転換点の近付く世界景気

先進国と新興国それぞれの課題

The Global Economy Approaching a Turning Point

— Challenges for developed countries and emerging countries —

Occasional Paper No.37

IIMA
Institute for International Monetary Affairs

公益財団法人 国際通貨研究所
Institute for International Monetary Affairs

はじめに

緩やかな拡大を続けてきた世界経済は、景気循環上、2019年内にも転換点を迎える可能性が高まっており、各国の成長率見通しも軒並み下方修正されてきています。喫緊では、米中間からグローバルに拡大する貿易・通商摩擦や英国のEU離脱問題などが、世界経済全体にさらなる下振れリスクをもたらしています。また、中長期的にみても、先進国と新興国はともに、成長の持続と金融の安定に向けて構造的な課題を抱えていると言えます。

以上の問題意識をもとに、国際通貨研究所では2月25日に「転換点の近付く世界景気 ～先進国と新興国それぞれの課題～」と題するシンポジウムを開催いたしました。本シンポジウムでは、国内外から著名な専門家をお招きし、各国・地域の現状を踏まえたうえで議論していただきました。

本稿は、同シンポジウムにおける各パネリストのスピーチおよびパネル・ディスカッションでの議論を記録にまとめたものです。ご関心のある皆様方の今後のご考察への一助になれば幸いです。

2019年8月
公益財団法人　国際通貨研究所

Preface

The global economy maintains a moderate growth but it is widely expected that it will come to a cyclical turning point sometime in 2019, and downward revisions in the GDP growth outlook are expanding among countries and regions. At the present time, trade friction expanding from the U.S. and China to the world and the withdrawal of the UK from EU pose further downside risks to the global economy. Also, in the medium to long term, both developed and emerging countries have structural challenges towards sustained growth and financial stability.

With these points in mind, the Institute for International Monetary Affairs held on February 25 a symposium titled “The Global Economy Approaching a Turning Point —Challenges for developed countries and emerging countries—”. We invited prominent experts from home and abroad and we had the pleasure to have very active discussions on the basis of current situations that the panelists represent, namely, Japan, the US, the EU, and Asia including China.

This is a record of speeches of the panelists of the symposium and discussions in the panel discussion session. We would be happy if this will be of some help to those who are interested in the issues concerned.

August 2019
Institute for International Monetary Affairs

パネリストの略歴／Profiles

白井　さゆり
慶應義塾大学総合政策学部教授、
元日本銀行政策委員会審議委員

Sayuri Shirai
Professor, Keio University,
Former Member of Policy Board, Bank of Japan

日本銀行政策委員会審議委員（2011-2016）を経て、慶應義塾大学総合政策学部教授（現職）及びアジア開発銀行研究所客員研究員（現職）。コロンビア大学大学院・経済学研究科博士課程修了（Ph.D）。近著「Mission Incomplete: Reflating Japan's Economy」（改訂版、2018）の他、日本経済、金融政策に関するコメンテーターとして内外のテレビ番組等にも多数出演。

Dr. Shirai is a professor of Keio University and a visiting scholar at the ADB Institute. She holds Ph.D. in economics from Columbia University. She was a Member of the Policy Board of the Bank of Japan (BOJ) in 2011-2016. Her recent book is Mission Incomplete: Reflating Japan's Economy published by the ADB Institute (the second edition, 2018). She regularly appears on Bloomberg Live TV program, CNBC TV program, and various Japanese TV programs as a commentator on Japanese economy and monetary policies.

ゲルトルーデ・トゥンペル・グゲレル
元欧州中央銀行（ECB）専任理事

Gertrude Tumpel-Gugerell
Former Member of the Executive Board,
European Central Bank

元欧州中央銀行専任理事（2003 -2011）、元オーストリア中央銀行副総裁（1983 -2003）。
2014 年、欧州委員会のユーロ圏共同債・専門家検討グループ議長。現在、オーストリア経済研究所名誉コンサルタント、Commerzbank 等の社外取締役を務める。2013 年より三菱 UFJ フィナンシャル・グループのグローバル・アドバイザリー・ボード委員。

Dr. Tumpel-Gugerell is a former Executive Board Member of the ECB and former Vice-Governor of the Austrian Central Bank. In 2014 she chaired the Expert Group of the European Commission on Debt Redemption Fund and Eurobills. In 2017 she published the Evaluation Report on the European Stability Mechanism. Currently she is Emerita Consultant at the Institute for Economic Research in Vienna, non-Executive Director at Commerzbank AG, OMV AG and VIG AG in Frankfurt and Vienna. Since 2013 she is Member of the Global Advisory Board of MUFG.

タリサ・ワタナゲス
元タイ中央銀行総裁

Tarisa Watanagase
Former Governor, Bank of Thailand

元タイ中央銀行総裁（2006 – 2010）。同銀行に 35 年間勤務し、IMF にもエコミストとして出向。1997 年のタイ通貨危機及びその後の対応において、同国の金融監督や決済システム等を含む金融セクター改革に尽力。

Dr. Watanagase had a 35 year career with the Bank of Thailand (BOT) and was Governor between 2006 -2010. She was instrumental in the 1997 Thai crisis resolution and the ensuing supervisory and financial sector reforms, the modernization of the Thai payment system and the passage of the new BOT Act in 2008, which guarantees central bank independence. Dr. Watanagase also worked as an economist at the IMF and as a short-term consultant/advisor to the IMF, World Bank Group and regional central banks.

エレン・ゼントナー
モルガン・スタンレー 米国担当チーフエコノミスト

Ellen Zentner
Chief U.S. Economist, Managing Director,
Morgan Stanley

2013 年にモルガン・スタンレーに入社し、現在、米国担当チーフエコノミスト。ニューヨーク連邦準備銀行、シカゴ連邦準備銀行及び米国銀行協会の諮問委員会メンバー。全米企業エコノミスト協会（NABE）及び NABE 財団の理事。コロラド大学及び同大学院にて経営学士、経済学修士を取得。

Ms. Zentner is Chief US Economist and a Managing Director at Morgan Stanley, joining in 2013 from Nomura Securities International. Ms. Zentner serves on the Advisory panel for the Federal Reserve Banks of New York and Chicago, as well as the American Bankers' Association. She is a Director of the National Association for Business Economics (NABE) as well as the NABE Foundation. Ms. Zentner holds a Bachelor of Business Administration and a Master's Degree in Economics from the University of Colorado.

(アルファベット順／In alphabetical order)

渡辺　博史
国際通貨研究所　理事長

Hiroshi Watanabe
President,
Institute for International Monetary Affairs

1972 年東京大学法学部卒業、同年大蔵省（現財務省）に入省。主税局税制第三課長、同第二課長、大臣官房秘書課長、大蔵大臣秘書官などを経て、国際局長、財務官などを歴任。2007 年退官後、一橋大学大学院教授、日本政策金融公庫代表取締役副総裁、2013- 2016 年国際協力銀行総裁。2016 年 10 月より現職。

Mr. Watanabe after graduating from the University of Tokyo joined the Ministry of Finance (MOF) in 1972. Before retiring as Vice Minister of Finance for International Affairs in 2007, he occupied various senior positions in the Taxation Bureau and others at the MOF. He later took high positions in the Japan Policy Bank and the Japan Bank for International Cooperation (JBIC) before his appointment as the President of JBIC in 2013. Since October 2016 he has been the President of the IIMA.

倉内　宗夫
国際通貨研究所　専務理事

Muneo Kurauchi
Managing Director,
Institute for International Monetary Affairs

1978 年慶應義塾大学卒業後、東京銀行（現三菱 UFJ 銀行）入行。国際プロジェクト部、ニューヨーク勤務などを経て、常務執行役員名古屋営業本部長、専務執行役員国際部門副部門長などを歴任。2014 年 7 月より国際通貨研究所専務理事。

Mr. Kurauchi joined the Bank of Tokyo (presently the MUFG Bank, Ltd.) in 1978. He took up many important posts including Deputy Chief Executive of Global Business Unit of the MUFG Bank, Ltd. as Senior Managing Executive Officer. Since July 2014, he has been Managing Director of the IIMA.

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本シンポジウムは主に英語で行われました。日本語版は英語での記録を当研究所で翻訳したものです。内容については、英語版が日本語版に優先します。
The Japanese version is based on the transcript of the speeches and discussions which were mainly conducted in English. Regarding the contents, the English version takes precedence over the Japanese version.

英語版

English Version

Occasional Paper No.37

The 27th International Financial Symposium

The Global Economy Approaching a Turning Point

—Challenges for developed countries and emerging countries—

February 25, 2019
Keidanren Kaikan

Institute for International Monetary Affairs

Contents

1. Opening Remarks
Muneo Kurauchi, Managing Director, IIMA

Good afternoon, ladies and gentlemen,

Thank you very much for coming to our international financial symposium, titled “The Global Economy Approaching a Turning Point—Challenges for developed countries and emerging countries—.” Today we are very pleased to have a privilege to share a moment with you to reflect on the challenges and prospects for the individual regions of the world economy which may hit a cyclical turning point from now on to 2020.

In the first place, to provide some common perceptions for the discussion, let me start by reviewing briefly the current situation of the global economy and presenting some points of issues.

1. Current Situation of the Global Economy —increased concerns over its future developments

The global economy continued to expand until recently, but since the second half of 2018 its growth estimates started to differentiate among the countries and regions with some of the countries showing a clear sign of slowdown. For example, according to the revised IMF (International Monetary Fund) World Economic Outlook published in January this year, the global growth outlook was revised downward to 3.5%, lowered by 0.2% from the October 2018 forecast reflecting weaker growth mainly in the euro area and, especially, Turkey.

There is a view that the economies of individual countries and regions will hit a turning point some time from now to 2020. The sharp fall of stock prices toward the end of last year may have been a little bit excessive, but it should be noted that such concerns for the future also exist widely in the international financial market.

2. Backgrounds of concerns over the future of the economy —4 suggested issues for discussion

Then, what are the background factors behind the concerns that the international financial market has over the future of the global economy? We think issues to be reviewed in relation to the global economy may include the following four points.

(1) Protectionism in the United States

The first point of issue is the protectionism in the United States. The brunt of its attack has been aimed at the NAFTA (North American Free Trade Agreement) as well as Europe and Japan, but especially growing is the concern over its trade tensions with China. There is even a view emerging that the conflict between the United States and China has not been limited to trade but it has now become a comprehensive and long lasting one that extends to high technology and security issues. Currently the two countries are making last minute negotiations to avert the tariff increases scheduled at the beginning of March.

There are mainly three channels through which protectionism brings about negative effects on the economy of individual countries. First Channel is contraction of the United States (U.S.)-China trade due to tariff increases, Second channel is contraction of trade between China and the third countries through global value chains, however, the third countries may sometimes have a positive effect due to a trade conversion effect, and Third channel is deterioration of corporate investment incentives and financial market sentiment reflecting higher uncertainties about the future of the economy.

Among these, the most alarming is the third channel, and it was one of the reasons for the temporary but sharp fall of stock prices witnessed toward the end of last year. The World Economic Outlook released last autumn by the IMF and the OECD (Organization for Economic Co-operation and Development) estimated that the third channel would dampen the global real GDP (Gross Domestic Product).

(2) Slowdown of the Chinese economy and policy responses

The second issue is a possible slowdown of the Chinese economy and the government's policy responses. The slowdown of the Chinese economy became clear last year as growth in capital investment weakened due to deleveraging and measures to address non-performing loans. The growth rate for 2018 slowed to 6.6%, the lowest in the past 28 years. Currently the decreasing exports due to the U.S.-China trade tensions are weighing on the economy. The drop of birthrate for 2018 to the lowest level since 1980 also constitutes a source of concern from a long-term perspective.

Accordingly, the government made it clear in the second half of last year that it intends to support the economy by taking fiscal stimulus measures and accommodative monetary policy. Actually it expanded the reduction of personal tax rates and in January this year it announced a tax reduction program targeted at small and medium companies.

To these situations, however, there have been two things pointed out. Firstly it is unclear whether the policy responses of the Chinese government are enough to underpin the economy amid the intensifying and protracted U.S.-China confrontations. Secondly even if it takes policy measures sufficient to support the economy, there remains a concern that it may lead to a postponement of the structural reforms that should be tackled. One: Deleveraging without systemic financial turmoil; Two: Addressing non-performing loans without slowing down financial sector reforms, and Three: Reform of funding scheme of local governments and decisive measures to improve efficiency of State Owned Enterprises.

(3) Political uncertainties in the leading EU (European Union) countries

The third point is that all of the leading countries in the EU have been saddled with political uncertainties.

Regarding the issue of Brexit, it is still uncertain whether or not "No Deal Brexit" can be avoided, and we must admit that it has become even more confusing.

At a moment like this, stronger leadership of Germany and France that lead the EU will be all the more desired, but German Chancellor Merkel stepped down from the top of the ruling party, CDU (Christian Democratic Union of Germany) at the end of last year. Although she was succeeded by her loyalist Ms. Kramp-Karrenbauer, the unifying power of Merkel herself has been declining. In France, big waves of protests repeatedly occurred in November and December last year, forcing President Macron to withdraw various reform agendas. Without leadership of these two countries, it will be difficult to secure the political and economic stability of the EU as a whole. In Italy, the coalition government belongs to the Eurosceptic group and it faces with problems of budget deficit as well.

An election for the European Parliament is scheduled in May, in which it is forecasted that populist ultra-right parties will gain increased number of seats. This may also lead to an intensified uncertainty.

(4) Policy responses to downside risk in emerging markets

The fourth issue is the downside risk in emerging markets associated with the changes in the monetary policy in advanced economies, such as rate hikes by the Fed and the end of asset purchasing program by the ECB (European Central Bank). This risk was strongly felt in the middle of last year when the financial and exchange markets in Turkey and Argentine were thrown into turmoil. Although speculation on the rate hikes by the Fed has receded more recently, given the protectionism in the United States and slowdown of the Chinese economy, continued attention should be given to the risks of market adjustment in emerging economies.

Then the question is what kind of policy responses the authorities in each country and region can take when this risk actually materializes. Ideally, it would be desirable for them to take immediate internationally coordinated actions, but it remains unclear whether advanced countries can take appropriate financial and monetary policies giving considerations to the emerging countries, for example, earlier termination of rate hike process by the Fed or postponement of start of rate hikes by the ECB. Further, it is also a point of issue whether the ASEAN (Association of Southeast Asian Nations) countries have accumulated enough buffers of international reserves or whether the Chiang Mai Initiative can be timely activated at a time of need.

In addition to the issues mentioned so far, G20 (Group of 20) and others have pointed out crypto-assets or virtual currencies as a potential risk that needs vigilant monitoring. They see a problem in their low liquidity and high volatility. Also they point out other challenges. Those are the need for consumer and investor protection, and AML/CFT (Anti-Money Laundering and Countering the Financing of Terrorism) regulation and supervision.

There is no end to the issues surrounding the global economy and finance, but I will stop my remarks here, and would like to listen to the presentations by the panelists. Now, ladies and gentlemen, please enjoy the symposium with thought-provoking arguments by the distinguished panelists. Thank you very much for your attention.

2. Opening of Symposium
Hiroshi Watanabe, President, IIMA

Thank you very much. Welcome ladies and gentlemen to our symposium. Today we are going to have very deep discussions with, as you see, four excellent lady panelists. Unfortunately I don't belong to the same gender but anyway we will have good discussions.

From my right from your view is Ms. Ellen Zentner from the U.S., Ms. Gertrude Tumpel-Gugerell from Austria, Ms. Tarisa Watanagase from Thailand, and Ms. Sayuri Shirai from Japan. In this order we will like to hear the presentation of each panelist and after that we are going to have a panel discussion in about an hour and a half from now. So first I would like to hear about the U.S. situation. Now the U.S. market is our main concern. President Trump sends out many Twitters at night and it has some kind of impact on the market, which may impact the U.S. monetary policy. And the U.S. monetary policy would have some impact on the other countries, not only developed economies but also developing economies. I would like to hear Ellen's view on this.

Ellen Zentner is Chief U.S. economist and Managing Director at Morgan Stanley. She joined the institution in 2013 and also she served as an Advisory Panel for the Federal Reserve Bank of New York and also Chicago, and as well as for the American Bankers Association. She also is the Director of National Association for the Business Economics as well as the NABE foundation. So we are very much looking forward to hear your view. Ellen, floor is yours.

