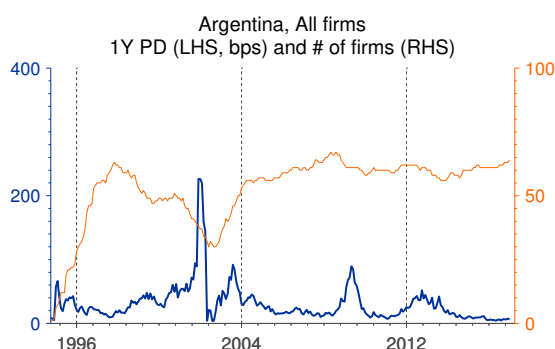
The bottom 12 graphs in each region show the time series of RMI-CRI 1-year aggregate PD for all exchange listed firms in the region, all non-financial firms in the region, and firms in each of the ten industry sectors in the region. Each graph shows the PD in thick blue on the left axis and the count 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.

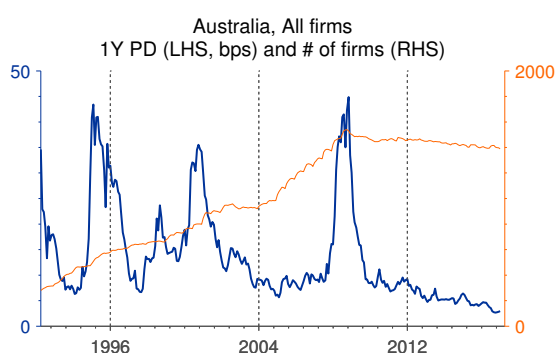
Appendix [D](#) gives a more detailed description of the data in Appendix [C](#), along with a description of the PDiR.



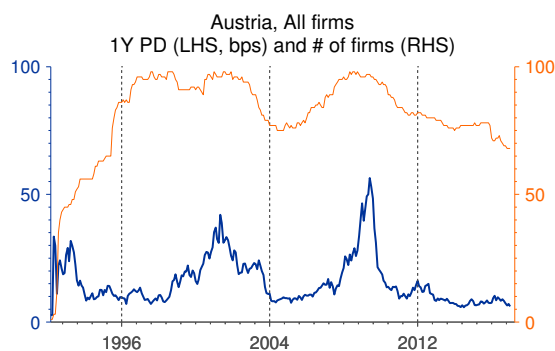
## A PD by economies



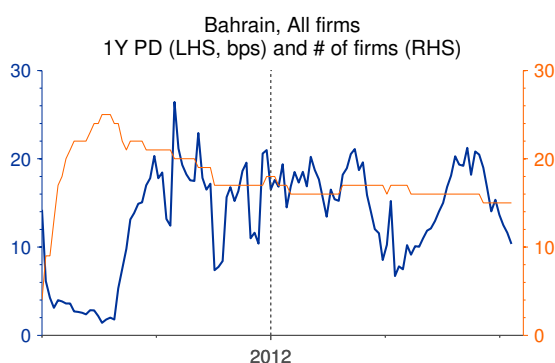
Argentina	2016Q4			2017Q1		Q1-Q4	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	11	21.8	32.3	20.4	27.0	-4.0	13.5
Basic Materials	6	25.6	39.3	24.3	41.7	-0.6	19.6
Communications	3	2.2	3.6	2.2	1.2	-0.3	2.9
Consumer Cyclical	6	8.5	34.1	11.2	44.1	1.1	23.5
Consumer Non-cyclical	16	5.0	74.0	4.4	19.5	-0.2	55.4
Diversified	2	24.3	5.9	22.8	6.5	-1.6	0.6
Energy	4	8.2	52.0	6.4	28.2	-3.5	24.1
Industrial	7	4.1	2.4	4.1	4.6	-0.4	4.5
Technology	1	0.8	—	0.5	—	-0.3	—
Utilities	10	7.8	9.5	3.3	6.9	-3.1	6.2



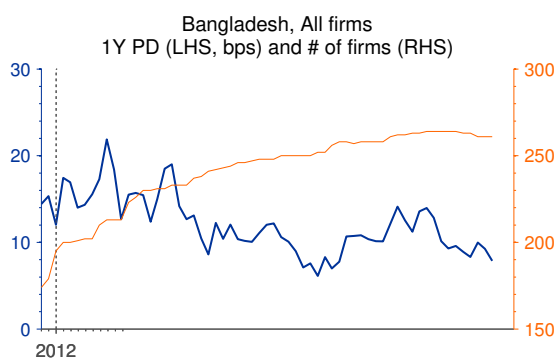
Australia	2016Q4			2017Q1		Q1-Q4	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	152	1.4	18.4	1.1	16.3	-0.0	7.3
Basic Materials	542	6.1	39.9	5.7	33.8	-0.4	20.2
Communications	99	5.3	26.5	4.8	17.0	-0.1	20.1
Consumer Cyclical	79	2.4	23.4	2.2	41.3	-0.0	20.7
Consumer Non-cyclical	234	2.8	33.8	1.9	34.2	-0.2	17.4
Diversified	8	3.8	8.9	1.1	4.7	-1.6	6.2
Energy	175	11.5	45.6	9.4	51.1	-0.2	35.0
Industrial	112	3.8	39.8	4.1	41.2	-0.1	11.3
Technology	104	4.8	22.0	5.0	19.1	-0.2	11.2
Utilities	13	6.8	17.7	2.2	11.2	-2.5	10.0



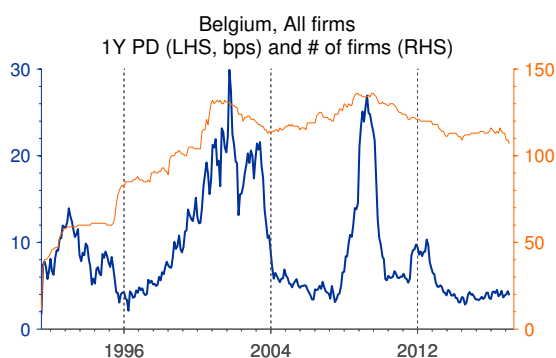
Austria	2016Q4			2017Q1		Q1-Q4	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	21	4.0	23.4	2.8	13.5	-1.1	11.8
Basic Materials	3	2.2	3.1	1.4	3.0	-0.8	0.2
Communications	1	2.5	—	1.1	—	-1.5	—
Consumer Cyclical	10	7.9	35.5	5.6	26.6	-1.0	9.2
Consumer Non-cyclical	7	10.1	8.3	8.4	8.9	-1.7	4.5
Energy	4	5.8	2.6	5.2	1.7	-1.4	1.3
Industrial	17	7.0	15.4	6.0	8.2	-1.3	9.5
Technology	4	5.9	4.6	3.7	1.4	-1.9	4.3
Utilities	2	2.1	2.2	1.6	1.7	-0.5	0.5



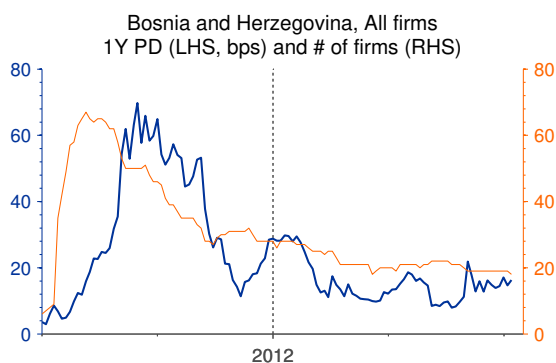
Bahrain	2016Q4			2017Q1		Q1-Q4	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	11	25.2	71.6	27.4	55.3	0.2	24.6
Basic Materials	1	8.0	—	5.8	—	-2.3	—
Communications	2	1.0	0.1	1.1	0.0	0.0	0.1
Consumer Cyclical	2	0.0	0.0	0.5	0.7	0.4	0.6
Industrial	1	10.5	—	14.6	—	4.1	—



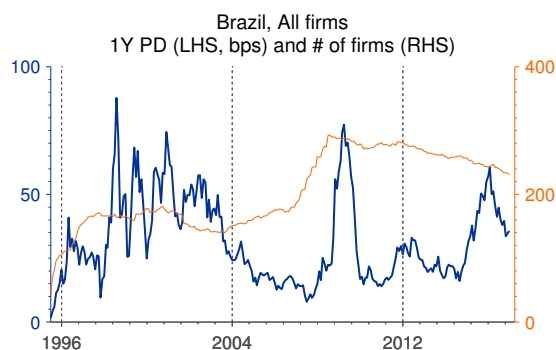
Bangladesh	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	97	24.1	42.0	18.6	30.8	-3.8	17.2
Basic Materials	15	5.2	15.4	4.5	18.1	-0.0	11.5
Communications	7	2.4	14.9	1.7	11.6	-0.2	3.6
Consumer Cyclical	59	12.8	57.0	11.1	50.0	-0.6	16.0
Consumer Non-cyclical	40	11.0	31.8	8.8	34.5	0.3	12.7
Diversified	1	76.8	—	61.5	—	-15.2	—
Energy	5	10.6	12.3	9.2	5.1	-1.8	8.0
Industrial	30	13.3	17.3	11.5	15.9	-0.1	6.0
Technology	1	2.5	—	3.1	—	0.7	—
Utilities	7	4.8	28.9	5.0	28.3	-0.1	0.9



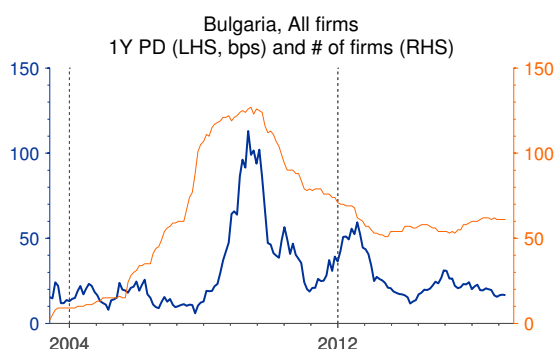
Belgium	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	31	1.5	86.2	1.9	56.9	-0.3	29.9
Basic Materials	7	9.4	9.5	3.0	14.0	-0.4	5.7
Communications	6	4.7	69.2	2.6	10.5	-1.3	59.0
Consumer Cyclical	6	4.4	2.7	2.8	3.3	0.2	1.8
Consumer Non-cyclical	24	4.3	7.2	3.2	8.1	-1.0	5.5
Diversified	4	0.8	1.8	0.2	1.1	-0.6	0.8
Energy	2	43.9	37.8	31.8	19.3	-12.1	18.5
Industrial	24	6.0	19.4	3.5	10.3	-1.4	12.4
Technology	5	3.0	3.6	2.2	5.2	-0.3	2.5
Utilities	2	1.3	0.2	0.9	0.6	-0.4	0.4



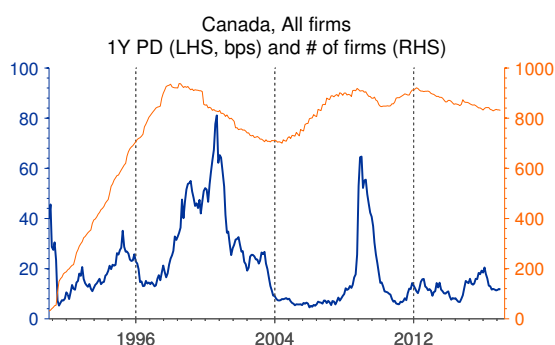
Bosnia and Herzegovina	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	3	66.8	12.4	49.3	31.5	-2.8	25.7
Basic Materials	4	29.7	122.6	23.8	2.1	-5.9	120.6
Communications	2	6.7	5.3	5.0	4.2	-1.7	1.1
Consumer Cyclical	1	40.6	—	69.2	—	28.6	—
Consumer Non-cyclical	2	4.6	5.3	7.9	1.3	3.3	6.6
Energy	2	28.2	26.2	24.6	21.6	-3.6	4.6
Industrial	3	49.6	39.9	40.9	60.4	12.4	28.2
Utilities	4	87.5	209.1	58.6	53.8	-33.8	158.0



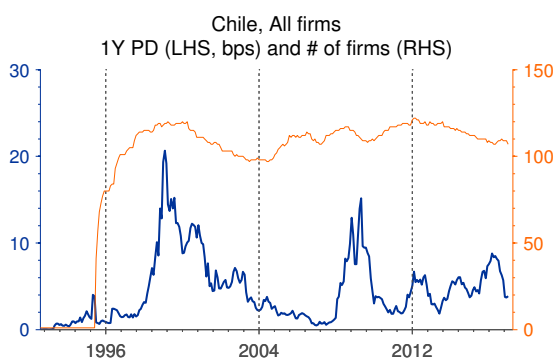
Brazil	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	55	43.0	178.9	34.7	176.2	-2.9	71.2
Basic Materials	20	61.5	131.3	63.8	114.8	7.8	110.8
Communications	8	43.0	298.0	29.0	205.7	-5.2	101.1
Consumer Cyclical	48	32.1	298.1	32.5	315.4	-1.8	170.6
Consumer Non-cyclical	39	19.0	183.3	17.9	180.8	-0.4	78.3
Diversified	7	74.0	90.2	30.6	78.0	-0.2	60.1
Energy	11	20.6	353.3	26.5	725.3	0.3	385.7
Industrial	28	96.7	322.8	99.1	407.7	-2.3	185.9
Technology	5	7.2	47.2	3.5	67.0	0.3	21.3
Utilities	27	26.6	59.4	21.6	63.5	-0.2	32.4



Bulgaria	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	11	17.2	32.0	9.3	19.5	-2.0	20.1
Basic Materials	3	15.1	7.2	10.5	5.6	-4.6	1.8
Communications	1	47.4	—	37.3	—	-10.1	—
Consumer Cyclical	2	10.9	0.5	10.4	5.0	-0.5	4.6
Consumer Non-cyclical	11	25.8	28.0	24.6	21.1	0.0	10.3
Diversified	10	23.4	13.4	16.1	12.6	-3.4	6.4
Energy	2	12.0	3.5	18.2	0.6	6.2	2.8
Industrial	12	6.9	22.1	3.3	16.9	-1.8	6.4
Utilities	1	7.9	—	6.2	—	-1.7	—



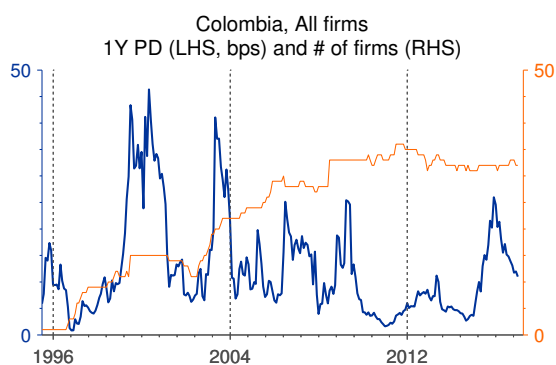
Canada	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	140	3.5	132.5	2.3	194.1	-0.2	81.3
Basic Materials	257	23.0	144.9	18.5	166.7	-1.1	121.7
Communications	47	8.6	657.8	9.6	523.3	-0.1	195.1
Consumer Cyclical	62	4.8	160.9	5.4	167.3	-0.0	61.0
Consumer Non-cyclical	110	11.6	621.5	10.8	427.6	-0.4	209.6
Diversified	6	6.6	47.9	4.4	77.1	-0.5	46.9
Energy	133	12.7	705.8	17.2	710.2	0.4	81.1
Industrial	68	6.1	86.9	6.1	94.0	-0.3	25.6
Technology	39	30.3	377.5	35.2	320.6	-0.3	133.6
Utilities	16	6.4	20.6	6.2	25.5	-0.4	9.1



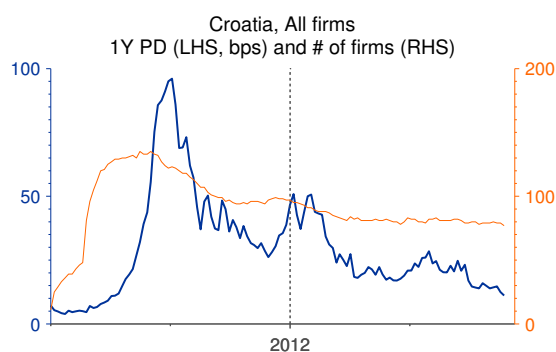
Chile	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	26	4.7	42.1	4.8	51.4	-0.0	12.7
Basic Materials	13	5.3	27.1	2.6	37.4	-0.4	13.1
Communications	3	11.7	23.8	10.4	26.6	1.5	3.3
Consumer Cyclical	11	7.8	20.6	6.0	17.0	-0.5	19.2
Consumer Non-cyclical	24	1.5	42.9	1.3	49.5	-0.2	18.7
Diversified	5	7.6	6.6	9.0	6.2	0.7	2.4
Energy	2	66.6	2.5	33.7	16.9	-32.9	19.4
Industrial	23	3.8	6.4	2.0	7.4	-0.3	4.1
Technology	1	0.6	—	1.4	—	0.8	—
Utilities	13	3.7	32.8	3.0	41.3	0.2	13.2



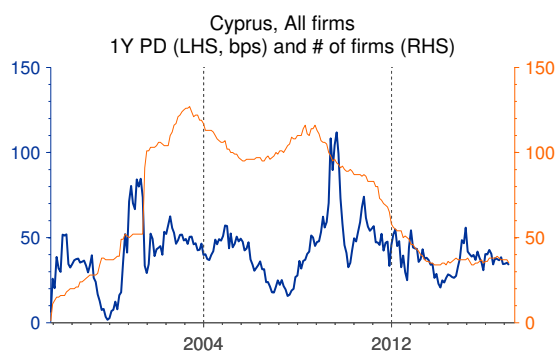
China	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	276	45.7	92.7	36.9	73.7	-4.9	42.0
Basic Materials	395	67.7	84.4	54.0	83.9	-6.6	47.7
Communications	201	26.8	121.5	22.6	226.5	-1.8	119.8
Consumer Cyclical	617	44.9	124.5	35.3	123.4	-5.4	53.6
Consumer Non-cyclical	570	28.0	82.9	21.0	52.3	-4.5	52.1
Diversified	33	90.8	72.8	76.2	64.2	-15.2	37.3
Energy	116	69.6	91.6	49.7	108.6	-8.4	45.9
Industrial	1021	56.0	111.1	44.3	98.6	-7.2	48.2
Technology	215	28.9	54.5	24.4	56.8	-2.1	20.4
Utilities	88	63.2	83.9	50.2	64.0	-10.5	35.5



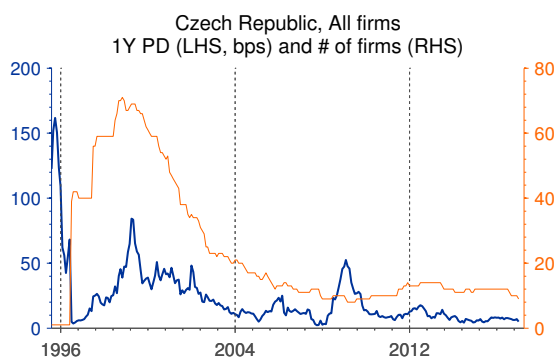
Colombia	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	9	27.4	35.5	33.3	32.2	-1.6	16.8
Basic Materials	2	13.6	7.3	15.1	16.6	1.5	9.3
Communications	1	2.3	—	1.3	—	-1.0	—
Consumer Cyclical	2	91.3	48.4	82.1	66.5	-9.2	18.1
Consumer Non-cyclical	1	0.4	—	0.2	—	-0.2	—
Diversified	2	62.4	58.6	61.0	47.7	-1.4	10.9
Energy	3	23.8	13.7	18.6	8.2	-5.2	5.5
Industrial	9	11.5	8.0	9.6	9.6	0.2	3.5
Utilities	3	14.9	7.5	11.7	6.3	-2.6	1.2



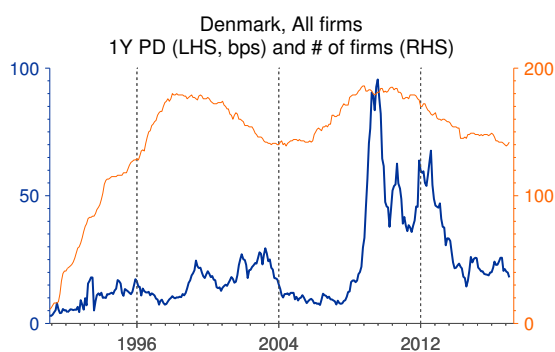
Croatia	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	9	17.4	37.3	17.6	41.1	-0.2	25.3
Basic Materials	3	55.4	41.0	90.4	28.1	12.9	25.4
Communications	4	17.0	62.1	7.1	25.5	-9.9	36.7
Consumer Cyclical	28	7.5	92.0	8.2	40.7	-0.9	52.4
Consumer Non-cyclical	24	16.1	34.0	19.6	38.3	2.0	14.0
Diversified	1	56.5	—	42.0	—	-14.5	—
Energy	2	2.2	2.9	2.0	2.3	-0.2	0.6
Industrial	15	37.3	29.0	24.3	56.8	-7.2	48.0



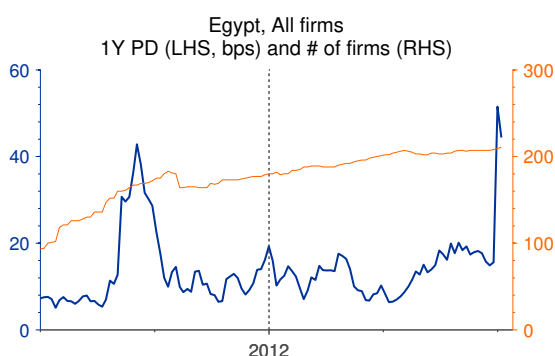
Cyprus	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	14	37.6	131.0	37.1	62.6	-1.1	76.5
Basic Materials	3	32.4	14.3	26.3	5.3	-8.8	10.3
Consumer Cyclical	5	47.5	47.8	48.5	41.4	-6.5	14.2
Consumer Non-cyclical	8	35.1	186.7	23.3	130.2	-5.5	57.0
Energy	4	62.8	292.2	99.0	4128.5	46.9	3836.7
Industrial	5	14.7	74.4	9.3	79.5	0.2	11.2
Technology	2	55.8	68.4	43.3	54.5	-12.6	13.9



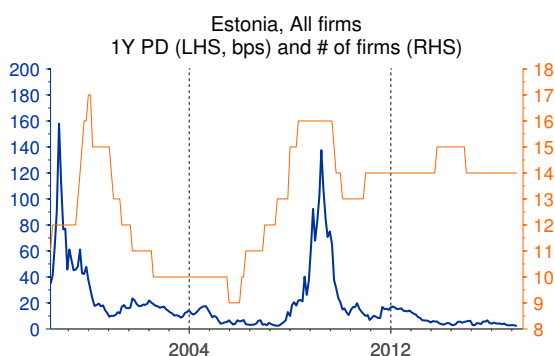
Czech Republic	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	2	14.6	12.4	10.9	5.7	-3.7	6.7
Communications	1	5.3	—	3.7	—	-1.7	—
Consumer Cyclical	2	8.3	5.4	3.6	2.6	-4.7	2.7
Consumer Non-cyclical	2	3.1	1.4	2.5	0.2	-0.6	1.2
Diversified	1	4.0	—	6.3	—	2.3	—
Energy	2	7.8	3.5	6.3	5.3	-1.5	1.9
Industrial	1	7.2	—	3.8	—	-3.4	—
Utilities	1	12.9	—	12.6	—	-0.2	—



Denmark	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	43	27.9	96.5	23.6	40.9	-4.9	74.1
Basic Materials	1	2.8	—	1.7	—	-1.1	—
Communications	8	23.6	18.3	12.5	28.5	-2.0	15.9
Consumer Cyclical	16	23.1	36.4	13.2	29.5	-9.8	10.5
Consumer Non-cyclical	31	7.3	17.1	6.6	15.8	-0.8	6.0
Diversified	2	2.7	3.7	0.8	1.2	-1.8	2.6
Energy	2	28.4	19.9	16.5	15.6	-11.9	4.3
Industrial	32	23.6	91.0	12.2	63.5	-6.2	31.7
Technology	10	21.0	55.0	19.0	64.7	5.1	14.7
Utilities	2	30.0	34.8	24.4	27.6	-5.7	7.1



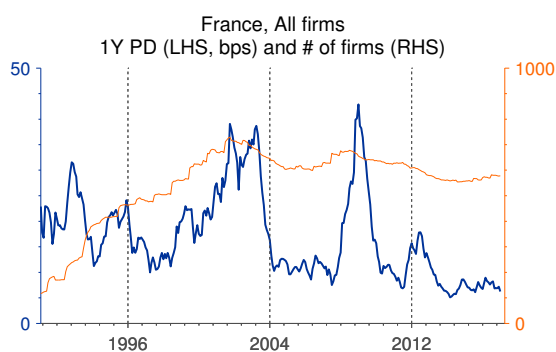
Egypt	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	68	66.4	95.2	45.0	61.2	-18.4	42.8
Basic Materials	21	47.1	90.0	14.3	51.2	-18.9	51.3
Communications	7	54.5	44.1	61.3	50.0	2.2	10.7
Consumer Cyclical	22	55.3	47.6	40.1	38.8	-11.2	27.0
Consumer Non-cyclical	45	34.6	67.6	17.9	39.9	-13.2	49.7
Diversified	1	3.5	—	1.6	—	-1.9	—
Energy	1	108.5	—	99.4	—	-9.2	—
Industrial	36	51.4	71.0	34.9	44.7	-21.1	31.9
Technology	1	30.1	—	26.0	—	-4.1	—
Utilities	1	109.7	—	95.5	—	-14.2	—



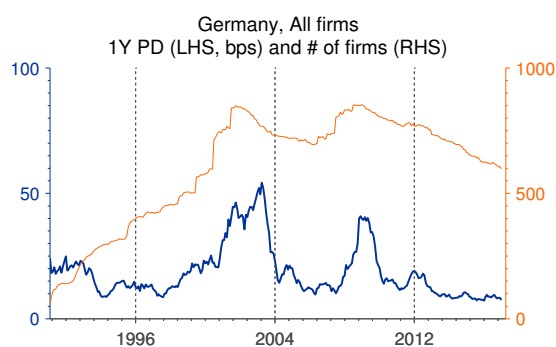
Estonia	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	3	16.6	9.6	24.4	16.0	5.4	7.9
Communications	1	2.4	—	2.2	—	-0.1	—
Consumer Cyclical	5	2.0	20.6	2.1	14.8	0.0	6.6
Consumer Non-cyclical	1	19.3	—	4.5	—	-14.8	—
Industrial	4	1.5	2.6	1.4	3.4	-0.1	0.7
Utilities	1	0.3	—	0.2	—	-0.0	—



Finland	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	20	8.2	5.8	5.0	6.0	-0.1	3.4
Basic Materials	7	4.7	1.3	3.7	1.8	-0.1	1.3
Communications	13	5.4	17.7	2.8	11.7	-2.5	11.7
Consumer Cyclical	13	3.6	9.1	3.4	4.9	-1.1	6.1
Consumer Non-cyclical	23	4.5	132.2	4.1	86.2	-0.7	48.3
Energy	2	45.6	62.0	32.2	42.1	-13.5	20.0
Industrial	38	5.1	35.3	4.7	24.7	-1.3	11.8
Technology	14	5.8	23.3	4.1	18.3	-1.1	6.0
Utilities	1	4.0	—	2.1	—	-1.9	—



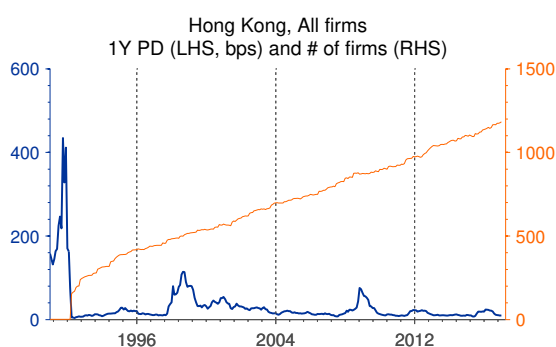
France	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	86	5.6	33.8	5.0	28.0	-0.7	10.4
Basic Materials	19	11.6	47.4	10.5	59.9	-0.0	13.5
Communications	63	8.9	29.7	8.6	20.9	-1.4	12.9
Consumer Cyclical	83	6.7	61.4	5.7	26.4	-0.8	50.3
Consumer Non-cyclical	132	5.0	14.6	3.9	13.0	-0.6	8.0
Diversified	9	24.0	57.2	18.6	42.9	-2.7	29.7
Energy	14	13.3	34.8	7.9	63.4	-1.0	33.4
Industrial	113	6.7	30.3	4.4	29.7	-1.0	17.3
Technology	66	4.2	21.0	4.9	19.8	-0.6	5.2
Utilities	11	8.0	11.9	7.3	9.3	-1.1	3.7



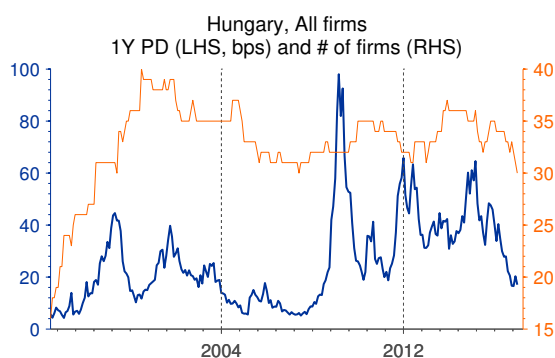
Germany	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	149	10.0	70.5	8.2	29.8	-1.1	49.1
Basic Materials	26	5.9	23.7	5.7	48.3	-0.5	25.4
Communications	61	11.1	71.3	8.3	29.3	-1.4	51.0
Consumer Cyclical	79	8.2	387.5	6.1	361.7	-1.9	52.4
Consumer Non-cyclical	97	7.0	43.2	5.4	33.1	-0.7	27.6
Diversified	4	58.4	38.5	39.8	34.2	-6.8	34.6
Energy	17	12.2	708.1	12.3	689.4	-2.1	43.3
Industrial	127	7.2	298.7	5.4	222.9	-1.6	147.5
Technology	70	5.4	21.2	4.3	20.1	-1.1	10.5
Utilities	10	7.5	41.7	5.7	53.4	-0.6	16.9



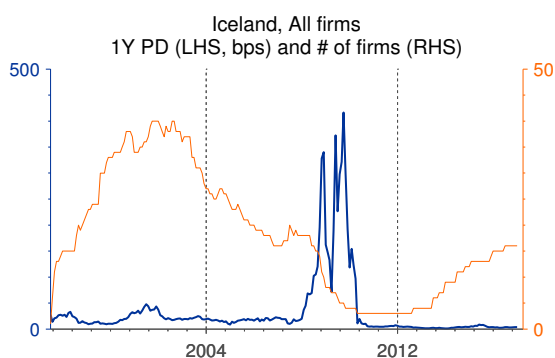
Greece	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	17	33.5	128.4	18.4	83.5	-3.0	96.3
Basic Materials	10	31.8	92.5	17.3	54.0	-2.0	92.2
Communications	11	93.2	495.9	101.3	265.1	-17.7	246.7
Consumer Cyclical	34	40.2	130.1	42.4	85.9	-0.4	92.5
Consumer Non-cyclical	33	48.6	67.0	35.2	39.5	-12.6	48.1
Diversified	1	27.4	-	21.4	-	-6.0	-
Energy	5	25.6	25.0	16.5	32.4	-1.7	11.2
Industrial	49	68.7	202.2	46.4	428.4	-11.9	257.4
Technology	8	28.1	25.3	21.3	25.8	-3.1	19.4
Utilities	4	6.8	14.7	5.5	10.4	-1.4	4.4



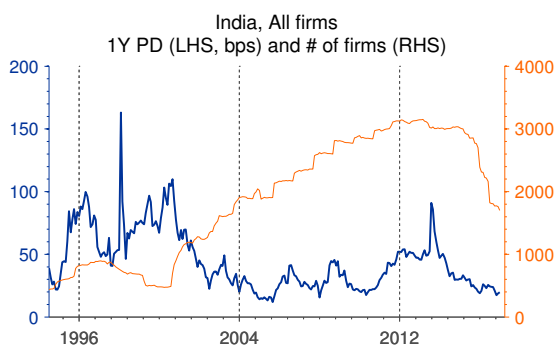
Hong Kong	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	285	8.6	40.6	6.2	37.2	-0.6	19.0
Basic Materials	62	13.8	87.6	8.6	57.1	-0.4	48.9
Communications	78	9.2	31.1	7.4	30.3	-0.9	9.2
Consumer Cyclical	278	5.3	33.3	4.3	32.9	-0.5	10.4
Consumer Non-cyclical	163	5.5	35.0	5.8	46.2	-0.2	26.2
Diversified	40	5.5	33.7	4.6	31.3	-1.1	13.5
Energy	43	24.5	78.9	22.6	82.4	-1.8	26.6
Industrial	230	10.4	71.2	8.7	60.0	-0.4	24.9
Technology	57	11.1	56.6	9.9	35.7	-0.8	32.8
Utilities	21	11.1	13.7	9.3	8.1	-2.7	7.7



Hungary	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	8	13.7	45.5	14.7	32.5	0.1	16.4
Communications	4	58.4	97.0	70.8	119.9	12.4	23.0
Consumer Cyclical	2	31.1	37.5	27.8	31.9	-3.3	5.7
Consumer Non-cyclical	6	23.4	34.5	18.5	19.5	-3.7	23.4
Diversified	2	34.8	4.0	29.0	20.7	-5.8	16.7
Energy	4	30.5	109.9	22.8	16.8	-8.1	98.7
Industrial	1	30.6	—	24.0	—	-6.6	—
Technology	2	22.2	6.9	22.5	18.4	0.3	11.5
Utilities	3	2.5	4.3	1.3	4.1	-0.8	0.5



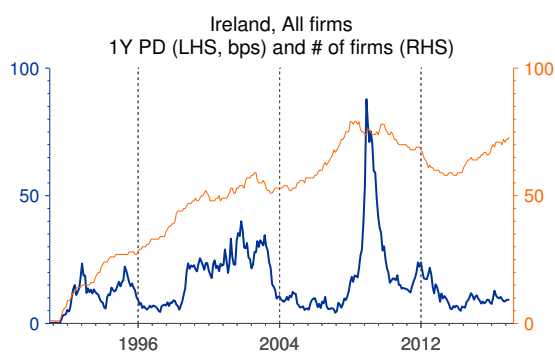
Iceland	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	5	4.5	3.1	3.3	3.5	-1.2	2.0
Communications	2	4.3	0.7	3.1	0.7	-1.2	0.0
Consumer Cyclical	2	6.7	8.7	26.6	35.6	19.9	26.9
Consumer Non-cyclical	2	63.5	74.9	8.4	2.2	-55.1	77.2
Energy	1	3.5	—	10.6	—	7.2	—
Industrial	2	9.1	11.8	5.9	7.0	-3.1	4.7
Technology	1	9.0	—	3.3	—	-5.8	—



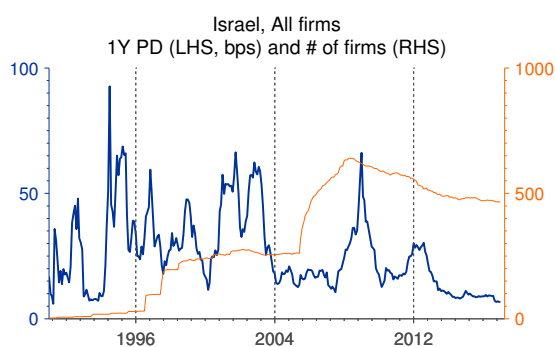
India	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	235	26.3	155.0	25.8	132.2	-1.4	34.4
Basic Materials	244	15.0	71.3	14.7	56.1	-1.0	26.9
Communications	75	16.9	81.5	13.6	61.2	-1.1	24.7
Consumer Cyclical	371	14.8	68.5	12.7	75.1	-1.6	41.9
Consumer Non-cyclical	314	8.9	57.3	7.1	57.0	-0.4	20.0
Diversified	21	20.3	81.8	17.6	114.2	-5.4	106.2
Energy	40	23.7	57.8	20.8	85.6	-0.6	36.5
Industrial	412	16.8	77.9	13.4	85.7	-2.0	31.2
Technology	101	7.7	81.1	7.7	88.1	-0.0	14.5
Utilities	34	35.4	124.2	23.6	169.4	-4.0	79.1



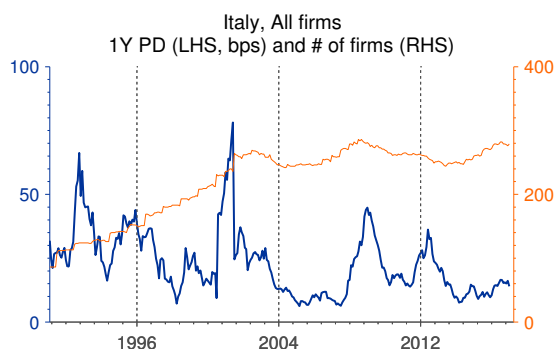
Indonesia	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	131	25.2	39.1	28.5	39.8	-0.0	19.9
Basic Materials	45	19.0	67.8	19.4	51.9	0.0	28.1
Communications	28	25.6	82.0	20.8	76.0	-0.8	16.6
Consumer Cyclical	70	15.1	31.5	12.5	31.8	0.0	12.8
Consumer Non-cyclical	77	13.8	34.4	15.0	54.9	-0.0	28.0
Diversified	1	95.7	—	72.2	—	-23.5	—
Energy	33	8.4	73.9	8.1	79.5	-0.0	30.6
Industrial	76	19.3	40.9	15.4	49.9	-0.4	33.3
Technology	7	2.2	27.4	2.8	27.5	0.5	3.4
Utilities	4	20.1	23.9	15.3	16.9	-0.2	14.7



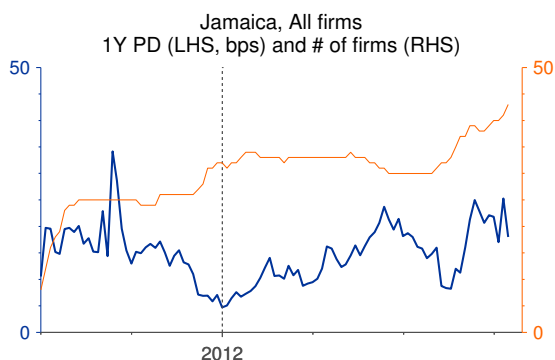
Ireland	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	9	10.8	22.4	7.0	18.3	-0.4	5.5
Basic Materials	11	20.8	39.9	30.5	49.5	1.4	16.8
Communications	4	52.6	96.7	38.2	72.1	-14.4	24.7
Consumer Cyclical	7	9.1	26.7	6.4	5.2	-2.8	29.1
Consumer Non-cyclical	26	6.1	720.6	4.8	269.6	-0.1	488.5
Energy	8	28.2	114.9	52.7	33.5	7.1	104.5
Industrial	6	5.3	13.8	3.0	9.5	-2.0	4.3
Technology	1	0.0	—	0.0	—	-0.0	—



Israel	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	118	9.5	88.7	9.2	74.9	-1.1	24.4
Basic Materials	14	8.6	49.9	7.0	35.4	-0.4	15.2
Communications	33	11.8	71.7	8.6	100.2	-1.3	34.7
Consumer Cyclical	50	7.5	36.6	6.1	27.9	-0.9	19.9
Consumer Non-cyclical	100	10.0	61.0	7.8	63.3	-0.4	26.1
Diversified	9	9.0	9.7	7.1	9.3	-1.5	3.0
Energy	31	7.5	26.3	5.6	27.1	-0.6	4.7
Industrial	80	5.8	39.7	5.8	38.3	-0.5	24.6
Technology	35	3.4	32.4	3.0	36.3	-0.2	17.2

