Institute of International Finance

Global Economic and Financial Outlook

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Highlights

● Since 2018, the global economy has maintained the momentum for a stable, full recovery with a rise in inflation, in spite of the greater volatility in financial markets and the looming threat of trade war.

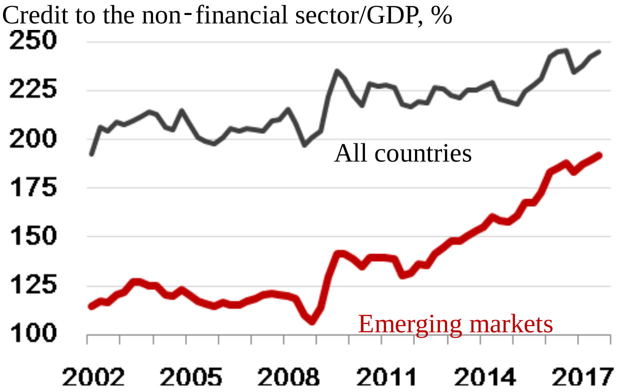
● In the near future, the global economy will continue to recover and is estimated to reach an annual growth rate of about 3.4% in 2018. The global economic landscape will be reshaped by the game between major powers and policy adjustments.

● The United States and its Asian Pacific allies mull a joint regional infrastructure scheme as an alternative to the Belt and Road Initiative. However, that scheme faces constraints and problems making it hard to hold back the Belt and Road Initiative.

● The expected continuous hikes in the medium- and long-term interest rates of the United States driven by various factors may have an array of effects in the future. The battle for the European financial centre will be more intense after Brexit.

Global Macro Leverage Ratio Still Rising

Credit to the non-financial sector/GDP, %



Sources: BIS, BOC Institute of International Finance

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New Changes Will Reshape the Global Economy amidst Faster Growth

-- Global Economic and Financial Outlook (2018Q2)

Since 2018, the fundamentals for a broader, faster global recovery have remained unchanged amidst the greater volatility of financial markets, rising threat of global trade war and escalating geopolitical risk. Looking into the future, we expect the global economic growth to strengthen on the U.S. tax cuts, commodity price rally and easy global monetary policy environment. The downside risk to global economy comes from escalating trade conflicts and overshooting inflation, which might force the Federal Reserve to rush on rate hikes and trigger geopolitical risk.

I. Global Economic Review and Outlook

I.1 The global economy in faster recovery will embrace new changes driven by various factors

The global economy continued to recover in the first quarter of 2018. The World Trade Outlook Indicator (WTOI) was 102.3 in the first quarter of 2018, slightly higher than the quarter before and above the trend level of 100, indicating solid growth in global trade. Specifically, the forward-looking indicator export orders recorded the highest value since 2011, suggesting that global trade will continue to recover. In terms of production, the leading indicator global overall PMI continued to expand, staying above 54% (50% is the boom-or-bust line) for five months as of February 2018. Specifically, service PMI has risen for four consecutive months, showing the strongest expansion. Manufacturing PMI fell in the past two months, yet still higher than one year ago. The impetus to Overall PMI expansion remains strong (Figure 1). In terms of demand, the growth indicator of emerging markets has rallied steadily since the second half of 2017 and hit a six-month high in January 2018. The continuing momentum for global economic recovery is driven mainly by the following factors: Firstly, in respect of cyclical factor, the Eurozone, Japan and other developed economies have bottomed out, leading to recovering demand. Secondly, the U.S. tax reform and related stimulus measures have bolstered expectations and speeded up investment expansion. Thirdly, the main emerging markets, typically China, have strong domestic demand and stay on the boom side of the economic cycle. Global economic growth is preliminarily estimated to reach an annualized quarter-on-quarter rate of 3.2%, or a year-on-year growth rate of 3.5%.

Figure 1: Global GDP vs. PMI

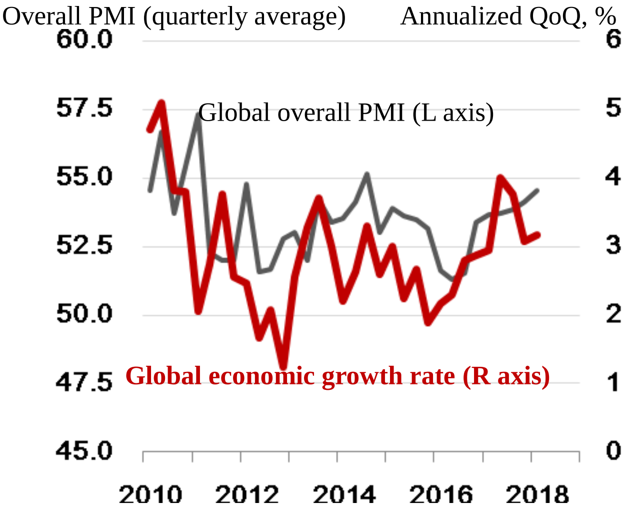
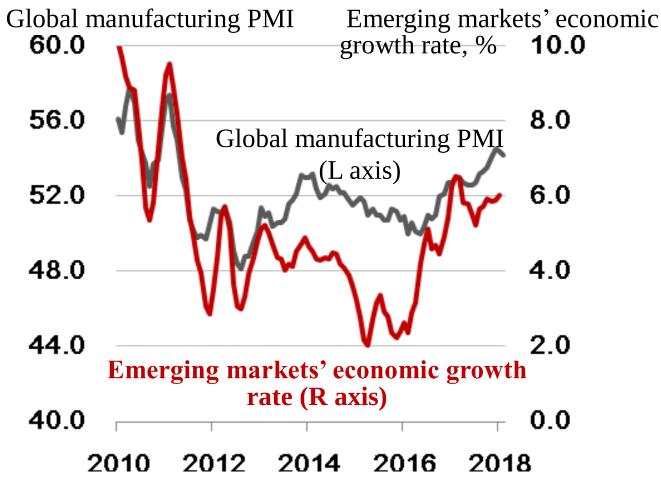