3. The U.S. Economy and Financial Circumstances

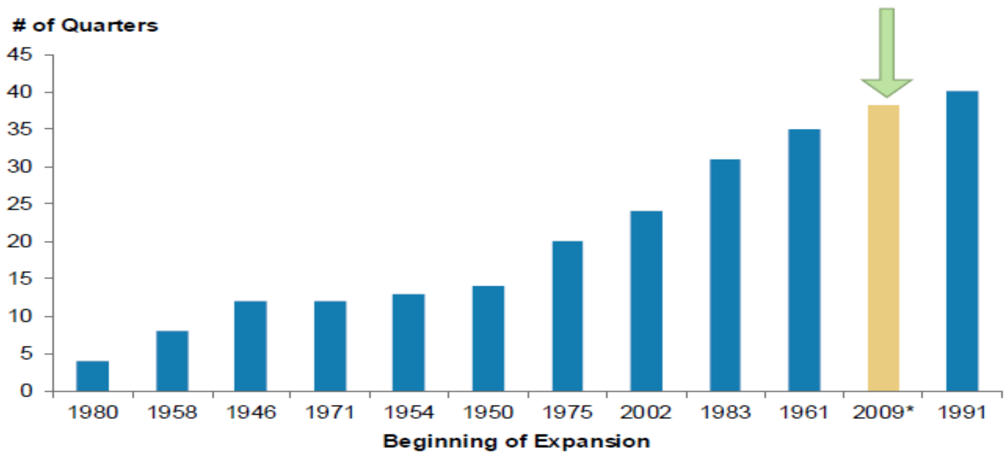
Ellen Zentner, Chief U.S. Economist, Managing Director, Morgan Stanley

Good afternoon. Thank you for inviting me today, and I first just want to apologize for the lack of diversity on our panel up here as I know that's a sensitive issue.

Today, I am going to focus my remarks on the outlook for the U.S. economy, first by providing some context around the extraordinary length of the current expansion. And secondly, I'm going to discuss current economic conditions followed by the outlook for growth and inflation, and what policy actions U.S. monetary policymakers may take.

So first, what I think about the current economic cycle. Exhibit 1 charts the length of post-World War II expansions. As you can see, the current expansion is already the second longest on record. In June of this year, the current expansion will become the longest U.S. expansion on record. As we approach that mark, we also face heightened concerns about recession in the U.S. Some of those concerns are warranted. Growth in the U.S. is still constrained by an aging population, lack of investment, and scars left by the financial crisis. These factors are just a few that have led to subpar growth for far longer than we had become accustomed to. It is also important to note that a long period of subpar growth is normal in the wake of financial crises.

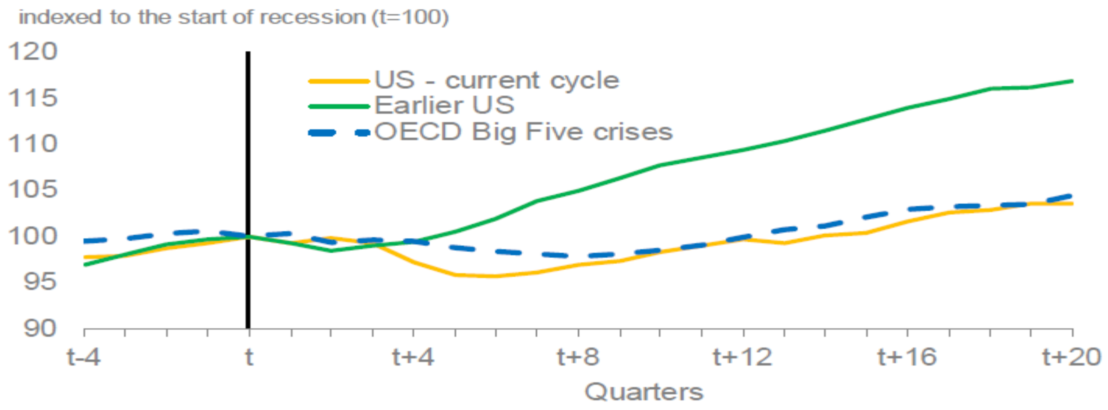
Exhibit 1. The Length of Post WWII Recessions



Note: Comparison is to expansions post-WWII. * indicates current expansion through 4Q 2018.
Source: National Bureau of Economic Research, Morgan Stanley Research

Exhibit 2 compares the current U.S. cycle to the average cycle over the last 10 recessions, as well as to the OECD Big Five financial crises as first identified by Kaminsky and Reinhart. Despite its length, the backdrop of the current economic expansion continues to produce subpar growth. But, it's tracking very closely with earlier post-crisis recoveries.

Exhibit 2. Real GDP Around Recessions and Financial Crises



Note: "Earlier" is the average of the last 10 recessions; OECD Big Five financial crises first identified by Kaminsky and Reinhart (1999); Countries are Spain (1977), Norway (1987), Finland (1991), Sweden (1991) and Japan (1997). We use 1997 for Japan (as opposed to 1992) as this was the start of the most intense phase of the financial crisis there.
Source: OECD, Morgan Stanley Research

This is just to say that this time is actually not different, but actually fairly normal. The U.S. economy is flying closer to the ground in this expansion and as such smaller hits than before can lead to a downturn.

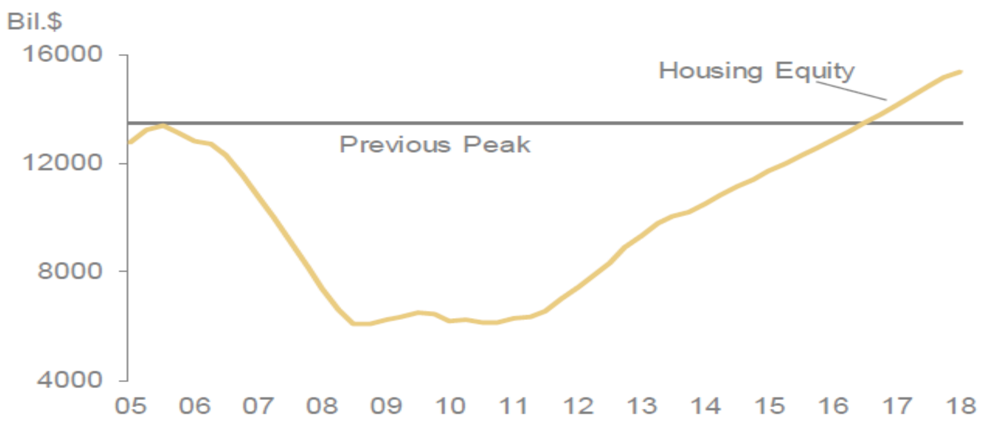
Now other concerns that are driven solely by a time-stamp are overblown in my view. So, those will be the concerns we are going into recession simply because it is a 10-year long expansion. In the words of former Fed Chair Janet Yellen, "The fact that this has been quite a long expansion doesn't lead me to believe that…its days are numbered."[1]

Instead, recessions tend to be preceded by a period of overheating, which in turn requires a more aggressive monetary policy response. So, when I am scanning across key sectors of the U.S. economy, I see little sign of overheating today. Exhibit 3 shows the housing perspective. This illustrates one key sector that only just reached its previous peak in equity in 2017, and the national average home price is only 5% above its previous peak and that's more than 12 years later. That's in nominal terms, if you look at it in inflation-adjusted terms, home prices are still well below the previous peak. As you can see, it's been a quite sluggish housing recovery, but that also means housing is far from overheating. Now, the pace of job creation has been extraordinary, driving

[1] Transcript of Chair Yellen's Press Conference, Dec.16,2015

the unemployment rate down to nearly 20-year lows. Yet, wage growth, though climbing, remains well within the normal range dictated by trend productivity and inflation. Indeed, tight labor markets have had little effect as yet on inflation in the U.S., owing to a very flat Phillips curve as depicted in Exhibit 4. The persistence of inflation or how long any given change in inflation tends to linger—has also fallen.

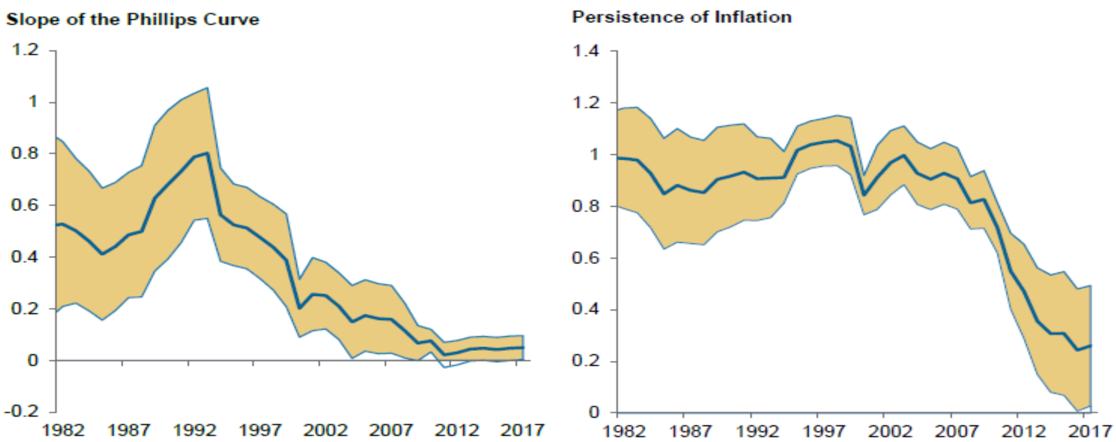
Exhibit 3. Slow Recovery in Housing Equity



Source: Federal Reserve Board data through 3Q18, Morgan Stanley Research

Exhibit 4. The Phillips Curve Is Flat

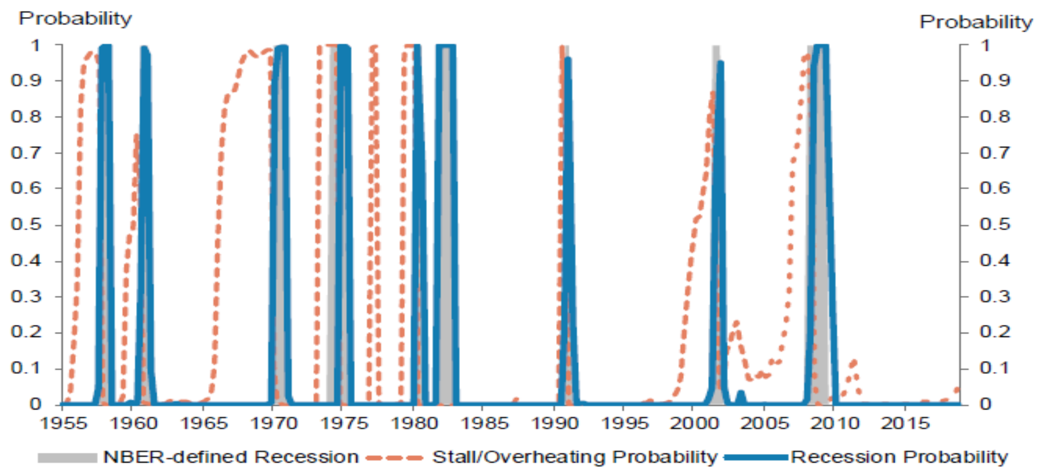
"…many factors, including better conduct of monetary policy over the past few decades, have greatly reduced, but not eliminated, the effects that tight labor markets have on inflation."



Note: See Chairman Jerome H. Powell, Monetary Policy and Risk Management at a Time of Low Inflation and Low Unemployment, October 2, 2018.
Source: Federal Reserve, Morgan Stanley Research

Now, we have a probability recession model at Morgan Stanley and we call it our Dual Mandate Model or DMM, and it's because it tries to capture overheating in the economy from the Fed's Dual Mandate stand point. So, using the DMM we calibrate the recession risk posed by rising inflation. It is anchored in the view that Fed tightening sets the stage for most recessions. Our two model inputs, "the unemployment rate" and "year-over-year total PCE price inflation", mirror the Fed's dual mandate of maximum sustainable employment and price stability. With inflation low and stable, and continued downward movement in the unemployment rate, the DMM continues to see a low probability that the economy has moved into the stage of overheating that precedes recessions as shown in Exhibit 5.

Exhibit 5. DMM Points to a Low Probability We Have Entered the Overheating Phase



Source: Federal Reserve Board data through 3Q18, Morgan Stanley Research

In Exhibit 5, you can see to the far right that the recession probability remains quite low today because we see the probability that we moved into the overheating stage of the economy as being low, so that is to say, we do expect this to become the longest expansion on record as we expect it to move past June of this year.

Now, let me talk about current economic conditions. In these early days of 2019, the economy is off to a slow start following on the heels of 3 percent growth in 2018. The domestic economy is likely to grow as low as 1 percent in the first quarter, owing to the prolonged partial government shutdown that lasted 35 days, the Polar Vortex, if you watch the news here it reported on global weather conditions we had record low temperatures at least the lowest level since the 1990s in January, and a cautious consumer on the back of heightened market volatility and importantly policy uncertainty. The FOMC (Federal Open Market Committee) has responded to a sharp tightening in financial conditions by interrupting its hiking cycle and awaiting data that confirm its outlook has not been damaged before it can proceed.

Now, a more uncertain outlook wasn't the only factor driving the Fed's decision to be more patient at its January meeting. Muted inflation pressures also played an important role such that "the case for raising rates has weakened," according to Chair Powell[2].

While the economy may be off to a slow start, economic activity has by no means collapsed. In January, the labor market experienced net job creation of over 300,000 and a meaningful rise in labor force participation. Measures of consumer and business sentiment, as well as capital expenditure plans have also stabilized around more normal expansionary levels following what had been consistent declines in late 2018 as unsustainably high readings moderated on the back of fading stimulus and payback from the front-loading of activity ahead of tariffs.

Looking ahead, I anticipate a rebound in GDP in the second quarter from the transitory factors I've noted previously. Moreover, with the Fed on hold, financial conditions have eased since the turn of the year, and we expect this easier set of conditions to support growth. Inflation in our forecasts, however, remains little changed for some months to come and so we expect the Fed to remain patient this year.

Now, let me turn to the outlook and how I'm looking at the economy and growth this year. My expectation for 2019 is that the economy expands by 1.7 percent on a fourth quarter-over-fourth quarter basis. This forecast stands in stark contrast compared with 3 percent growth that we experienced in 2018. I see several factors that are weighing on growth this year, and I am going to run through them systematically here.

First, as you can see in Exhibit 6, fiscal stimulus is fading. Last year, we estimated that the Tax Cuts and Jobs Act (or TCJA) plus higher budget caps raised GDP growth by a combined 0.8 percentage points. As I broke it down here on the chart, half a percentage point due to the tax cuts, and three-tenths percentage point due to raising the budget caps. That created eight-tenths of support for the economy last year but that fades to two-tenths of support this year, so that's a six-tenths difference on headline GDP in terms of just direct stimulus we're getting from fiscal policy.

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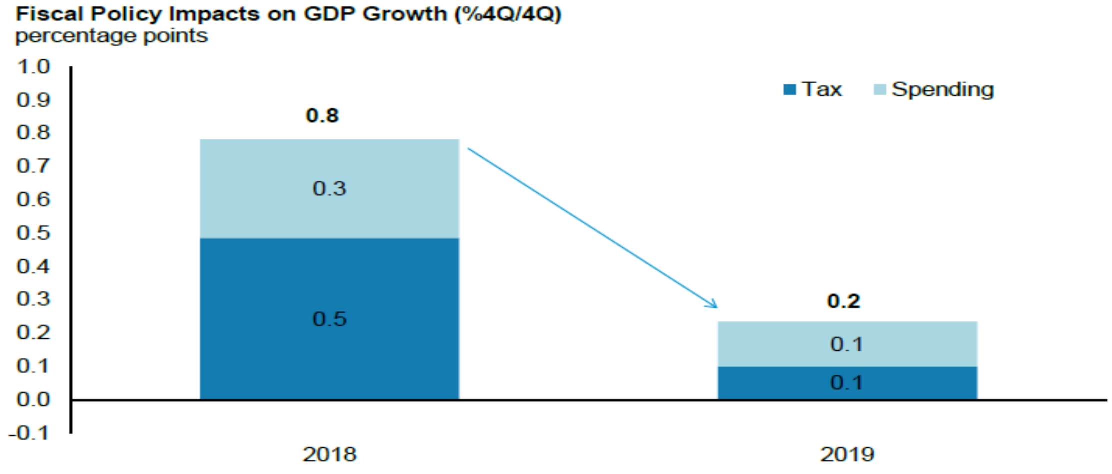
[2] Fed Chair Jerome Powell, transcript from the Jan.29-30,2019 FOMC meeting

Exhibit 6. 2019 Outlook: What's Weighing on Growth This Year?

Fiscal stimulus is fading.

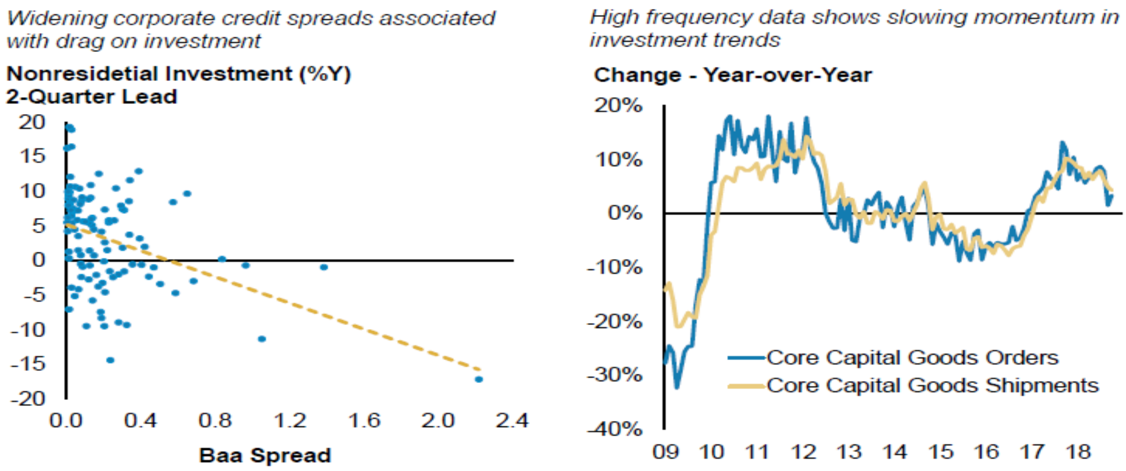


Source: Morgan Stanley Research

Corporate credit spreads are incredibly important to the business investment backdrop in the U.S. (See Exhibit 7). In fact, when you are macro-modeling, credit spreads are more important than what you are assuming about global growth, it is more important than what you are assuming about trade policy, and how that may play out.

