2. International Economic Developments

Data released in the past quarter point that global economic activity has not settled into a notable track of recovery. The banking crisis in the Southern Cyprus, the slower-than-expected rate of growth in the Chinese economy and the easing policies enforced by the BoJ stood out as the featuring developments.

Following the publication of the January Inflation Report, economic activity in the Euro Area decelerated further, thus leading to a notable downward revision in the growth rate forecast for 2013. In spite of the measures taken to solve the problems in the Euro Area, the banking crisis in the Southern Cyprus proves that risks to the financial system are still in place.

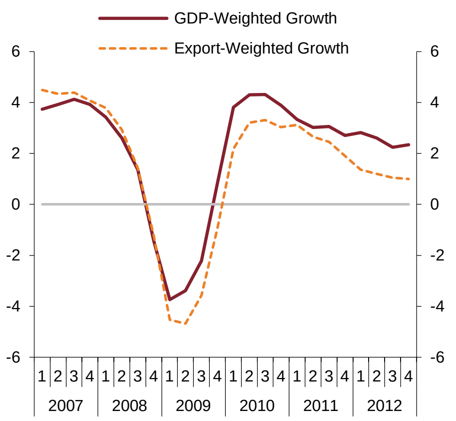
Having diverged from other advanced economies by registering a 1.6 percent rate of annualized growth in the last quarter of 2012, the US economy still recorded the lowest rate of growth of the last 1.5 years. Furthermore, in the first quarter of 2013, the US economy posted a lower-than-expected rate of growth by 2.5 percent in annualized terms, implying that the effects of the tightening fiscal measures are manifested. Cutbacks in budget expenditures will continue to pose downside risks to the US growth in the forthcoming period.

Commodity prices crept up in the first quarter of 2013, while commodity prices excluding energy posted a decline. Having edged down in advanced economies, annual consumer inflation rates followed an upward course in emerging economies in the same period. Also owing to the low rate of global inflation, monetary policy decisions were mainly shaped by concerns of growth, while both advanced and emerging economies continued with monetary easing in the said period. Accordingly, driven mostly by monetary policies in advanced economies, the global monetary policy is expected to remain loose in the period ahead.

2.1. Global Growth

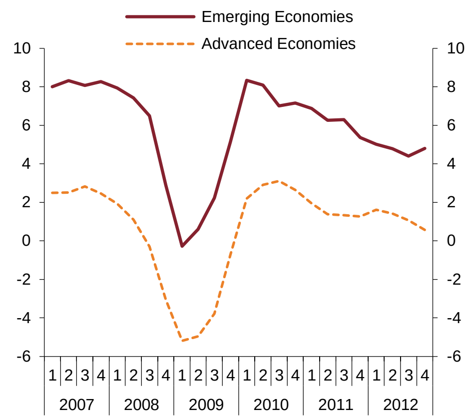
Amid increased economic activity in emerging economies in the last quarter of 2012, global economic activity also moved slightly upwards. As for advanced economies, despite continuing monetary easing policies to support economic activity, growth remained sluggish in the last quarter of the year. Meanwhile, countries with major shares in Turkey's exports also maintained a poor growth outlook in the said quarter (Charts 2.1.1 and 2.1.2).

Chart 2.1.1.
Global Growth Rates*
(Annual Percent Change)



* Weighted by each country's share in Turkey's exports for export-weighted indices.
Source: Bloomberg, CBRT.

Chart 2.1.2.
Global Growth Rates*
(Annual Percent Change)

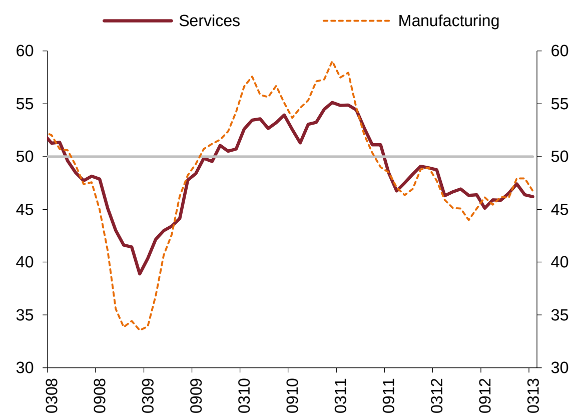


* Weighted by each country's share in global GDP.
Source: Bloomberg, CBRT.

In the last quarter of 2012, the US economy posted a quarterly growth of 1.6 percent (annualized), the lowest figure of the last 1.5 years. Private consumption and investment besides imports contributed positively to growth in contrast to the negative contribution of public consumption and investment besides exports. Having undershot the expectations, the US economy recorded a 2.5 percent growth in annualized terms in the first quarter of 2013. This was interpreted as a manifestation of the cutbacks in public expenditures on the US economy.

The Euro Area economic activity continued with an unfavorable course in the last quarter of 2012, posting a year-on-year contraction by 0.6 percent in 2012. Meanwhile, the PMI data suggest that this contraction would continue in the first quarter of the year as well (Chart 2.1.3). Having projected a positive growth for the Euro Area in 2013 in the previous reporting period, the Eurostat envisioned that the Euro Area would contract further in 2013 and growth would recede by 0.6 percent; and positive growth figures would be attained by 2014. Thus, the Euro Area is expected to further adversely affect the global growth outlook in 2013.