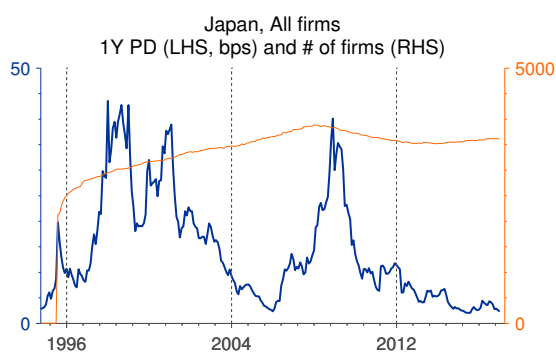


Italy	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	59	26.4	84.1	15.7	61.9	-6.3	27.4
Basic Materials	4	10.7	6.0	7.0	5.0	-4.0	1.3
Communications	37	21.5	22.7	12.6	17.3	-6.4	9.9
Consumer Cyclical	49	12.7	26.6	5.9	24.3	-4.2	9.9
Consumer Non-cyclical	39	10.1	35.4	5.7	21.7	-2.7	19.0
Diversified	3	13.1	12.0	4.9	3.4	-8.3	8.6
Energy	18	12.5	58.8	8.8	22.4	-2.4	40.5
Industrial	51	12.0	38.8	5.4	26.7	-4.6	17.0
Technology	16	11.6	14.5	9.2	7.2	-1.4	10.9
Utilities	12	9.6	15.6	5.2	22.5	-3.7	7.5

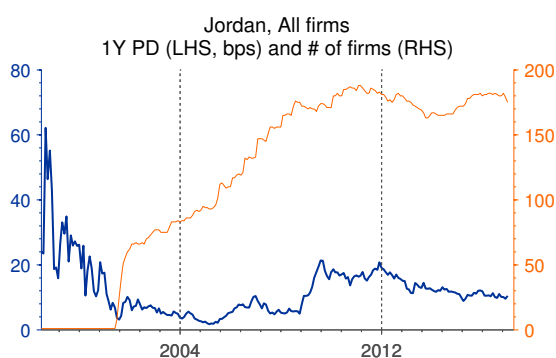


Jamaica	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	15	19.4	35.0	11.4	24.1	-2.6	16.8
Basic Materials	2	58.9	54.9	35.1	45.7	-23.8	9.2
Communications	3	168.0	87.3	120.3	86.1	-4.0	29.0
Consumer Cyclical	6	5.8	15.2	5.1	7.3	-0.2	10.0
Consumer Non-cyclical	13	14.7	29.6	12.5	20.6	-2.4	9.9
Diversified	3	28.5	26.3	35.3	19.5	0.4	12.4
Industrial	4	1.5	8.9	7.9	29.3	-0.1	30.9
Technology	1	0.3	—	0.3	—	-0.1	—

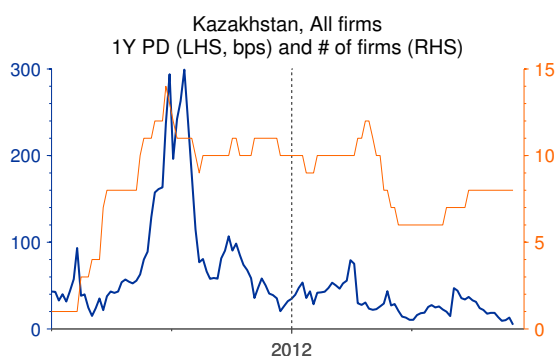




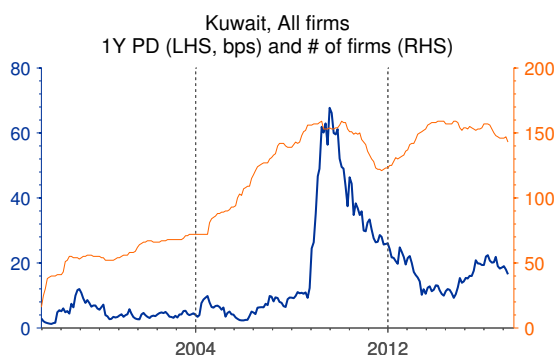
Japan	2016Q4			2017Q1		Q1-Q4	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	346	7.4	19.4	7.9	24.9	0.1	9.3
Basic Materials	237	2.4	4.6	1.8	4.7	-0.1	2.6
Communications	275	1.4	7.5	1.1	7.1	-0.1	5.6
Consumer Cyclical	854	2.0	24.1	1.7	25.3	-0.1	7.0
Consumer Non-cyclical	620	0.8	5.7	0.7	58.2	-0.0	55.6
Diversified	3	14.3	7.8	9.8	9.2	0.5	3.4
Energy	17	3.0	8.6	3.9	10.5	0.1	5.2
Industrial	966	2.2	8.7	1.9	9.1	-0.1	3.1
Technology	300	1.4	19.2	1.1	19.3	-0.1	3.3
Utilities	21	6.3	16.4	5.0	17.3	-0.4	3.1



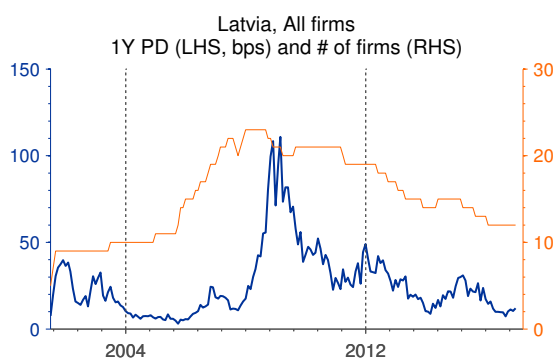
Jordan	2016Q4			2017Q1		Q1-Q4	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	93	7.7	36.9	6.5	32.5	-0.4	16.8
Basic Materials	16	13.5	33.5	13.0	34.9	-0.6	20.6
Communications	2	38.9	19.4	40.5	27.7	1.6	8.3
Consumer Cyclical	15	13.0	55.5	15.4	60.6	0.4	11.3
Consumer Non-cyclical	29	9.9	38.0	10.7	35.4	-0.3	20.2
Diversified	2	31.9	44.3	22.9	32.1	-9.0	12.2
Energy	2	6.0	8.4	5.0	7.0	-1.0	1.3
Industrial	21	20.1	117.8	18.8	106.9	-0.4	14.6
Technology	1	15.7	-	15.1	-	-0.6	-
Utilities	2	32.3	10.5	33.5	18.8	1.1	8.3



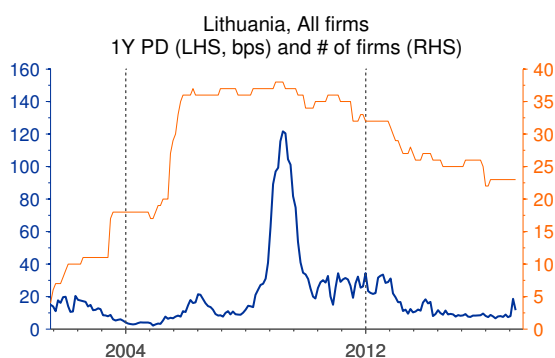
Kazakhstan	2016Q4			2017Q1		Q1-Q4	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	3	91.5	71.5	108.9	86.6	17.4	15.5
Basic Materials	1	12.2	-	5.7	-	-6.5	-
Communications	1	3.2	-	1.9	-	-1.3	-
Energy	2	2.4	2.6	1.5	1.9	-0.9	0.8
Utilities	1	9.4	-	6.6	-	-2.8	-



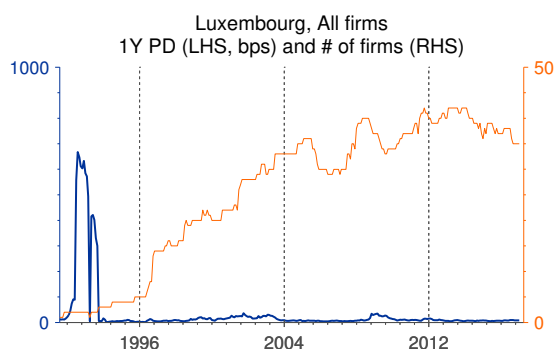
Kuwait	2016Q4			2017Q1		Q1-Q4	
	#	Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	87	23.5	71.1	22.6	69.6	-4.2	15.9
Basic Materials	4	3.9	12.5	3.3	16.3	-0.3	4.0
Communications	6	7.0	23.5	3.9	71.0	-0.5	52.2
Consumer Cyclical	12	26.6	28.9	18.1	28.4	-1.3	13.9
Consumer Non-cyclical	11	5.6	26.6	2.9	15.1	-0.9	13.3
Diversified	5	16.1	10.9	13.6	13.6	-0.1	6.1
Energy	7	48.6	81.4	43.8	93.6	-0.2	59.5
Industrial	23	20.9	21.7	14.9	19.2	-4.1	7.6
Technology	1	0.5	-	0.3	-	-0.2	-



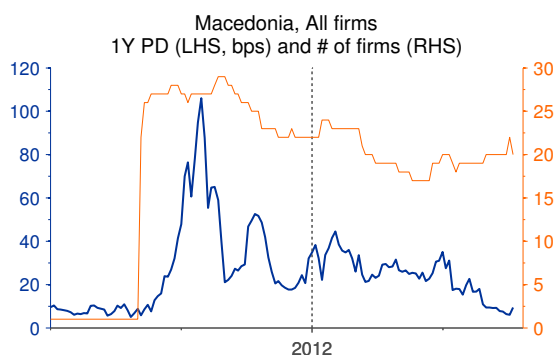
Latvia	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Communications	1	2.3	—	1.1	—	-1.2	—
Consumer Cyclical	2	73.9	77.0	64.7	58.0	-9.2	19.0
Consumer Non-cyclical	3	9.7	7.0	6.6	3.5	-3.1	4.0
Industrial	3	25.1	15.4	37.7	18.3	0.1	7.8
Utilities	1	5.5	—	6.2	—	0.7	—



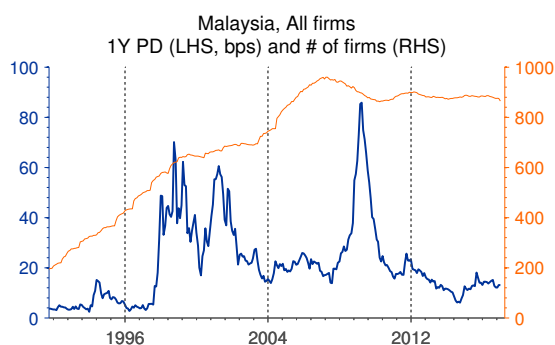
Lithuania	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	6	3.6	18.6	2.4	20.0	-0.3	2.2
Basic Materials	1	1.6	—	2.7	—	1.0	—
Communications	1	9.5	—	13.1	—	3.6	—
Consumer Cyclical	5	21.3	24.0	12.8	27.0	0.0	5.4
Consumer Non-cyclical	9	28.7	22.6	6.2	25.4	0.6	8.6
Energy	1	1.3	—	2.3	—	1.0	—
Industrial	2	36.7	6.1	46.4	2.0	9.7	8.2
Utilities	4	11.2	10.8	9.4	12.2	-0.3	3.4



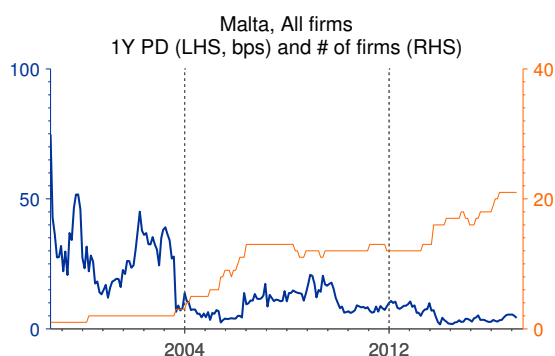
Luxembourg	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	9	11.8	35.9	8.4	137.5	-0.0	106.2
Basic Materials	5	9.8	13.9	8.1	11.7	-1.0	2.9
Communications	4	13.9	640.7	11.4	116.1	-4.4	524.6
Consumer Cyclical	2	109.8	148.1	16.3	18.2	-93.5	129.9
Consumer Non-cyclical	4	4.9	25.2	2.6	20.2	-2.4	5.1
Industrial	7	12.4	61.4	9.9	41.7	-2.5	20.3
Technology	3	1.4	1.5	1.0	1.0	-0.3	0.5
Utilities	1	34.1	—	22.3	—	-11.8	—



Macedonia	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	7	9.4	53.5	10.4	44.3	-2.3	10.9
Basic Materials	3	27.8	8.4	30.3	13.4	-0.6	6.1
Communications	1	3.4	—	2.0	—	-1.3	—
Consumer Cyclical	2	6.2	8.7	6.6	9.3	0.4	0.5
Consumer Non-cyclical	4	1.5	2.1	1.2	2.6	-0.2	0.6
Industrial	2	28.1	33.9	21.5	22.7	-6.6	11.2
Utilities	1	29.0	—	36.9	—	7.9	—



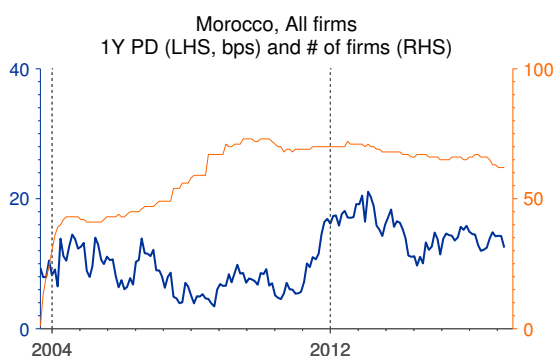
Malaysia	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	126	13.5	104.6	11.3	66.5	-1.2	49.0
Basic Materials	67	19.2	192.0	14.9	201.6	-0.9	49.5
Communications	38	13.1	74.4	8.7	40.1	-5.6	39.6
Consumer Cyclical	119	15.3	51.7	10.8	40.8	-1.7	20.5
Consumer Non-cyclical	148	4.7	136.2	3.6	184.5	-0.1	77.6
Diversified	25	8.3	169.5	7.3	89.6	-1.1	82.8
Energy	32	59.6	247.4	39.8	167.1	-7.9	191.1
Industrial	279	18.8	164.7	10.8	114.7	-2.2	107.0
Technology	63	23.7	67.2	16.7	54.8	-1.5	35.0
Utilities	6	5.0	25.0	7.0	27.0	1.6	3.4



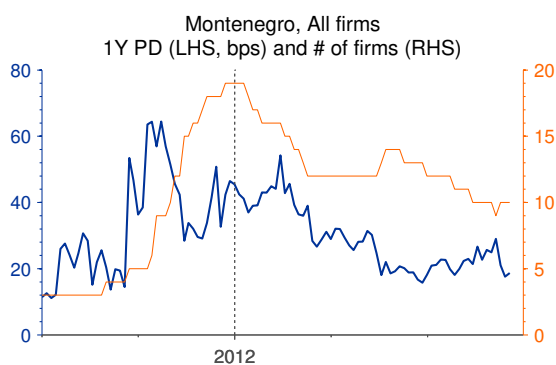
Malta	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	12	4.1	10.3	5.4	10.6	0.6	2.1
Communications	3	6.7	24.0	8.3	12.0	-0.2	12.3
Consumer Cyclical	5	2.8	5.5	3.1	6.0	-1.1	3.5
Consumer Non-cyclical	2	4.5	6.1	5.2	7.1	0.6	1.0
Energy	1	19.9	—	17.0	—	-2.9	—
Industrial	1	0.1	—	0.0	—	-0.1	—



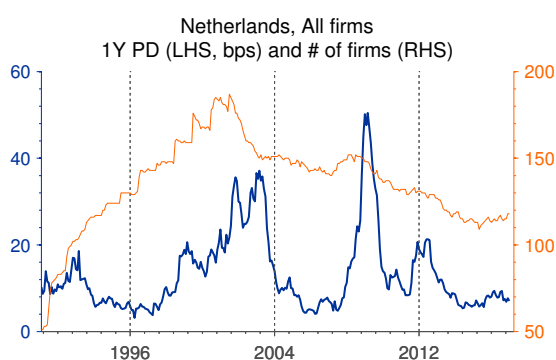
Mexico	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	30	3.9	27.0	5.5	24.9	1.0	12.7
Basic Materials	11	7.6	8.4	5.4	11.5	-0.4	7.0
Communications	5	19.8	62.9	20.0	73.0	0.0	13.5
Consumer Cyclical	24	3.5	49.2	4.8	55.4	0.1	19.3
Consumer Non-cyclical	15	1.3	11.5	2.4	8.0	0.0	4.2
Diversified	5	6.1	9.2	5.0	8.1	0.1	2.5
Industrial	18	2.8	192.7	7.0	471.9	0.2	409.0
Utilities	2	3.3	3.9	8.4	10.3	5.1	6.4



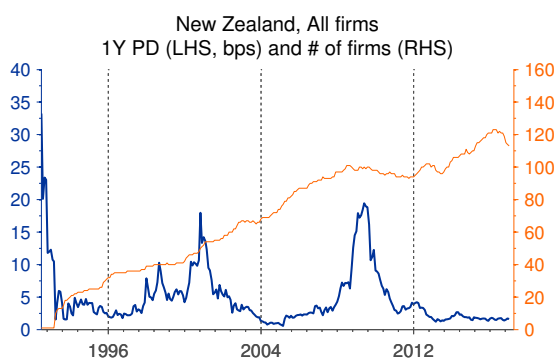
Morocco	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	19	15.9	19.8	15.8	17.0	-0.9	5.3
Basic Materials	9	26.5	19.1	17.6	21.6	-2.3	11.4
Communications	1	0.3	—	0.2	—	-0.1	—
Consumer Cyclical	7	14.1	35.7	14.9	39.3	0.5	6.4
Consumer Non-cyclical	8	3.6	10.3	3.4	5.8	-0.5	5.4
Diversified	1	240.6	—	31.6	—	-209.0	—
Energy	1	1.4	—	1.5	—	0.1	—
Industrial	10	42.5	55.8	45.4	48.3	-1.0	23.7
Technology	4	12.3	7.1	11.2	6.7	-3.7	2.8
Utilities	3	4.9	15.3	4.6	16.8	0.0	1.5



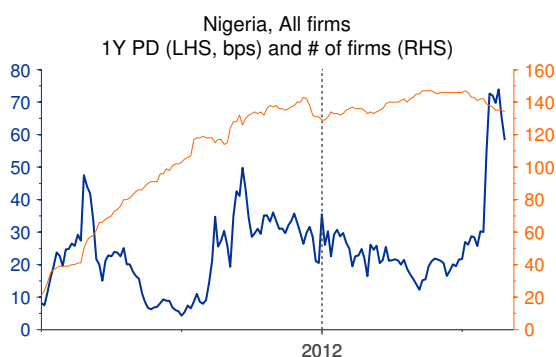
Montenegro	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Communications	1	6.3	—	7.6	—	1.3	—
Consumer Cyclical	4	19.7	16.2	19.5	13.9	-0.7	3.6
Consumer Non-cyclical	5	29.3	6.8	23.8	6.7	-5.5	4.8
Energy	1	51.7	—	31.4	—	-20.3	—
Utilities	2	14.4	10.9	12.7	10.5	-1.7	0.4



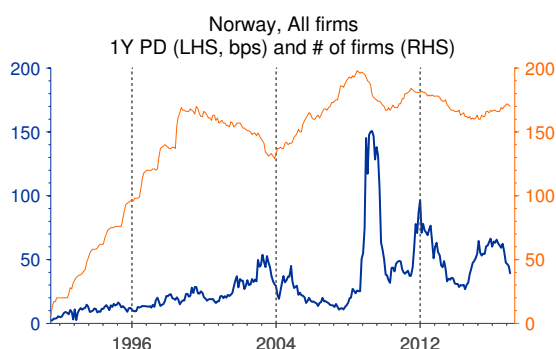
Netherlands	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	22	13.9	47.4	10.1	60.3	-0.8	20.3
Basic Materials	6	2.1	54.2	1.4	43.5	-1.1	10.8
Communications	11	11.5	117.0	8.3	55.8	-3.0	67.9
Consumer Cyclical	12	3.4	197.7	2.1	213.0	-0.8	16.2
Consumer Non-cyclical	33	5.0	28.7	4.8	21.4	-0.5	12.5
Energy	8	12.5	10.5	9.8	17.4	-0.8	12.5
Industrial	19	10.3	15.1	5.6	12.2	-1.3	8.4
Technology	14	4.2	30.0	2.9	13.6	-0.8	26.2



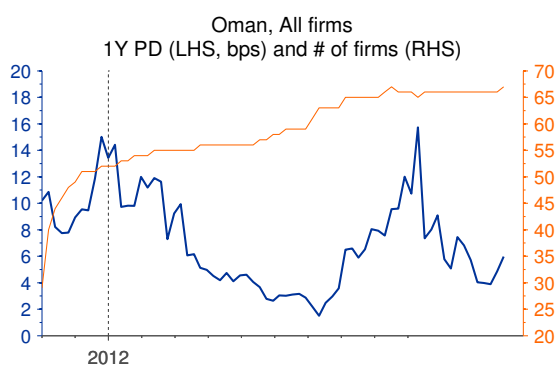
New Zealand	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	20	0.2	64.3	0.1	63.3	-0.0	23.0
Basic Materials	2	19.8	6.7	33.8	10.0	14.0	3.4
Communications	8	11.2	24.6	8.8	12.9	0.0	18.1
Consumer Cyclical	15	1.5	12.2	1.4	13.3	-0.0	3.6
Consumer Non-cyclical	35	0.8	379.4	0.7	463.7	-0.0	84.5
Diversified	2	33.3	46.4	41.5	58.1	8.2	11.7
Energy	4	6.9	5.8	8.0	6.2	-0.2	2.2
Industrial	18	1.9	39.1	2.4	38.2	-0.0	7.8
Technology	13	5.4	21.4	5.2	21.2	-0.0	4.0
Utilities	6	0.6	0.9	0.3	0.8	-0.1	0.3



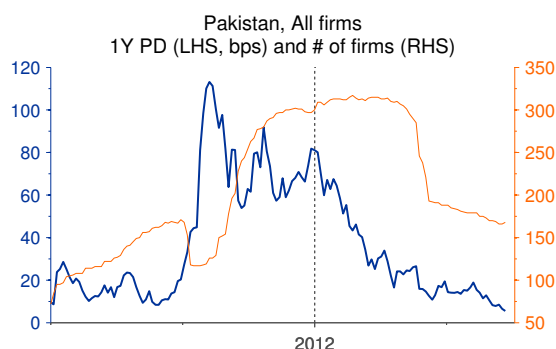
Nigeria	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	51	62.3	173.8	28.8	73.4	-36.7	103.8
Basic Materials	10	80.6	103.3	26.6	49.1	-32.9	58.7
Communications	5	24.8	91.6	16.8	15.0	-8.6	81.4
Consumer Cyclical	13	87.8	162.5	38.1	70.4	-45.6	92.8
Consumer Non-cyclical	31	36.3	108.5	14.9	50.3	-17.1	60.2
Energy	10	40.4	170.6	18.8	64.9	-23.9	106.7
Industrial	19	88.7	296.1	36.3	141.0	-56.3	156.4
Technology	3	55.9	113.4	26.1	33.3	-29.7	80.5



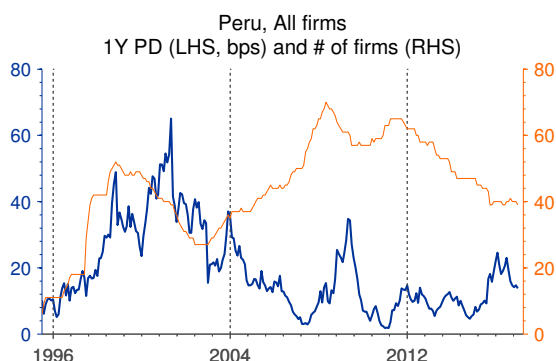
Norway	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	41	26.9	46.3	21.3	38.5	-2.9	22.9
Basic Materials	5	7.0	59.7	5.3	61.4	0.3	2.7
Communications	7	20.4	85.4	14.1	40.3	-4.0	46.4
Consumer Cyclical	7	11.0	24.7	7.5	41.8	-1.6	19.6
Consumer Non-cyclical	22	6.2	54.3	13.0	39.5	0.3	17.1
Diversified	1	2.7	—	18.4	—	15.7	—
Energy	29	49.3	44.3	44.8	44.8	-1.4	37.1
Industrial	48	39.5	177.5	26.4	46.7	-3.3	155.5
Technology	9	13.2	28.1	14.6	86.2	1.5	91.4
Utilities	2	4.9	5.3	5.4	4.0	0.4	1.3



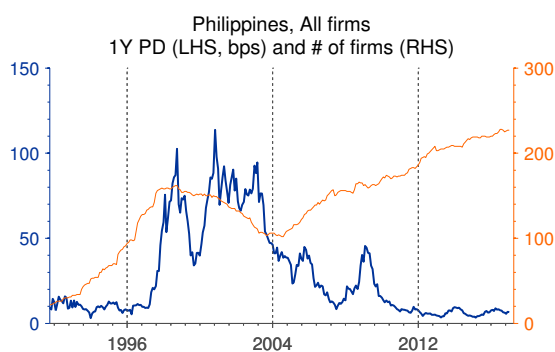
Oman	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	24	23.3	18.2	19.6	19.4	-1.4	7.7
Basic Materials	3	16.0	17.2	9.8	17.4	-0.5	3.4
Communications	2	0.7	0.9	1.2	1.7	0.6	0.8
Consumer Cyclical	1	61.0	—	14.0	—	-47.0	—
Consumer Non-cyclical	7	6.5	8.1	1.8	6.6	-1.4	2.8
Diversified	1	0.0	—	0.0	—	0.0	—
Energy	5	3.5	166.9	3.3	119.1	-0.1	48.0
Industrial	12	1.5	36.9	0.9	39.1	-0.4	12.2
Utilities	9	5.0	13.2	2.0	10.8	-1.1	4.3



Pakistan	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	35	31.4	56.6	32.4	55.2	-0.2	26.2
Basic Materials	22	7.1	50.6	3.9	40.0	-1.9	20.4
Communications	5	25.4	72.4	37.9	83.8	12.4	14.0
Consumer Cyclical	34	10.6	72.2	9.8	71.8	0.1	13.3
Consumer Non-cyclical	28	0.6	10.7	1.1	13.3	0.0	10.0
Energy	10	3.4	15.3	2.5	13.6	-0.6	7.7
Industrial	29	2.3	11.5	2.2	13.0	-0.0	7.6
Technology	1	8.0	—	3.9	—	-4.1	—
Utilities	9	18.0	42.1	15.0	38.7	-3.1	8.1



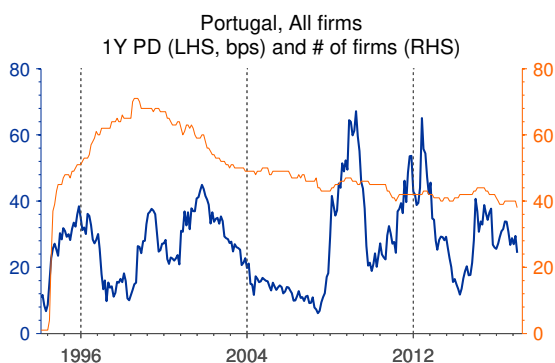
Peru	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	8	11.0	6.2	9.7	5.9	-0.9	1.4
Basic Materials	14	13.8	12.4	9.6	12.6	-1.8	8.8
Communications	2	23.2	1.6	24.3	6.0	1.1	7.6
Consumer Cyclical	1	2.7	—	2.6	—	-0.1	—
Consumer Non-cyclical	7	19.5	22.9	17.7	32.2	0.0	10.1
Diversified	2	30.1	11.3	110.2	126.4	80.1	115.1
Energy	2	73.0	102.2	71.7	99.1	-1.3	3.1
Industrial	2	23.6	2.8	20.0	8.8	-3.6	6.0
Utilities	4	1.7	8.4	2.3	6.6	0.6	1.8



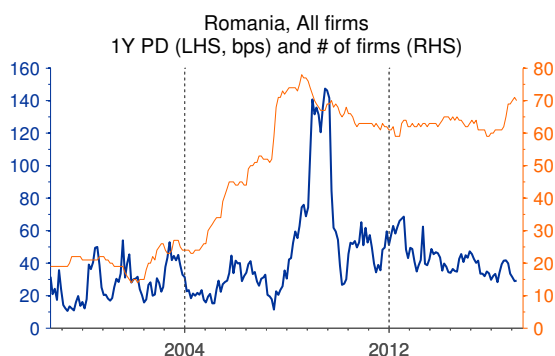
Philippines	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	78	12.6	26.3	10.6	26.9	-0.1	8.5
Basic Materials	26	7.4	42.4	8.3	46.9	-0.0	17.2
Communications	16	11.9	22.0	7.3	17.4	-0.4	6.9
Consumer Cyclical	29	5.7	20.7	5.7	20.2	-0.6	4.9
Consumer Non-cyclical	33	4.5	35.4	4.7	33.6	-0.1	9.4
Diversified	16	1.5	30.8	1.3	31.5	-0.0	8.2
Energy	12	4.6	17.5	5.3	21.0	0.1	14.0
Industrial	13	6.8	27.1	5.5	27.6	-1.1	6.6
Technology	3	4.8	2.6	2.7	1.5	-2.1	1.3
Utilities	14	3.8	10.5	2.8	8.1	-0.0	3.4



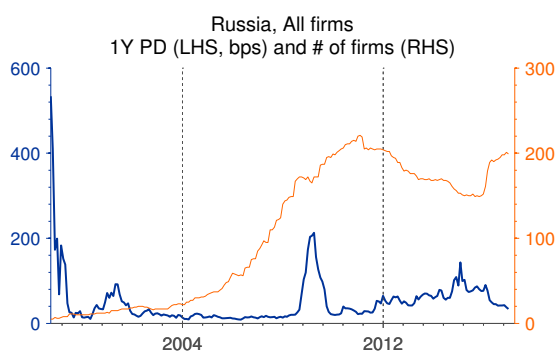
Poland	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	83	34.9	109.9	28.9	85.8	-5.7	48.6
Basic Materials	27	18.4	23.7	12.1	26.3	-1.4	12.8
Communications	33	46.3	224.1	33.7	255.2	-10.5	246.6
Consumer Cyclical	56	25.2	68.9	17.4	48.0	-3.9	38.8
Consumer Non-cyclical	61	31.5	127.2	26.7	121.9	-3.0	30.0
Energy	15	49.6	246.4	50.4	271.6	-4.2	42.9
Industrial	121	35.4	123.6	25.2	127.8	-5.7	46.2
Technology	41	22.5	142.9	19.3	72.0	-2.9	86.7
Utilities	9	39.1	27.0	27.4	20.0	-11.7	18.0



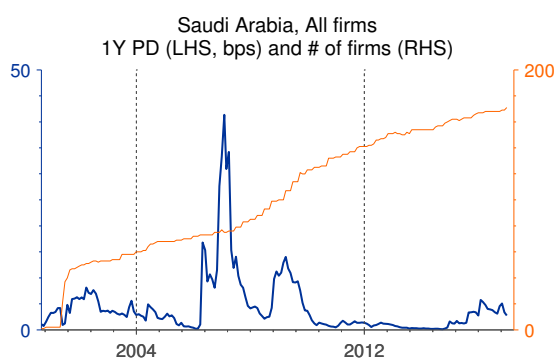
Portugal	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	3	122.5	71.7	26.1	53.7	-8.2	74.7
Basic Materials	6	8.2	24.2	4.1	22.3	-2.6	2.3
Communications	6	20.6	171.7	12.2	42.6	-8.4	130.7
Consumer Cyclical	7	55.4	52.6	27.8	41.6	-7.8	27.9
Consumer Non-cyclical	6	30.1	71.7	18.4	43.6	-8.9	28.9
Diversified	2	51.3	66.2	31.4	41.0	-19.9	25.2
Energy	1	3.3	—	1.9	—	-1.4	—
Industrial	7	51.8	49.7	30.2	48.8	-17.3	22.2
Technology	3	46.7	33.6	57.7	34.1	-1.4	8.8
Utilities	2	5.5	3.3	5.0	4.3	-0.5	1.0



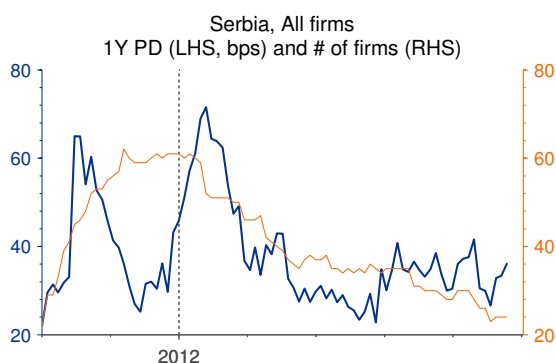
Romania	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	8	29.8	96.8	12.9	50.1	-8.8	48.0
Basic Materials	8	58.9	64.4	43.7	65.1	-11.9	34.6
Communications	1	13.6	—	14.1	—	0.5	—
Consumer Cyclical	11	29.5	25.4	18.1	34.3	-7.1	23.2
Consumer Non-cyclical	12	17.0	68.6	11.9	71.5	-3.7	13.0
Energy	8	21.4	248.6	7.7	82.3	-3.1	168.6
Industrial	25	37.4	54.0	34.2	50.9	-7.0	20.4
Utilities	4	2.8	2.4	2.0	1.6	-1.0	1.4



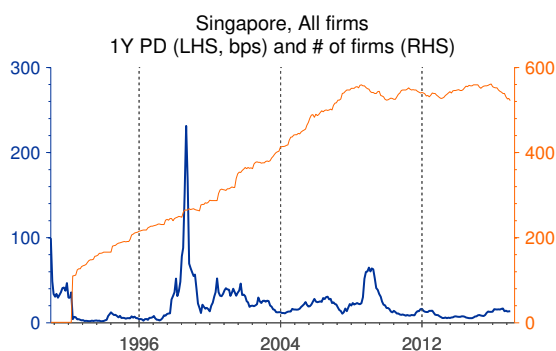
Russia	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	20	52.6	30.0	57.3	31.9	-0.4	22.5
Basic Materials	34	18.8	27.3	14.4	28.0	-0.0	10.0
Communications	13	20.5	26.7	21.4	44.8	-1.5	34.4
Consumer Cyclical	18	54.5	242.7	45.9	310.2	-1.1	74.3
Consumer Non-cyclical	27	32.3	61.2	22.4	71.3	-0.4	63.3
Diversified	2	89.5	68.2	82.8	69.2	-6.7	1.0
Energy	20	21.2	88.5	23.9	50.3	-1.2	41.7
Industrial	22	39.1	175.7	34.1	373.2	0.7	200.0
Technology	3	38.0	19.1	42.4	12.3	12.2	27.8
Utilities	55	58.0	44.6	54.4	125.1	-0.9	122.7



Saudi Arabia	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	60	1.6	10.2	0.9	8.7	-0.3	3.2
Basic Materials	18	18.0	22.4	14.9	108.1	-1.6	106.9
Communications	7	43.6	21.4	33.7	59.5	-9.3	55.9
Consumer Cyclical	18	6.2	16.1	2.6	15.4	-0.3	6.1
Consumer Non-cyclical	26	5.9	9.4	4.9	6.1	-0.9	4.7
Diversified	3	20.1	8.4	19.0	10.8	-1.1	2.9
Energy	2	12.3	0.9	10.1	2.2	-2.2	3.1
Industrial	34	6.1	18.7	4.8	19.2	-0.4	2.8
Utilities	1	27.9	—	36.8	—	8.9	—

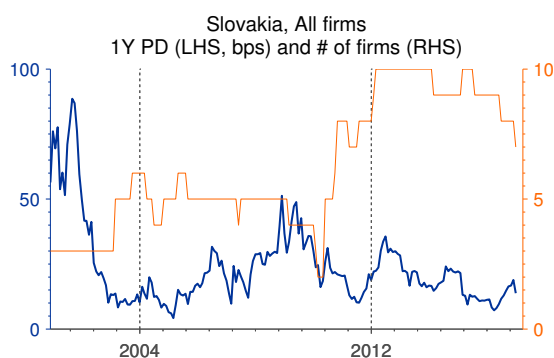


Serbia	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	4	43.3	44.6	45.5	33.1	-1.3	12.4
Basic Materials	3	4.2	12.6	4.7	9.1	-0.3	3.7
Consumer Cyclical	3	4.1	44.6	2.9	43.1	-1.1	1.5
Consumer Non-cyclical	5	86.1	120.5	77.7	48.0	-1.6	92.5
Diversified	2	84.0	108.2	62.4	77.2	-21.6	31.0
Energy	1	11.2	—	9.1	—	-2.1	—
Industrial	9	55.9	58.0	37.8	120.9	-2.2	82.6

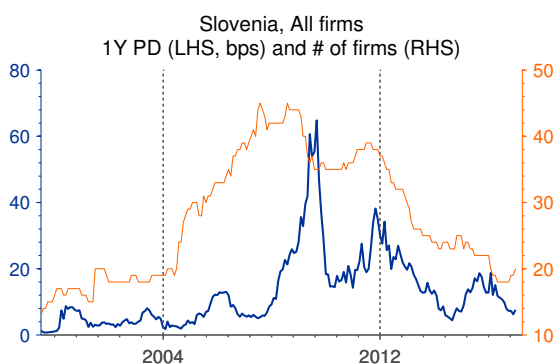


Singapore	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	116	2.8	44.6	2.5	60.4	-0.1	52.2
Basic Materials	28	15.0	68.5	13.3	100.7	-0.2	59.5
Communications	24	12.2	150.9	13.1	107.5	-0.5	73.8
Consumer Cyclical	78	14.2	114.2	10.7	66.6	-1.5	62.3
Consumer Non-cyclical	76	9.6	71.0	8.8	43.7	-0.2	37.5
Diversified	11	13.4	60.6	3.8	20.7	-10.4	43.6
Energy	26	51.1	397.8	30.9	362.4	-13.5	158.5
Industrial	176	27.0	99.0	21.7	238.4	-2.9	194.7
Technology	27	10.4	163.8	8.9	75.4	-1.1	99.2
Utilities	3	29.1	92.2	28.3	44.8	-1.3	48.6

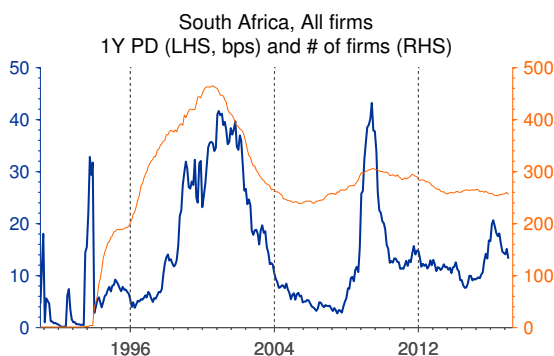




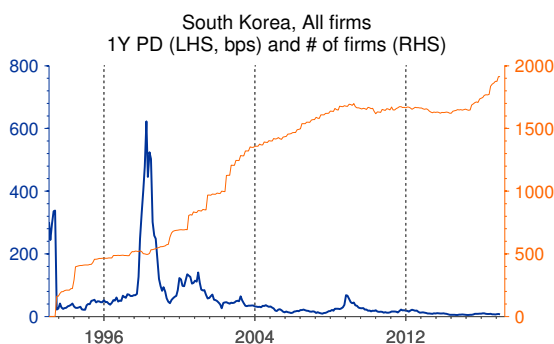
Slovakia	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	4	41.0	28.2	29.6	21.8	-2.7	13.0
Basic Materials	1	55.6	—	40.0	—	-15.6	—
Consumer Cyclical	1	0.1	—	0.1	—	0.0	—
Consumer Non-cyclical	2	10.6	10.2	9.7	8.7	-1.0	1.5
Energy	1	10.5	—	11.0	—	0.4	—
Industrial	1	8.3	—	8.6	—	0.3	—
Technology	1	9.1	—	7.1	—	-1.9	—



Slovenia	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	6	26.6	18.3	21.7	23.9	-2.8	9.9
Basic Materials	2	6.1	8.0	7.1	9.6	1.1	1.5
Communications	1	13.2	—	1.8	—	-11.4	—
Consumer Cyclical	4	20.4	14.3	20.3	11.9	-0.9	3.4
Consumer Non-cyclical	8	3.6	21.1	4.5	30.2	0.2	10.9
Diversified	1	98.3	—	117.1	—	18.8	—
Energy	1	1.0	—	1.4	—	0.4	—
Industrial	3	22.5	30.0	16.1	31.1	0.6	4.2
Technology	1	39.5	—	36.0	—	-3.5	—