Exhibit 7. 2019 Outlook: What's Weighing on Growth This Year?

Uncertainty around trade policy and wider corporate credit spreads are pointing to sluggish investment ahead.



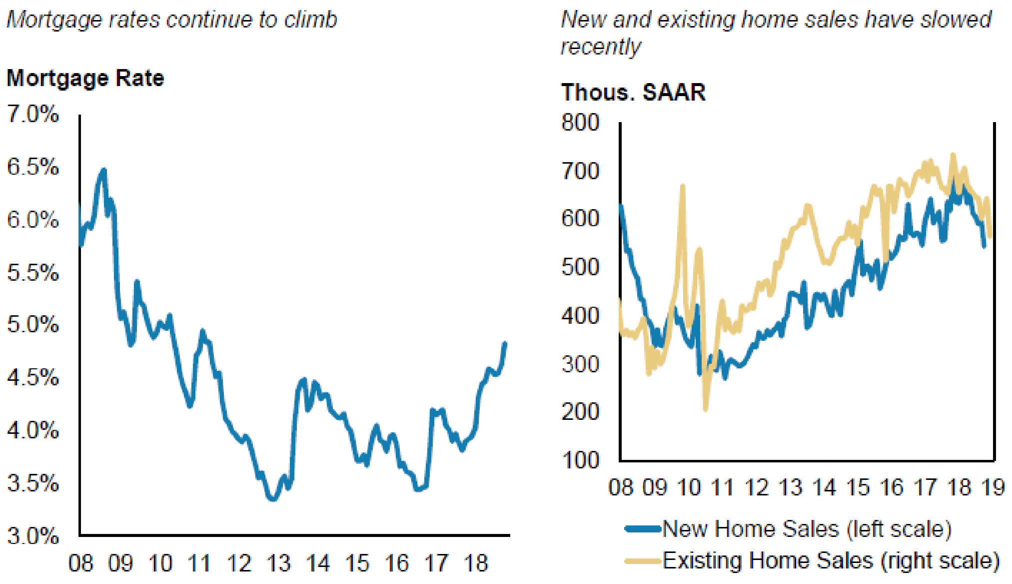
Source: Census Bureau, Bureau of Economic Analysis, Bloomberg, Morgan Stanley Research

Essentially, corporate credit spreads are likely to prevail at wider levels this year compared with last year. This will raise the cost of capital and have a depressing effect on investment and hiring. Forward-looking data within the durable goods report point to slowing in investment. Uncertainty around trade policy of course has also played a role. Furthermore, the anticipation of tariffs actually pulled forward a lot of investment into last year. So, if you looked at the data in the first quarter and second quarter of last year, business investment soared in the U.S. and it was less a factor of the stimulus and more a factor of the global economy getting their goods while the getting was still good, so to speak, trying to get everything before the tariffs went into effect so we are moving through the payback period of that now. But, corporate credits spreads matter the most in terms of the business outlook and it's simply a less supportive environment this year.

Now, responding to an economy operating beyond full employment and well above potential, the Fed raised rates four times last year. The Fed is doing its job. As GDP rose by 3% last year, the Fed needs to slow that growth. They raised rates and the cost of credit, so mortgage rates have risen, housing will slow, so will auto sales and those will not be supportive of growth.

Exhibit 8. 2019 Outlook: What's Weighing on Growth This Year?

Interest rate sensitive sectors will not contribute.

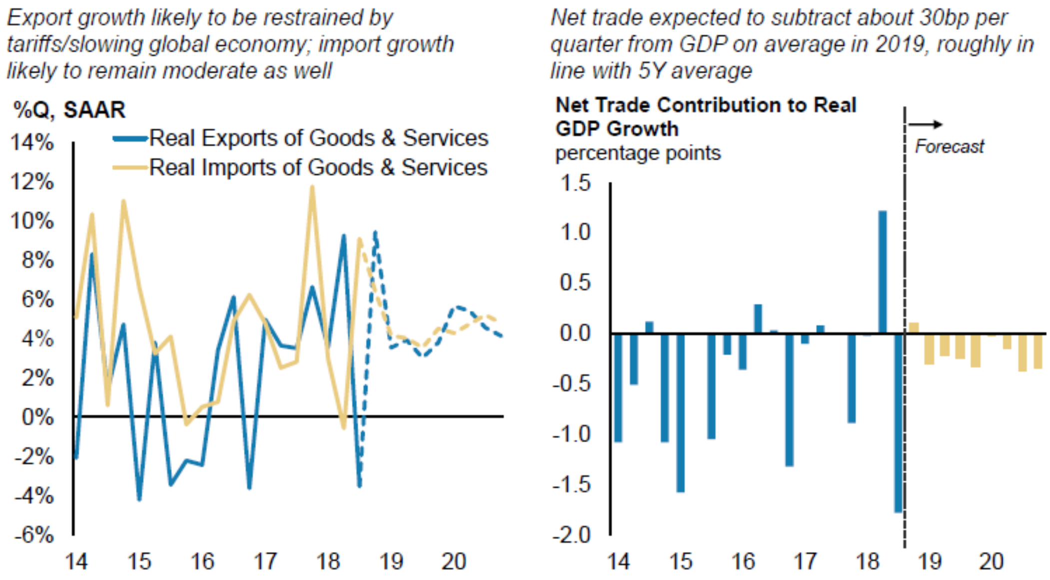


Source: FHLMC, Census Bureau, National Association of Realtors, Morgan Stanley Research

Finally, on the tariffs we expect slower global growth and tariffs to put a dampener on export growth and in the U.S. exports have to double the pace of imports in order to close the trade gap such that trade will weigh on growth.

Exhibit 9. 2019 Outlook: What's Weighing on Growth This Year?

Export growth likely to be restrained by tariffs.



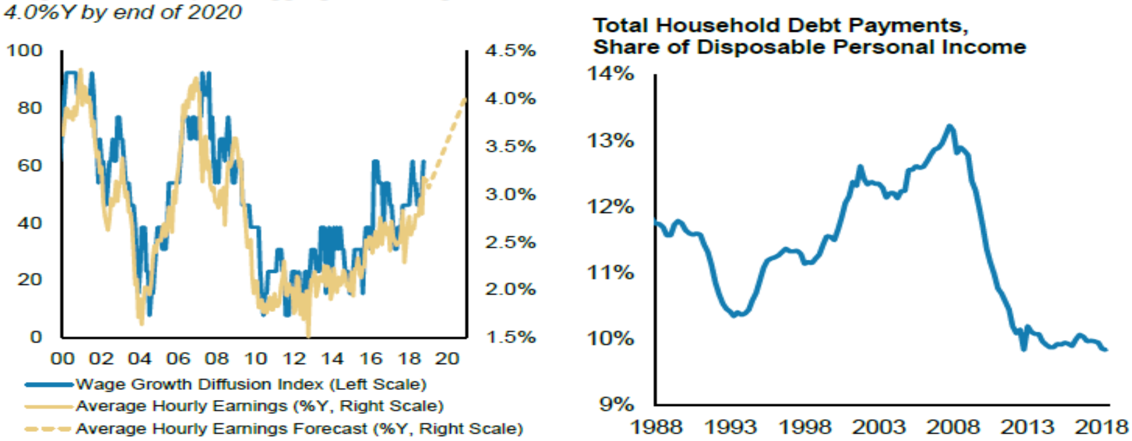
Source: Bureau of Economic Analysis, Morgan Stanley Research

Now, what's bright in the Outlook? I talked a lot about negatives in the outlook, but the household sector is bright in the outlook for the U.S. and luckily that's 70% of our economy, so wage growth is strengthening and it's rising, we expect it to accelerate further this year and next. And, you can see that debt service costs as a share of disposal income are not rising alongside higher interest rates as they normally would, and that's because the bulk of the household balance sheet is locked in at fixed rates. This is very unusual as we normally don't have such a cushion. Household debt tends to be very exposed to variable rate while this time almost all of this is locked in at a fixed rate.

Exhibit 10. 2019 Outlook: What's Bright in the Outlook?

The household sector remains impressively resilient. Wages are rising and the cost of carrying debt is low.

Wage breadth helps lift aggregate earnings to 4.0%Y by end of 2020 | *Debt-service costs are close to all-time lows*



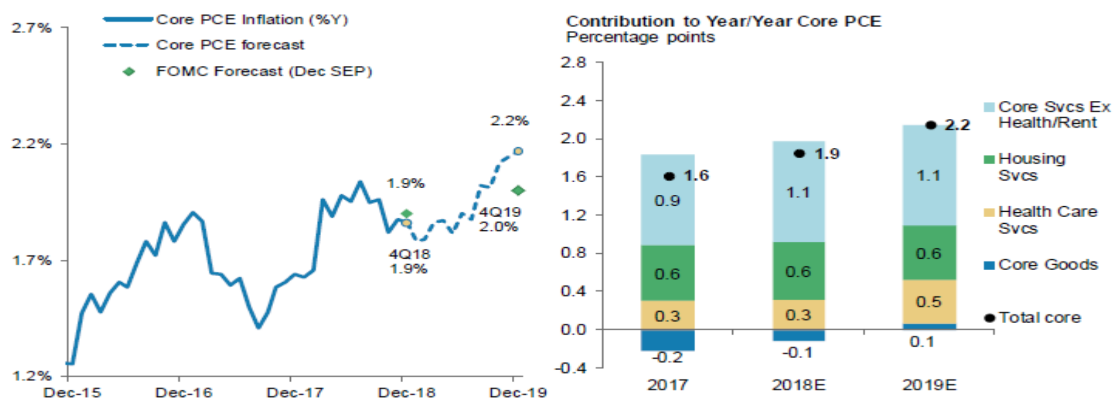
Source: Bureau of Labor Statistics, Federal Reserve, Morgan Stanley Research

Finally, let me move on to inflation and then conclude with monetary policy. Exhibit 11 plots the path for core inflation this year, as well as the contributions to price growth from major sectors. Taking on board the pass-through from tariffs, higher medical price inflation, and upward pressure from a tight labor market, I do expect core inflation will begin rising by the summer even though this year will remain well within the symmetry of the Fed's 2 percent inflation goal.

Exhibit 11. 2019 Outlook: Inflation Rises to 2.2% By Year-end

Tariffs, higher medical price inflation, and upward pressure from a tight labor market work together to push up core prices. The Fed will debate how much is permanent vs transitory.

Core PCE inflation moving up | *Decomposition of core PCE inflation, actual and projected*

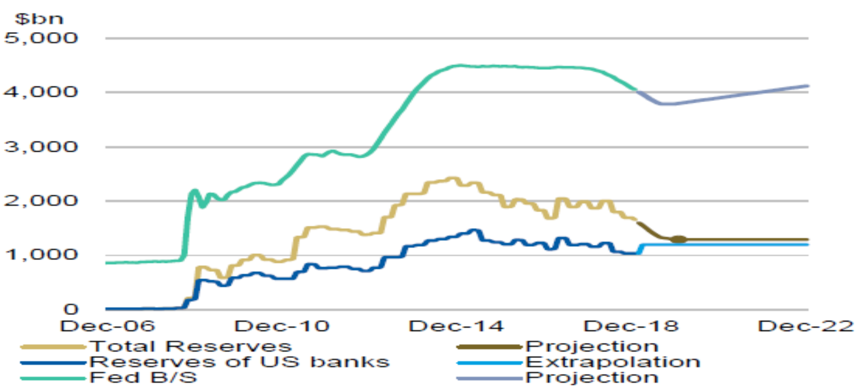


Source: Bureau of Economic Analysis, December 2018 FOMC Summary of Economic Projections, Morgan Stanley Research

Now for monetary policy, the Fed has moved into what we call "its third phase of policymaking" after normalization you move into the phase of managing policy around neutral. The Fed has proved they will remain on the sidelines for as long as needed to manage downside risks to the outlook in the first half of this year, and only moving gradually once there is convincing evidence of rising core inflation supported by sustained GDP growth above potential. This is what we expect in 2020. The balance sheet has also run its course. The minutes of the January meeting showed that they all but formalized an announcement that balance sheet run-off will end late this year. We expect an official announcement to come at their March meeting, the balance sheet, a tapering of normalization will begin on April 1st and end in September. In an effort to maintain the floor system of managing the effective federal funds rate, we expect the Fed to keep enough reserves in the system such that domestic banks can maintain their current holdings of reserves. We also expect the Fed to maintain a buffer of reserves in the system on top of that amount —bringing the total reserves to $1.3 trillion dollars on the Fed's balance sheet and the total size of balance sheet to $3.8 trillion— as depicted here in Exhibit 12. Business and regulatory pressures on bank balance sheets have led the Fed to accept that it will be a larger presence in money markets for as far as the eye can see.

Exhibit 12. 2019 Outlook: The End of Balance Sheet Normalization

Projection under our base case scenario for a September 2019 end to balance sheet normalization.



Source: Morgan Stanley Research

So in conclusion, as the U.S. expansion is set to become the longest in our post World War II history, I see risks both domestically from rising interest rates and fading fiscal stimulus, as well as abroad from slowing global growth and geopolitical tension. But, monetary policymakers have acted swiftly to stem the recent volatile tightening in financial conditions that threatened the outlook, proving again that Chair Powell will do whatever it takes to lengthen the cycle. Thank you.

Mr. Watanabe: Thank you Ellen, she described the current situation of the U.S. Market and also the U.S. economy.

Today February 25th is rather a memorable day for the U.S. financial system. About 160 years ago the first bank license was given in the United States and also on February 25th, 1862, the first dollar Legal Tender Note was circulated. It was the good days but now the U.S. dollar has very much overwhelming impact on the world economy and global market. Afterwards we're going to have much deeper discussion on this in the panel discussion.

The second panelist is Gertrude Tumpel-Gugerell. She is currently Emerita Consultant at the Institute for Economic Research in Vienna. And also she was former Executive Board Member of the European Central Bank between 2003 and 2011, and before that she was the Vice Governor of the Austrian Central Bank up to 2003. Also in 2014 she chaired the Expert Group of European Commission on Debt Redemption Fund and Eurobills. So she has lots of working experience in the turmoil and development stages which has led to the current situation of Europe.

So now Gertrude, floor is yours.

4. European Economy and Financial Circumstances
Gertrude Tumpel-Gugerell, Former Member of the Executive Board, European Central Bank

Thank you very much. I don't want to start with history and talk about banks which were established 500 years ago and what happens to them. It's a pleasure to be here and an honor to contribute to today's seminar.

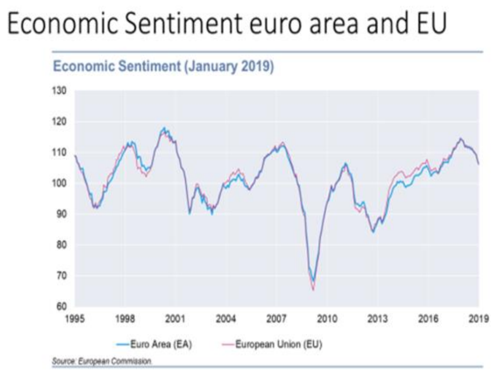
150 years ago Japan entered into diplomatic relations with my home country which was at that time the Austro-Hungarian Monarchy. A beautiful exhibition in Vienna has reminded us recently of the big impact Japanese art and design had on the works of Monet, Degas, Van Gogh and Gustav Klimt.
One month ago the Japan-Europe Economic Partnership entered into force. It can be regarded as an achievement of great economic and rule setting value.

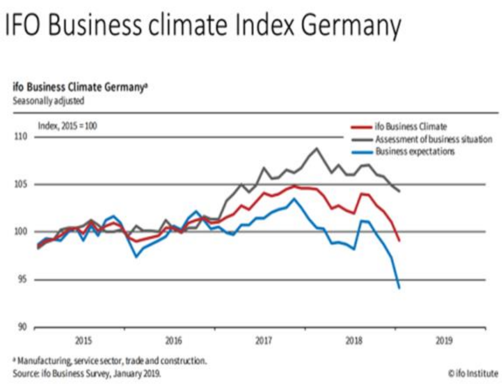
In my intervention I would like to address 3 topics:

- The economic outlook very briefly,
- The cooperation in the euro area between Germany and France, and reform agenda,
- Slowdown as a result of political uncertainty.