Chart 2.1.3.
The Euro Area PMI Indices

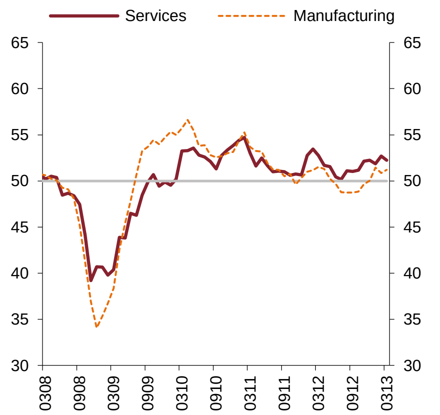


Source: Bloomberg.

As for emerging economies, having followed a 7.9 percent growth rate in the last quarter of 2012, the Chinese economy unexpectedly lost pace in the first quarter of 2013, and grew by 7.7 percent, also bringing about concerns for a new "low growth" period. The languish industrial sector and the lower-than-expected retail sales led to low growth, while also causing stronger perceptions that the expansionary monetary policy were not as effective as expected on the real sector.

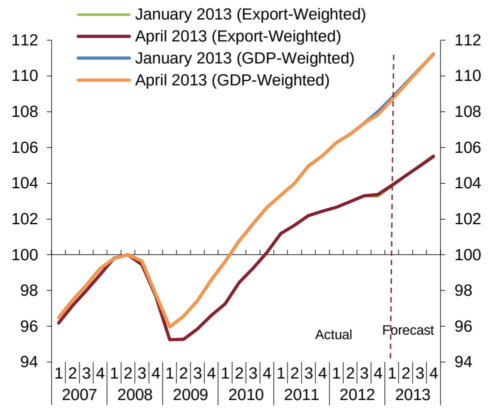
The PMI data regarding the global economic activity point that both the manufacturing and the services sectors posted a slight growth in the first quarter (Chart 2.1.4). Further measures were taken in advanced economies to bolster economic activity, thus causing economic activity to edge up. Notwithstanding the globally loose monetary policy, persisting problems regarding the Euro Area crisis continue to create uncertainty regarding the course of global growth in the period ahead. According to Consensus Forecasts, global growth forecasts for end-2013 remained unchanged in the inter-reporting period; while Euro Area growth forecast for end-2013 was revised considerably downward (Table 2.1.2). GDP and export-weighted global production indices that are updated by April Consensus Forecasts confirm that no evident recovery is expected in external economies in the forthcoming period, and global uncertainties will continue to restrain external demand (Chart 2.1.5).

Chart 2.1.4.
JP Morgan Global PMI Indices



Source: Bloomberg.

Chart 2.1.5.
Global Production Indices*
(2008Q2=100)



* Weighted by each country's share in Turkey's exports for export-weighted indices.
Source: Bloomberg, Consensus Forecasts, CBRT.

Table 2.1.2.
Growth Forecasts for end-2013 and end-2014

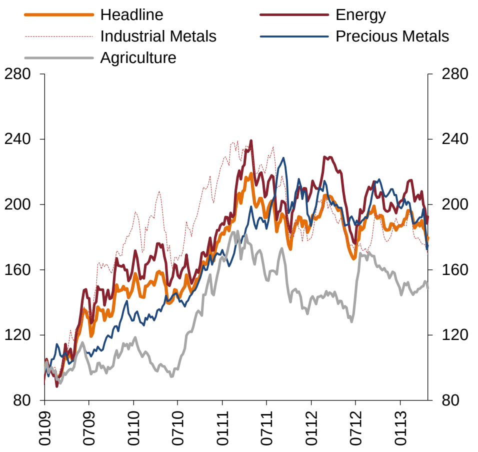
	Consensus Forecasts (Average Annual Percent Change)			
	January		April	
	2013	2014	2013	2014
World	2.6	3.2	2.6	3.2
Advanced Economies	-	-	-	-
USA	2.0	2.8	2.1	2.7
Euro Area	-0.1	0.9	-0.4	0.9
Germany	0.7	1.7	0.7	1.7
France	0.1	0.8	-0.1	0.7
Italy	-0.9	0.5	-1.4	0.5
Spain	-1.6	0.3	-1.6	0.2
Greece	-4.5	-1.3	-4.9	-1.4
Japan	0.7	1.0	1.3	1.3
UK	1.0	1.7	0.7	1.6
Emerging Economies	-	-	-	-
Asia-Pacific	6.6	6.8	6.6	6.7
China	8.1	8.0	8.2	8.0
India	6.5	-	6.1	6.8
Latin America	3.5	3.9	3.4	3.8
Brazil	3.3	3.9	3.1	3.7
Eastern Europe	2.9	3.9	2.7	3.6

Source: Consensus Forecasts.

2.2. Commodity Prices

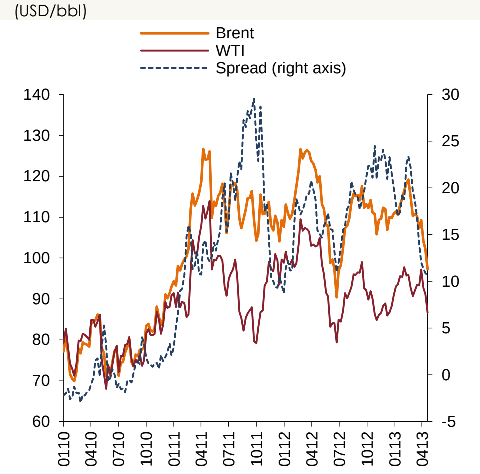
In the first quarter of 2013, commodity prices edged up on a quarterly basis, while commodity prices excluding energy posted a decline. In the said period, energy prices went up by 2.4 percent; while, industrial metal, precious metal and agricultural prices increased by 0.9, 6.4 and 7.4 percent, respectively (Chart 2.2.1).

