



Monday, January 14, 2019

Top 10 risk and compliance related news stories and world events that (for better or for worse) shaped the week's agenda, and what is next

Dear members and friends,

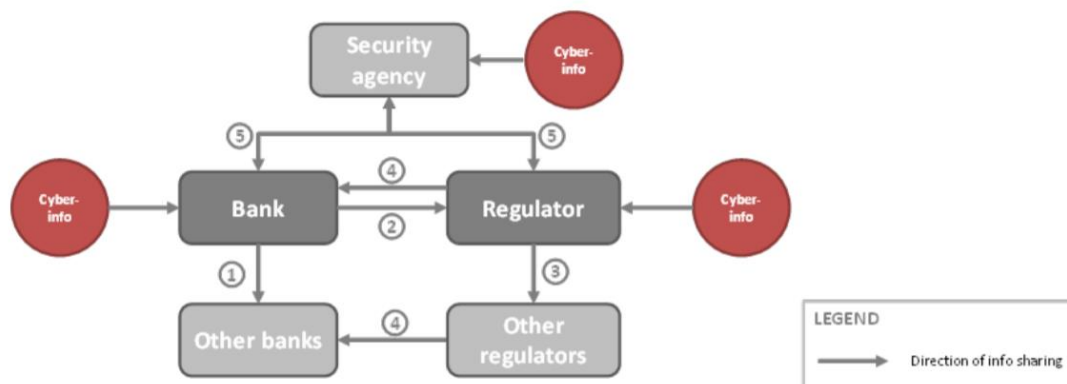
Oscar Wilde believed that **consistency** is the last refuge of the unimaginative. When cyber risk management is just another checklist, he is right. But in establishing international standards, we need consistency.



I have just read an interesting new paper from the Basel Committee, with the title *Cyber-resilience: Range of practices*. The paper answers a very important question: **Do banks share cyber-security information with regulators?**

We read: “The sharing of cyber-security information from a bank to its regulator(s)/supervisor(s) is generally **limited** to cyber-incidents based on regulatory reporting requirements.

Figure 1: Interlinkage of different types of cyber-security information-sharing practices (1)



(1) the numbered circles next to the arrows indicate the “types” of info sharing as described in section 5.1 and Figure 2
Source: Basel Committee on Banking Supervision.

Such requirements are mainly established to:

- (i) enable **systemic** risk monitoring of the financial industry by regulator(s);
- (ii) enhance regulatory requirements or issue recommendations by regulator(s) to **adjust** policies and strategies based on information collected;
- (iii) allow appropriate **oversight** of incident resolution by regulator(s); and
- (iv) facilitate further sharing of information with industry and regulators to develop a cyber-risk response framework.

Reporting requirements are established by **different** authorities for specific purposes depending on their mandate (eg supervisory and regulatory functions, consumer protection and further distribution of information to national cyber-security agencies for systemic operators).

Incident reporting by banks to regulator(s) is a **mandatory** requirement in many jurisdictions, with **different scopes** of requirements and ranges of application.

For jurisdictions already enforcing the requirement in the past, the reporting obligation has a **broader** operational incident scope, including cyber-incidents.

The perimeter can include all supervised institutions but is more often **limited** to systemically important institutions.

Nearly all institutions regulated in the EU are required to report cyber-security incidents to the competent authorities.

The requirements stem from supervisory frameworks (such as the Single Supervisory Mechanism (SSM) cyber-incident reporting framework), EU directives (PSD2, NIS) and local law.

Some requirements also include the obligation to submit a **root cause analysis** for the incident, or a **full post-mortem** or lessons learnt after the incident.

Different scopes and perimeters may depend on the type of authority (eg supervisors, regulators, national security) and their mandate (ie national cyber-security agencies, consumer protection, banking supervision, etc), sector(s) involved (eg multisector or specific: banks, significant banks, systemic operators, payment) and geographical range (eg national,

multiregional).

While many of the supervisors focus only on reporting and tracking incidents that have already taken place, some require **proactive** monitoring and tracking of potential cyber-threats because concerns about **reputational** risk may lead to a delay in incident reporting by the regulated entity.

Based on these considerations, different reporting frameworks are also observed.

These **range** from formal communications to informal communications (eg free-text updates via email or verbal updates over the phone).

Differences are **noted in:**

- (i) **taxonomy** for reporting;
- (ii) reporting **time frame** (immediately, after two hours, after four hours and after 72 hours are examples of practices observed);
- (iii) templates; and
- (iv) **threshold** to trigger an incident reporting.”

Read more at Number 1 below. Welcome to the Top 10 list.

Best Regards,

George Lekatis

George Lekatis
President of the IARCP
General Manager, Compliance LLC
1200 G Street NW Suite 800,
Washington DC 20005, USA
Tel: (202) 449-9750
Email: lekatis@risk-compliance-association.com
Web: www.risk-compliance-association.com
HQ: 1220 N. Market Street Suite 804,
Wilmington DE 19801, USA
Tel: (302) 342-8828

*Number 1 (Page 8)***Cyber-resilience: range of practices**

The Basel Committee on Banking Supervision has published a report that identifies, describes and compares the range of observed cyber-resilience practices across jurisdictions.

*Number 2 (Page 11)***Old and new challenges for the insurance sector, its regulators and supervisors**

Keynote address by Mr Denis Beau, First Deputy Governor of the Bank of France, at the Joint ICMIF/AMICE Regulatory Affairs conference, Paris.



“After a few words on the economic and financial context and its related challenges for insurers, I will first focus on those brought by regulatory developments currently in the making, and will finish with the new risks that insurers, their regulators and supervisors will have to address, namely **cyber-risks** and climate change-related risks.”

*Number 3 (Page 13)***Confidential data loss in Denmark**

Confidential data of 20,000 residents in Gladsaxe, Denmark has been lost following the theft of a computer from the town's city hall between November 30th and December 3rd.

The data had been saved locally and included information such as registration numbers, age and addresses. Details of social welfare payments and housing were also reported as being affected.

*Number 4 (Page 14)***DOJ charges Chinese nationals in cyber espionage campaign**

The indictment was filed by prosecutors with the U.S. attorney's office in the Southern District of New York.

UNITED STATES DISTRICT COURT SOUTHERN DISTRICT OF NEW YORK	DOCUMENT ELECTRONICALLY FILED
----- X	DOC #:
UNITED STATES OF AMERICA	DATE FILED: DEC 17 2018
- v. -	SEALED INDICTMENT
ZHU HUA,	18 Cr. _____
a/k/a "Afwar,"	
a/k/a "CVNX,"	
a/k/a "Alayos,"	
a/k/a "Godkiller," and	18 CRIM 891
ZHANG SHILONG,	
a/k/a "Baobeilong,"	
a/k/a "Zhang Jianguo,"	
a/k/a "Atreexp,"	
Defendants.	
----- X	
	COUNT ONE
	(Conspiracy to Commit Computer Intrusions)

*Number 5 (Page 15)***Deepen reform and opening-up comprehensively. Create new prospects for financial sector**

Yi Gang, Governor of the People's Bank of China, to commemorate the 40th anniversary of China's economic reform and the 70th anniversary of the People's Bank of China (PBC), Beijing.



"This year marks the 40th anniversary of the reform and opening-up and the 70th anniversary of the founding of the People's Bank of China (PBC).

As components of China's tremendous achievements in the progress of the reform and opening-up, historic changes in the financial sector have taken place in the past four decades, and a modern financial market system has been broadly established which, adapting to the socialist market economy with Chinese characteristics, is vital and internationally competitive."

*Number 6 (Page 34)***The need to regulate virtual currency**

Keynote speech by Mr Ahmed Naseer, Governor of the Maldives Monetary Authority, at the 5th Maldives Islamic Banking & Finance Industry Conference.



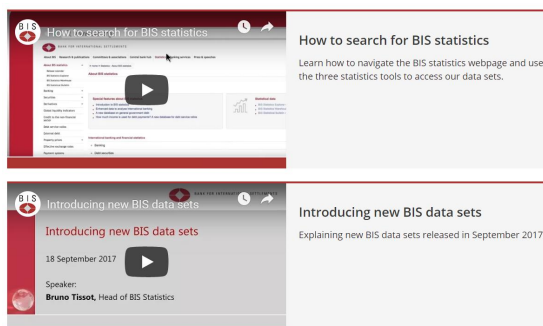
“As the regulator of banks, and financial institutions in the country, Maldives Monetary Authority is grateful to the organizers of this Conference, and congratulate you all for completing five years of this series.”

Number 7 (Page 38)

Tutorials



You can watch these tutorials to learn how to use the statistical tools.



Number 8 (Page 39)

Amazon Customers Made This Holiday Season Record-Breaking with More Items Ordered Worldwide Than Ever Before



Amazon has announced a record-breaking holiday season thanks to its customers all around the world, with more items ordered worldwide than ever before. Amazon customers shopped at record levels from a wide selection of products across every department, discovering top holiday gifts and trending products offered at deep discounts and low prices. Some of the best-selling products this season included, all-new Echo Dot, L.O.L. Surprise! Glam Glitter Series Doll, fashion items from Carhartt, and Bose QuietComfort Wireless Headphones, among others.

Number 9 (Page 42)

Zuckerberg's update on addressing abuse from bad actors on Facebook



“For 2018, my personal challenge has been to focus on addressing some of the most important issues facing our community -- whether that's preventing election interference, stopping the spread of hate speech and misinformation, making sure people have control of their information, and ensuring our services improve people's well-being. In each of these areas, I'm proud of the progress we've made.