Growth in the euro area has moderated in the second half of 2018. According to the Winter Forecast of the European Commission which was published in early February, growth will continue but at a slower pace. The downturn was to be expected after 7 years of growth but it seems to be stronger than foreseen in the autumn forecasts.

Leading indicators like the Economic Sentiment indicator of the EC and the IFO -Business Climate Index based on 7000 interviews with business people in Germany show a continuous deterioration during the last few months. The IFO Index has reached the lowest level in 5 years.



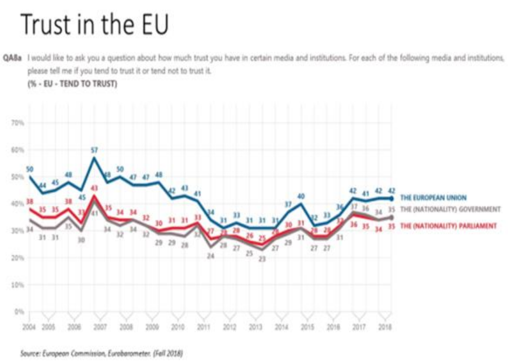


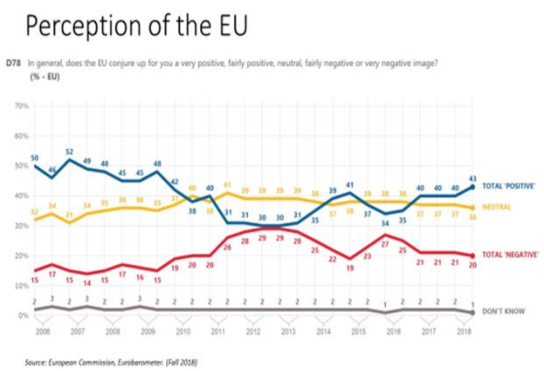
Why is Germany relevant in this context? This is because it is the country most exposed to foreign trade. Uncertainty in trade policies is materializing in weaker trade dynamics already. While uncertainty resulting from U.S. policy changes is one effect, even larger seems to be the impact of slowing growth in China.

Apart from Germany, France, Italy and Belgium have seen similar deterioration in economic sentiment. As we know from previous business cycle turning points, and I have seen various business cycles turning already in my professional life, once a downturn is gaining momentum it has a self-fulfilling element in it.

My second point is cooperation in the Euro area. According to the latest Eurobarometer Survey of November 2018 the confidence in the EU has improved on an aggregate level after the difficult years of the financial crisis.

Nevertheless confidence in a number of countries, especially in the south of Europe and in the UK (United Kingdom) is limited. People who regard the economic situation in their country as bad tend to have less confidence in the EU as well. In the perception of the EU you see a positive trend in the last few years.





Regarding political priorities of the EU, when you ask Europeans, the most important for them is freedom of travel, work, study, and live-abroad has the highest support among the European policy aims, so 83% of respondents say that this is the most important for them. Common Defense and Security Policy have support of 76% of respondents, Energy Policy and Trade Policy more than 70%, Immigration Policy 69%, and Foreign Policy 63%. Digital Single Market is seen as less of an issue although there is of course a policy program there.

“Does the Pillar of European Integration, the alliance between Germany and France still hold?” was one of the questions I got from the organizers.

I was involved in European Policy Making since the late 90s and I am still a close observer of this process. I never had doubts about one fact that there is an alliance between Germany and France, although there are differences in economic ideas, differences in economic concepts but also differences in personalities. But there is a strong, let's say awareness of the importance of this alliance.

A month ago Chancellor Merkel and President Macron have signed the Treaty of Aachen or Aix la Chapelle as it is called, it is a strong commitment to further integration, coordination and cooperation.

Will we see concrete results of this agreement? We have to be patient, because major institutional achievements were made during and after the crisis: The establishment of the European Stability Mechanism, the Banking Union, and an additional Fund for Investments. Last December a first step in the direction of a Common Budget was made as well as a backstop for the common banking restructuring Fund (SRF) was decided. I think it is an important step for the confidence in the cross-border banking. 2019 will be a year of reflection and orientation.

The European Commission, the executive arm of the Union will be newly composed after the Election to the European Parliament in May. This election is expected with great interest as it is a barometer for the strength of the various political movements.

The assumption is that the traditional parties (People's Party and Social Democrats) will lose support in favor of the more populist parties. It is clear and the next slide presents the most recent survey we have on the European Elections. We don't have euro-wide or European-wide surveys so we have to compose national surveys for that. The People's Party and Social Democrats both will lose with the expectation that the Liberals could gain and the Right Wing Parties will get more support. On the aggregate level this does not seem dramatic yet although it would mean that the People's Party and Social Democrats will lose the majority in the European Parliament.

Political Preferences – European Parliament – Election May 2019

	People's Party	Social Democrats	Liberals	Green	Right Wing	Left Wing
Election 2014	219	187	68	52	135	52
Projection*	185	130	95	50	177	57
Change	-34	-57	+27	-2	+42	+5

*national surveys Jan 2019 and estimates

Source: foederalist.eu

The shift in individual countries could be considerable. For instance in Italy the Lega Nord could get up to 40% of the votes compared to 6% it had in the previous election in 2014. In France the party chaired by Ms. Le Pen could get more support than the movement En Marche led by President Macron. In Germany the support for the Alternative für Deutschland (AfD) is projected to be around 12-to 16% of the votes.

Regarding Germany the expectation is continuity in general terms once Ms. Merkel will hand over to her successor Ms. Kramp-Karrenbauer who has achieved positive approval scores in public opinion polls. Whether we will see courageous steps into a more integrated Europe, it is too early to tell. In one year from now we might know more.

Let me turn to my third point which is the risks: Brexit, Italy, Populism etc. Brexit remains a topic loaded with speculation, with hopes for last minute solutions and the search for compromises. Brussels insider assume there will be last minute negotiations and the current assumption is that extra time will be given to find a solution for the unintended consequences of a possible no deal (Border issue between Northern Ireland and Ireland). The UK attitudes toward the EU remains a complex topic it is very much now a debate within the UK, it is a debate between Prime minister and members of her party and there is not much European can do on the topic at the moment.

Let me turn to Italy. Italy has a number of domestic political uncertainties. One of them is: Will the coalition fulfill its commitments vis-a-vis the electorate? (It was basically a reversal of pension reform, minimum income etc.). Italy has a long-term structural problem of low productivity growth and high youth unemployment especially in the south. So, none of the issues in Italy is really new.

While on the one hand the labor market has become more flexible, the working conditions for the young people have become more difficult and this is one of the reasons why the Populist Parties get so much support. But on the other hand we should acknowledge that at the end of last year the Italian government has found an agreement with the European Commission not to pursue the originally intended budget policy in order to prevent higher financing costs.

I answer the questions from the organizers regarding the economic consequences of politics.

Brexit will have negative economic consequences on both sides of the canal; the extent will depend on the final agreement. There are different assumptions, what Brexit impact could be depending for instance if there would be free trade agreement the growth effect could be 0.8 % points. It would have a dampening effect on growth, if it would be a kind of WTO (World Trade Organization) agreement. This would have even higher consequences and 1.5% dampening effect on GDP. If there would be a European Economic Area Agreement like Norway has with the European Union, the effect would be negligible.

Reversing Integration

= Less output & employment in the long term

Reversing Integration in %

	EU27	
	GDP	Jobs
Free Trade Agreement [1]	-0.8	-0.3
WTO	-1.5	-0.7
EEA ('Norway') [2]	An impact is neglectable	

[1] Low tariffs; non-tariff barriers
[2] Access to single market

Policy uncertainty in other countries like Italy and France has a negative impact as well, but both of these topics will not create the recession in Europe. Seen from data the role of China for global growth and the U.S.-China relations might have the biggest impact for the economic outlook. Thank you.

Mr. Watanabe: Thank you Gertrude, you covered many countries in Europe. Now the geopolitical issue has much more impact on European countries. Not only in Europe but also in the U.S., "My country first" or "Me-ism" is prevailing very much.

Today is February 25th and I just found that on February 25th, 1963 the Beatles released "Please Please Me". And also, Brexit is another important factor which has just one month to go, on February 25th, 1570, Queen Elizabeth I was excommunicated by the Catholic Church. And now the UK is going out by their-own issue.

The third panelist would be Tarisa Watanagase from Thailand. She has been the Governor of the BOT (Bank of Thailand) between 2006 and 2010, and she has been working for 35 years in the bank. And also she held a position in the IMF for a few years. During her career at the BOT, she has been involved in the Asian Crisis and some structural changes of the Thai monetary system. Needless to say, she went to Keio University and so I believe she can speak very good Japanese, but today she is going to make English presentation. Now Tarisa, floor is yours.

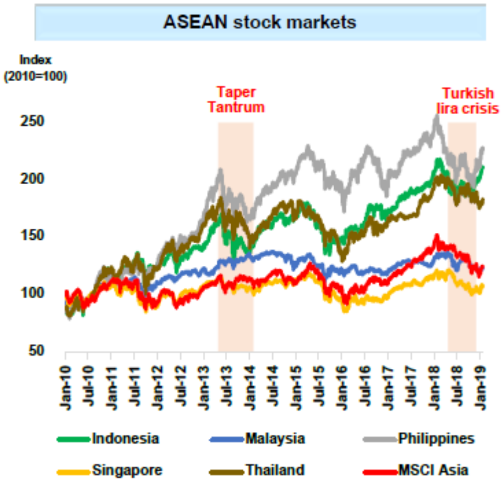
5. Asian Economy and Financial Circumstances
Tarisa Watanagase, Former Governor, Bank of Thailand

Thank you very much Watanabe-san. I would like to thank the IIMA for the kind invitation on the topic, which is at the center of the attention for the global community both for advanced and developing economies. The global growth this year is expected to slow due to a number of downside risks. I will go directly to talk about the challenges for the ASEAN economies. I cannot cover the entire emerging economies because they are so diverse and it will be very difficult to generalize, so I will basically focus on ASEAN where I came from and am more familiar with. I guess the economies in the region are more or less homogeneous.

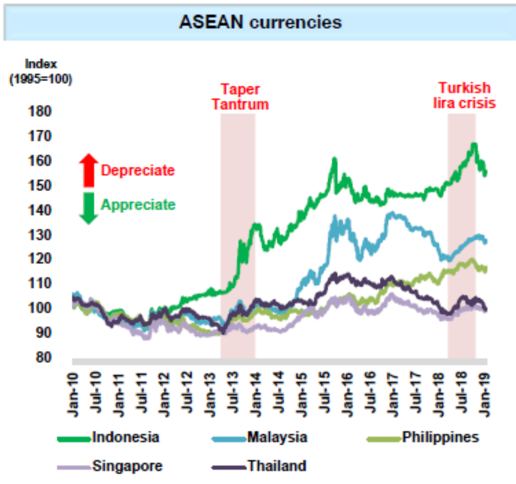
The first challenge for ASEAN is the vulnerability to capital flow. The massive liquidity injection and the ultralow interest rate after the global crisis have brought a lot of hot money into this part of the world and its stock market. The slides below show that stock market really went up in a number of countries, especially in Thailand, together the exchange rate became very volatile when the money is in. The exchange rate tends to turn strong and often be out of line with the economic fundamentals. Also in some cases they can lead to build up of pockets of financial imbalances. So you can see that there are a number of causes that can be associated with the capital inflows. The issue is even bigger when there is an outflow and these inflows and outflows can be very up abrupt as well. So this is the situation that emerging market including ASEAN emerging economies has to face.

Challenges for ASEAN: Vulnerability to Further Capital Flow Reversals (1)

Changes in market perception of timing or pace of G3 policy changes, risks-off sentiment on EM assets could spur the risk of capital flow reversals similar to what occurred during "2013 taper tantrum" and recently "2018 Turkish lira crisis".



Source: Bloomberg



Source: Bloomberg

These risks of capital outflows and inflows for this year and next are real one. According to an estimate by IIF, next year in 2020, close to four trillion of emerging market bonds and syndicated loans would be due. And one-third of these are denominated in foreign currencies, so you can see that, in emerging markets where they have the vulnerability in terms of the external balances, this could be a real issue, however I think this is more about emerging economies outside of ASEAN. Fortunately we have more favorable external conditions. You can see that most countries have favorable, comfortable level of foreign exchange reserves and also current account balances and lower external debts.

Challenges for ASEAN: Vulnerability to Further Capital Flow Reversals (2)

IIFestimates **$3.9 trillion of EME bonds and syndicated loans due by end of 2020**, with one third denominated in foreign currencies.

External debt liabilities of countries with vulnerable external conditions and weak currencies likely to increase in local currencies undermining debt servicing ability and economic stability.

EM (ex-China)—non-bank FX denominated debt

Source: BIS, IIF; 95Q1-99Q4 figures are estimated using BIS debt and banking statistics; only includes USD, EUR and JPY debt.

Indicators of External Vulnerability

	Criteria*	TH	MY	PH	ID	SG
Liquidity Indicators (As of Dec18)						
Int'l Reserves (USD bn)		205.6	101.4	79.2	120.7	287.7
Import cover (end period, months)	3 mths	9.9	5.6	8.7	7.7	9.3
Reserve over short-term debt	> 1 time	3.1	1.0	5.9	2.5	0.3
Solvency Indicators (As of 3Q18)						
External Debt / GDP (%)		31.7	66.1	23.5	34.5	420.5
Current Account / GDP (%)		3.4	1.0	-3.7	-3.4	20.1

*Minimum criteria.
Source: CEIC

The next issue is about the risk from the trade war or trade dispute. This is also a very big threat for us. Although the negotiations between the U.S. and China are still on going and most of U.S. tariff have not fully kicked in, the related uncertainties already have led to significant volatilities in ASEAN financial market since last year. Apart from the impacts on the financial market, the trade dispute also leads to impact in the real economies. The impacts can work through three channels. First is supply chain effect. Countries that supply intermediate products for China, for example Taiwan, Japan, Korea, and Malaysia will be adversely affected. The second channel is the substitution effect. With low tariffs, ASEAN countries may be able to better compete in the U.S. or China markets, but alternatively U.S. and China may divert that export to ASEAN economies. Lastly are the income effects. Global demands could slow, being derailed by dampened global growth. And net impacts will depend on the product substitutability, non-tariff barriers, the capability of firms to adjust, and types of countries' exports to China and the U.S.

It is difficult to guess the size of this impact in general. But perhaps in the case of Thailand there are some indications about impacts coming from the trade dispute. We are seeing there are some major industrial estates with significant higher demand especially from Chinese investors. Although we can't conclude for sure that this is because of relocation because part of these could be from the interest in investing in the EEC: the Eastern Economic Corridor, which is a huge infrastructure investment program initiated by the government and it will spend over a number of years. So part of that, that is maybe another reason why we see a huge increase in demand coming to Thailand. But in any case the general feeling is that the trade dispute may have Chinese investor come to conclude in the investment decision sooner rather than taking more time to decide.

ASEAN Economies Generally Resilient

ASEAN Economic Indicators

	GDP Growth (%yoy)				Inflation (%yoy, avg)				Current Account Balance (%GDP)				Public Debt (%GDP)			
	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018
Indonesia	4.9	5.0	5.1	5.1*	6.4	3.5	3.8	3.2	-2.0	-1.8	-1.7	-2.4*	27.5	28.3	28.8	29.8*
Malaysia	5.1	4.2	5.9	4.7*	2.1	2.1	3.8	1.0*	3.0	2.4	3.0	2.9*	57.9	56.2	54.1	55.1*
Philippines	6.1	6.9	6.7	6.2	0.7	1.3	2.9	5.2	2.5	-0.4	-0.8	-1.5*	41.5	39.0	39.9	39.8*
Singapore	2.2	2.4	3.6	2.9*	-0.5	-0.5	0.6	1.0*	18.6	19.0	18.8	18.5*	100.5	106.8	111.1	112.9*
Thailand	3.0	3.3	3.9	4.6*	-0.9	0.2	0.7	1.1	8.0	11.7	11.0	9.1*	42.5	41.8	41.9	41.9*
Vietnam	6.7	6.2	6.8	7.1	0.6	2.7	3.5	3.5	-0.1	2.9	2.5	2.2*	57.4	59.9	58.5	57.8*

Source: WEO

Note: *Forecasted by WEO

ASEAN Trade Data

		Export to (%Share in 2017)							
		US	CN	ID	MY	PH	SG	TH	VT
Exporters	US		8.4	0.4	0.8	0.5	1.9	0.7	0.5
	China	19.0		1.5	1.8	1.4	2.0	1.7	3.2
	Indonesia	10.6	13.7		5.0	3.9	7.6	3.8	2.1
	Malaysia	9.5	13.5	3.7		1.8	14.3	5.4	3.0
	Philippines	14.1	11.7	1.1	2.5		5.8	4.0	1.3
	Singapore	6.5	14.5	7.5	10.6	1.9		3.9	3.3
	Thailand	11.2	12.4	3.7	4.4	2.9	3.5		4.9
	Vietnam	19.5	16.6	1.3	2.0	1.3	1.4	2.2	

Source: Trademap

		Import from (%Share in 2017)							
		US	CN	ID	MY	PH	SG	TH	VT
Importers	US		21.8	0.9	1.6	0.5	0.8	1.3	2.0
	China	8.4		1.5	3.0	1.0	1.9	2.3	2.7
	Indonesia	5.2	21.9		5.8	0.5	10.8	5.7	2.0
	Malaysia	8.3	19.6	4.5		1.1	11.1	5.7	2.7
	Philippines	8.2	18.1	6.6	3.9		5.8	6.9	2.8
	Singapore	10.6	13.8	4.6	11.9	1.8		2.2	1.0
	Thailand	6.7	19.9	3.3	5.3	1.5	3.6		2.2
	Vietnam	4.4	27.7	1.7	2.8	0.6	2.5	5.0	

Source: Trademap

10

This is the last slide. This basically shows the indicators of a number of ASEAN economies. The number reinforces my earlier observation that ASEAN economies are generally resilient. If you look at the GDP number, inflation, current account balance and public debt, these are in good shapes, but I'd like to also stress that no one can afford to be complacent even though we are doing very well.

