2. International Economic Developments

After the first quarter's upturn, global economic growth gained further momentum in the second quarter of 2017. With advanced economies being on a much firmer footing, the global trade volume has started to increase recently. Amid buoyant financial markets, emerging economies continued to attract massive capital inflows. Indicators for the third quarter suggest that the brighter prospects for advanced economies have been particularly more pronounced for the Euro Area and the US. On the other hand, the growth outlook has been more diverse for emerging economies. The second quarter's brisk global growth is expected to continue into the third quarter as suggested by Consensus Forecasts and IMF forecasts in October, which remained almost unchanged from the previous reporting period.

Expectations about the Fed's plans for rate hike and balance sheet unwind have been a key concern for financial markets also in the third quarter. The Fed's determination to normalize its policy following the better-than-expected US growth and inflation data in September sent bond yields and market volatility soaring in advanced economies. Moreover, persistently low inflation rates and ongoing prospects of a relatively moderate policy normalization across the globe caused risk appetite to remain robust. This spurred further portfolio flows to emerging economies despite hiccups amid geopolitical tensions.

Notwithstanding the benign outlook for the global economy and financial markets, risks are mostly on the downside for the upcoming period. The path to monetary policy normalization in advanced economies is a major risk over the forthcoming period. The Fed started to downsize its balance sheet in October 2017. Being long awaited, this operation had no negative spillovers, but it still entails some uncertainty with its effects yet to be fully seen (Box 2.1). In case the pace and size of the policy normalization of the Fed and other major central banks exceed expectations, the high risk appetite and low volatility cycle in financial markets may reverse. Moreover, the fact that the size of private sector debt has reached high levels in some emerging economies, with China in the lead, might amplify the impact of the risks to financial markets.

Uncertainties persist regarding global economic policies. The lack of a clear-cut Brexit strategy in the UK and the tendency towards more inward-oriented policies in European economies are among key factors adding to high uncertainty. The geopolitical turmoil in Asia and the Middle East stands out as another risk factor to financial markets and global growth. Therefore, macroeconomic policies should be used jointly and effectively and be accompanied by structural reforms and proper trade policies to maintain the buoyant global growth and reduce fragilities.

2.1. Global Growth

Global economic growth gained further momentum in the second quarter of 2017, and the pace of quarterly growth was up in both advanced and emerging economies (Chart 2.1.1). In this period, the growth outlook for Euro Area, the US, Japan and Canada was favorable, while the UK's growth has decelerated. As for emerging economies, annual growth returned to positive in Brazil and picked up sharply from the previous quarter in Russia. Latin America and Eastern Europe experienced stronger growth in the second quarter, while Asia registered a slight deceleration with China and India posting slower year-on-year growth (Chart 2.1.2).

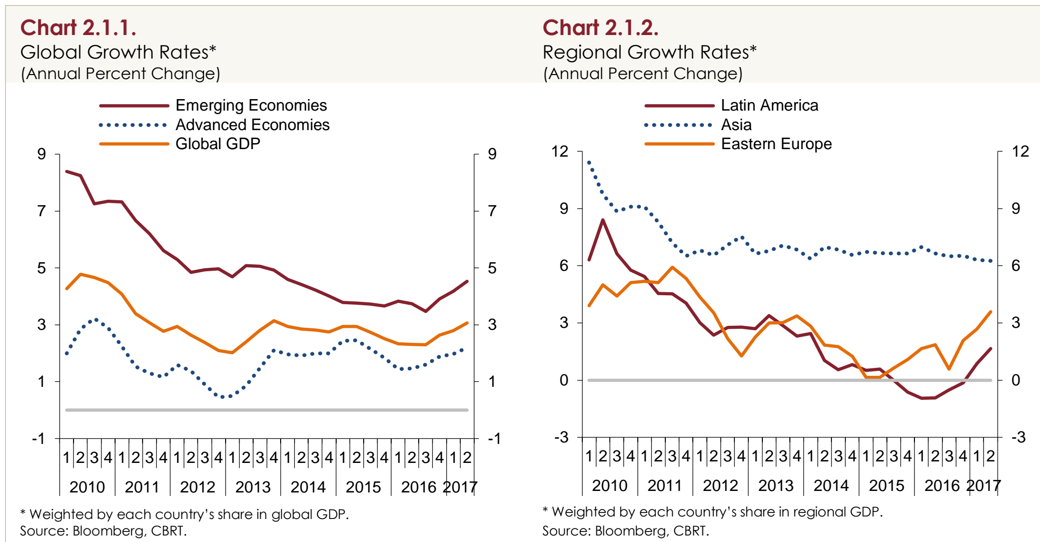


Chart 2.1.1.
Global Growth Rates*
(Annual Percent Change)

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

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

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

PMI data for global economic activity remained on the rise for both manufacturing and services in the third quarter (Chart 2.1.3). This was largely driven by the ongoing recovery in advanced economies, particularly in the Euro Area. In fact, the manufacturing PMI data for the Euro Area hint at stronger growth for the third quarter. The US economy grew by an annualized 3 percent in this period, despite the temporary slowdown caused by the two hurricanes that hit the US in late August and early September. Meanwhile, the third-quarter manufacturing PMI data for Japan fell below its second-quarter reading, signaling a quarter-on-quarter decline in economic growth (Chart 2.1.4).

