

Reform of Global Financial Architecture (GFA): Short Term Measures and Long Term Goals

Organized by:

Southwestern University of Finance and Economics (SWUFE)

Shanghai Development Research Foundation (SDRF)

Reinventing Bretton Woods Committee (RBWC)

July 22, 2016

Chengdu, China

Hilton Chengdu

(NO.666, Tianfu Avenue)

Overview

The outbreak of financial crisis and its aftermath demonstrated that the Global Financial Architecture (GFA) has played a certain role on preventing the collapse of global economy. However, some flaws in the system were noticed such as: mismatch of supply and demand of liquidity which caused volatility in cross-border capital flows; Spillover and spillback effects of monetary policies in developed countries brought negative impacts to developing and developed economies respectively. To resolve these existing problems in GFA, we need to tackle both the cause and effect of these problems with combined short term measures and long term goals. Therefore, we decided to hold this international conference to try to find out the solutions of these problems and promote the reform of GFA.

Agenda

<p style="text-align: center;">22nd of July , 2016</p> <p style="text-align: center;">Taurus Ballroom, 2nd Floor</p>	
08:30 –09:00	Registration
09:00 –09:30	<p>Opening Remarks:</p> <p>YIN Qingshuang Vice President of SWUFE</p> <p>Marc Uzan Executive Director of RBWC</p> <p>Keynote speech:</p> <p>ZHANG Tao Deputy Governor, PBOC</p> <p style="padding-left: 150px;">Incoming Deputy Managing Director of IMF</p> <p>Moderator:</p> <p>QIAO Yide Vice Chairman and Secretary General of SDRF</p>
09:30–11:00	<p>1, Global Economic Integration under Stress: Negative Interest Rate Policy and Brexit.</p> <p>More and more developed economies started to adopt negative interest rate policies. Although these policies may improve domestic demands in these countries, but some concerns such as inflation occurred and potential bubble busted started arising. Brexit is going to add global economic uncertainty and hurt integration.</p> <p>How to evaluate negative interest rate policy?</p> <p>What are the impacts it would bring to global financial sustainability?</p> <p>What are the implications of Brexit to global economy and economic integration?</p> <p>Moderator:</p> <p>LIU Xiliang Assistant to the President of SWUFE</p> <p>Speakers:</p> <p><i>“The Effect and Revelation of the Negative Interest Rate Policy”</i></p> <p>WANG Qing Director, Chinese Finance Research Institute of SWUFE</p>

	<p><i>"Brexit - Fragmentation, Complexity and Uncertainty Challenges at the ZLB"</i></p> <p>Joshua Aizenman Professor of Economics, USC and the NBER</p> <p><i>"Brexit: The unwinding of an international currency."</i></p> <p>Ousmene Mandeng Head of Research and Development, New Sparta Asset Management</p> <p><i>"Macroeconomic Implications of Monetary Policy Divergence of Systemically Important Central Banks"</i></p> <p>XIE Huaizhu Division Chief, Research Institute, PBOC</p>
11:00 –11:15	Coffee Break
11:15 –12:45	<p>2, Shortage of Safe Asset and Its Implications to GFA</p> <p>The risk within global financial market is accumulating which created shortage of safe financial asset and caused disordering in financial market.</p> <p>What is the current status of the shortage of safe financial assets?</p> <p>Are there any ways to alleviate this shortage problem?</p> <p>What are effects of this problem to GFA?</p> <p>Moderator:</p> <p>CHEN Hongyi Senior Manager , Hong Kong Institute for Monetary Research</p> <p>Speakers:</p> <p><i>"European bond markets: negative rates and QE challenges "</i></p> <p>Beat Siegenthaler Macro Advisor, UBS</p> <p><i>"The BOJ's Negative Interest Rate Policy and the Japanese Yen as a Safe Haven Currency"</i></p>

	<p>Masahiro Kawai Professor, University of Tokyo</p> <p>Former Dean, Asian Development Bank Institute</p> <p><i>“RMB internationalization: a supplement global liquidity”</i></p> <p>YAO Yudong Director , RIBF at PBOC</p>
12:45 –14:00	Lunch
14:00 –15:30	<p>3, Transition of the Current System into a Multiple Reserve Currency one</p> <p>With the addition of RMB to SDR basket, more and more attention has been paid to internalization of RMB and its impact to global reserve system. Is transition to multiple reserve currency system most likely or inevitable? What are the benefits and costs of this kind of transition? How to make this transition smooth?</p> <p>Moderator:</p> <p>LIU Ligang Managing Director and Chief Economist for China at Citi</p> <p>Speakers:</p> <p><i>“China’s Foreign Exchange Policy”</i></p> <p>MA Jun Chief Economist, The PBOC Research Bureau</p> <p><i>"Transition to a Multiple Reserve Currency System"</i></p> <p>Chalongphob Sussangkarn Former Finance Minister of Thailand</p> <p>Senior Fellow, Thailand Development Research Institute</p> <p><i>"A New Wave of Anchor Searching in the International Monetary System"</i></p> <p>HUANG Haizhou Managing Director, CICC</p> <p><i>“The Reform of International Reserve System and Renminbi Internationalization”</i></p> <p>ZHANG Liqing Professor, Central Finance University</p>