So, on this positive note, I would like to end my first presentation here. Thank you.

Mr. Watanabe: Thank you Tarisa for covering ASEAN and the other Asian countries. I think you don't have to cover all the emerging economy in the world, because still the Japanese economy, industry and banking sector focuses on Asia, North America and Europe. They are trying to go to Africa and Latin America but still it is not so easy to go there and so your coverage is very important. As you said Asia is and will be the core of the world growth in the next few years. But one worry is that money would be taken away if the U.S. economy and the U.S. monetary policy are going to change, but so far it is not so bad. Coincidently on February 25th, again, the electric vacuum cleaner has been invented and not by Americans but by the British.

So the last speaker would be Sayuri Shirai. Dr. Shirai is professor of Keio University and also visiting scholar at the ADBI (Asian Development Bank Institute). She had been a board member of the BOJ (Bank of Japan) from 2011 to 2016. Also she is teaching at Keio University but also you can see her face often on TV programs in Bloomberg and other foreign correspondence communication.

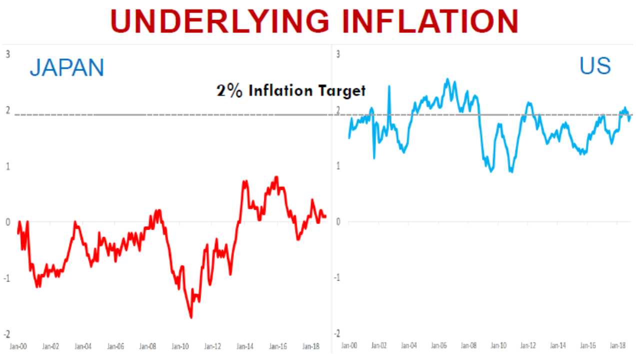
So I would like to ask you to give us your thoughts on these issues. Sayuri, floor is yours.

6. Japanese Economic and Financial Circumstances

Sayuri Shirai, Professor, Keio University, Former Member of Policy Board, Bank of Japan

First of all, I would like to express gratitude to IIMA for inviting me and giving me this great opportunity to present and participate in the panel with distinguished guests. Since I was one of the monetary policymakers of BOJ, I will make presentation especially about BOJ's policy. But to make it more interesting, I will also touch on Federal Reserve, Fed policy, since U.S. monetary policy is quite important to Japanese economy and Japanese financial market, and also influences BOJ's policy.

Now let's look at inflation and inflation expectation in Japan and the U.S. This is underlying inflation. It is defined as a general consumer's prices excluding all food and energy. In a case of Japan, I excluded direct impact of 2014 consumption tax hike. Now you can really see a clear difference between Japan and U.S. in terms of this inflation. Since the BOJ adopted this massive monetary easing in 2013, it is true that Japan's underlying inflation is somewhat higher than in the past. Nevertheless, I have to say this inflation is quite fragile. Please look at 2016, it entered negative territories when the yen appreciated so sharply and also oil price dropped significantly. Overall Japan's underlying inflation remains very sluggish, 6 years on average the underlying inflation was just 0.3%. And the latest data in January this year, this underlying inflation remains just 0.3%.



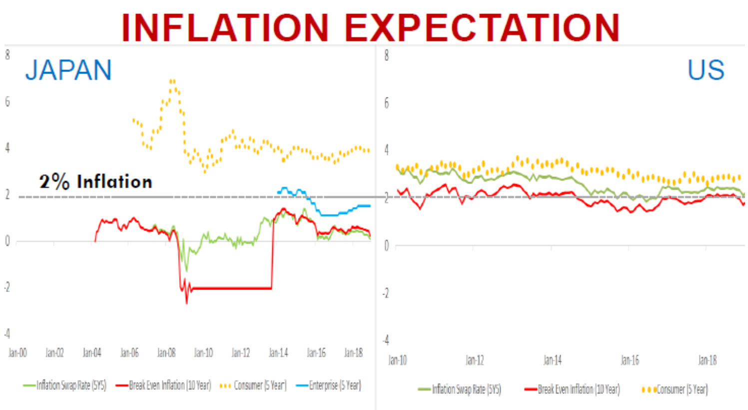
On the other hand, let's look at the U.S. Even though FOMC worries and talks about muted inflation, when you look at underlying inflation, it is not really bad. It is quite stable and current underlying inflation is 1.9%, but that is not very different from pre-crisis period.

The interest thing about U.S. underlying inflation is that you don't really see a strong impact from oil prices. When oil price is high, underlying inflation is quite stable. Then why U.S. underlying inflation is so stable? I think it is because when you look at services, there is a wide range of service items, which continue to show a steady increase. That makes a big difference. Whereas in Japan when you look at services item, some are rising but many stay constant or declining.

Now let's look at long term inflation expectation. I picked up consumer's long term inflation expectation and also market-based inflation expectation such as break-even inflation and inflation swap rate. In the case of Japan, I also added the corporate sector's long term inflation expectation. Again, you can really see the stark difference between Japan and the U.S.

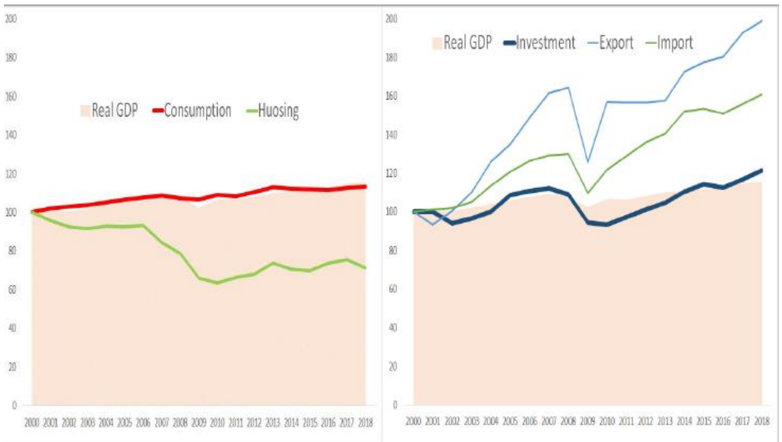
Let's look at Japan's case on the left. You can see that four long term inflation expectation indicators are quite divergent from each other, and very much dispersed. Also, I have to say it is not really anchored, and it is quite far from 2% inflation target. Very interesting thing about Japan is that when you look at consumer's inflation expectation, it is very high. There is an extremely upper bias for the Japanese household inflation even though the CPI (Consumer Price Index) based inflation is suggesting moderate deflation or very small inflation. Households always feel that prices are actually picked up and price will continue to go up, and this upper bias is much bigger than the case of the U.S. Because consumers tend to feel that the prices are very high, they tend to resist to the price hike, and they are very sensitive to the change in food prices and daily product prices.

Now let's look at the U.S. Also FOMC members worry that recently long term inflation expectation started to slow down, but it is still quite stable and quite anchored at 2%. I think in the case of U.S., I don't really see a very serious concern in terms of this monetary related development.



Now let's go back to Japan. You already saw that Japan's underlying inflation and inflation expectations were so sluggish, but BOJ has done tremendous monetary policies. I mean BOJ's scale on monetary accommodation and the diversity of the tools adopted was almost unprecedented and much bigger than those of the U.S. But then, why in the case of Japan, inflation is so sluggish? I think one of the answers for that question is you can look at left-hand side, the household spending. You can see over in this 18 years, consumption is quite sluggish and shows very very small growth. If you look at the past 16 years from 2003 when this massive monetary easing started, the consumption growth is just on average 0.4%. It shows almost no growth. In terms of housing, it is very difficult to even recover to the 2000 level. So you can clearly see consumers' spending is not very strong.

What drove this economic activity in Japan? If you look at the CAPEX, capital spending which is this dark blue line, in the past 5 years, there was a rapid growth. But because there was a postponement of investment right after Lehman shock, it started to catch up and managed to exceed the year 2000 level right now. It has not really been a very big investment yet, so the contribution to the capital accumulation and potential economic growth remains limited.



Another important factor driving the Japanese economic activity is probably the real export. Last year, if you look at growth rate, export growth and import growth were the same, so the contribution of net exports to economic growth was 0. There is, I think, one concern in the future because of this trade problem between the U.S. and China. Japan already sees a decline in export. So that will have some problem on the economic growth.

You already saw the result and what will happen to the 2% inflation target? In the case of Japan, we may be able to say that the BOJ is almost giving up the 2% target. Why? It is because last April, Outlook Report abandoned and gave up expressing the projected timing of achieving 2%. BOJ no longer shows in their forecast that when they will achieve 2%.

On the other hand, in the case of Fed, what is interesting is that you can always see underlying inflation is not bad at all, and also long term inflation expectation is not bad at all. But why FOMC members worry so much about muted inflation? It is because, I think, they emphasize symmetric 2% inflation. In most cases, recently, inflation is below 2%, so they want to have both above 2% and below 2% with almost equal probability. That hasn't happened. That is why they are worried a lot about this muted inflation. The Fed this year is going to talk about whether they should modify their existing flexible inflation targeting framework, and some people like John Williams or Bostic or

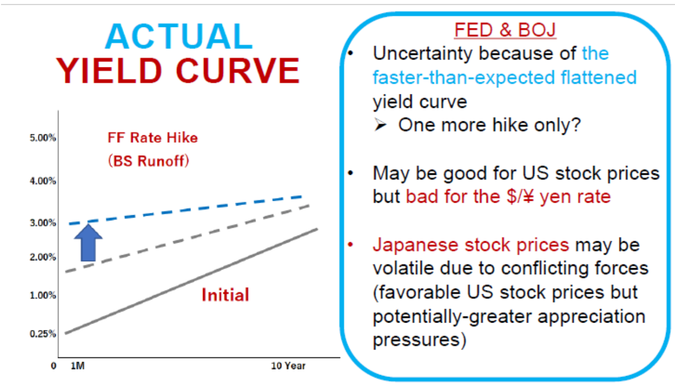
Charles Evans, mentioned about price level targeting which is theoretically more powerful than flexible inflation targeting to ensure the symmetric 2% inflation target.

Now given this kind of development, what should Japan do? Domestically I know some people mentioned that the BOJ should completely abandon this inflation target. Some people say maybe the BOJ should lower the inflation target to 1%, but I think that is not desirable. Given that the U.S. continues to make sure that they will achieve 2% in a symmetric manner, if the BOJ abandons and moves away from 2% target, that will have a lot of impact on the Yen's appreciation, so I don't think it is a good idea to do that.

I've already been saying for over 2 years that the BOJ should have a more flexible interpretation of 2% target such as introduction of plus minus 1% range to 2%. That is more acceptable to the Japanese public, and then also the BOJ does not need to abandon 2% target. I think that is more realistic.

So what will be the action for the BOJ for 2019? Four things happened since the 4th quarter last year. Number 1, the Japanese stock prices became quite volatile, and they are underperforming compared to U.S. stock prices. It is partly because Japanese corporate profits for the 4th quarter were not doing extremely good, so there was a lot of downward adjustment in terms of corporate profits for this year. Number 2, 10-year yield started to have a downward pressure from November last year and actually from February this year 10-year yield entered into the negative territory. Number 3, there was a renewed pressure on yen's appreciation especially on January 3rd, when we had a flash crash. And Number 4, the Fed changed the monetary policy stance toward more dovish.

Very quickly let's look at what's happening to the Fed.



This is what happened. When the Fed started to normalize its monetary policy from December 2015 by raising the federal fund rate, I think initially, they assumed this movement will happen from gray solid line to dotted gray line because short term interest rate hike will lead to the flattening of yield curve. Then from October 2017 when the Fed started to conduct this balance sheet run-off, I think they expected the long term yield will also start to go up so that the yield curve becomes steeper, but that did not happen. Because a lot of market participants worried that this might be a sign for the future U.S. recession, so the market started to react to that kind of a view, and U.S. stock prices became quite fragile. There is a lot of uncertainty over U.S. federal fund rate hike this year. I expect one time, but already John Williams of San Francisco Fed mentioned that maybe they will not do any hike this year unless there is a strong pick-up in inflation and so on. If that happens, that is good for U.S. stock prices, but maybe bad for the yen dollar rate, because this interest differential is not going to be as big as we used to expect. What will happen to Japan stock prices? It is quite unstable because on the one hand U.S. higher stock prices lead to the higher Japanese stock prices, but on the other hand there will be some appreciation pressure on Japanese yen. That will lead to the decline in Japanese stock prices.

Let me quickly talk about this long-run reserve balances. When you look at before October 2017 when they started this balance sheet run-off, I think the market was expecting the long-run size of reserve balances was just around $613 billion. But over time they increased these reserve balances. The most recent data is showing $1.2 trillion, which I think is because of this higher demand for the reserve balances. Then the Fed already said in January 30th' Minutes that they were going to stop this run-off in the second half of this year, which means that reserve balances would be around $1.2 trillion. That is much bigger than what was initially expected by the market and also by the federal reserves. It means that the Fed will keep quite a large amount of treasury securities more than people expected. That will have a downward pressure on the term premium, so the U.S. long term interest rates are unlikely to pick up substantially. That will also create a problem. Because of the narrow interest differential between the U.S. and Japan, it would give some impact on Japanese yen and U.S. dollar exchange rate.

What will the BOJ do under this environment? The BOJ is facing a dilemma now. 10-year yields are already entering into negative territory this month, which is very bad for the financial sector. The BOJ wants to increase this 10-year yield, but if they try to increase it, then the interest differential between the U.S. and Japan will shrink. I think that kind of dilemma between trying to deal with the side effect and the adverse impact occurring at the financial sector on the one hand, and trying to maintain the current exchange rate around 110 on the other hand is a tremendous task. What can the BOJ do? Most likely, the BOJ will maintain current policy —maintain 10-year yield target around 0% plus minus 0.2%— but it is possible that the BOJ expands this target range. I think that is better rather than lowering 10-year target which would put financial sector in a very difficult position.

I think I am running out of time so I just want to say probably the BOJ will maintain the status quo, but it is very difficult to keep this to find appropriate level of 10-year yield to cope with this dilemma. About ETF purchases, it is very likely that the BOJ will maintain around 6 trillion yen, because already, the major investors of Japanese stocks are the BOJ, the corporate sectors buy back, and foreigners already have a net seller's position. So it is very difficult for the BOJ to take any clear step toward normalization.

I had a couple of other documents, but I think I ran out of time so maybe we can talk about normalization issue later in the discussion. So I stop my presentation here.

Mr. Watanabe: Thank you Sayuri for very clear comment on the BOJ policies. As I explained to you, today's panelists are all involved in the central bank's operation in each country or each region. But I think now the central bank's policy has been challenged or is under challenge in many aspects.

Some don't like looking back to 500 years ago, but my last trivia is in exactly 1616, on February 25th, when Galileo was summoned by the Roman Church and was asked "Do you still think that, the sun is moving or the earth is moving?" On that day he changed his attitude to "The sun is moving." Officially he renounced it but murmured "Still the earth is moving." This kind of question and challenge is sort of the policy of the central banks and it is very much a global issues. I think in the following panel discussion we are going to have more clear views on this.

Thank you very much.

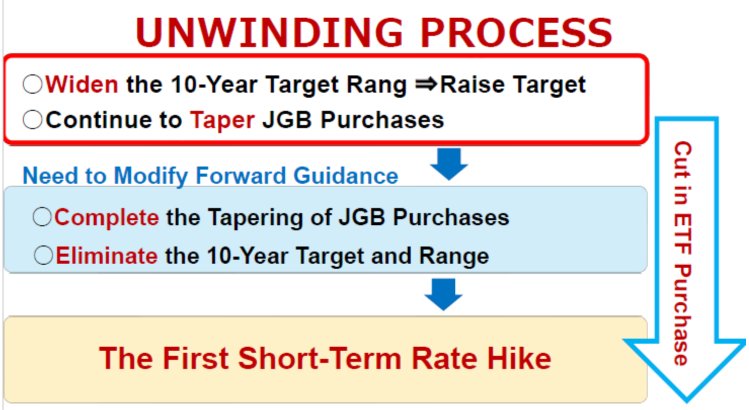
7. Panel Discussion

Mr. Watanabe: During the break the panelists have already started discussions on the normalization issues. At the last presentation Prof. Shirai had just begun to touch upon the issue. So I think Sayuri is going to start this discussion and we are going to get the responses from other panelists. Sayuri please.