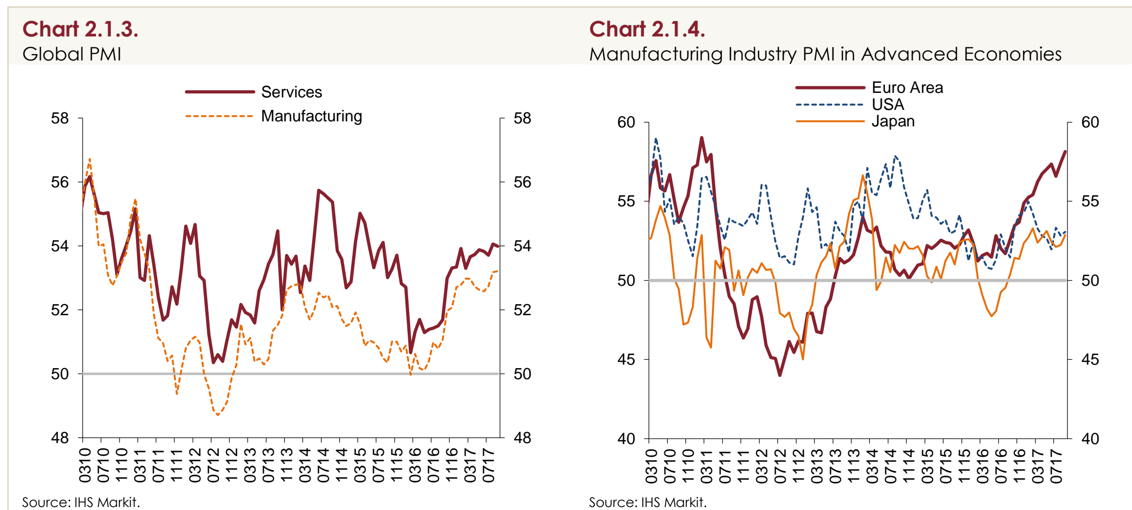


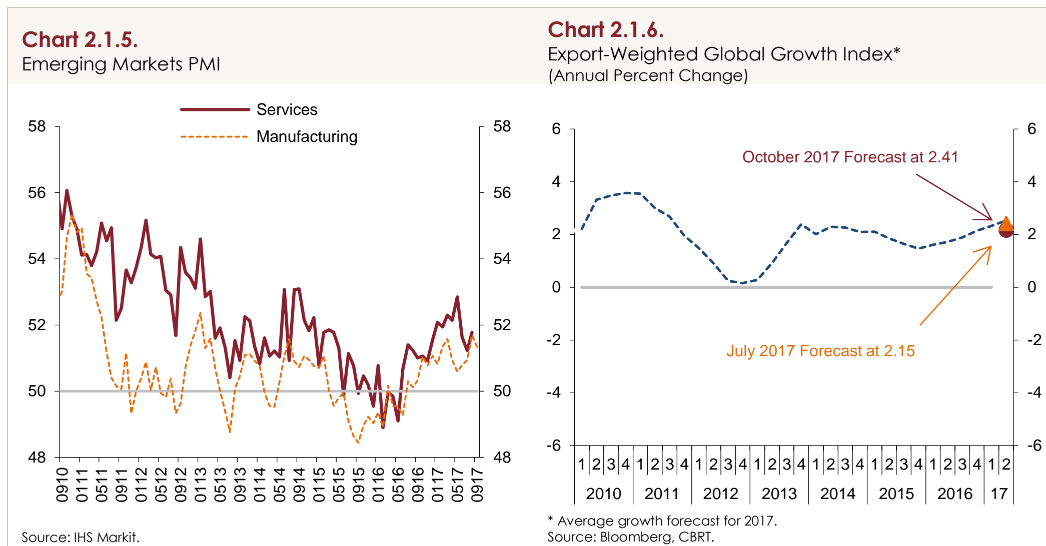
Chart 2.1.3.
Global PMI

Source: IHS Markit.

Chart 2.1.4.
Manufacturing Industry PMI in Advanced Economies

Source: IHS Markit.

As for emerging economies, the PMI data were up for manufacturing but down for services in quarterly terms in the third quarter of 2017 (Chart 2.1.5). China, the major driver of growth in emerging economies, saw a quarter-on-quarter decline, registering 6.8 percent annual growth in this period. The third quarter's manufacturing PMI data for India were markedly down from the second quarter, indicating a persistent slowdown, which, however, is expected to be partly offset by strong capital inflows. PMI data for Eastern Europe were on the downside in the third quarter, adding to concerns of a quarterly slowdown across these economies. On the other hand, Latin American manufacturing PMI data seem promising, signaling a full recovery from the recession.



In sum, the global economy is expected to grow further in the third quarter at a similar pace to the second quarter. This outlook is backed by the minor increase of 0.1 point in October Consensus Forecasts for global growth in 2017 over the inter-reporting period. Likewise, the October issue of the IMF's World Economic Outlook kept the global growth forecast for 2017 broadly unchanged from the April issue, raising it by a mere 0.1 point to 3.6 percent.