We're a very different company today than we were in 2016, or even a year ago. We've fundamentally altered our DNA to focus more on preventing harm in all our services, and we've systematically shifted a large portion of our company to work on preventing harm. We now have more than 30,000 people working on safety and invest billions of dollars in security yearly.”

Number 10 (Page 45)

New Materials Architectures Sought to Cool Hypersonic Vehicles

DARPA seeks designs for cooling super-hot leading edges that rip through the air at more than five times the speed of sound



Hypersonic vehicles fly through the atmosphere at incredibly high speeds, creating intense friction with the surrounding air as they travel at **Mach 5** or above – five times faster than sound travels.

Developing structures that can withstand furnace-like temperatures at such high speeds is a technical challenge, especially for leading edges that bear the brunt of the heat.

To address this thermal challenge, DARPA recently announced its Materials Architectures and Characterization for Hypersonics (MACH) program.

Number 1

Cyber-resilience: range of practices



The Basel Committee on Banking Supervision has published a report that identifies, describes and compares the range of observed cyber-resilience practices across jurisdictions.

Based on analysis of authorities' responses to previous international surveys and on exchanges between international experts, the report gains insight into the effective practices and expectations in place.

It also benefited from industry participants' input.

The current challenges and initiatives to enhance cyber-resilience are summarised in 10 key findings and illustrated by case studies which focus on concrete developments in the jurisdictions covered.

1. General Landscape.

Despite convergence in high level expectations, the technical specifications and supervisory practices differ across jurisdictions.

This diversity of approaches results in a complex and fragmented landscape, but is also a necessary reflection of actual differences in Members' legal frameworks and degree of digitalisation.

2. Strategy.

Regulators generally do not require a specific cyber strategy, however institutions are expected to ensure that systems are "secure-by-design" and that emphasis is placed on resilience in light of current threats rather than compliance to a standard.

3. Cyber risk management.

In most jurisdictions broader IT and operational risk management practices are more mature and are used to address cyber risk and supervise cyber resilience.

4. Governance / organisation.

Models such as "three lines of defence" are widely adopted, but cyber resilience is not always clearly articulated across the technical, business and strategic lines, which hampers their effectiveness.

5. Workforce.

Skills shortage leads to recruitment challenges. A few jurisdictions have implemented or leveraged specific cyber certifications to address this.

6. Testing.

Protection and detection testing is evolving and prevalent; response and recovery less so.

7. Incident response.

Although an incident management framework is not required, incident response plans are.

8. Metrics.

Although some forward-looking indicators of cyber resilience are being picked up through the most widespread supervisory practices, no standard set of metrics has emerged yet.

9. Information sharing.

The content and use of information collected or shared by banks and supervisors varies widely across jurisdictions. The speed, latitude and security of communications required to cope with a cross-border cyber incident has led a few jurisdictions to take specific formal steps in this area.

10. Third party risk.

Regulatory frameworks for outsourcing activities across jurisdictions are quite established and share substantial commonalities, but there is no common approach regarding third parties beyond outsourced services.

While third parties may provide cost-effective solutions to increase resilience levels, the onus remains on the banks to demonstrate adequate understanding and active management of the third party dependencies and concentration across the value chain.

By describing the diversity of approaches thematically, the report will help banks and supervisors navigate the regulatory environment and will serve

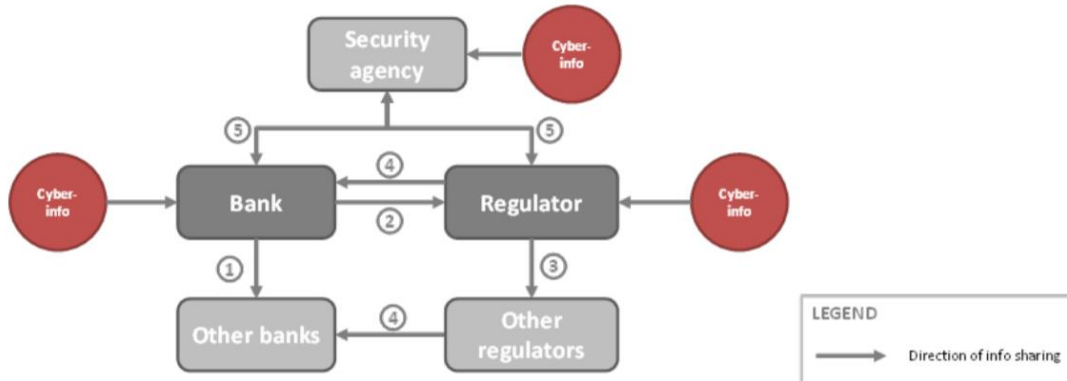
as useful input for identifying areas where further policy work by the Committee may be warranted.

Going forward, the Committee will integrate the cyber dimension into its broader operational resilience work.

To read the report:

<https://www.bis.org/bcbs/publ/d454.pdf>

Figure 1: Interlinkage of different types of cyber-security information-sharing practices (1)



(1) the numbered circles next to the arrows indicate the "types" of info sharing as described in section 5.1 and Figure 2
 Source: Basel Committee on Banking Supervision.



*Number 2***Old and new challenges for the insurance sector, its regulators and supervisors**

Keynote address by Mr Denis Beau, First Deputy Governor of the Bank of France, at the Joint ICMIF/AMICE Regulatory Affairs conference, Paris.



Good morning to all of you, dear Presidents and members of ICMIF and AMICE, I am very happy to be here with you today to exchange views on the stimulating and no less challenging developments that the insurance sector, and especially mutual insurers, as well as their regulators and supervisors, will have to face in the upcoming months and years.

After a few words on the economic and financial context and its related challenges for insurers, I will first focus on those brought by regulatory developments currently in the making, and will finish with the new risks that insurers, their regulators and supervisors will have to address, namely **cyber-risks** and climate change-related risks.

Overall, the **macroeconomic** environment has been favourable. The recovery of the global economy strengthened last year. Global GDP grew at 3.8% in 2017 and is expected to grow at a similar pace for the next two years.

The **European** economy performed well and the inflation rate in Europe is in line with the European Central Bank's target (2%).

Even if recent survey data have been somewhat weaker, the medium-term outlook for the euro area remains broadly positive.

However, global and domestic uncertainties are growing. The tightening of monetary policy in response to improved economic conditions may impact the growth of major advanced economies.

The **US Federal Reserve** and the **Bank of England** have progressively raised interest rates; meanwhile, the European Central Bank has started phasing out its bond-buying programme (QE). The impact of monetary policy normalisation on financial markets should be closely monitored.

The overall market sentiment is optimistic, but signs of possible repricing in financial markets are emerging.

Market volatility has increased since the beginning of the year and price corrections were observed, most significantly in equity markets.

Valuations remain stretched in equity, bond and certain real estate markets creating a high risk of asset repricing.

Recent **tensions** in emerging markets, especially Turkey and Argentina, initiated some flight to safety mainly towards US investments.

In the near future, the threat to global trade created by **protectionist** tensions, and growing political uncertainties, also in Europe following the developments in Italy and a significant probability of a hard Brexit may weigh negatively on the global environment.

In addition, the European insurance sector has been facing an unprecedented and challenging low interest rate environment for the past four years.

To read more:

<https://www.bis.org/review/r181220a.pdf>



*Number 3***Confidential data loss in Denmark**

Confidential data of 20,000 residents in Gladsaxe, Denmark has been lost following the theft of a computer from the town's city hall between November 30th and December 3rd.

The data had been saved locally and included information such as registration numbers, age and addresses. Details of social welfare payments and housing were also reported as being affected.

Local authorities had informed those affected by Monday 3rd blaming the issue on human error following a spreadsheet being saved locally on the computer as a temporary measure.

Ensuring personal data is secure should be at the [top of any priority list](#), and the NCSC has guidance aimed at protecting bulk data at: <https://www.ncsc.gov.uk/guidance/protecting-bulk-personal-data-main>

Organisations shouldn't look to pass blame onto employees following this kind of incident. The likelihood is that the employee was acting in good faith to ensure a business need was met. The NCSC encourages adding extra layers of resilience to support employees and use incidents such as this as a learning opportunity.

It's well worth reading a blog post written on the NCSC website back in November 2016 at: <https://www.ncsc.gov.uk/blog-post/security-breaches-communication-wh-at-are-your-users-telling-you>



Number 4

DOJ charges Chinese nationals in cyber espionage campaign

The indictment was filed by prosecutors with the U.S. attorney's office in the Southern District of New York.

UNITED STATES DISTRICT COURT	:	DOCUMENT
SOUTHERN DISTRICT OF NEW YORK	:	ELECTRONICALLY FILED
- - - - -	:	DOC #:
	:	DATE FILED: DEC 17 2018
	:	18 CRIM 891
UNITED STATES OF AMERICA	:	<u>SEALED INDICTMENT</u>
-v.-	:	18 Cr. _____
ZHU HUA,	:	
a/k/a "Afwar,"	:	
a/k/a "CVNX,"	:	
a/k/a "Alayos,"	:	
a/k/a "Godkiller," and	:	
ZHANG SHILONG,	:	
a/k/a "Baobeilong,"	:	
a/k/a "Zhang Jianguo,"	:	
a/k/a "Atreexp,"	:	
	:	
Defendants.	:	
- - - - -	:	
	:	

COUNT ONE
(Conspiracy to Commit Computer Intrusions)

You may visit:
<https://www.justice.gov/opa/press-release/file/1121706/download>



*Number 5***Deepen reform and opening-up comprehensively. Create new prospects for financial sector**

Yi Gang, Governor of the People's Bank of China, to commemorate the 40th anniversary of China's economic reform and the 70th anniversary of the People's Bank of China (PBC), Beijing.