Ms. Shirai: I didn't have time to talk at the final session about options for the BOJ on normalizations.

I think now the ECB, the Federal Reserve and the BOJ, we all face very low neutral rates, and when we have a very low neutral rate, there is a high probability that we will easily enter into the environment with an effective lower bound. So, what kind of options do the central banks have in the future? We usually talk about forward guidance, quantitative easing or negative interest rates, and the BOJ at this moment continues to do all these tools. It is true that BOJ's massive monetary easing has contributed to generating the Yen's depreciation and higher stock prices, but I think it is clear that the impact on aggregate demand, inflation and inflation expectation was limited. Having said that, what will be the assessment about these three unconventional monetary policy tools? As I said, there are some side effects. If we have a recession in the future, probably the forward guidance applied to the policy rate will not be as effective as what happened right after the global financial crisis, because in 2009 when the Fed introduced forward guidance, they just lowered the federal fund rate from 5% to 0%. When there is such a large difference in terms of policy rates, then forward guidance can be more effective. But now the policy rate is so low, so I think even when we adopt forward guidance in the case of next recession, probably it is not going to be as effective as it used to be right after the global financial crisis.

Now let's talk about normalization policy of the BOJ. Last year in July, the BOJ managed to introduce target range on 10 year yield plus minus 0.2%. I think that was a very good move. It is very likely that the BOJ will try to widen this 10 year target range, and eventually they will have to try to raise the 10 year target level itself. Also at this moment, the BOJ is continuing to taper the Japanese government bond purchases, but in this first stage, the BOJ can do that without changing forward guidance. However, if the BOJ wants to make a clear step toward normalization such as the second stage by completing the tapering of Japanese government bond purchases or eliminating the 10 year target or the target range, and then move to the third stage of the normalization process chosen by the Fed —the First Short-Term Rate Hike— I think the BOJ really needs to modify the forward guidance.



So finally, I want to show you these current three types of forward guidance adopted by the BOJ. At this moment, because they introduced statement such as "as long as necessary for maintaining the price stability target of 2% in a stable manner" or they "will continue expanding monetary base until the year-on-year rate of increase in the observed CPI (all items less fresh food) exceeds 2% and stay above the target in a stable manner", that kind of forward guidance gives the constraint on the BOJ's behavior, if they really want to stick to step to the real normalization process. Before the BOJ makes any clear step toward normalization, probably it has to adopt more flexible forward guidance.

Finally I just want to say as I said earlier, the BOJ is likely to maintain status quo this year. Because there are a lot of uncertainties on the exchange rate and stock prices it is very difficult for the BOJ to make a clear move. The question is when the BOJ will be able to take normalization step. I think it all depends on the U.S. As long as the U.S. economic growth will be better, be stronger than we project at this moment like 2.3% this year, the U.S. stock prices continue to go up with favorable corporate profits, and we may start to see some upward pressure on the U.S. dollar index, then the BOJ may have an opportunity to take some step toward normalization. Otherwise, I think it is very difficult for the BOJ to take normalization. It all quite depends on what happens to the U.S. economy, the stock market, and the U.S. dollar index. I will stop here.

Mr. Watanabe: OK, thank you very much. Maybe last year at that time people believed the U.S. would be on the course of exit or maybe normalization and then the ECB was going to follow in 2019 and for BOJ it will take another year. But now the U.S. is going to change the direction a little and the ECB is also getting more cautious on this issue. I think maybe the timing of this issue is a concern, and also what type of normalization or in what way of the normalization would be expected, is another issues. So is there anyone who can have some response to Sayuri? Would it be a concern for the U.S., Ellen? Can I have your thoughts?

Ms. Zentner: The Fed seems to be leading the charge on that front. I think some of the issues that central bankers will face are how to communicate around the balance sheet and normalization of their balance sheet. What do they assign the reasons behind finding optimal sizes of the balance sheet? For the Fed it is a technical matter. Now you may disagree with that, but the Fed is convinced that any of the angst in the financial markets around the turn of the year was not because of its balance sheet reduction, and it's not why they are stopping the balance sheet run-off as we expect in September. It's a technical matter of finding the proper level of reserves to support bank demand for reserves and they stressed that in the additional materials they released alongside the January meeting "this is a technical matter". The reason why it is so important to them is that they want to try to convince market participants that the balance sheet is a passive tool of monetary policy, not a primary tool. The rate adjustment is the primary tool and the balance sheet remains the passive tool except in the case of significant downturns. That is very important because if they stopped running-off the balance sheet in September, then the market participants immediately assume they are going to have to do more rate hikes because they are no longer tightening with two tools. That is one thing to keep in mind. The chart I showed that not only did they stop the balance sheet run-off in September, but in 2020 they will be back in the market buying across the curve. They have to grow the size of the balance sheet with the economy.

There are still some unanswered questions that the Fed has to answer. They can start tapering the run-off on April 1st but the question they have to answer is how to deal with composition of the balance sheet. Now, I think it is very complicated process for each central bank to figure out. For the Fed, the biggest question is "What will they do with the reinvestments? Do they put those across the curve and keep the composition of the balance sheet about the same, or do they frontload the balance sheet in the T-bills?" The argument for frontloading the balance sheet in T-bills means a shorter duration of balance sheet. In this case, as Shirai-san has pointed out, the more ammunition you will have in the next downturn, because they are fearful that they don't have enough room to drop rates or enough power of the balance sheet to deal with the next downturn. You could have a more powerful balance sheet in the next downturn if you shorten its composition, so twist operations you can do a lot, get a lot more bang for your buck doing that in the next downturn. But, that is something they have yet to work out. The most recent materials show pretty evenly split on that debate; do they reinvest across the curve or do they frontload it? There is sound argument on both sides but that's something they still need to work out.

Mr. Watanabe: Thank you. How do you see it, Gertrude?

Ms. Tumpel-Gugerell: Most of the time central banks act under uncertainty but at the moment uncertainty is even higher than usual. And the ECB has stated at the end of last year to end quantitative easing and no further expansion, and they have said rate hikes not before September

2019 if at all, because it depends very much on incoming data. This was the most recent communication in January it depends very much on incoming data and they want to assess it. The side effects of the expansionary policy are not strong enough to reverse policy. They are strong in some sectors of the economy, but it's not enough to reverse policy for the time being, and the medium term inflation definition at or below 2% remains.

Mr. Watanabe: Well, thank you. Tarisa, do you have any comments?

Ms. Watanagase: Not really, but just to add a bit from the emerging market economies' point of view that we are always at the receiving end, no matter what happens in the advanced economies. We get either the big inflow or massive outflow. Of course one may ponder whether we can ask for more cooperation from the advanced economies in their conduct of monetary policy. But realistically, I think it is impossible because monetary policy is always primarily focusing on the domestic economy. So what we can do is just to try to strengthen our resilience and make sure that whatever comes we will have the strength to withstand that.

Mr. Watanabe: Thank you, Tarisa. OK, do you have any comments, Sayuri?

Ms. Shirai: I just want to say something, as Ellen mentioned, about the appropriate size of reserve balances. I think, based on my understanding, it is likely that the Federal Reserve's balance sheet size will decline to around US$3.5 trillion toward the end of this year, and then gradually start to pick up by accommodating this demand for a currency. So probably 5 or 7 years from now, the eventual size of the Fed balance sheet will be around $4 trillion, which is equivalent to the current size. That is quite large. Now I hear some FOMC members say that $5 trillion is not a big issue, because it is only 25% of nominal GDP, as GDP is growing. That is not so different from the maximum level the Fed reached in 2014. So I think eventually, we really have to discuss what will be the appropriate size of central banks' balance sheet. And that is one issue I just want to mention.

Another issue is that if the Fed is going to hold most of their portfolios in the form of treasury securities, then what it means is that we really have to question what will be the impact on the fiscal discipline and treasury securities behavior.

Mr. Watanabe: OK, thank you very much. Now I'd like to change the subject a little. We'd like to discuss about the macro economy, especially with the impact of some events, such as discussions between the U.S. and China, the protectionism movement of other economies. They are going to have some negative impact or some shrinking impact on the economies. How is each region going to handle the impact and its causes? Now may I ask Gertrude first?

Ms. Tumpel-Gugerell: There's a grave perception of the trade dispute or trade debate creating uncertainties among investors because they are not sure about the circumstance in the future. Therefore finding a new way of defining common rules at the global level would be very important. It's difficult to quantify how big this impact will be because once you start the downward spiral it feeds itself. It could not be quantified but it seems to be one of the origins of the current slowdown. If we are lucky we have a slowdown only, not a recession. In the current assumption, it will be a slowdown but the deterioration of leading indicators has been stronger than expected three or four months ago.

Mr. Watanabe: I see. How about it, Ellen?

Ms. Zentner: When I think about trade tensions and how they came about, if you look back at history of financial crises, because they are so deep and damaging and lay bare a lot of the underlying social problems in the economy, they tend to be followed by a period of protectionism. So, you can look back at history and say "OK, it's not surprising that we are moving through a period of protectionism now in the wake of global financial crisis". And for us in the U.S., there always trends to be elements of racism that is wrapped up in protectionism as well. I think back to the financial crisis in the 1880s where coming out of that we passed the Chinese Exclusion Act in 1882 which lasted for 10 years and barred any Chinese people coming over to the U.S., a very embarrassing time in our country's history, but again it was coming out of the financial crisis. If you look at those periods, there was one good thing to be said about it and that is that it has never lasted. But, I think what is happening today in the wake of the financial crisis for the U.S. households, the rise in populism has been on the back of really pulling the credit rug out from under U.S. households after decades of expanding credit in the U.S. As manufacturing sector was disappearing decade by decade, and we were becoming a more service- led economy, you could see that the middle class has been disappearing decade by decade, but the way the middle class stayed in the middle was by expanding debt. Every decade we saw real income growth slow in the U.S. and we saw debt rise in equivalent amount. You stripped all that way after the financial crises and laid bare that there was no middle class left in the U.S. So, it's very easy to see how populism could rise here and how someone like president Trump could find a strong base in that group and why trade protectionism and trade tensions are so popular among his voter base. The political motivation is behind a lot of this, but there are some legitimate motivations behind pursuing what we consider more fair trade policies as well. Economists from Harvard studied the movement of manufacturing and jobs to China away from the U.S. that started with China's accession into the WTO. Prior to that we had to go through very contentious negotiation process every year with China to talk around what tariff would be in place and what not, and what we would finally agree to and because of that annual cycle it was too uncertain for businesses to move into China with certainty, because there was always uncertainty over whether these trade relationship would be renewed each year. Once China ascended to the WTO, which by the way the U.S. voted for, you removed the uncertainty. So, there's legitimate reason to look at trade relationships and these trade pacts we go into like NAFTA, which is now called the USMCA (United States–Mexico–Canada Agreement). You know these trade pacts are not meant to last for decades and over decades things change. But, I think the process has been concerning to many, and especially damages business sentiment in the U.S. and dampens investment in the U.S. because it has been the contentious nature of the debate and uncertainty around the debate has been damaging. It's not without foundation but the process has been difficult to digest.

Mr. Watanabe: Well, thank you very much. About NAFTA, President Trump said "I don't like any multilateral negotiations and so I do bilateral negotiations". But the reality is that he just changes the name and of course some of the details of NAFTA have been changed but still the three countries are negotiating…

Ms. Zentner: Yes. It's still the three countries, but many of us cannot understand how Mexico would sign such a deal. I mean, it is extremely restrictive to Mexico. It basically bars them from any backdoor opportunity to import anything other than goods from the U.S. Basically it ties their hands but they had no choice. Even Canada was pressured as well to sign the deal. Now we are a long way away from it being signed into law because now there are still a lot of moving parts and pieces that have to go through Congress. It's going to be slow moving these pieces until we get a concrete USMCA and TAG (Trade Agreement on goods) and until then NAFTA remains in place. It's not the best deal for all countries involved, but, certainly the President and his administration are happy with what turned out for the U.S.

Mr. Watanabe: I believe so. Anyway it is not good to agree or good to negotiate before the administration changes. So the Mexican case would be one of the very difficult things. Also I am very much worried about the Brazilian issues, if there is going to be some kind of negotiations. Anyway the U.S. and China have negotiated and with another few days extensions there would be some kind of possible agreement, even if it is not a free agreement but I think a partial one, it would be seen within maybe two weeks.

I'd like to ask Tarisa about this. Of course the U.S. and China negotiation is going to have impact on Asia, but ASEAN has already created the AEC (ASEAN Economic Community) among the 10 ASEAN countries. What would be the impact of the U.S.-China issues on AEC?

Ms. Watanagase: Before that, can I go back to the issue of protectionism? It is true that in the history we see many of that come and go. But I am concerned that this one may have a long term effect, because the issue is not about trade in fact. Even though right now, negotiations are still going on, it is very likely that in the end both sides may decide to compromise one way or the other, but it has already created so many uncertainties. I think the business communities have taken these uncertainties very seriously. You can see relocations going out of the U.S. or China, anticipating potential actions from the two superpowers if they remain to be in these countries. There could be some profound changes to the global supply chains going forward. It is not just about trade: we know that there are disputes on issues of intellectual property, cyber security, technologies, etc. These are all long term issues that cannot be easily and quickly resolved. So, even though the trade negotiation could bring some good news, the changes that have started may still continue. Is this good or bad for the global economy? We know that protectionism is never good for the world. Although right now, there may be investments moving into Thailand and Vietnam, on a global basis, no one is a winner. Everyone loses from trade protectionism. That is my concern.

For ASEAN, there are different impacts as I pointed out briefly in my presentation. The impact depends on what special capabilities each country has, that may fit into this global supply. The concern on a higher level is whether this trade dispute is going to affect the economy in general in this part of the world. I think the answer is yes, because both China and the U.S. are very big trading partners of everyone in the region, and especially China, the trade relationship has been increasing. There is a saying that “When China sneezes we catch a cold,” that shows how important China is to this part of the world.

There are also uncertainties about the impact on China; I think that part remains to be assessed. It is true that when the global economy slows, China’s economy will suffer as well. But because of its sheer size, maybe it will be able to shield some of these impacts by depending more on the domestic economy. That remains to be seen.

Mr. Watanabe: Thank you. Sayuri, do you have any comment on this protectionism movement?

Ms. Shirai: I think this protectionism intensified tensions between China and the U.S. really contributed to this deceleration of manufacturing PMI. Especially in China and euro area, scale of decline with regard to manufacturing PMI is noticeable. So I think mainly it came from trade tensions. That is quite a concern because, as we already see, business investment started to slow down in the U.S. and probably to some extent in Japan and other Asia. That is quite problematic for the global economy.

Now another thing I am interested in at this moment is according to the report, this China-U.S. trade agreement will include China's commitment that China will buy more products from the U.S., a total of U.S. $ 1 trillion over six years. That means at this moment, China imports from the U.S. only $130 billion annually. In addition to that, it probably imports an additional $170 billion annually over six years, so the total is $300 billion which China has to import from the U.S. If that kind of commitment is credible, probably China has to import a lot of product from the U.S., so what will happen to Japan, other Asia, Germany, Mexico or Canada? The manufacturers are going to shift production location to the U.S. and then what will happen to global supply chain? If people think this China's commitment will be credible, then it will have a quite significant impact on global supply chain. I would like to see that.

One more issue I would like to mention is that the impact of protectionism on financial market is not very clear. Why the U.S. stock prices dropped so sharply in December? Certainly it is true that global economic slowdown is one of the concerns affected by the U.S.-China trade dispute. But also, as I said earlier in my speech, we all paid attention to the yield curve shape of the U.S. treasury securities. It became so flat, and people talked about when this yield curve would reverse. Then people talk about, "OK, so the U.S. will have a recession in the future like one or two years from now." So that kind of uncertainty about the U.S. dollar yield curve also contributed to the uncertainty and instability in a financial market. It is very difficult to single out. This whole problem came from protectionism but also came from the U.S. yield curve issue, and also the U.S. government shutdown. So many other issues came out. I think the timing was bad any way. That is what I wanted to say.

Mr. Watanabe: Thank you very much. Anyway the U.S. and China are going to have some kind of compromise and as far as some estimate says that full application of higher tariff rates would cause a decline in China's growth rate by 1% and by 0.3% or 0.4% decline for the U.S. and also for Japan's GDP. The reason is that Japan is selling producing machines and other high-valued components to China, and China uses them for the assembly of products which they sell to the U.S. So if the total sale to the U.S. shrinks, in that case, Chinese purchase from Japan and Korea, even from the ASEAN countries, is going to shrink as well. Such kind of two-way or indirect impact is going to happen. Also, if there is some kind of the agreement between U.S. and China, then the U.S. is going to make another negotiation with the European Union and also with Japan. Then, how do you see the U.S. impact on the European Union? Gertrude, do you have any thought?