Figure 2: IIF Emerging Market Growth Tracker



Sources: Wind, IIF, BOC Institute of International Finance

Look into the future, we expect the global economy to continue its good momentum into the second quarter of 2018 and grow at about 3.4%. Based on the global growth slightly stronger than expected in the second half of 2017, we raise our forecast for global growth in 2018 to 3.4%. Global CPI is estimated to rise by 3.3%, faster than the previous year. However, global political, trade and financial fields are experiencing some major changes that will reshape the global economic landscape in its course of accelerated growth.

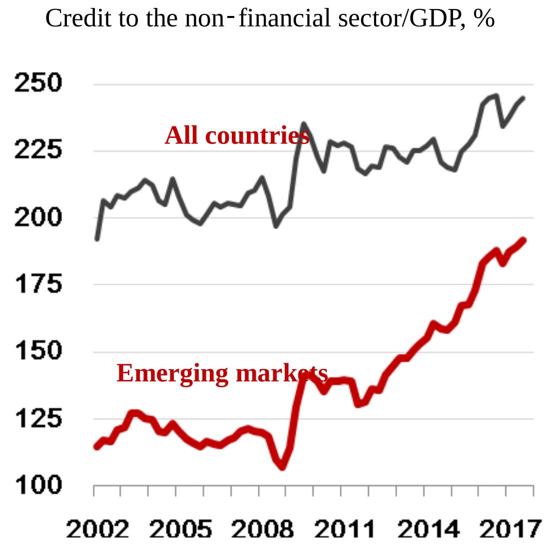
First, the global trade protectionism remains on the rise. The new trade protectionism has been escalating under U.S. President Donald Trump's "America First" slogan. On March 8, 2018, Trump signed an announcement imposing import tariffs of 25% on steel and 10% on aluminum. As a countermeasure, the EU may impose tariffs on the U.S. Harley-Davidson motorbikes, Levi's jeans and whisky bourbon, typical of American-made products. Driven by U.S. domestic political interests, this event is probably just a prelude to more subsequent global trade and invest disputes the United States are likely to stir up in the future, especially against China. There will be no winner in a "trade war" in the context of the still-fragile footing of global recovery and deeper-going economic integration. Trade conflicts will undermine the world economy.

Second, global stock markets show signs of turbulence and correction due to tightening financing conditions. In early February 2018, the 10-year U.S. Treasury yield rose rapidly on the strengthening inflation expectations fueled by better-than-expected U.S. non-farm employment data. The Dow Jones Industrial Average index and S&P 500 Index lost 8% accumulatively in a week, triggering a plunge in global stock markets (Figure 3). The stocks markets in developed economies have risen for a long period of time but deviating somewhat from the economic fundamentals, with the P/E-based valuation staying high. The ample liquidity injected by the protracted easy post-crisis monetary policy has distorted asset pricing. There is still a possibility of sharp asset price correction entailed by the global monetary policy reversal and liquidity ebbing, catalyzed by global political and economic events. It will be a challenge to the global economic recovery.

Third, global debt risk remains high. The global macro leverage ratio remains high. The Bank for International Settlements (BIS) data show that the credit to the non-financial sector/GDP ratio reached an historical high of 244.7% at the end of the third quarter of 2017, far above the pre-crisis five-year average of 206.0% (Figure 4). Some developed economies transfer debts to the public sector, pushing up fiscal risk significantly. Many emerging market economies manifest excessive private-sector leverage, which will affect their solvency. Low-income countries suffer a growing fragility of governmental debts, with the median of governmental leverage ratio rising to 47% at present from 33% in 2013. The massive U.S. fiscal stimulus plan might accelerate the rise in inflation and the Federal Reserve's pace of rate hikes. The history of debt crisis in developing countries and sudden-stops in emerging market capital flows may repeat.

Figure 3: Changes in U.S. Stock Index vs. U.S. Long-term Interest Rate

Figure 4: Changes in Global Macro Leverage Ratio



Sources: Wind, BIS, BOC Institute of International Finance

Fourth, the competition and strategic game among major powers are intensifying. Early March 2018 witnessed a revitalization of the Quadrilateral Security Dialogue among the United States, Japan, Australia and India. The four countries discussed the launch of a regional infrastructure investment scheme as an alternative to China's Belt and Road Initiative. That is a product of the "Indo-Pacific" strategy, which is politically intended to "retain America, enhance India and stop China". In addition, despite the eased tensions in inter-Korean relations and North Korea's nuclear issue that allows a direct dialogue between the United States and North Korea, the United States' new practice of taking China as a rival in terms of national security, defense strategy, diplomatic policy and trade policy puts global stability at a new risk.

I.2 Main economies grow faster, suggesting changes in monetary policy orientation

The U.S. economy gains pace. The U.S. economic acceleration is fueled mainly by the strengthening confidence of consumers, expanding government spending and narrowing trade deficits. The rising income of residents will further drive up consumer spending. Private-sector investment will keep growing on tax cuts. The infrastructure plan implementation will increase government expenditure. The foreign demand expansion and stable USD exchange rate will reduce trade deficits. The U.S. real GDP is estimated to grow by 2.9% in the second quarter. The U.S. core inflation rate will gradually approach the 2% target in 2018 due to tightening labor market and rising labor cost. The Federal Reserve will continue to tighten the monetary policy in 2018, expected to announce three to four rate hikes and downsize the balance sheet progressively.