According to October Consensus Forecasts, the end-2017 global growth forecast is revised upwards for the Euro Area and Japan, but left unchanged for the US and the UK compared to the previous reporting period. The growth forecast for emerging economies, on the other hand, is kept constant for Asia-Pacific, but revised upwards for Latin America and Eastern Europe (Table 2.1.1). Thus, the growth rate of the export-weighted global growth index revised by October forecasts posted an increase from the July Inflation Report (Chart 2.1.6). In other words, the external demand outlook for Turkey seems brighter in 2017 than the previous year.

In line with the upbeat global economy, the global trade volume rose sharply in the first half of the year, by 4.2 percent year-on-year as suggested by WTO data. This stemmed mainly from the base effect due to the weak global trade in 2016 as well as the import demand stimulated by the brisk pace of economic growth, particularly in the US and China. Moreover, massive portfolio flows toward emerging economies act a source for the financing of the external trade deficit in these economies, and thus, have a positive impact on global trade. WTO forecasts indicate that global trade will expand rapidly throughout the rest of 2017 and 2018, but lose some momentum in the next year due to base effects.

Table 2.1.1.
Growth Forecasts for end-2017 and end-2018
(Average Annual Percent Change)

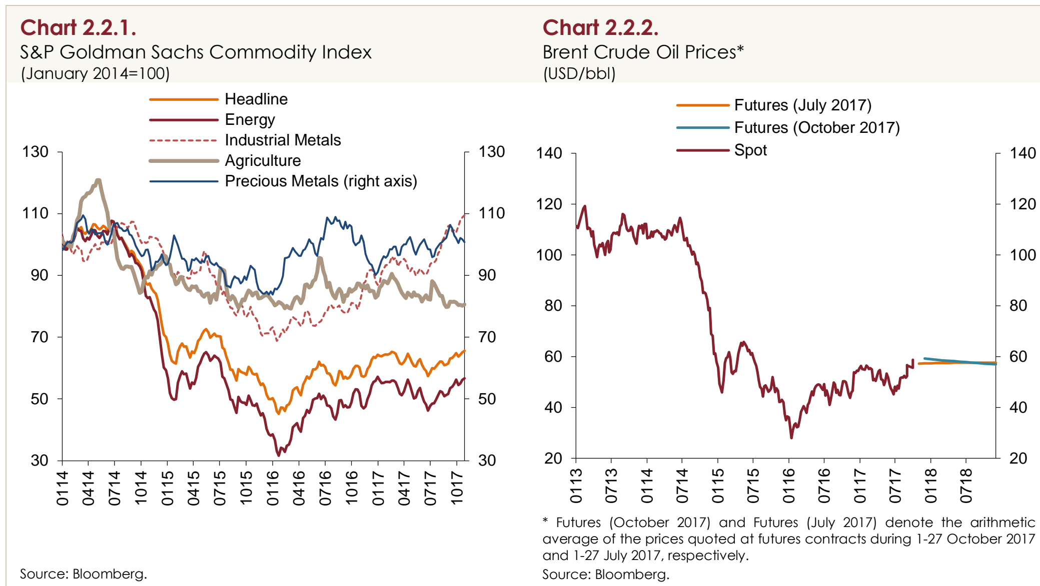
	July		October	
	2017	2018	2017	2018
Global	3.0	3.0	3.1	3.1
Advanced Economies				
USA	2.2	2.3	2.2	2.4
Euro Area	1.9	1.7	2.2	1.8
Germany	1.7	1.7	2.0	1.9
France	1.5	1.6	1.7	1.7
Italy	1.2	1.0	1.4	1.2
Spain	3.0	2.5	3.1	2.6
Japan	1.4	1.1	1.6	1.2
UK	1.6	1.4	1.6	1.4
Emerging Economies				
Asia-Pacific	5.8	5.6	5.8	5.7
China	6.6	6.3	6.8	6.4
India	7.3	7.6	6.8	7.5
Latin America	1.6	2.4	1.7	2.6
Brazil	0.4	2.1	0.8	2.4
Eastern Europe	2.8	2.7	3.3	2.9
Russia	1.4	1.7	1.7	1.8

Source: Consensus Forecasts.

2.2. Commodity Prices and Global Inflation

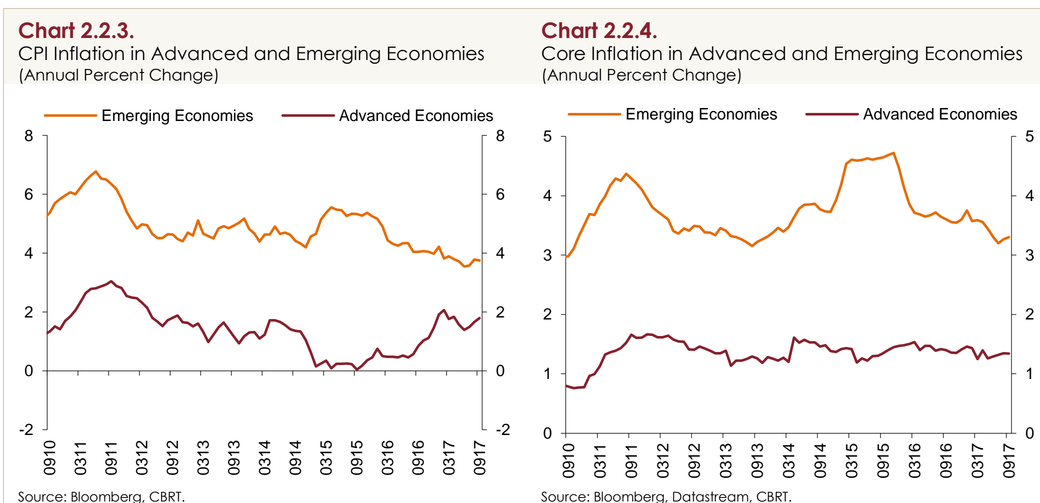
After decelerating in the second quarter of 2017, the headline commodity index went up by an average of 1.2 percent quarter-on-quarter in the third quarter due to the rising industrial metal index. In this period, price indices for industrial metals, energy and precious metals were up 10, 1.3 and 1.4 percent quarter-on-quarter on average, respectively, whereas the price index for agriculture was down on average by 0.2 percent (Chart 2.2.1).

