

## 2. International Economic Developments

Economic and political developments in the Euro Area have shaped the global economic outlook in the last quarter. Growth rates in emerging and advanced economies decreased in general and risk appetite was highly volatile in this period. Expectations for the forthcoming period point that the economic activity will continue to slow down.

Following the evaluation period of the April Inflation Report, results of the Greek elections attenuated the perceptions of exit from the EU. On the other hand, public borrowing rates that went even beyond 7 percent in Spain as well as aggravating problems in the banking sector reinforced the need of Spain for an EU and IMF-based financial support. However, the amount of the probable support to be higher than the other countries raises concerns over the sufficiency of the currently available resources. Meanwhile, public borrowing rates in Italy have also reached distressing levels that can challenge debt rollover in the same period, which became another factor to elevate risks in the region. In line with these developments, economic activity continued to lose momentum across the Euro Area in the last quarter, and expectations for the second half of the year deteriorated. Steps taken by policymakers and the ECB against adverse economic developments were perceived as insufficient by market players, signaling that downside risks on the EU economy will remain brisk for an extended period.

Last-quarter-data on the US economy indicate a slowdown in the recovery of the economic activity. However much the US economy grew compared to other advanced economies in the first quarter, labor market data point that the fall in unemployment rates halted and the rise in employment lost pace. On the other hand, expectations regarding economic activity did not suggest a marked recovery. Thus, the Fed decided to continue with its swap policy to exchange short-term Treasuries for long-term bonds in its June meeting. At the same time, given the developments in the economic activity, the possibility of a third expansionary package was also kept on the agenda.

In the said period, economic activities of emerging economies also decelerated in line with the advanced economies. For example, having attained two-digit figures since 2010, growth rate of the Chinese economy recorded the lowest level in the second quarter of 2012 following the global

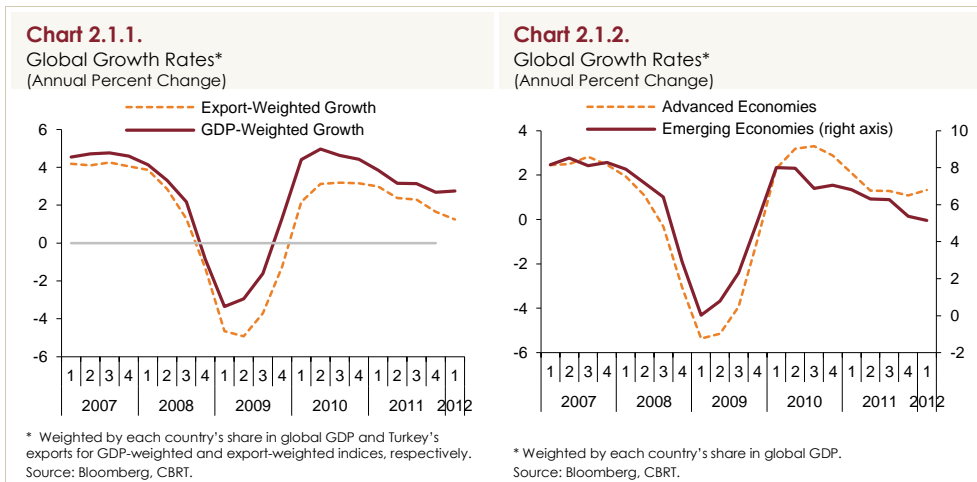
economic crisis. Parallel to the low quarterly growth rates across advanced and emerging economies, year-end growth expectations were revised downwards.

Inflation has recently trended downwards across advanced and emerging economies and risks on growth follow a downside path, which facilitated the central banks to pursue monetary policies with a focus on growth. In this respect, central banks of some advanced and emerging economies opted for policy rate cuts in order to bolster economic activity. It is expected that the slackening of the monetary policy stance will continue through the rest of the year.

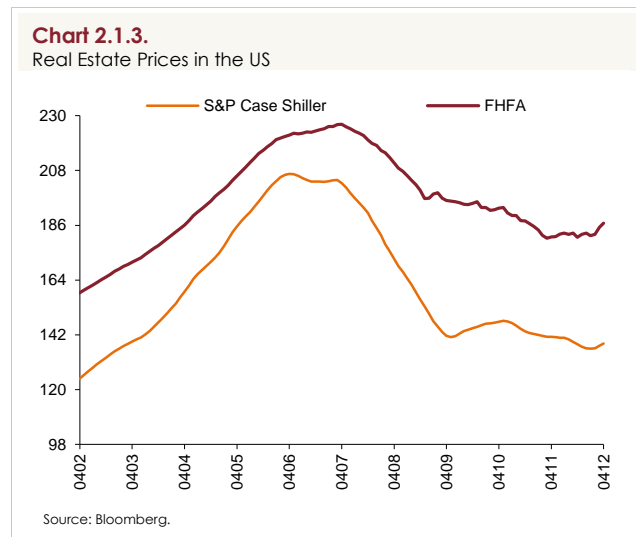
Due to the slowdown in global economic activity, commodity prices saw plunges in the second quarter. Nevertheless, energy prices have recently trended upwards owing to supply-side developments. Furthermore, due to the drought in America, the recent rise in agricultural commodity prices is likely to pose an upside risk on processed food prices in the forthcoming period.