This year marks the 40th anniversary of the reform and opening-up and the 70th anniversary of the founding of the People's Bank of China (PBC).

As components of China's tremendous achievements in the progress of the reform and opening-up, historic changes in the financial sector have taken place in the past four decades, and a modern financial market system has been broadly established which, adapting to the socialist market economy with Chinese characteristics, is vital and internationally competitive.

And over the past 70 years, under the leadership of the Communist Party of China (CPC), the PBC has made extensive exploration and innovation, overcome formidable obstacles, pioneered in the promotion of financial development, reform and opening-up at different times, kept creating new prospects for the financial sector, and made significant contributions to China's economic and social development.

Financial Adjustment and Macro Prudential Management Framework Gradually Improved

The monetary policy framework has been established and improved. After the founding of new China, the country adopted a mono-bank system compatible with the planned economy, wherein the PBC functioned as a central bank and a unique commercial bank as well.

Following the introduction of the reform and opening-up policy, the PBC gradually split off its industrial and commercial credit and savings businesses, and exclusively performed the functions of a central bank since 1983, with primary responsibility lying in the implementation of macro financial policies.

Amid the steady progress in reform and opening-up and the transition from the planned economy to the socialist market economy with Chinese characteristics, the monetary policy regulatory mechanism was gradually shifted from direct adjustment-oriented to indirect adjustment-oriented.

First, the Law of the PRC on the People's Bank of China specified that the ultimate objective of monetary policy is "to maintain the stability of the value of the currency and thereby promote economic growth".

Second, measures were taken to reform the credit plan management system which featured "centralized management on deposits and loans", eliminate caps on credit scales, gradually establish the M2 money supply as the intermediate target of monetary policy, and develop in due time indicator of aggregate financing to the real economy (AFRE) as an important source of reference for monetary policy.

Third, the monetary policy instruments including required reserve, central bank lending, central bank discount and open market operation have been created and improved. In order to meet the actual demands of economic and financial development, monetary policy tools such as open market short-term liquidity adjustment instruments have been launched in succession.

Monetary policy macro adjustment has been strengthened. At different stages of economic development, the PBC has always made timely and proper adjustments in monetary policies according to the changes in financial and economic landscape.

Here are several examples. In the late 1980s, China experienced serious economic overheating and inflation. Under the leadership of the central government, the PBC strengthened control over the total supply of money and credit, stepped up efforts to rectify financial governance, and managed to effectively curb fast growing investment and soaring prices in a relatively short time. Following the year of 2003, China's economy entered another upward cycle and the next five years saw 15 rises in required reserve ratio.

In 2007 alone, the required reserve ratio was increased on ten occasions, and the benchmark interest rates for deposits and loans were raised six times.

In 2008, the US sub-prime mortgage crisis spread worldwide and escalated into a global financial crisis, significant changes took place in the economic and financial landscapes at home and abroad. The PBC resolutely implemented the decisions of the CPC Central Committee and the counter-crisis package plan developed by the State Council, made timely

adjustments to the direction, priority and intensity of monetary policy, reduced the benchmark interest rates for deposits and loans five times and the required reserve ratio four times so as to ensure an adequate supply of liquidity and eventually make China's economy among the first in the world stabilize and rebound in 2009.

Then in the second quarter of 2009, following the solid recovery of China's economy, the PBC made prompt reverse adjustments by increasing required reserve ratio three times, hence effectively undermining the influence of policy overshooting.

After 2015, and especially since the beginning of 2018, faced with the cyclical downward pressure emerging in economic structural adjustment, the PBC has remained steadfast in pursuing its policy, conducted pre-adjustment and fine-tuning at appropriate junctures, proactively enhanced its support for the supply-side structural reform and high-quality economic development, especially for private enterprises and small and micro enterprises, and alleviated the downward pressure on the real economy.

The two-pillar regulatory framework of monetary policy and macro prudential policy has been established. After the outbreak of the global financial crisis in 2008, the international community recognized that macro imprudence was a crucial cause of the crisis. The PBC spearheaded in the innovative exploration of counter-cyclical macro prudential management.

In the second half of 2009, as RMB loans grew rapidly, it proposed to develop new counter-cyclical measures under the macro prudential policy framework.

In 2010, the PBC explored the practice of macro prudential management by introducing dynamic adjustments of differentiated reserve requirements, associating credit expansion with capital adequacy level required by the macro prudential management. At end-2010, the Central Economic Work Conference explicitly instructed to use well of the macro prudential tool.

After that, the PBC continuously improved macro prudential policies, upgraded the dynamic adjustment mechanism for differentiated reserve requirements into the Macro Prudential Assessment (MPA) system, and took gradual steps to include more financial activities, asset expanding behaviors, and all-system cross-border financing in its macro prudential management. In 2017, "improving the framework of regulation underpinned by monetary policy and macro-prudential policy" was formally written in the report of the 19th CPC National Congress.

Battle for forestalling and defusing major risks has progressed. In the report to the 19th CPC National Congress, General Secretary Xi Jinping noted that we must fight three critical battles and the first of which is to take tough steps to forestall and defuse major risks.

The PBC has proactively fulfilled the responsibilities of the General Office of the Financial Stability and Development Committee under the State Council, taken the lead in developing the three-year action plan to forestall and defuse major risks, launched new asset management regulations and supporting policies, strengthened regulation of financial holding groups, improved regulatory regimes for systematically important financial institutions (SIFIs) and financial infrastructures, and shored up weak links in the system.

Measures have been taken to promote structural deleveraging in an active and prudent manner, properly manage money supply, tighten asset and debt constraints for state-owned enterprises, rigorously implement differentiated housing credit policies, and strictly curb the excessive growth of household debt as well as local governments' hidden debt and leverage ratio.

Meanwhile, the PBC has also rectified various financial chaos in a well-regulated way, resolutely resolved risks of some high-risk financial holding groups, intensively rectified the financial order and conducted the special program on addressing Internet financial risks.

Financial Institutional Reform Continuously Deepened

Remarkable achievements have been made in the reform of large state-owned commercial banks. In 1979, in order to support "loans for government grants" reform, the central government established various state-owned specialized banks, gradually discarded the division of work among these banks, split off their policy-related businesses, and transformed them into market competitors.

However, due to deficiencies in financial standards and rules, imperfect corporate governance structure and inadequate capital, as well as the impact of the 1997 Asian financial crisis, there was a massive build-up of non-performing loans in the banking sector. At that time, some scholars at home and abroad believed China's large state-owned commercial banks were on the brink of "technical bankruptcy".

In response, the Chinese government issued special treasury bonds and established four asset management companies that specialized in receiving and disposing non-performing loans of RMB 1.4 trillion hived off from

state-owned commercial banks. However, deeper reforms like the institutional reform of large state-owned commercial banks remained untouched.

In February 2002, it was clarified at the Second National Financial Work Conference that large state-owned commercial banks should be transformed into joint-stock companies and those with appropriate conditions could get listed. In 2003, the central government decided that the PBC should take the lead in researches on the reform of large state-owned commercial banks.

The PBC then proposed creatively to inject the state's foreign exchange (FX) reserves into large commercial banks, and designed a four-step reform program which included writing off actual capital losses, splitting off and disposing of non-performing assets, injecting FX reserves and getting listed on domestic or foreign markets.

In September 2003, upon the deliberation and approval of the CPC Central Committee, the State Council approved the general plan for transforming large state-owned commercial banks into joint-stock banks, of which the drafting was led by the PBC.

According to the plan, Bank of Communications (BOCOM), China Construction Bank (CCB), Bank of China (BOC), Industrial and Commercial Bank of China (ICBC) and Agricultural Bank of China (ABC) successively underwent shareholding reforms, stripped off non-performing assets, significantly shored up their capital base, and eventually went listed.

During the process, they gradually established relatively well-regulated corporate governance structure and notably enhanced their internal management, risk control capability and market constraint mechanism, with their assets and profitability leaping into the front ranking of the world.

Since 2011, BOC, ICBC, ABC and CCB were successively included in the list of global systemically important banks (G-SIBs). Past experience has demonstrated that it was through reforms that we could achieve a leap forward in the soundness of large financial institutions and that China's financial system was able to withstand the severe blow of the 2008 global financial crisis.

Continued advances have been made in the reform of rural credit cooperatives. In 1996, rural credit cooperatives were decoupled from the ABC and administered by the PBC. After 1998, the State Council set up first the rectification group and then the reform & research group, in a bid to

regulate and consolidate rural credit cooperatives. Though the move enhanced their strength, the rural credit cooperatives still faced such problems as unclear property relationship, inadequacy in management systems, heavy historical burdens and poor asset quality. By the end of 2002, the non-performing loan ratio of rural credit cooperatives in China was as high as around 50%, and 97.8% of rural credit cooperatives were insolvent.

After the Second National Financial Work Conference held in 2002, the State Council established the task force, which was led by the PBC, for deepening reforms of rural finance and rural credit cooperatives. And the overall requirements for reform and development of rural credit cooperatives including "property relationship to be clarified, constraint mechanisms to be strengthened, services to be improved, appropriate support to be provided by the state and local governments to be held responsible" were specified. In June 2003, the reform of rural credit cooperatives was piloted in Zhejiang and seven other provinces and then applied nationwide in a phased manner.