The improved global economic outlook spurred the demand for industrial metals. In addition, the alarming air pollution in China prompted the government to put a cap on steel and aluminum production, which increased China's import demand for these metals. Put differently, the third-quarter's rising price index for industrial metals is largely a result of the re-balancing in supply and demand fueled by China's supply cut and the demand-stimulating global economic recovery. In this period, the escalating tension between the US and North Korea as well as the US economic policy uncertainty drove prices of gold, and thus, other precious metals higher. The energy price index, on the other hand, increased due to crude oil prices, which soared on the back of the buoyant economic growth across the globe, the OPEC output cut decision and the hurricane-stricken US oil production (Chart 2.2.1).



Notwithstanding the recent uptrend in energy prices, risks for the upcoming period are on the downside. Production and inventory levels are expected to remain on the rise amid falling output costs across non-OPEC crude oil producers, particularly the US, Canada and Brazil. In fact, the number of oil rigs in the US has doubled year-on-year as of September 2017. The OPEC's decision to extend output cuts after seeing a lower chance of oil market re-balancing suggests that oil prices will rise only modestly in the upcoming period. Moreover, global demand growth is expected to remain robust, albeit at a slowing pace. Thus, as signaled by Brent crude oil futures contracts, Brent crude oil prices will be trading at 56 USD by the end of 2018 (Chart 2.2.2).

Against this backdrop, inflation rates were slightly up in both advanced and emerging economies in the inter-reporting period (Chart 2.2.3). Likewise, core inflation rates registered a moderate increase in both country groups (Chart 2.2.4). Inflation forecasts for end-2017 and end-2018 remained basically unchanged for advanced economies and emerging economies, except Latin America, compared to the previous reporting period (Table 2.2.1).



The fuel price upsurge following the twin hurricanes that hit the US brought inflation up, but is unlikely to have a permanent impact on inflation over the medium term. Meanwhile, the sluggish nominal wage growth in the face of falling US unemployment rates and inflation expectations anchored around the 2-percent target hint at a moderate inflation outlook. In the Euro Area, consumer inflation excluding food and energy is expected to remain modest until the end of 2019, while headline inflation will remain below the 2-percent target. In Japan, there is a slim chance that inflation will rise closer to the 2-percent target in the medium term. On the other hand, the inflationary pressure from the weakening pound sterling caused by the opaque future of UK-EU relations led to higher-than-expected UK inflation. Although households' inflation expectations remain largely consistent with the target and the nominal wage growth has evolved broadly as projected, the UK inflation rate is expected to hover above the 2-percent target over the following three years.

Major factors to pose upside risks to global inflation over the upcoming period are possible depreciations across currencies of emerging economies due to a faster-than-expected policy normalization by the Fed and the ECB as well as possible spikes in commodity prices, particularly for oil, amid geopolitical tensions.

Table 2.2.1.
Inflation Forecasts for end-2017 and end-2018
(Average Annual Percent Change)

	July		October	
	2017	2018	2017	2018
Global	3.0	2.8	3.0	3.0
Advanced Economies				
USA	2.1	2.1	2.0	2.0
Euro Area	1.5	1.4	1.5	1.3
Germany	1.7	1.6	1.7	1.6
France	1.1	1.2	1.0	1.1
Italy	1.4	1.2	1.3	1.2
Spain	2.0	1.4	1.9	1.3
Greece*	1.1	1.0	1.1	1.0
UK	2.7	2.7	2.7	2.6
Japan	0.5	0.8	0.4	0.7
Emerging Economies				
Asia-Pacific	1.9	2.2	1.7	2.1
China	1.8	2.1	1.6	2.1
India**	3.8	4.6	3.5	4.6
Latin America	12.4	10.8	15.9	18.4
Brazil*	3.4	4.2	3.1	4.0
Eastern Europe	5.3	4.7	5.1	4.8
Russia*	4.1	4.2	3.6	4.1

* Annual percent change.
** Based on fiscal year.
Source: Consensus Forecasts.

2.3. Global Monetary Policy

The Fed left its benchmark interest rate unchanged in the third quarter. The easing inflationary pressure led by modest headline and core inflation indicators and the slowdown in the US economic rally due in part to the devastating twin hurricanes of late August have dimmed prospects for three Fed rate hikes each in 2017 and 2018. Meanwhile, with the September FOMC meeting statement, the Fed conveyed the message that it would stick to the announced path of normalization, thereby keeping market expectations in check. The median federal funds rate projected by FOMC members for 2017 and 2018 was unchanged, while the long-awaited balance sheet reduction was announced to start in October. Being widely anticipated, this downsizing program yielded no negative spillovers on financial markets (Chart 2.3.1).