Chart 2.2.1.
S&P Goldman Sachs Commodity Prices Indices
(January 2009=100)



Source: Bloomberg.

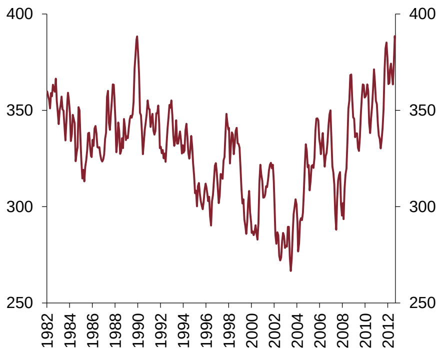
Chart 2.2.2.
WTI – Brent Prices
(USD/bbl)



Source: Bloomberg.

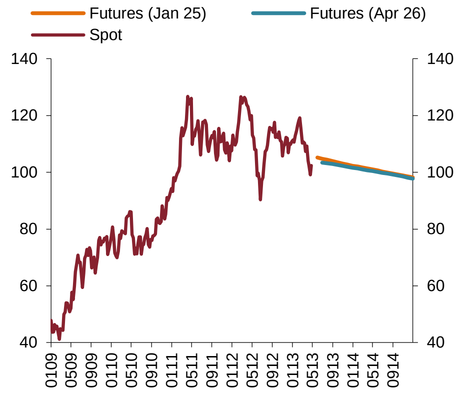
In the first quarter of the year, Brent and WTI oil prices crept up on a quarterly basis. However, by mid-April, both Brent and WTI prices trended downwards, and recorded a quarter-on-quarter decline by 13 and 7 percent, respectively (Chart 2.2.2). The lack of a sign for a permanent recovery in employment indicators despite positive growth in the US economy; and the widespread expectations that the contraction in the Euro Area will persist across 2013 will likely to contain demand pressure on oil prices. Furthermore, both the high course of US crude oil stocks (Chart 2.2.3) and expectations that the current production levels will be maintained in OPEC countries indicate absence of an upward supply-side pressure on crude oil prices. In short, despite persisting political issues in the Middle East, an evaluation of supply and demand conditions suggests that oil prices will remain on a downward path in the forthcoming period. In fact, 18-month forward contracts show that oil prices remained virtually unchanged in the inter-reporting period (Chart 2.2.4).

Chart 2.2.3.
Crude Oil (Brent) Prices*
(USD/bbl)



Source: The US Department of Energy.

Chart 2.2.4.
Crude Oil Inventories in the US
(Million barrel)



*Futures (Jan 25) and Futures (April 26) denote the arithmetical average of the prices quoted in futures contracts during January 1 and 25, 2013 and April 1 and 26, 2013, respectively.
Source: Bloomberg.

WTI and Brent oil prices converged gradually in 2013. The Brent-WTI spread, which was USD 22.3 in the last quarter of 2012, receded to USD 10.6 by mid-April (Chart 2.2.2). The closing of the spread against developments to curb the external dependency of the US in energy is attributed to the more robust growth of the US economy compared to Europe.

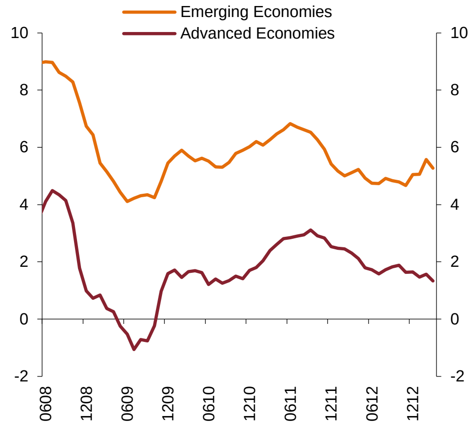
Having increased further in the first half of 2012, agricultural prices remained below 2011 levels throughout 2012; and continued on a downward trend in the first quarter of 2013 by registering a 7.4 percent fall (Chart 2.2.1). However, the future course of agricultural prices remains uncertain due to weather conditions. Hence, both downside and upside risks are brisk throughout 2013.

The course of global growth is still the main determinant of energy and industrial metal prices. Besides economic uncertainties, the monetary easing policies implemented in the US, the Euro Area and Japan to bolster the economy and achieve financial stability are influential on precious metal prices. In the meantime, supply-side developments render it possible for commodity prices to change in both sides.

2.3. Global Inflation

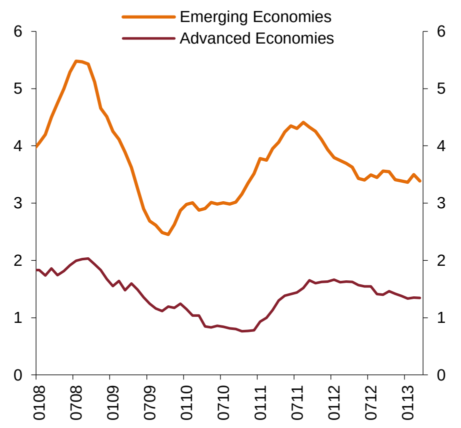
In the first quarter of 2013, headline and core consumer inflation rates posted a limited decline in advanced economies. Having declined slightly in March, inflation rates registered an increase in emerging economies in the inter-reporting period (Charts 2.3.1 and 2.3.2). The fall in commodity prices excluding energy in the said period supported the flat course in inflation rates; and growth, which was languish particularly in advanced economies, did not exert a demand pressure on inflation.