The Eurozone has strong momentum for economic growth. The Eurozone economy sees broader and faster growth, mainly driven by strong foreign demand that makes exports a bigger engine for economic growth. Domestic demand continues to recover, the consumers' demand held back at crisis times continues to be freed out and the capital goods manufacturing sector finds its capacity utilization rate rising continuously, pointing to a strong private-sector investment demand. The

Eurozone's real GDP growth is expected to slow down to 2.1% in the second quarter, but we optimistically forecast an annual growth rate of about 2.3%. The continuous and full recovery of the European economy will cause the European Central Bank (ECB) to further consider the tapering of quantitative easing and removal of negative interest rates. Given the still-high unemployment rate and low inflation rate, ECB is expected to normalize its monetary policy slowly and cautiously.

The Japanese economy is on the track of mild recovery. Currently the Japanese economy shows notable momentum of recovery. The upturn in foreign demand and private-sector investment underpins an upbeat outlook for economic growth in the first half of the year. Industrial output growth has been moderating for three consecutive months, indicating a possible slowdown in recovery. Japanese GDP is estimated to grow by 1.6% in the second quarter of 2018. Japan's population aging and policy isolation impose constraints on its potential of economic growth. Abenomics has worked to a limited extent. Japanese economic slowdown will motivate the Bank of Japan to maintain its policy orientation to quantitative and qualitative easing in 2018.

Emerging market economies show divergent growth. The Asian Pacific emerging economies will further play their role as the leader in global growth, expected to grow at about 6.5% in 2018. Led by Russia and Poland, emerging market economies in the Central and Eastern Europe grow markedly faster. Mexico, Brazil and other Latin American economies have a firmer footing of recovery, thanks to the U.S. recovery and global commodity price rally. The Saudi Arabian economy recovers on oil price rises, with the Middle East and North Africa growing faster. Emerging market economies show significant disparities in economic trends and divergent monetary policies. Asian Pacific economies grow relatively fast, with the monetary policy remaining stable with a tightening bias. Latin America, Middle East, Eastern Europe and Africa sensitive to commodity market fluctuations are in weak recovery and keep the monetary policy easy.

II. Global Financial Review and Outlook

II.1 The global financial sector remains stable overall

The global economy has been expanding since the beginning of 2018. Backed by loose financing conditions, major economies see faster employment growth, improvements in inflation and upturn in profit of businesses and their willingness to invest. The economic fundamentals are conducive to maintaining a sound financial system. In risk terms, close attention should be paid to the inflation pickup and pace of monetary policy normalization in the recovery process as well as their effects on the global interest rate markets and stock markets.

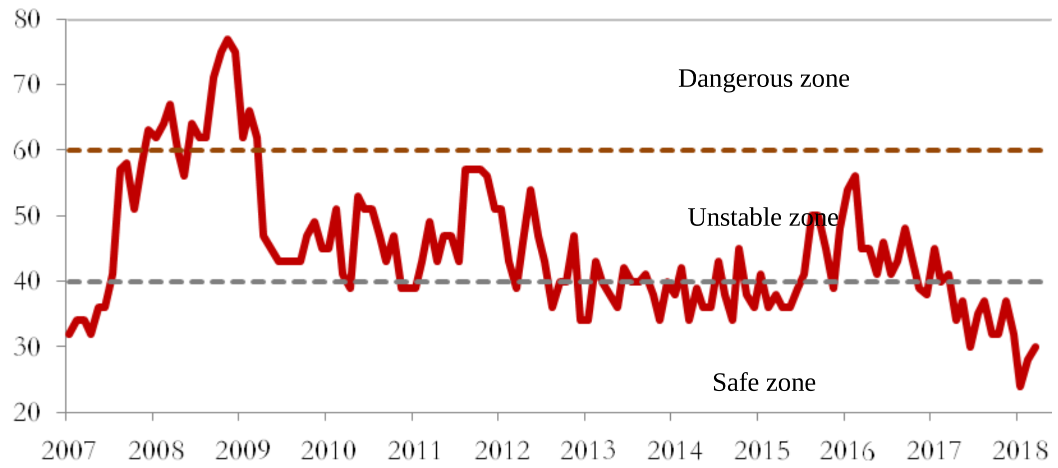
First, the global recovery improves profitability of businesses and bolsters financial market stability. Since 2016, the global economy has been gradually stepping out of the recession caused by the 2008 financial crisis. The European and U.S. private-sector leverage ratio have fallen to low level, investment and trade growth have recovered markedly and main international organizations have revised up its global growth forecast for a couple of times. These factors, together with the U.S. tax bill passed in December 2017, will immediately improve the profit outlook of enterprises.