Ms. Tumpel-Gugerell: I must admit I'm not a trade specialist. Clarity is most important for investors and I will give you some figures. The volume of trade between the EU and Japan is the same volume as between the U.S. and Germany alone. There is a lot at stake here. I see a huge potential for a deepening of the relations between Japan and the EU. A number of European companies have manufacturing and production sites in the U.S., and of course these production sites have relations with China, and it will have an impact on the U.S. car makers as well. This is my understanding why also US firms are not in favor of the government policy, because it has an impact on their cost structure. If U.S. citizens are willing to pay more for their products they will support government policies.

Mr. Watanabe: Yes. If the U.S. government is keeping very tight measures on this issue, they are going to implement very high tariffs and the import prices are going to go up. Some people say that last year the ordinary workers and ordinary farmers got about 1,000 dollars of tax reduction. But from now on they have to pay more tariffs to the government. So 1,000 dollars reduction in income tax is consumed by tariff payments. What kind of the impact this will have on the voters or citizens of the U.S., Ellen?

Ms. Zentner: Yes, I think that in the U.S. in general the aging of the population, which is not just solely in the U.S., but the aging of population is slowing income growth and it affects the financial crisis. It‘s been a price-intolerant consumer for quite some time. Companies are not able to pass on any type of higher costs to the consumers for quite some time, so if companies' costs go up it squeezes margins. In this case, under the specter of higher tariffs, companies have been guiding for the latter part of 2018, telling the investors that "Don't worry. We are not going to eat tariffs on our margins. We are going to pass on the higher cost to consumers. We haven't been able to raise prices for so long but now on the auspice of tariffs we will pass it on in the form of price increases". This is the time you would try to pass on the increased cost to the household in the U.S. because we have just been given a big tax cut.

There's never going to be a time when we are more price-tolerant. But that is not the case for all tariffs, maybe that works for 10% tariffs on broad consumer goods and especially personal electronics which we believe we cannot live without these days. 10% increase in your cellphones, for instance, something you are just going to digest. That wouldn't be the case certainly if we put 25% tariffs on other goods which we import into the U.S., because already for big ticket items it makes it that much more expensive. But, the concern is that certainly the negotiations with China are going well, they've been progressing. Now, the President is pleased enough with the progress that he is willing to delay the onset of that 25% and delay the start of that, and I've been surprised when we have gone through all the measures China has actually put in place already. I'm surprised how much progress has been made. But the worry is that you put aside as less of the concern that things with China are going to blow up as soon as you can put it on the backburner where it is still bubbling but it's not a concern.

That gives the time for the President to think about where else he could focus his attention, and Germany is the obvious choice. We have a new report showing how large its surplus is. The worry is that the president can suddenly turn his attention to Europe at any time. These days policy moves at the speed of a tweet. That is the concern. This is something that we study with our European colleagues and our Chinese colleagues. We did a lot of these global exercises where we looked at not just direct supply chain effects but the secondary impact to global supply chains and other tariffs on Europe will be something that would be more the game changers for European outlook. Something on the order of 0.4 to 0.7% impact to the GDP. I'm not a European expert, but just in terms of thinking about numbers, that's what some of our early analysis has suggested.

Mr. Watanabe: Yes. I think for the U.S. or President Trump or the congress, the trade deficit is the worst and so definitely they are going to reduce the deficits. The first target will be China. I'm not sure the next one is Germany or Japan but the same level of the issues will be faced. After the China-U.S. negotiation is over, the next negotiation will start in Germany or Japan.

In the case of Germany, Americans says because of the very weak euro, values for Germany and the Netherlands have some good advantage to sell more to other countries and so their trade surpluses are very much large, almost same amount with China. In that sense if you see the comparison with the GDP, Germany's trade surplus is getting higher and higher. So I think that would be causing some kind of rather harsh "tackle" to Germany and also Japan. But in the case of the EU, Germany doesn't have any currency position, as the ECB has one euro position, and because of this sometimes the U.S. administration gives up. Euro would not be supported by any intervention to the market but I think some surplus would be gained by the northern countries of the euro region. And so they have to pay more in some kind of the rescue operation of Greece and some other southern edge countries in difficulty. Would such kind of the regional negotiations be induced by U.S. challenges or the EU thinks about the issue on its own? Do you have any comments, Gertrude?

Ms. Tumpel-Gugerell: I would say the current account surplus of some countries, especially of Germany but also some others is a longstanding issue in the policy debate. The recommendation is that Germany should either raise its wages or import much more. Reducing a current account surplus cannot be done without central government action as China has demonstrated. There are exports which are competitive. You cannot tell companies to stop exporting. But you should also not only see the export surplus on the side of exporting country. But you should see also a strong interconnectedness of Germany and the neighbor countries especially. There's a huge integration of economic activities. In the mean time between Germany, France, Central and Eastern Europe, a lot of value chains are also depending on production in some neighboring countries. If you hit Germany you would hit other countries as well. This is a strong impact we would see.

The inner European debate is whether we should have more macroeconomic stabilization tools at hand like a common EU budget or a common Euro area budget. There are two different debates. The one is strengthening domestic demand vis-a-vis growth depending on trade. Reducing the volume of trade would hit Germany, but it would hit others as well and it would reduce growth. The other debate is how much solidarity mechanism we should have and what can countries do to rebalance. The slow pace of convergence was not fully foreseen at the start of the monetary union. Fixing exchange rates was one step, but the impact of having different policy concepts and a different willingness of undertaking structural reforms plays an important role as well. My personal view is that more policy tools at the euro area level are necessary. But at the same time some counties have to undertake more reforms, and this cannot be substituted by a central budget.

Mr. Watanabe: Well, thank you. In Japan, many industries, media and even politicians worry about this situation. How do the people in academia feel on this issue? Sayuri, do you have any comments?

Ms. Shirai: Japan's current account surplus as a percent of GDP is around 3 or above 3%. That looks quite large, but I think we had a trade deficit recently, so trade balance is quite small. Nonetheless, when we look at the U.S. trade deficit, Japan is still one of the economies which generate quite large trade deficits with the U.S. So the U.S. will certainly try to talk with Japan bilaterally to make sure that Japan will buy more agricultural products and automobiles. We do not have any tariffs on automobiles, so maybe some kind of export quota for the U.S. could be discussed, but I think more important issue is what will happen to this foreign exchange clause.

For example, in the case of China-U.S. discussions, according to a report, China agreed with a commitment to maintain the exchange rate such as RMB (Renminbi: Chinese yuan) stable. So they are not going to generate Chinese currency's depreciation. That kind of commitment will be included in a U.S.-China trade agreement. I think one concern for Japan is what will happen to foreign exchange clause in a case of Japan-U.S. trade negotiation. Already foreign exchange clause was included in the case of Mexico-U.S.-Canada agreement. That is quite an important issue. My understanding is that the U.S. distinguishes the Yen's depreciation generated by monetary accommodation and by direct intervention in the foreign exchange market. I do not think the U.S. will touch on the BOJ's policy on this regard, but probably the U.S. government may try to ask Japanese government to have some kind of commitment that they are not going to intervene in the exchange market. If that kind of commitment has to be made, then that will create a very challenging environment for Japan. Since 2011, Japan has not intervened in the foreign exchange market, but they always want to leave an option just in case of a sharp Yen's appreciation, because Yen still continues to be a safe haven currency, so they always want to keep this tool as an option. I think that will be very challenging.

Mr. Watanabe: I think the foreign exchange clause would be included. Of course no intervention to the market is a very simple one. But other measures, including some monetary policy to keep the low interest rate or to make the lower value of its currency, would have very much negative impact. Especially for the good economy countries it's OK, but bad economy countries still need such kind of low interest rates to generate the economy. But such kind of impacts or pressures is coming from the other countries. They would be big loss or big burden for the management of the central bank. I think that could be the case. But of course the U.S. always does this with a very loud voice. We should be prepared for that. But final discussion will be somewhat different. Tarisa, do you have any comment on the issue?

Ms. Watanagase: In fact, Thailand could be at the bottom of the U.S. watch list as well because we have trade surplus with the U.S. But in our case, I do not know what we can do to change that situation because we don't have quotas, we don't have subsidies, and our currency is strong, one of the strongest in the region right now, and for the past few years as well. If we are targeted we'll just have to try to point out all these facts, that our trade surplus is not the result of any market interference.

Mr. Watanabe: Well thank you. Just I'd like to come back to the China issues. Some people say if the U.S. is going to have very harsh position against China, Chinese position would be replaced by the other countries. In that case I think the ASEAN countries have the good opportunity to increase more sales or more exports to the United States. Tarisa, could you somewhat touch upon that issue? Do you still see such kind of opportunity for the ASEAN countries to keep the good position towards the United States if China is going to withdraw a little?

Ms. Watanagase: I don't think that there will be much change to China's position. China is now the No.2 biggest economy and is expected to surpass the U.S. in the future. No doubt China has quite a few immediate issues to take care of: pockets of imbalances, debt issues, for example. But compared to other economies it is still much more centrally planned. The government has a very strong hand in implementing or executing measures it wants to do. So in that sense their economic policies can be more effectively executed compared to other market economies. From that perspective, it may be able to weather economic difficulties and maintain its global position. I believe that all ASEAN countries are trying to maintain well balanced relationship with both China and the U.S., because these are two super powers of the world. We are mostly small open economies and hence can't afford to side with either country.

Mr. Watanabe: Sorry, I have one more question for Tarisa. If there are some agreements between the U.S. and China on the foreign exchange issues, the RMB would be stabilized to the dollar and at least the RMB would not depreciate against the dollar, what kind of impact will it have for the trade with ASEAN? Still between Thailand and China, most transactions are done in the dollar, not using the RMB? (Tarisa: No.) In that case there is no direct impact of higher value of the RMB on Thai exports?

Ms. Watanagase: If the RMB is stronger, in a way it is good for our exports to other countries. Yes, I think that is something positive to countries in this part of the world.

Mr. Watanabe: Yes, still we do not know the details what kind of the agreement they have reached. Just the news saying there would be some development on this issue.

Ms. Watanagase: In the case of China the general perception is that the exchange rate is not always moving freely. But going forward I think China wants to gradually become more open, so it's possible that with or without this agreement with the U.S., it will move in that direction. Perhaps it is a matter of speed.

Mr. Watanabe: OK, thank you very much. I'd like to come back to monetary issue, about the interest rate. Currently interest rate is globally very low and of course the economies are not so good. Especially U.S. interest rate is not rising and so the situation does not bring up the other countries' interest rate as well. But my sense is that now the money is not so scarce, so we don't see any possibility of 8% or even 12% U.S. treasury bills in the future. Even though some funds flow back to the U.S. market, still the Asian economy can tap the debt market with very low rates. Some people say if the sentiment for the future of the interest rate is rising, the interest rate will rise, but from now on I don't think there will be any re-occurrence of 1980s and 90s interest rate levels. How do you think of that, Ellen?

Ms. Zentner: Will we ever see it again? We've done a lot of demographic work in the U.S., looking at the changeover from baby boomers to the millennials taking share from them. In terms of size the millennials outnumber the baby boomers now starting this year. We had a period of low interest rates for so long, you now have a generation that has never known anything other. When you survey that generation for what mortgage interest rate would they be alarmed by, the answer is 5%. That 5% mortgage rate would be something that would be really alarming for them.

I was born in 1971, and in 1980 I was with my mother when she bought a house. She still had to pay 18% interest rate, 18% mortgage rate, and that was normal. It was with that sense of "If you don't buy today, it would be more expensive tomorrow". And I tell that to young people today and they are just astounded. They can't believe that. And I tell them "Don't worry. We had refinanced several times over the next couple of decades." That is an interesting demographic angle and it is the impediment to interest rates being higher.

You have a generation that has no idea that 3.5% mortgage rate is not normal. The lower for longer stories though, it was pretty much written in stone once we were hit by financial crisis. You could argue that while in the past because of the level of inflation, you needed 400 to 500 basis points of monetary policy easing in order to provide enough lift for the economy. We, at this time with inflation running lower, don't need to drop rates 400 to 500 basis points to get real rates lower. If we are faced with a typical downturn next time, who is to say that 300 basis points of easing, even if it puts us back by the zero lower bound, that's not because the real rate will be just as negative as it was in the past when we dropped it 400 to 500 basis points.

But, I think "the lower for longer" is going to, like Shirai-san pointed out, linger for longer because central bank balance sheets will be very large for a long time and depressing term premium for a long time. I think that's just the world that we live in. And, it's one reason why the Fed has continued to act so gingerly as it has in terms of raising interest rates and being so quick to move to the sidelines when there has been any hiccup in the economy or signs of hiccup, because they know that their ultimate desire is to get the rate as high as possible in the cycle. The only way to do that is to stretch the expansion for as long as possible because you can only get there very slowly. I think there is a general recognition of these impediments to getting rates higher and just how careful they need to be.

Mr. Watanabe: Well, thank you. Ellen just touched upon the issue of demography. I think in Europe and Japan is somewhat different. How do you see, Gertrude and then Sayuri?

Ms. Tumpel-Gugerell: On the demographic issue, there is no intention to change the trend. There is no willingness to accept more immigration or migration. We have got used to lower growth rates in the medium term. Interest rates have lost the allocation function in the economy. I hope we'd see some normalization. I am less concerned at the moment about the level of interest rates, although it has negative side effects especially on bank profitability and pension funds. I am more concerned about volatility of capital flows between regions in the world and in and out of emerging market. I think there is a risk for financial stability and this should be addressed now.

Ms. Shirai: About this lower neutral rate which is happening in advanced economies, it means that in advanced economies, their interest rate continued to remain low. After normalization it maybe a slight pickup, but compared to the pre-crisis period in the advanced economies, interest rates would remain low. That means that probably emerging economies still have a high demand for credit, so probably emerging economies' neutral rate is much higher than advanced economies. That means that there will be capital inflows to emerging economies which is good for emerging economies. Then they can catch up with advanced economies. That is my point number one.

Number two, the relationship between aging and neutral rate is not clear. At this moment, we see in Japan, Europe or the U.S., because of some demographic issues of aging leads to the decline in neutral rate. It's because that we have people who live longer, who work longer, who can have higher income, and saving is greater so that leads to the decline in neutral rate. But at some point in the future when these elderly people who are working at this moment will completely retire from the market, and they will start to consume accumulated saving, and then the saving will be less in the economy. That will lead to a pickup in the neutral rate. So just to clarify, the relationship between aging and neutral rate is not clear. At this moment for a while, we will see a downward pressure on neutral rate but in the future, I think there will be some threshold, because aging will lead to lower saving which will lead to higher neutral rate. In that case, central banks will have lower probability of falling into an effective lower bound. They are able to use traditional monetary easing policy. That's my second point.

Third point is about inflation. Even in the U.S., I do not see any serious problems of the U.S. inflation dynamics, but the FOMC members worry so much about this muted inflation, and also they are really seriously thinking what kind of alternative monetary policy framework they can introduce this year. But I guess at some point, what really the central bankers have to think is that we may really have a low inflation period, maybe because of the sharing economy or maybe because of globalization. When you look at consumer prices and merchandise product prices, you do not really see a pickup. Even in the U.S. when you look at CPI good prices, they do not show steady growth. Regarding globalization or e-commerce —we can purchase lots of goods from the whole world which leads to a competition— or sharing economy, maybe we have a structurally different inflation dynamic now. So probably at this moment, it is difficult to discuss about changing inflation target, but at some time in the future, probably central banks in advanced economy maybe have to discuss whether 2% inflation is reasonable. What is wrong with lower inflation if we do not see any inflation risk?

Mr. Watanabe: Thank you. Sayuri's first point is that now we (developed country) are going to remain at low interest rates, and so it is good chance for the emerging economy to catch up. But I think short-money is very much abundant but long-money is not so much provided because the banks' strength is little bit weaker than before, especially in the Europe, I am sorry to say this. So overall the money is very much abundant, but short money is too much abundant, while long money is not so much. The Asian Development Bank says every year Asian infrastructures demand for financing $1.6 trillion but the reality is only a few hundred billion dollars would be invested. Such kind of big gap would remain. Tarisa, how do you see from the view of the ASEAN economies?

Ms. Watanagase: That is obviously bad for ASEAN economies that have high need for infrastructure. I do not have a good answer to the problem. I guess the world has to come together and put resources together. When the AIIB (Asian Infrastructure Investment Bank) was set up, it was said that this will complement what the ADB (Asian Development Bank) is doing, which I think it is doing but still that is not enough. We just have to keep on and do more work for that.

Changing the topics or going back a bit to the previous question about inflation. Right now it is low, as we know. Whether the target should be maintained or not, I fully agree with Sayuri-san that timing has to be right, not to erode confidence in inflation targeting. But when the timing is right, I think it is very important to consider the need of revision. The estimation of natural rate and potential GDP is tricky business, and there have been structural changes. Hence there may be good reasons to change the target. These are issues going forward for central bankers to ponder upon. In the long run, might inflation be an issue? I'm concerned that it might be, given the high government debts of quite a few economies, both advanced and emerging. How do you get out of this situation, especially since this is government debt? It might be an incentive to inflate yourself out of high debts. Maybe I am too pessimistic here.