At its October meeting, the ECB decided to cut bond purchases from 60 to 30 billion EUR starting from January 2018. However, in the ensuing meeting statement, the bank reiterated that the benchmark interest rate will not be raised until well after the termination of the bond purchasing program. Accordingly, monetary policy will remain accommodative in the Euro Area and Japan over the upcoming period. Across other advanced economies, monetary policy continued to be tightened as expected, with the Central Bank of Canada and Czech National Bank hiking interest rates in the third quarter (Chart 2.3.1). Overall, policy rate expectations and policy messages still indicate a cautious and slow monetary policy normalization for advanced economies.

On the emerging economies front, the divergence in monetary policies continued into the third quarter of 2017. In this period, the central banks of Brazil, Russia and Colombia continued with monetary easing, while the Central Reserve Bank of Peru and Bank Indonesia lowered their policy rates. Meanwhile, monetary policy is expected to be somewhat tighter in Eastern Europe through 2018 (Chart 2.3.2). Thus, despite a slight fluctuation, the global monetary policy outlook remains virtually unchanged from the previous reporting period as of October.

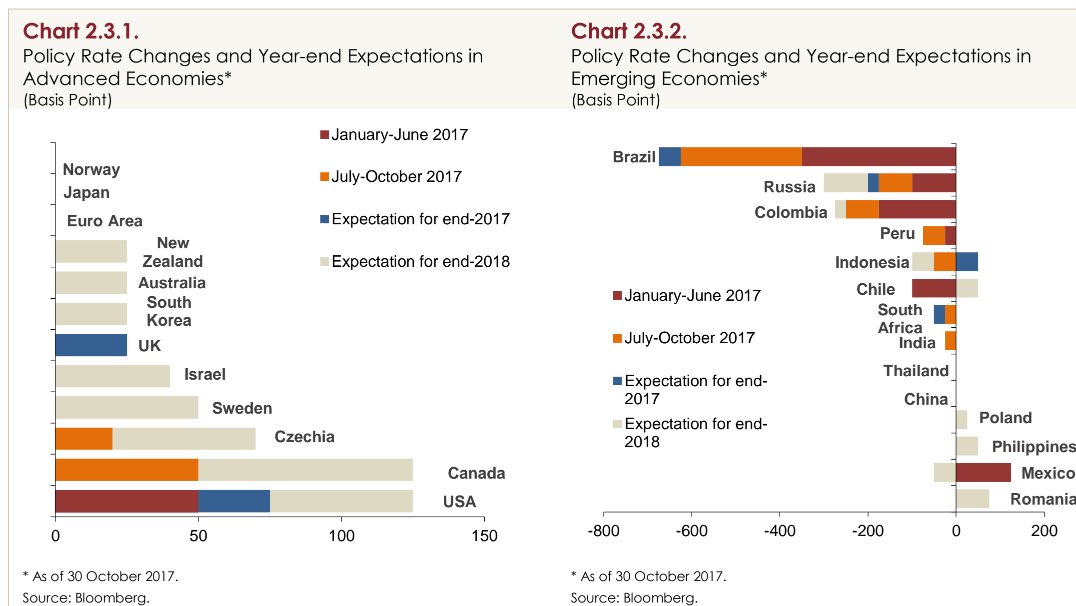


Chart 2.3.1.
Policy Rate Changes and Year-end Expectations in Advanced Economies*
(Basis Point)

* As of 30 October 2017.
Source: Bloomberg.

Chart 2.3.2.
Policy Rate Changes and Year-end Expectations in Emerging Economies*
(Basis Point)

* As of 30 October 2017.
Source: Bloomberg.

2.4. Global Risk Indicators and Portfolio Flows

In the third quarter of 2017, financial markets remained highly responsive to the prospects of a Fed rate hike and balance sheet reduction. The Fed's clear message that there will be no easing in the previously chosen policy path following September's better-than-expected US growth and inflation rates raised advanced market bond yields (Chart 2.4.1). The Fed's decisively hawkish tone added to financial market volatility, turning around the downtrend in exchange rate volatility since early 2017 (Chart 2.4.2).