Second, the mild global inflation and steady pace of interest rate hikes provide a favorable financial environment. The Federal Reserve announced three rate hikes and started to shrink its balance sheet in 2017, with the core inflation level still below target, leading to the market expectation of relatively slow pace of the Federal Reserve's rate hikes. The long-term interest rate did not rise in synchronization with rate hikes. The 10-year U.S. Treasury rate at the end of 2017 was basically flat with that at the end of 2016. As the European and Japanese central banks cling to the policy of QE and ultra-low interest rates, the global liquidity is sufficient overall amidst loose financing conditions. The absolute interest rate remains relatively low, allowing enterprises to increase earnings per share (EPS) by leveraging and share repurchase. The low interest rate environment provides a strong backing for stock valuation (P/E). **Third, future growth expectations and monetary policy changes will weigh on market rates and asset valuation.** 2018 has seen the following new changes: The United States has entered the stage of full employment, which, coupled by Trump's fiscal deficits and tax cuts, might drive the U.S. total demand to expand further. The inflation pressure will be pushed up on the supply side by the rising the oil price, higher tariff and trade barriers, signs of faster wage growth and cumulative effects of USD depreciation. The changed expectations of economic growth and inflation have aroused market concern over the Federal Reserve's faster pace of rate hikes. The U.S. Treasury yield curve has moved up noticeably, triggering a 10% to 15% technical correction of U.S. and global stock markets and a substantial rally in global market volatility.

II.2 The U.S. financial crisis warning indicator remains in the safe zone

In the first quarter of 2018, the monthly average of the U.S. risk of financial crisis index (ROFCI) further dropped to 27.33 from 33.66 in the previous quarter, close to the historical low in the safe zone. But this index was in a slight uptrend in the first quarter (Figure 5). The index reveals the following characteristics: The financial market is stable overall, with the corporate credit risk showing signs of continuous improvements. Market risk shows signs of escalation, evidenced by higher volatility of stock market, including banking stocks, and more risk-averse investors. VIX mean remains in the safe zone, yet back from historical low to historical average. The banking system is stable in general and at a low systemic risk of default. The interbank funding market remains relatively stable, yet showing signs of tightening liquidity.

Figure 5: U.S. Risk of Financial Crisis Index (ROFCI)



Sources: BOC Institute of International Finance

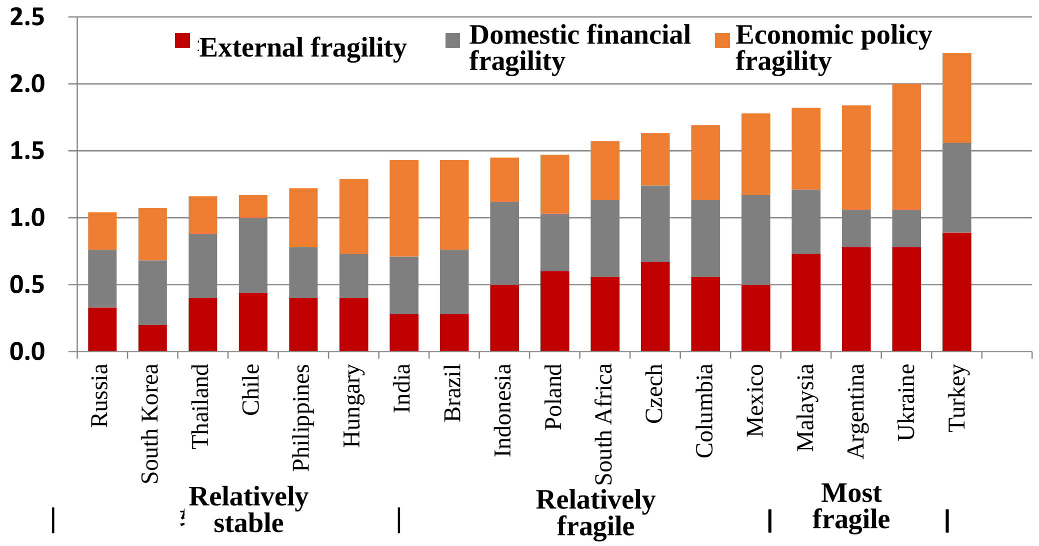
In the future, the U.S. financial market will have a largely uncertain risk profile, mainly due to the great uncertainties in Trump administration's policies, especially its foreign trade and North Korea policies and administration makeup. The U.S. monetary and fiscal policies are also uncertain. In addition, the confidence of financial market participants might be undermined by uncertainties in the sustainability and cyclical pattern of U.S. economic growth. The ROFCI is estimated to rise slightly in the safe zone.

II.3 Emerging markets have a higher level of overall fragility

Given the high market volatility and global interest rate surges recently, emerging markets, especially those with a huge demand for foreign capital, will undergo a tough process of development. Some liquidity stress indicators (e.g. cross-currency basis) perform well, but some potential problems remain unsolved. As for the external risks facing emerging markets, extra attention should be paid to the stronger momentum of global growth and U.S. tax policy changes. Export-oriented emerging economies experience international trade fluctuations. For example, the emerging market trade partners of the United States might face a upside risk amidst the cyclical movements against the backdrop of strengthening global economy and expanding U.S. demand spurred by the tax reform. The financial sector of emerging markets may become more fragile in the context of the global monetary policy remaining easy in the medium term. Investors tend to increase the exposure to lower-rating companies with volatile prices and sovereign borrowers, leading to rapid growth in debts of non-financial enterprises in some emerging market countries. In addition, the strong USD and stock market downturn will have an effect on global asset prices and capital flows, likely to send economies with a strong debt refinancing demand and without hedging USD liabilities into financial troubles.

According to the latest emerging market fragility assessment, 19 countries are in the relatively stable range or below, with the overall fragility level on the rise. Over 20% of countries fall in the most fragile range. Of the five most fragile nations, Turkey has the most severe fragility, showing the worst situation in either external or domestic financial fragility. When the current account deficit is large and expanding rapidly, the external fragility may even worsen to spur violent exchange rate fluctuations. Among the five most fragile nations, Turkey, Ukraine and Argentina show high fragility of real effective exchange rate index and indexes concerning current account balance etc. Of the relatively stable nations, Chile has noticeable domestic financial fragility. Hungary deserves attention due to its economic policy fragility, given its heavy government debt burden and upcoming general elections in 2018.