## 2.1. Global Growth

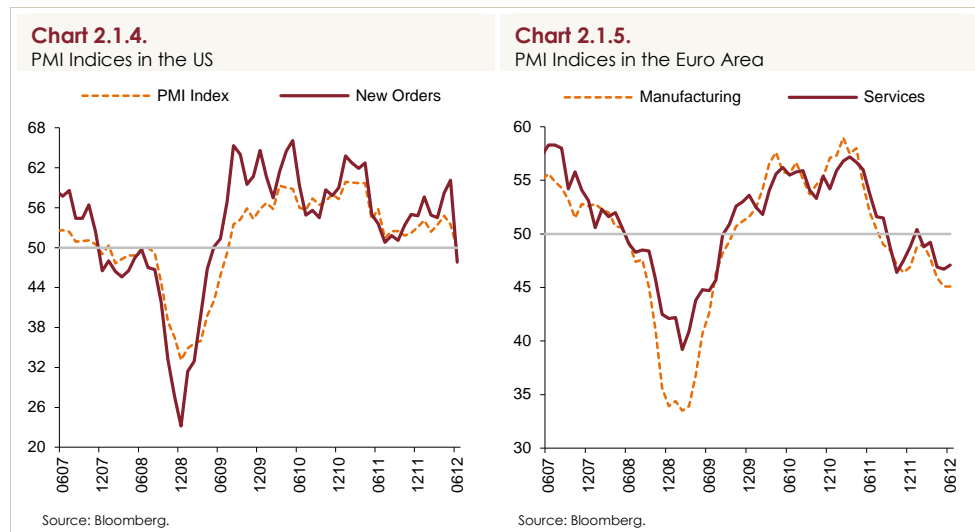
Second liquidity operation of 3-year maturity by the ECB besides the aversion of Greek default and the improvement in perceptions regarding the debt crisis of the Euro Area led to a temporary optimism in markets in the first quarter of the year. As a result, GDP-weighted global growth index moved slightly upwards, while the change in world trade remained limited (Chart 2.1.1). However, amid the aggravated debt crisis in the Euro Area due to the stronger need of Spanish banking sector for financing in the second quarter, the global growth outlook for the forthcoming period is weaker than the previous reporting period.



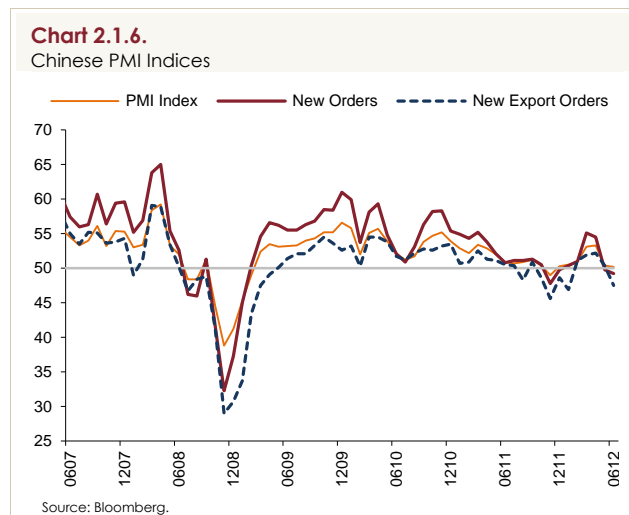
Aggregated indices suggest that advanced economies saw a slight increase, while emerging economies experienced a decline in economic activity in the first quarter of 2012 (Chart 2.1.2). The US and Japan contributed positively to growth in advanced economies. However, having recorded rather low rates in the first quarter, the Euro Area and the UK pulled the said growth rate down. As for the emerging economies, the deceleration in Chinese and Indian economies has been the main driver of the slowdown in the economic activity of this group.



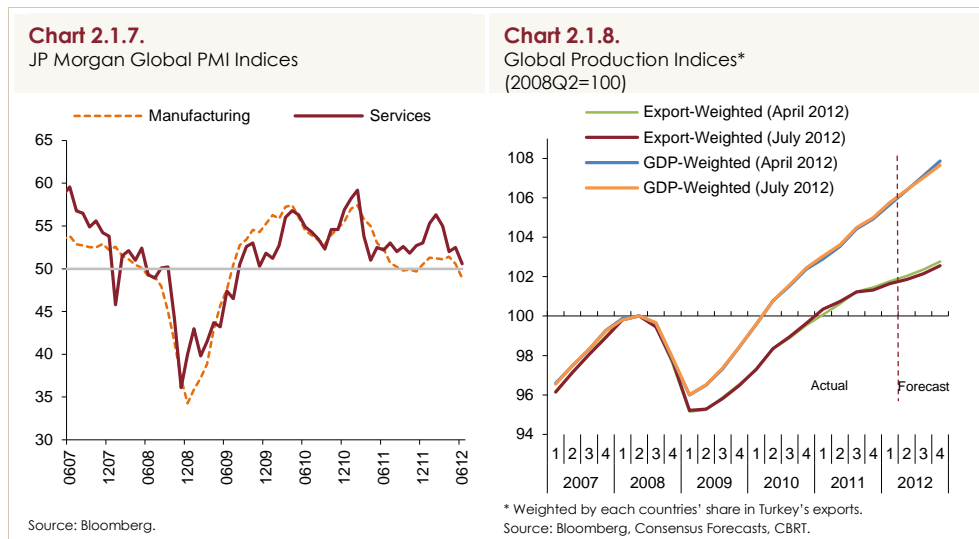
In the first quarter of 2012, GDP growth in the US posted a quarterly increase by 1.9 percent in annualized terms and the data regarding the housing market proved favorable in the same period, thus contributing positively to the US economic outlook by increasing the consumer and investor confidence. However, despite signals for recovery in the housing sector, (Chart 2.1.3 and Box 2.1) labor force did not see any improvement and the worsening Euro Area debt crisis continued to pose uncertainty on global growth, constituting a notable downside risk on the US growth for the forthcoming period. In fact, the decline in PMI figures of the second quarter is noticeable (Chart 2.1.4). For the Euro Area, which continued to record a quarterly contraction in the first quarter of 2012, growth is projected to remain limited in the second quarter of the year parallel to the intensifying problems (Chart 2.1.5).



In the recovery process following the global crisis, Chinese growth rate, which provided the largest contribution to growth in emerging economies, continued to fall in the second quarter and GDP grew by 7.6 percent annually. Mainly driven by consumption, growth was slightly supported by external demand. PMI indicators suggest that growth will remain limited in the forthcoming period (Chart 2.1.6).



The data released in the inter-reporting period point that the global growth outlook for the forthcoming period has worsened. Global PMI figures suggest that production industry and services sub-indices edged up at the start of the year, while this trend has reversed since March and indices have recorded a decline (Chart 2.1.7).



Year-end global growth forecasts suggest that projections presented in the July Consensus Forecasts Bulletin indicate a weaker growth outlook compared to the outlook presented in the April Inflation Report. In July, year-end growth forecasts for the US economy were slightly reduced and forecasts for the Euro Area were revised downwards due to developments in Italy, Spain and Greece (Table 2.1.1). GDP and export-weighted global production indices, which were reduced by July Consensus Forecasts, were also revised downwards in the inter-reporting period. In line with the outlook presented above, this confirms that a noticeable recovery is not expected in external economies, and therefore global problems will continue to exert pressure on external demand (Chart 2.1.8).