Chart 2.3.1.
CPI Inflation in Advanced and Emerging Economies
(Annual Percent Change)



Source: Bloomberg, CBRT.

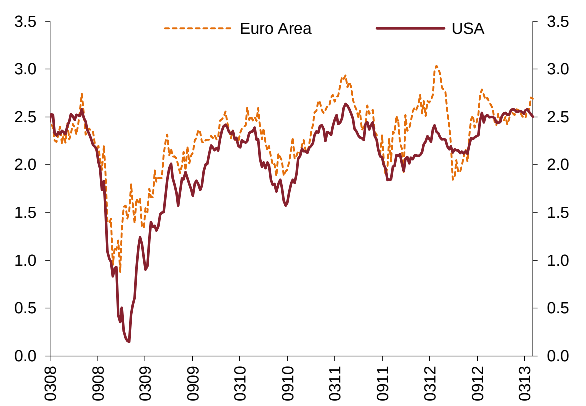
Chart 2.3.2.
Core Inflation in Advanced and Emerging Economies
(Annual Percent Change)



Source: Bloomberg, Datastream, CBRT.

In the first quarter of 2013, the Euro Area inflation compensation edged down, while inflation compensation edged up in the US. Growing perceptions that the contraction in the Euro Area will persist in 2013 accompanied by further support to troubled countries in the region were influential on the fall in compensation rates. On the other hand, the US inflation expectations, which were expected to rise plausibly in 2013, remained broadly unchanged. Nevertheless, inflation compensations in both regions have moved slightly upwards since the midst of March (Chart 2.3.3).

Chart 2.3.3.
Inflation Compensation in the US and the Euro Area
(Percent)



Source: Bloomberg.

Global inflation forecasts suggest no change for end-2013, while a slight upward revision for end-2014 (Table 2.3.1). Forecasts for the Euro Area were revised downwards both for end-2013 and end-2014, while for the US economy, the forecasts remained unchanged. Inflation forecasts for Japan were revised upwards for both 2013 and 2014; and it was envisioned that Japan will start to experience inflation starting from 2013. On the other hand, the course of commodity prices, which remained flat in the first quarter of the year, is not considered to be a pressure and a risk factor on global inflation rates in the period ahead. In addition, steps taken by advanced economies to revive the shrinking and languish economies do not produce favorable expectations, and accordingly, no upside pressures are thought to be present on inflation rates in advanced economies in the forthcoming period.

Table 2.3.1.
Inflation Forecasts for end-2013 and end-2014
(Annual Percent Change)

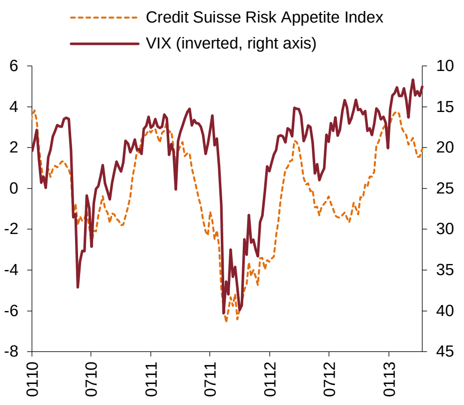
	January		April	
	2013	2014	2013	2014
World	2.8	3.0	2.8	3.1
Advanced Economies	-	-	-	-
USA	1.9	2.1	1.9	2.1
Euro Area	1.9	1.7	1.7	1.6
Germany	1.9	2.0	1.7	2.0
France	1.5	1.8	1.2	1.6
Italy	2.0	1.8	1.9	1.7
Spain	2.3	1.5	2.0	1.5
Greece	0.2	1.4	-0.1	1.3
Japan	-0.2	1.6	0.1	1.9
UK	2.6	2.3	2.9	2.5
Emerging Economies	-	-	-	-
Asia-Pacific*	3.9	3.9	3.9	4.0
China	3.2	3.4	3.2	3.5
India	7.6	6.8	8.2	7.4
Latin America	6.4	6.3	6.6	6.5
Brazil	5.5	5.6	5.7	5.7
Eastern Europe	5.4	4.7	5.2	5.0

* Denotes estimates excluding Japan.
Source: Consensus Forecasts.

2.4. Financial Conditions and Risk Indicators

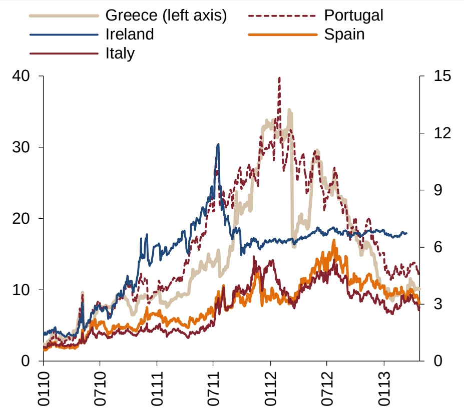
The first quarter of 2013 was marked by persisting uncertainties, especially due to risks regarding the Euro Area; and the global risk appetite recorded a decline in this period (Chart 2.4.1). Despite the resolute stance of the ECB besides the Euro Area governments, both the election results in Italy as well as the financial crisis and the banking crisis in the Southern Cyprus deteriorated the risk perceptions regarding the region. The post-election shares of votes in Italy challenged the establishment of a government and the resulting concerns over political stability led to the downgrade of the country's credit rating and an increase in bond yields (Chart 2.4.2).