Figure 6: Financial Fragility of Emerging Market Countries in 2018Q1



Sources: IIF, BOC Institute of International Finance

II.4 Major global financial markets show divergence in trends

Since 2018, non-USD currencies have appreciated broadly on economic recovery and inflation expectations. Global interest rates have been moving gradually higher. Stock markets have become more volatile markedly. The commodity market is mixed, with energy prices rising while raw material prices relatively weak. The inflation expectations have driven up long-term U.S. Treasury rates substantially. Global liquidity is ample and flowing into stock markets. Investor optimism has hit an all-time high and the pro-cyclic activities have been lowering market volatility. Our basic forecasts for the second quarter of 2018 are as follows:

First, there are more reasons for the U.S. Treasury yield to rise than fall. The 10-year U.S. Treasury yield is expected to move between 2.8% and 3.0%. The German and Japanese government bond yields will remain within 0.70%-0.85% and around zero respectively. Firstly, the Federal Reserve’s rate hiked in March has further pushed short-term interest rates high. Secondly, the market uncertainties resulting from inflation expectation disturbances will increase the market’s liquidity premium and risk premium for bond maturities, making the long-term interest rates more likely to rise than fall, and the intensity of upward breakthrough depends on whether the inflation exceeds expectations. Thirdly, The European and Japanese adherence to quantitative easing and zero (negative) interest rates will bring down global interest rates.

Second, global stock markets will be more volatile, with emerging markets better than developed markets. The US stock market has entered a relatively stable phase after technical correction, indicating that market participants’ upbeat outlook for short-term profit of businesses overshadows their concern over elevated valuation. Firstly, there are uncertain expectations of rising inflation and interest rates, but the U.S. Treasury rate is still below the 3% mark, so the effects on valuation are only a matter of expectation. Secondly, the U.S. policy stimulus and economic dynamics, together with global recovery, have improved the profit expectations of businesses, with relative return available to investors. Thirdly, the sufficient global liquidity and institutional investors’ robust demand for asset allocations provide a strong backing for the U.S. financial market.

Third, the crude oil price is expected to move around USD65/barrel. The focus of contradictions lies in the game between OPEC output cuts and shale oil production expansion. Affecting factors include the production cost of shale oil, profitability and willingness to invest. Good profitability makes oil producers more willing and motivated to expand production and lessens the possibility of oil price surges. As investors have been expanding investments for years, the current urgent need for cash recovery forces producers to cut capital expenditures. Considering rising production costs, the oil price is likely to fluctuate around USD65/barrel.

III. Joint Regional Infrastructure Scheme of the United States, Japan, India and Australia

Recently the United States, Japan, India and Australia have been discussing a joint regional infrastructure scheme designed to counter China’s rising regional influence, which is described as an alternative to China’s Belt and Road Initiative. It has triggered broad-based discussions on its impact on the Belt and Road Initiative and the current geopolitical and economic landscapes.

III.1 The joint regional infrastructure scheme is a feeler of the “Indo-Pacific Strategy”.

Before the U.S. exit from TPP there were three intercontinental economic agreements in Asia Pacific, i.e. the China-led Regional Comprehensive Economic Partnership (RCEP) agreement, Belt and Road Initiative (BRI) and the U.S.-led TPP. The United States has weaker presence in the Asia Pacific region following its withdrawal from TPP. As BRI is going deeper in implementation, breakthroughs have been made in the connectivity of infrastructures in major economic corridors. The level of connectivity has been enhanced notably. Developmental and policy-directed financial supports have been strengthening, bilateral and multilateral investment and financing mechanisms and platforms are growing fast and China has enhanced its regional influence.

The joint infrastructure development scheme of the United States, Japan, India and Australia can be considered as an action plan to implement the “Indo-Pacific Strategy”. To deepen the security partnership and coordinate the regional infrastructure financing, officials from the four countries held a separate quadrilateral security dialogue during the ASEAN summit in November 2017. It was the first official meeting of the four nations after Japan came up with the concept of "quadrilateral alliance" in 2007. This quadrilateral strategic dialogue is considered a move to advance the "Indo-Pacific Strategy" put forward by Japanese Prime Minister Shinzo Abe. The four nations aim to jointly build a "free, open, prosperous and inclusive Indo-Pacific region" by promoting free trade and defense cooperation centered on a belt extending from the South China Sea across the Indian Ocean all the way to Africa, showing an obvious intent to counterbalance China. Therefore, the four nations attempt to promote the free trade-based joint infrastructure development scheme as a feeler of the "Indo-Pacific Strategy" implementation, through "high-quality infrastructure construction".

III.2 There are major uncertainties in implementation of the alternative scheme

Cross-regional infrastructure development features huge investment, long payback period and coexistence of country, regional and other risks. It not only requires a strong economic capacity, but also necessitates a strong capability of technology exports, firm policy backing and efficient mobilization of social resources. Given the strengths of the United States, Japan, India and Australia, the United States is more likely to play the role of a coordinator and leader in the quadrilateral infrastructure cooperation, while Japan will be the exporter of infrastructure technologies and human resource. In terms of financing channels, reliance on the U.S.-led Word Bank and the Japan-led Asian Development Bank is a bigger probability. Currently the joint infrastructure development scheme is still in the phase of preliminary discussion, with great uncertainties remaining in finalization and implementation.