	<p><i>"The Renminbi's Future: an International Currency with Chinese Characteristics"</i></p> <p>David Lubin Managing Director, Head of Emerging Markets Economics, Citi Research</p>
15:30 –15:45	Coffee Break
15:45 –17:15	<p>4, SDR: a Fantasy or an Instrument towards a Resilient GFA</p> <p>The goal of SDR was to overcome deficiencies in the dollar-based GFA and become the principal reserve asset. However, SDR not only failed to become a credible alternative for reserve diversification, but was also marginalized.</p> <p>Why are we lack to enthusiasm to SDR at this moment?</p> <p>What obstacles need to be overcome?</p> <p>How can we enhance its role in a long-term view?</p> <p>Moderator:</p> <p>Ousmene Mandeng Head of Research and Development, New Sparta Asset Management</p> <p>Speakers:</p> <p><i>"Experience with the Use of the SDR"</i></p> <p>Siddharth Tiwari Director Strategy Policy Review Department, IMF</p> <p><i>"Why and How to Bridge the Gap between the Existing SDR and an Effective Multilateral Reserve Currency?"</i></p> <p>Christian Ghymers Vice President of Robert Triffin International Association</p> <p><i>"RMB as a Reserve Currency and Implications of Its Inclusion to the SDR Basket"</i></p> <p>Jukka Pihlman Managing Director, Standard Chartered</p> <p><i>"Preliminary Thinking on Promotion of SDR by Using Blockchain Technology"</i></p> <p>GE Jiafei Research Fellow, SDRF</p>

17:15 –17:30	Closing Remarks: WANG Yurong Executive Director, International Fianance Institute, International Cooperation Center, National Development and Reform Commission QIAO Yide Vice Chairman and Secretary General of SDRF
17:45	Meeting at the entrance of the hotel and go out for dinner

List of Speakers and Moderators

NAME		TITLE
Tao	Zhang	Deputy Governor, PBOC
		Incoming Deputy Managing Director of IMF
Qingshuang	Yin	Vice President of SWUFE
Yide	Qiao	Vice Chairman and Secretary General of SDRF
Marc	Uzan	Executive Director of RBWC
Xiliang	Liu	Assistant to the President of SWUFE
Yurong	Wang	Executive Director, International Finance Institute, International Cooperation Center, National Development and Reform Commission

In alphabetical order by last name

Joshua	Aizenman	Professor of Economics, UCLA
CHEN Hongyi	Chen	Senior Manager , Hong Kong Institute for Monetary
Jiafei	Ge	Research Fellow, SDRF
Christian	Ghymsers	Vice President of Robert Triffin International Association
Haizhou	Huang	Managing Director, CICC
Masahiro	kawai	Professor, University of Tokyo
		Former Dean, Asian Development Bank Institute
Ligang	Liu	Managing Director and Chief Economist for China at Citi
David	Lubin	Managing Director,Head of Emerging Markets Economics, Citi Research
Jun	Ma	Chief Economist, The PBOC Research Bureau
Ousmene	Mandeng	Head of Research and Development, New Sparta Asset Management
Jukka	Pihlman	Managing Director,Standard Chartered
Beat	Siegenthaler	Macro Advisor, UBS
Chalongphob	Sussangkarn	Former Finance Minister of Thailand
		Senior Fellow, Thailand Development Research Institute
Siddharth	Tiwari	Director Strategy Policy Review Department, IMF
Qing	Wang	Director, Chinese Finance Research Institute of SWUFE
Huaizhu	Xie	Division Chief, Division of International Finance, Research Bureau, PBOC
Yudong	Yao	Director , Research Institute of Banking and Finance, PBOC
Liqing	Zhang	Professor, Central Finance University

Opening Remarks:

YIN Qingshuang

Vice President of SWUFE

Marc Uzan

Executive Director of RBWC

Keynote speech:

ZHANG Tao

Deputy Governor, PBOC
Incoming Deputy Managing Director of IMF

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Global Economic Integration under Stress: Negative Interest Rate Policy and Brexit

"Brexit - Fragmentation, Complexity and Uncertainty Challenges at the ZLB"

Joshua Aizenman

Professor of Economics, USC and the NBER

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Chengdu, July 22, 2016

Brexit - Fragmentation, complexity and uncertainty. Challenges at the ZLB

Joshua Aizenman, USC and the NBER

1

Brexit: Man-made real & financial shock, inducing probable but uncertain fragmentation.