By issuing special central bank bills and special central bank lending, the PBC managed to help rural credit cooperatives in pilot areas to reduce historical burdens. Meanwhile, in formulating the requirements for the issuance and redemption of special lending and special bills as well as the evaluation procedure, the PBC closely integrated financial support into the process of rural credit cooperative reform, so as to gradually bring them "to a new stage". Under the positive mechanism of constraints and incentives, the asset quality, profitability, funding to support agriculture and business sustainability of rural credit cooperatives have been significantly improved.

The reform of development-oriented and policy-backed financial institutions has been proceeding in an orderly manner. To tackle the problems of the indistinction between policy-oriented businesses and commercial businesses in state-owned commercial banks and their severe moral hazards, the Chinese government established three policy banks, namely China Development Bank (CDB), Export-Import Bank of China (CEXIM) and Agricultural Development Bank of China (ADBC) in 1994.

They grew over the decade but were, to varying degrees, troubled by problems like ambiguous boundaries of business and imperfect governance structure. According to the reform principles of targeted guidance and "one policy for one bank" specified on the National Financial Work Conference in 2007, the PBC worked with relevant authorities to first commercialize the CDB, replenishing its capital base and building up a sound corporate governance structure.

Since the outbreak of the international financial crisis in 2008, it has clearly proved that letting development-oriented and policy-backed financial institutions serve national strategies is crucial and necessary. By injecting FX reserves and specifying bond credit policies, the PBC provided funding support for the reform of development-oriented and policy-backed financial institutions to improve their capital adequacy, and formulated charters of CDB, CEXIM and ADBC to facilitate improvements to their corporate governance structure and risk prevention and control system.

Through a series of reforms, the PBC further enhanced the policy-related functions of CEXIM and ADBC, clarified CDB's position as a development-oriented financial institution, significantly strengthened the capital base and resilience of the three institutions, and remarkably improved their governance structure and constraint mechanism.

Reforms of Market-based Interest Rate and Exchange Rate Steadily Promoted

Market-based interest rate reform has made significant breakthroughs. Back in 1993, the Third Plenary Session of the 14th CPC Central Committee proposed that "the central bank should make timely adjustment of benchmark interest rates based on market supply and demand while allowing deposit rates of commercial banks to fluctuate within limits". Since then, the conditions for marketizing interest rate became mature with the successive implementation of the Law of the PRC on the People's Bank of China and the Law of the PRC on Commercial Banks.

On June 1, 1996, the PBC officially eased restrictions on interbank offered rate, marking an important step towards market-based interest rate. Later, the PBC steadily promoted market-based interest rate reform under the principle of "domestic currency after foreign currency, deposits after loans, short-term after long-term", and gradually realized market-based interest rates in the bond market and in the deposits and loans of foreign currencies.

China eased most of the interest rate restrictions by gradually expanding the floating range of deposit and loan rates after the global financial crisis in 2008, by completely removing restrictions on loan rates of financial institutions in July, 2013 and by lifting the cap of deposit rates in October, 2015, all of which marked significant breakthroughs in China's market-based interest rate reform.

Market-based exchange rate reform has been steadily advanced. Since the reform and opening up, China started to facilitate foreign trade system reform by implementing foreign exchange retention system, establishing

foreign exchange swap market afterwards, and easing restrictions on individual use of foreign exchange, which led to the coexistence of official exchange rate and market-based exchange rate.

On January 1, 1994, the reform of RMB exchange rate regime achieved a breakthrough in the unifying of official exchange rate and that in the foreign exchange swap market, resulting in a single, managed floating exchange rate regime based on market demand and supply, and a tiered and unified foreign exchange market. On July 21, 2005, the PBC relaunched the reform of RMB exchange rate regime, with a managed floating exchange rate regime based on market demand and supply with reference to a basket of currencies.

With three successive adjustments in 2007, 2012 and 2014, the daily trading band for the USD/CNY has been widened from 3‰ to 2%, indicating that the PBC has basically withdrawn from regular intervention of the exchange market and that the flexibility of RMB exchange rate has been significantly enhanced.

In the past decade, especially after the exchange rate reform initiated on August 11, 2015, RMB exchange rate formation mechanism has become increasingly market-based. By now, the flexibility of the two-way floating of the RMB exchange rate has been enhanced significantly, with a steady exchange rate expectation. RMB exchange rate remained basically stable at a reasonable and balanced level.

Financial Market System Established and Improved

The bond market has achieved leapfrog development. During the period of resuming government bond issuance in 1981 to establishing China Central Depository & Clearing Co., Ltd in 1996, China's bond market undergone twists and turns featuring seven years of "bond supplied without demand", and the closing of treasury futures market due to the "3.27 incident" after two-year operation from 1993. After the First National Financial Work Conference in 1997, all commercial banks withdrew from the exchange bond market and started to conduct bond repurchase and spot trading in the interbank market.

This marked the beginning of a diversified and tiered bond market system which includes exchange market and the over-the-counter (OTC) retail market (commercial bank OTC market) and was mainly dominated by OTC block trading market (interbank bond market).

Since 2000, under the basic approach of "easing administrative regulations, serving for qualified institutional investors and relying on OTC market", the

PBC has been actively promoting the development of reforming the bond market's role and structure. It has propelled the establishment and improvement of the systems such as market maker rule, settlement agent system, currency broker system, information disclosure system, and credit rating system. It has improved systems for bond issuing, exchange, trust and clearing, established Shanghai Clearing House, facilitated the establishment of National Association of Financial Market Institutional Investors and China Bond Insurance Co., Ltd.

To accelerate innovation of financial products, the PBC launched subordinated bonds, ordinary financial bonds, short-term financing bills and medium-term notes. Besides spot exchange and bond repurchase, the PBC also offers bond lending, bond forward and credit risk mitigation (CRM) instruments. The category of basic products is almost the same with developed bond markets. At the end of October, 2018, China ranked as the world's third largest bond market behind the United States and Japan, with outstanding bonds almost hitting RMB 84 trillion.

Besides, China's bond market also served the role of extending direct financing channels for the real economy, improving social financing structure, enhancing transmission efficiency of monetary policies, lowering financing costs, and strengthening financial stability.

In October 2018, the PBC set up support instrument of bond financing for private enterprises, which is to give credit support to private enterprises with temporary difficulties via various market-oriented approaches such as the sale of CRM instruments. And it has made positive progress.

The coordinated development of the financial market has been advanced. The money market has developed in an innovative way. Since interbank lending was approved among specialized banks in China in 1984, interbank lending market emerged across China.

In 1993, the PBC fostered the establishment of a national interbank lending market. In 2007, when the Measures for the Administration of Interbank Lending was issued, the PBC launched Shanghai Interbank Offered Rate (Shibor) and advanced the reform and opening of the money market. In addition, the bond repurchase market kept growing and the bill market developed in a well-regulated manner.

China's bill business started in the 1970s, while the Law of the PRC on Negotiable Instruments was released in the late 1990s. Since 2000, the PBC has been promoting the use of electronic commercial draft to facilitate the development of commercial acceptance bill.

In 2016, the PBC pushed forward the establishment of a national bill transaction platform and Shanghai Commercial Paper Exchange Corporate Ltd, which marked the expansion and function enhancement of bill market. Moreover, the gold market has grown fully fledged in its functions. After gold jewelry market was opened in China in 1982, the PBC issued Regulations of the PRC on the Control of Gold and Silver.

In 2002, the founding of Shanghai Gold Exchange (SGE) started the movement towards market-oriented gold market of China. By now, SGE has become largest exchange for physical gold bullion.

RMB Internationalized on a Market-oriented Basis

RMB internationalization is an inevitable trend and natural result of the deepening of reform and opening-up in China's economic and financial sector. During the 2008 global financial crisis, RMB gained unexpected popularity among the international community.

A number of countries proactively set up currency swaps with China. Amid an increasing demand for RMB and China's deepening opening-up, the PBC built on the sound momentum generated to gradually make the RMB a fully convertible currency by further eliminating unnecessary administrative controls and policy restrictions and by constantly improving policy framework for cross-border use of RMB for the real economy.

In July 2009, the PBC launched the pilot program of RMB settlement in cross-border trade in several cities such as Shanghai and Guangdong. Later, the coverage of cross-border trade settlement in RMB was extended to the entire nation. After that, the PBC launched various institutional arrangements, including RMB Qualified Foreign Institutional Investors (RQFII), RMB Qualified Domestic Institutional Investors (RQDII), Shanghai-Hong Kong Connect, Shenzhen-Hong Kong Connect, Mutual Recognition of Funds and Bond Connect, to improve the infrastructure system for RMB internationalization.

As China experienced greater economic growth and an elevating international status of RMB, a growing chorus of international voices appeared, calling for RMB's inclusion into the Special Drawing Rights (SDR) currency basket.

Since the IMF reviews the SDR basket of currencies every five years, the 2015 Review offered a historic opportunity for RMB to be included into SDR basket. Under the strategic guidance of the CPC Central Committee, the PBC proactively fostered the inclusion process.

On November 30, 2015, the Executive Board of the IMF acknowledged RMB as a freely usable currency and decided that it will be included in the SDR currency basket, effective October 1, 2016. It was an important milestone in RMB internationalization, which reflected that the achievements of China's reform and opening up were highly recognized by the international community.