Mr. Watanabe: You touched upon the sovereign government issues but also emerging market banking sector takes money from the outside world. I don't want to see any other re-occurrence of 1997-98 crisis in Asia. How do you see the current status or strength of the ASEAN banks?

Ms. Watanagase: ASEAN are generally fairly resilient because we put in a lot of reforms after the Asian crisis. I think we will be able to withstand the next crisis but for some other emerging economies, which may also have vulnerable external conditions, it may be different. If you look at the global debts which are at record high, it is difficult to see a way for these countries to grow out of their debts. Although it's easier said than done, maybe that is a need for debtors to get together and talk about ways to deal with it in a sustainable manner, some negotiation to do some haircut, for example. Otherwise it will be a long term time bomb, which when exploded will have consequences on the banking sector and in some advanced economies as well.

Mr. Watanabe: Thank you, I just mentioned about the banking sector's strength and also I mentioned about the weaker status of the European banks. How do you see this, Gertrude? So far I think some of the fund channeling to Africa and Latin America is somewhat shrinking and I think one of reasons for the shrinking is coming from the weaker positions and the status of the European banks. How do you see that?

Ms. Tumpel-Gugerell: I think the European banks are not weaker, but they are less visible at the global level, and they have deleveraged, they are better capitalized but of course some part of the deleveraging took place via a reduction of cross-border exposure. The general expectation is that we could see more cross-border consolidation in parallel with a more credible financial stabilization framework. I think the creation of the Banking Union was progress, because it has harmonized banking supervision and a common backstop was created. This was an important step. Now the role of London vis-a-vis other continental financial markets has to be seen after Brexit. But in general the

European banking system is very much based on the supply of loans and the ECB has achieved a reopening of credit channels after the crisis. I think both business models of banking are necessary. Investment banking services are provided to a large degree from U.S. investment banks. I don't expect much change in this respect.

Mr. Watanabe: You said the European banks are not weaker. (Gertrude: No, they are not weaker.) But still they become a little cautious to the cross-border operations.

Ms. Tumpel-Gugerell: Yes, they have reduced their cross-border exposures due to higher capital requirements, the experience with fiscal risks during the crisis and less cross border liquidity provision. In addition a number of steps have been taken to reduce non-performing loans. More needs to be done but progress has been made in this area.

Mr. Watanabe: I see. During the course of globalization, we usually say, free movement of the money, information, commodity, even humans. But now for humans, there is some backlash and for commodity, there are trade disputes. And also for information, there would be some kind of discussion on what kind of information can be provided to other areas and on how to contain it. That is the situation. So even for money, you've had some kind of limitations, not forced ones, but I think institutions have some kind of cautiousness to provide cross-border operation. We are moving in the other way. Do you think in that way? Maybe I am too much simplified.

Ms. Tumpel-Gugerell: I think we should not look at the banking sector alone but rather capital flows in general across regions. We have an ongoing diversification and investment in other regions out of Europe and vice-versa. This continues especially foreign direct investments. The cross border presence of European banks is lower than in the past, but investment flows are still considerable.

Mr. Watanabe: I think, in the area of the money, more regulations on the investment like the CFIUS (Committee on Foreign Investment in the United States). Maybe Japanese companies are rather free to buy some American companies but the Gulf countries and even China show some interest, CFIUS may apply. Even in that area there is some kind of blockage of the money movement.

Ellen, I have one question but this time just as a private banker. How do you keep the size of long-term money to the world? Even though you are not in charge of development financing I appreciated if you have some comments.

Ms. Zentner: If I think about the banking system overall in the U.S., I admit it is clear that banks are better capitalized and better prepared for a downturn, as the LCR (Liquidity Coverage Ratio) being one of the biggest pieces of regulation that came about. They created healthier balance sheets for banks but also one might see the Fed has to keep an enormous balance sheet because of that. Now the stress testing process is quite credible in the U.S. because the CCAR (Comprehensive Capital Analysis and Review) process is pretty rigorous. I think if there is one area in question where there could be even more strength behind the CCAR process in that stress testing process would include the leveraged loan market. And capturing how much banks are exposed to that. If there is one area of concern of the Fed because they have raised their focus on credit markets, it is the leveraged loan market, and that led governor Brainard back in September when she spoke about corporate leverage being a financial risk to the U.S. but one area you could further strengthen stress testing for banks.

And I say this, knowing that creates pain around people that do the CCAR process, but finding some way to gauge how exposed the banks are to the leveraged loans at this point is important. The U.S. corporate credit market has been quite strong for many years and it is quite stretched, and so that the biggest risk that the Fed should be watching is the leveraged loan market. We have had a few defaults, the U.S. PG&E (Pacific Gas and Electric Company) being the third largest corporate default in U.S. history and someone tries to dismiss it as nuance for idiosyncratic factors, but these things tend to kick off waves of defaults. There is a global systemic aspect to this because, for instance, Japanese buyers have been the largest buyers in the past three years of U.S. corporate debt. So, it’s safe to say there is overarching risk to the U.S. outlook or the link to this expansion is corporate debt market. I am not sure the bank balance sheet has been properly tested for that.

Mr. Watanabe: Thank you very much. Now we have about 15 minutes to go, so I’d like to change the subject. This year Japan is going to host G20, and during discussion in the financial world we will have to discuss how to treat and how to cope with the crypto-asset issues. Some countries very much like to do virtual currencies or Bitcoin types of operations. But now more suspicion is rising. So now we are going to think about how to regulate the crypto-assets. Some totally refuse it, while some are very much encouraging it. Each person has quite different views on this issue. Do you have comments, Sayuri?

Ms. Shirai: About crypto-currencies, although central banks and regulators pay a lot of attention to this emergence of crypto-currency, at this moment, the impact is really small. I think it is for several reasons.

The first reason is because crypto-currency developers are not allowed to generate money. So there is no money creation activity. That is why the size is not comparable to the private sector money such as bank deposits or any other e-money. That is one point.

And for the second point, I think bitcoins are technically attractive. They have attractive features but for a bitcoin, there is a maximum amount of issuance, and the scale of its issue is not comparable to any other existing moneys. From this angle, I do not really see a major threat at this moment. But I think young people are really interested in them not only in Japan but globally, and eventually we really have to talk about how to form an integrated approach to this regulation related to crypto-currency.

I just want to mention about central bank digital currency. There are lots of issues about central bank digital currency, meaning central bank, instead of private sector developers, issues on digital token, which became very popular. But I think there is some kind of conclusions after many discussions and experiments, so central bank digital currency applying to the general public probably is not good, because it will have an adverse impact on existing banking system. So probably people really do not pay a lot of attention to this central bank digital currency issue to the general public, except for Sweden. Sweden is different. They are not issuing crypto-currency but are going to issue central bank digital currency. And the conclusion is that I think central bank may use this digital token in the future, if such kind of technology will generate more efficient wholesale financial system like RTGS (Real-time gross settlement), delivery vs payment or cross border payment. So it is still ongoing at this moment, technologically not matured, so no central bank considers seriously the central bank digital currency. But in the future, I think still it is possible the central bank may apply this digital token to their businesses.

Mr. Watanabe: Thank you. There are two things. Some people say “if the size of crypto-asset is going to rise, the BOJ’s money supply would be replaced by such kind of supply and the management of central banks would be somewhat affected.” That is one thing. Another thing is now we have more than two thousand different crypto-assets sometimes we call them Bitcoin or something else like that. And they said if you use a Bitcoin you don’t have to worry about foreign exchange of the matching prices but now you have two thousand different ones, so how do you make the exchange or how do you treat them. Do you have any idea on this? Sayuri?

Ms. Shirai: About the impact on money supply, it is unlikely. Maybe 10 or 20 years-long from now, it might be an issue. But at this moment, as I explained, because crypto-currency developers are not allowed to have a money creation so the size will be very small. One interesting action is conducted by Swiss regulator called FINMA (Swiss Financial Market Supervisory Authority). They allow the Fintech companies to have an account for the general public but such money cannot be used for money creation. But it’s a first step. So eventually the regulator will start to give some additional function to the Fintech companies then in the future crypto-currency developer may be able to have a money creation, then I think the impact will be very big. But at this moment as long as they are not allowed to do that, the impact is really small and probably I don’t think there will be any impact about money supply. But in the future I think like you said that’s possible.

Mr. Watanabe: Thank you for that. Tarisa?

Ms. Watanagase: Yes, in our case the SEC (Securities and Exchange Commission) of Thailand has issued regulations about ICO, initial coin offering. But the idea was not to restrict the offering but just to lay some basic ground rules so that investors are better informed about the nature of that offering. On the part of the BOT we have started to work with commercial banks assessing in a sand box environment, wholesale fund transfers like RTGS system. The concept is done, the trial is done, but I think it's still a long way to go live. At the moment there's no intention to go live since that will need many changes in the legal system and relevant hardware and software need to be upgraded. The benefit is improved efficiency but in terms of safety the existing RTGS fund transfer system is equally safe. Lastly, we don't intent to allow crypto-currency at retail customer level.

Mr. Watanabe: OK, thank you. So, Gertrude and Ellen, in this order?

Ms. Tumpel-Gugerell: For me the crypto-currencies are means of exchange, they are not store of value yet, and they are not a unit of account by definition. In a traditional definition they are not money. Of course the idea behind is that we should have private money and their popularity is due to the expectation that it is profitable to hold them. But there is also the expectation of anonymity and I think we don't need more money laundering; therefore this is one of drawbacks. And the second one is they create credit. Therefore, transparency is important and also monitoring of developments is important. Financial stability and confidence of the public are very precious.

Mr. Watanabe: Ellen?

Ms. Zentner: The Fed, and I am sure all central banks, has a special section that is tasked with studying crypto-currency. Because our question is, what does it mean for bank intermediation, how is it supporting illicit activities which is a big concern around fraud? We saw billions of dollars in crypto-currencies last year just disappear and no one knows where it went. You need to figure out all of that to establish enough confidence in it to be adopted by the public widely. We've seen Chase and Bank of America both crack down on using credit cards to purchase Bitcoins which was happening. You could see it in the credit card data. That was interesting, but it's naturally moving this direction.

I do agree with Shirai-san that demographic support is there. I mean this is something that your millennials and generation Z, who are now turning the age of 21desire. This is exactly the type of freedom these young people want. The anonymity of course is important for illicit activities, but it's also important for these younger generations. What it brings me back to is that, it is clearly moving in that direction and we have to move in a gradual pace because there are certain dangers with it. But, something you said struck me when you talked about there being two thousand different Bitcoins out there. If I look back to the 1960s, when the Bank of America was a tiny bank located on the west coast of the United States and considered themselves the be the lender to the middle class, and they invented the BankAmericard which was the first credit card. At that time MasterCard did not exist. And after that, you had thousands of different types of bank cards in the U.S. because every single bank, no matter the size, had its own credit card. And, it was mayhem and we almost didn't adopt credit cards in the U.S. at all. Eventually we came out with the centralized system Visa and MasterCard which then would issue those credit cards in the name of all those banks. Maybe, that's eventually something like a Bitcoin, some centralized system comes about. But, just because there are two thousands of them out there which is laughable doesn't mean we can't get some centralized system. It has happened before at least in the U.S. for the credit card system.

Mr. Watanabe: Thank you. I think the credit card is one of the good innovations at that time, but now smartphone devise application is going to kick out such kind of credit cards. Already in China credit card is not working and smartphone application is the only way to make payment. Such kind of new innovation or new challenge is coming.

OK, my final question, in the case of the monetary world the bad thing has happened every ten years; in 1987 Black Monday, in 1997 the Asian crisis, Brazilian, Russian, and LTCM (Long-Term Capital Management) in New York, and in 2007 subprime loans crisis and of course in the next year we had the Lehman Brothers shock. Very luckily there were no significant one in 2018. I'd like to ask you about 10 years from now, in 2029, what would be the feature of the banking sector? Everybody if you have comments on that?

Ms. Zentner: I think within next 10 years there has to be a day of reckoning in corporate credit in the U.S. I talked about corporate credit earlier. You always have to follow the leverage when you think about either downturns or crises. Follow the leverage. The leverage this time in the U.S. has been the U.S. corporate credit. They did not deleverage after the financial crisis amid years of low interest rates, and have built up the real financial stability risk in that sector. And it's not just a tremendous rollover schedule of corporate debt which we are looking at in this year around $750 billion, another record high, next year rises to $820 billion then $821 billion after that. Much of the newer debt issued in the BBB market comes with an aggressive deleveraging schedule which many corporates will not be able to handle. So, you are constantly at risk of a wave of defaults in the U.S. Financial crises have some systemic source, and this can be systemic because the reach for the yield has occurred across the global economy as low interest rates pushed a lot of investors globally into corporate bonds. That is the terribly pessimistic side of me.

Meanwhile, economists are the dismal scientists, so we get paid to worry. The bright spot I will give you for the U.S. economy is that when we think about demographics which we can base a lot of studies solely on a country's demographics, the youth demographic in the U.S. is unique to the U.S. If you look at the share of our population of millennials and especially generation Z, generation Z is our country's largest cohort which dwarfs other countries. We have this massive youth demographic. We are looking at the sweet spot years for U.S. economy from 2022 to 2032, when the millennials, which is generation Y and generation Z combine in greatest number, in their prime working years and prime earning years. That sets us apart on the global stage because no other countries, especially no other developed countries, really have this youth demographic. So, this will be raising potential GDP, raising trend consumption, it does allow for higher real interest rates and the like. I think that is a very positive story I can leave you with for the U.S.

Mr. Watanabe: Thank you for that. Gertrude, I would like to ask you in a broader aspect, not only the banking sector, but the financial system and the EU integrity, what do you see in 2029?

Ms. Tumpel-Gugerell: First of all I hope we will have a more balanced system between the role of the capital market and the banking system. When we look closer at the banking system in the U.S. and in Europe we see that part of the higher share of the capital market in the U.S. has to do with the securitization of mortgages, which is less the practice in Europe. The financial system is undergoing a huge transformation. Banks will be less visible, banking services will be offered to a high degree online but there will also be demand for financial advice and competition from non-banks will increase. Banks may go back to a smaller scale; I mean what we have seen in the early 2000, within 10 years balance sheets of banks have doubled, this we will not see in the future again.

Mr. Watanabe: Thank you, Gertrude. Tarisa, how do you see in ASEAN?

Ms. Watanagase: OK, 10 years is a long time. In the period, there could be a financial crisis somewhere in ASEAN, but that would probably be an isolated case, unlikely to be a systemic one. For me the concern is more about the global health: whether we are going to see another global crisis. I have two concerns. First is the high global debt, which I mentioned earlier might take longer than 10 years for the debt crisis to blow up, but it is also possible to happen sooner. My second concern is inequality. It is getting very, very bad almost everywhere. If economic growth is not forth coming, is not high enough, or does not contribute to the right economic segments, how long can that inequality continue without social unrests that can be major disruption to the economy?

Mr. Watanabe: Thank you, Tarisa. So, Sayuri?

Ms. Shirai: 10 years from now, if there is any financial crisis, that may likely to come from non-bank in advanced economies, where we do not have a lot of information about what is happening in non-bank sector especially in the U.S. and Europe. Their balance sheets are growing, probably much bigger than banking sector. So their risk exposure is not clear, and that is one area of concern. How to regulate: how to get more information from this sector is one issue.

The second point is that if we have a low neutral rate for a while in advanced economy, there will be interest differential between advanced economy and emerging economy. There will be continued capital inflow into emerging economy, so some emerging economy may again face credit bubble or real estate bubble.

My final point is that this is not about financial sector, but I really want to say something about central bank. What will happen to central bank? After the Lehman shock, the Fed took the lead in terms of implementing LSAP and the QE massively, which really contributed to higher U.S. stock prices and higher real estate prices. Asset prices were positively affected by this unconventional monetary policy. Now the U.S. is trying to normalize monetary policy, which means such kind of impact on their stock prices and real estate prices will be reversed, but the market do not want to accept that. That is what happened last year. What will happen to the balance sheet of central bank in the end, what will happen in 10 years from now, will there be any central bank in advanced economy that could reduce the balance sheets to a significant degree? —those are the questions I have in my mind. Like what Ellen and I also mentioned, the Fed is likely to have a very large balance sheet toward the end of this year, $3.5 trillion, but eventually, it will start to pick up to accommodate the higher demand for the currency, so the Fed in a longer run, their balance sheet will be, say, $4 trillion. If the recession will happen 5 years from now in the U.S. and they do the QE, then this balance sheet goes to 5 trillion or 6 trillion, what will happen? So that kind of issue I always want to keep in mind. It may not be banking crisis but some kind of problem may be created by this huge balance sheet generated by central banks in advanced economy. What will happen, how that will affect the function of financial market? That kind of thing, I think, we really need to seriously discuss in the next 10 years.

Mr. Watanabe: Thank you very much. Now that the time is running out, I don’t have to make any summary, we have covered very big issues and every panelist was very excellent and showed their wisdom. We really appreciate them. Please give your big hands to the 4 panelists.

Thank you very much.

Now I close this panel discussion.

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