The shock raises uncertainty, and leads to a heightened level of the *Peso Problem*: a higher probability that at an uncertain date, it will trigger further adverse shocks (i.e., a heightened anticipation of bad tail events at an uncertain time).

New Known Risks – political, financial and economic contagion: Brexit is welcomed by populist parties opposing globalization and the EU/Eurozone/Schengen agendas - viewing globalization and integration as the cause of growing income inequality.

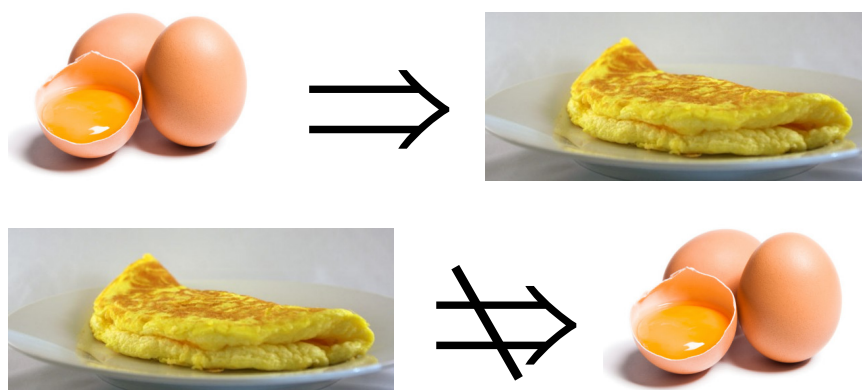
This populist agenda overlooks the role of technology & demographic trends in causing the issues they are referring to.

The first best solution - deeper investment in safety nets, vocational education and training needed to help the adjustment

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of the middle class and the working poor to new technologies and shocks.

New Uncertainties: how to manage smoothly the exit of a large country from the EU, without de-stabilizing the Global Economy. Unwinding the EU is like trying to reverse a cooked omelet to the prior egg stage.



3

The growing complexity of the EU/Eurozone/Schengen fuel the populist backlash, with simplistic Black-White solutions.

One may hope that Brexit will force the EU & Eurozone to address its fundamentals; including a thorough debt restructuring instead of procrastination. Until this happens, the private sector may opt to delay its investment.

The Brexit outcome: flight to perceived safety. US \$ appreciation pressure.

Greater uncertainty and the *Peso Problem* delay investment by the private sector, reducing GDP and growth [Aizenman and Marion (1993, 1999), Ramey & Ramey (1995), Bloom, Bond & Reenen (2007)].

→ Shifting more countries towards the ZLB with probable further recessionary pressures [Caballero, Farhi and Gourinchas (2016)].

→ Exporting recessionary pressures from the UK to other countries at a time of growing fragility of the Eurozone banks.

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→ Deeper recessionary pressures, further destabilizing fragile countries with fragile banks, in particular accelerating and deepening the banking crisis in Italy into a run on its banking system [private bailouts, like the Atlas Fund, would not work at times of peril].

Bipolar trends: A risk of on/off patterns

- Interest rates approaching the ZLB generate a search for yield, compressing risk premia;
- While the peso problem tends to increase risk premia of affected countries.

Possible outcome: liquidity concerns and a heightened Peso Problem risk may distort and fragment financial markets [Shin (2016), Du et al. (2016)]. Dollar appreciation leads to greater balance sheet exposure of countries with large and growing US

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dollar debt liabilities, leading to a perceived dollar shortage. Tighter regulations increase the cost of financial intermediation and banks' balance sheet costs; inducing imbalances in investment demand and funding supply across currencies, at a time of growing divergence between the US\$ and other currencies.

The options facing China and other EMs:

While negative nominal interest rates may work in countries like Denmark for a while, chances are that adopting negative interest rates would destabilize EMs.

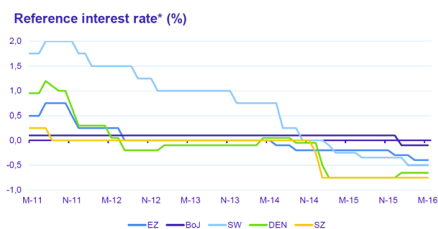
Negative interest rates may induce bubbly real estate and equity markets, subject to a heightened volatility and corrections associated with news about a future rise of interest rates.