According to the SWIFT data, RMB ranked fifth worldwide as a global currency of payment at the end of August 2018, accounting for 2.12% of the global market. In Q2 of 2018, RMB reserves held by countries that report to the IMF's Currency Composition of Official Foreign Exchange Reserves (COFER) system stood at USD 193.38 billion. Over 60 foreign central banks and monetary authorities have included RMB in their official FX reserves.

Opening up of the Financial Sector Steadily Expanded

The financial sector has been further opened up. In the early days of China's reform and opening up, foreign banks were allowed to be established only in the Special Economic Zones (SEZs). They mainly offered services to three types of foreign-funded enterprises with credit funds basically coming from overseas.

After Deng Xiaoping's Southern Inspection Tour Talks in 1992, more openings were extended to foreign banks by removing geographical restrictions for setting up institutions and by allowing foreign banks to conduct pilot operations of RMB business in Shanghai.

Since the accession to the WTO, China has been constantly expanding the opening of the financial sector in aspects of the establishment of financial institutions, the business scope and foreign ownership. As a result, a number of foreign financial institutions set up operations in China, which formed a financial service network with certain coverage and market depth.

Foreign strategic investors were also invited to participate in the transformation of large state-owned commercial banks into joint-stock companies. Since 2018, the PBC has resolutely implemented major state policies announced by General Secretary Xi Jinping at the Boao Forum for Asia Annual Conference to further reform and open up the financial sector, for which the PBC formulated relevant measures and timetable.

In April, the PBC announced eleven reform and opening-up measures, seven of which have been implemented up to present. Meanwhile, the PBC is also promoting reform and opening up of the financial sector in areas such as payment and clearing, bond market, credit-rating and credit reference.

New achievements have been scored in international policy coordination and cooperation. In line with China's overall diplomatic strategy, the PBC carried out financial exchanges and cooperation in an all-round, multi-tiered, flexible and pragmatic manner.

Firstly, the PBC has actively participated in global economic governance and policy coordination, which include fulfilling the tasks of the G20 Finance Track especially those of 2016 G20 Hangzhou Summit; taking an active role and promoting the IMF Quota, Governance and Surveillance Reform, with China's IMF quota ranking third in the world and Chinese staff appointed to management posts of the IMF; and working with Financial Stability Board (FSB) and Basel Committee on Banking Supervision (BCBS) to develop standards and rules and promote alignment of domestic standards with international standards.

Secondly, the PBC has strengthened cooperation and innovation in the multilateral development sector by joining, since 1980, various regional and sub-regional multilateral development banks such as the African Development Bank, Inter-American Development Bank and the European Bank for Reconstruction and Development.

Thirdly, the PBC took deep participation in the investment and financing cooperation under the Belt and Road Initiative by encouraging financial institutions to conduct overseas fund business in RMB, promoting the establishment and expansion of the Silk Road Fund and advancing the network building of financial institutions and services.

Fourthly, the PBC has strengthen regional financial cooperation through platforms such as ASEAN Plus Three Cooperation, the Shanghai Cooperation Organization and South East Asian Central Banks.

Fifthly, the PBC has steadily advanced the development of RMB business in Hong Kong and Macao, consolidated Hong Kong's position as an international financial center and established a cross-Straits currency clearing mechanism.

Major changes have been realized in foreign exchange administration. On December 1, 1996, China formally accepted the obligations of Article VIII of the IMF's Articles of Agreement. Since then the RMB had been fully convertible on current accounts. After that, China started to promote RMB capital account convertibility. However, it was slowed down by the 1997 Asian financial crisis and by severe economic and financial hardships. Since China's accession to the WTO, the PBC has been steadily enhancing capital account convertibility through deepening reforms in line with the principle of "prioritizing inflow over outflow, long-term over short-term, direct over

indirect, and institutions over individuals". According to the IMF's classification of capital account, 37 out of all 40 items have already achieved full or partial convertibility, accounting for 92.5%, leaving only 3 items to be opened.

Meanwhile, the PBC has accelerated the reform in foreign exchange administration, loosened its grip, streamlined administration and delegated power to substantially reduce exchange restrictions on cross-border capital and financial transactions, pursue balanced management of capital inflows and outflows and promote an equilibrium in balance of payments.

Foreign exchange reserve management has been constantly improved. Since the reform of foreign exchange management system in 1994, China has achieved a substantial increase in FX reserves. The PBC holds, manages and operates China's FX reserves in accordance with the law. Since 2001, FX reserves have been managed and operated following the principle of "safety, liquidity and asset value preservation and appreciation", under the guidance and supervision from all levels of the three-tiered approval system consisting of the State Council, the PBC and the SAFE.

By building a diversified portfolio, China has gradually expanded its FX reserves to cover more than 30 currencies, 50 types of asset products and 6,000 investment targets with continuous operation 24 hours a day globally, and has constantly improved frameworks, approaches, instruments and means of risk management and internal control. All this made it possible for China to withstand the challenges of financial crises such as the Asian financial crisis, the US sub-prime mortgage crisis and the European sovereign debt crisis and to achieve steady growth in the operation performance.

Financial Infrastructure Continuously Reinforced

The rule of law in financial sector has made solid headway. The institutional framework of financial laws has been established with the fundamental laws including the Law of the PRC on the People's Bank of China, the Law of the PRC on Commercial Banks, the Securities Law, and the Insurance Law at the core and relevant administrative rules and regulations, departmental rules and regulatory documents as important components. Laws and regulations have been released such as the Anti-Money Laundering Law, the Administrative Rules for Financial Statistics, the Regulation on the Administration of Credit Investigation Industry, and the Deposit Insurance Regulation.

The formulation and amendment of financial regulations including the Regulation on Non-depository Lending Organizations and the Interim Regulation on Cash Management have picked up pace. The reform to transform the government's functions has been continuously deepened. The online platform for administrative approval has been built up. We've further streamlined administration and delegated powers while improving the policy transparency.

New breakthroughs have been made in financial statistics. A nationwide financial statistics information system has been established to realize the concentration and sharing of financial statistics. A series of indicators of aggregate financing to the real economy (AFRE) has been formulated, specifying that the management targets for the aggregates of monetary policy are provided by the asset-holding financial institutions. The indicators now serve as an important reference for macro analysis and decision-making.

A comprehensive financial statistics system has been formed while the asset management products have been innovatively incorporated in the statistics. The macro-oriented specialized statistics and credit-policy statistics have been strengthened to serve financial regulation and prevent and control systemic financial risks.

The construction of a modern payment and clearing system has been accelerated. Since the reform and opening-up, the payment and clearing system in China has achieved leap forward development: from the reform of interbank system to the successive establishment of High Value Payment System (HVPS), Bulk Electronic Payment System (BEPS), Cheque Image System (CIS) and Electronic Commercial Draft System (ECDS) as well as the launch of the Second Generation of China National Advanced Payment System (CNAPS), Accounting Data Centralized System (ACS), and the RMB Cross-border Interbank Payment System (CIPS). China UnionPay has been founded to facilitate the nationwide bankcard interoperability.

The real-name system of bank account has been in place with reform of classified management of personal bank accounts completed. Guidance has been given to non-bank payment institutions for their healthy development. Mobile payment in China has played the leading role in the world in terms of business volume, processing efficiency and coverage.

The credit information system has gradually improved. In the second half of 1990s, the PBC started to build the credit information system of enterprises and individuals. Based on that, a database of financial credit information system has been built up and now plays a significant role in improving the social credit system and preventing credit risks. Meanwhile,

the conditional easing of market access leads to the growing overall competence and competitiveness of market-based credit information institutions, which thus enables its development different from and complementary with the national financial credit information system database. The PBC has fully advanced the building of the social credit system and participated in establishing the mechanism of collective punishment for deception and collective incentives for honesty.

The service efficiency of currency and coins has continuously improved. Since its inception, the PBC has consecutively designed and printed five series of RMB banknotes. The printing techniques and anti-counterfeit level of China's banknote printing and minting have reached the world's advanced standards.

The large-value cash management and services in terms of RMB notes with small denominations have been improved with a constantly raising capacity and level of cash management. The efforts to prevent and crack down counterfeiting banknotes have been stepped up into the stage of systematic, scientific and refined management. The Digital Currency Research Institute has been set up for in-depth digital currency R&D.

The modern treasury system has been continuously improved. The PBC has performed its function of managing the treasury since its foundation. With the release and implementation of the Regulation of the PRC on State Treasury and the Budget Law, the treasury management has grown towards law-based, scientific and regulated procedures.

The constant advancement in treasury system and IT application has played a crucial role in safeguarding the security of treasury and the execution of fiscal budgets at all levels. The launch of the Treasury Information Process System (TIPS) in 2006 in particular has provided solid safeguard for the fiscal fund security and efficient operation.

Efforts in the area of anti-money laundering (AML) have been continuously strengthened. In 2004, the State Council Inter-Ministerial Anti-Money Laundering Joint Meeting system was initiated, with the PBC taking the lead, for better regulatory framework and strengthened coordination and collaboration. The AML supervision has covered the full range of banking, securities and futures, insurance and key special non-financial sectors. China has been deeply engaged in the international exchanges, cooperation and policy-making of AML.