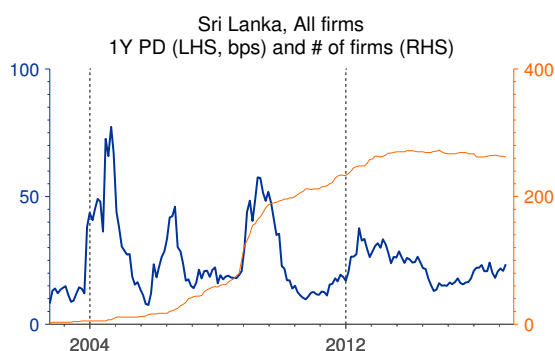
South Africa	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	79	18.8	126.2	14.9	151.2	-0.2	44.9
Basic Materials	38	28.9	93.9	21.7	141.3	-2.6	65.0
Communications	13	3.8	200.9	6.4	299.1	0.0	99.2
Consumer Cyclical	34	10.8	383.4	6.0	549.1	-0.1	200.0
Consumer Non-cyclical	36	6.8	53.3	6.9	46.2	-0.3	13.4
Diversified	9	4.7	40.6	3.2	41.0	-0.2	2.7
Energy	9	27.9	604.6	24.9	248.6	-0.5	356.4
Industrial	42	24.0	96.1	24.6	128.0	0.5	39.3
Technology	11	5.6	50.9	7.0	328.3	0.0	281.1



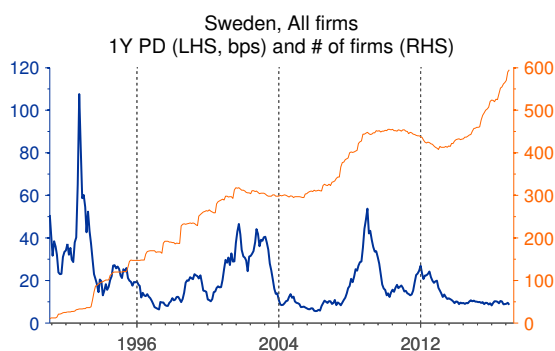
South Korea	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	92	25.2	157.0	22.2	38.6	-2.5	142.2
Basic Materials	192	5.9	23.4	5.8	46.5	0.0	34.4
Communications	199	4.3	43.3	3.7	42.0	-0.2	32.6
Consumer Cyclical	312	9.3	37.6	8.2	62.8	-0.3	40.2
Consumer Non-cyclical	328	4.1	27.3	3.2	29.1	-0.1	24.2
Diversified	50	0.0	9.1	0.0	7.6	0.0	1.5
Energy	13	8.6	54.6	5.4	43.0	-0.6	13.9
Industrial	546	9.5	68.1	8.2	299.3	-0.1	273.9
Technology	247	5.8	34.9	5.5	39.1	-0.0	23.1
Utilities	17	13.5	11.0	11.1	11.1	0.6	8.0



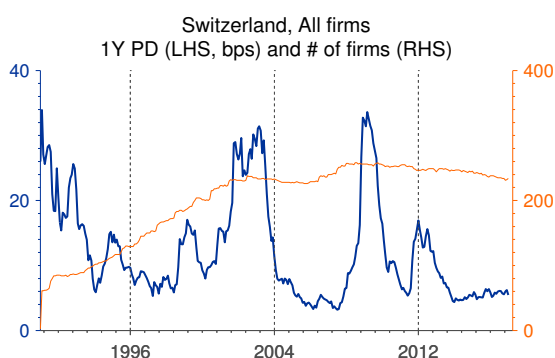
Spain	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	32	16.3	134.4	10.7	85.5	-5.1	50.2
Basic Materials	8	5.7	5.4	3.9	4.2	-2.1	2.1
Communications	18	6.1	8.2	5.9	6.5	-0.5	4.6
Consumer Cyclical	14	6.7	22.1	5.1	25.3	0.0	21.9
Consumer Non-cyclical	33	5.0	16.0	5.0	10.0	-0.2	9.4
Energy	4	7.9	2.7	5.0	1.0	-2.9	1.8
Industrial	31	9.4	14.6	7.4	69.6	-2.0	70.3
Technology	3	0.8	6.6	0.3	3.9	-0.5	2.7
Utilities	7	3.8	29.9	2.3	6.9	-1.4	23.1



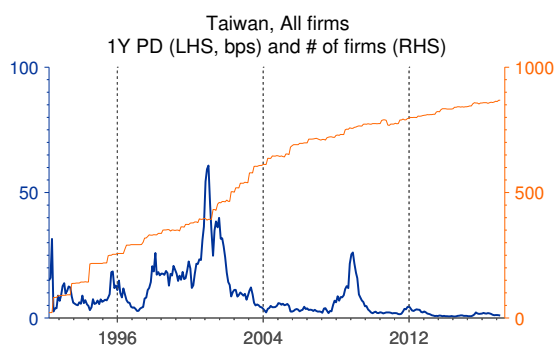
Sri Lanka	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	87	55.7	75.7	56.0	88.8	1.6	25.6
Basic Materials	14	18.0	61.7	15.9	79.2	1.5	18.2
Communications	4	1.7	9.1	1.6	9.9	0.1	0.9
Consumer Cyclical	60	12.6	40.8	13.8	53.3	0.7	16.9
Consumer Non-cyclical	55	20.0	89.6	18.7	65.9	-0.4	32.5
Diversified	14	22.3	44.7	25.4	43.8	-0.4	18.8
Energy	3	3.0	2.5	2.0	2.1	-0.8	0.5
Industrial	23	11.2	144.6	10.1	178.7	0.4	40.4
Technology	2	21.8	26.8	33.4	37.5	11.6	10.6
Utilities	5	14.1	14.0	13.7	14.2	-0.0	7.1



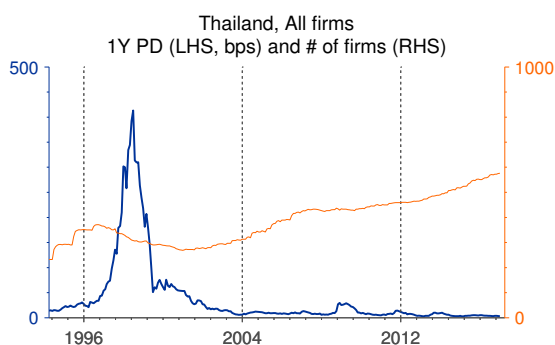
Sweden	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	82	10.5	108.7	9.6	94.7	-0.5	113.6
Basic Materials	28	22.0	36.9	16.8	35.4	-2.7	21.6
Communications	59	19.4	53.5	15.8	40.2	-2.0	29.1
Consumer Cyclical	69	11.8	37.4	9.2	45.3	-1.0	27.4
Consumer Non-cyclical	175	9.4	23.0	10.2	41.4	-0.5	36.0
Diversified	6	23.4	160.0	20.9	107.5	-2.4	55.5
Energy	18	11.2	63.1	10.1	374.7	-2.5	316.7
Industrial	115	13.8	30.2	12.6	34.9	-0.9	25.9
Technology	54	11.8	31.7	10.7	29.1	-0.2	13.7
Utilities	2	9.1	4.3	13.5	7.0	4.4	2.7



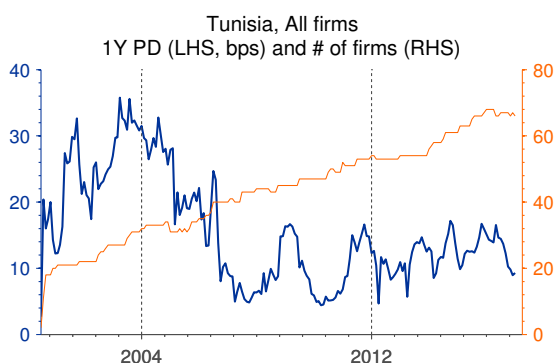
Switzerland	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	69	8.5	509.7	6.3	530.7	-1.1	34.3
Basic Materials	17	4.1	268.2	3.7	164.4	-1.3	116.5
Communications	10	5.9	17.4	4.3	16.4	-1.7	1.6
Consumer Cyclical	20	6.0	45.0	3.5	39.8	-1.2	11.2
Consumer Non-cyclical	41	3.1	411.3	2.5	76.4	-0.6	417.4
Diversified	3	10.6	37.9	3.8	26.8	-6.8	11.3
Energy	5	32.8	108.0	49.2	71.5	-2.8	55.5
Industrial	62	5.3	18.0	2.4	15.1	-0.8	7.7
Technology	11	8.4	14.4	6.4	15.1	-0.9	2.2
Utilities	4	8.1	14.7	6.6	11.8	-1.5	3.0



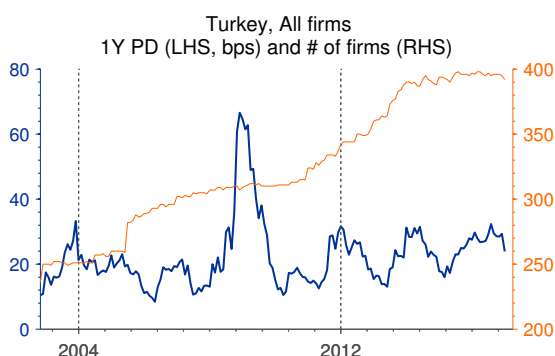
Taiwan	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	79	2.7	14.9	2.0	14.4	-0.4	5.4
Basic Materials	76	0.4	4.2	0.3	4.2	-0.0	1.8
Communications	42	1.2	9.1	0.6	10.4	-0.3	1.8
Consumer Cyclical	147	0.8	8.0	0.7	5.7	-0.1	3.5
Consumer Non-cyclical	60	0.2	3.8	0.1	2.9	-0.0	1.4
Diversified	1	0.0	—	0.0	—	0.0	—
Energy	7	5.4	3.3	4.0	3.1	-0.5	0.7
Industrial	311	1.4	14.6	0.9	13.1	-0.1	5.6
Technology	151	0.9	11.5	0.7	8.0	-0.2	5.2
Utilities	6	0.0	0.1	0.0	0.0	0.0	0.0



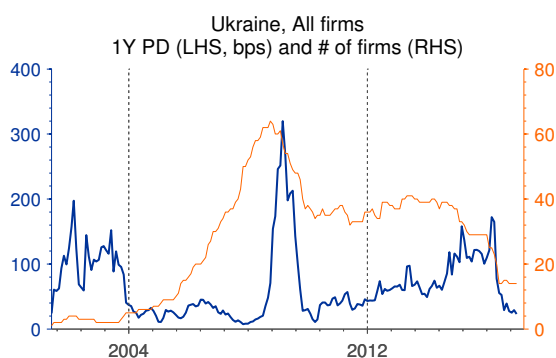
Thailand	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	112	8.2	22.5	7.3	23.6	-0.0	6.3
Basic Materials	55	4.3	21.7	3.0	32.7	0.0	16.5
Communications	47	4.3	21.7	4.1	29.1	-0.2	16.0
Consumer Cyclical	132	2.9	12.7	2.9	14.1	-0.0	7.1
Consumer Non-cyclical	96	1.2	7.2	1.0	7.9	0.0	2.2
Diversified	6	1.0	9.9	0.8	10.3	-0.2	0.5
Energy	19	4.8	59.9	4.4	63.8	-0.0	14.5
Industrial	132	3.9	14.8	3.3	14.8	-0.0	4.5
Technology	13	6.5	29.6	5.1	36.8	-0.3	10.6
Utilities	15	1.3	5.0	1.0	4.1	0.0	2.3



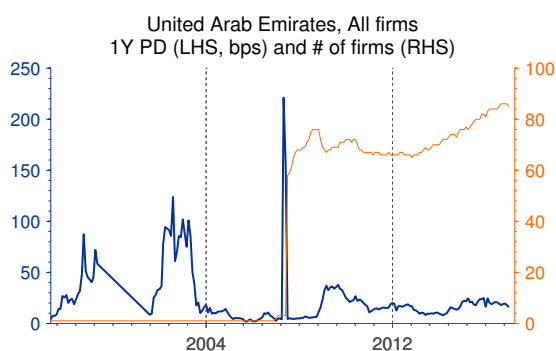
Tunisia	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	24	26.9	46.5	30.6	47.4	0.0	6.4
Basic Materials	4	5.1	6.4	7.4	8.1	1.8	2.0
Communications	4	9.0	34.5	13.7	20.1	0.7	17.1
Consumer Cyclical	10	0.6	52.7	1.0	38.7	0.0	14.0
Consumer Non-cyclical	10	5.5	28.0	7.7	24.1	0.9	6.4
Diversified	1	1.9	—	2.4	—	0.5	—
Energy	1	0.2	—	0.3	—	0.1	—
Industrial	12	7.2	42.8	11.5	35.9	0.1	12.5
Technology	2	70.8	27.8	89.0	11.1	18.2	16.7



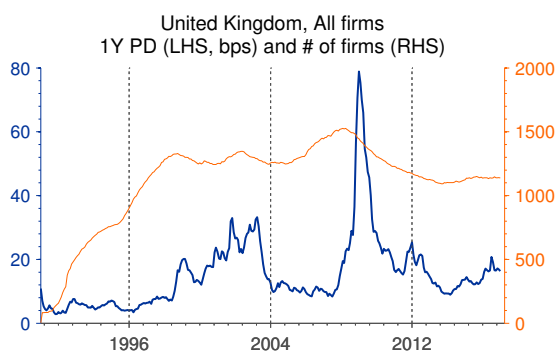
Turkey	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	100	28.8	51.9	26.6	55.7	-0.0	18.7
Basic Materials	37	16.0	22.5	10.9	22.5	-0.7	6.4
Communications	13	25.5	38.0	23.4	33.9	-7.0	14.0
Consumer Cyclical	91	35.2	98.6	25.6	107.2	-2.0	23.2
Consumer Non-cyclical	53	23.2	43.2	15.4	37.2	-1.8	18.8
Diversified	11	49.9	47.1	29.3	55.2	0.1	19.4
Energy	5	14.3	33.1	21.0	27.0	-4.1	8.5
Industrial	70	17.4	33.2	14.4	30.4	-0.3	14.9
Technology	4	19.6	25.6	20.0	30.0	1.2	10.3
Utilities	8	18.0	29.3	23.0	24.9	-2.5	14.8



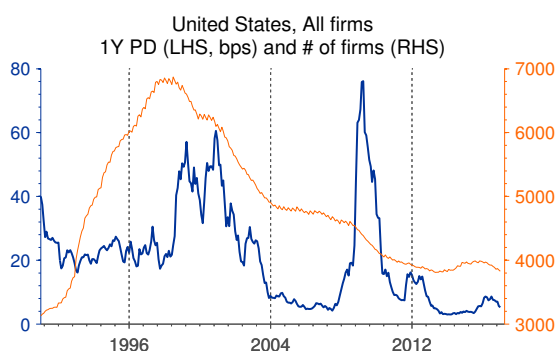
Ukraine	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	1	176.8	—	162.9	—	-13.9	—
Consumer Non-cyclical	8	43.0	189.4	32.3	62.5	-5.3	147.7
Diversified	1	25.0	—	16.0	—	-9.0	—
Energy	2	138.8	78.4	171.5	80.2	32.7	1.9
Industrial	3	22.5	57.6	9.3	7.7	-13.2	50.5
Utilities	1	16.9	—	17.9	—	1.1	—



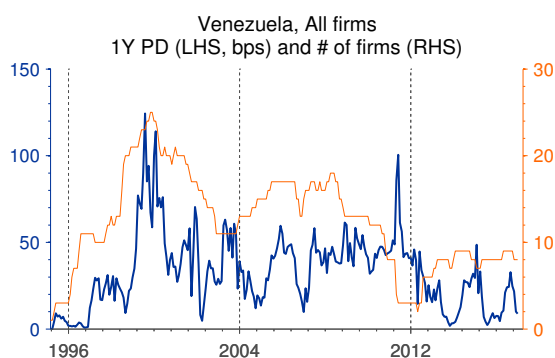
United Arab Emirates	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	43	22.6	23.4	20.5	22.5	-0.8	13.1
Communications	3	0.8	9.4	0.7	14.2	0.0	4.7
Consumer Cyclical	5	8.3	9.8	19.1	9.6	2.5	7.8
Consumer Non-cyclical	10	10.8	45.5	9.3	44.5	-2.6	11.1
Energy	4	42.6	58.6	37.2	13.1	-16.8	51.5
Industrial	18	20.4	32.7	18.4	51.1	-0.5	29.6
Utilities	1	194.4	—	234.8	—	40.4	—



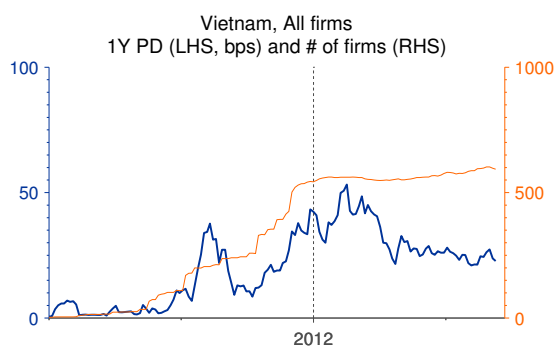
United Kingdom	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	233	16.3	91.4	12.2	55.8	-1.5	50.9
Basic Materials	94	22.6	58.8	17.5	78.4	-1.5	49.7
Communications	104	17.0	81.6	15.5	107.7	-0.7	69.5
Consumer Cyclical	156	15.6	66.9	13.6	41.7	-1.2	49.0
Consumer Non-cyclical	244	11.7	64.3	9.6	38.6	-0.7	53.5
Diversified	8	24.1	114.3	18.0	91.5	-0.9	39.6
Energy	97	28.9	83.8	22.4	68.6	-0.7	85.4
Industrial	171	15.3	61.9	11.5	81.5	-1.2	65.6
Technology	98	9.2	79.6	8.3	111.8	-0.1	36.6
Utilities	11	5.8	32.9	4.8	17.4	-1.1	16.4



United States	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	904	3.6	70.9	3.7	209.8	-0.0	174.2
Basic Materials	133	4.7	61.7	4.2	334.6	-0.2	314.9
Communications	277	5.7	147.8	5.4	417.6	-0.1	332.1
Consumer Cyclical	454	4.2	145.2	4.0	440.7	-0.0	361.7
Consumer Non-cyclical	916	7.0	261.2	5.8	251.1	-0.4	249.9
Diversified	8	11.1	30.3	6.0	103.8	-0.9	76.2
Energy	276	19.9	157.4	18.5	492.2	-0.1	424.4
Industrial	469	2.8	86.9	2.2	214.3	-0.1	158.2
Technology	329	3.1	90.5	2.1	169.5	-0.2	108.0
Utilities	84	0.7	52.7	0.6	34.3	-0.1	30.9



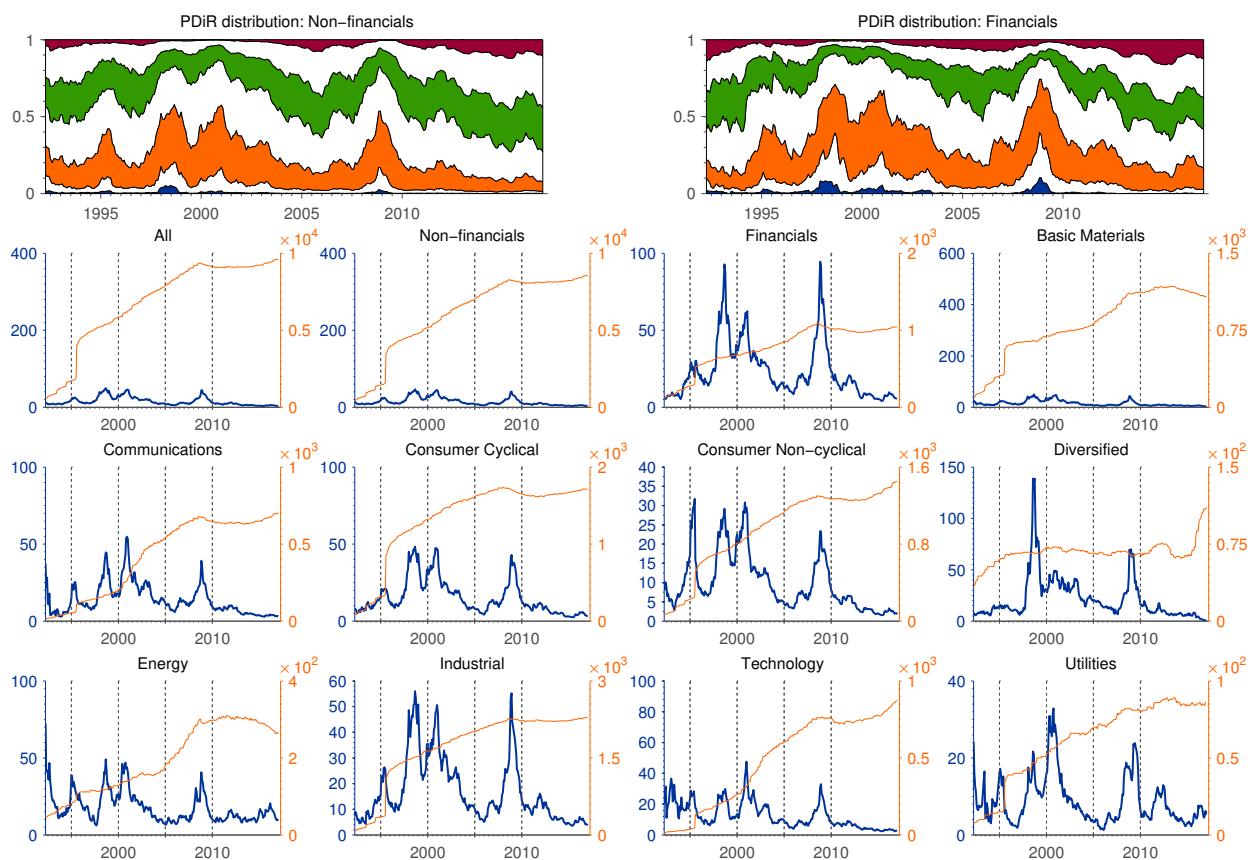
Venezuela	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	5	6.2	7.4	3.5	4.3	-1.2	3.9
Basic Materials	1	73.1	—	101.1	—	28.1	—



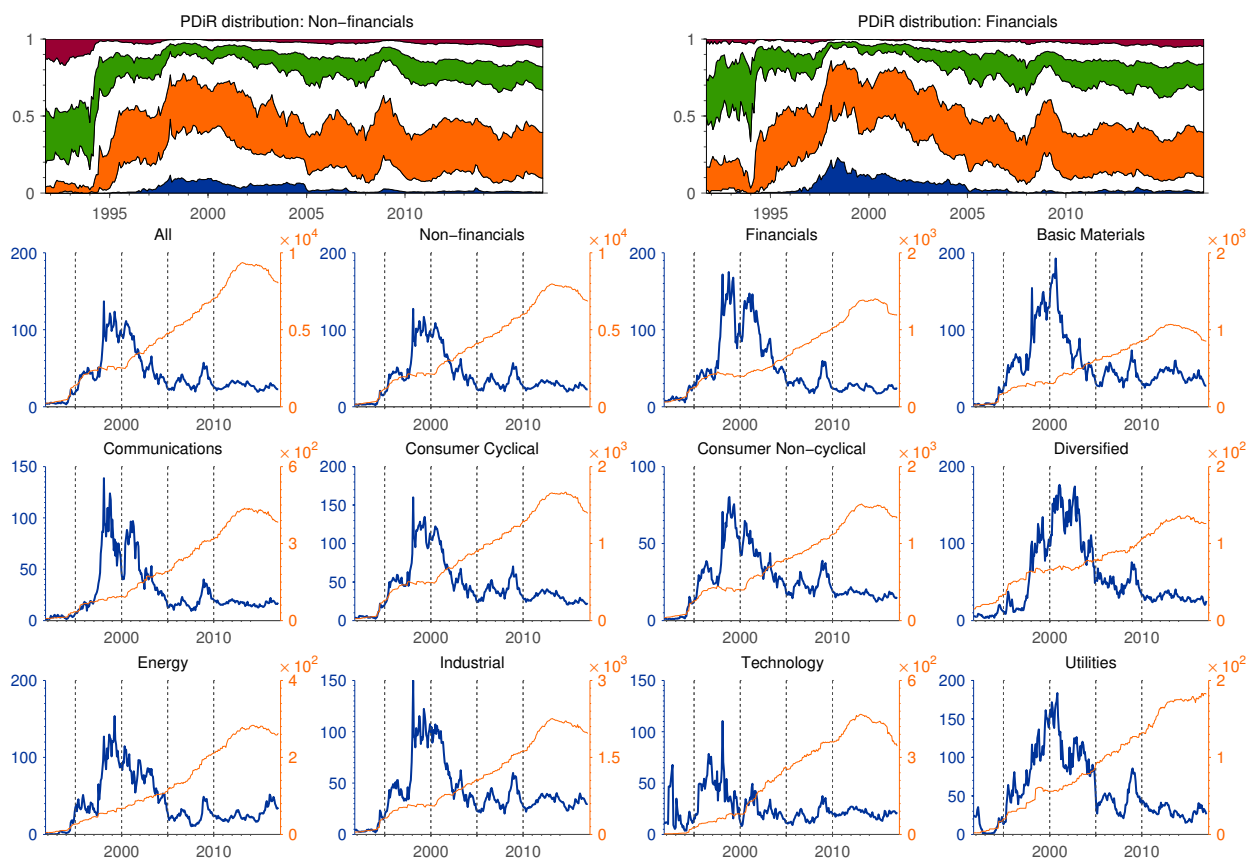
Vietnam	#	2016Q4		2017Q1		Q1-Q4	
		Median	St.Dev.	Median	St.Dev.	Median	St.Dev.
Financials	86	21.4	100.2	19.2	66.8	-2.1	43.0
Basic Materials	66	18.0	98.2	14.8	81.6	-1.1	43.3
Communications	20	18.2	52.5	17.3	87.2	0.3	40.3
Consumer Cyclical	62	24.6	241.6	23.1	128.9	-0.1	124.9
Consumer Non-cyclical	89	15.0	126.5	10.6	80.6	-0.7	85.0
Diversified	16	11.5	57.7	12.9	47.3	0.4	19.9
Energy	22	77.1	69.7	68.4	72.2	-4.2	18.6
Industrial	255	32.2	92.2	29.7	84.6	-1.5	48.4
Technology	6	10.1	27.3	5.1	27.1	-1.8	3.9
Utilities	17	4.3	14.2	5.3	15.9	-0.3	6.9

## B PD by regions

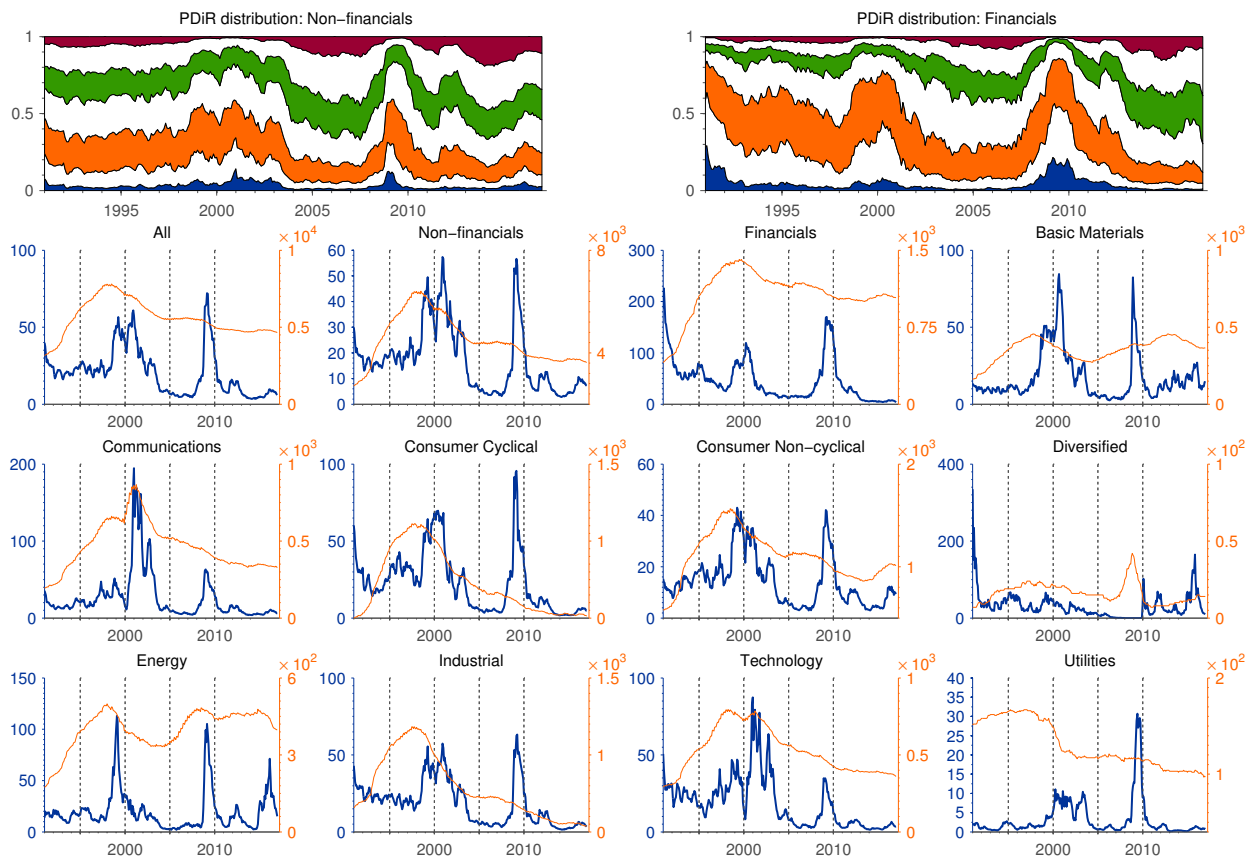
### Asia Pacific - developed economies



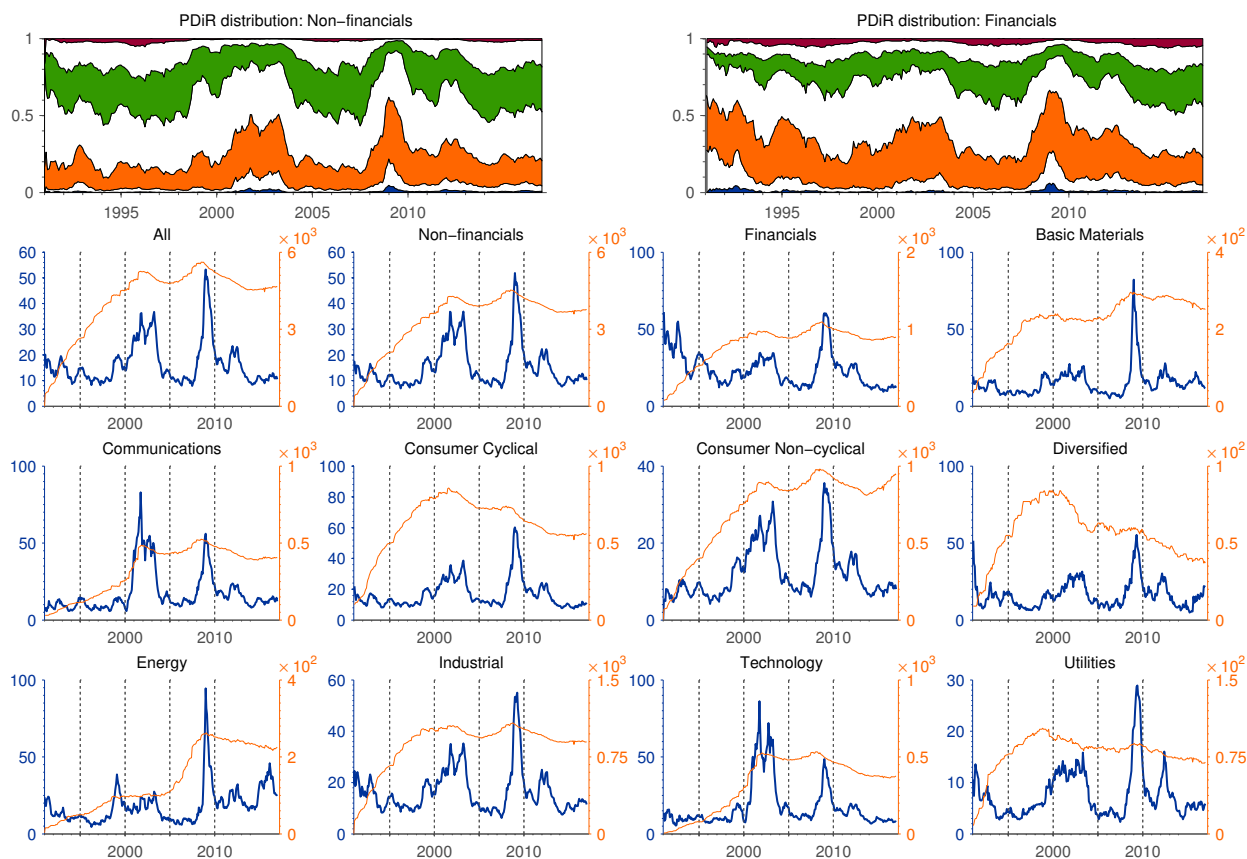
### Asia Pacific - emerging economies



## North America

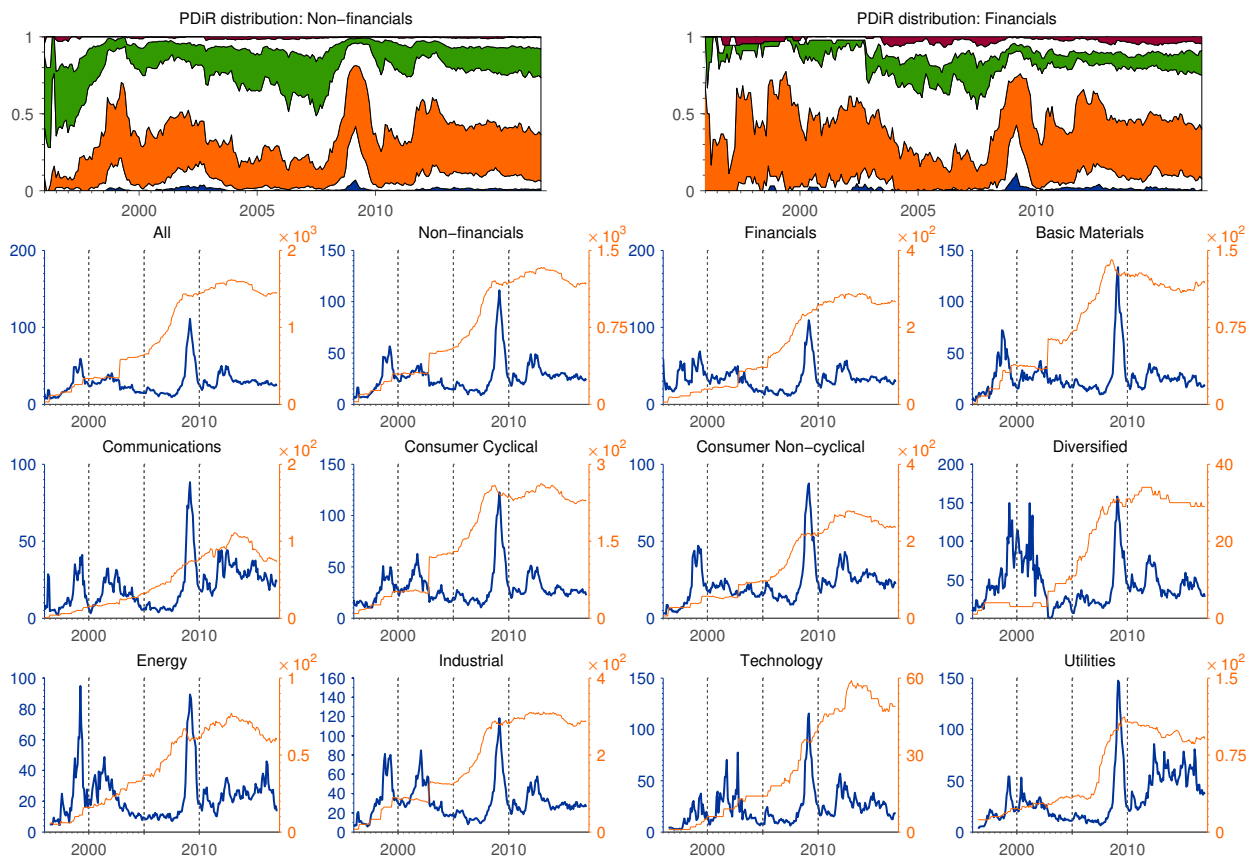


## Western Europe

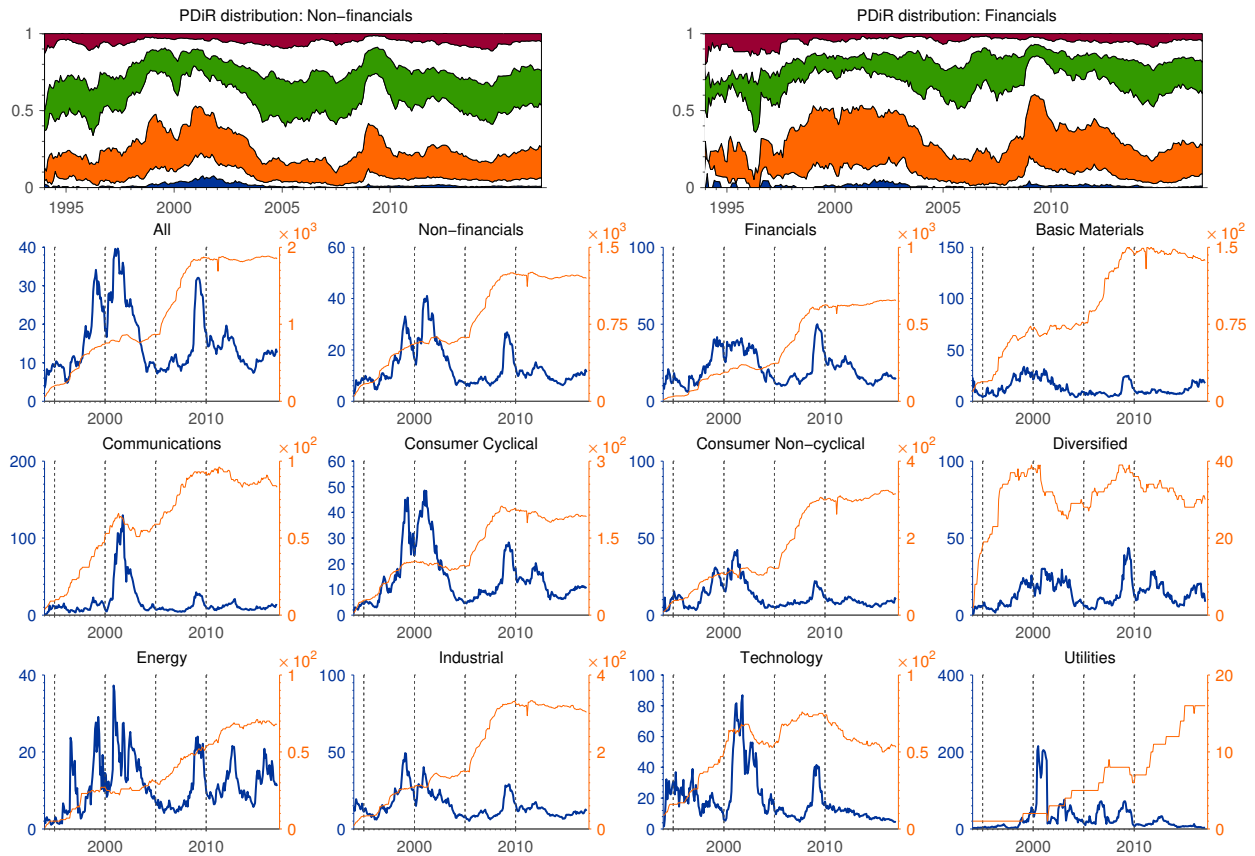




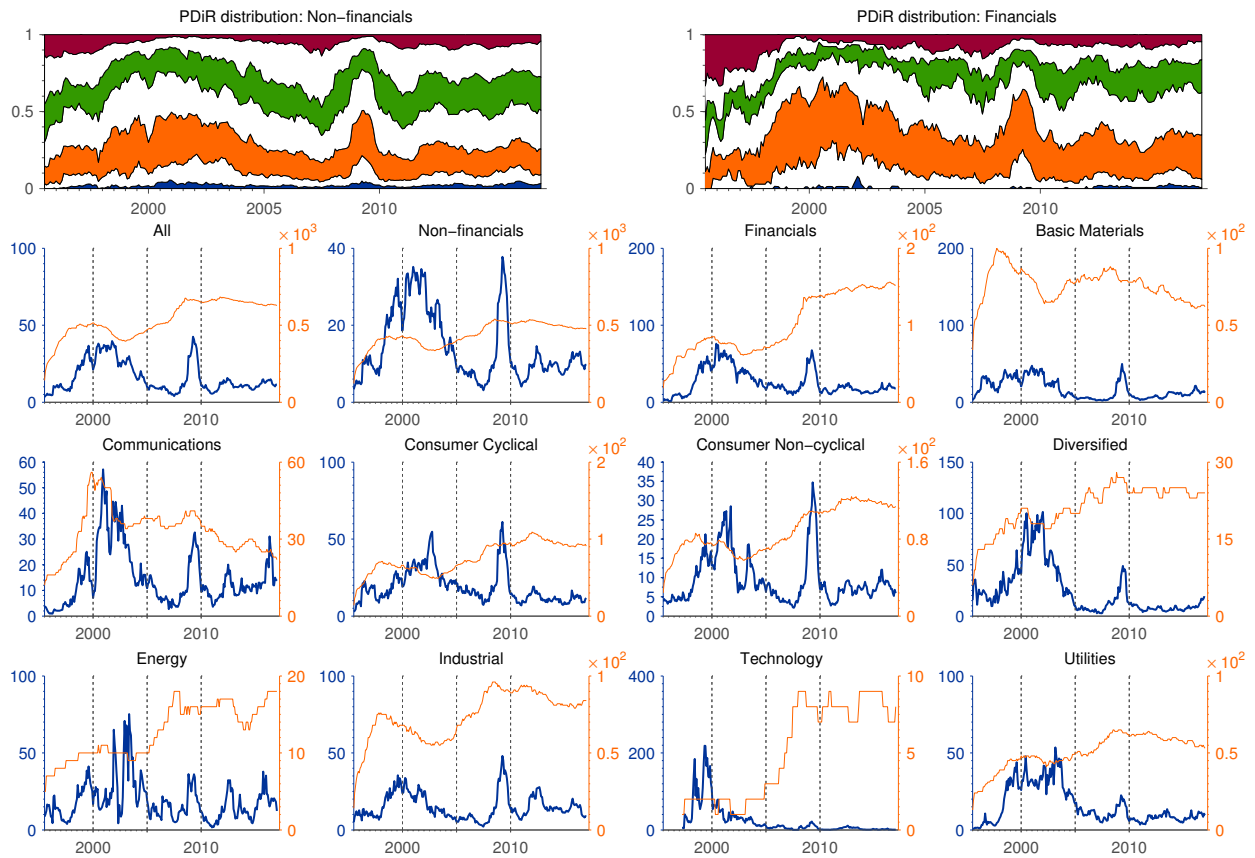
## Eastern Europe



## Africa ME

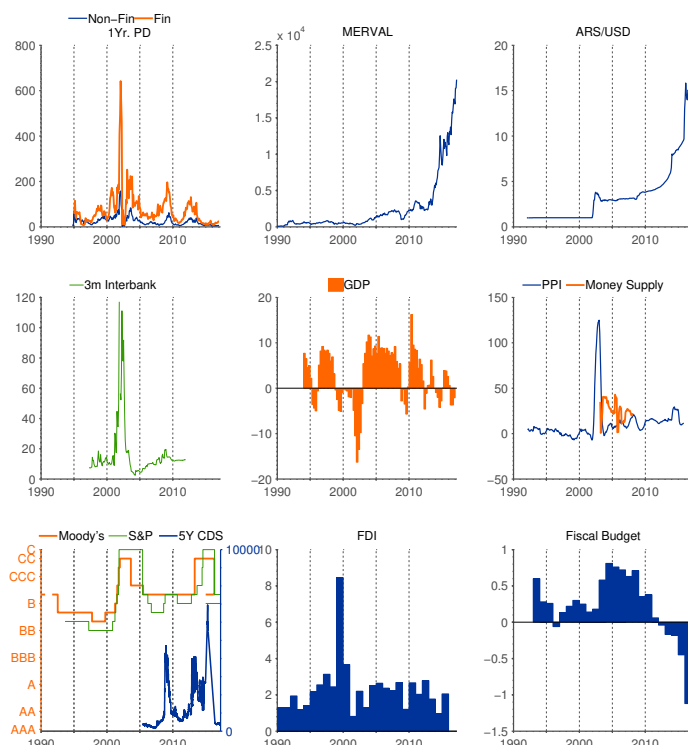


## Latin America

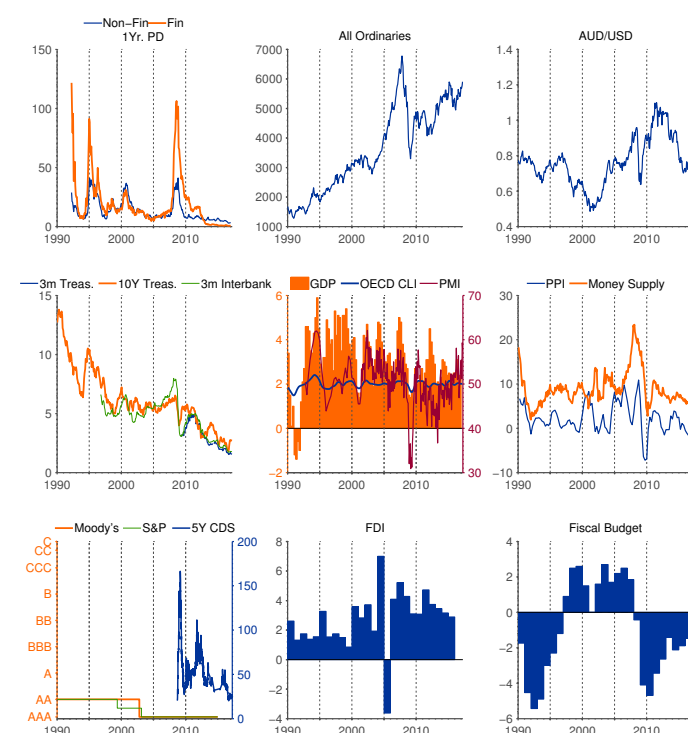


## C Macroeconomic Indicators

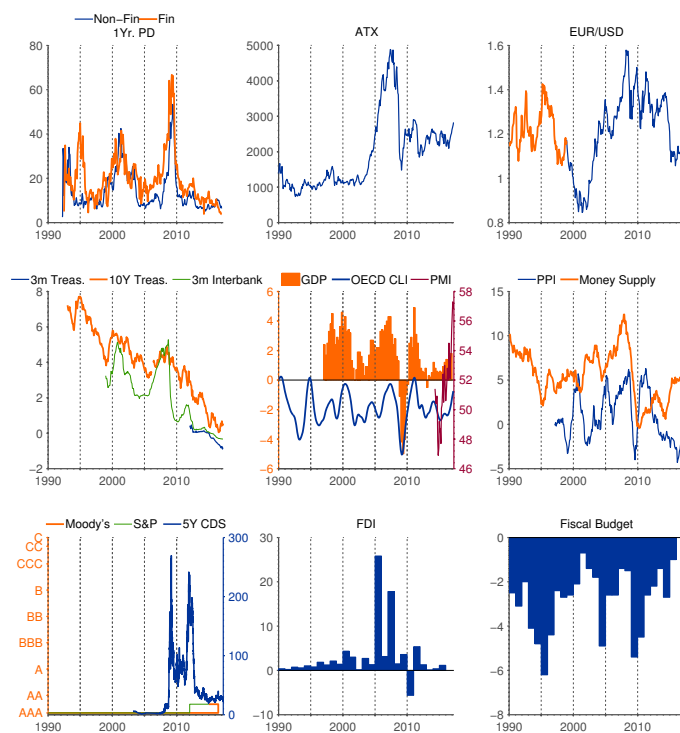
Descriptions of the data contained in this section are provided in Appendix D.



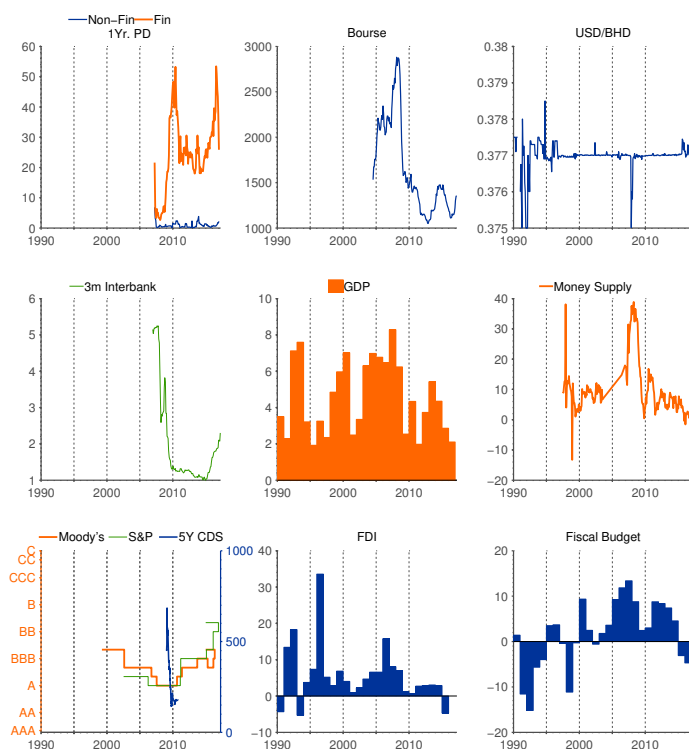
Argentina	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	3.68	4.79	5.47	5.33	4.18
1Yr. PD, Fin.	12.26	17.59	16.81	21.77	20.45
MERVAL	12992	14683	16676	16918	20265
ARS/USD	14.70	15.05	15.31	15.88	15.39
GDP (YoY%)	0.6	-3.7	-3.7	-2.1	-
Sov. Rating, Moody's	B3	B3	B3	B3	B3
Sov. Rating, S&P	B	B	B	B	B
5Y CDS (bps)	-	419.70	381.72	419.36	364.20
Fiscal Budget (%GDP)	-	-	-	-1.12	-



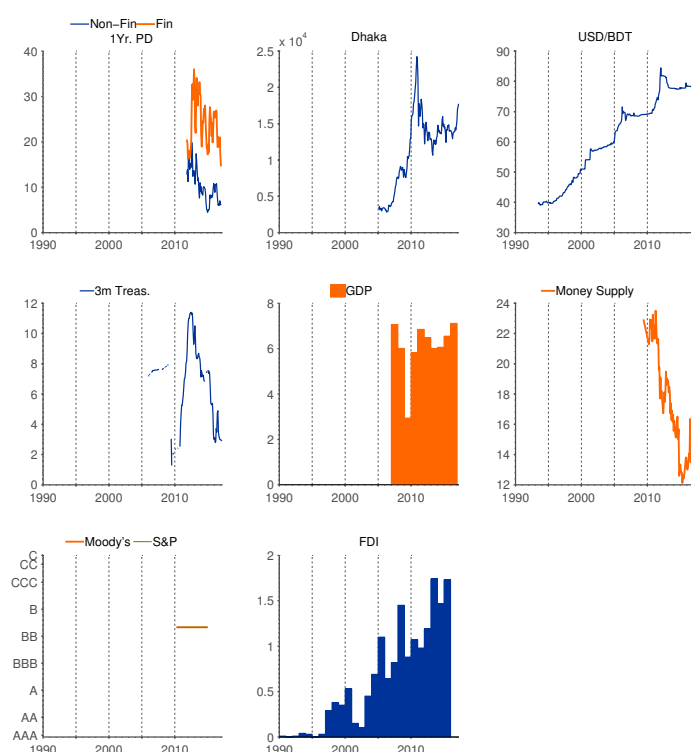
Australia	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	6.86	6.39	4.84	5.26	4.50
1Yr. PD, Fin.	1.59	1.61	1.02	1.19	1.22
All Ordinaries	5152	5310	5525	5719	5904
AUD/USD	0.77	0.75	0.77	0.72	0.76
3m Treas. Yield (%)	2.04	1.69	1.53	1.70	1.55
10Y Treas. Yield (%)	2.49	1.98	1.91	2.77	2.70
3m Interbank (%)	2.27	1.94	1.72	1.80	1.79
GDP (YoY%)	2.5	3.1	1.9	2.4	-
OECD CLI	100.04	100.21	100.16	100.04	100.10*
PMI	58.1	51.8	49.8	55.4	57.5
PPI (YoY%)	-1.1	-1.6	-0.7	1.1	-
Money Supply (YoY%)	6.0	5.8	5.6	6.7	7.0*
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
5Y CDS (bps)	35.01	35.00	25.66	24.83	25.51
Fiscal Budget (%GDP)	-	-	-	-1.47	-



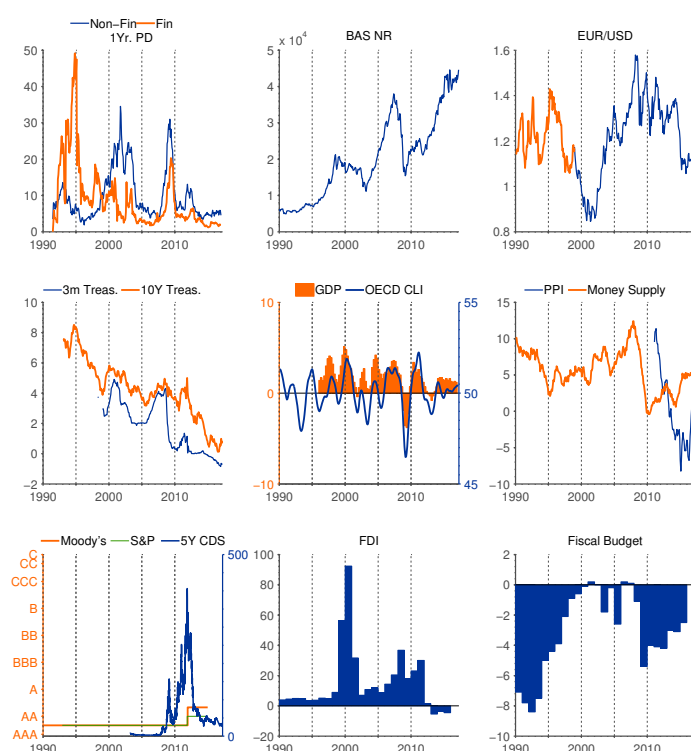
Austria	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	10.85	10.69	9.26	6.95	4.53
1Yr. PD, Fin.	12.80	7.74	4.72	4.16	2.75
ATX	2270	2096	2405	2618	2829
EUR/USD	1.14	1.11	1.12	1.05	1.07
3m Treas. Yield (%)	-0.53	-0.61	-0.70	-0.82	-0.82
10Y Treas. Yield (%)	0.35	0.20	0.10	0.43	0.54
3m Interbank (%)	-0.24	-0.29	-0.30	-0.32	-0.33
GDP (YoY%)	1.4	1.2	1.6	1.8	—
OECD CLI	99.59	99.79	100.21	100.84	101.26*
PMI	52.8	54.5	53.5	56.3	56.8
PPI (YoY%)	-4.0	-3.0	-2.0	0.5	3.0*
Money Supply (YoY%)	5.1	5.0	5.1	5.2	4.7*
Sov. Rating, Moody's	Aa1	Aa1	Aa1	Aa1	Aa1
Sov. Rating, S&P	AA+	AA+	AA+	AA+	AA+
5Y CDS (bps)	29.4	31.0	25.9	28.1	22.5



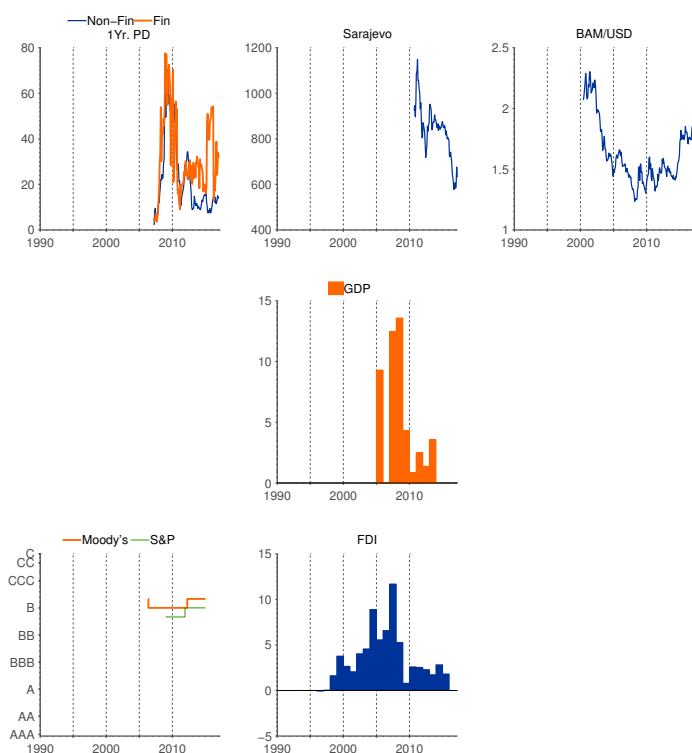
Bahrain	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	0.31	0.74	1.00	1.00	1.06
1Yr. PD, Fin.	25.98	32.08	36.92	15.50	27.45
Bourse	1131	1118	1150	1220	1356
USD/BHD	0.38	0.38	0.38	0.38	0.38
3m Interbank (%)	1.76	1.80	1.88	2.10	2.30
GDP (YoY%)	—	—	—	2.10	—
Money Supply (YoY%)	1.96	2.11	2.70	1.06	1.94*
Sov. Rating, Moody's	Baa3	Baa3	Baa3	Baa3	Baa3
Sov. Rating, S&P	BB-	BB-	BB-	BB-	BB-
Fiscal Budget (%GDP)	—	—	—	-4.71	—



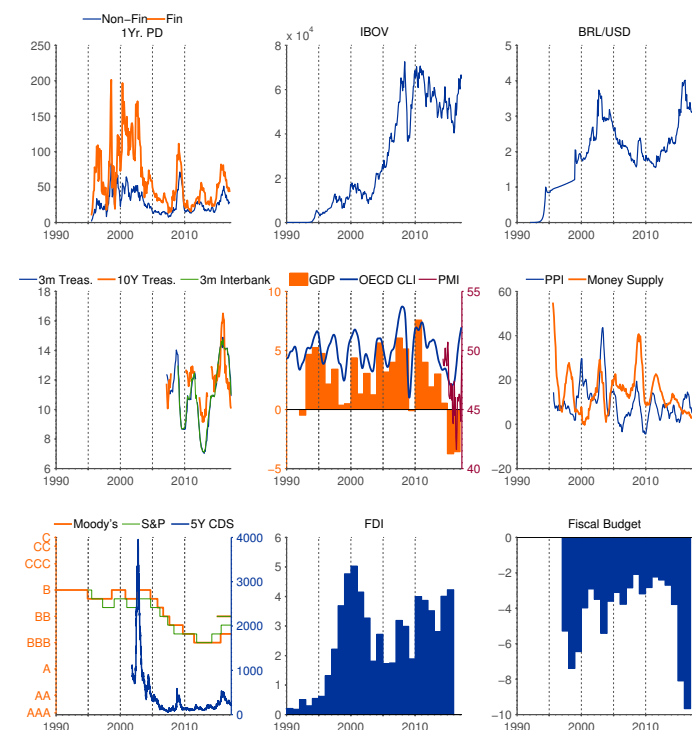
Bangladesh	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	13.61	11.52	9.80	10.99	9.73
1Yr. PD, Fin.	32.83	26.57	32.00	24.14	18.64
Dhaka	13407	13803	14429	15478	17738
USD/BDT	78.38	78.33	78.38	78.92	80.25
3m Treas. Yield (%)	2.83	4.75	3.20	2.98	2.89*
GDP (YoY%)	—	—	—	7.1	—
Money Supply (YoY%)	13.6	16.4	13.4	13.8	13.4*
Sov. Rating, Moody's	Ba3	Ba3	Ba3	Ba3	Ba3
Sov. Rating, S&P	BB-	BB-	BB-	BB-	BB-



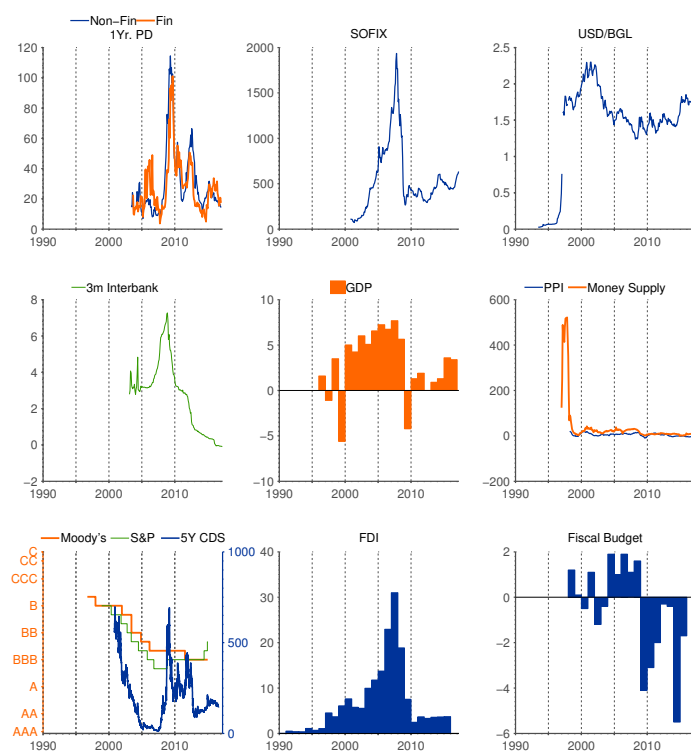
Belgium	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	5.22	5.57	5.17	5.04	2.99
1Yr. PD, Fin.	2.90	2.48	2.19	1.50	1.91
BAS NR	39614.7	41164.2	42424.0	43085.0	44607.4
EUR/USD	1.14	1.11	1.12	—	—
3m Treas. Yield (%)	-0.43	-0.65	-0.75	-0.85	-0.66
10Y Treas. Yield (%)	0.51	0.23	0.14	0.53	0.85
GDP (YoY%)	1.3	1.2	1.3	1.2	—
OECD CLI	100.08	100.22	100.33	100.42	100.41*
PPI (YoY%)	-6.5	-3.4	0.8	9.4	13.8*
Money Supply (YoY%)	5.10	5.00	5.10	5.20	5.30
Sov. Rating, Moody's	Aa3	Aa3	Aa3	Aa3	Aa3
Sov. Rating, S&P	AA	AA	AA	AA	AA
5Y CDS (bps)	45.57	49.22*	—	33.66	27.05



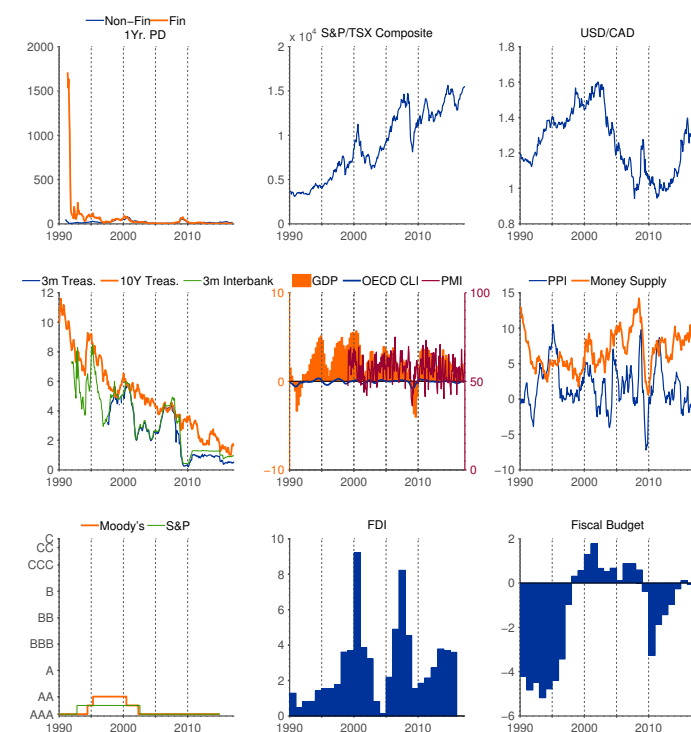
Bosnia and Herzegovina	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	3.69	11.30	8.50	22.11	23.80
1Yr. PD, Fin.	50.52	46.53	50.92	67.47	49.28
Sarajevo	741	652	577	583	631
BAM/USD	1.72	1.76	1.74	1.86	1.83
Sov. Rating, Moody's	B3	B3	B3	B3	B3
Sov. Rating, S&P	B	B	B	B	B



Brazil	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	48.03	48.18	42.18	37.66	38.47
1Yr. PD, Fin.	66.52	60.95	50.70	42.98	36.40
IBOV	50055	51527	58367	60227	64984
BRL/USD	3.59	3.21	3.26	3.25	3.12
3m Treas. Yield (%)	13.99	14.14	13.72	12.94	10.90
10Y Treas. Yield (%)	13.97	12.07	11.58	11.40	10.06
3m Interbank (%)	14.12	14.13	13.80	12.96	11.00
GDP (YoY%)	-	-	-	-3.6	-
OECD CLI	97.91	99.25	100.54	101.42	101.96*
PMI	46.0	43.2	46.0	45.2	49.6
PPI (YoY%)	13.0	14.6	12.3	7.6	4.9
Money Supply (YoY%)	5.6	5.2	5.3	3.7	3.2*
Sov. Rating, Moody's	Ba2	Ba2	Ba2	Ba2	Ba2
Sov. Rating, S&P	BB	BB	BB	BB	BB
5Y CDS (bps)	365.74	316.92	272.81	280.76	226.44
Fiscal Budget (%GDP)	-	-	-	-9.67	-

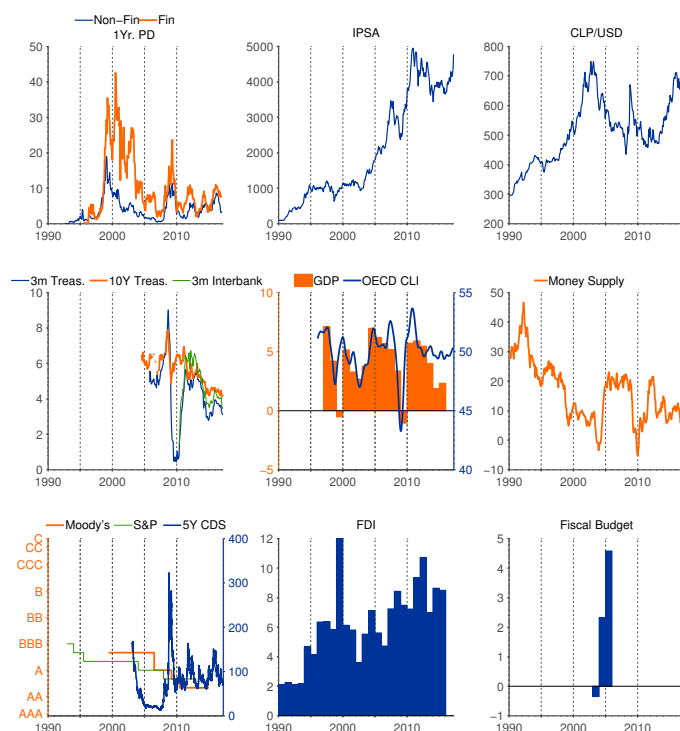


Bulgaria	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	21.29	19.04	17.63	15.00	13.83
1Yr. PD, Fin.	23.20	26.47	19.12	22.85	13.45
SOFIX	446.4	455.6	504.6	586.4	634.0
USD/BGL	1.72	1.76	1.74	1.86	1.84
3m Interbank (%)	-0.02	-0.04	-0.05	-0.07	-0.10
GDP (YoY%)	—	—	—	3.4	—
PPI (YoY%)	-4.1	-4.2	-2.4	0.6	2.9*
Money Supply (YoY%)	6.0	8.9	8.7	7.6	7.6*
Sov. Rating, Moody's	Baa2	Baa2	Baa2	Baa2	Baa2
Sov. Rating, S&P	BB+	BB+	BB+	BB+	BB+
5Y CDS (bps)	161.42	162.71	142.88*	—	—

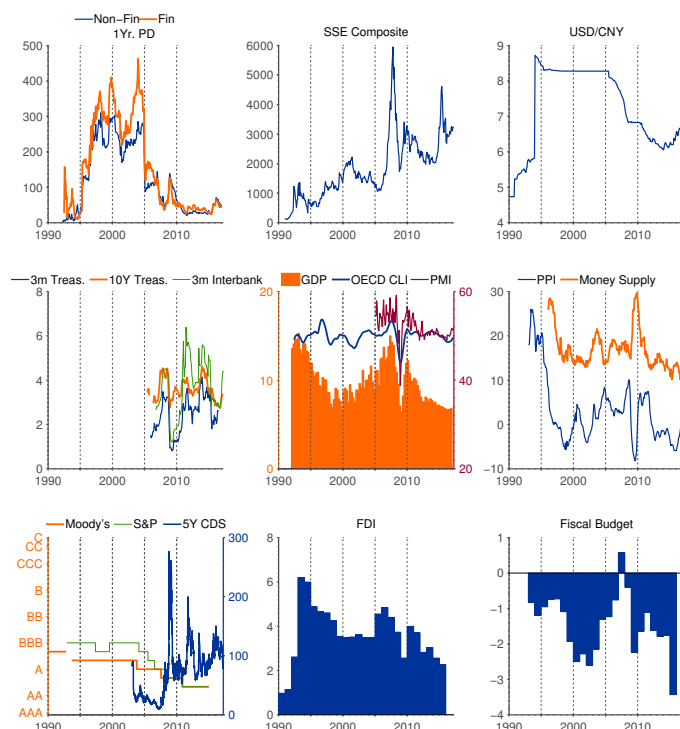


Canada	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	17.64	13.65	13.32	13.77	12.44
1Yr. PD, Fin.	5.14	5.04	3.96	3.57	2.43
S&P/TSX Composite	13494	14065	14726	15288	15548
USD/CAD	1.30	1.29	1.31	1.34	1.33
3m Treas. Yield (%)	0.45	0.49	0.53	0.46	0.55
10Y Treas. Yield (%)	1.23	1.06	1.00	1.72	1.63
3m Interbank (%)	0.90	0.88	0.90	0.94	0.94
GDP (YoY%)	1.3	1.1	1.4	2.0	—
OECD CLI	99.01	99.39	99.81	100.35	100.71*
PMI	57.9	54.7	68.1	49.4	67.6
PPI (YoY%)	-1.9	-0.7	-0.3	2.3	3.5*
Money Supply (YoY%)	8.0	10.5	8.3	8.5	6.7*
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
Fiscal Budget (%GDP)	—	—	—	-0.05	—

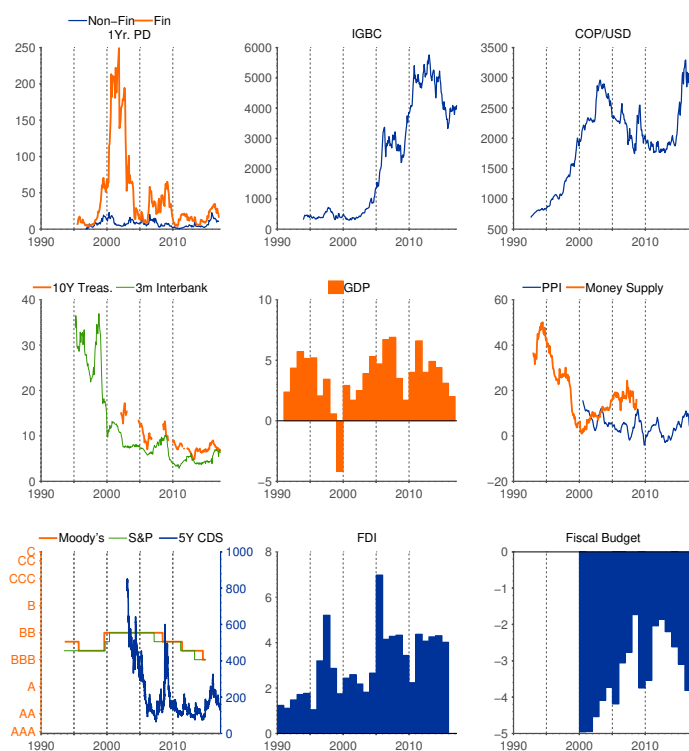




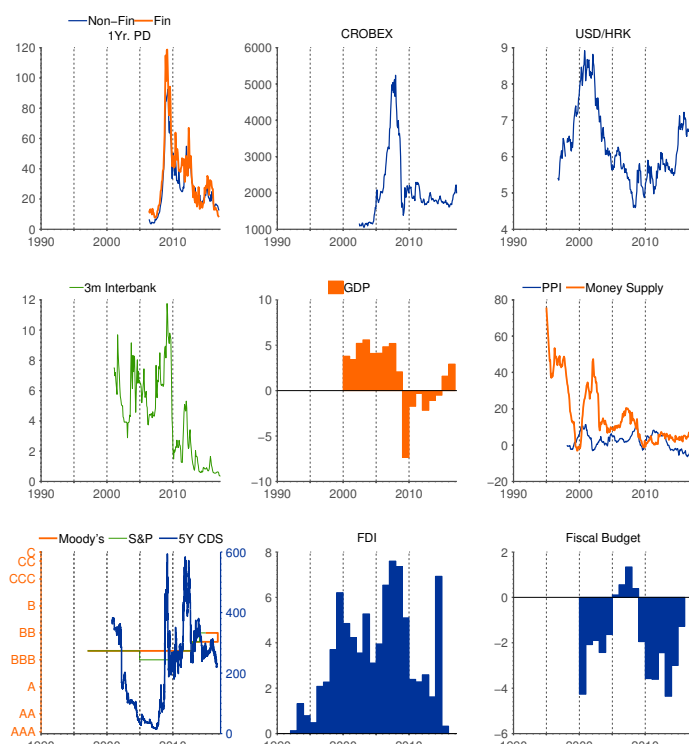
Chile	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	6.46	5.89	5.46	4.24	3.06
1Yr. PD, Fin.	11.48	7.95	7.29	4.82	4.84
IPSA	3937	3996	4015	4151	4783
CLP/USD	667.74	663.26	657.32	670.68	660.25
3m Treas. Yield (%)	3.81	3.73	3.61	3.35	3.09
10Y Treas. Yield (%)	4.44	4.55	4.22	4.37	4.20
3m Interbank (%)	4.23	4.12	4.04	4.09	3.43
OECD CLI	99.72	99.63	99.80	100.17	100.35*
Money Supply (YoY%)	12.5	9.2	8.0	6.3	4.4*
Sov. Rating, Moody's	Aa3	Aa3	Aa3	Aa3	Aa3
Sov. Rating, S&P	AA-	AA-	AA-	AA-	AA-
5Y CDS (bps)	95.00	94.50	86.43	83.25	72.16



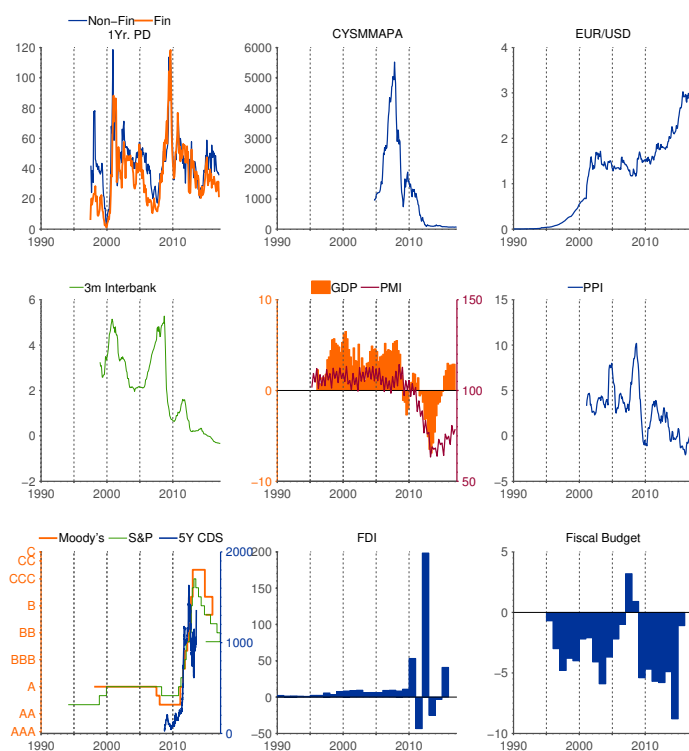
China	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	60.05	61.09	53.75	46.01	36.49
1Yr. PD, Fin.	57.56	61.33	50.69	45.48	36.90
SSE Composite	3003.9	2929.6	3004.7	3103.6	3222.5
USD/CNY	6.5	6.6	6.7	6.9	6.9
3m Treas. Yield (%)	2.05	2.63	2.63*	—	—
10Y Treas. Yield (%)	2.89	2.86	2.74	3.06	3.29
3m Interbank (%)	2.82	2.97	2.80	3.27	4.39
GDP (YoY%)	6.7	6.7	6.7	6.8	—
OECD CLI	98.61	98.63	98.80	99.21	99.64*
PMI	50.2	50.0	50.4	51.4	51.8
PPI (YoY%)	-4.30	-2.60	0.10	5.50	7.60
Money Supply (YoY%)	13.40	11.80	11.50	11.30	11.10*
Sov. Rating, Moody's	Aa3	Aa3	Aa3	Aa3	Aa3
Sov. Rating, S&P	AA-	AA-	AA-	AA-	AA-
5Y CDS (bps)	120.83	122.23	106.50	113.67	81.99



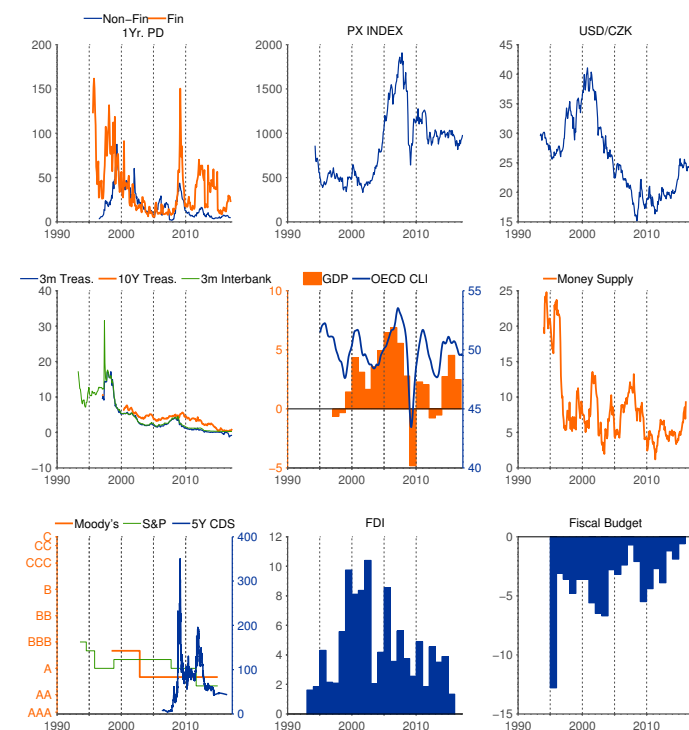
Colombia	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	17.25	19.47	17.29	13.79	11.66
1Yr. PD, Fin.	29.30	30.10	25.55	27.43	33.34
IGBC	3979	3925	3939	3995	4097
COP/USD	3002.14	2920.46	2881.30	3000.71	2873.98
10Y Treas. Yield (%)	8.20	7.59	7.00	7.11	6.65
3m Interbank (%)	6.30	6.95	6.97	5.46	6.22
GDP (YoY%)	—	—	—	2.0	—
PPI (YoY%)	8.56	9.64	3.38	1.62	0.55
Sov. Rating, Moody's	Baa2	Baa2	Baa2	Baa2	Baa2
Sov. Rating, S&P	BBB	BBB	BBB	BBB	BBB
5Y CDS (bps)	215.66	205.42	169.93	164.22	133.99
Fiscal Budget (%GDP)	—	—	—	-3.82	—



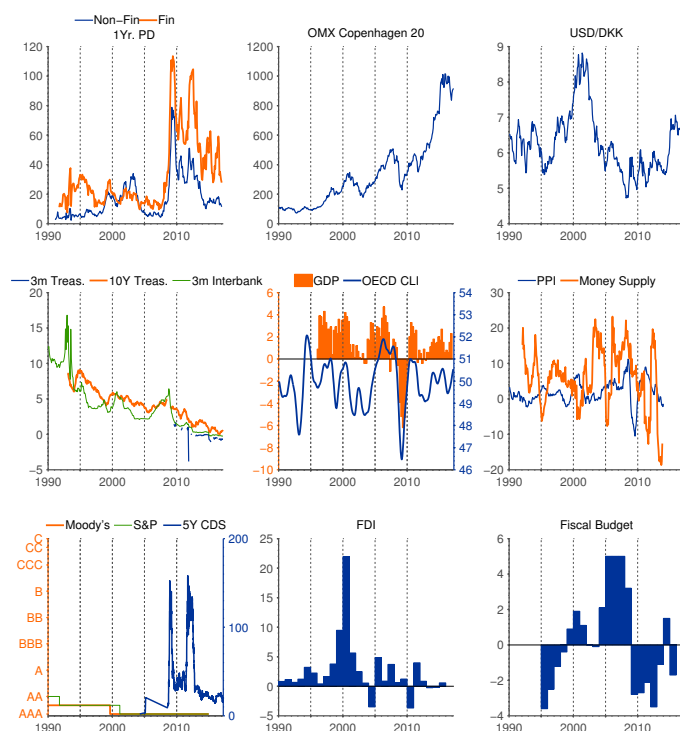
Croatia	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	22.85	20.98	19.86	15.97	13.92
1Yr. PD, Fin.	24.12	19.79	16.34	17.43	19.99
CROBEX	1670	1676	1941	1995	1989
USD/HRK	7	7	7	7	7
3m Interbank (%)	0.58	0.55	0.61	0.57	0.33
GDP (YoY%)	—	—	—	2.9	—
PPI (YoY%)	-5.50	-5.50	-3.20	0.00	1.20
Money Supply (YoY%)	3.41	4.60	4.29	4.71	3.31*
Sov. Rating, Moody's	Ba2	Ba2	Ba2	Ba2	Ba2
Sov. Rating, S&P	BB	BB	BB	BB	BB
5Y CDS (bps)	270.0	253.3	225.9	—	—



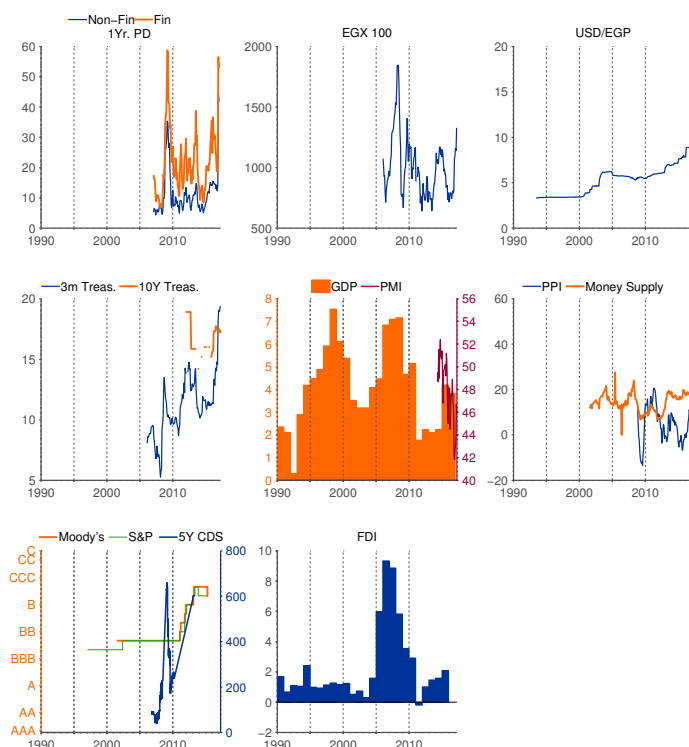
Cyprus	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	38.07	36.22	30.57	31.33	26.29
1Yr. PD, Fin.	37.25	30.41	24.09	32.06	37.09
CYSMMAPA	68	66	66	66	68
EUR/USD	2.82	2.88	3.00	3.52	3.64
3m Interbank (%)	-0.24	-0.29	-0.30	-0.32	-0.33
GDP (YoY%)	2.8	2.8	2.9	2.9	—
PMI	70.3	80.7	75.9	78.7	—
PPI (YoY%)	-1.1	-0.8	0.1	0.2	-0.5*
Sov. Rating, Moody's	B1	B1	B1	B1	B1
Sov. Rating, S&P	BB+	BB+	BB+	BB+	BB+



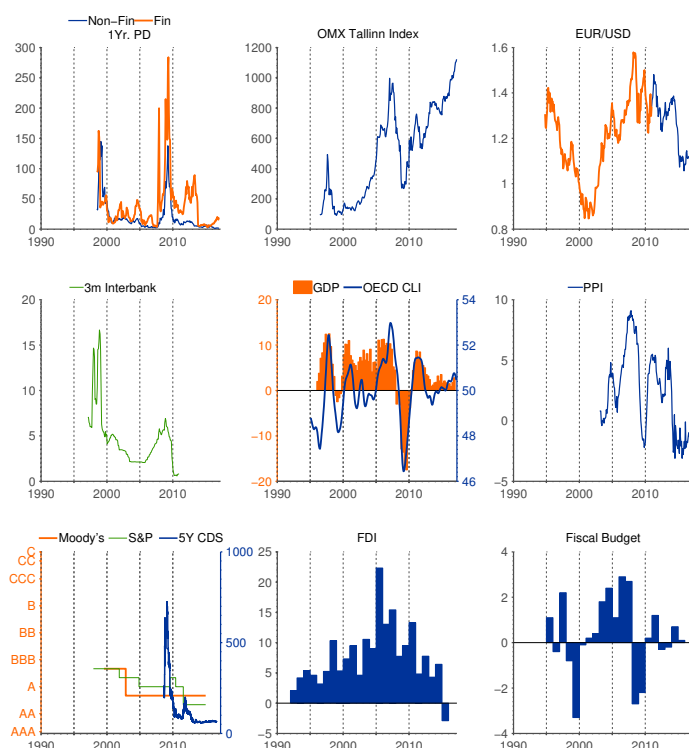
Czech Republic	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	6.94	7.92	6.54	5.34	3.75
1Yr. PD, Fin.	9.81	17.58	13.32	10.42	10.89
PX INDEX	899.9	816.9	863.6	921.6	981.1
USD/CZK	23.76	24.39	24.04	25.70	25.38
3m Treas. Yield (%)	-0.00	-0.07	-0.72	-0.97	-0.89
10Y Treas. Yield (%)	0.44	0.46	0.29	0.55	1.00
3m Interbank (%)	0.29	0.29	0.29	0.28	0.28
GDP (YoY%)	—	—	—	2.48	—
OECD CLI	100.34	99.89	99.55	99.61	99.50*
Money Supply (YoY%)	9.4*	—	—	—	—
Sov. Rating, Moody's	A1	A1	A1	A1	A1
Sov. Rating, S&P	AA-	AA-	AA-	AA-	AA-
5Y CDS (bps)	—	43.34	—	—	—



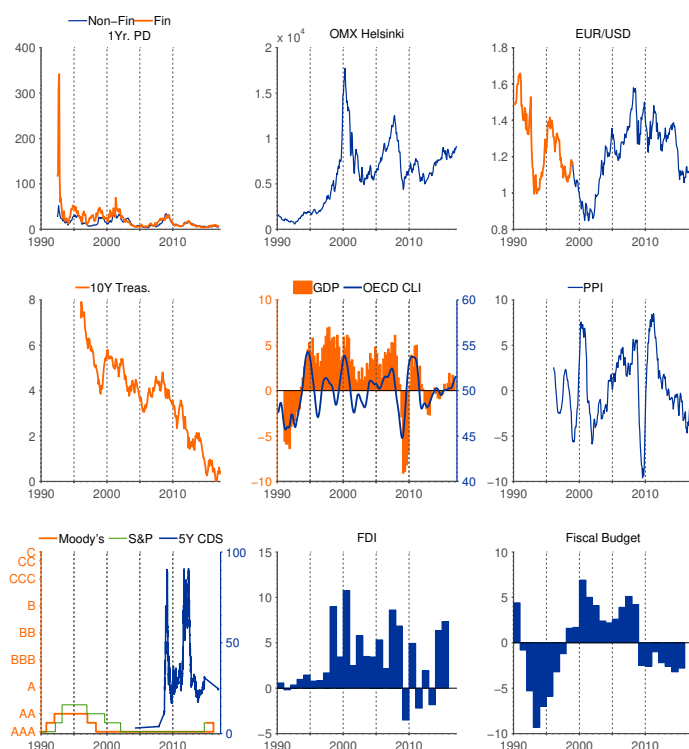
Denmark	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	17.70	18.37	15.07	14.18	9.93
1Yr. PD, Fin.	45.95	47.73	39.49	30.86	23.64
OMX Copenhagen 20	948	958	897	884	916
USD/DKK	6.55	6.70	6.63	7.07	6.98
3m Treas. Yield (%)	-0.48	-0.50*	-0.66	-0.79	-0.69
10Y Treas. Yield (%)	0.44	0.09	0.01	0.33	0.60
3m Interbank (%)	-0.08	-0.21	-0.19	-0.23	-0.26
GDP (YoY%)	0.8	0.6	1.5	2.3	—
OECD CLI	99.46	99.55	99.83	100.27	100.55*
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
5Y CDS (bps)	21.68	23.16	23.69	22.69	17.04



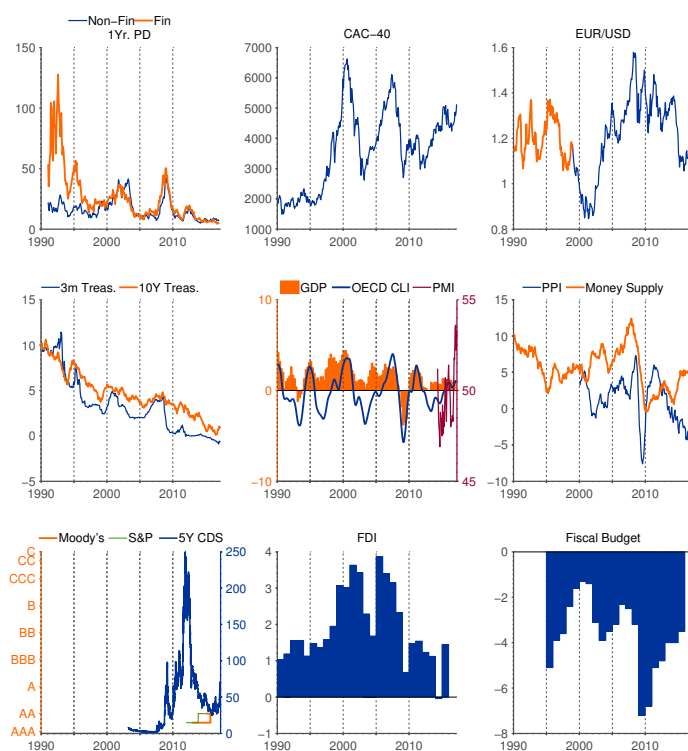
Egypt	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	21.29	19.66	17.28	44.60	28.79
1Yr. PD, Fin.	38.47	47.12	33.10	66.26	45.00
EGX 100	792.2	743.7	790.3	1096.0	1327.7
USD/EGP	8.85	8.88	8.88	18.13	18.17
3m Treas. Yield (%)	13.22	13.96	14.78	19.04	19.38
10Y Treas. Yield (%)	17.30	17.30	17.40*	17.40	17.40
GDP (YoY%)	—	—	—	3.8	—
PMI	44.5	47.5	46.3	42.8	45.9
PPI (YoY%)	0.5	5.7	9.3	28.1	—
Money Supply (YoY%)	18.2	18.6	18.0	39.0	36.6*
Sov. Rating, Moody's	B3	B3	B3	B3	B3
Sov. Rating, S&P	B-	B-	B-	B-	B-



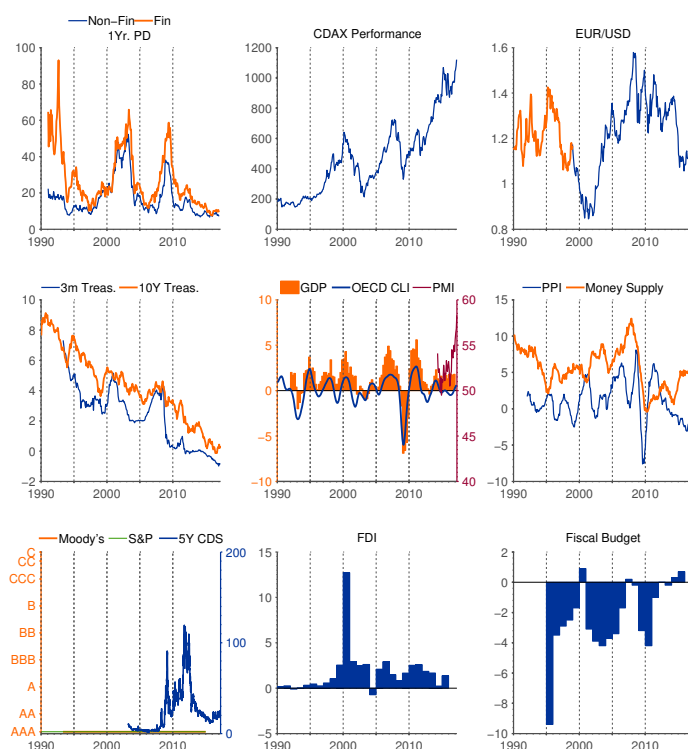
Estonia	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	1.37	1.98	2.91	1.76	1.79
1Yr. PD, Fin.	10.69	13.88	20.91	16.59	24.42
OMX Tallinn Index	970.6	985.6	1001.3	1075.5	1122.2
EUR/USD	1.14	1.11	1.12	—	—
GDP (YoY%)	1.5	0.9	1.8	2.8	—
OECD CLI	100.39	100.47	100.74	100.69	100.46*
PPI (YoY%)	-2.0	-1.4	-0.9	2.5	3.9*
Sov. Rating, Moody's	A1	A1	A1	A1	A1
Sov. Rating, S&P	AA-	AA-	AA-	AA-	AA-
5Y CDS (bps)	66.32	64.12	65.66*	—	—



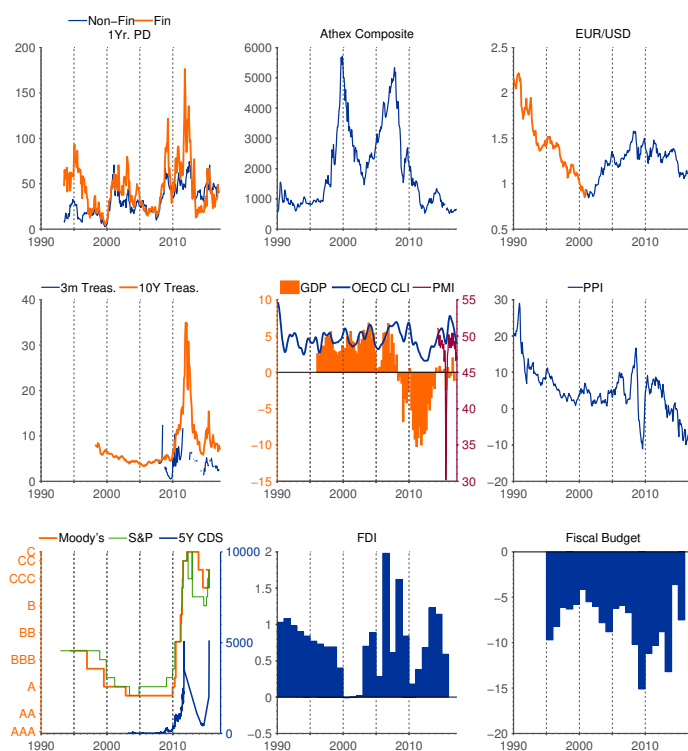
Finland	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	7.39	7.26	5.67	4.86	3.81
1Yr. PD, Fin.	9.09	9.73	7.32	8.18	4.96
OMX Helsinki	8000	7904	8626	8902	9165
EUR/USD	1.14	1.11	1.12	—	—
10Y Treas. Yield (%)	0.44	0.15	0.03	0.35	0.45
GDP (YoY%)	1.9	0.8	1.7	1.2	—
OECD CLI	100.27	100.37	100.94	101.46	101.54*
PPI (YoY%)	-4.1	-3.4	-1.4	2.4	5.3*
Sov. Rating, Moody's	Aa1	Aa1	Aa1	Aa1	Aa1
Sov. Rating, S&P	AA+	AA+	AA+	AA+	AA+
5Y CDS (bps)	—	—	—	24.1	—



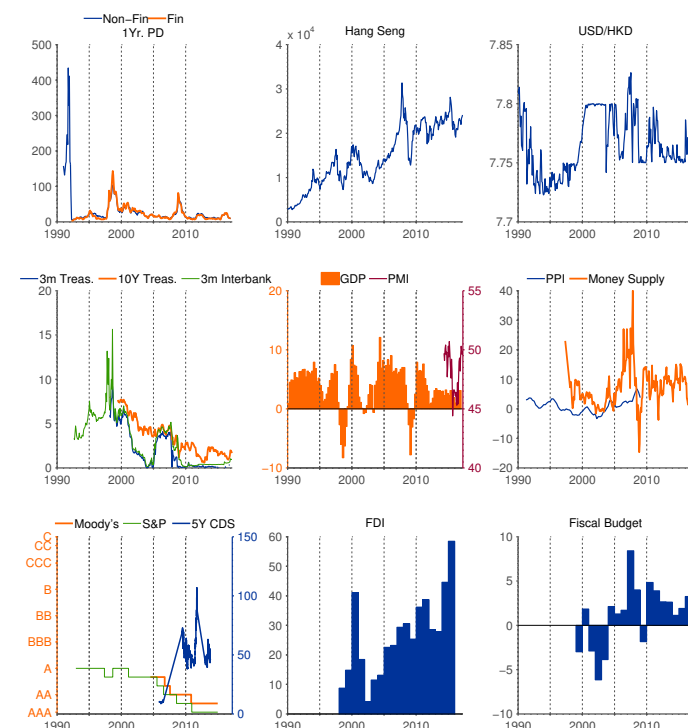
France	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	9.12	8.52	7.02	6.70	5.38
1Yr. PD, Fin.	7.24	6.29	4.93	5.66	4.96
CAC-40	4385	4237	4448	4862	5123
EUR/USD	1.14	1.11	1.12	—	—
3m Treas. Yield (%)	-0.42	-0.57	-0.69	-0.90	-0.57
10Y Treas. Yield (%)	0.49	0.18	0.19	0.69	0.97
GDP (YoY%)	1.2	1.1	0.9	1.1	—
OECD CLI	100.37	100.19	100.23	100.47	100.53*
PMI	49.6	48.3	49.7	53.5	53.3
PPI (YoY%)	-3.9	-3.1	-1.5	1.7	3.9*
Money Supply (YoY%)	5.1	5.0	5.1	5.2	5.3
Sov. Rating, Moody's	Aa2	Aa2	Aa2	Aa2	Aa2
Sov. Rating, S&P	AA	AA	AA	AA	AA
5Y CDS (bps)	33.3	50.5	29.2	37.0	50.4



Germany	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	9.85	9.93	8.30	7.71	5.86
1Yr. PD, Fin.	13.68	12.57	10.82	10.64	8.15
CDAX Performance	915	893	971	1043	1121
EUR/USD	1.14	1.11	1.12	—	—
3m Treas. Yield (%)	-0.59	-0.68	-0.80	-0.99	-0.82
10Y Treas. Yield (%)	0.15	-0.13	-0.12	0.21	0.33
GDP (YoY%)	1.8	1.8	1.7	1.8	—
OECD CLI	99.51	99.58	99.89	100.35	100.61*
PMI	50.7	54.5	54.3	55.6	58.3
PPI (YoY%)	-3.0	-2.2	-1.4	1.0	3.0*
Money Supply (YoY%)	5.1	5.0	5.1	5.2	5.3
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
5Y CDS (bps)	18.69	22.27	19.18	21.78	17.15

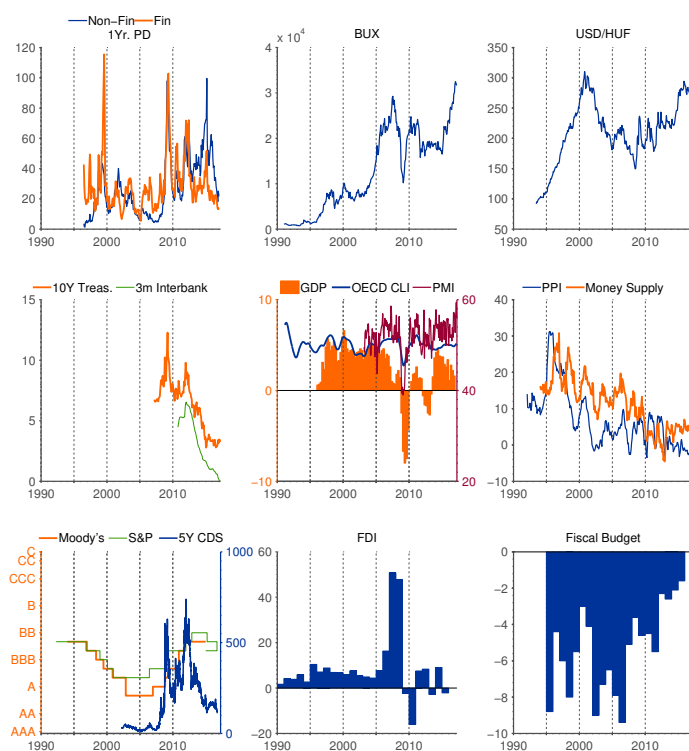


Greece	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	56.24	57.28	50.78	47.06	36.02
1Yr. PD, Fin.	29.75	35.56	38.83	32.12	32.93
Athex Composite	577	542	566	644	666
EUR/USD	1	1	1	—	—
3m Treas. Yield (%)	3.28	3.38	3.34	2.59	2.43*
10Y Treas. Yield (%)	8.59	8.29	8.28	7.11	6.99
GDP (YoY%)	-0.7	-0.4	2.0	-1.1	—
OECD CLI	102.76	102.07	101.28	99.97	98.96*
PMI	49.0	50.4	49.2	49.3	46.7
PPI (YoY%)	-9.0	-7.3	-3.2	3.0	8.8*
Sov. Rating, Moody's	Caa3	Caa3	Caa3	Caa3	Caa3
Sov. Rating, S&P	CCC+	CCC+	CCC+	CCC+	CCC+

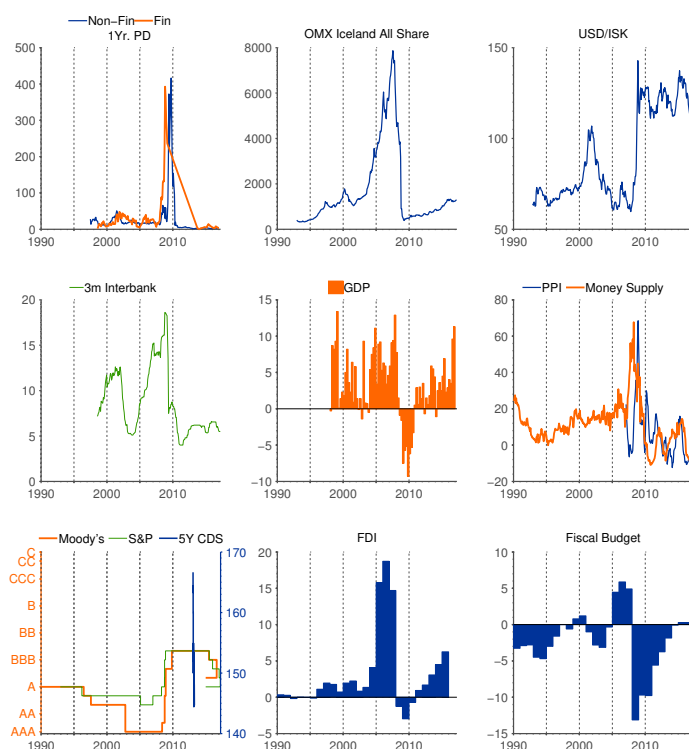


Hong Kong	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	19.45	16.75	9.00	8.77	6.52
1Yr. PD, Fin.	24.67	19.82	10.89	8.63	6.17
Hang Seng	20777	20794	23297	22001	24112
USD/HKD	7.76	7.76	7.76	7.76	7.77
3m Treas. Yield (%)	0.05	0.10*	—	0.33*	—
10Y Treas. Yield (%)	1.28	1.02	1.06	1.97	1.67
3m Interbank (%)	0.56	0.57	0.59	1.02	0.94
GDP (YoY%)	1.0	1.7	2.0	3.1	—
PMI	45.5	45.4	49.3	50.3	49.9
Money Supply (YoY%)	3.6	2.1	7.8	8.9	12.8*
Sov. Rating, Moody's	Aa1	Aa1	Aa1	Aa1	Aa1
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
Fiscal Budget (%GDP)	—	—	—	3.26	—

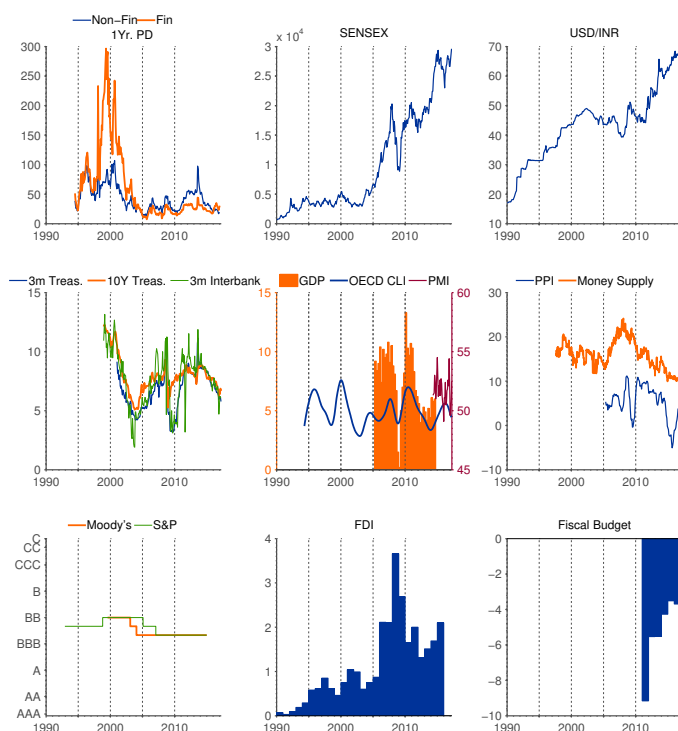




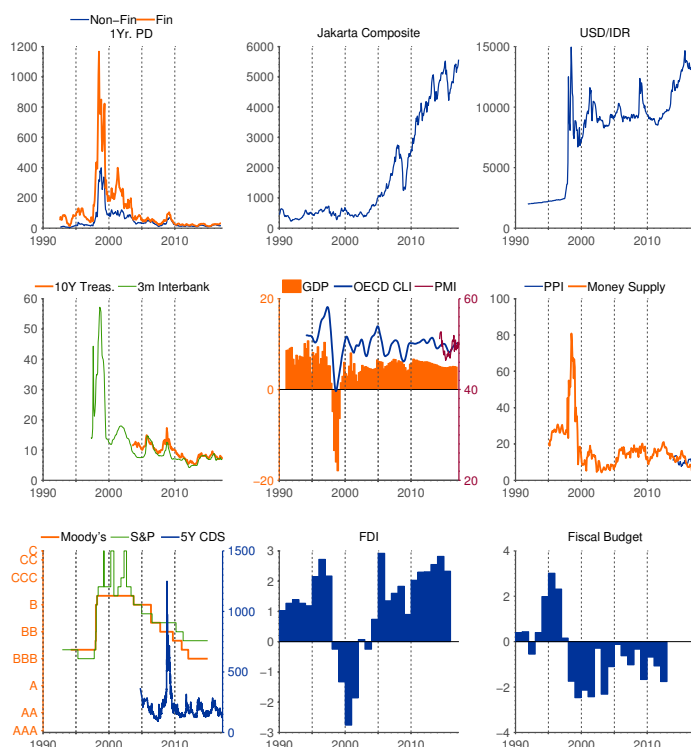
Hungary	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	39.91	32.83	26.21	31.25	19.16
1Yr. PD, Fin.	24.45	25.68	18.98	16.64	14.73
BUX	26451.0	26325.6	27664.3	32003.0	31634.3
USD/HUF	275.92	284.23	274.35	294.36	289.83
10Y Treas. Yield (%)	2.95	3.03	2.88	3.16	3.25
3m Interbank (%)	0.91	0.76	0.59	0.21	0.05
GDP (YoY%)	1.1	2.8	2.2	1.6	—
OECD CLI	100.00	99.92	99.71	99.97	100.35*
PMI	51.7	50.9	57.2	52.8	56.0
PPI (YoY%)	-1.6	-2.6	-2.6	0.5	4.0*
Money Supply (YoY%)	5.03	5.36	4.20	6.88	6.84*
Sov. Rating, Moody's	Ba1	Ba1	Ba1	Ba1	Ba1
Sov. Rating, S&P	BBB-	BBB-	BBB-	BBB-	BBB-
5Y CDS (bps)	151.84	158.69	115.11	—	—



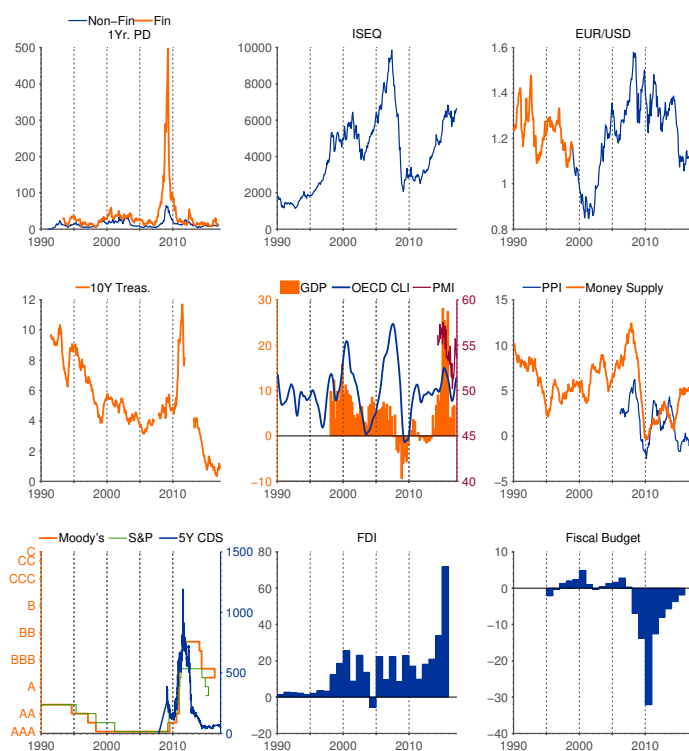
Iceland	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	2.25	4.70	5.30	6.92	4.47
1Yr. PD, Fin.	3.63	9.65	6.62	4.49	3.31
OMX Iceland All Share	1321	1245	1209	1232	1291
USD/ISK	123.42	123.18	113.82	113.34	113.49
3m Interbank (%)	6.55	6.55	5.95	5.60	5.50
GDP (YoY%)	4.0	3.5	9.6	11.3	—
PPI (YoY%)	-10.7	-9.3	-5.5	-6.1	-5.5*
Money Supply (YoY%)	-5.65	-6.98	-8.41	-4.58	1.47*
Sov. Rating, Moody's	A3	A3	A3	A3	A3
Sov. Rating, S&P	A	A	A	A	A
Fiscal Budget (%GDP)	—	—	—	0.29	—



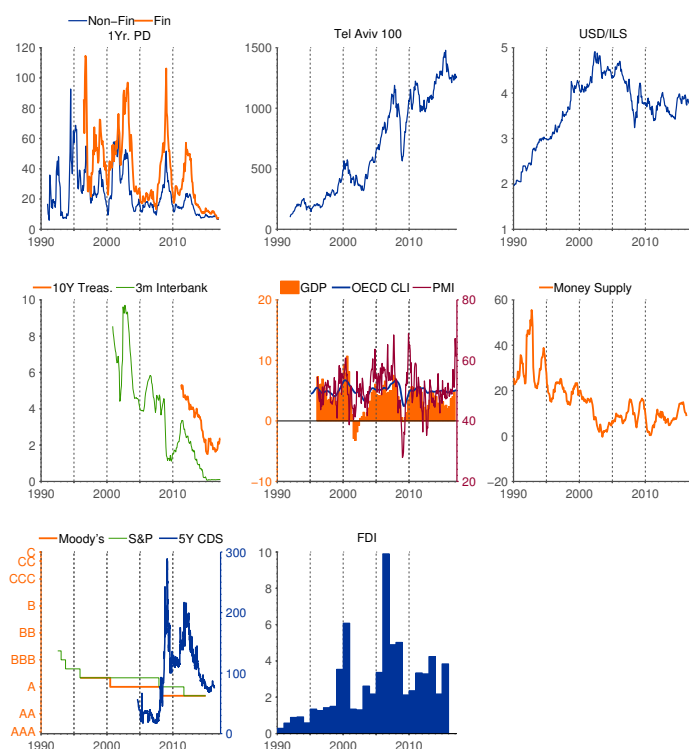
India	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	24.05	21.77	19.00	13.03	12.21
1Yr. PD, Fin.	27.37	25.96	22.83	23.29	25.04
SENSEX	25342	27000	27866	26626	29621
USD/INR	66.25	67.53	66.61	67.92	64.85
3m Treas. Yield (%)	7.13	6.65	6.42	6.20	5.78
10Y Treas. Yield (%)	7.46	7.45	6.82	6.51	6.68
3m Interbank (%)	7.50	6.75	7.04	5.36	6.14
OECD CLI	100.62	100.53	100.20	99.73	99.45*
PMI	52.4	51.7	52.1	49.6	52.5
PPI (YoY%)	-0.5	2.1	3.8	3.7	5.7
Money Supply (YoY%)	10.20	10.40	12.10	6.50	7.70
Sov. Rating, Moody's	Baa3	Baa3	Baa3	Baa3	Baa3
Sov. Rating, S&P	BBB-	BBB-	BBB-	BBB-	BBB-
Fiscal Budget (%GDP)	-	-	-	-3.69	-



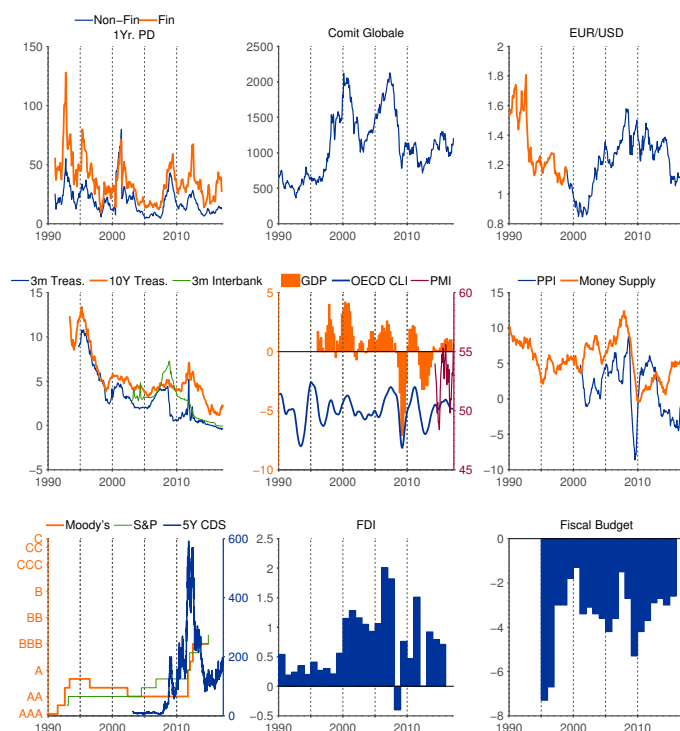
Indonesia	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	19.30	19.08	16.69	16.86	14.48
1Yr. PD, Fin.	23.47	24.35	22.06	25.04	28.45
Jakarta Composite	4845	5017	5365	5297	5568
USD/IDR	13239.00	13210.00	13042.00	13473.00	13322.00
10Y Treas. Yield (%)	7.67	7.45	7.06	7.97	7.04
3m Interbank (%)	6.73	7.23	7.10	7.46	6.87
GDP (YoY%)	5.0	5.1	5.0	4.9	-
OECD CLI	99.13	99.66	100.05	100.15	100.04*
PMI	50.6	51.9	50.9	49.0	50.5
PPI (YoY%)	11.10	11.54	10.96	8.65	6.77
Money Supply (YoY%)	7.41	8.69	5.08	10.03	9.30*
Sov. Rating, Moody's	Baa2	Baa2	Baa2	Baa2	Baa2
Sov. Rating, S&P	BB+	BB+	BB+	BB+	BB+
5Y CDS (bps)	198.3	185.2	152.1	157.9	127.5



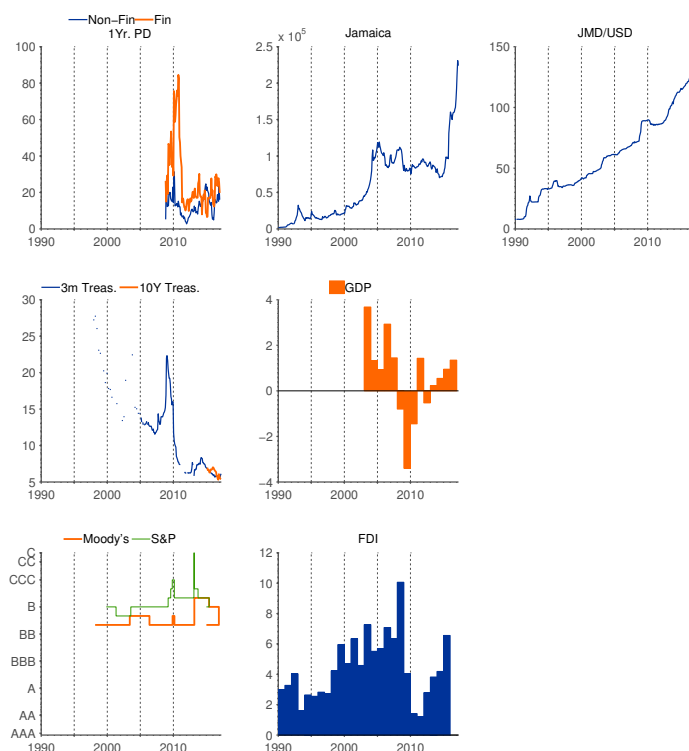
Ireland	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	9.18	9.24	7.86	8.73	7.68
1Yr. PD, Fin.	18.84	19.37	10.20	10.78	7.03
ISEQ	6309	5642	6035	6517	6659
EUR/USD	1.14	1.11	1.12	—	—
10Y Treas. Yield (%)	0.73	0.52	0.33	0.75	1.00
GDP (YoY%)	4.1	3.8	6.3	6.6	—
OECD CLI	99.79	98.85	99.32	100.65	101.44*
PMI	54.9	53.0	51.3	55.7	53.6
PPI (YoY%)	-0.5	-0.4	-0.7	0.2	1.1*
Money Supply (YoY%)	5.1	5.0	5.1	5.2	5.3
Sov. Rating, Moody's	A3	A3	A3	A3	A3
Sov. Rating, S&P	A+	A+	A+	A+	A+
5Y CDS (bps)	57.81	64.71*	—	63.75	50.86



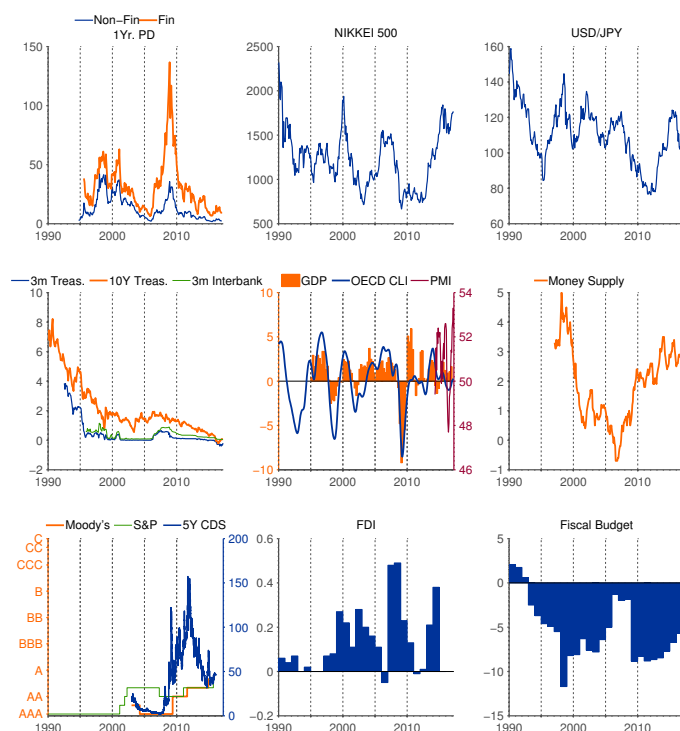
Israel	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	10.08	10.44	8.18	7.97	6.29
1Yr. PD, Fin.	15.90	12.58	9.55	9.41	9.70
Tel Aviv 100	1250	1211	1262	1282	1252
USD/ILS	3.76	3.86	3.76	3.84	3.62
10Y Treas. Yield (%)	1.85	1.63	1.73	2.06	2.36
3m Interbank (%)	0.10	0.08	0.10	0.10	0.10
GDP (YoY%)	2.3	3.7	4.0	4.8	—
OECD CLI	99.70	99.85	99.86	100.04	100.15*
PMI	49.0	48.8	52.1	67.2	61.2*
Money Supply (YoY%)	8.8	—	—	—	—
Sov. Rating, Moody's	A1	A1	A1	A1	A1
Sov. Rating, S&P	A+	A+	A+	A+	A+
5Y CDS (bps)	79.59	75.72*	—	—	—



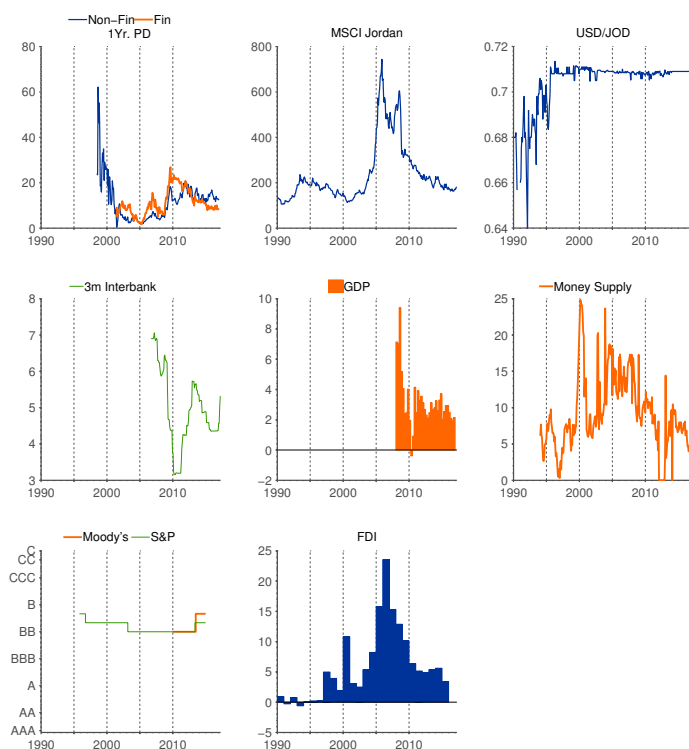
Italy	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	13.11	15.16	14.09	12.53	6.79
1Yr. PD, Fin.	35.42	43.07	38.52	27.44	15.72
Comit Globale	1056	949	965	1124	1208
EUR/USD	1.14	1.11	1.12	—	—
3m Treas. Yield (%)	-0.21	-0.28	-0.39	-0.46	-0.33
10Y Treas. Yield (%)	1.22	1.26	1.19	1.81	2.32
3m Interbank (%)	-0.02	-0.04	-0.05	-0.07	-0.10
GDP (YoY%)	1.1	0.8	1.0	1.0	—
OECD CLI	100.72	100.44	100.21	100.18	100.13*
PMI	53.5	53.5	51.0	53.2	55.7
PPI (YoY%)	-3.9	-3.4	-0.8	0.9	3.7*
Money Supply (YoY%)	5.10	5.00	5.10	5.20	5.30
Sov. Rating, Moody's	Baa2	Baa2	Baa2	Baa2	Baa2
Sov. Rating, S&P	BBB-	BBB-	BBB-	BBB-	BBB-
5Y CDS (bps)	126.70	152.05	150.82	157.22	170.09



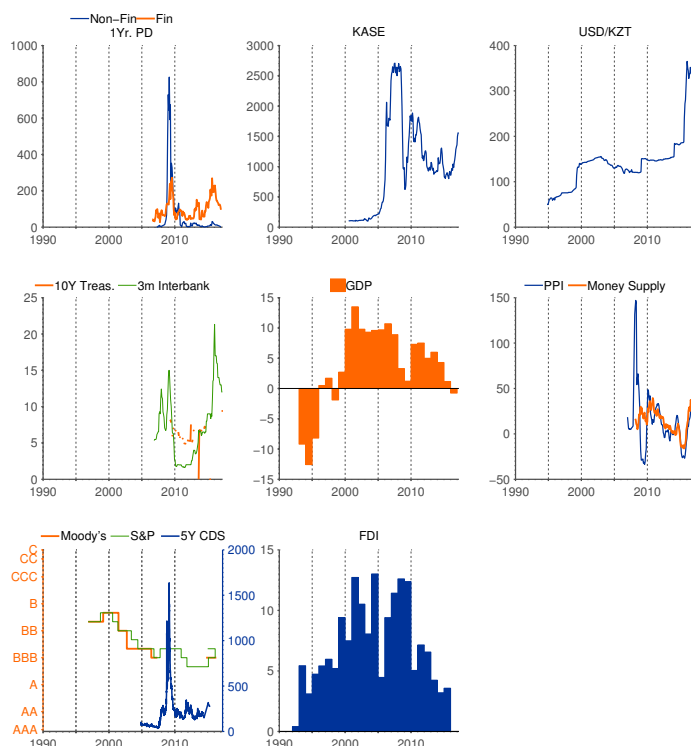
Jamaica	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	7.14	11.36	10.55	13.32	13.58
1Yr. PD, Fin.	16.27	30.31	23.77	19.40	11.43
Jamaica	153911	159717	164474	192274	223834
JMD/USD	121.56	126.55	127.58	128.85	128.13
3m Treas. Yield (%)	5.75	5.86	5.86	5.68	6.13
10Y Treas. Yield (%)	6.66	6.35	5.45	5.84	5.38
GDP (YoY%)	—	—	—	1.4	—
Sov. Rating, Moody's	Ba3	Ba3	Ba3	Ba3	Ba3
Sov. Rating, S&P	B	B	B	B	B



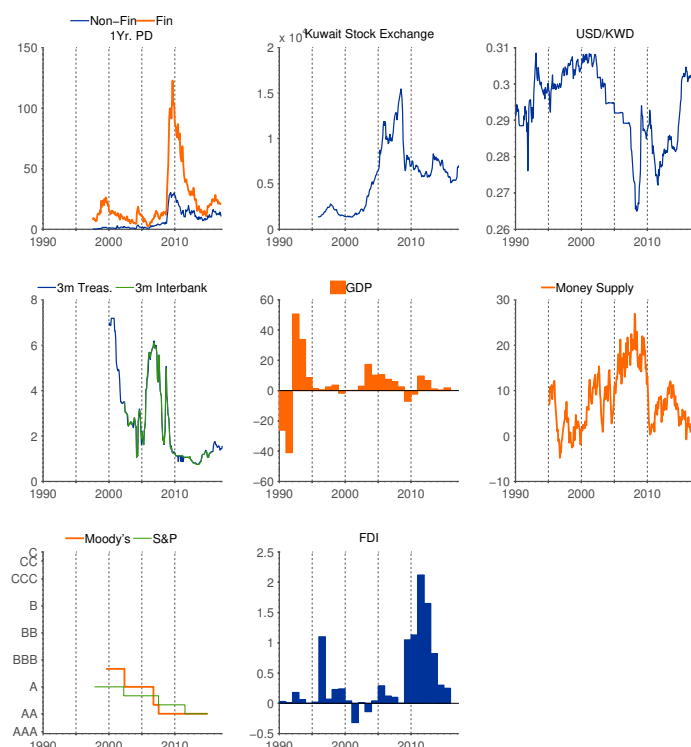
Japan	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	3.32	3.40	2.10	1.74	1.43
1Yr. PD, Fin.	9.84	11.36	8.89	7.34	7.76
NIKKEI 500	1590	1513	1572	1744	1760
USD/JPY	112.57	103.20	101.35	116.96	111.39
3m Treas. Yield (%)	-0.12	-0.27	-0.40	-0.39	-0.20
10Y Treas. Yield (%)	-0.03	-0.22	-0.09	0.05	0.07
3m Interbank (%)	0.10	0.06	0.06	0.06	0.06
GDP (YoY%)	0.4	0.9	1.1	1.6	—
OECD CLI	99.66	99.60	99.73	100.01	100.11*
PMI	49.1	48.1	50.4	52.4	52.4
Money Supply (YoY%)	2.60	2.90	3.00	3.40	3.60
Sov. Rating, Moody's	A1	A1	A1	A1	A1
Sov. Rating, S&P	A+	A+	A+	A+	A+
5Y CDS (bps)	45.79	—	—	—	—
Fiscal Budget (%GDP)	—	—	—	-5.67	—



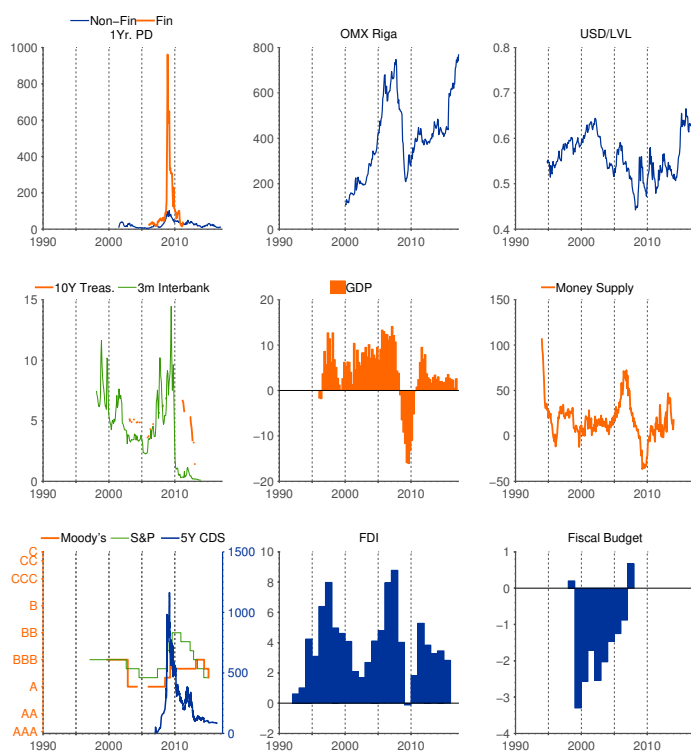
Jordan	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	12.40	12.41	12.69	12.09	13.94
1Yr. PD, Fin.	6.59	8.85	8.71	8.22	6.95
MSCI Jordan	170	166	163	172	182
USD/JOD	0.71	0.71	0.71	0.71	0.71
3m Interbank (%)	4.36	4.36	4.36	4.57	5.32
GDP (YoY%)	2.5	2.1	2.0	2.1	—
Money Supply (YoY%)	6.85	4.58	4.94	4.02	0.38*
Sov. Rating, Moody's	B1	B1	B1	B1	B1
Sov. Rating, S&P	BB-	BB-	BB-	BB-	BB-



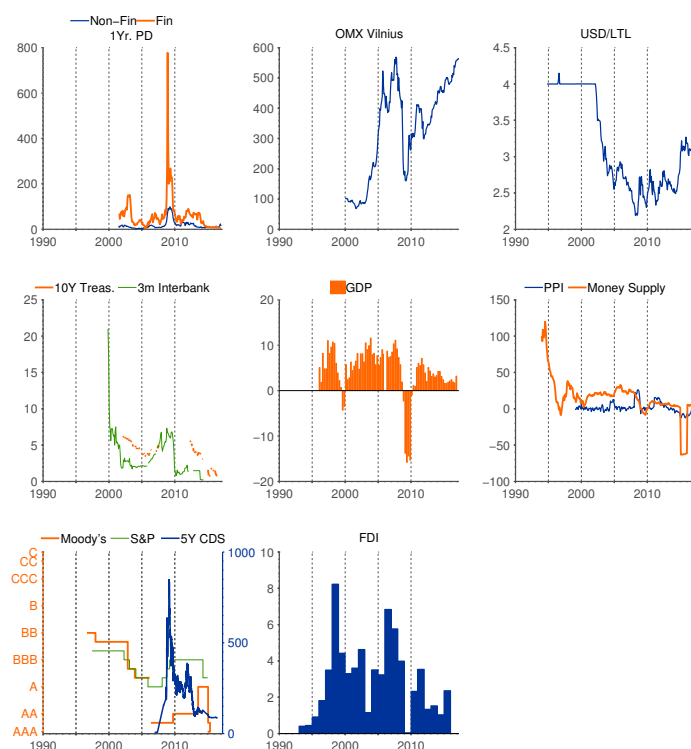
Kazakhstan	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	9.63	7.60	7.02	3.75	2.83
1Yr. PD, Fin.	97.53	78.44	68.42	91.52	108.87
KASE	971	985	1191	1358	1554
USD/KZT	344.59	339.18	335.84	333.69	313.65
10Y Treas. Yield (%)	—	—	—	—	9.40
3m Interbank (%)	17.00	15.92	14.00	13.00	12.00
GDP (YoY%)	—	—	—	-0.8	—
PPI (YoY%)	8.2	18.7	26.1	15.5	26.7
Money Supply (YoY%)	24.94	25.17	32.54	46.39	36.07*
Sov. Rating, S&P	BBB-	BBB-	BBB-	BBB-	BBB-



Kuwait	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	17.87	11.64	14.50	15.76	11.64
1Yr. PD, Fin.	30.75	29.07	27.71	23.53	21.54
Kuwait Stock Exchange	5229	5365	5398	5748	7029
USD/KWD	0.30	0.30	0.30	0.31	0.30
3m Treas. Yield (%)	1.63	1.50	1.56	1.44	1.56
Money Supply (YoY%)	4.16	1.67	2.56	3.02	1.39*
Sov. Rating, Moody's	Aa2	Aa2	Aa2	Aa2	Aa2
Sov. Rating, S&P	AA	AA	AA	AA	AA

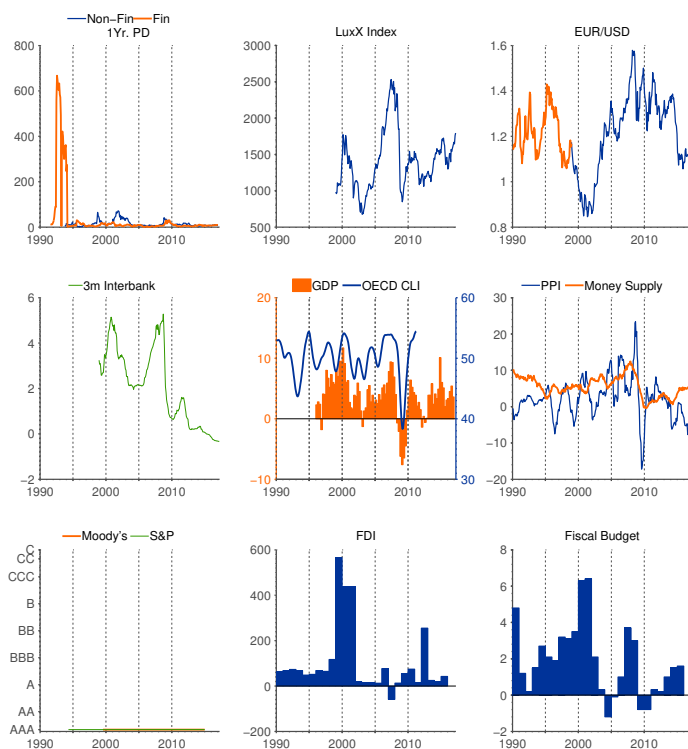


Latvia	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	13.34	8.39	6.76	9.78	6.82
OMX Riga	616	621	709	734	770
USD/LVL	0.62	0.63	0.63	0.67	0.66
GDP (YoY%)	2.4	2.3	0.5	2.6	—
Sov. Rating, Moody's	A3	A3	A3	A3	A3
Sov. Rating, S&P	A-	A-	A-	A-	A-
5Y CDS (bps)	88.57	81.82	—	—	—

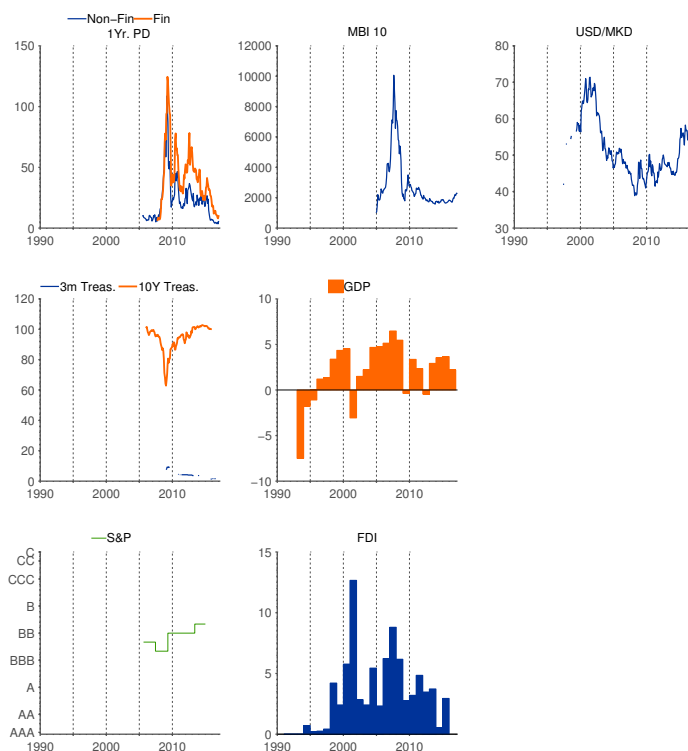


Lithuania	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	6.45	10.41	13.98	18.87	12.95
1Yr. PD, Fin.	10.01	5.94	4.75	3.64	2.36
OMX Vilnius	508	511	544	558	565
USD/LTL	3.03	3.11	3.07	3.28	3.24
10Y Treas. Yield (%)	1.06	0.79	—	—	—
GDP (YoY%)	2.4	1.9	1.7	3.2	—
PPI (YoY%)	-10.0	-6.9	-0.6	5.5	8.2
Money Supply (YoY%)	5.30	5.10	6.60	7.30	7.60*
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	A-	A-	A-	A-	A-
5Y CDS (bps)	90.64	83.52	—	—	—

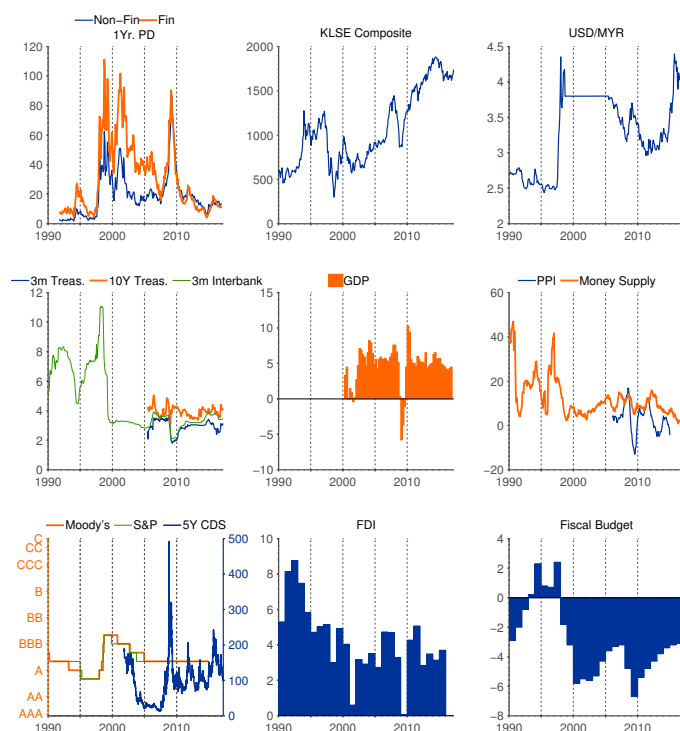




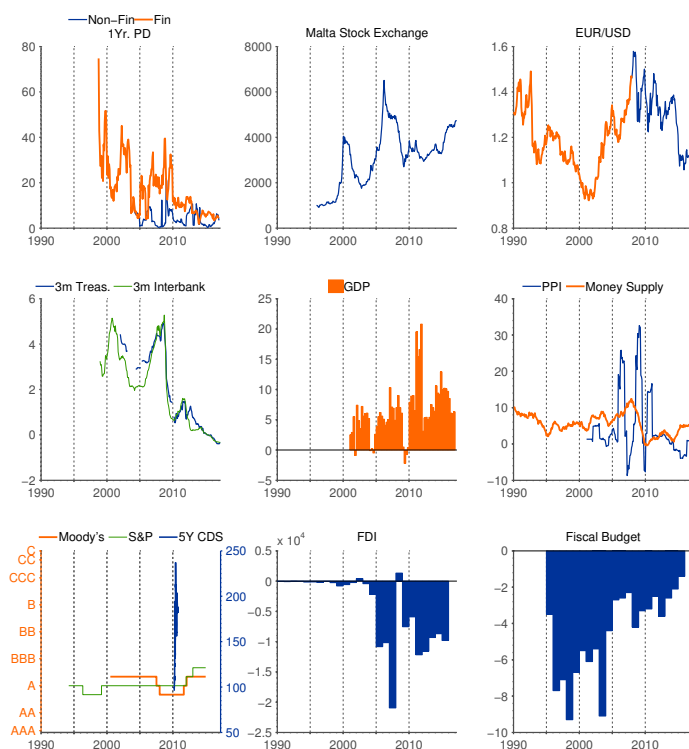
Luxembourg	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	8.40	11.31	8.41	8.61	8.47
1Yr. PD, Fin.	10.86	10.19	7.84	7.15	8.43
LuxX Index	1451	1399	1578	1669	1795
EUR/USD	1.14	1.11	1.12	—	—
3m Interbank (%)	-0.24	-0.29	-0.30	-0.32	-0.33
GDP (YoY%)	3.3	4.5	5.4	3.6	—
PPI (YoY%)	-5.2	-4.7	-7.4	-6.1	-3.1*
Money Supply (YoY%)	5.10	5.00	5.10	5.20	5.30
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA



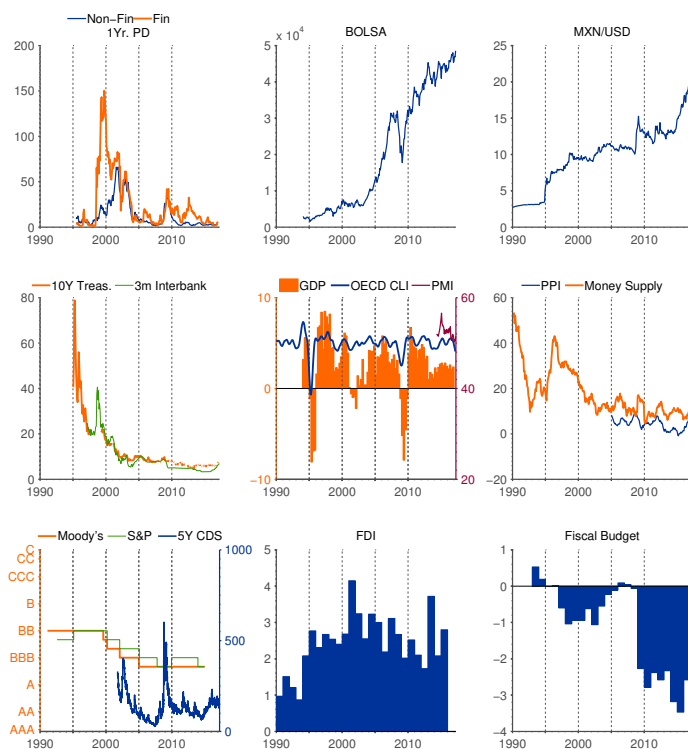
Macedonia	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	11.48	6.51	4.33	4.45	10.64
1Yr. PD, Fin.	21.22	25.70	20.80	9.44	10.41
MBI 10	1781	1707	1954	2135	2251
USD/MKD	54.15	55.48	54.69	58.46	57.78
3m Treas. Yield (%)	1.60*	1.60	1.60*	—	—
GDP (YoY%)	—	—	—	2.2	—
Sov. Rating, S&P	BB-	BB-	BB-	BB-	BB-



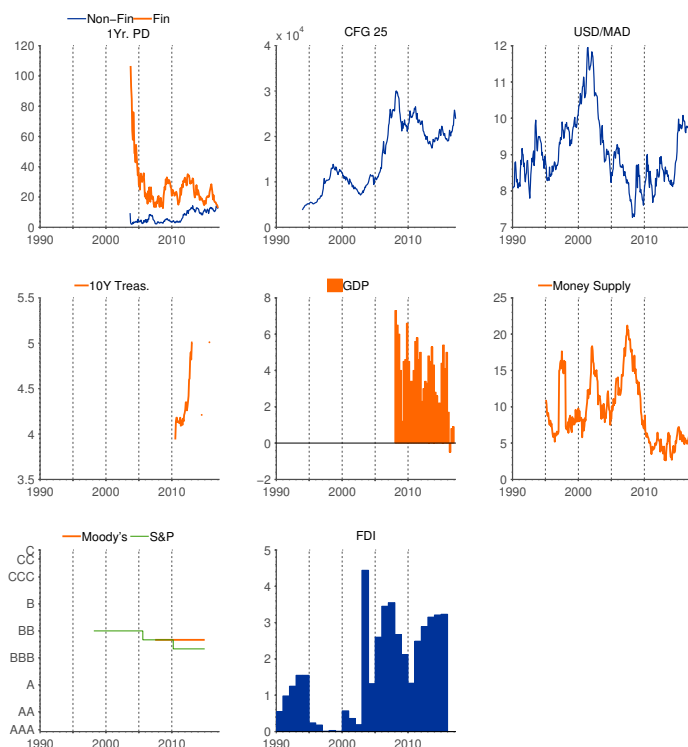
Malaysia	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	16.96	18.48	15.22	14.46	9.87
1Yr. PD, Fin.	17.05	15.03	12.31	13.84	11.31
KLSE Composite	1718	1654	1653	1642	1740
USD/MYR	3.90	4.03	4.14	4.49	4.43
3m Treas. Yield (%)	2.39	2.69	2.58	3.06	3.15
10Y Treas. Yield (%)	3.80	3.74	3.55	4.23	4.15
3m Interbank (%)	3.71	3.65	3.40	3.41	3.43
GDP (YoY%)	4.2	4.0	4.3	4.5	—
Money Supply (YoY%)	0.90	1.90	2.20	3.00	3.60*
Sov. Rating, Moody's	A3	A3	A3	A3	A3
Sov. Rating, S&P	A-	A-	A-	A-	A-
5Y CDS (bps)	153.00	154.51	120.84	138.38	105.21
Fiscal Budget (%GDP)	—	—	—	-3.10	—



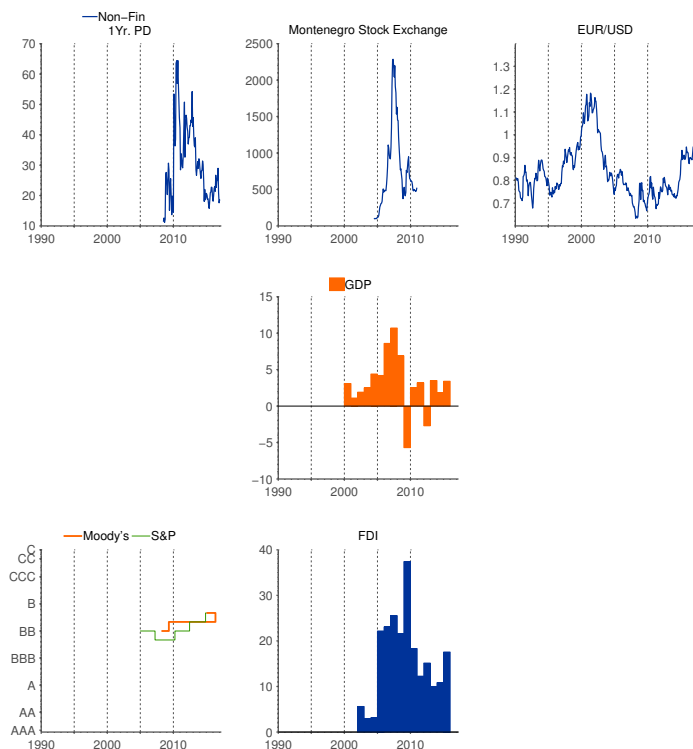
Malta	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	3.63	3.65	4.80	5.64	5.68
1Yr. PD, Fin.	6.38	6.20	11.75	4.13	5.37
Malta Stock Exchange	4563	4561	4467	4631	4718
EUR/USD	1.14	1.11	1.12	—	—
3m Treas. Yield (%)	-0.14	-0.28	-0.39	-0.39	-0.35
3m Interbank (%)	-0.24	-0.29	-0.30	-0.32	-0.33
GDP (YoY%)	8.5	6.1	6.0	6.3	—
PPI (YoY%)	-3.4	0.9	0.4	0.3	2.4*
Money Supply (YoY%)	5.10	5.00	5.10	5.20	4.70*
Sov. Rating, Moody's	A3	A3	A3	A3	A3
Sov. Rating, S&P	BBB+	BBB+	BBB+	BBB+	BBB+



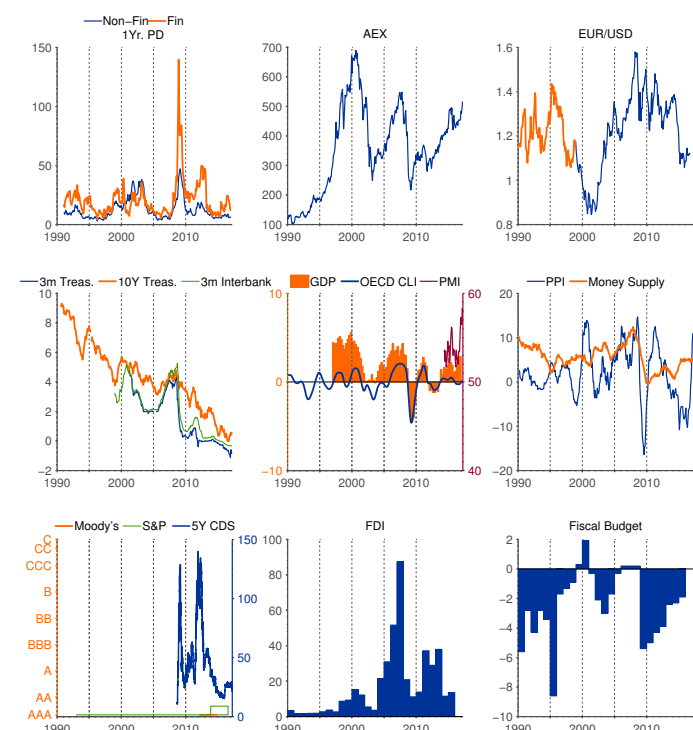
Mexico	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	2.76	3.05	2.83	3.94	4.96
1Yr. PD, Fin.	7.17	4.45	2.26	3.86	5.82
BOLSA	45881	45966	47246	45643	48542
MXN/USD	17.28	18.28	19.39	20.73	18.72
10Y Treas. Yield (%)	6.03	6.08	5.99	7.25	7.60*
3m Interbank (%)	4.12	4.23	5.15	6.19	6.93
GDP (YoY%)	2.2	2.6	2.1	2.4	—
OECD CLI	100.83	101.06	100.66	99.43	98.15*
PMI	53.2	51.1	51.9	50.2	51.5
PPI (YoY%)	2.9	4.9	6.6	10.3	10.7
Money Supply (YoY%)	7.70	8.40	10.10	10.60	8.80*
Sov. Rating, Moody's	Baa1	Baa1	Baa1	Baa1	Baa1
Sov. Rating, S&P	BBB+	BBB+	BBB+	BBB+	BBB+
5Y CDS (bps)	162.36	159.12	166.81	155.91	130.28
Fiscal Budget (%GDP)	—	—	—	-2.58	—



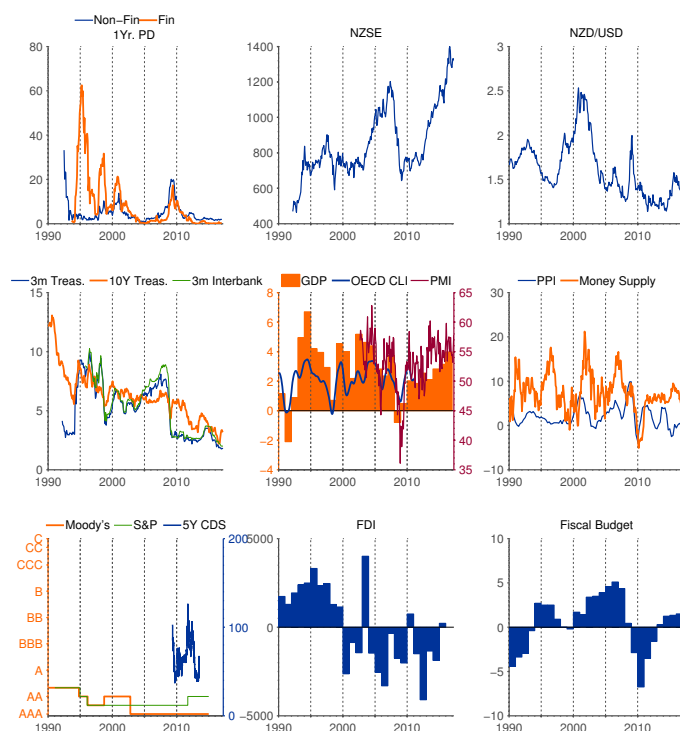
Morocco	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	10.72	11.90	14.91	13.31	12.40
1Yr. PD, Fin.	27.95	19.87	19.51	17.03	15.84
CFG 25	19872	20098	21282	24464	23883
USD/MAD	9.63	9.79	9.73	10.13	10.06
GDP (YoY%)	1.7	-0.5	0.8	0.9	—
Money Supply (YoY%)	5.51	4.90	5.90	4.70	5.40*
Sov. Rating, Moody's	Ba1	Ba1	Ba1	Ba1	Ba1
Sov. Rating, S&P	BBB-	BBB-	BBB-	BBB-	BBB-



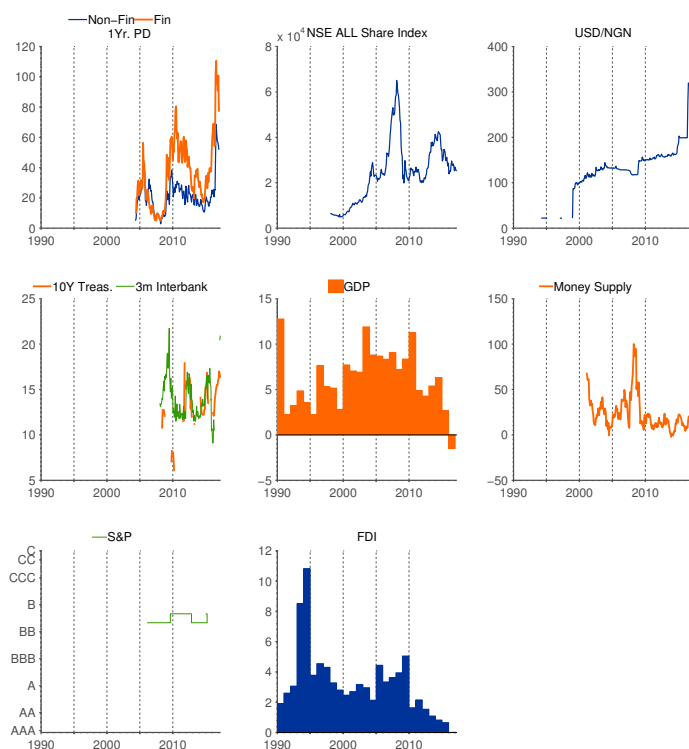
Montenegro	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	22.03	25.43	24.48	24.59	21.44
1Yr. PD, Fin.	20.27	17.41	17.40*	—	—
EUR/USD	0.88	0.90	0.89	0.95	0.94
Sov. Rating, Moody's	B1	B1	B1	B1	B1
Sov. Rating, S&P	B+	B+	B+	B+	B+



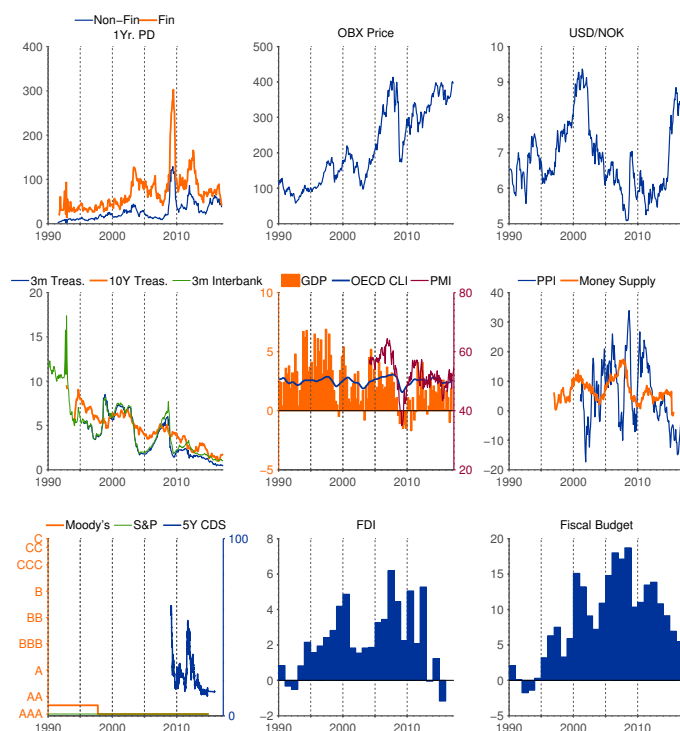
Netherlands	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	8.28	8.11	5.44	5.92	4.56
1Yr. PD, Fin.	17.65	26.72	20.18	13.87	10.09
AEX	440	436	452	483	517
EUR/USD	1.14	1.11	1.12	—	—
3m Treas. Yield (%)	-0.53	-0.66	-0.78	-1.11	-0.78
10Y Treas. Yield (%)	0.36	0.09	0.00	0.36	0.58
3m Interbank (%)	-0.24	-0.29	-0.30	-0.32	-0.33
GDP (YoY%)	1.2	1.9	2.5	2.9	—
OECD CLI	99.78	99.76	99.75	99.97	100.16*
PMI	53.6	52.0	53.4	57.3	57.8
PPI (YoY%)	-9.5	-6.4	-4.0	4.9	11.0*
Money Supply (YoY%)	5.10	5.00	5.10	5.20	4.70*
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
5Y CDS (bps)	25.60	26.67	25.11	27.65	21.31



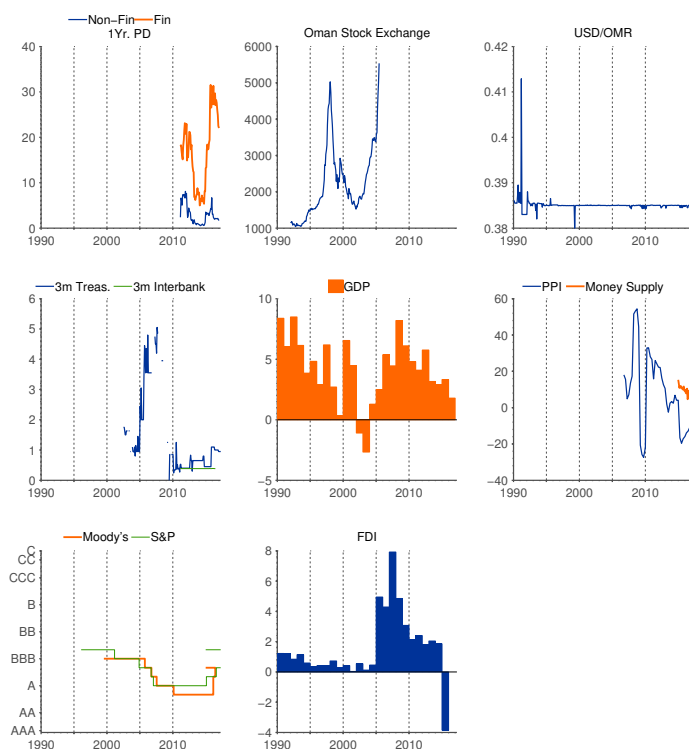
New Zealand	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	1.36	1.46	1.28	1.48	1.63
1Yr. PD, Fin.	1.12	0.92	0.47	0.20	0.14
NZSE	1283	1305	1375	1281	1322
NZD/USD	1.45	1.40	1.37	1.44	1.43
3m Treas. Yield (%)	1.94	2.09	1.91	1.75	1.77
10Y Treas. Yield (%)	2.93	2.35	2.27	3.33	3.19
3m Interbank (%)	2.35	2.42	2.20	2.00	2.00
GDP (YoY%)	—	—	—	4.0	—
PMI	53.4	57.5	57.4	54.5	57.8
PPI (YoY%)	0.1	0.5	0.1	2.5	—
Money Supply (YoY%)	7.80	5.90	4.80	6.40	6.40*
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AA	AA	AA	AA	AA
Fiscal Budget (%GDP)	—	—	—	1.51	—



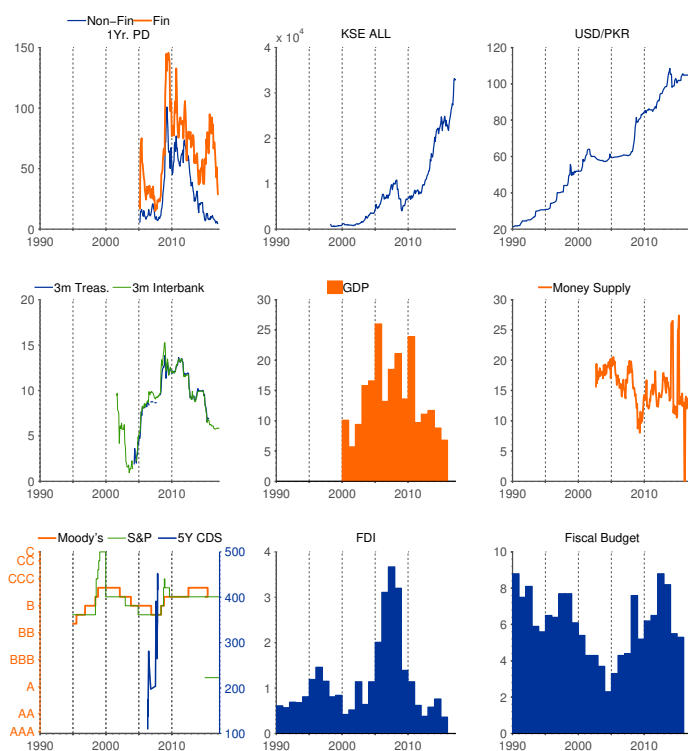
Nigeria	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	24.82	53.16	57.57	52.99	26.28
1Yr. PD, Fin.	36.99	97.39	99.34	76.43	28.79
NSE ALL Share Index	25306	29598	28335	26875	25516
USD/NGN	199.05	280.50	315.00	315.33	314.29
10Y Treas. Yield (%)	12.09	14.40	15.54	16.24	16.29
3m Interbank (%)	11.66	10.45*	—	—	20.93
GDP (YoY%)	—	—	—	-1.5	—
Money Supply (YoY%)	6.94	15.28	18.18	18.45	8.50*
Sov. Rating, S&P	B+	B+	B+	B+	B+



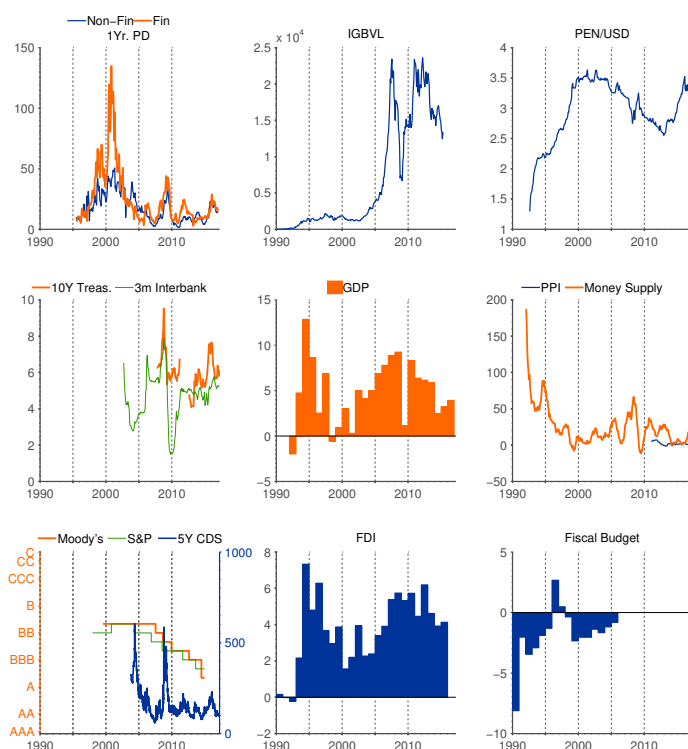
Norway	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	34.97	33.13	28.22	23.83	19.05
1Yr. PD, Fin.	47.46	52.09	35.65	30.34	21.30
OBX Price	346	353	358	397	396
USD/NOK	8.27	8.36	7.98	8.64	8.60
3m Treas. Yield (%)	0.44	0.54	0.48	0.51	0.41
10Y Treas. Yield (%)	1.21	1.01	1.21	1.65	1.64
3m Interbank (%)	1.00	1.01	1.15	1.17	0.97
GDP (YoY%)	1.7	1.1	-1.0	1.9	—
OECD CLI	99.51	99.54	99.81	100.28	100.43*
PMI	46.4	53.4	52.4	52.0	54.7
PPI (YoY%)	-14.9	-9.7	-6.1	7.2	16.1
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
Fiscal Budget (%GDP)	—	—	—	5.48	—



Oman	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	2.06	2.37	2.06	3.17	1.92
1Yr. PD, Fin.	27.77	24.64	24.56	23.29	19.62
USD/OMR	0.39	0.38	0.39	0.39	0.39
3m Treas. Yield (%)	1.10	1.00	1.00	0.95	0.95
3m Interbank (%)	0.39	0.39	—	—	—
GDP (YoY%)	—	—	—	1.8	—
PPI (YoY%)	-13.9	-12.9	-10.8	—	—
Money Supply (YoY%)	7.89	5.35	5.57	1.83	2.60*
Sov. Rating, Moody's	Baa1	Baa1	Baa1	Baa1	Baa1
Sov. Rating, S&P	BBB-	BBB-	BBB-	BBB-	BBB-

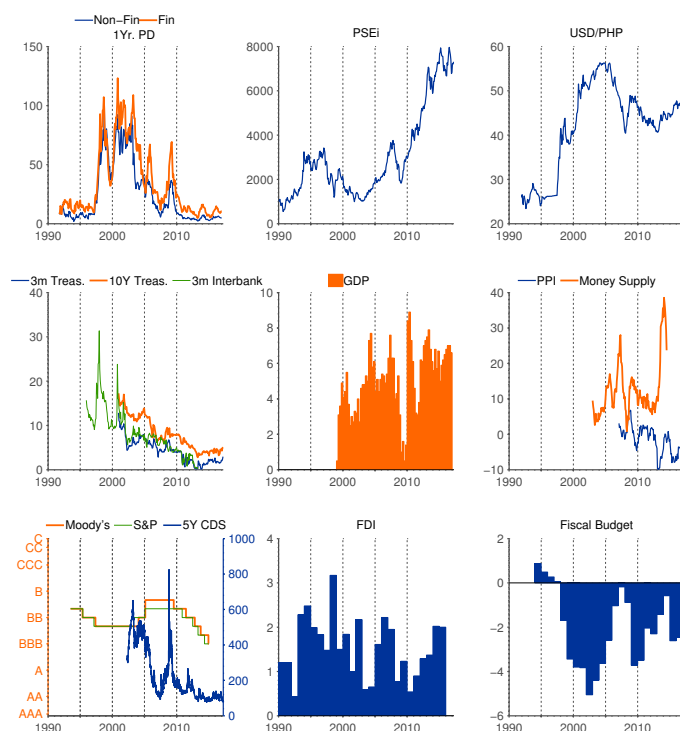


Pakistan	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	9.95	9.31	6.66	5.43	4.20
1Yr. PD, Fin.	73.85	72.75	55.99	31.39	32.35
KSE ALL	22897	25313	27682	32842	32985
USD/PKR	104.75	104.73	104.66	104.83	104.85
3m Interbank (%)	6.10	5.80	5.79	5.87	5.87
Money Supply (YoY%)	13.50	13.70	12.70	14.50	13.60*
Sov. Rating, Moody's	B3	B3	B3	B3	B3
Sov. Rating, S&P	A-	A-	A-	A-	A-

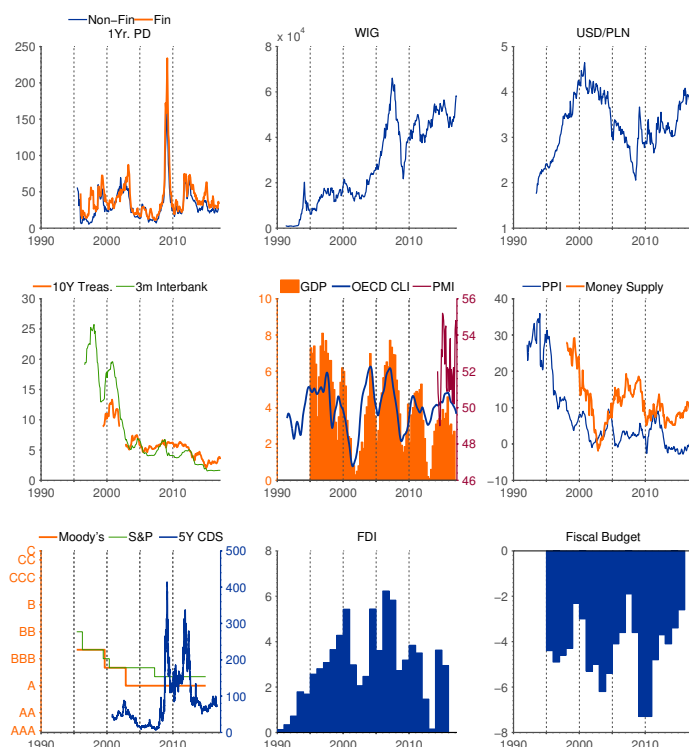


Peru	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	19.48	30.18	18.59	18.98	13.80
1Yr. PD, Fin.	11.63	14.98	12.84	11.03	10.71
PEN/USD	3.31	3.29	3.38	3.36	3.25
10Y Treas. Yield (%)	6.95	6.08	5.77	6.38	5.77
3m Interbank (%)	5.59	5.76	5.24	5.27	5.20
GDP (YoY%)	-	-	-	3.9	-
PPI (YoY%)	1.8	1.0	1.5	1.9	1.8
Money Supply (YoY%)	4.00	8.60	18.00	11.50	13.20*
Sov. Rating, Moody's	A3	A3	A3	A3	A3
Sov. Rating, S&P	BBB+	BBB+	BBB+	BBB+	BBB+
5Y CDS (bps)	162.62	138.66	102.69	108.02	102.15

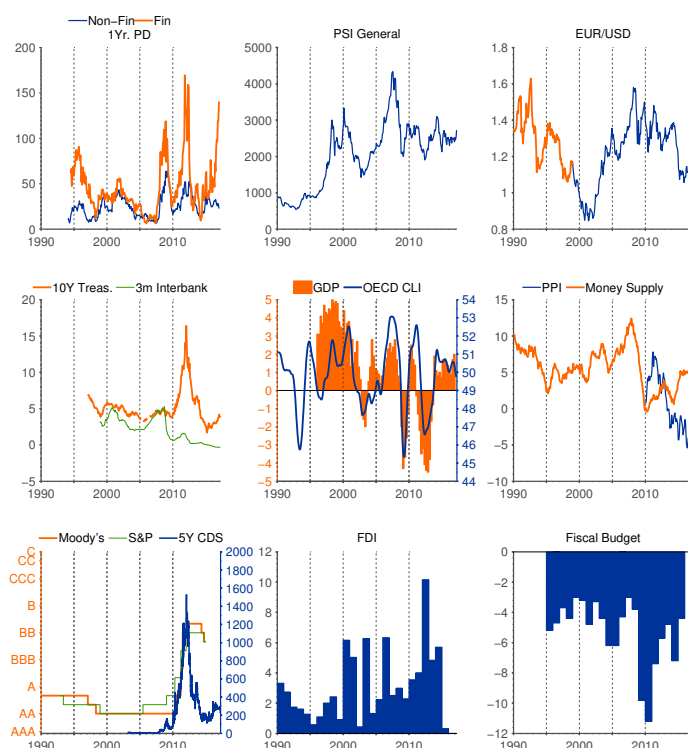




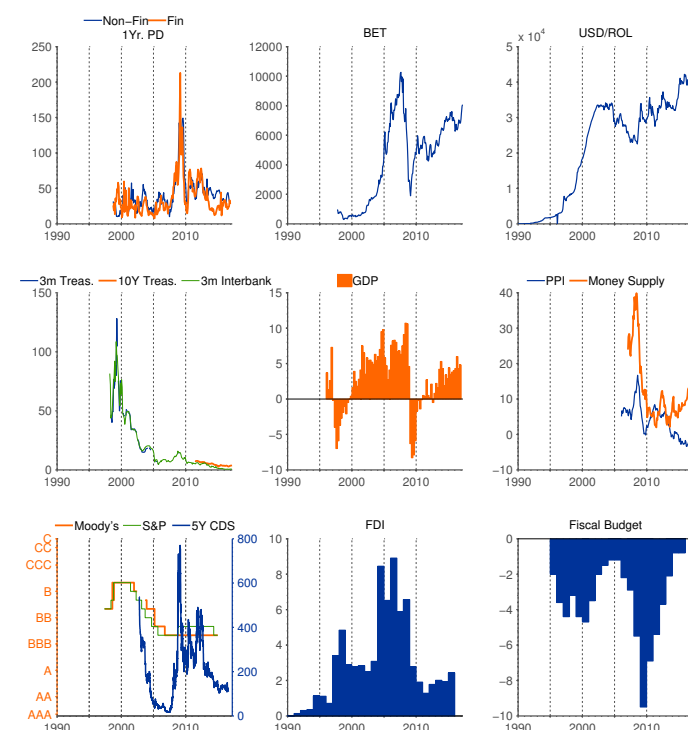
Philippines	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	7.00	8.39	7.01	6.05	5.31
1Yr. PD, Fin.	14.10	14.24	11.43	12.65	10.40
PSEI	7262	7796	7630	6841	7312
USD/PHP	45.97	47.16	48.47	49.60	50.20
3m Treas. Yield (%)	1.76	1.76	1.59	2.15	2.96
10Y Treas. Yield (%)	4.71	4.22	3.65	4.63	5.08
GDP (YoY%)	6.8	7.0	7.0	6.6	—
PPI (YoY%)	-6.9	-3.7	-4.3	-4.2	1.1
Sov. Rating, Moody's	Baa2	Baa2	Baa2	Baa2	Baa2
Sov. Rating, S&P	BBB	BBB	BBB	BBB	BBB
5Y CDS (bps)	105.32	114.17	116.82	109.67	81.80
Fiscal Budget (%GDP)	—	—	—	-2.45	—



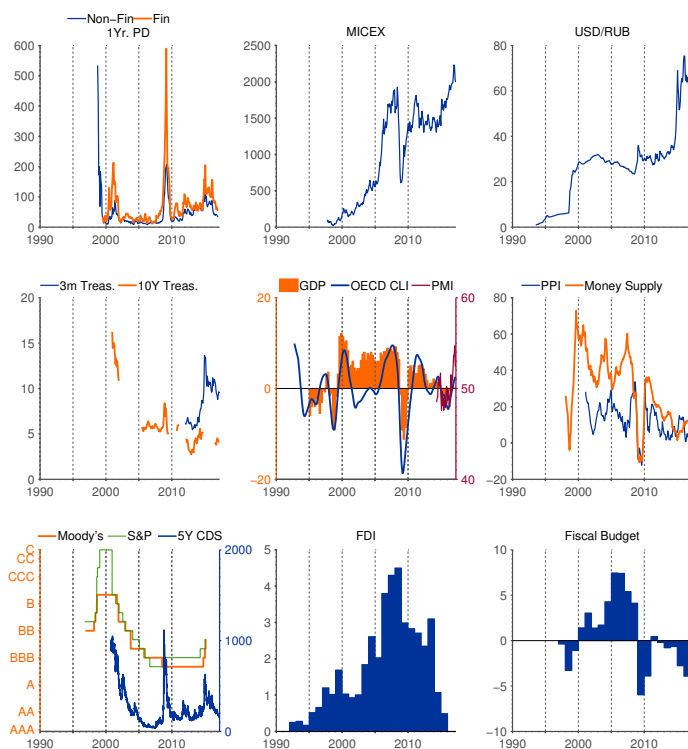
Poland	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	24.03	29.59	23.95	29.75	22.23
1Yr. PD, Fin.	32.78	33.06	30.07	35.31	29.23
WIG	49017	44749	47085	51754	57911
USD/PLN	3.73	3.94	3.82	4.19	3.97
10Y Treas. Yield (%)	2.84	2.91	2.92	3.63	3.49
3m Interbank (%)	1.57	1.61	1.61	1.63	1.63
GDP (YoY%)	3.0	3.1	2.5	2.7	—
OECD CLI	100.41	100.25	100.09	99.91	99.66*
PMI	53.8	51.8	52.2	54.3	53.5
PPI (YoY%)	-1.9	-0.8	0.2	3.2	4.4*
Money Supply (YoY%)	9.10	11.40	9.40	9.60	8.20*
Sov. Rating, Moody's	A2	A2	A2	A2	A2
Sov. Rating, S&P	A-	A-	A-	A-	A-
5Y CDS (bps)	87.14	85.92	70.50	—	—



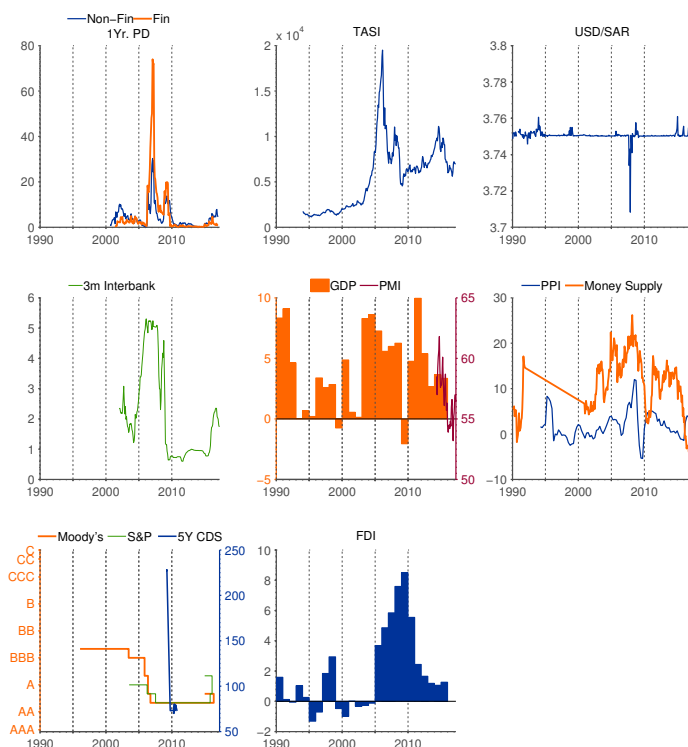
Portugal	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	32.94	34.52	23.63	23.65	20.10
1Yr. PD, Fin.	67.40	79.85	82.34	122.47	26.10
PSI General	2466	2370	2481	2520	2725
EUR/USD	1.14	1.11	1.12	—	—
10Y Treas. Yield (%)	2.94	3.01	3.33	3.76	3.98
3m Interbank (%)	-0.24	-0.29	-0.30	-0.32	-0.33
GDP (YoY%)	1.0	0.9	1.7	2.0	—
OECD CLI	100.15	100.49	100.56	100.13	99.74*
PPI (YoY%)	-4.8	-4.2	-1.9	1.5	4.0*
Money Supply (YoY%)	5.10	5.00	5.10	5.20	4.70*
Sov. Rating, Moody's	Ba1	Ba1	Ba1	Ba1	Ba1
Sov. Rating, S&P	BB+	BB+	BB+	BB+	BB+
5Y CDS (bps)	264.40	310.71	302.70	274.01	238.70



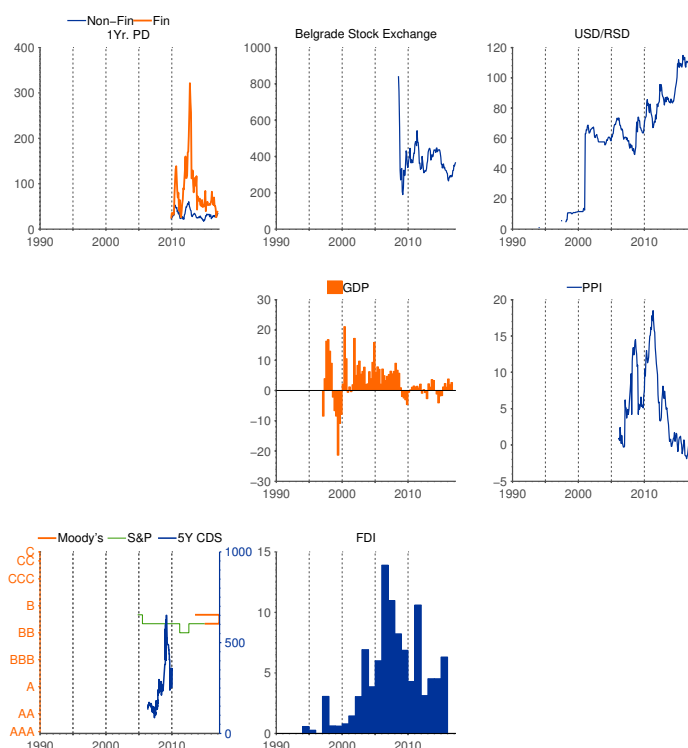
Romania	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	34.74	46.17	40.52	31.71	20.90
1Yr. PD, Fin.	35.39	60.84	33.17	29.82	12.91
BET	6738	6473	6937	7085	8069
USD/ROL	39272.91	40746.75	39525.00	43130.51	42751.51
10Y Treas. Yield (%)	3.32	3.40	2.84	3.47	3.86
3m Interbank (%)	0.57	0.60	0.50	0.68	0.66
GDP (YoY%)	4.3	6.0	4.3	4.8	—
PPI (YoY%)	-3.4	-2.3	-1.5	0.9	3.9*
Money Supply (YoY%)	9.94	13.08	12.24	9.76	10.06*
Sov. Rating, Moody's	Baa3	Baa3	Baa3	Baa3	Baa3
Sov. Rating, S&P	BBB-	BBB-	BBB-	BBB-	BBB-
5Y CDS (bps)	117.02	150.07	111.85*	—	—



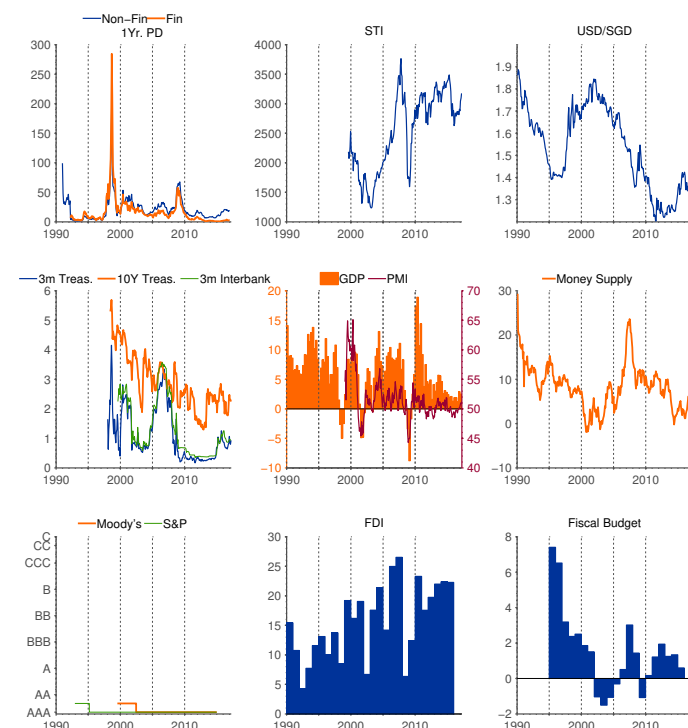
Russia	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	48.53	42.62	42.11	36.03	32.83
1Yr. PD, Fin.	82.61	77.14	59.36	53.32	55.81
MICEX	1871	1891	1978	2233	1996
USD/RUB	67.05	63.97	62.85	61.27	56.26
3m Treas. Yield (%)	11.17	10.99	9.80	8.78	9.50
10Y Treas. Yield (%)	—	—	3.79	4.46	4.17
GDP (YoY%)	-0.4	-0.5	-0.4	0.3	—
OECD CLI	98.11	99.18	100.08	100.91	101.29*
PMI	48.3	51.5	51.1	53.7	52.4
PPI (YoY%)	0.8	5.1	5.1	7.4	15.1*
Money Supply (YoY%)	11.80	12.20	12.70	9.20	12.10*
Sov. Rating, Moody's	Ba1	Ba1	Ba1	Ba1	Ba1
Sov. Rating, S&P	BB+	BB+	BB+	BB+	BB+
5Y CDS (bps)	283.19	232.87	219.66	231.35*	166.70
Fiscal Budget (%GDP)	—	—	—	-3.93	—



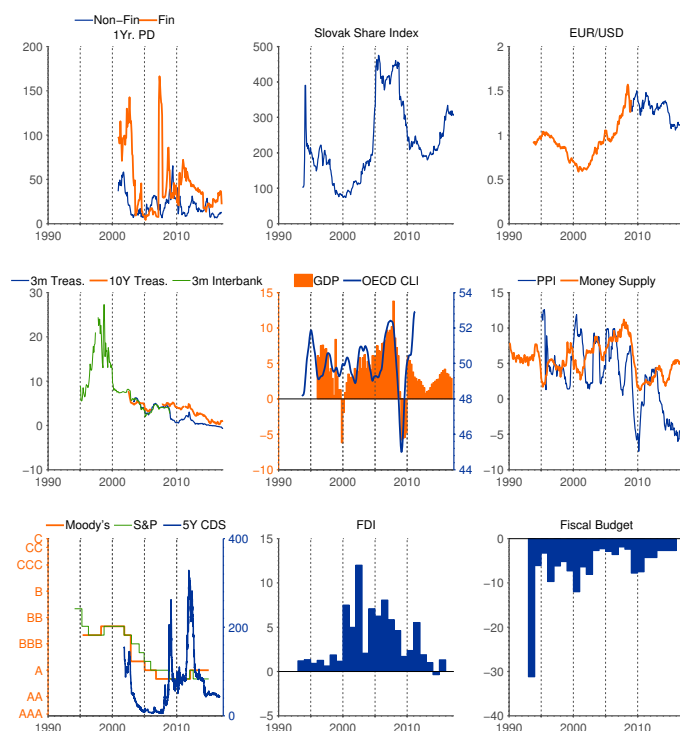
Saudi Arabia	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	9.03	8.41	11.19	8.20	6.20
1Yr. PD, Fin.	3.91	2.65	3.63	1.55	0.94
TASI	6223	6500	5623	7210	7002
USD/SAR	3.75	3.75	3.75	3.75	3.75
3m Interbank (%)	1.80	2.22	2.36	2.04	1.74
PMI	54.5	54.4	55.3	55.5	56.4
PPI (YoY%)	2.7	4.0	3.7	2.0	—
Money Supply (YoY%)	-0.40	-2.60	-4.00	0.70	0.10*
Sov. Rating, Moody's	A1	A1	A1	A1	A1
Sov. Rating, S&P	A-	A-	A-	A-	A-



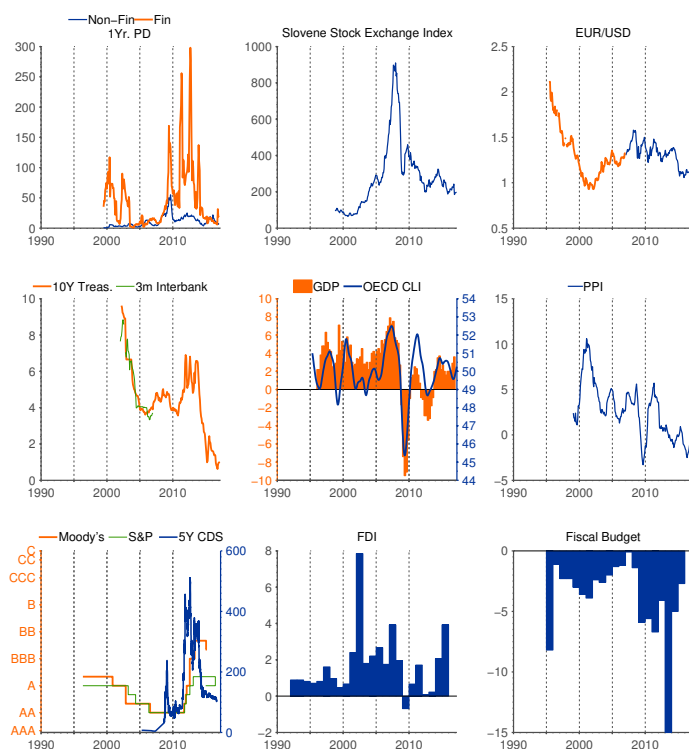
Serbia	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	38.20	35.84	35.60	37.74	38.67
1Yr. PD, Fin.	66.42	70.53	43.08	43.26	45.50
Belgrade Stock Exchange	283	288	294	352	368
USD/RSD	107.89	111.02	109.49	117.29	115.97
GDP (YoY%)	3.8	1.9	2.6	—	—
PPI (YoY%)	-1.5	-1.6	0.2	2.2	2.9
Sov. Rating, Moody's	Ba3	Ba3	Ba3	Ba3	Ba3
Sov. Rating, S&P	BB-	BB-	BB-	BB-	BB-



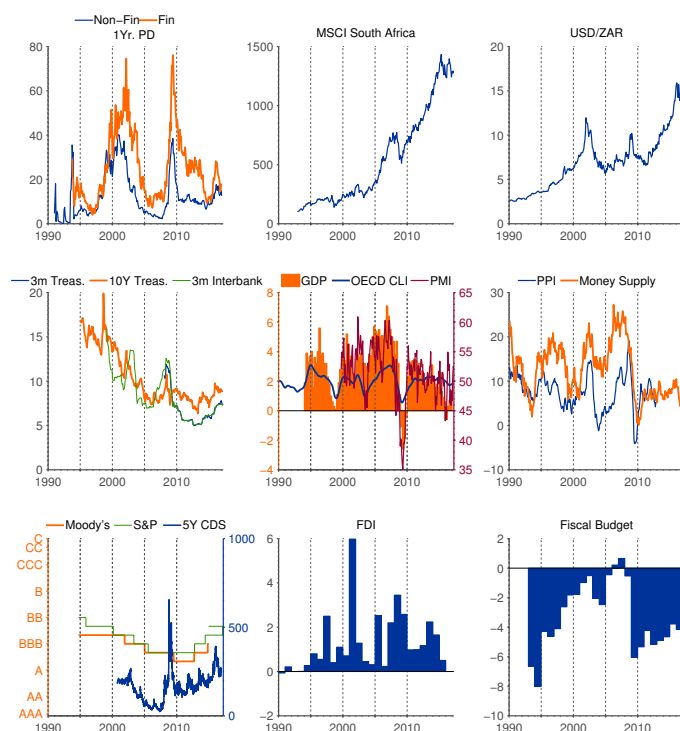
Singapore	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	21.17	22.56	20.31	17.57	13.49
1Yr. PD, Fin.	3.38	4.02	3.11	2.78	2.54
STI	2841	2841	2869	2881	3175
USD/SGD	1.35	1.35	1.36	1.45	1.40
3m Treas. Yield (%)	0.76	0.66	0.71	1.06	0.93
10Y Treas. Yield (%)	1.84	1.91	1.78	2.47	2.25
3m Interbank (%)	1.06	0.93	0.87	0.97	0.95
GDP (YoY%)	1.9	1.9	1.2	2.9	2.5
PMI	49.4	49.6	50.1	50.6	51.2
Money Supply (YoY%)	2.20	4.20	5.00	7.70	7.70*
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA



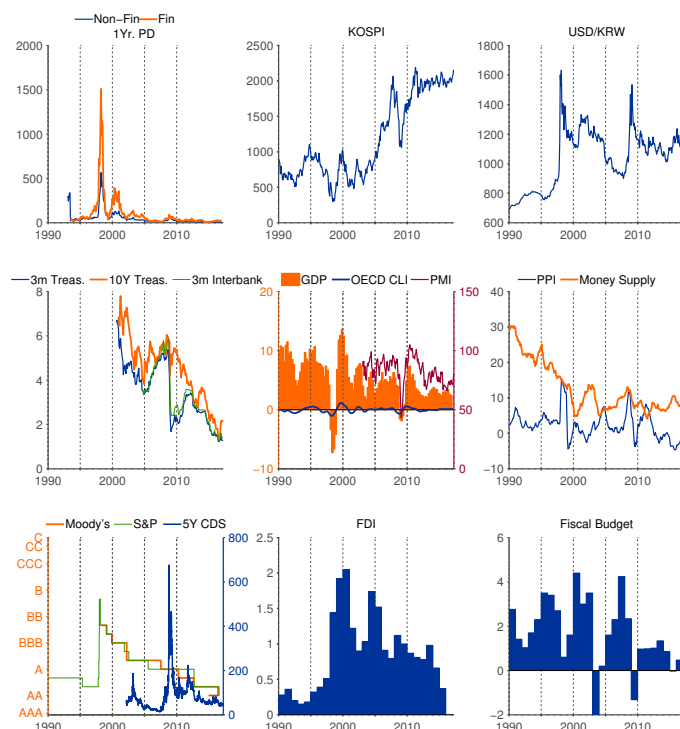
Slovakia	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	7.41	11.37	14.65	8.65	8.58
1Yr. PD, Fin.	12.25	22.01	22.80	21.34	29.61
Slovak Share Index	325	313	309	319	305
EUR/USD	1.14	1.11	1.12	—	—
3m Treas. Yield (%)	-0.17	-0.20	-0.29	-0.34	-0.59
10Y Treas. Yield (%)	0.36	0.59	0.27	0.90	1.09
GDP (YoY%)	3.6	3.5	3.1	2.9	—
PPI (YoY%)	-6.0	-4.5	-3.2	-1.8	2.6*
Money Supply (YoY%)	5.40	4.90	5.10	5.00	4.80*
Sov. Rating, Moody's	A2	A2	A2	A2	A2
Sov. Rating, S&P	A+	A+	A+	A+	A+
5Y CDS (bps)	45.56	43.91	44.21	—	—



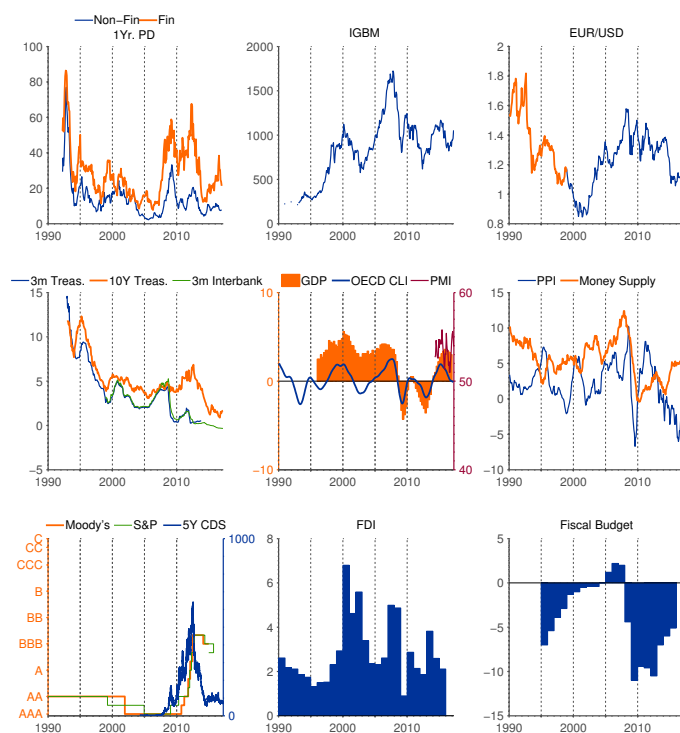
Slovenia	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	18.48	14.62	11.78	16.61	13.90
1Yr. PD, Fin.	18.57	18.42	15.14	26.59	21.70
Slovene Stock Exchange Index	216	210	227	192	196
EUR/USD	1.14	1.11	1.12	—	—
10Y Treas. Yield (%)	1.48	1.36	0.75	0.96	1.01*
GDP (YoY%)	2.0	2.1	2.9	3.6	—
OECD CLI	100.09	99.73	99.57	99.83	100.26
PPI (YoY%)	-2.2	-2.0	-0.9	0.5	1.9*
Sov. Rating, Moody's	Baa3	Baa3	Baa3	Baa3	Baa3
Sov. Rating, S&P	A	A	A	A	A
5Y CDS (bps)	115.22	115.14	102.37*	—	—



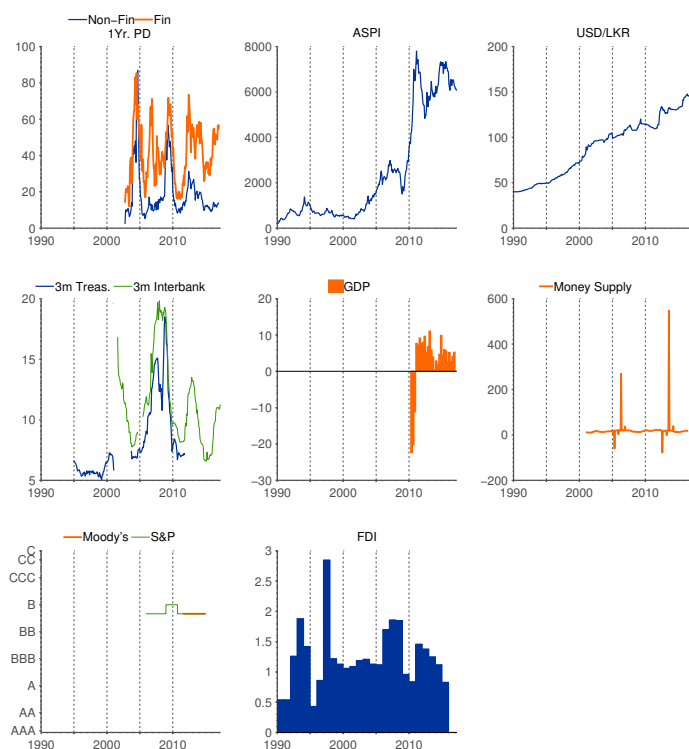
South Africa	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	16.18	17.31	16.86	13.49	14.74
1Yr. PD, Fin.	28.12	23.84	19.75	17.84	14.80
MSCI South Africa	1347	1355	1343	1276	1295
USD/ZAR	14.77	14.73	13.72	13.74	13.41
3m Treas. Yield (%)	7.24	7.35	7.36	7.79	7.42
10Y Treas. Yield (%)	9.18	8.90	8.73	9.02	8.89
3m Interbank (%)	7.23	7.36	7.36	7.36	7.36
GDP (YoY%)	-0.6	0.3	0.7	0.7	-
OECD CLI	99.66	99.34	99.37	99.52	99.55*
PMI	50.5	52.9	48.5	46.7	52.2
Money Supply (YoY%)	8.74	5.58	5.64	6.07	6.63*
Sov. Rating, Moody's	Baa2	Baa2	Baa2	Baa2	Baa2
Sov. Rating, S&P	BB+	BB+	BB+	BB+	BB+
5Y CDS (bps)	298.90	281.04	256.33	255.67*	-
Fiscal Budget (%GDP)	-	-	-	-4.14	-



South Korea	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	8.28	8.05	6.10	6.36	5.72
1Yr. PD, Fin.	24.12	25.48	20.45	24.53	22.23
KOSPI	1996	1970	2044	2026	2160
USD/KRW	1143.42	1151.80	1101.13	1205.83	1118.45
3m Treas. Yield (%)	1.50	1.27	1.26	1.32	1.30
10Y Treas. Yield (%)	1.79	1.47	1.42	2.09	2.19
3m Interbank (%)	1.56	1.30	1.32	1.47	1.42
GDP (YoY%)	2.9	3.4	2.6	2.4	-
OECD CLI	100.43	100.46	100.61	100.68	100.73*
PMI	66.0	74.0	74.0	72.0	81.0
PPI (YoY%)	-3.3	-2.7	-1.1	1.8	4.2*
Money Supply (YoY%)	8.60	7.90	7.80	8.10	7.40*
Sov. Rating, Moody's	Aa2	Aa2	Aa2	Aa2	Aa2
Sov. Rating, S&P	AA	AA	AA	AA	AA
5Y CDS (bps)	64.00	56.13	41.84	44.00	50.77
Fiscal Budget (%GDP)	-	-	-	0.47	-

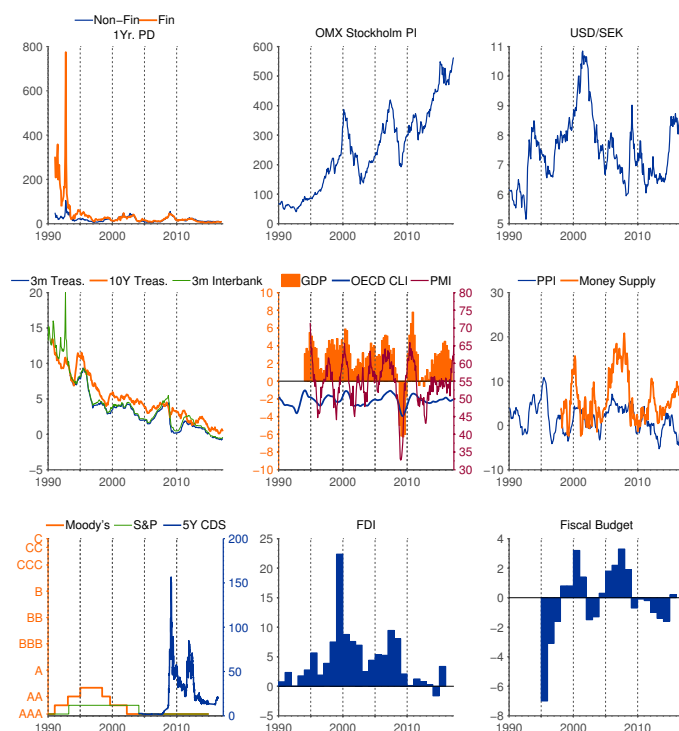


Spain	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	10.37	9.95	7.61	7.54	5.30
1Yr. PD, Fin.	25.32	24.87	21.89	16.34	10.56
IGBM	880	821	884	944	1055
EUR/USD	1.14	1.11	1.12	—	—
10Y Treas. Yield (%)	1.44	1.16	0.88	1.38	1.67
3m Interbank (%)	-0.24	-0.29	-0.30	-0.32	-0.33
GDP (YoY%)	3.4	3.4	3.2	3.0	—
OECD CLI	100.82	100.36	100.07	99.97	99.89*
PMI	53.4	52.2	52.3	55.3	53.9
PPI (YoY%)	-5.4	-4.5	-2.0	2.9	7.3*
Money Supply (YoY%)	5.10	5.00	5.10	5.20	4.70*
Sov. Rating, Moody's	Baa2	Baa2	Baa2	Baa2	Baa2
Sov. Rating, S&P	BBB+	BBB+	BBB+	BBB+	BBB+
5Y CDS (bps)	94.56	111.30	83.61	75.62	77.96

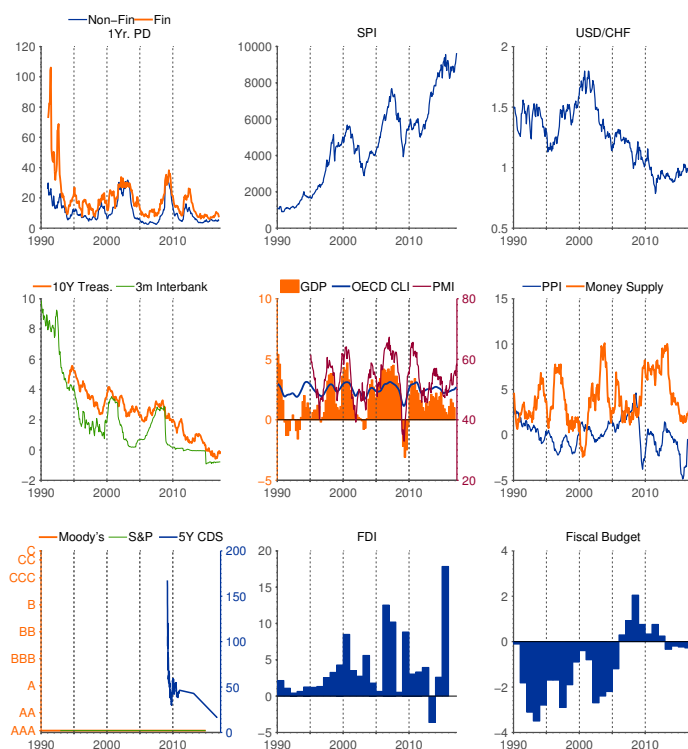


Sri Lanka	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	11.64	12.21	13.07	13.65	14.41
1Yr. PD, Fin.	46.47	47.35	45.17	55.56	55.96
ASPI	6072	6283	6535	6228	6062
USD/LKR	146.05	145.70	146.67	149.71	152.13
3m Interbank (%)	9.33	9.88	11.00	11.01	11.26
GDP (YoY%)	5.2	2.7	4.1	5.3	—
Money Supply (YoY%)	18.40	17.20	—	—	—
Sov. Rating, Moody's	B1	B1	B1	B1	B1
Sov. Rating, S&P	B+	B+	B+	B+	B+

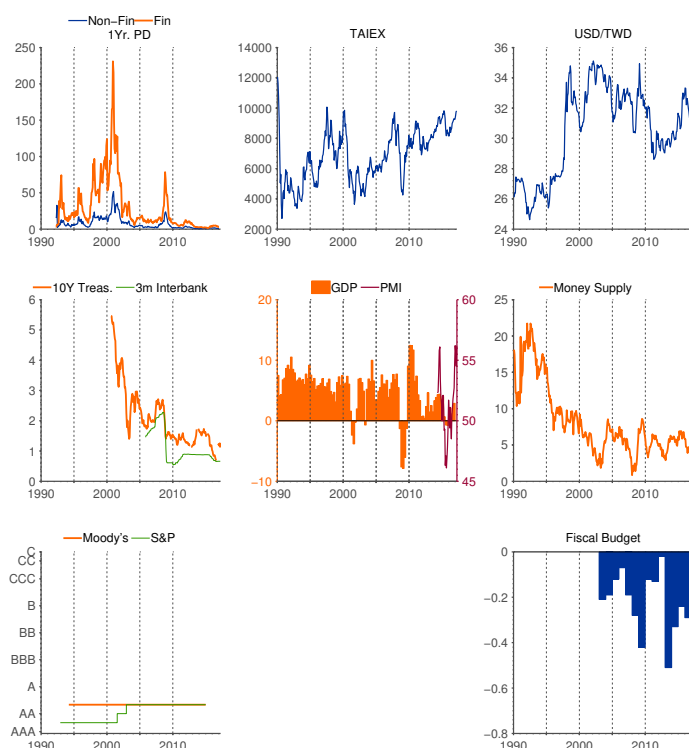




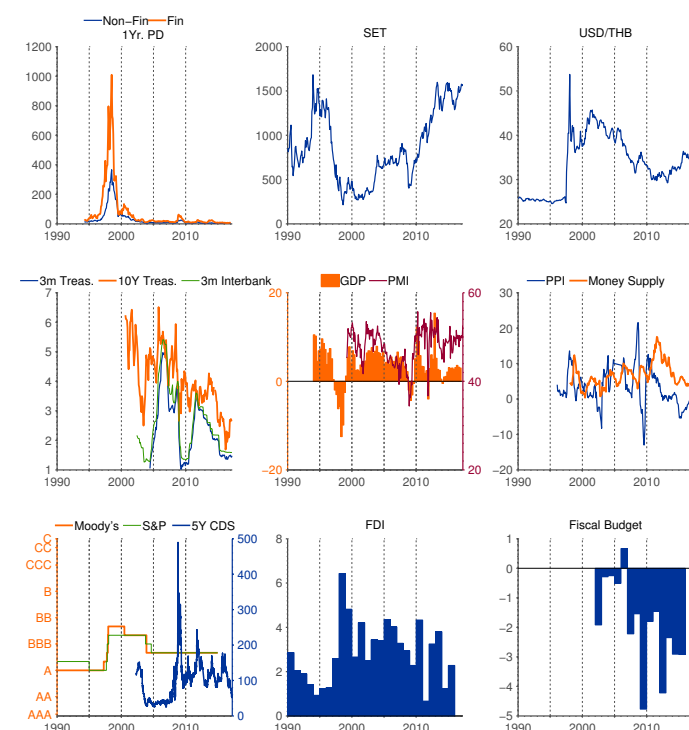
Sweden	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	12.62	13.50	11.56	12.15	10.83
1Yr. PD, Fin.	10.83	11.52	8.46	10.77	9.29
OMX Stockholm PI	483	471	518	535	563
USD/SEK	8.12	8.46	8.57	9.11	8.97
3m Treas. Yield (%)	-0.61	-0.65	-0.75	-0.80	-0.64
10Y Treas. Yield (%)	0.53	0.26	0.17	0.56	0.60
3m Interbank (%)	-0.45	-0.53	-0.51	-0.59	-0.44
GDP (YoY%)	4.0	3.5	2.5	2.3	—
OECD CLI	100.07	99.62	99.42	99.68	99.81*
PMI	53.0	53.0	55.0	60.3	65.2
PPI (YoY%)	-3.7	-1.9	-0.1	6.5	7.5*
Money Supply (YoY%)	8.69	6.73	8.70	7.25	9.25*
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
5Y CDS (bps)	17.57	21.03*	—	—	—



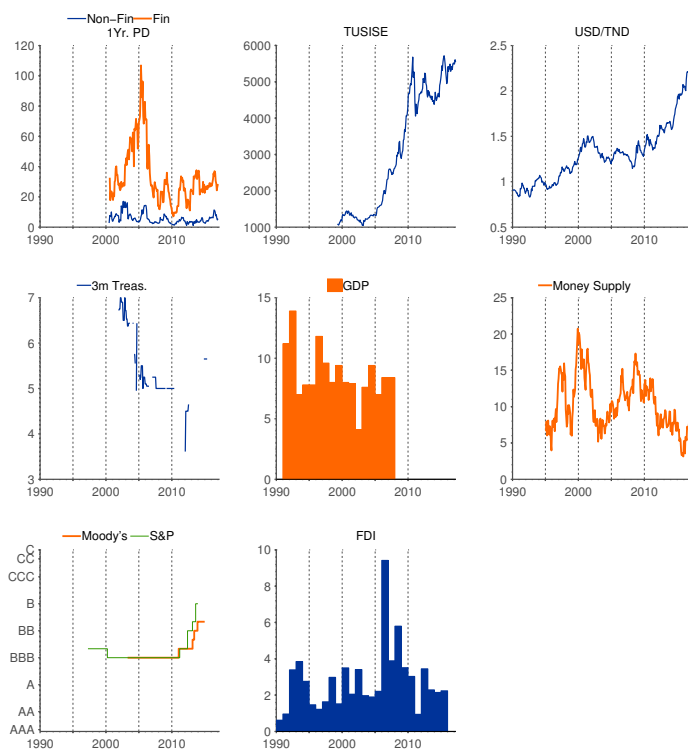
Switzerland	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	5.51	5.91	4.48	5.35	3.42
1Yr. PD, Fin.	11.18	14.33	11.27	8.51	6.29
SPI	8317	8660	8883	8966	9638
USD/CHF	0.96	0.98	0.97	1.02	1.00
10Y Treas. Yield (%)	-0.34	-0.57	-0.55	-0.19	-0.09
3m Interbank (%)	-0.79	-0.84	-0.81	-0.79	-0.79
GDP (YoY%)	1.1	1.7	1.4	1.0	—
OECD CLI	99.48	99.76	99.93	100.35	100.78*
PMI	53.0	51.5	54.4	56.2	58.6
PPI (YoY%)	-3.5	-0.6	0.0	-0.2	0.4*
Money Supply (YoY%)	1.71	2.31	2.95	2.98	3.10*
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AAA	AAA	AAA	AAA	AAA
5Y CDS (bps)	—	—	17.01	—	—
Fiscal Budget (%GDP)	—	—	—	-0.28	—



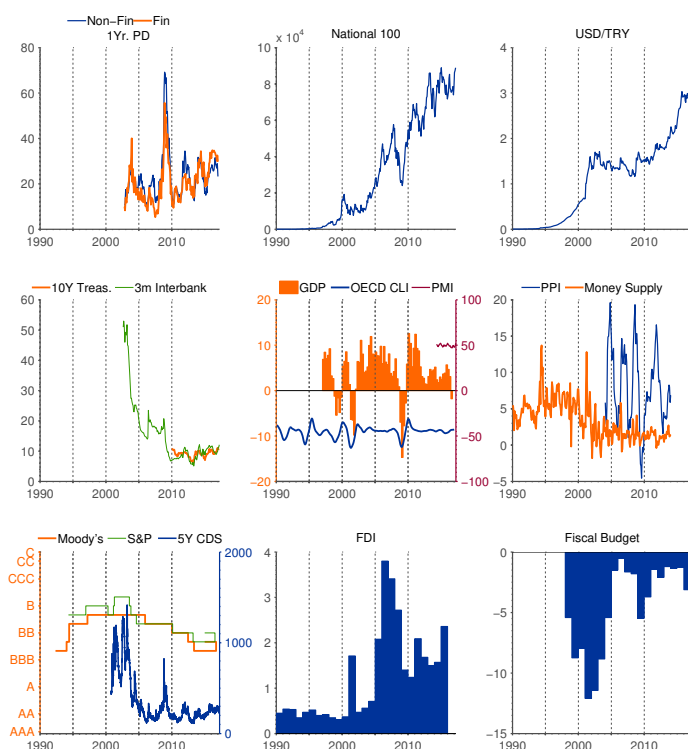
Taiwan	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	1.63	1.50	1.10	0.87	0.65
1Yr. PD, Fin.	4.79	5.13	4.03	2.72	2.14
TAIEX	8745	8667	9167	9254	9812
USD/TWD	32.21	32.26	31.36	32.33	30.35
10Y Treas. Yield (%)	0.84	0.77	0.69*	1.22	1.12
3m Interbank (%)	0.69	0.69	0.66	0.66	0.66
GDP (YoY%)	-0.2	1.1	2.1	2.9	-
PMI	51.1	50.5	52.2	56.2	56.2
Money Supply (YoY%)	4.70	4.65	3.98	3.55	3.49*
Sov. Rating, Moody's	Aa3	Aa3	Aa3	Aa3	Aa3
Sov. Rating, S&P	AA-	AA-	AA-	AA-	AA-
Fiscal Budget (%GDP)	-	-	-	-0.29	-



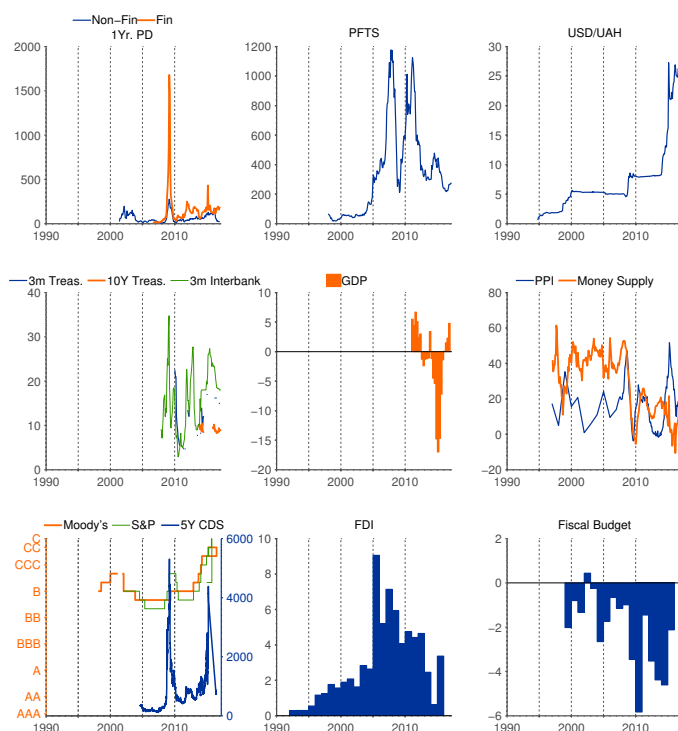
Thailand	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	4.28	3.76	3.67	2.78	2.77
1Yr. PD, Fin.	6.99	9.41	8.99	8.33	7.34
SET	1408	1445	1483	1543	1575
USD/THB	35.13	35.12	34.59	35.84	34.35
3m Treas. Yield (%)	1.38	1.36	1.45	1.50	1.48
10Y Treas. Yield (%)	1.69	1.95	2.10	2.65	2.69
3m Interbank (%)	1.60	1.59	1.59	1.59	1.59
GDP (YoY%)	3.1	3.6	3.2	3.0	-
PMI	51.5	50.4	50.3	50.3	52.6
PPI (YoY%)	-2.4	-1.4	-0.7	1.1	2.6
Money Supply (YoY%)	3.75	4.29	3.93	4.20	3.81*
Sov. Rating, Moody's	Baa1	Baa1	Baa1	Baa1	Baa1
Sov. Rating, S&P	BBB+	BBB+	BBB+	BBB+	BBB+
5Y CDS (bps)	131.34	114.50	86.68	81.59	54.24



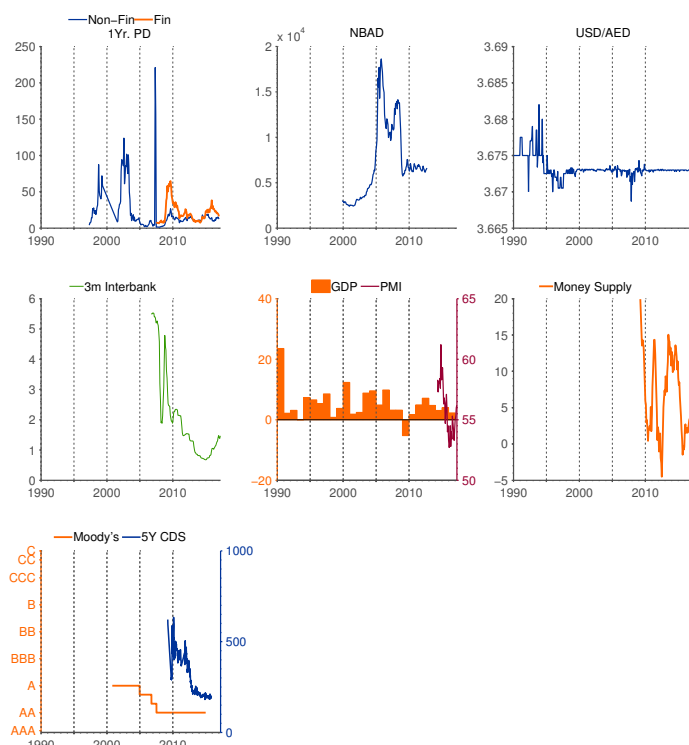
Tunisia	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	5.22	11.33	7.64	5.39	5.24
1Yr. PD, Fin.	33.72	38.79	19.64	26.87	30.65
TUNISE	5421	5290	5342	5489	5543
USD/TND	2.02	2.20	2.20	2.32	2.29
Money Supply (YoY%)	5.81	7.24	7.58	8.05	7.46*
Sov. Rating, Moody's	Ba3	Ba3	Ba3	Ba3	Ba3



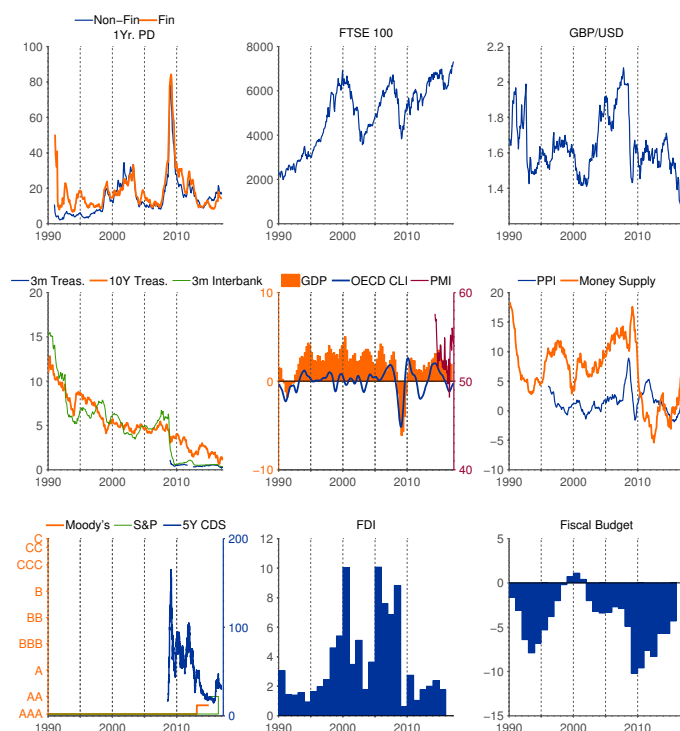
Turkey	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	25.28	28.73	28.02	23.57	20.01
1Yr. PD, Fin.	34.09	35.21	32.12	27.44	26.58
National 100	83268	76817	76488	78139	88947
USD/TRY	2.82	2.88	3.00	3.52	3.64
10Y Treas. Yield (%)	9.71	9.03	9.52	11.08	10.65
3m Interbank (%)	11.07	9.50	8.91	9.90	12.12
GDP (YoY%)	4.7	3.1	-1.8	—	—
OECD CLI	4.94	6.50	6.84	7.23	—
PMI	49.2	47.4	48.3	47.7	52.3
Sov. Rating, Moody's	Ba1	Ba1	Ba1	Ba1	Ba1
Sov. Rating, S&P	BB	BB	BB	BB	BB
5Y CDS (bps)	254.58	242.87	261.62	273.17	239.28
Fiscal Budget (%GDP)	—	—	—	-3.12	—



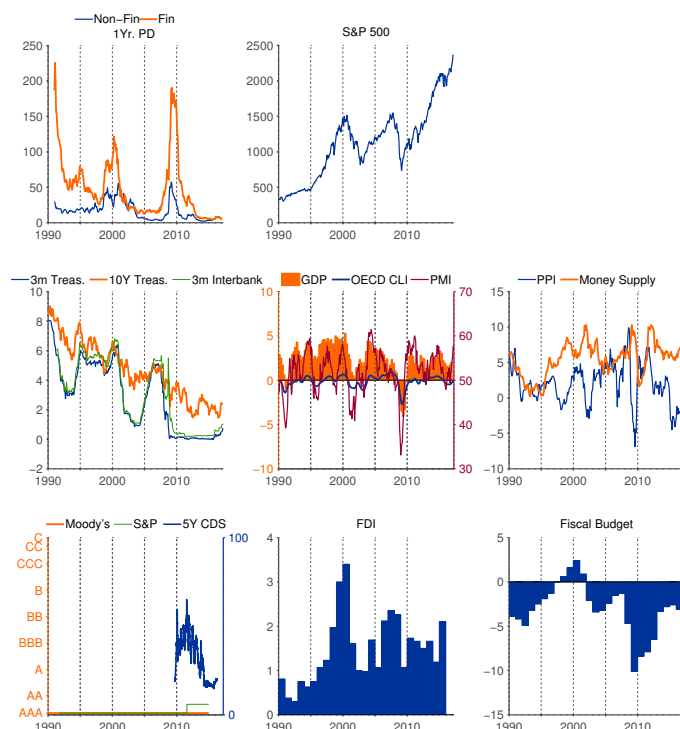
Ukraine	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	182.93	120.65	98.89	25.64	17.95
1Yr. PD, Fin.	151.24	125.23	33.53	95.71	162.87
PFTS	226	223	240	265	272
USD/UAH	26.20	24.83	25.93	27.30	27.06
3m Treas. Yield (%)	—	16.20	—	15.00	—
10Y Treas. Yield (%)	9.54	8.50	8.56	8.76	9.07
3m Interbank (%)	23.00	19.58	18.33	18.00	18.00
GDP (YoY%)	0.1	1.5	2.3	4.8	—
PPI (YoY%)	10.5	15.7	19.6	35.7	38.3
Money Supply (YoY%)	-1.70	6.20	12.60	10.90	4.40*
Sov. Rating, Moody's	Caa3	Caa3	Caa3	Caa3	Caa3
Sov. Rating, S&P	B-	B-	B-	B-	B-
5Y CDS (bps)	—	761.68	757.10*	—	—



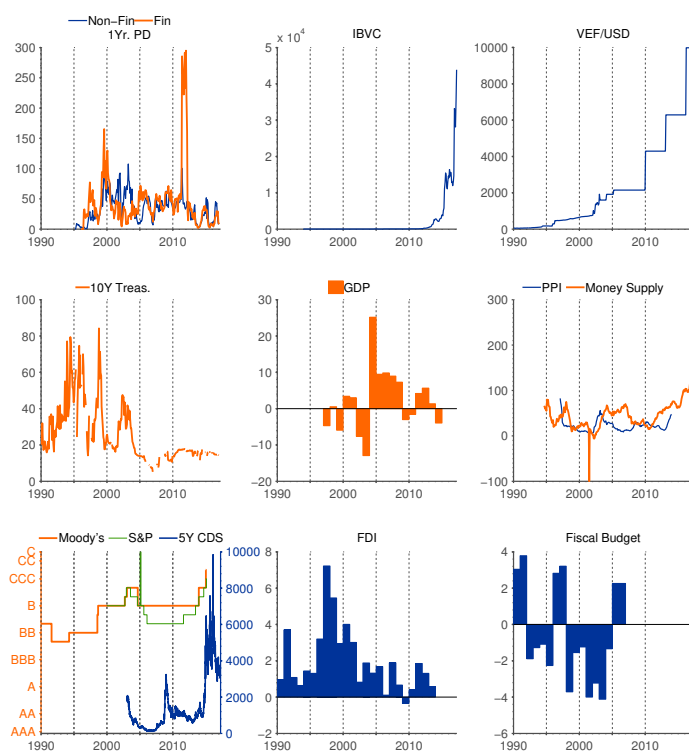
United Arab Emirates	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	14.41	15.33	18.44	13.99	16.62
1Yr. PD, Fin.	24.20	25.64	24.77	19.68	20.54
USD/AED	3.67	3.67	3.67	3.67	3.67
3m Interbank (%)	1.03	1.13	1.27	1.48	1.47
GDP (YoY%)	—	—	—	2.3	—
PMI	54.5	53.4	54.1	55.0	56.2
Money Supply (YoY%)	2.07	2.03	3.52	5.11	6.70
Sov. Rating, Moody's	Aa2	Aa2	Aa2	Aa2	Aa2



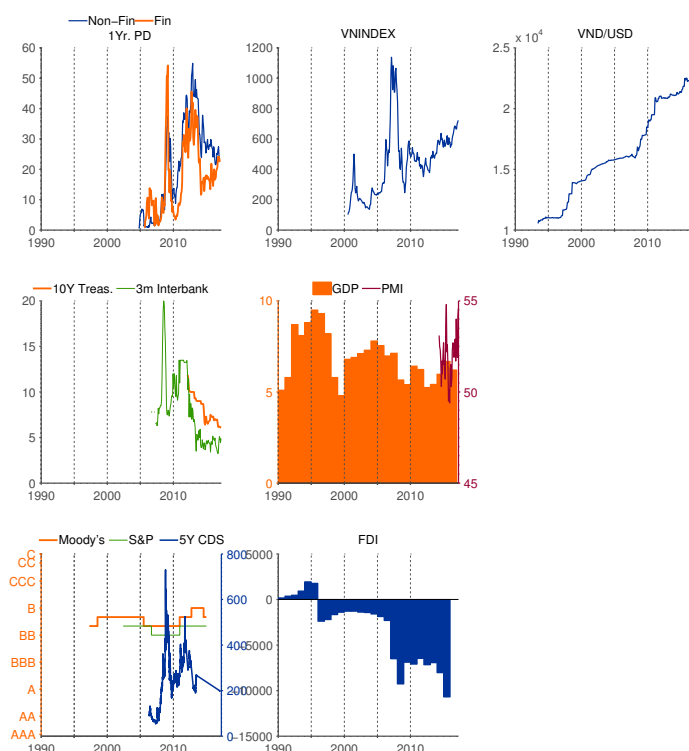
United Kingdom	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	15.37	19.84	15.73	15.34	12.39
1Yr. PD, Fin.	12.66	17.42	17.79	16.52	12.33
FTSE 100	6175	6504	6899	7143	7323
GBP/USD	1.44	1.33	1.30	1.23	1.25
3m Treas. Yield (%)	0.51	0.46	0.32	0.16	0.27
10Y Treas. Yield (%)	1.42	0.87	0.75	1.24	1.14
3m Interbank (%)	0.59	0.56	0.38	0.37	0.34
GDP (YoY%)	1.6	1.7	2.0	1.9	—
OECD CLI	99.28	98.85	99.05	99.49	99.76*
PMI	51.2	52.5	55.2	56.0	54.2
PPI (YoY%)	-0.7	-0.2	1.2	2.9	3.6
Money Supply (YoY%)	1.50	3.60	6.20	6.20	5.70*
Sov. Rating, Moody's	Aa1	Aa1	Aa1	Aa1	Aa1
Sov. Rating, S&P	AA	AA	AA	AA	AA
5Y CDS (bps)	38.81	43.25	32.45	30.73	—



United States	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	7.60	7.83	6.56	5.34	4.34
1Yr. PD, Fin.	7.06	7.71	6.63	3.63	3.67
S&P 500	2060	2099	2168	2239	2363
3m Treas. Yield (%)	0.20	0.26	0.27	0.50	0.75
10Y Treas. Yield (%)	1.77	1.47	1.59	2.44	2.39
3m Interbank (%)	0.57	0.55	0.78	0.78	1.05
GDP (YoY%)	1.6	1.3	1.7	2.0	—
OECD CLI	99.07	99.04	99.11	99.53	99.83*
PMI	51.7	52.8	51.7	54.5	57.2
PPI (YoY%)	-2.3	-2.0	-0.1	1.9	3.7*
Money Supply (YoY%)	6.10	6.90	7.20	7.10	6.40*
Sov. Rating, Moody's	Aaa	Aaa	Aaa	Aaa	Aaa
Sov. Rating, S&P	AA+	AA+	AA+	AA+	AA+
5Y CDS (bps)	19.83	19.89*	—	—	—
Fiscal Budget (%GDP)	—	—	—	-3.10	—



Venezuela	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	12.35	25.09	10.78	3.58	101.14
1Yr. PD, Fin.	6.19	14.82	22.51	6.20	3.53
IBVC	14575	12851	12961	31705	43877
VEF/USD	9987.50	9987.50	9987.50	9987.50	9990.05
10Y Treas. Yield (%)	15.49	14.77	14.62	14.24	—
Money Supply (YoY%)	103.40	96.40	113.30	158.80	206.90
Sov. Rating, Moody's	Caa3	Caa3	Caa3	Caa3	Caa3
Sov. Rating, S&P	CCC	CCC	CCC	CCC	CCC
5Y CDS (bps)	5180.28	3892.00	2946.27	3749.67	3571.02



Vietnam	2016				2017
	Q1	Q2	Q3	Q4	Q1
1Yr. PD, Non-Fin. (bps)	23.00	22.69	26.50	24.18	20.42
1Yr. PD, Fin.	14.30	21.23	20.46	21.28	19.16
VNINDEX	561	632	686	665	722
VND/USD	22293.00	22304.00	22296.00	22761.00	22755.00
10Y Treas. Yield (%)	6.90	6.94	6.50	6.20	6.07
3m Interbank (%)	4.65	3.95	3.25	5.10	4.90
GDP (YoY%)	—	—	—	6.2	—
PMI	50.7	52.6	52.9	52.4	54.6
Sov. Rating, Moody's	B1	B1	B1	B1	B1
Sov. Rating, S&P	BB-	BB-	BB-	BB-	BB-
5Y CDS (bps)	—	—	—	—	197.34*

## 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 April 2017 and every effort has been made to verify its accuracy.

The last section of this Appendix describes the Probability of Default implied Rating (PD<sub>i</sub>R). The PD<sub>i</sub>R has been introduced to aid intuition about PD values for individual companies.

**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](#).

<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.



**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](#).

**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](#).

## PDiR

The PDiR has been introduced to aid intuition about what different values of 1-year PD from RMI-CRI's default forecast model imply about a firm's credit quality. In short, the 1-year PD for a firm is used to imply a credit rating based on historically observed default rates for credit rating agency ratings.

The table at right classifies firms into S&P-equivalent PDiR based on their 1-year PD. For example, if a firm has a 1-year PD of 50bps, then it will be assigned an S&P-equivalent rating of BB. The upper bounds for each PDiR are derived using default and rating transition data provided by credit rating agencies to the European Securities and Markets Authority (ESMA) Central Ratings Repository.<sup>†</sup> RMI-CRI uses this data to compute issuer-weighted 1-year average default rates (ADR) for each rating's cohort, using ratings data from 2006-2015.

**Computing the boundaries between different PDiR classes:** The blue circles in the graph below indicate the logarithm of the observed ADR for firms rated by S&P with ratings from AA down to CCC/C.

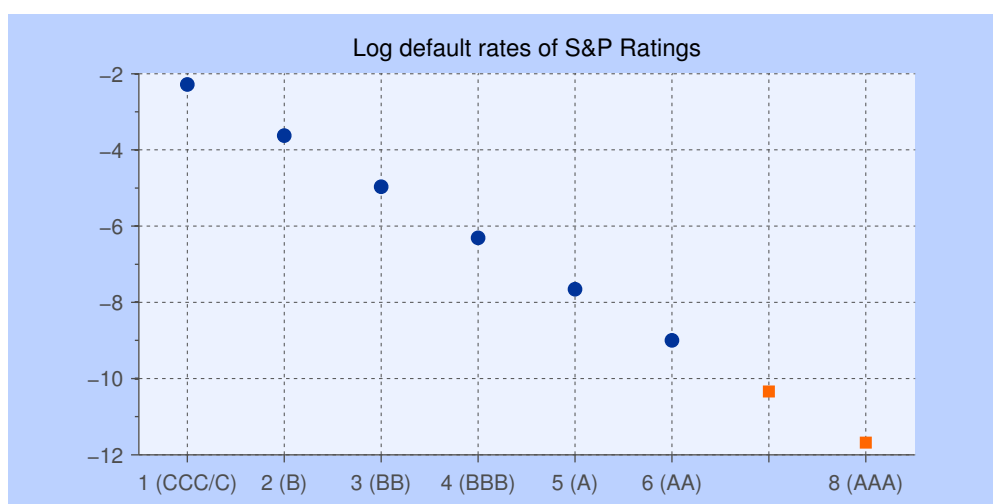
PDiR	Upper bound (bps)
AAA	0.16
AA	2.39
A	9.28
BBB	35.95
BB	139
B	539
CCC/C	–

Given the linear relationship between the observed log default rates and the ratings, we interpolate the log default rate for each rating notch from this result by plotting a line of best fit through the observed points. We then take the boundary between PDiR classes as the mid-point of the interpolated log default rates.

For example, the upper bound for BBB is computed as:

$$UB(BBB) = \exp\left(\frac{\log(ADR(BBB)) + \log(ADR(BB))}{2}\right).$$

For the upper boundary for AAA firms, a mid-point of observed log ADR cannot be taken as the ADR is zero for S&P rated AAA firms. Instead, a line of best fit can be plotted through the six observed points for the other rating classes in order to extrapolate the orange squares. However, taking the default rate based on the first extrapolated orange square results in a boundary that leads to a far larger fraction of PDiR-rated AAA firms as compared to actual rated AAA firms. Thus, the boundary between AA and AAA is taken as the mid-point between the first and second orange square.



<sup>†</sup>Central Ratings Repository, European Securities and Markets Authority (ESMA).

# About RMI and the Credit Research Initiative

The NUS RMI was established in August 2006 as a research institute at NUS dedicated to the area of financial risk management. The establishment of RMI was supported by the MAS under its program on Risk Management and Financial Innovation. RMI seeks to complement, support and develop Singapore's financial sector's knowledge and expertise in risk management, and thereby help to take on the challenges arising from globalization, structural change and volatile financial markets.

CRI is a non-profit project undertaken by NUS-RMI in response to the 2008-2009 GFC. The CRI takes a "public good" approach to credit ratings by providing the outputs from our default forecast system in a transparent, non-profit basis. In the current phase, the CRI model generates PDs on a daily basis for corporate entities in 119 economies in Africa, Asia-Pacific, Europe, Latin America, the Middle East and North America. Our PD can serve as a benchmark against traditional rating agencies' systems or internal credit analyses for industry analysts and business professionals. For more information about RMI and the CRI project, please visit our main site at <http://rmicri.org>

## Usage, redistribution and publication of data

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