Chart 2.4.1.
Global Risk Appetite



Source: Bloomberg, Credit Suisse.

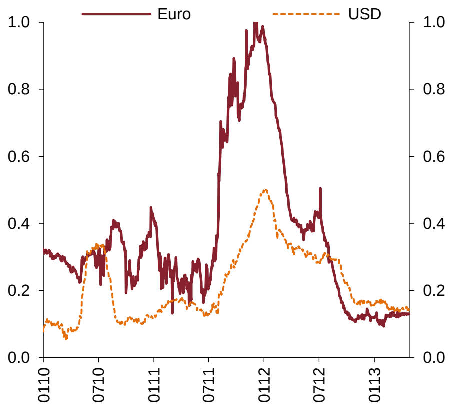
Chart 2.4.2.
Yield Spread over German Bonds in GIIPS Countries*(Percent)



* GIIPS countries are Greece, Ireland, Italy, Portugal and Spain.
Source: Bloomberg.

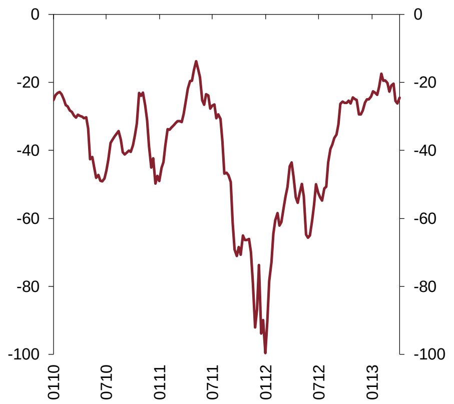
In the first quarter of the year, the OIS spread, which shows the counterparty risk in money markets, decreased for the US and increased for the Euro Area. Meanwhile, the euro–USD cross currency swap rate has increased since February (Charts 2.4.3 and 2.4.4).

Chart 2.4.3.
OIS Spread
(3-Month, Points)



Source: Bloomberg.

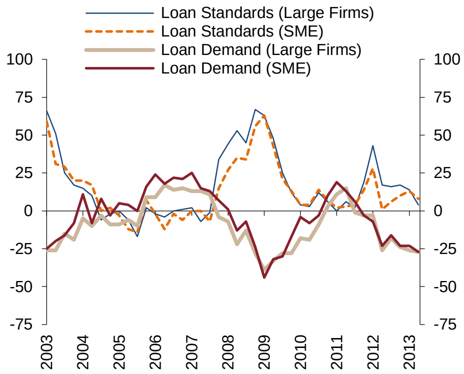
Chart 2.4.4.
Euro/USD Cross Currency Swap Rate
(1-Year, Basis Points)



Source: Bloomberg.

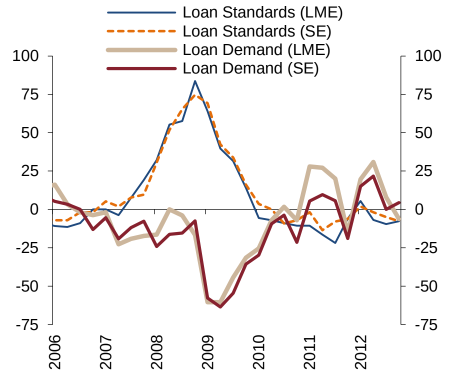
According to the ECB's bank lending survey for the first quarter of 2013, tight credit conditions in the banking sector were slightly alleviated, while credit demand was contracted further in the Euro Area (Chart 2.4.5). As per the latest lending survey released by the Fed, easing in lending conditions continued through the last quarter, and the loan demand of not only the large and medium-size but also of small-size firms increased in the US (Chart 2.4.6).

Chart 2.4.5.
The ECB Bank Lending Survey*
(Percent)



* Upward movements denote tightening in credit conditions.
Source: ECB.

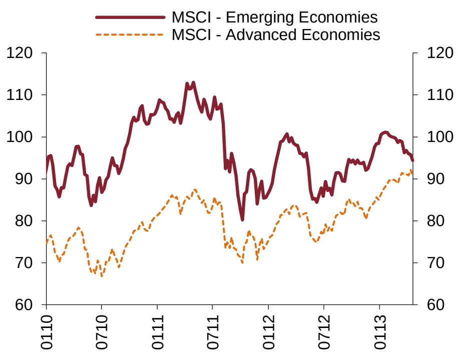
Chart 2.4.6.
The Fed Lending Survey*
(Percent)



* Upward movements denote tightening in credit conditions.
Source: Fed.

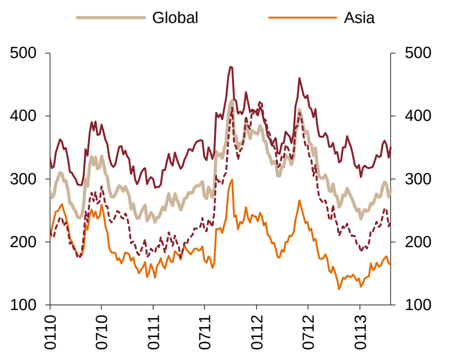
In the first quarter of the year, increased number of investors were attracted to stock markets in advanced economies, in particular the US; and the MSCI index of advanced economies soared in contrast to the plummeting performance of stock markets in emerging economies (Chart 2.4.7). In the same period, yield indices for borrowing bills of emerging economies recorded an increase (Chart 2.4.8).

Chart 2.4.7.
Global Stock Markets
(USD, 2007=100)



Source: Bloomberg.

Chart 2.4.8.
Regional EMBI Developments

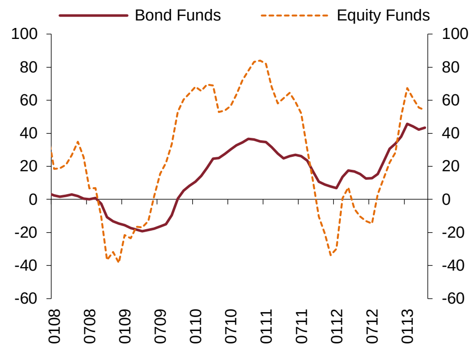


Source: Bloomberg.

2.5. Capital Flows

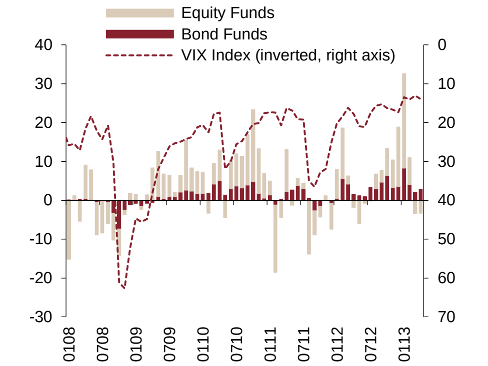
Having trended upwards in the last quarter of 2012, capital flows towards emerging economies accelerated further in January 2013; but lost pace in the succeeding months despite the relatively high global risk appetite (Chart 2.5.1). In the aftermath of January, which was marked by robust inflows towards equity and bond markets, capital flows trended downwards. The bond funds plummeted, while equity funds saw outflows in March and April (Chart 2.5.2).

Chart 2.5.1.
Annual Portfolio Flows to Emerging Economies
(Cumulative, Billion USD)



Source: EPFR, Bloomberg.

Chart 2.5.2.
Monthly Portfolio Flows to Emerging Economies
(Billion USD)



Source: EPFR, Bloomberg.

On a quarterly basis, the composition of capital flows remained unchanged in the first quarter of the year, in terms of both portfolio and regional distribution (Table 2.5.1). International investors mainly preferred equity funds, and emerging Asian economies remained as the most attractive country group for investors. While capital flows to emerging economies remained unchanged year-on-year, the volatility of capital flows increased in the first quarter of the year.

Table 2.5.1.
Composition of Portfolio Flows to Emerging Economies (Quarterly, Billion USD)

		Total	Portfolio Composition		Regional Composition			
			Equity Funds	Bond Funds	Emerging Asia	Emerging Europe	Latin America	MENA
2012	Q1	32.4	21.2	11. 2	14.7	5.7	9.3	2.7
	Q2	-3.5	-7.8	4.3	-4.0	0.0	0.2	0.3
	Q3	19.2	7.0	12.1	6.2	4.5	6.8	1.7
	Q4	42.8	27.9	14.9	24.0	6.3	9.9	2.7
2013	Q1	42.9	27.8	15.1	24.5	6.2	9.2	3.0

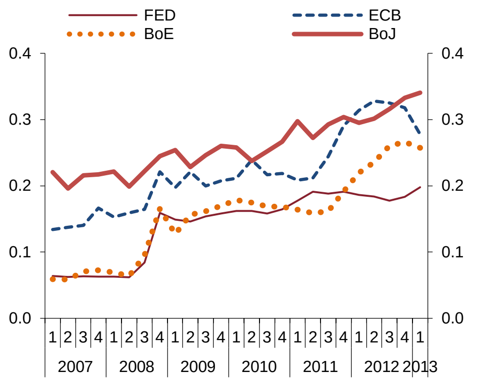
Source: EPFR.

The recent quantitative easing policy implemented by BoJ is considered to be an important factor that may accelerate capital flows to emerging economies in the upcoming period. Accordingly, owing to both the potentially robust course of capital flows and heightened volatility, risks to financial stability in emerging economies are thought to remain brisk in the forthcoming period.

2.6. Global Monetary Policy Developments

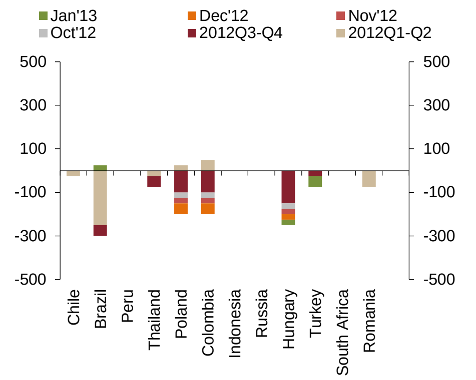
In the first quarter of 2013, monetary policies were eased amid the unfavorable global growth outlook. Advanced and emerging economies diverged considerably in the said quarter; i.e. while policy rates in emerging economies continued with a sharp decline, policy rates in advanced economies were stable. Countries such as Sweden, South Korea, the Czech Republic, Israel and Australia, which opted for policy rate reductions in the last quarter of 2012, kept their policy rates unchanged in the first quarter of the year in spite of the room for maneuver. The Fed and the BoJ, which are out of the four central banks that do not have much room for maneuver, sustained their monetary easing policies, while the ECB and the BoE slowed down on asset purchases, and central bank assets, and consequently their shares within the GDP saw a decline compared to the end of 2012 (Chart 2.6.1). In the meantime, policy rates were lowered by 50 basis points in India, Mexico and Turkey; and by 100 basis points in Hungary, Poland and Colombia in the first four months of the year. Meanwhile, Banco do Brasil delivered a 25 basis points policy rate hike in April given the overshoot of the inflation target of 6.5 percent. (Chart 2.6.2).