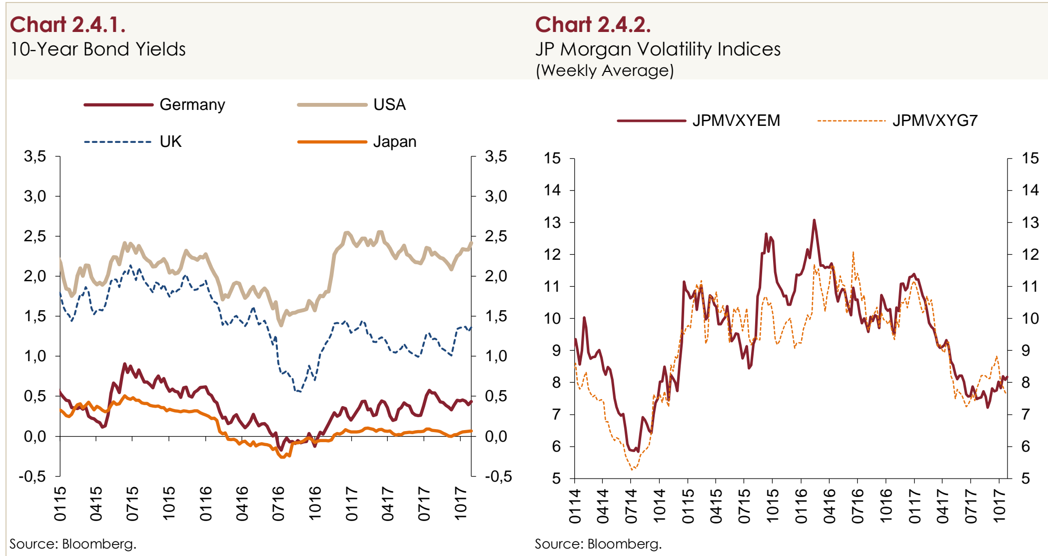


Chart 2.4.1.
10-Year Bond Yields

Source: Bloomberg.

Chart 2.4.2.
JP Morgan Volatility Indices
(Weekly Average)

Source: Bloomberg.

The global risk appetite remained strong despite Fed's determination to maintain monetary policy normalization, sparking more flows into both advanced and emerging stock markets. This caused the stock indices to reach all-time highs especially in the US (Chart 2.4.3).

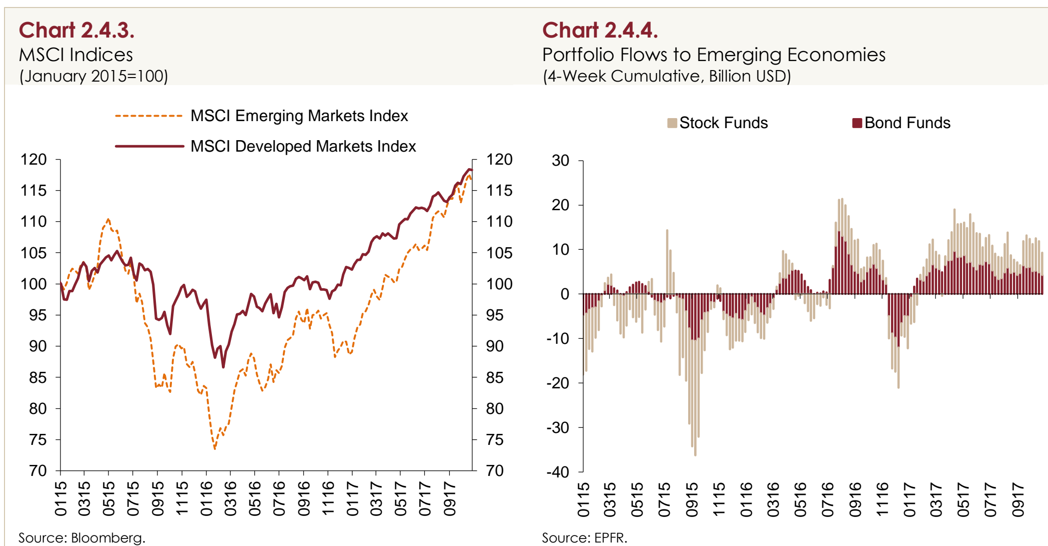


Chart 2.4.3.
MSCI Indices
(January 2015=100)

Source: Bloomberg.

Chart 2.4.4.
Portfolio Flows to Emerging Economies
(4-Week Cumulative, Billion USD)

Source: EPFR.

After accelerating on the back of the second quarter's brighter growth outlook and low financial market volatility, portfolio inflows lost some momentum in the third quarter amid geopolitical developments. However, the ongoing macroeconomic recovery across emerging economies, the robust global risk appetite and accommodative global financial conditions helped resume portfolio flows into emerging markets after a short-lived interruption. Therefore, emerging market portfolio inflows continued into the third quarter (Chart 2.4.4).

Table 2.4.1.
Composition and Regional Distribution of Fund Flows to Emerging Economies
(Quarterly, Billion USD)

		Total	Fund Composition		Regional Distribution			
			Bond Funds	Stock Funds	Asia	Europe	Latin America	Middle East and Africa
2015	Q1	-8.6	1.9	-10.5	-8.1	2.2	-2.4	-0.2
	Q2	-8.0	1.4	-9.4	-6.9	0.4	-2.0	0.4
	Q3	-45.3	-16.5	-28.8	-23.8	-6.5	-10.8	-4.1
	Q4	-22.3	-12.7	-9.6	-11.1	-3.0	-6.4	-1.9
2016	Q1	-4.5	-1.2	-1.6	-2.5	-1.4	-0.3	-0.3
	Q2	-1.4	7.3	-8.7	-4.5	0.7	1.9	0.6
	Q3	42.4	26.1	16.3	17.9	7.5	12.4	4.7
	Q4	-17.4	-9.3	-8.1	-12.6	-0.8	-2.7	-1.3
2017	Q1	32.7	19.9	12.8	8.2	7.7	12.4	4.3
	Q2	52.6	24.4	28.2	25.2	7.6	14.5	5.4
	Ç3	37.1	17.3	19.8	19.4	4.9	9.2	3.5

Source: EPFR.