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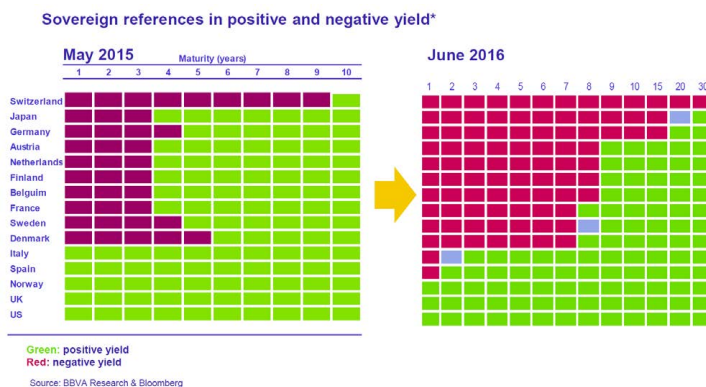
Declining and negative interest rates provide elusive stability of growing debt, as the flow cost of serving the debt shrinks. This may trap policy makers, as a higher debt/GDP raises the cost of ending the low policy interest rate era, increasing the fear of exiting the low policy interest rate regime, and reducing CBs' countercyclical policy options.

A negative interest rate destabilizes institutions that rely on cash flows [the insurance sector, pension funds, private banks], and may require larger fiscal adjustments down the road.

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Source: BBVA & Bloomberg



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Mature and stable economies, with a large tax base and limited income inequality [Scandinavian economies] may manage negative interest rates and an exit from ZLB smoothly, while most EMs may end up with hard landing and protracted crises.

These crises are associated with a war of attrition among domestic stakeholders, aiming at minimizing their burden of adjustment, trapping the economy into a negative sum game -- see the history of Greece, Argentina, etc.

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Options for China and other EMs (Aizenman and Pinto 2013):

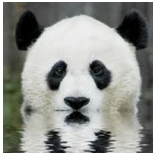
1. **Beware of targeting rigidly a too low inflation.**
2. **Beware of moving fast towards under-regulated financial integration.**
3. **Precautionary policies** help –
 - i. Manage buffers properly,
 - ii. Manage properly prudential regulation [dynamic reserve ratios and LTV regulations, etc.].
4. **Coordination between the Treasury and the CB; controlling the bias towards overspending** and over-borrowing by regional governors and provinces is essential [see the sad history of Argentina and Brazil].
5. **Manage the exchange rate prudently**, aiming at controlling balance sheet exposure.
6. **Reduce and contain reliance on debt instruments**, increase the use of equity funding, and aim at cleaning the balance

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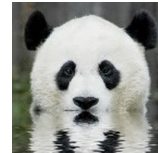
sheet of systemic players. Deal with zombie banks in order to avoid the Japanese syndrome.

7. **Act Locally** - Don't expect the solution to come from international cooperation.
8. **Think Globally** - Large players should aim at deeper cooperation to minimize further destabilization of the global economy [coordinated fiscal and monetary expansions by the US, China and Germany would help, though don't hold your breath for it].

Deeper provision of swap lines, credit lines from the IMF and other IFIs would help in ameliorating and accommodating the excess demand for safe assets at times of peril.



Thanks for your attention



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_____ (1999), Volatility and investment: interpreting evidence from developing countries, *Economica*

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Ramey and Ramey (1995), Cross-Country Evidence on the Link Between Volatility and Growth, AER.

Shin H S (2016), Global liquidity and procyclicality, BIS WP.

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“Brexit: The unwinding of an international currency.”

Ousmene Mandeng

Head of Research and Development, New Sparta Asset Management

International monetary dimension of Brexit

Conference—Reform of Global Financial Architecture: Short Term Measures and Long Term Goals

Chengdu, 26 July 2016

Shanghai Development Research Foundation
Reinventing Bretton Woods Committee

Ousmène Jacques Mandeng
New Sparta Asset Management and London School of Economics

Brexit

Most significant unilateral action since 1973 Nixon shock undermining deeply spirit and notion of multilateral cooperation.

Accelerates unwinding of sterling as an international currency and magnifies international currency concentration.

Serves as a reminder that international monetary system lacks mechanism to allow for orderly exchange rate depreciation.

Bretton Woods

U.S. Treasury Secretary Henry Morgenthau, Bretton Woods Conference, Closing Plenary Session, 22 July 1944:

"There is a curious notion that the protection of national interests and the development of international cooperation are conflicting philosophies—that somehow or other men of different nations cannot work together without sacrificing the interests of their particular nations. