

## 2. International Economic Developments

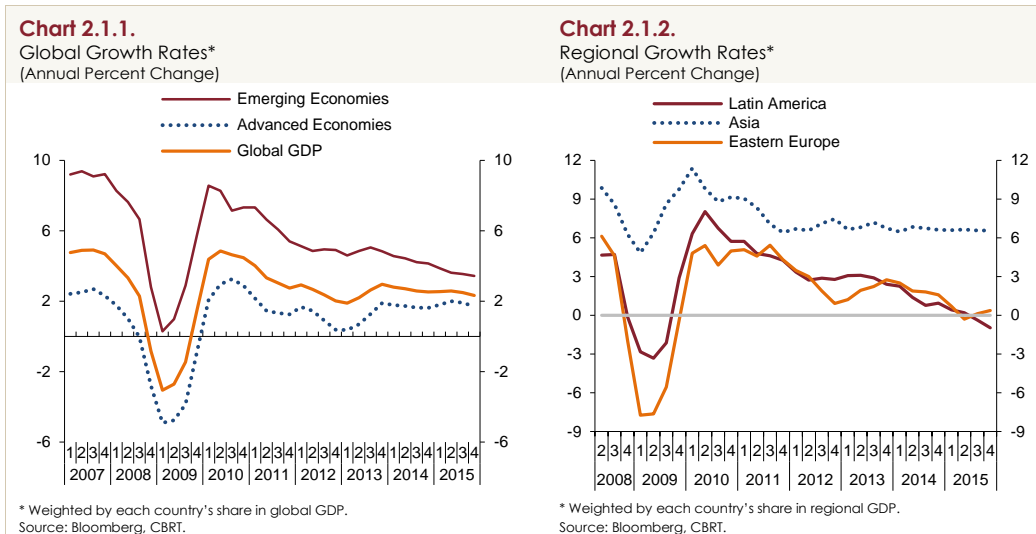
The global growth rate remained on a downward track and stood well below its long-term average at the end of 2015. This decline is attributed to the downturn in emerging economies coupled with the subdued growth in advanced economies. In that period, the weak course of the Chinese economy further weighed on the economic activities of emerging economies that are China's leading trading partners. Meanwhile, the languishing commodity demand remained as the downside risk factor to growth prospects of commodity-exporting emerging economies. On the advanced economies front, although growth-stimulating macroeconomic policies remained in force, leading indicators and forecasts showed that the persisting slowdown in growth continued in the first quarter.

In the first quarter of the year, the course of commodity prices was shaped by energy prices. In that quarter, the energy price index increased amid the prospects for a solution to the global excess supply in crude oil. Accordingly, despite the ongoing excess supply in the crude oil market, expectations that Saudi Arabia and Russia will compromise on the control of oil supply drove prices upwards. What is more, the decline in the US crude oil production supported the upward movement of oil prices in that period. However, the persisting low levels of energy prices continued to limit consumer price inflation both in advanced and emerging economies.

Due to the deteriorated global growth prospects, monetary policies of advanced economies witnessed a new round of easing in the first quarter of the year. The Bank of Japan opted for a negative policy rate, and the ECB announced a strong monetary easing program accompanied by a policy rate cut. Accordingly, the Fed hinted at a gradual and milder monetary tightening following the March meeting. As the policy rates in advanced economies are expected to remain low for a long term, risk appetite picked up in the first quarter of the year and risk premiums of emerging economies decreased. Accordingly, international portfolio flows were mostly oriented towards emerging economies in the first quarter of the year. However, the blurred course of the global economy in the upcoming period as well as the sluggish global trade and commodity prices keep downside risks brisk to portfolio flows towards emerging economies in the period ahead.

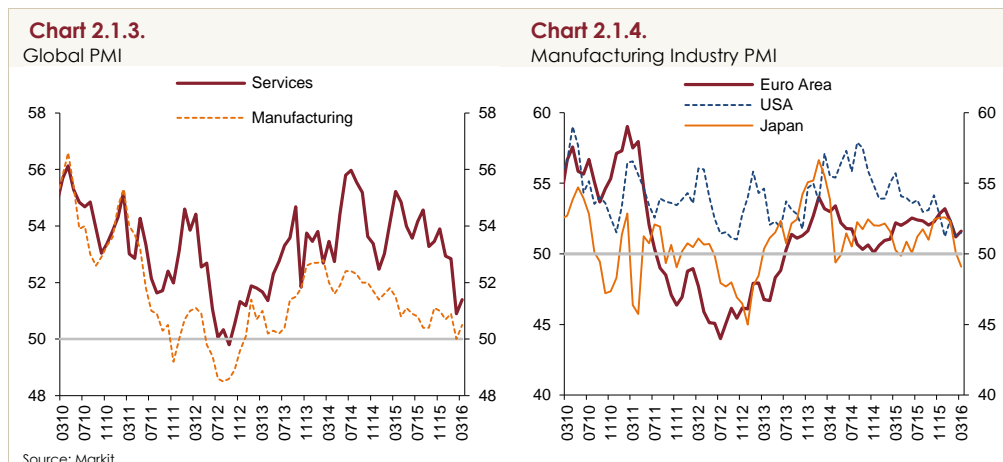
### 2.1. Global Growth

The deceleration trend in global economic activity continued in the last quarter of 2015 and the growth rate of the global economy remained below that of the previous quarter. This was led by both the lingering negative growth performance in emerging economies and the slowing growth rate in advanced economies (Chart 2.1.1). The deceleration continued in the Chinese economy in this period, while Russia and Brazil witnessed a more apparent contraction. On a regional basis, the growth rate in Latin America proved negative in the last quarter of the year, while growth in Eastern Europe hovered slightly above zero (Chart 2.1.2). In the advanced economies front, the mild growth outlook in the euro area continued in the fourth quarter of 2015, while the US and Japanese economies experienced some deceleration quarter-on-quarter.



Global PMI data of the first quarter of 2016 signal a lingering slowing pace in the global economy and a lower growth figure compared to the previous quarter (Chart 2.1.3). The manufacturing industry PMI for the US, the euro area and Japan receded quarter-on-quarter in this period, and resulted in stronger expectations that growth rates will remain below those in the previous quarter (Chart 2.1.4).

Unlike advanced economies, the emerging markets PMI increased on a quarterly basis in the first quarter of the year (Chart 2.1.5). However, the manufacturing industry PMI still hovered below the neutral 50 mark. Manufacturing industry PMI receded in Turkey and Russia in this period compared to the previous quarter, yet followed a slightly favorable course in other emerging economies. These developments and country-specific indicators show that the recession in Russia and Brazil continued in the first quarter of the year. In addition, both the deterioration in PMI and the slowdown in annual growth rates of foreign trade volume and fixed asset investments in January and February are likely to cause the Chinese economy to lose pace further in the first quarter of the year and the growth rate will remain below the previous quarter. However, in other emerging economies, especially Eastern Europe and Asia, growth prospects are expected to turn positive, albeit slightly, in this period.

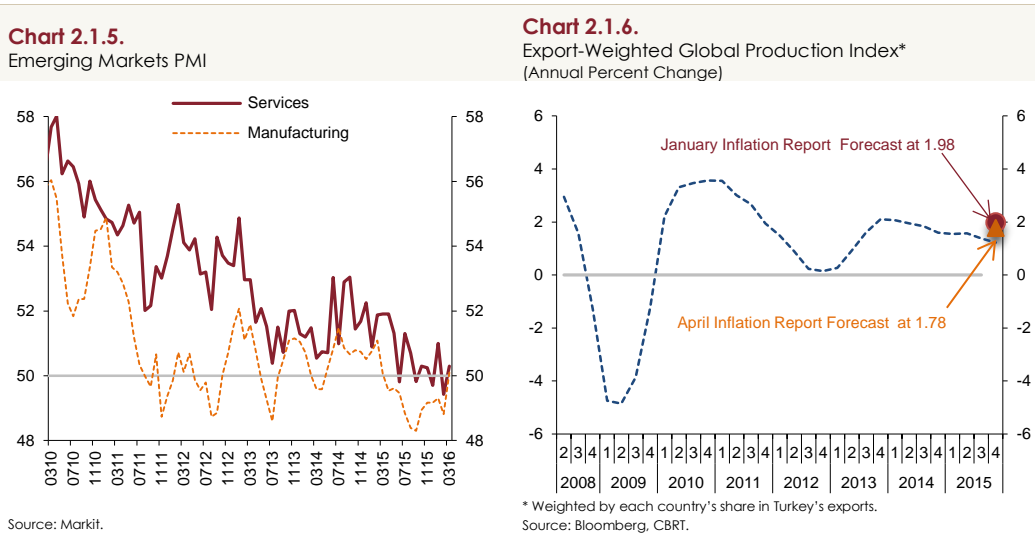


In sum, the global economy is expected to continue to decelerate in the first quarter of the year, owing both to advanced and emerging economies; and the global growth rate is projected to remain below the previous quarter. Downward revision of growth forecasts for 2016, excluding China, compared to the January Inflation Report in the April Consensus Forecasts Bulletin supports this expectation. Moreover, growth forecasts for end-2017 were also revised downwards for all country groups compared to January (Table 2.1.1). In addition, having been revised by the April growth forecasts, the annual growth rate of export-weighted global production index decreased remarkably compared to the January Inflation Report figures (Chart 2.1.6). Accordingly, the languishing global growth performance is likely to put a cap on Turkey's external demand in the upcoming period as well.

**Table 2.1.1.**  
Growth Forecasts for end-2016 and end-2017  
(Average Annual Percent Change)

	January		April	
	2016	2017	2016	2017
Global	2.7	3.0	2.4	2.8
<i>Advanced Economies</i>				
USA	2.4	2.5	2.0	2.4
Euro Area	1.7	1.7	1.5	1.6
Germany	1.8	1.6	1.6	1.5
France	1.4	1.6	1.3	1.5
Italy	1.3	1.3	1.1	1.2
Spain	2.7	2.3	2.7	2.3
Japan	1.2	0.6	0.6	0.5
UK	2.3	2.3	2.0	2.2
<i>Emerging Economies</i>				
Asia-Pacific	5.7	5.6	5.6	5.6
China	6.5	6.3	6.5	6.3
India	7.8	7.7	7.6	7.7
Latin America	0.0	2.2	-0.6	2.0
Brazil	-2.7	0.9	-3.8	0.6
Eastern Europe	1.5	2.4	1.1	2.3
Russia	-0.5	1.3	-1.3	1.1

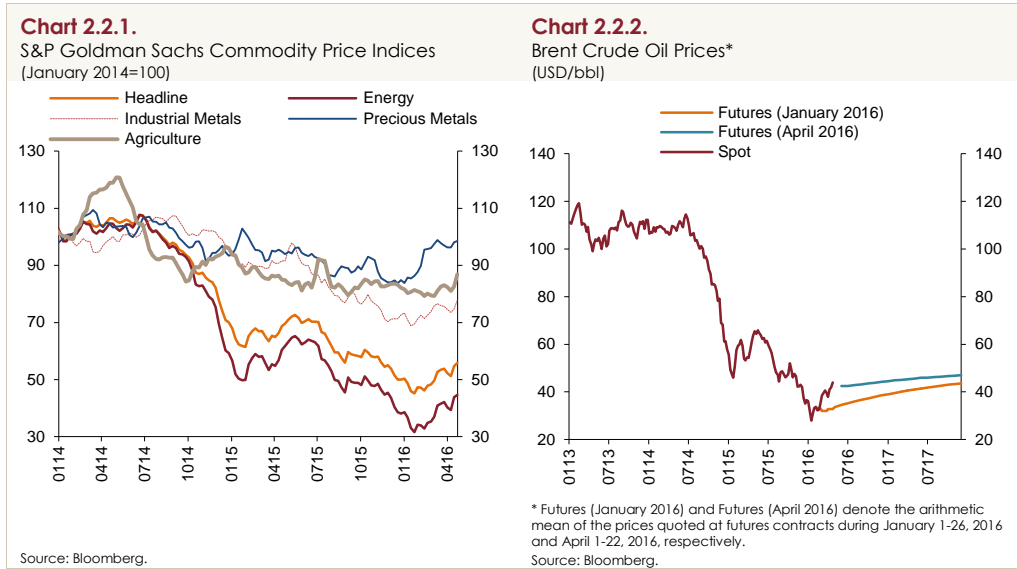
Source: Consensus Forecasts.



## 2.2. Commodity Prices and Global Inflation

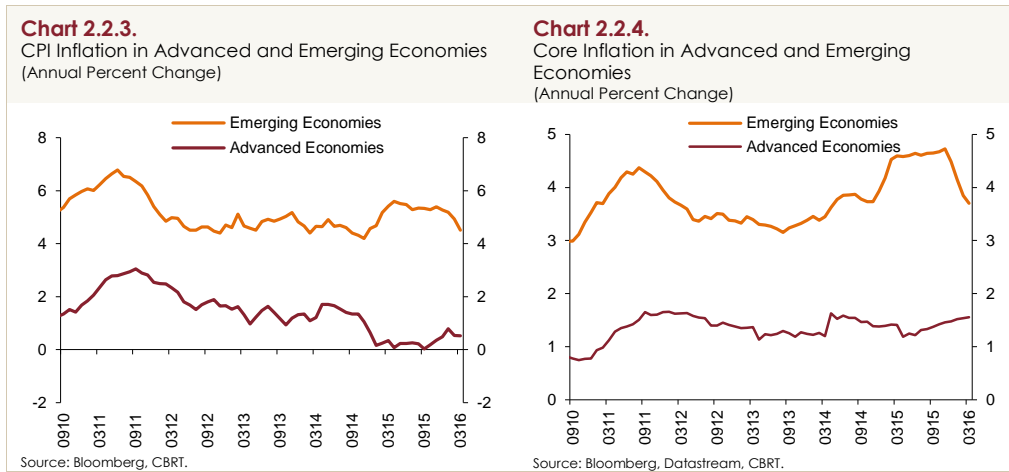
In the first quarter of 2016, the headline commodity price index appreciated by 3.8 percent compared to the end of the previous quarter. Energy, industrial metals and precious metals increased by 4.9, 2 and 0.2 percent, respectively, while the agricultural price index depreciated by 0.1 percent.

The energy price index soared upon the expectation for a solution to the global excess supply in crude oil, whereas precious metal prices surged due to escalated concerns over the global economy in the first month of the year. Having risen sharply in January, concerns over the Chinese economy alleviated slightly in the following months, which fed into the rise in industrial metal prices (Chart 2.2.1).



Brent crude oil price, which dropped to 27 USD in January, increased in February and March. Despite the lingering high levels of supply in the crude oil market, expectations that Saudi Arabia and Russia will compromise on keeping the production level at the January level pushed prices upwards. The fall in the US crude oil production underpinned the upside movement in oil prices, while this movement is contained by the possibility that oil production in Iran can fill this gap. As a result, having been quoted at 38.5 USD on average in January, the Brent crude oil contract due in December 2016, was quoted at 44.2 USD on April 22 on a monthly average (Chart 2.2.2). Although no decision was made to halt the increase in production in the April OPEC meeting, expectations thereof still prevail, which will shape the future course of oil prices.

In the inter-reporting period, inflation rates in advanced and emerging economies decreased slightly. The low course of fuel prices put a limit on consumer inflation in advanced economies. In the emerging economies front, inflation is receding, especially in Russia and Turkey (Chart 2.2.3). Meanwhile, core inflation rates in advanced economies are increasing in the US and the euro area, while decreasing in the emerging economies owing to Russia (Chart 2.2.4). Year-end inflation expectations for 2016 and 2017 were revised downwards for advanced economies and notably upwards for Latin America, which is among emerging economies, compared to the previous Inflation Report (Table 2.2.1).



The euro area and Japan attempt to contain falling inflation expectations through unconventional monetary policy tools. Meanwhile, in the US, core inflation figures hint at inflationary pressures in the upcoming period, yet the languishing global growth outlook indicate a slower-than-expected tightening in the monetary policy. In view of the rise in energy prices, this poses an upside risk on the inflation rate of advanced economies. As for emerging economies, rising energy prices may place upward pressure on inflation, while fluctuations in capital flows may cause downward pressure on prices via the exchange rate channel.

**Table 2.2.1.**  
Inflation Forecasts for end-2016 and end-2017  
(Average Annual Percent Change)

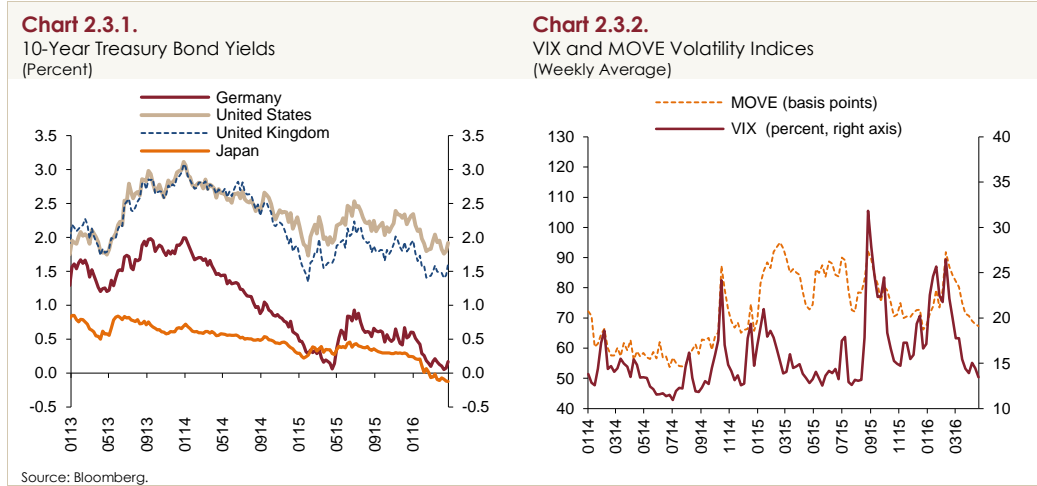
	January		April	
	2016	2017	2016	2017
Global	2.6	2.8	2.4	2.8
<i>Advanced Economies</i>				
USA	1.5	2.3	1.3	2.2
Euro Area	0.8	1.5	0.3	1.4
Germany	1.1	1.8	0.5	1.6
France	0.8	1.4	0.3	1.2
Italy	0.6	1.3	0.1	1.1
Spain	0.7	1.4	-0.2	1.3
Greece	0.1	1.5	-0.1	1.5
UK	1.0	1.8	0.7	1.7
Japan	0.6	2.0	0.0	1.6
<i>Emerging Economies</i>				
Asia-Pacific	2.2	2.4	2.2	2.4
China	1.6	1.7	1.9	1.9
India	5.3	5.3	5.2	5.3
Latin America	10.4	7.1	13.1	8.2
Brazil*	7.0	5.5	7.1	5.6
Eastern Europe	6.0	5.0	6.0	5.1

\* December-on-December.  
Source: Consensus Forecasts.

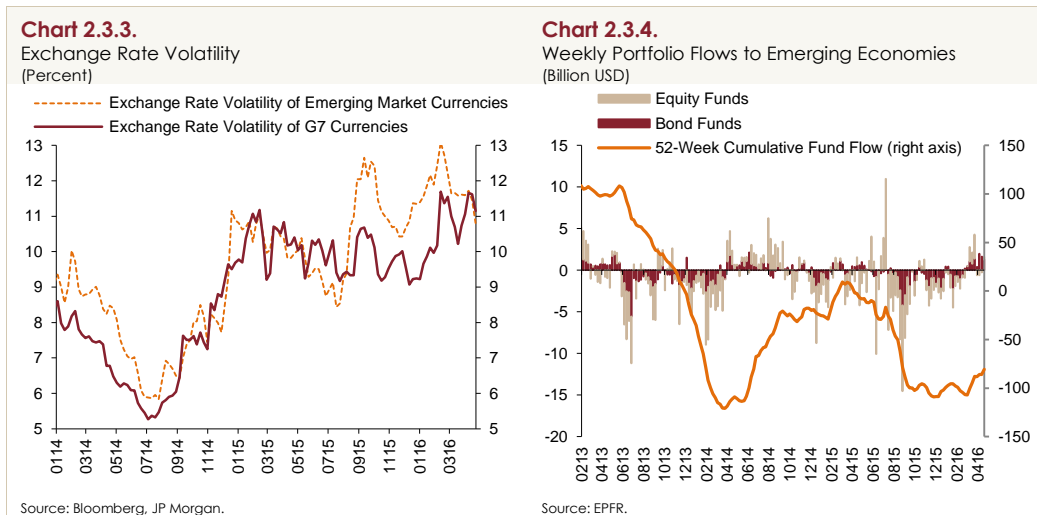
### 2.3. Financial Conditions, Risk Indicators and Portfolio Flows

The negative growth performance in emerging economies continued in the first quarter of 2016 and had a spillover effect on advanced economies. Consequently, the global economic growth proved slower and more fragile with mounting associated risks. Following the adoption of a negative policy rate by the Bank of Japan, the ECB announced a strong monetary easing framework in addition to the rate cut. Accordingly, following the March meeting, signals got stronger for a milder and more gradual normalization process by the Fed compared to the previous reporting period. In line with this

easing in monetary policies of advanced economies, long-term yields displayed a decline (Chart 2.3.1).



Risk appetite exhibited an increase as a result of the growing expectation that the global economy will recover at a slower pace than expected in the previous reporting period and the stronger projections that policy rates in advanced economies will remain subdued for a prolonged period of time amid persisting geopolitical risks (Chart 2.3.2). This also affected exchange rates of emerging economies positively, causing the exchange rate volatility of emerging market currencies to post a slight decline (Chart 2.3.3).

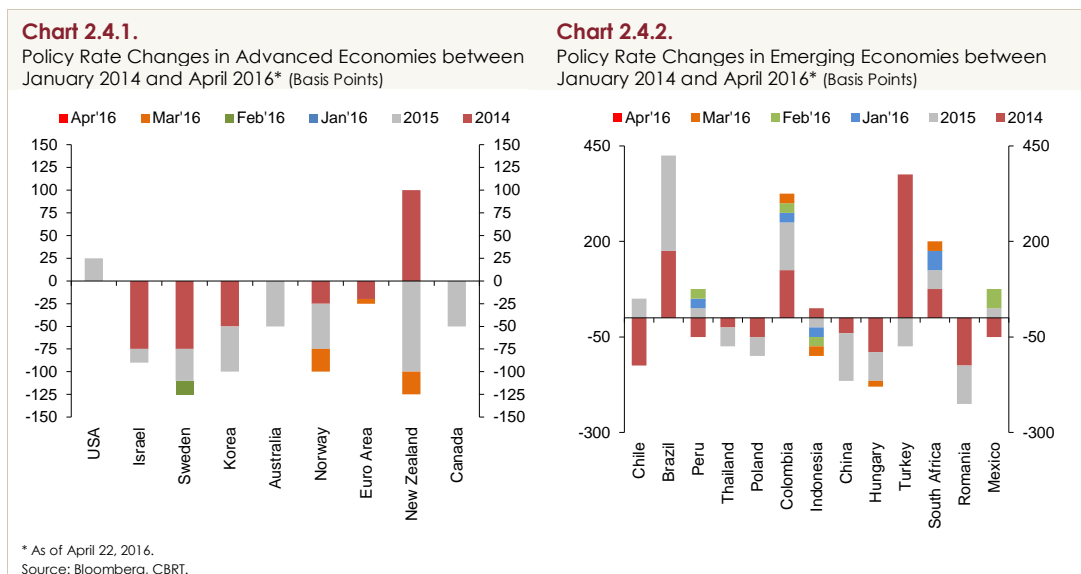


In line with the expectation that the central banks of advanced economies will maintain low levels of policy rates for a prolonged period of time, sovereign risk premiums dropped in emerging economies as the global risk appetite picked up. Accordingly, the EMBI and the CDS spreads have tended to decrease as of the second half of February (Charts 5.1.3 and 5.1.4). As a result, international portfolio flows were shifted towards emerging economies in that period (Chart 2.3.4). However, lingering downside risks to the global economy, the gloomy outlook for the Chinese economy, the

sluggish global trade and commodity prices invigorate downside risks to portfolio inflows particularly to emerging economies in the upcoming period.

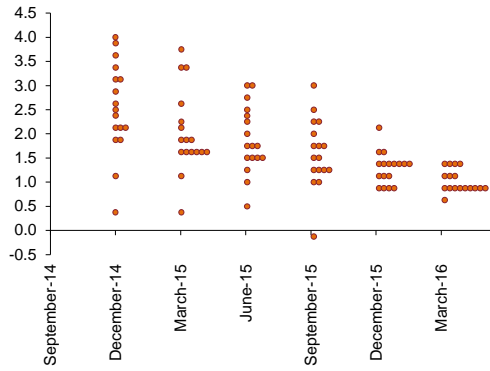
## 2.4. Global Monetary Policy

Having delivered a policy rate hike in December 2015, the Fed kept the policy rate unchanged in the following two meetings in the first quarter of the year. Amid the deteriorated global growth outlook, the Bank of Japan and the ECB pulled policy rates to negative levels and announced new bond purchasing programs, thus initiating another round of monetary easing in advanced economies. Accordingly, the ECB implemented a policy rate cut by 5 basis points, while Sveriges Riksbank delivered a policy rate reduction by 15 basis points from January to April. During the same period, Norges Bank and the Reserve Bank of New Zealand lowered their policy rates by 25 basis points (Chart 2.4.1). In the same period, the Hungarian Nemzeti Bank, the Reserve Bank of India and Bank Indonesia reduced their policy rates by 15, 25 and 75 basis points, respectively, on the emerging economies side. On the other hand, the Central Reserve Bank of Peru and the Bank of Mexico implemented a policy rate hike by 50 basis points, while the South African Reserve Bank and the Bank of the Republic of Colombia raised their policy rates by 75 basis points (Chart 2.4.2).



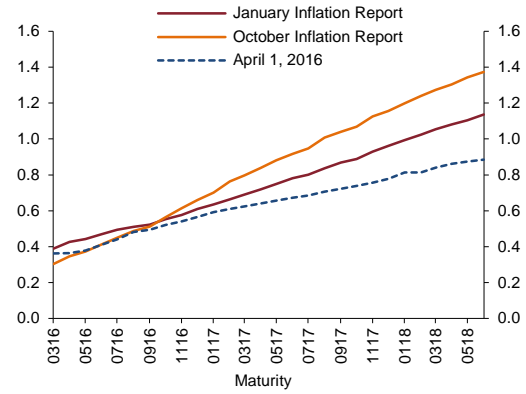
The Fed's monetary policy diverged notably from that of other major central banks by the December rate hike amid dissimilarities across countries with respect to growth and inflation. Moreover, this divergence proved more apparent with the adoption of further easing measures by these banks in the first quarter of 2016. Owing to the deteriorated expectations for growth prospects, both the ECB and the Bank of Japan lowered their interest rates below zero on bank deposits, and the People's Bank of China reduced required reserve ratios. Against these developments, the Fed hinted at a more cautious stance regarding policy rate hikes at the press release of the March meeting. Accordingly, the median value of the FOMC members' current forecasts for end-2016 declined by 50 basis points compared to the previous quarter. This level signals two more rate hikes in 2016 against the previously projected four hikes (Chart 2.4.3). Moreover, Fed funds futures rate displayed a notable decline especially in medium and long-term maturities in the inter-reporting period (Chart 2.4.4).

**Chart 2.4.3.**  
Policy Rate Projections of the FOMC Members  
(Percent)



Source: Fed.

**Chart 2.4.4.**  
US Federal Funds Futures\*  
(Percent)



\* As of January 26, 2016 and October 28, 2015 for January Inflation Report and October Inflation Report, respectively.  
Source: Bloomberg.



Box  
2.1

## Factors Affecting Credit Ratings in Advanced and Emerging Economies

Credit rating agencies have been at the heart of criticism since the financial crisis. Although they downgraded several sovereign ratings after the crisis, they have been mainly criticized for their credit evaluation methodologies and failing to foresee the crisis. Another criticism against credit rating agencies is that there might be a negative bias towards emerging economies. In fact, it is evident that they assign different credit ratings to countries with similar macroeconomic fundamentals. This box explores the determinants of credit ratings for advanced and emerging economies and examines whether the effects of these variables differ across these countries.

**Data and Empirical Findings**

The analysis uses long-term foreign currency ratings provided by Fitch for 13 emerging and 16 advanced economies from 2008 to 2014. The ratings in 17 different categories are scaled linearly, in which the highest credit rating is assigned the highest score. Besides the credit ratings, the rating outlook is also incorporated into the score. For a positive (negative) outlook, 1/3 point is added to (subtracted from) the score. Scaled credit scores are used as the main dependent variable in the analysis. In line with the literature, the real GDP growth, the GDP per capita (in USD terms), CPI inflation, government debt to the GDP ratio, private credit to the GDP ratio (as an indicator of financial depth), net international investment position to the GDP ratio, current account balance to the GDP ratio and budget balance to the GDP ratio are used as explanatory variables. In addition to these fundamental variables, some volatility and uncertainty measures are also added as explanatory variables, which are inflation volatility, real GDP growth volatility, exchange rate volatility, VIX and political risk variables.

We estimate four different models using pooled panel regression estimation techniques. Model 1 attempts to explain the credit rating ( $CR$ ) by the real GDP growth ( $g$ ), inflation ( $\pi$ ), debt to the GDP ( $d$ ), credit to the GDP ( $c$ ) and net international investment position to the GDP ( $niip$ ). The model also includes a dummy variable ( $EM$ ) that equals 1 for emerging economies as follows:

$$CR_{i,t} = \beta_0 + \beta_1 g_{i,t} + \beta_2 \pi_{i,t} + \beta_3 d_{i,t} + \beta_4 c_{i,t} + \beta_5 niip_{i,t} + \lambda EM_i + u_{i,t} \quad (1)$$

Model 2 extends Model (1) with additional fundamentals, which are current account balance ( $cab$ ) and budget balance ( $bb$ ), along with VIX and the GDP per capita ( $GPC$ ) such that:

$$CR_{i,t} = \beta_0 + \beta_1 g_{i,t} + \beta_2 \pi_{i,t} + \beta_3 d_{i,t} + \beta_4 c_{i,t} + \beta_5 niip_{i,t} + \beta_6 cab_{i,t} + \beta_7 bb_{i,t} + \beta_8 VIX_t + \beta_9 GPC_{i,t} + \lambda EM_i + u_{i,t} \quad (2)$$

Model 3 extends Model (2) with volatility variables, which are inflation volatility ( $VolF$ ), real GDP growth volatility ( $VolG$ ) and exchange rate volatility ( $VolP$ ). Finally, Model 4 is the most extensive model that includes political risk ( $Pol$ ) as below:

$$CR_{i,t} = \beta_0 + \beta_1 g_{i,t} + \beta_2 \pi_{i,t} + \beta_3 d_{i,t} + \beta_4 c_{i,t} + \beta_5 niip_{i,t} + \beta_6 cab_{i,t} + \beta_7 bb_{i,t} + \beta_8 VIX_t + \beta_9 GPC_{i,t} + \beta_{10} VolF_{i,t} + \beta_{11} VolG_i + \beta_{12} VolP_i + \lambda EM_i + u_{i,t} \quad (3)$$

$$CR_{i,t} = \beta_0 + \beta_1 g_{i,t} + \beta_2 \pi_{i,t} + \beta_3 d_{i,t} + \beta_4 c_{i,t} + \beta_5 niip_{i,t} + \beta_6 cab_{i,t} + \beta_7 bb_{i,t} + \beta_8 VIX_t + \beta_9 GPC_{i,t} + \beta_{10} VolF_{i,t} + \beta_{11} VolG_i + \beta_{12} VolP_i + \beta_{13} Pol_{i,t} + \lambda EM_i + u_{i,t} \quad (4)$$

Table 1 reports the pooled regression estimation results of these four models, using data from advanced and emerging economies. Accordingly, inflation, government debt to the GDP, credit to the GDP and net international investment position to the GDP are statistically significant in all models and take the expected sign. Moreover, when volatility measures are included in Model 3 and Model 4, the GDP volatility and inflation volatility are also statistically significant in both models, while exchange rate volatility is significant only in Model 4. One interesting observation is that current account balance is significant but with a negative sign. This might be because the multi-collinearity between explanatory variables might hinder the effect of some variables. Another observation is that the significance of the GDP per capita disappears when political risk measure is added. Finally, the most crucial observation is that the emerging market dummy variable is statistically significant and negative in all models. Although the bias tends to decline with the number of explanatory variables, emerging economies receive 1.4 steps lower credit ratings on average than advanced economies with similar macroeconomic fundamentals even in the most extensive model.

Table 1. Pooled Panel Regression Estimation Results

Dependent Variable: Credit Rating	Model 1	Model 2	Model 3	Model 4
Constant	15.69*** (0.271)	13.404*** (0.901)	15.372*** (0.971)	14.868*** (0.633)
GDP Growth	-0.006 (0.053)	0.008 (0.047)	0.006 (0.048)	0.019 (0.035)
CPI Inflation	-0.19** (0.081)	-0.262*** (0.078)	-0.311*** (0.082)	-0.161** (0.068)
Debt to the GDP	-0.036*** (0.004)	-0.034*** (0.004)	-0.033*** (0.004)	-0.023*** (0.004)
Credit to the GDP	0.017*** (0.002)	0.011*** (0.003)	0.014*** (0.003)	0.009*** (0.002)
NIIIP to the GDP	0.025*** (0.004)	0.023*** (0.006)	0.018*** (0.006)	0.015*** (0.004)
Current Account Balance		-0.142*** (0.054)	-0.136** (0.055)	-0.163*** (0.049)
Budget Balance		0.053 (0.05)	0.044 (0.042)	0.069** (0.034)
VIX		0.011 (0.016)	-0.007 (0.021)	0.06*** (0.018)
GDP Per Capita		0.077*** (0.019)	0.065*** (0.019)	-0.015 (0.018)
Exchange Rate Volatility			0.057 (0.041)	-0.078*** (0.029)
GDP Volatility			-0.154* (0.082)	-0.257*** (0.078)
Inflation Volatility			-1.305*** (0.264)	-1.804*** (0.181)
Political Risk				3.632*** (0.328)
Emerging Market Dummy Variable	-4.744*** (0.309)	-2.896*** (0.605)	-2.613*** (0.612)	-1.402*** (0.38)
Number of Observations	187	187	187	187
R-squared	0.716	0.757	0.777	0.868

Standard errors are in parenthesis. \*\*\*, \*\* and \* denote statistical significance at 1, 5 and 10 percent, respectively.

CDS spreads are market-based alternatives to credit ratings. However, unlike credit ratings, a rise in CDS spread implies increased credit risk. Since both credit ratings and market-based credit indicators aim to measure the credit risk, they are expected to respond similarly to macroeconomic variables. Accordingly, the models above are re-estimated by using CDS spreads as the dependent variable and the results are displayed in Table 2. These results indicate that inflation, real GDP growth, government debt as well as net international investment position, inflation volatility and political risk are statistically significant in explaining CDS spreads. The most striking result is that the emerging market dummy variable is statistically insignificant in all models.

Table 2. Pooled Panel Regression Estimation Results

Dependent Variable: CDS	Model 1	Model 2	Model 3	Model 4
Constant	-15.737 (48.358)	103.906 (69.816)	-36.496 (88.136)	-85.436 (82.211)
GDP Growth	-18.056** (7.433)	-18.781** (7.371)	-19.125** (7.545)	-19.863*** (7.16)
CPI Inflation	17.302* (9.553)	19.824** (9.782)	23.967** (10.028)	18.204* (10.077)
Debt to the GDP	1.887*** (0.654)	1.845** (0.726)	1.829** (0.703)	1.404** (0.622)
Credit to the GDP	-0.284* (0.154)	-0.062 (0.337)	-0.364 (0.403)	-0.196 (0.357)
NII to the GDP	-1.969*** (0.677)	-1.967** (0.826)	-1.548** (0.778)	-1.501** (0.718)
Current Account Balance		6.844 (7.761)	6.503 (8.006)	7.651 (7.931)
Budget Balance		-1.853 (8.121)	-1.536 (8.037)	-2.309 (7.778)
VIX		-0.829 (2.782)	-0.158 (3.349)	-3.018 (3.21)
GDP Per Capita		-3.614* (1.926)	-2.19 (1.951)	3.194 (1.96)
Exchange Rate Volatility			-3.096 (3.974)	2.797 (3.237)
GDP Volatility			1.024 (9.257)	2.965 (9.261)
Inflation Volatility			100.335*** (43.193)	132.524*** (44.661)
Political Risk				-170.839*** (44.399)
Emerging Market Dummy Variable	45.905 (35.341)	-38.15 (50.935)	-45.25 (52.885)	-58.263 (49.881)
Number of Observations	178	178	178	178
R-square	0.306	0.310	0.330	0.370

Standard errors are in parenthesis. \*\*\*, \*\* and \* denote statistical significance at 1, 5 and 10 percent, respectively.

### Conclusion

Findings presented in this box indicate that government debt, net international investment position, financial market depth, political risks, inflation and inflation volatility have significant effects on credit ratings. In addition to these observations, empirical results indicate that there may be a negative bias towards emerging economies having similar macroeconomic fundamentals with advanced economies regarding credit ratings. On the other hand, when market-based CDS spreads are used in empirical models, the bias against emerging economies totally disappears.

### REFERENCES

Duran, M. and D. Küçüksaraç, 2016, How Different are the Factors Affecting the Credit Ratings of Developed and Emerging Countries?, CBT Research Notes in Economics No. 16/09.