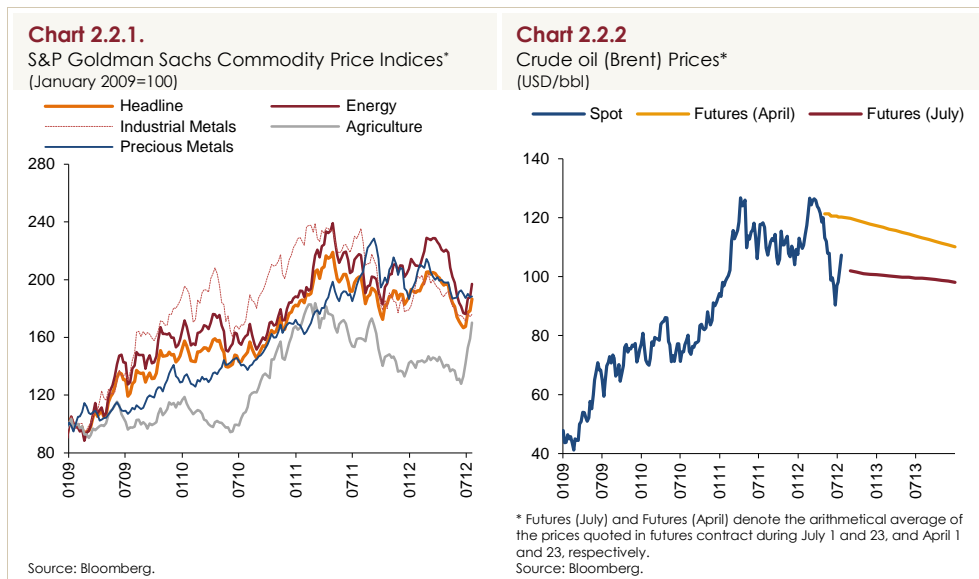
**Table 2.1.1.**  
Growth Forecasts for end-2012  
(Annual Percent Change)

	April	July
World	2.6	2.5
<i>Advanced Economies</i>		
USA	2.3	2.1
Euro Area	-0.4	-0.5
Germany	0.7	0.9
France	0.3	0.2
Italy	-1.5	-2.0
Spain	-1.6	-1.7
Greece	-5.4	-6.8
Japan	2.0	2.5
UK	0.7	0.1
<i>Emerging Economies</i>		
Asia-Pacific	5.0	4.9
China	8.4	8.1
India	7.2	6.3
Latin America	3.7	3.3
Brazil	3.3	1.9
Eastern Europe	2.8	2.7

Source: Consensus Forecasts.

## 2.2. Commodity Prices

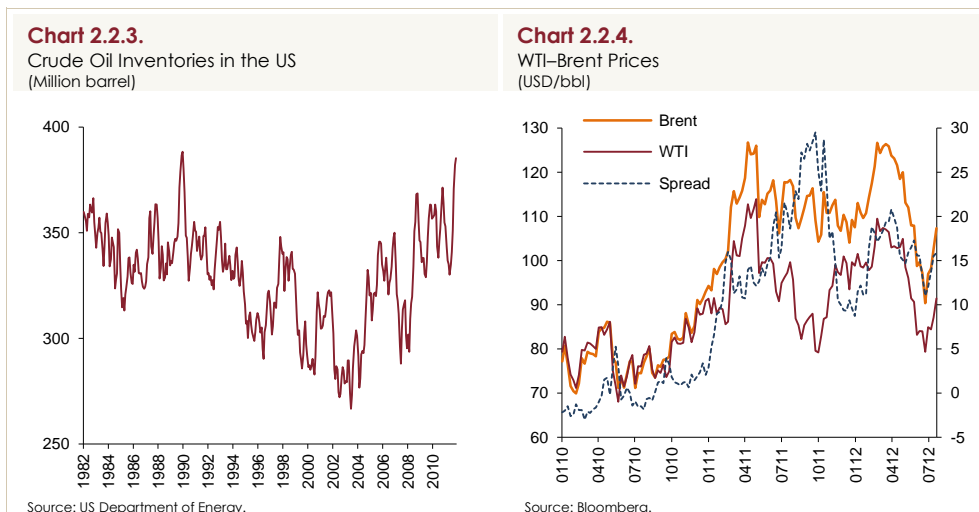
In the second quarter of 2012, the headline commodity index hit the 6-quarter low, but trended upwards again mainly due to supply-side problems. Energy prices decreased amid adverse global growth outlook, and increased as of early July owing to the geopolitical problems in the Middle East. Having halted owing to the supply-side problems led by the drought in the US that were manifested as of midst June, declining agricultural product prices were replaced by sharp increases. Concerns over global economic activity dominated industrial metal prices, thus causing further modest decline. On the other hand, upon the release of unfavorable data regarding the Euro Area, China and especially the US, a new round of monetary expansion has been considered in these economies, thus determining the course of precious metal prices (Charts 2.2.1 and 2.2.2).



In this period, demand-side developments have played a great role in the downward movement of oil prices. Unfavorable US employment figures, the poor course of industrial production in China that has intense commodity use and the aggravating concerns over the Italian and Spanish economies in the Euro Area following Greece affected the global growth outlook adversely, and oil prices hit the 18-months low at the end of the second quarter. Although a favorable outlook emerged following the meeting of the Euro Area leaders in late June besides the decision for a rate cut by the ECB, persisting concerns over the region exert a downward pressure on oil prices.

On the other hand, the downward trend of oil prices was also driven by supply-side developments. Despite the deterioration in global growth outlook, Saudi Arabia sustained crude oil production at record levels, which stood out as a positive development for the crude oil market. Moreover, due to the rise in crude oil production with unconventional methods in the US and Canada, crude oil stocks in the US have hit the top level since 1990 (Chart 2.2.3).

Following the unfruitful negotiations with Iran to overcome the nuclear crisis, the decision to lay embargo taken by Europe in January was enforced on July 1, 2012. With this decision, oil exports from Iran not only to Europe but also to other countries are deprived of insurance services in crude oil trade. Against this background, recurring conflict between Iran and the US over the Strait of Hormuz, which is of great importance for seaborne crude oil trade shipment, has elevated political risks in the region. Growing political tension in Syria and deepening domestic problems in Iraq are among other geopolitical developments leading to a rise in oil prices. Furthermore, the suspension of oil production in Norway, which is the world's fifth largest crude oil exporter, following the disagreement among employees and employer unions in the crude oil industry pose an upside risk on oil prices in the short term. Although the intervention by the government to prevent a cutback in production was considered to be a positive development, the problem is yet to be solved, which stands as a risk factor especially on Brent crude oil prices (Chart 2.2.4).



Following the Latin America and Russia, supply-side problems in agricultural problems have become more noticeable due to the recent drought in the US. Cereal production in the US, which is expected to record high

levels due to the rise in cultivated areas, is highly likely to remain far below the projected level due to the excessively hot weather conditions in the country, resulting in an upside risk on agricultural product prices (Table 2.2.1).

As a result, languish global growth alleviated the pressure on commodity prices, while supply-side problems regarding crude oil and agricultural products stand out as a risk factor. Moreover, gradually aggravating geopolitical problems in the Middle East keep upside risks on oil prices brisk in the short and medium term through the supply channel.

**Table 2.2.1.**

Production, Consumption and Inventory Forecasts for Agricultural Commodities\*

	2010/2011	2011/2012	2012/2013	
			May Forecasts**	July Forecasts
<b>WHEAT(million tons)</b>				
Initial Inventory	200.6	197.2	197.0	197.2
Production	651.1	694.7	677.6	665.3
Consumption	654.5	694.7	686.5	680.1
Period-end Inventory	197.2	197.2	188.1	182.4
<b>CORN (million tons)</b>				
Initial Inventory	144.1	124.3	127.6	129.4
Production	829.1	873.7	945.8	905.2
Consumption	848.9	868.6	921.0	900.5
Period-end Inventory	124.3	129.4	152.3	134.1
<b>COTTON (million bales)</b>				
Initial Inventory	47.8	49.5	66.9	66.7
Production	116.4	122.7	16.7	113.8
Consumption	114.7	106.6	110.0	109.0
Period-end Inventory	49.5	66.7	73.8	72.4

\* The figures may be inconsistent due to discrepancies among countries in terms of exports and imports data, as well as the loss and damage in the marketing network.

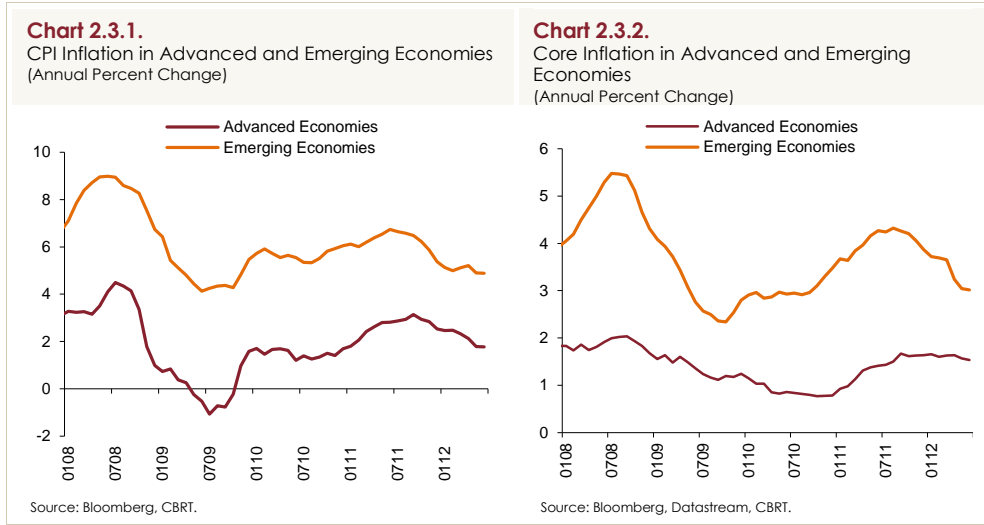
\*\* Preliminary forecasts for 2012/2013 were released in May.

Source: US Department of Agriculture.

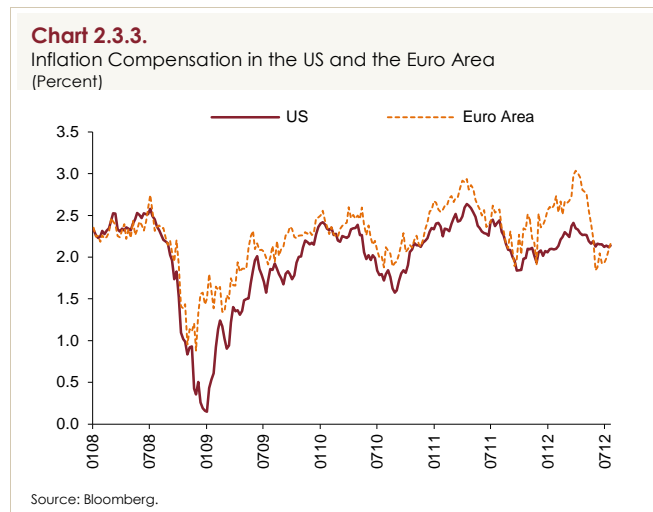
### 2.3. Global Inflation

In the second quarter of 2012, annual consumer inflation rates continued to trend downwards both in advanced and emerging economies (Chart 2.3.1). The fall in commodity prices in this period was the largest contributor to disinflation. Meanwhile, annual core inflation rates fell sharply in emerging economies, but remained flat in advanced ones (Chart 2.3.2).





In the second quarter of 2012, adverse economic developments in the Euro Area, especially the financing need of the banking sector in Spain, were influential in the aggravation of concerns over the growth outlook of the region and the plunge in inflation compensation (Chart 2.3.3). In the same period, the fall in inflation compensation for the US remained limited.



Global inflation forecasts for 2012 and 2013 edged down compared to the previous reporting period (Table 2.3.1). Nevertheless, hikes in agricultural product prices as of June are considered to be an upside risk factor on global inflation rates in the forthcoming period. Additionally, the latest decisions taken by the ECB to bolster Euro Area economy may raise inflation rates across the region. Furthermore, the probable pause of the recent downtrend in energy prices may fuel the said upside risks.

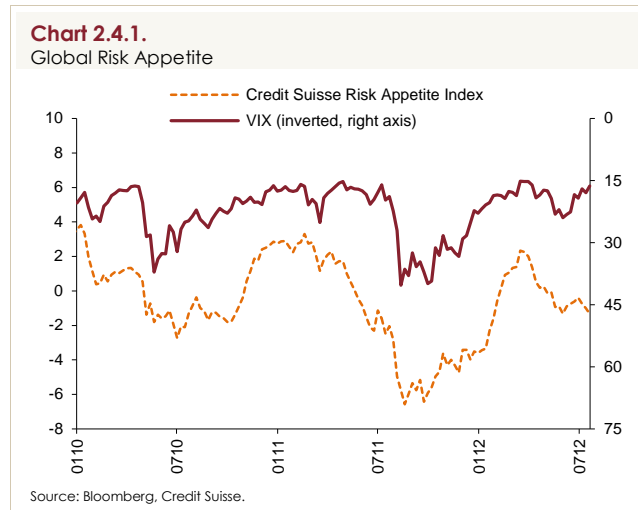
**Table 2.3.1.**  
Inflation Forecasts for end-2012  
(Annual Percent Change)

	2012		2013	
	April	July	April	July
World	3.0	2.9	2.9	2.8
<i>Advanced Economies</i>				
USA	2.3	2.0	2.1	1.9
Euro Area	2.3	2.3	1.7	1.7
Germany	2.0	2.0	1.8	1.8
France	2.1	2.0	1.8	1.6
Italy	3.0	3.0	2.4	2.0
Spain	1.8	1.8	1.6	1.5
Greece	0.9	0.6	0.5	1.9
Japan	-0.2	0.1	0.0	0.0
UK	2.8	2.7	2.0	2.0
<i>Emerging Economies</i>				
Asia-Pacific	3.8	3.8	4.0	4.0
China	3.3	3.0	3.6	3.5
India*	7.0	8.4	6.6	7.6
Latin America	6.0	5.9	6.3	6.4
Brazil	5.1	4.9	5.4	5.4
Eastern Europe	6.4	6.4	5.3	5.3

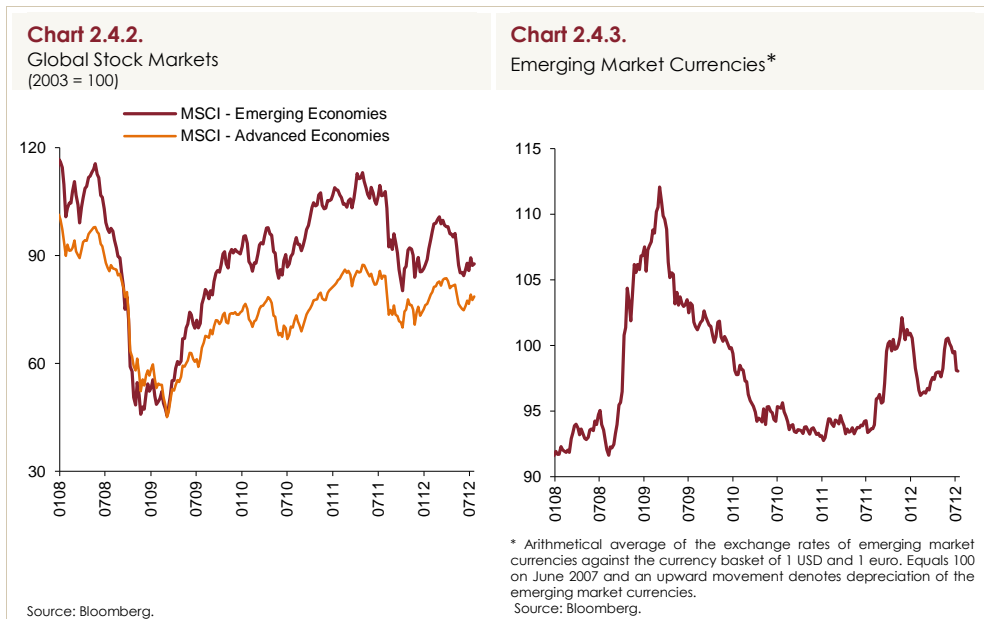
\* As of the fiscal year starting in April.  
Source: Consensus Forecasts.

## 2.4. Financial Conditions and Risk Indicators

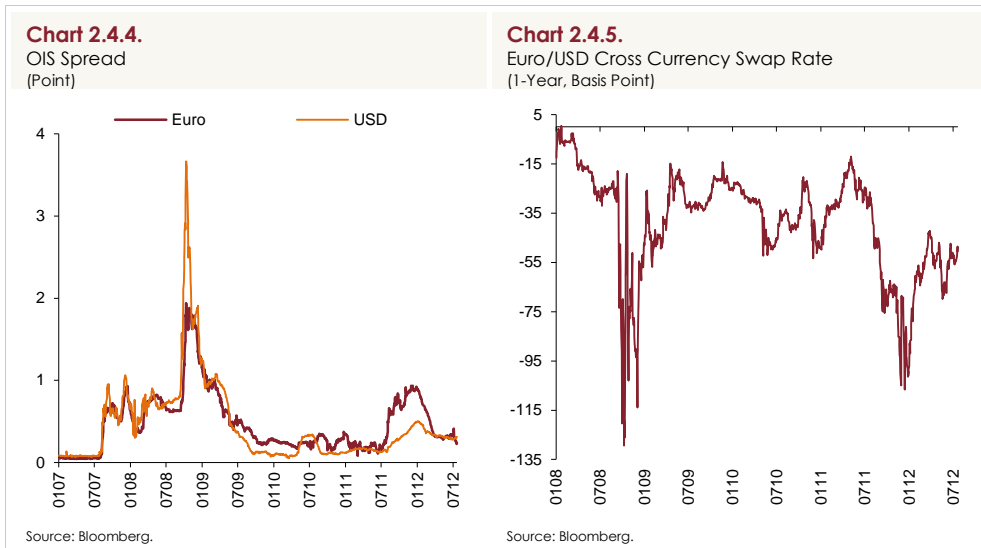
In the last quarter, intensifying concerns over Spain due to the problems in the banking sector and the political unrest in Greece were among the primary factors that kept the Euro Area debt crisis alive. Besides the problems in the Euro Area, the data for economic activity undershot the forecasts especially in the Chinese and US economies, resulting in an attenuated global risk appetite in April and May. Ensuring external support to re-capitalize the Spanish banking sector and welcoming of the election results in Greece have prevented deterioration in risk appetite since June. Despite the decisions for aid to the Spanish banking sector and resorting to the banking union in the Euro Area in the EU summit on June 28–29, risk appetite did not record a remarkable recovery as there are uncertainties yet to be solved regarding practice and scope. Yields have climbed to levels that can trigger concerns over debt sustainability in Spain since mid-July and perceptions strengthened that Greece has challenges in implementing the current stability program, which continued to inhibit the risk appetite (Chart 2.4.1).



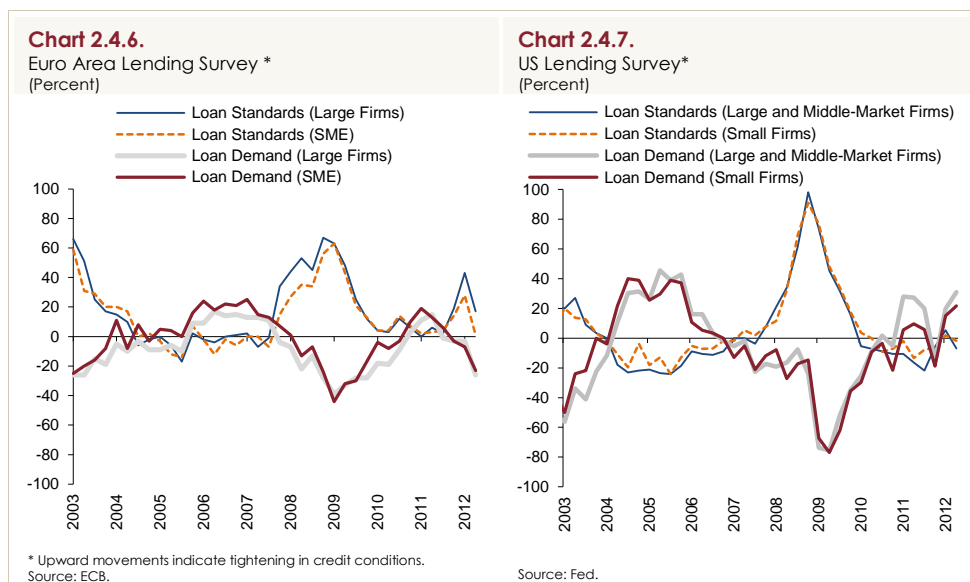
In line with the developments in the global risk appetite, a partial recovery was seen in stocks market subsequent to notable losses of value. Similarly, exchange rates of emerging economies which experienced devaluations partially compensated for their losses thanks to the recovery in the risk appetite (Charts 2.4.2 and 2.4.3).



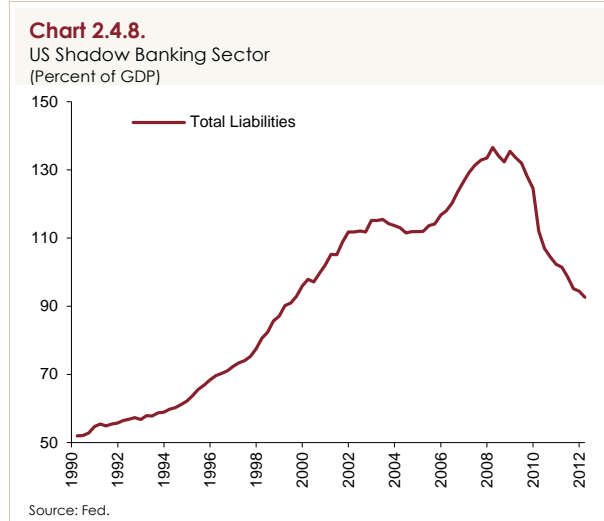
As for the money markets, OIS spread remained broadly unchanged in the last quarter. Notwithstanding the loose policies of the central banks, the counterparty risk remains brisk in the sector (Chart 2.4.4). Owing to the problems driven by the Spanish banking sector, the euro/USD cross currency swap rates remained high against the euro in the last quarter (Chart 2.4.5).



The Euro Area debt crisis still affects credit markets adversely. The last loan tendency survey released by the ECB suggests that despite the significant fall in the tightening of lending conditions in early 2012, the credit demand declined more remarkably (Chart 2.4.6). On the other hand, the latest loan tendency survey released by the Fed points that the US banking sector slightly eased lending conditions; and the credit demand improved following the fall in the last quarter of 2011 and reached the highest levels following the global financial crisis (Chart 2.4.7).



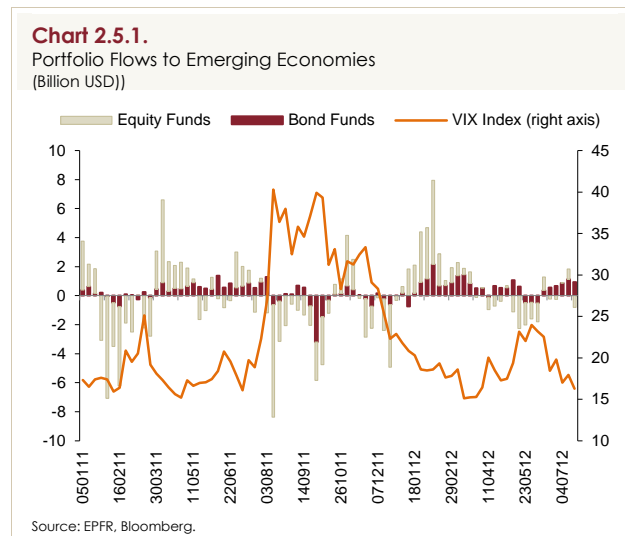
Having expanded enormously in the pre-crisis period, and thus being criticized for generating asset bubbles primarily in the real estate sector, weakening in activities in the shadow banking sector persists (Chart 2.4.8).



Experiences in global markets in the last quarter signal that fragilities are still vibrant and developments in the Euro Area debt crisis will continue to set the agenda items. Whether the disagreements on the implementation of the decisions taken in the summit of June 28–29 can be removed or not is of great importance in this context. Those in the Spanish banking sector being the leading ones, developments to affect borrowing costs of Italy and Spain are expected to remain as the determinant factors in global markets.

## 2.5. Capital Flows

The deteriorating trend in the global risk appetite in the second quarter of 2012 brought about capital outflows from emerging economies, which drew notable amounts of portfolio investments in the first quarter (Chart 2.5.1). Emerging Asian countries experienced the highest amount of fund outflows, while the relatively best performers in portfolio investments were Latin American countries. As for the emerging European countries, outflows from equity markets were largely compensated by inflows towards bond funds markets.



On a quarterly basis, funding outflows were mostly seen in stock markets; however, these outflows remained limited to less than 40 percent of the equity fund flows to emerging economies in the first quarter of the year (Table 2.5.1). Meanwhile, investments in bond funds continued, albeit at a slower pace.

**Table 2.5.1.**  
Portfolio Flows to Emerging Economies\*  
(Billion USD)

	Total	Equity Funds	Bond Funds
2012Q1	32.9	22.7	10.2
2012Q2	-4.7	-8.7	4.0

Source: EPFR

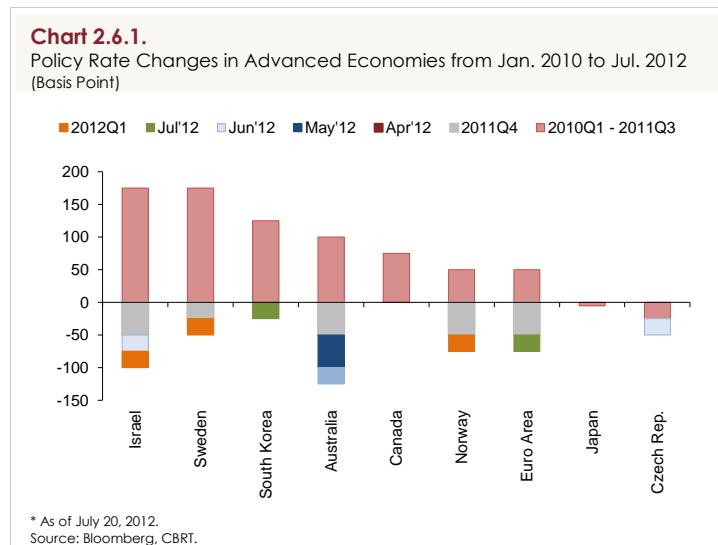
Uncertainties regarding the Euro Area in the forthcoming period are considered to be the leading risk factor that can restrict capital inflows towards emerging economies by affecting the risk appetite of investors adversely.

## 2.6. Global Monetary Policy Developments

Monetary policy decisions were largely shaped by the global growth outlook in the second quarter of 2012. Accordingly, monetary policy was eased remarkably both in advanced and emerging economies parallel to the global growth outlook that displays a rather negative outlook compared to the previous quarter.

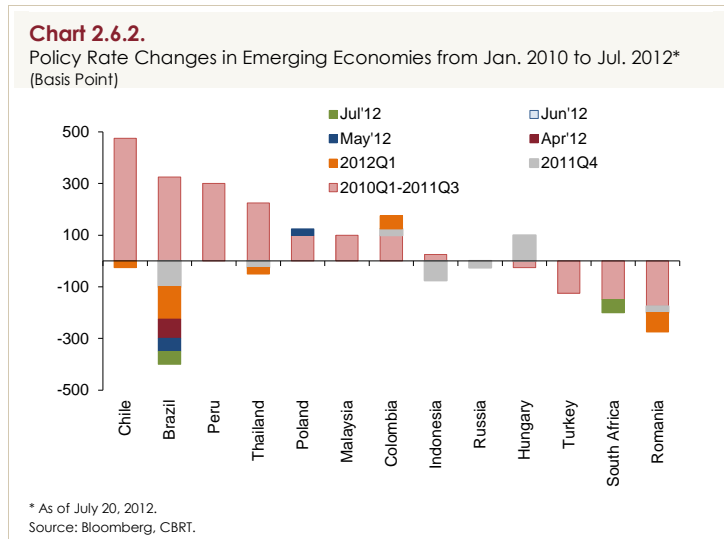
Some advanced economies opted for easing in monetary policies by reducing policy rates in the second quarter. Despite the gradual expansion of the package of measures to solve the problems in the Euro Area and more

common use of ECB funds, Euro Area growth forecasts deteriorated. Accordingly, as expected, the ECB cut the policy rate by 25 basis points in July. Meanwhile, the policy-rate-cut of 25 basis points by the Bank of Korea in July surprised the market. The Czech National Bank, the Reserve Bank of Australia and the Bank of Israel also opted for monetary easing by reducing policy rates in the second quarter (Chart 2.6.1).