All regions enjoyed portfolio inflows in the third quarter (Table 2.4.1). However, inflows to both stock and bond markets were mainly attracted to Asia. Despite geopolitical adversities, portfolio flows to Asia continued to accelerate in this period, with India and South Korea in the lead, thanks to improved domestic demand conditions and exports. Portfolio flows to China, on the other hand, slowed slightly after the second-quarter pickup despite the adoption of macroprudential measures. The strong demand for Brazil's bonds saw a remarkable decline in the third quarter, while Turkish and Indian bond markets continued to attract strong flows.

Box 2.1 The Fed Balance Sheet Unwind and its Possible Effects

In their statements following the September meeting, Fed officials announced that the long-awaited balance sheet normalization program would start in October. This box gives a brief account of how and why this program is structured and also discusses its possible effects and policy implications.

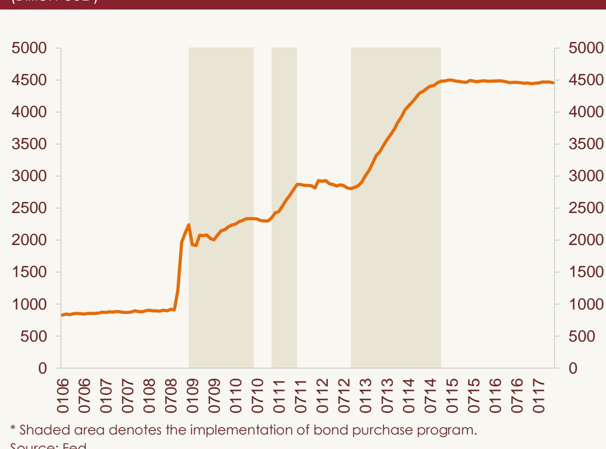
Table1. Fed's Balance Sheet (Billion USD)

Before the Crisis*				Current**			
Assets		Liabilities		Assets		Liabilities	
Securities Held Outright	791	Federal Reserve Notes in Circulation	777	Securities Held Outright	4248	Federal Reserve Notes in Circulation	1580
US Treasury Securities	791	Bank Reserves	17	US Treasury Securities	2465	Bank Reserves	2293
Federal Agency Debt Securities	0	Reverse Repurchase Agreements	0	Federal Agency Debt Securities	7	Reverse Repurchase Agreements	373
Mortgage-Backed Securities	0	Other Liabilities	43	Mortgage-Backed Securities	1776	Other Liabilities	225
Repurchase Agreements	25	Total Capital	34	Repurchase Agreements	0	Total Capital	40
Other Assets	55			Other Assets	263		
Total	**871**	**Total**	**871**	**Total**	**4511**	**Total**	**4511**

* As of 1 August 2007.
** As of 21 September 2017.
Source: Fed.

Table 1 shows the evolution of the Fed's balance sheet from before the global financial crisis to the current time. Central banks engage in market transactions to fund their monetary policy actions and hold a portfolio of financial assets, usually government bonds, to carry out these transactions. The financial assets in the Fed's pre-crisis balance sheet are likely of this nature. In the post-crisis balance sheet, the amount of such assets grew almost five-fold, which resulted from the three rounds of asset purchase programs, more commonly known as Quantitative Easing (QE), allowing the Fed to increase the money supply while raising bank reserves on the liability side of its balance sheet (Chart 1). As a result, the Fed's balance sheet accounts for as much as 23 percent of GDP today, compared to about 5 percent before the crisis.

Chart 1. Total Assets in Fed's Balance Sheet* (Billion USD)



* Shaded area denotes the implementation of bond purchase program.
Source: Fed.

As a general principle, central banks avoid holding more government bonds than needed for them to conduct policy actions. Buying large amounts of government bonds means assuming the responsibility to finance the budget deficit and, as evidenced many times in economic history, this unsustainable situation causes inflation to rise sharply. Therefore, the Fed and other central banks engaged in bond purchases stated that this was only a temporary policy action to help bring the persistently low post-crisis inflation rates closer to the target and to boost growth.

Aside from this principle, the expanded balance sheet also puts a constraint on the Fed's monetary policy. The market liquidity gets bloated with asset purchases, which translates into less dominance over short-term interest rates for the Fed. Even though the Fed wants to raise the benchmark interest rate, the market liquidity will cause short-term interest rates to be zero or even negative. It is against this fact that the Fed changed its monetary strategy and started to pay interest on all bank reserves (both required and excess reserves) and offered non-depository financial institutions to have access to reverse repurchase agreements.

The abovementioned two constraints, one theoretical and the other practical, are the main reasons behind the Fed's balance sheet unwind. In its bond purchase program, the Fed bought up both US Treasury bonds and mortgage-backed securities. Retaining such securities is not a standard practice for central banks, and the Fed announced in 2014 that it will hold no more securities than necessary to implement monetary policy efficiently and effectively in the long run (Fed, 2014).

The Fed pays interest on bank reserves at the upper limit of the federal funds target rate. This does not constitute a problem when interest rates are low. However, as market liquidity remains unchanged with rate hikes, the Fed's interest payments gradually increase. Keeping spending under control calls for gradual rate hikes and a balance sheet reduction, thus shrinking bank reserves.