The working mechanism for the protection of rights and interests of financial consumers has taken initial shape. In 2012, the bureau for protecting the rights and interests of financial consumers was set up to

foster and reinforce the mechanism and measures, and to draft the policies, laws and regulations concerned. The PBC has organized various education activities for financial consumers while exploring to incorporate financial knowledge into the national education system. Vigorous efforts have been devoted to financial inclusion, with China's inclusive financial indicator system formed and improved and the coverage expansion of basic financial services prioritized.

Intrinsic Logic and Experience Summing-up for the Reform and Development of China's Financial Sector

Since the introduction of the reform and opening-up policy, Chinese financial reform and development has made tremendous and hard-earned achievements, which has undergone formidable and complex process, providing us with a rich legacy of experiences worthwhile to sum up.

Letting the market play decisive role in resource allocation shall be upheld at all times. In the early days of reform and opening-up, the PBC was the sole bank in China bearing high monopolistic power. After the reform was initiated, a large number of banks were established, including hundreds of city commercial banks, thousands of rural commercial banks and rural credit cooperatives.

As many of these banks completed shareholding reforms and went listed, their business efficiency was greatly elevated with the property rights clarified and a marked reduction of state shareholding in the banking sector. Banks used to be the cashier of the government and the state finance in the early days of reform and opening-up, whereas they exercised independent operation after the reform and thereby became market entities in resource allocation.

In line with the requirements of the Basel Committee on Banking Supervision, the banking sector has built up an asset-liability constraint mechanism with capital adequacy ratio at its core, as well as a market-based loss absorbency and risk prevention and control mechanism. At the beginning of the reform and opening-up, bank employees got the same compensation regardless of their performance, whereas a market-based performance evaluation system and a salary system that linked employees' remunerations with their contributions were established after the reform.

The deepened reform and opening-up has further improved the accounting standard and information disclosure policy, and enhanced external supervision and market discipline. Now that the problems have been addressed in flawed financial institutions among securities companies, insurance companies and financial holding companies, the implicit

repayment guarantees are in turn unwound and the exit mechanism is gradually built up. We are now steadily promoting the deposit insurance system, expecting the orderly building of a financial risk resolution framework based on deposit insurance.

Law-based administration and fulfillment of duty shall be ensured at all times. It is a basic code that the functions of the PBC is designated by law and carried out in accordance with the law. Since the foundation of the Government Administration Council of the Central People's Government in 1949, the PBC has been one of the Council's composing institutions and precisely practiced its functions in accordance with law.

In 1982, the State Council further emphasized that "the People's Bank of China is the central bank of the People's Republic of China, and it is a government agency responsible for supervising the financial industry of the country under the leadership of the State Council". In 1983, the State Council decided that the PBC should exclusively perform the function of the central bank and specified its ten functions.

In 1995, the Law of the PRC on the People's Bank of China was enacted, which confirmed the law-granted status of the PBC as the central bank through state legislation. Revised in 2003, the Law further stipulated that "as a composing department of the State Council, the People's Bank of China is the central bank of the People's Republic of China, and serves as a regulatory department at macro level to formulate and implement monetary policies, maintain financial stability and provide financial services".

Firm actions shall be constantly taken to advance the opening-up of financial sector. It was through opening-up and a thorough study of the international standard of financial supervision and regulation, that we could have a realistic picture of how far we lagged behind, and we brought in better technology and management skills as well as competition mechanism.

The mechanism especially contributes to improving corporate governance, reducing external administrative intervention, and promoting the reform of intermediary services such as accounting standard, transparency, credit rating, etc. The opening-up has also advanced the reforms in related fields at home. For instance, the inclusion of RMB in the SDR basket required China, as a reserve currency issuer, constantly to improve its macro policy framework, so as to boost the world's confidence in RMB.

Safeguarding economic and financial stability shall be deemed as an important target at all times. A sound economic and financial environment

is essential for the successful advancement of each financial reform. Therefore, flexible and appropriate accommodation of macro regulation and adjustments, especially monetary policy, should be pursued in line with the changing economic landscape, and counter-cyclical regulation should be enhanced as well.

In times of an overheated economy or asset bubbles, proper instruments should be used to achieve a "controllable pressure-relieving" and a "soft landing", so as to secure a stable adjustment. When an economic recession or external economic shocks occur, timely measures should be taken to stabilize the financial market and enhance public confidence.

Meanwhile, a healthy relationship should be maintained among financial reform, development and stability. The financial market shall be developed with financial reform forging ahead and opening-up expanded, while maintaining the stability of the financial system and provision of continual financial services and holding the bottom line of preventing systemic financial risks.

The role of a central bank shall be set from a forward-looking perspective. In order to better adapt to the changing environment and demands, the PBC's role and its functions have been adjusted and refined many times since the reform and opening up.

In a bid to fulfill new functions in financial reform, development and financial stability, the PBC set up several specialized departments in 2003, including the bureaus of financial markets, financial stability, credit information system and anti-money laundering, after the three professional regulatory agencies were established, namely, China Banking Regulatory Commission, China Securities Regulatory Commission and China Insurance Regulatory Commission.

In 2005, the PBC set up its Shanghai Head Office for better executing macro regulation and adjustment functions as the central bank and improving the decision-making and operation system.

In 2009, a specialized department was set up to push forward the reform of RMB exchange rate formation mechanism and cross-border use of RMB.

In 2012, it established the specialized bureau of financial consumer protection.

In August 2013, upon the requirement of the State Council, the PBC initiated the establishment of the Inter-Ministerial Joint Meeting for Financial Regulation and Coordination.

In July 2017, the Fifth National Financial Work Conference decided to set up the Financial Stability and Development Committee under the State Council, in which the PBC serves its General Office and takes the lead in preventing and defusing systemic financial risks.

In 2018, the third plenary session of the 19th CPC Central Committee adopted the reform scheme of Party and state institutions, which stipulated that the PBC should be responsible for drafting important laws and regulations concerning banking and insurance sectors and designing the fundamental prudential regulation system.

Looking forward, as the socialism with Chinese characteristics has entered a new era, the principal contradiction facing Chinese society has evolved. The country's economy has shifted from fast growth to high-quality growth, but there remain many challenges and tasks to be addressed in the reform and development of the financial system.

It is our firm belief that, under the strong leadership of the CPC Central Committee with Xi Jinping at its core, the giant ship symbolizing China's financial cause will continue moving steadily forward into a promising future with prospects of new achievements in the financial development and reforms!



*Number 6***The need to regulate virtual currency**

Keynote speech by Mr Ahmed Naseer, Governor of the Maldives Monetary Authority, at the 5th Maldives Islamic Banking & Finance Industry Conference.



Chairperson, Distinguished Speakers, Distinguished guests, Ladies and Gentlemen, Assalam Alaikum. Good Morning.

I am deeply honored to speak at this important and significant Conference, one which is very relevant and important in the development of the financial sector of the Maldives.

As the regulator of banks, and financial institutions in the country, Maldives Monetary Authority is grateful to the organizers of this Conference, and congratulate you all for completing five years of this series.

MMA is proud to be a partner in promoting and developing Islamic finance in the Maldives, and assure you that we will continue this journey together with all our stake holders.

Ladies and Gentlemen.

Bitcoin, the world's first cryptocurrency (or virtual currency), long obscured with a reputation as a fringe economic phenomenon, has gone mainstream.

The skyrocketing price in late 2017 has made Bitcoin a household name. Proposed in a 2008 white paper by software developer Satoshi Nakamoto, Bitcoin was an attempt to enable peer-to-peer "electronic cash" as an alternative to conventional banking in the wake of the global financial crisis.

When released in 2009, the virtual currency had a value of less than one U.S. penny per "coin." However, just nine years later, one bitcoin reached \$ 17,900 in the middle of December 2017, and the cryptocurrency's market capitalization is now over \$200 billion.

One might think this as a normal product cycle, but the reality is, cryptocurrency has been a favorable payment instrument over the decade. And the usage of cryptocurrencies will be as common as the use of normal bank notes and payment instruments.

Just recently, Canada's first Bitcoin-backed loan has been issued during the first week of November this year.

It is not a false assumption that some of the Maldivians even own cryptocurrencies such as Bitcoin. We have already seen some business entities even trying to introduce cryptocurrency wallets into Maldives.

It is just a matter of time before someone starts mining cryptocurrency in the Maldives. Therefore, it would be unwise not to consider the emergence of cryptocurrency in Maldives as an acceptable payment instrument.

Likewise, as policy makers, we should not ignore financial technology and regulatory technology in our future economic and monetary policy implementation. More importantly, we should not discourage technology and innovation in our financial sectors.

Ladies and Gentlemen.

What are cryptocurrencies? I have been asked several times over the past one year. Well, it is a technological development that utilize a technique better known as cryptography. And what is cryptography? The technique of protecting information by transforming it (encrypting) into unreadable format, that can only be deciphered (decrypted) by someone who possess a secret key. Cryptocurrencies such as Bitcoins are secured via this technique using an ingenious system of public and private keys.

Ladies and Gentlemen.

Let me take [a step back](#) and talk a little bit about the Cyberspace, the vast new domain of interaction, where we are all connected in the modern world. A place where we are all unified, and totally free. A place where we now spend increasing hours of our day. Where we do more of our shopping. More of our dating. More of our learning. Commerce, Broadcasting, and news making. Selling of goods and services, and ideas.

A place where we are all unified, and totally free. Free from filters. Free from values. And free from true governance.

Sometimes some of us act as though, no one is watching in the cyberspace, with tweets trashing people, hate speech, gambling, pornography, and

other cybercrimes, it has become important for us to pause a little bit for some moral reflection.

As Tom Friedman puts it in his recent book, we need to balance technological progress with a sense of humanity, and moral values.

As Former US President Obama said when he visited Hiroshima in May 2016,

"Technological progress without an equivalent progress in human institutions can doom us. The scientific revolution that led to the splitting of an atom requires a moral revolution as well".

Ladies and Gentlemen.

Cryptocurrency, like any other payment instrument poses, a variety of risks to the economy, and more importantly, to the financial sector of any country. The risk factor is heightened now, because the use of cryptocurrency, has expanded to mortgage and security lending.

Due to the nature and the specific features of cryptocurrency, it has long been understood that cryptocurrency has been a somewhat attractive form of payment instrument for money laundering, terrorist financing and tax evasion.

Now, what are those features?

- **Anonymity:** The anonymity surrounding cryptocurrencies, prevents transactions from being adequately monitored, allowing shady transactions to occur outside the regulatory perimeter.
- **Cross-border nature:** Transaction occur cross-border, and are nearly instant in the network and are confirmed in a couple of minutes. Since they happen in a global network of computers, they are completely indifferent of any physical location. There are no third parties involved in verification or validation.
- **No gatekeeper:** The software that everybody can download is for free and there is no centralized coin issuer or an intermediary to oversee the coin trading activities. Anyone can receive and send cryptocurrencies as soon as a cryptocurrency software is installed without being monitored by a central government authority.

Due to these factors, countries are **concerned about the misuse** of cryptocurrency, especially to launder proceeds of crime, fund terrorist

activities and evade taxation. In a recent report by a data security company, CipherTrace, \$761 million has already been laundered via cryptocurrencies so far this year.

Therefore, international organizations such as the IMF and EU are advocating for regulating cryptocurrency, despite challenges such as anonymity, cross-border nature of use cryptocurrency, lack of central intermediary to regulate, etc.

In February 2018, [Ms. Christine Lagarde](#), head of IMF said in an interview on CNN that due to the potential illicit use of cryptocurrency, cryptocurrency regulations are inevitable. Her remarks echoed the initiatives of countries to bring cryptocurrency into a regulatory framework to combat money laundering and terrorism financing.

In April 2018, the Parliament of the [European Union](#) passed changes to anti-money laundering legislation that will impose new regulations on cryptocurrency exchanges and custodians operating in Europe. The US has already extended its AML regulatory framework to cryptocurrency. Other countries include, Australia, Canada, Japan, Mexico and Switzerland.

Therefore, it is important to recognize the role cryptocurrencies play in the financial markets, and to start thinking about allowing emerging technologies to have a level playing field in these markets.

To conclude, I would like to stress on the importance of allowing financial technologies into our financial markets and at the same time implementing proper regulatory regimes to ensure such technologies, market players and our economy is not abused for illicit purposes.

Blockchain technology, if properly used, can be applied in a large variety of sectors, including, trade, commerce, healthcare and governance. It could be used in pledging of collateral, registration of shares, bonds and other assets, and operation of land registers, and many more.

I wish you all a successful Conference.

Thank you. Wassalam Alaikum.



Number 7

Tutorials



You can watch these tutorials to learn how to use the statistical tools.

<p>The screenshot shows the BIS website interface. At the top, there is a navigation bar with the BIS logo and the title 'How to search for BIS statistics'. Below the navigation bar, there is a sidebar with various menu items like 'About BIS statistics', 'Banking', 'Securities', etc. The main content area features a large video player with a play button in the center. To the right of the video player, there is a section titled 'Special features about...' with a list of bullet points.</p>	<h3>How to search for BIS statistics</h3> <p>Learn how to navigate the BIS statistics webpage and use the three statistics tools to access our data sets.</p>
<p>The screenshot shows the BIS website interface. At the top, there is a navigation bar with the BIS logo and the title 'Introducing new BIS data sets'. Below the navigation bar, there is a sidebar with various menu items. The main content area features a large video player with a play button in the center. Below the video player, there is a section titled 'Introducing new BIS data sets' with the date '18 September 2017' and the speaker's name 'Bruno Tissot, Head of BIS Statistics'.</p>	<h3>Introducing new BIS data sets</h3> <p>Explaining new BIS data sets released in September 2017.</p>

You may visit:

<https://www.bis.org/statistics/statstools/tutorials.htm>



Number 8

Amazon Customers Made This Holiday Season Record-Breaking with More Items Ordered Worldwide Than Ever Before



Amazon has announced a record-breaking holiday season thanks to its customers all around the world, with more items ordered worldwide than ever before. Amazon customers shopped at record levels from a wide selection of products across every department, discovering top holiday gifts and trending products offered at deep discounts and low prices. Some of the best-selling products this season included, all-new Echo Dot, L.O.L. Surprise! Glam Glitter Series Doll, fashion items from Carhartt, and Bose QuietComfort Wireless Headphones, among others.

Prime membership continued to grow this holiday season, with tens of millions of people starting Prime free trials or paid memberships, to benefit from FREE Same-Day, One-Day or Two-Day shipping, in addition to FREE two-hour delivery with Prime Now, and exclusive shopping and entertainment benefits. Prime members enjoyed shopping a wide selection of products with fast and free shipping throughout the season – in fact, this holiday millions of unique items in the U.S. shipped with Prime FREE Same-Day, Prime FREE One-Day or FREE two-hour delivery with Prime Now.

“This season was our best yet, and we look forward to continuing to bring our customers what they want, in ways most convenient for them in 2019. We are thrilled that in the U.S. alone, more than one billion items shipped for free this holiday with Prime,” said Jeff Wilke, CEO Worldwide Consumer. “Thank you to our employees all around the world who are committed to bringing our customers the widest selection of products with low prices and fast and free delivery options throughout the holidays and all year long.”

Amazon Devices & Alexa

- Customers purchased millions more Amazon Devices this holiday season compared to last year – the best-selling Amazon Devices this holiday included all-new Echo Dot, Fire TV Stick 4K with all-new Alexa Voice Remote, and Echo.

- It was a record holiday season for Amazon’s Kids Edition devices; customers purchased more Echo Dot Kids Edition and Fire Kids Edition tablets than ever before.
- Customers purchased millions of Amazon Fire TV, Fire Tablet, and Kindle products this holiday season.
- Ring and Blink sold more devices this holiday season than ever before, as more and more customers are keeping their homes safe.
- Customers made their homes even smarter this year with a record number of smart home devices sold on Amazon.com; best-selling smart home devices included Amazon Smart Plug, Ring Video Doorbell 2, TP-Link Kasa Smart Plug Mini Outlet, and the iRobot Roomba 690.
- Customers [used Alexa](#) to listen to hundreds of millions more hours of music this holiday season compared to last holiday season, and on even more services – including Amazon Music, Spotify, Tidal, and Apple Music, among others.
- Customers [asked Alexa](#) to turn on their holiday lights tens of millions of times this holiday season, with the number one request being “[Alexa, turn on the Christmas tree.](#)”
- Alexa delivered 8x as many reminders this holiday season compared to last.
- Alexa set more than [one hundred million timers](#) this holiday season.
- Customers requested nearly 3x as many recipes this holiday season compared to last and asked Alexa for cooking-related advice twice as much.
- Alexa helped mix hundreds of thousands of cocktails this holiday season – with eggnog and Moscow Mule being the most requested drinks.
- From carolers to delivery drivers and holiday guests, customers received millions of doorbell and motion announcements via Alexa this holiday season.
- Customers were in to the festive spirit with Alexa Skill Blueprints – popular Blueprints this holiday season were The Holiday Story, Santa’s Letter, and the Hallmark Holiday Greeting.

- The **number one holiday song** that customers requested this holiday season was “All I Want for Christmas is You” by Mariah Carey.
- This holiday season, customers listened to more than one million holiday stories from Amazon Storytime on Alexa – the most popular holiday story was Rapping Paper.
- Customers around the world asked Alexa how many days or sleeps until Christmas this holiday season – customers in the United Kingdom were the most excited, asking twice as much as customers in any other country.
- Customers used Alexa nearly twice as much on Fire TV devices this holiday season compared to the same time period last year.



*Number 9***Zuckerberg's update on addressing abuse from bad actors on Facebook**

For 2018, my personal challenge has been to focus on addressing some of the most important issues facing our community -- whether that's preventing election interference, stopping the spread of hate speech and misinformation, making sure people have control of their information, and ensuring our services improve people's well-being. In each of these areas, I'm proud of the progress we've made.

We're a very different company today than we were in 2016, or even a year ago. We've fundamentally altered our DNA to focus more on preventing harm in all our services, and we've systematically shifted a large portion of our company to work on preventing harm. We now have more than 30,000 people working on safety and invest billions of dollars in security yearly.

To be clear, addressing these issues is more than a one-year challenge. But in each of the areas I mentioned, we've now established multi-year plans to overhaul our systems and we're well into executing those roadmaps. In the past we didn't focus as much on these issues as we needed to, but we're now much more proactive.

That doesn't mean we'll catch every bad actor or piece of bad content, or that people won't find more examples of past mistakes before we improved our systems. For some of these issues, like election interference or harmful speech, the problems can never fully be solved. They're challenges against sophisticated adversaries and human nature where we must constantly work to stay ahead. But overall, we've built some of the most advanced systems in the world for identifying and resolving these issues, and we will keep improving over the coming years.