Chart 2.6.1.
Central Bank Assets to GDP*



* Estimate for 2013Q1GDP.
Source: Bloomberg, CBRT.

Chart 2.6.2.
Policy Rate Changes in Emerging Economies from Jan. 2010 to Apr. 2013* (Basis Points)

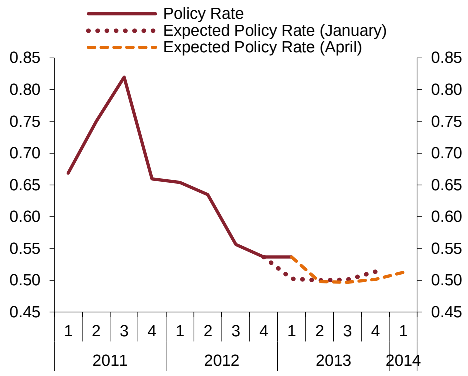


* As of April 29, 2013.
Source: Bloomberg, CBRT.

As for the monetary policy implementations in advanced economies, the Fed implemented further monetary easing and continued with bond purchases announced by the third monetary easing package. Despite the partial recovery in the US growth, the Fed envisioned that the earlier projection of 6.5 percent in unemployment rate will not be attained before the last quarter of 2014 and the monetary policy will remain loose for a while. As for Japan, a new package of expansionary fiscal and monetary policy measures was introduced to re-settle the economy into a growth path in early April. Accordingly, monthly bond purchases, which were announced to be JPY 3.8 trillion in the previous package, were increased to JPY 7.5 trillion (around USD 75 billion). The BoJ showed resoluteness in attaining the goal of 2 percent in inflation and doubling the monetary base within two years.

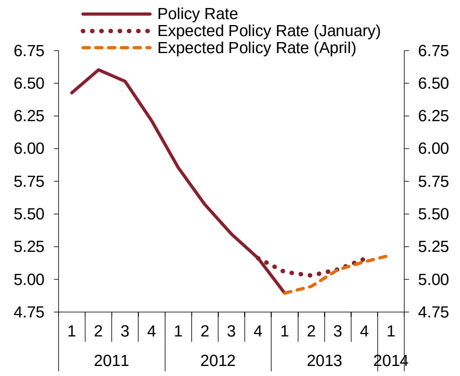
In emerging economies, policy rates slowed down further, and in inflation-targeting countries, the GDP-weighted average policy rate went down by 27 basis points in end-2013 compared to end-2012. Policy rate reductions were attributed to sluggish economic activity, and it was declared by central banks that these reductions were consistent with their inflation targets.

Chart 2.6.3.
Expected Policy Rates in Advanced Economies



Source: Bloomberg, CBRT.

Chart 2.6.4.
Expected Policy Rates in Inflation-Targeting Emerging Economies



Source: Bloomberg, CBRT.

Similar to the previous quarter, the ECB did not deliver the expected policy rate cut, thus causing the average policy rate in advanced economies to remain above the level projected in the January Inflation Report (Chart 2.6.3). Meanwhile, the projections that the ECB would implement a 25-basis points policy rate cut in the second quarter of 2013 were still in place in April. As for emerging economies, the fall in average policy rate stood far above the expectations in January (Chart 2.6.4). Expectations for April suggest that monetary easing in emerging economies ended with this sharp decline. The upward trend in both the consumer inflation and core inflation indicators in the said countries challenges the sustainability of policy rate reductions to bolster economic growth. In fact, expectations also point that the average policy rate in emerging economies will trend upwards as of the second quarter of the year. Finally, expectations for end-2013 remained broadly unchanged in April for both country groups in the inter-reporting period, except for a minor adjustment to the deviation in the first quarter of the year, thereby resulting into the settlement to the previous path.

Box 2.1 Export-Weighted Global PMI Index and the Growth Threshold

The Purchasing Managers' Index (PMI) is a significant indicator released on a monthly basis entailing qualitative information on the month-on-month change in the economic activity of a country or a sector. As for countries, the PMI is a leading indicator for the GDP growth. In this Box, a new global PMI series is constructed to estimate the export-weighted global growth rates calculated for Turkey (see Inflation Report 2010-II, Box 2.1) and the threshold PMI value; i.e. the PMI value corresponding to 0 percent growth rate is calculated.

PMI figures are calculated by results of a monthly survey responded by the purchasing managers of firms.[1] Accordingly, in a month where all participants report no month-on-month change in their activities, the PMI value will be 50. Therefore, the PMI value of 50 is also called the theoretical growth threshold or the neutral level. By definition, a PMI value above the theoretical growth threshold corresponds to expansion in the economy; while a PMI value below 50 indicates contraction. Hence, through a regression analysis in the spirit of Koenig (2002), this study estimates the PMI value and the growth threshold, which correspond to the 0 percent growth rate, and compares it with the theoretical growth threshold.