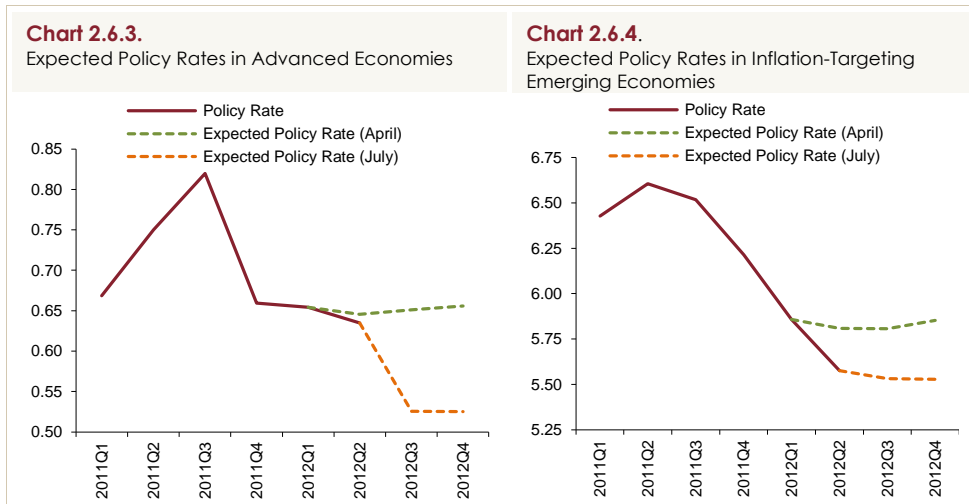


In the second quarter, the Fed and the Bank of England eased their monetary policy stances through the use of quantitative easing tools. For example, following the meeting on June 19 – 20, the Fed announced that it extended the implementation of Operation Twist until the year-end, which was expected to end in early July. Pointing to both medium-term employment forecasts and risks in global financial markets to account for this extension, the Fed signaled for another monetary easing should growth undershoot their forecasts and inflation lags behind their medium-term forecasts. The Bank of England announced in its July meeting that the asset purchasing program was raised by GBP 50 billion.

The second quarter saw reductions in policy rates also in some emerging economies. Banco do Brasil maintained its rate-cut trend in the previous quarter as well. The Reserve Bank of South Africa opted for rate cuts twice as of late 2010, which totaled 50 basis points. Meanwhile, the cuts implemented by the Bank of China and Bank of India by 56 and 50 basis points, respectively point to their concerns over the falling GDP growth rates (Chart 2.6.2).



Due to strong perceptions that the adverse impact of the Euro Area crisis on the global growth outlook will be heavier than expected, in the second quarter of the year, global monetary policy was eased far above the projections presented in the April Inflation Report. Additionally, in the previous reporting period, policy rates were expected to follow a flat course for a while and trend upwards at the year-end both in advanced and emerging economies. The Report also suggested that the downward trend in rates would also continue in the second quarter of the year. When compared to emerging economies, year-end rate expectations in advanced economies were subject to a more sizeable downward revision than envisaged in the April Inflation Report. This is mostly attributed to the strong perception that the ECB will introduce another rate reduction (Charts 2.6.3 and 2.6.4).





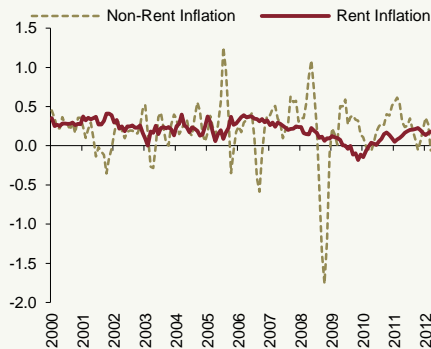
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2.1

## US Housing Market Dynamics

Falling prices in the US housing market in the post-2007 period increased the default rates in housing loans and decreased new housing constructions. Due to rising housing prices, the number of housing constructions will increase and will ease the process of exit from crisis. Accordingly, by using interest rates, this Box analyzes the US housing market in terms of the relative course of rent and mortgage in the short and long term, and also discusses the possible effects of the high levels of housing stock.

Since 2007, the onset of the crisis, rent inflation remained lower than non-rent inflation rate in the US economy. Given the long-term relative price movements, rent inflation is supposed to be higher than non-rent inflation in a robust housing market (Arslan and Kanik, 2012). Rent inflation has recently approached its long-term level, which is perceived as the first signal that the US housing market is getting normalized (Chart 1).

**Chart 1. US Inflation Rates**  
(Seasonally Adjusted Rent and Non-Rent CPI-Quarterly Moving Average)



Source: Bureau of Labor Statistics.

**Chart 2. Case-Shiller and Gordon Housing Price Indices**  
(Jan. 2000=100)



Source: S&P., Arslan and Kanik (2012).

In the housing market, mortgage rates are significant besides rent. As interest rates affect cost of loans, they also affect the demand for loans, and so the housing demand. Rates on mortgage with 30-year maturity, which is mostly preferred by consumers, have exhibited a downtrend from 1986 to this date, and went down to 6 percent as a result of the accommodative monetary policy implemented by the Fed in 2001. Thanks to the considerably low interest rate and asset-backed mortgage policies implemented by the Fed to alleviate the effects of the economic crisis since 2007, mortgage rates with 30-year maturity went down to 5 percent, and even further down to 4 percent in recent months.<sup>1</sup> Rates on housing loans, which hover around historically low levels, stand out as a factor to bolster recovery in the housing market.

<sup>1</sup> Housing loan rates with different maturities follow a similar course.

Analysis of the effects of rent and interest rates is also possible by using the Gordon growth model, which is a type of discounted cash flows model. Gordon pricing formula is depicted in the equation below:

$$P = \frac{K}{r - g}$$

Where  $P$  is the Gordon price,  $K$  is the housing rents in the subsequent period,  $g$  is the growth rate of housing rents (fixed rent inflation),  $r$  is the housing loan rate. Under the assumption that the housing is financed through loan, the equation estimates that Gordon prices will go up in line with the decreasing interest rates and increasing rent inflation.

Gordon Housing Price Index (HPI) obtained from the Gordon pricing formula is illustrated in Chart 2 together with the Case-Shiller HPI. Gordon HPI exhibits a similar trend to the real estate market prices in the long term. Nonetheless, Gordon HPI has recently diverged from the Case-Shiller HPI to a remarkable extent and in April 2012, the ratio of Gordon HPI to Case-Shiller HPI rose to 2.36, which leads one to think that Case-Shiller HPI is considerably lower than Gordon HPI and has a potential to increase.

In sum, these analyses point that interest rates and rent dynamics will contribute to the recovery in the US housing market in the forthcoming period. Nevertheless, there are still notable downside risks pending on the recovery. In fact, the increase in the number of housing stock ready to be sold in the post-crisis period, the limited number of consumers that could avail themselves of the low interest rates and the likelihood of an aggravated Euro Area debt crisis are highlighted as the downside risks in terms of the forecasts in the analysis. On the other hand, the Gordon pricing formula does not include significant factors like risk and expectation, which is considered to be another important factor to affect forecasts.

#### REFERENCES

Arslan, Y. and B. Kanık, 2012, ABD Kira Enflasyonu ve Konut Fiyat Dinamikleri (in Turkish), CBRT Economic Notes No.12/03.