First, the financing channels are a challenging issue. To address the main sources of funding for the BRI, the Asian Infrastructure Investment Bank and the Silk Road Fund support relevant projects, and a number of commercial banks and policy banks of China also dedicate themselves to building a Belt and Road financial artery by providing substantial financial supports. For infrastructure development that requires massive funding, the United States, Japan, India and Australia need to work out a reasonable financial support plan for implementing the alternative infrastructure scheme, including the financial support shares and funding capability and willingness of the four nations, as well as the main financing channel or platform.

Second, Trump advocates for "America First" policy and trade protectionism. The Trump administration has gradually unveiled its "Non-cooperative Game" strategy under the "America First" slogan, under which the United States is reshaping its relations with other countries and withdrawing from many multilateral international organizations. Meanwhile, Trump persistently stands for trade protectionism, and has never stopped advocating for it since he assumed presidency. Recently the United States imposed import tariffs of 25% and 10% on steel and aluminum products respectively, having a negative effect on the multilateral trade system. Therefore, the United States' "America First" policy and the trade protectionism against globalization add many barriers to the Asian Pacific infrastructure development, which is a cross-regional program requiring cooperation among countries.

Third, the ability to export infrastructure development capabilities is limited. As for the overall capacity of the four countries, India suffers both technical and financial shortfalls in railway, road and port infrastructure construction, showing a limited capacity of exporting infrastructure. Australia as a nation relying heavily on resource exports also has a limited capacity of exporting infrastructure. The United States has the ability to export infrastructure, yet at non-competitive costs. Overall, only Japan stands alone as a rival of China in the ability to export infrastructure.

Fourth, the alternative scheme is in nature a competitor of the BRI. Though the four nations have stressed that their scheme is not intended as a countermeasure for China's BRI and described it as an "alternative" to the BRI, not a competitor, the two obviously competes with each other.

Noticeably India and Australia have already joined the Asian Infrastructure Investment Bank, so their economic cooperation with China can produce much more benefits than confrontation does. Thus it is much more difficult to shift to another alternative infrastructure scheme when interests are complex and mixed among the nations involved and the BRI has already borne fruit.

III.3 The quadrilateral infrastructure development scheme can hardly rival the BRI

The joint infrastructure development scheme of the United States, Japan, India and Australia are still under discussion. It is a long way to go to turn the idea into reality. The alternative scheme is a test of the four nations' ability to think and act together in both public and private sectors. The "America First" policy led by Trump and the de-globalization tides will be the biggest barriers to the alternative scheme. The speed and result of the alternative scheme should not be overstated.

The BRI has made huge progress. Main international organizations and over 100 countries have voiced their supports and taken a part in the initiative, which is also endorsed by the UN General Assembly and the Security Council. The BRI goes beyond the conventional philosophy of regional cooperation themed by trade and investment facilitation to introduce a new model of regional economic cooperation. It is a well-focused initiative driven by a multi-form cooperation mechanism taking transport routes and connectivity as ties. The BRI focuses on regional development on six economic corridors, namely the New Eurasia Land Bridge, China-Mongolia-Russia, China-Central Asia-West Asia, China-Indochina Peninsula, and Bangladesh-China-India-Myanmar and China-Pakistan, providing a useful platform for global funds and personnel. China signs memorandum and roadmap with each country along the Belt and Road individually under the "Country-specific Policy" principle, so as to align with various national development strategies along the Belt and Road and provide a new paradigm for international cooperation.

The building of a financial system plays an irreplaceable role in turning the BRI from an idea to reality. Multilateral organizations including the Asian Infrastructure Investment Bank, the New Development Bank and the Silk Road Fund, China Development Bank, the Export-Import Bank of China and other developmental financial institutions and commercial financial institutions work together to form a financial support system for the BRI. In the future, the BRI will ride on the tides of building a modernized economic system and pushing for further opening-up of China, provide a flow of cooperation opportunities and cooperation areas for economic cooperation in the Asia Pacific, shape a win-win landscape and give a new impetus to the global growth. The joint infrastructure development scheme of the United States, Japan, India and Australia will not replace the BRI in the short term, let alone to contain China and stifle the BRI in the long term.

IV. Medium- and Long-term U.S. Interest Rate Hikes and Their Effects

Since the beginning of 2018, the U.S. long-term interest rates, typically the 10-year Treasury yield, have shown strong momentum of ascending and the yield curve has steepened gradually, bringing both surprises and troubles to the U.S. capital market and economic growth.

IV.1 Long-term U.S. rate hikes are driven by various factors

The U.S. economy gains pace with stronger inflation expectations. The trend and curve of the U.S. Treasury yield has a close tie to macro-economic trends. The U.S. Treasury yield usually moves up in a steeper curve when the economy is about to enter the phase of recovery and boom with rising inflation expectations. It is the other way round when the economy sinks into a depression or recession. As the U.S. economy is gaining pace gradually, the U.S. Treasury yield level and curve are returning to normal to channel capital into the real sectors of economy. With Trump's tax cuts, income expansion and financial deregulation considered, the U.S. economy will maintain its good momentum and achieve a mild, slight acceleration of growth in 2018. The bright growth prospects and the improved business profitability driven by tax cuts have bolstered the U.S. Treasury yield.

The factors affecting U.S. Treasury yield also include demand-supply relationship and monetary policy trends. At present, the marginal growth rate of U.S. bond supply exceeds demand. On the demand side, the Federal Reserve is shrinking its balance sheet by stopping renewing maturing treasury bonds or reducing bond buying. On the supply side, Trump's tax reform has led to a decline in the U.S. government revenues. The latest budget agreement raises the current expenditure ceiling by about USD300 billion. The U.S. budget deficit will expand in the new fiscal year. The supply-demand imbalance in the governmental bond market has been driving up the U.S. Treasury yield. **In addition,** given the better-than-expected recovery of the Eurozone economy that has been continuing since 2017, the European Central Bank has begun to cut bond purchase since January this year, with the monetary policy expected to reverse. In such a context, the bond yields of main nations in the Eurozone fluctuate in an overall uptrend, which fuels the U.S. Treasury yield upturn due to the connectivity of the European and U.S. financial markets and the substitutability of financial products.