The real GDP data for countries included in the calculation of export-weighted global growth are obtained from Bloomberg (for calculation method, see Inflation Report 2010-II, Box 2.1). The quarterly GDP data are also seasonally adjusted. Meanwhile, 34 countries, which are importers from Turkey, are included in the calculation of export-weighted global PMI and the PMI data are released by Markit.[2] Turkstat dataset is used for the calculation of Turkey's exports to these countries. Data on exports and PMI are transformed from monthly to quarterly frequency, and quarterly PMI is calculated as the simple arithmetic average of the monthly PMI. The analysis covers the 1999-2012 period.

[1] In the survey, the respondents are asked about the status of their activities compared to the previous month and requested to select "better", "worse", or "unchanged". Then, total number of participants is normalized to 100 and the ratio of each answer is calculated according to the percentage of the respondents. The index is calculated with the weight of "better" being 1; while the weight of "unchanged" and "worse" is 0.5 and 0, respectively.
[2] Total share of these countries within Turkey's exports is around 60 percent.

The coverage of PMI data by Markit differs for each country and also by sectors. For each country, the most comprehensive PMI series is chosen with the objective to find the best leading indicator for the GDP. In case of an absence of the index for any time period, the second most comprehensive series is employed. For instance, if a country's headline PMI starts from 2007, then this series is used for the succeeding periods; whereas, for the preceding periods, the manufacturing industry PMI is used. The export-weighted global PMI (P_t) is calculated as follows by using the PMI series that will best lead the GDP growth:

$$\mathrm{P_t} = \sum_{i=1}^{n} \mathrm{w_{i,t-1}} \mathrm{P_{i,t}}$$

In this equation, $P_{i,t}$ denotes the PMI value of the country i in period t; and $w_{i,t-1}$ denotes the share of the country i within Turkey's exports in period t-1.

Export-weighted global PMI and global growth are illustrated in Chart 1, together with the theoretical growth threshold.[3] The chart highlights the frequency of cases where the PMI value is above (below) the theoretical threshold and the global growth is below (above) zero, thus signifying the possibility that the actual threshold for growth may be different.[4] Thus, the following simple regression equation is estimated, where the export-weighted global growth, g_t is the dependent variable and the export-weighted global PMI, P_t is the explanatory variable:

$$\begin{array}{lll} g_t = 0{,}001\ (P_t - 47{,}540) & & R^2 = 0{,}736 \\ \qquad\quad (12{,}3) \qquad (104{,}2) & & S.E. = 0{,}003 \end{array}$$

Respective t-statistics are shown in parentheses. According to this equation, each 1-point increase in the export-weighted global PMI value corresponds to an increase by 0.1 percentage point in the export-weighted global growth.

[3] The correlation coefficient between the two series is 0.86.
[4] The number of observations corresponding to this case is 14. For example, in the last three quarters, even though the PMI remains below the theoretical growth threshold, global economy continues to grow.

Chart 1. Export-Weighted Global PMI for Turkey and the Theoretical Global Growth Threshold*

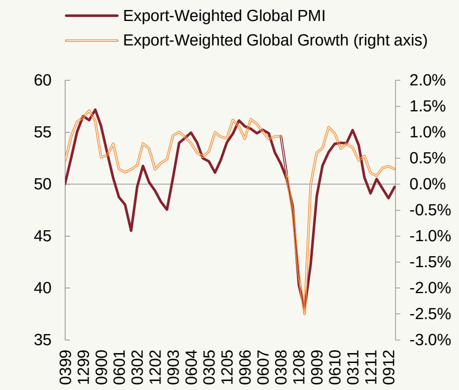
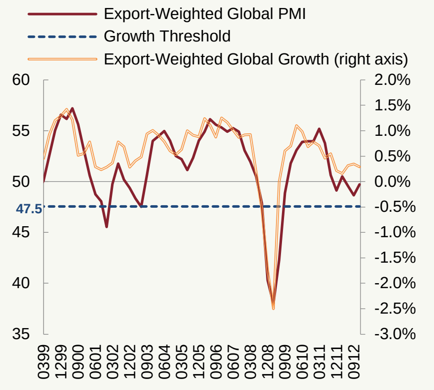


Chart 2. Export-Weighted Global PMI for Turkey and the Growth Threshold*



* Quarterly data and quarter-on-quarter growth.
Source: Markit, CBRT.

According to the estimation equation, the calculated PMI value corresponding to 0-percent growth rate is around 2.5 points below the theoretical growth threshold. The Chart 2 illustrates the growth threshold along with the global PMI and growth series. As depicted in the chart, growth rates implied by the PMI according to the threshold value are largely consistent with the actual growth rates. In other words, while the theoretical growth threshold results in inconsistency in 14 observations, this figure recedes to 3 with the use of the estimated values for growth rates. Therefore, in building up expectations regarding the direction of growth, the use of the estimated growth threshold is more accurate as opposed to the use of the theoretical growth threshold.

In sum, as a leading indicator for export-weighted global growth, which largely gauges Turkey's exports, a global PMI series is constructed and the growth threshold is estimated using this series. The findings indicate that, compared to the theoretical growth threshold of 50, the estimated growth threshold is able to better capture the direction of growth, thus indicating that this estimated series should be taken into account in analyses.

REFERENCES

Koenig, E. F., 2002, Using the Purchasing Managers' Index to Assess the Economy's Strength and Likely Direction of Monetary Policy, Federal Reserve Bank of Dallas Economic and Financial Policy Review, 1(6).