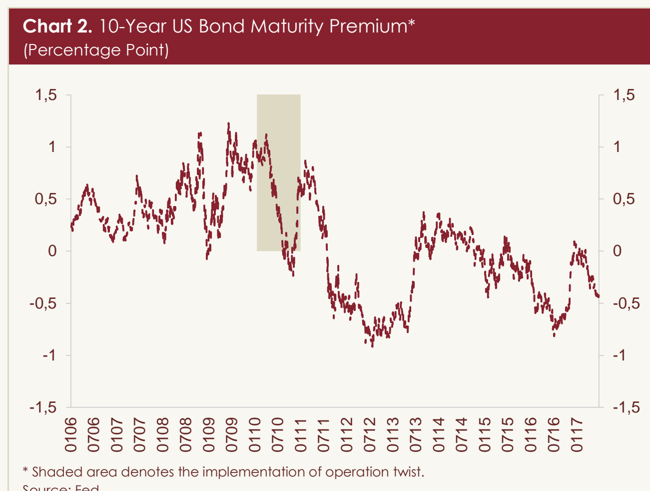
Under the announced balance sheet reduction plan, the Fed will not sell any financial assets immediately, but will avoid re-investing some maturing assets within pre-determined caps, thereby reducing the bond stock. These caps will gradually increase over one year before reaching a standstill, and the balance sheet will continue to shrink.

One thing that is yet to be clarified about the program is how big the final balance sheet will be once the unwinding is completed. The farthest that the Fed can go with the balance sheet reduction is to deplete bank reserves and make its security stock roughly equal to the Federal Reserve notes in circulation as in the pre-crisis era. Although the 2014 road map for normalization hinted at such a move, the Fed later stated that it might not fully exhaust its reserves and embark on such an aggressive path of downsizing, but rather give its final decision after monitoring whether these reserves are necessary for the banking system. In other words, where the tapering will end remains unknown.

Expected Effects of the Fed's Balance Sheet Reduction

The Fed's monetary policy affects emerging economies mostly through financial markets. The immediate effects of the Fed's balance sheet reduction or a short-term rate hike would be higher long-term bond rates and an appreciation of the US dollar. Put differently, both policies might have the same effects on markets. Yet, the main difference between the balance sheet reduction and a policy rate hike is their relative impact on exchange rates and interest rates. Although the effects of both policies are expected to be in the same direction, short-term interest rate changes may have a stronger impact on exchange rates. On the other hand, given the fact that the Fed portfolio is largely made up of long-term bonds, it is likely that the balance sheet downsizing will weigh mostly on long-term bond yields through the term premium, which can actually be interpreted as undoing the impact of previous Fed policies. In fact, large-scale asset purchases and especially the operation twist program that involved swapping short-term bonds for long-term Treasury securities had caused long-term interest rates and the term premium to fall dramatically (Chart 2). Now that the Fed will make a U-turn, these effects will also turn into reverse.

Chart 2. 10-Year US Bond Maturity Premium*
(Percentage Point)



* Shaded area denotes the implementation of operation twist.
Source: Fed.

The impacts of these on exchange rates and interest rates are undoubtedly significant for emerging economies. Changes in the US market will also affect the global economy through capital flows and international trade channels. However, as mentioned above, the magnitude of these effects depends on how far the Fed will shrink its balance sheet and what monetary policy it later pursues. For example, factors such as the Fed's decision on the final level of bank reserves or whether it will maintain its reverse repurchase agreement facility after the operation will determine how high the term premium will be (Perli, 2017).[1]

[1] Greenwood et al. (2016) argue that bank reserves are high-quality short-term assets bolstering financial stability, and therefore, the Fed balance sheet should be larger than before. On the other hand, experience has proven that high liquidity might lead to an asset bubble and a financial crisis (Bindseil, 2016).

Conclusion

The Fed's balance sheet unwind signals a liquidity crunch across the globe over the long run. However, the final size of the balance sheet, and how the Fed will steer market rates remains uncertain. The Fed will wait to decide on these matters until the effects of the program are fully observed. In addition, these decisions will also determine the magnitude of the final impact that this tapering will have on long-term interest rates. Moreover, there are views arguing that today's global economic conditions are different from those of the QE episode, and thus, the upward pressure from the balance sheet unwind on interest rates might be less significant than the downward pressure from bond purchases (Bostic, 2017).

Balance sheet reduction is different from QE given the possibility to make simultaneous changes to short-term interest rates and the balance sheet size. In fact, during the quantitative easing program, the Fed first lowered the policy rate and then started asset purchases. To manage the process better, the Fed built its balance sheet scheme on a more automatic mechanism and emphasized that the short-term interest rate remained its main policy tool. From now on, the Fed is expected to watch closely for any ripple effects of its balance sheet plan and duly adjust the number of future rate hikes.

The Fed's plan to rely on the balance sheet rather than short-term interest rates to provide some of the necessary tightening can translate into fewer rate increases in the future. Accordingly, the pressure on exchange rates may also wane. The lengthy unwinding process works to the advantage of emerging economies. Yet, the effects of the Fed's impending balance sheet selloff on financial market conditions and expectations will be monitored closely by policymakers.

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