We've made a lot of improvements and changes this year, and here are some of the most important ones:

For preventing election interference, we've improved our systems for identifying the fake accounts and coordinated information campaigns that

account for much of the interference -- now removing millions of fake accounts every day. We've partnered with fact-checkers in countries around the world to identify misinformation and reduce its distribution. We've created a new standard for advertising transparency where anyone can now see all the ads an advertiser is running to different audiences. We established an independent election research commission to study threats and our systems to address them. And we've partnered with governments and law enforcement around the world to prepare for elections.

For stopping the spread of harmful content, we've built AI systems to automatically identify and remove content related to terrorism, hate speech, and more before anyone even sees it. These systems take down 99% of the terrorist-related content we remove before anyone even reports it, for example.

We've improved News Feed to promote news from trusted sources. We're developing systems to automatically reduce the distribution of borderline content, including sensationalism and misinformation. We've tripled the size of our content review team to handle more complex cases that AI can't judge.

We've built an appeals system for when we get decisions wrong. We're working to establish an independent body that people can appeal decisions to and that will help decide our policies. We've begun issuing transparency reports on our effectiveness in removing harmful content. And we've also started working with governments, like in France, to establish effective content regulations for internet platforms.

For making sure people have control of their information, we changed our developer platform to reduce the amount of information apps can access -- following the major changes we already made back in 2014 to dramatically reduce access that would prevent issues like what we saw with Cambridge Analytica from happening today.

We rolled out new controls for GDPR around the whole world and asked everyone to check their privacy settings. We reduced some of the third-party information we use in our ads systems.

We started building a Clear History tool that will give people more transparency into their browsing history and let people clear it from our systems.

And we've continued developing encrypted and ephemeral messaging and sharing services that we believe will be the foundation for how people communicate going forward.

For making sure our services improve people's well-being, we conducted research that found that when people use the internet to interact with others, that's associated with all the positive aspects of well-being you'd expect, including greater happiness, health, feeling more connected, and so on. But when you just use the internet to consume content passively, that's not associated with those same positive effects.

Based on this research, we've changed our services to encourage meaningful social interactions rather than passive consumption. One change we made reduced the amount of viral videos people watched by 50 million hours a day. In total, these changes intentionally reduced engagement and revenue in the near term, although we believe they'll help us build a stronger community and business over the long term.

To read more you may visit:

<https://www.facebook.com/zuck/posts/10105865715850211>



*Number 10***New Materials Architectures Sought to Cool Hypersonic Vehicles**

DARPA seeks designs for cooling super-hot leading edges that rip through the air at more than five times the speed of sound



Hypersonic vehicles fly through the atmosphere at incredibly high speeds, creating intense friction with the surrounding air as they travel at **Mach 5** or above – five times faster than sound travels.

Developing structures that can withstand furnace-like temperatures at such high speeds is a technical challenge, especially for leading edges that bear the brunt of the heat.

To address this thermal challenge, DARPA recently announced its **Materials Architectures and Characterization for Hypersonics (MACH) program**.

The MACH program seeks to develop and demonstrate new design and material solutions for sharp, shape-stable, cooled leading edges for hypersonic vehicles.

A Proposers Day describing the program will take place January 22, 2019 in Arlington, Virginia: <https://go.usa.gov/xEcEy>

“For decades people have studied cooling the hot leading edges of hypersonic vehicles but haven’t been able to demonstrate practical concepts in flight,” said Bill Carter, program manager in DARPA’s Defense Sciences Office. “The key is developing scalable materials architectures that enable mass transport to spread and reject heat. In recent years we’ve seen advances in thermal engineering and manufacturing that could enable the design and fabrication of very complex architectures not possible in the past. If successful, we could see a breakthrough in mitigating aerothermal effects at the leading edge that would enhance hypersonic performance.”

The MACH program will comprise **two** technical areas.

The first area aims to develop and mature fully integrated passive thermal management system to cool leading edges based on scalable net-shape manufacturing and advanced thermal design.

The **second** technical area will focus on next-generation hypersonic materials research, applying modern high-fidelity computation capabilities to develop new passive and active thermal management concepts, coatings and materials for future cooled hypersonic leading edge applications.

Both technical areas will be described in a Broad Agency Announcement solicitation expected in mid-January 2019 on DARPA's FedBizOpps page here: <http://go.usa.gov/Dom>

The MACH program seeks expertise in thermal engineering and design, advanced computational materials development, architected materials design, fabrication and testing (including net shape fabrication of high temperature metals, ceramics and their composites), hypersonic leading-edge design and performance, and advanced thermal protection systems.



Disclaimer

The Association tries to enhance public access to information about risk and compliance management.

Our goal is to keep this information timely and accurate. If errors are brought to our attention, we will try to correct them.

This information:

- is of a general nature only and is not intended to address the specific circumstances of any individual or entity;
- should not be relied on in the context of enforcement or similar regulatory action;
- is not necessarily comprehensive, complete, or up to date;
- is sometimes linked to external sites over which the Association has no control and for which the Association assumes no responsibility;
- is not professional or legal advice (if you need specific advice, you should always consult a suitably qualified professional);
- is in no way constitutive of an interpretative document;
- does not prejudice the position that the relevant authorities might decide to take on the same matters if developments, including Court rulings, were to lead it to revise some of the views expressed here;
- does not prejudice the interpretation that the Courts might place on the matters at issue.

Please note that it cannot be guaranteed that these information and documents exactly reproduce officially adopted texts.

It is our goal to minimize disruption caused by technical errors.

However, some data or information may have been created or structured in files or formats that are not error-free and we cannot guarantee that our service will not be interrupted or otherwise affected by such problems.

The Association accepts no responsibility regarding such problems incurred because of using this site or any linked external sites.

International Association of Risk and Compliance Professionals

You can explore what we offer to our members:

1. **Membership** – Become a standard, premium or lifetime member.

You may visit:

[www.risk-compliance-association.com/How to become member.htm](http://www.risk-compliance-association.com/How_to_become_member.htm)

Become a lifetime member of the association, and to continue your journey without interruption and without renewal worries. You will get a lifetime of benefits as well.

You can check the benefits at:

www.risk-compliance-association.com/Lifetime_Membership.htm

2. **Weekly Updates** - Subscribe to receive every Monday, the Top 10 risk and compliance management related news stories and world events that (for better or for worse) shaped the week's agenda, and what is next:

<http://forms.aweber.com/form/02/1254213302.htm>

3. **Training and Certification** - The Certified Risk and Compliance Management Professional (CRCMP) training and certification program has become one of the most recognized programs in risk management and compliance.

There are CRCMPs in 32 countries around the world. Companies and organizations like Accenture, American Express, USAA etc. consider the CRCMP a preferred certificate.

You can find more about the demand for CRCMPs at:

www.risk-compliance-association.com/CRCMP_Jobs_Careers.pdf

For the **distance learning** programs, you may visit:

[www.risk-compliance-association.com/Distance Learning and Certification.htm](http://www.risk-compliance-association.com/Distance_Learning_and_Certification.htm)

For **instructor-led** training, you may contact us. We can tailor all programs to meet specific requirements. We tailor presentations, awareness and training programs for supervisors, boards of directors, service providers and consultants.



Some CRCMP jobs:

www.simplyhired.com/search?q=crcmp&job=BY_s7GxAbt4KwSJ_aJA_4KaruYRQSQ

SimplyHired

crcmp City, State

Crcmp jobs

Sort by Date Added More Filters

Relevance ▾ Anytime ▾ None Selected ▾

Risk Science Business Process Lead, Senior Associate

Capital One - McLean, VA
Est. \$110,000 - \$150,000 a year ⓘ
Lean, Six Sigma, BPM, PMP, PRM, or CRCMP. McLean 1 (19050), United States of America, McLean, Virginia....

Application Security Advisor-Penetration Tester

USAA - San Antonio, TX
Est. \$100,000 - \$140,000 a year ⓘ
Professional designation in CISSP, CISA, CRISC, CISM, CEH, GWAPT, GWEB, or CRCMP. Purpose of Job IMPORTANT:....

Senior Information Security Risk Analyst

Public Company Accounting Oversight Board - ★★★★★ 10 reviews - Washington, DC

Professional designation in CISSP, CISA, CRISC, or CRCMP preferred. The PCAOB is a nonprofit corporation established by Congress to oversee the audits of public...

4. IARCP Authorized Certified Trainer (IARCP-ACT) Program - Become a Certified Risk and Compliance Management Professional Trainer (CRCMPT) or Certified Information Systems Risk and Compliance Professional Trainer (CISRCPT).



This is an additional advantage on your resume, serving as a third-party endorsement to your knowledge and experience. Certificates are important when being considered for a promotion or other career opportunities. You give the necessary assurance that you have the knowledge and skills to accept more responsibility.

To learn more, you may visit:

www.risk-compliance-association.com/IARCP_ACT.html

5. **Approved Training and Certification Centers (IARCP-ATCCs)** - In response to the increasing demand for CRCMP training, the International Association of Risk and Compliance Professionals is developing a world-wide network of Approved Training and Certification Centers (IARCP-ATCCs).



This will give the opportunity to risk and compliance managers, officers, and consultants to have access to instructor-led CRCMP and CISRCP training at convenient locations that meet international standards.

ATCCs use IARCP approved course materials and have access to IARCP Authorized Certified Trainers (IARCP-ACTs).

To learn more:

www.risk-compliance-association.com/Approved_Centers.html