IV.2 The equilibrium of the long-term U.S. interest rates is likely to move up in 2018

First, we look at the U.S. inflation trends. Firstly, economic growth accelerates and market sentiment improves, coupled by tax cuts, to stimulate consumption and investment demands and further fuel inflation. Secondly, as the United States basically reaches the full employment level at present, the continued economic growth in the future will spur fast wage increase and prices will rise accordingly. Thirdly, the punitive tariffs Trump announced in early March, as part of the escalating U.S. trade protectionism, will unavoidably result in price hikes of steel and aluminum products and their downstream consumer products in the United States and lead to a sharp inflation rise. Fourthly, the faster global recovery and global commodity price rally will cause imported inflation. In early 2016, the Treasury Inflation-Protected Securities (TIPS) indicated an expected inflation rate of 1.55% for the coming 20 years, but that measure already rose to 2.12% on March 9, 2018, suggesting gradual escalation in future inflation expectations.

In terms of the monetary policy trends, the rising inflation forecast and accelerating economic growth will keep the Federal Reserve on the track of monetary policy normalization. Moreover, the Fed Chairman Powell is more hawkish than his predecessor Yellen and highly appreciates the tax cut policy. Gradual rate hikes are expected to continue into the future regardless of any market fluctuations. The 10-year U.S. Treasury yield has been 1.3% higher than the federal funds rate on average since 2017. We expect the 10-year U.S. Treasury yield to probably stay within 3.3%-3.8% at the end of 2018. **If there are three rate hikes to come, the midpoint of long-term interest rates will possibly be around 3.45%; if there are four rate hikes to come, the possible midpoint of long-term interest rates will be about 3.65%. Currently the latter is more likely to occur.**

IV.3 The Long-term U.S. rate hikes have both positive and negative effects

First, the real economy will feel both positive and negative effects. The long-term interest rate rises affect the economy mainly in residential mortgages, financing costs of enterprises and interest margin of banks. The massive residential mortgages in the United States are issued mainly at fixed rates generally with a term of 15 or 30 years. The mortgage rate is determined to be the 10-year Treasury yield plus a risk premium. With the underlying 10-year Treasury yield on the rise, the mortgage rates will also become higher to drag on the home-buying demand. The U.S. economy has recorded positive growth for 8 years in a row, a recovery period far longer than historical average. However, the weak internal drivers of recovery, lack of notable technological innovations, lower productivity of labor and interest rate hikes weigh on the home-buying demand and property investment. In addition, the long-term rate rises will also increase the debt burden of enterprises and threaten financial stability. According to IMF estimates, the U.S. companies with a total of nearly USD4 trillion in assets will find their balance sheets weakened by soaring costs of borrowings and tight liquidity. 22% of U.S. companies have the poorest ability to pay interest since 2008 when the financial crisis broke out, and 10% of U.S. companies may make a profit insufficient to cover interest expenses.

In terms of slope, the steeper U.S. Treasury yield curve will increase the net interest margin and profit of commercial banks. Given the structure of short-term loans and asset-liability maturity, interest rate hikes help increase NIM income and profitability to provide more supports for the real economy. The U.S. economy will continue its solid growth in the short term thanks to tax cuts and expenditure expansion policies, pulling inflation back to target and further steepening the yield curve, which is in favor of the banking sector. The higher absolute level of long-term interest rates, as an expected result of the Federal Reserve's monetary policy normalization, will curtail overheated inflation and delay economic growth, having both positive and negative effects on the real economy.

Second, capital markets feel more negative than positive effects. The three major U.S. stock indices pulled back sharply in February this year, partially due to the rapid rise in the U.S. Treasury yield. The nine-year U.S. bull stock market amidst the weak economic recovery was driven largely by quantitative easing. The Federal Reserve keeps short-term and long-term interest rates low through rate cuts, massive asset buying and distortions, which have distorted the interest rate pricing mechanism. As excessive liquidity has flocked into the stock market in pursuit of higher yield, the stock market has kept expanding with its valuation deviating gradually from the real economy. Currently the situation is changing gradually, including the gradual rise in long-term yield. If the Federal Reserve raises interest rates too fast, the U.S. economic growth might slow down and the asset bubbles may burst at a faster rate. The bond price goes in the opposite direction of bond yield, so the bond price will decline as the long-term yield rises. Bond holders will suffer valuation and book loss, which will hold back bond demand and reduce bond issues. To fund the gradually expanding public spending and fill the fiscal gap, the Treasury yield will further move up and switch from the bull market to the bear market.

Third, the effects on the foreign exchange market depend on various relevant factors. Now the United States has entered the cycle of rising interest rates. But the Eurozone and Japan have not exited from the quantitative easing policy and will not start the interest rate hike process in the short term, with a slower pace of long-term rate rises than in the United States. In terms of the correlation between exchange rate and interest rate, the widening long-term interest rate spread between the United States and European or Japan will shore up the USD exchange rate and keep the bottom of U.S. dollar index. The recent escalation in the U.S. trade protectionism and "de-globalization" leads to uncertainties in global recovery and strong risk aversion worldwide. Trump's announcement of import tariffs and the resignation or dismissal of cabinet members, including Gary Cohn and Rex Tillerson, triggered noticeable volatility of exchange rates. The U.S. dollar index faces a pressure of short-term correction. In the environment of a trade war, the United States might receive retaliations and counter-sanctions from major trade partners, and see faster export decline than import contraction and continuing expansion of trade deficits, which will become a drag on the U.S. dollar index. As the U.S. dollar index is already in a correction, taking into account the expected tightening of both monetary policy and trade policy in the future, the U.S. economy will possibly embrace a short-term upturn and a long-term downturn, with the U.S. dollar index highly probable to move downwards gradually.

V. Brexit and Remaking of European Financial Center

In the Brexit negotiations, the U.K. hoped to separate service trades from goods trade, in an effort to best facilitate its financial services' entry into the European continent after its exit from the EU.

The U.K. Chancellor Philip Hammond said that "it is very much in our mutual interest for the EU and U.K. to secure a trade deal that includes financial services". But the EU argued that the U.K. only enjoys "equivalence" clause the EU offers to non-EU members (i.e. the free trade between the U.K. and EU members is conditional upon full proof that laws on the two sides have equivalent effects). But that clause has its biggest shortcomings in that the EU members allow the cancellation of an agreement with a third-party country by a 30-day prior notice, which casts doubt on the stability of the U.K. providing financial services to the European continent.

After the U.K. announced the Brexit referendum result, many large financial institutions started to weigh their options. Once the U.K. leaves the single market, many financial institutions based in London as their European headquarters will lose their "passporting" rights in other 27 EU members. That means financial institutions headquartered in London have to reapply for licenses to continue to sell financial products and services to the European continent. In this regard, the U.K. financial community has taken early steps to adjust their business structure for readiness to withdraw from the EU steadily. The battle for the new financial center of the EU is going on.

Now Frankfurt pulls ahead in the competition for the EU's new financial center. Most financial institutions, especially the largest few U.S. banks, plan to transfer part of their people to Frankfurt. Germany is the most dynamic engine of the European economy, so Frankfurt has a firm and enormous economic footing. Besides, Frankfurt is already home to numerous financial institutions. Eight of the top ten banks in the City of London have branches in Frankfurt, and six of the largest ten insurance institutions have branched in Frankfurt or Munich. Moreover, German financial practitioners generally have good English proficiency, which will simplify the job transfer process. Another key reason is that, as Frankfurt is the seat of the European Central Bank, the prevailing trend of single financial supervision highlights the importance of keeping a close tie to the ECB.

Paris is considered the No. 1 rival for Frankfurt now. In particular, Makron's victory in the French presidential election has fully eliminated the wide concern over political instability in Paris. In addition, the new French government started to promote Paris as the top financial market of the EU since early July 2017 and announced a series of supporting measures, including enacting a more flexible employment law, tax cuts and airport upgrades. Also, French regulators have good qualifications. Paris is home to 5 of the top 20 European banks and 3 of the world's largest 25 insurance companies. Paris is also the largest asset management center on the European continent, with the assets under management amounting to EUR3.6 trillion, second only to London. The incumbent French President Makron's planned reforms will further improve the outlook of Paris as a financial center.

Dublin, the capital of Ireland, also joins the competition. The largest strength of Dublin lies in its similar legal system to the U.K. as well as the same time zone and language as London. The exceptionally low corporate tax rate of 12.5% is very attractive to foreign investors. Its weaknesses are also evident: underdeveloped infrastructure and weak regulatory capabilities. The operating expenses of a Dublin-based company are only 80% of the European average, partially due to the much lower rental cost than that in Paris and Luxembourg. With such notable advantages in location and taxation, we believe that Dublin will attract large banks to relocate more specialty businesses or back-office operations from London to Dublin.

Other participants in the competition also have their advantages that should never be underestimated. Luxembourg has traditional strengths in taxation that are always highly attractive to financial institutions and bankers, but it might get overloaded because of less developed real sectors of economy. Amsterdam boasts a major air, land and ocean transport hub in Europe, but its financial sector is relatively small in size and imposes a strict ceiling on salaries and benefits. Warsaw provides cheaper human resources, but the business environment and infrastructure in the Eastern Europe are not suitable for front-office marketing. Even so, many large banks have outsourced their back-office operations and IT services to Warsaw.

London remains the world's top financial center, though its status as the financial center has been weakened to some degree due to the loss of "passporting" rights, which have benefited other EU members to various extents. The *Global Financial Centers Index 22* published in September 2017 still puts London in the first place among the world's financial centers. Frankfurt is ranked 11th, up 12 notches from the previous issue. Luxembourg, Paris and Dublin are ranked 14th, 26th and 30th respectively.

London will remain the leading financial center of Europe after Brexit. London is a large venue of foreign exchange transactions. The U.K. accounts for 70% of euro-denominated interest rate swaps, and 82% of over-the-counter EUR interest rate derivatives transactions. Most USD foreign exchange and interest rate products are traded in London only, at much lower costs than in other European financial centers, which is very attractive to investors. 19 EU banks renewed their licenses with the British Prudential Regulation Authority in 2017. It is estimated that major U.K.-based banks will move less than 4,600, which is 6%, of their employees out of London. Some banks have decided to expand their London business, considering Brexit a better development opportunity. For example, Wells Fargo bought an office building that can houses over 800 people in the London downtown for GBP300 million shortly after the Brexit referendum, in a bid to further tap into the London market. The Netherlands' ING Group believed that London will remain the world's crucial financial center with unrivaled talent pool and market strengths, whether the U.K. goes for a "hard Brexit" or not.

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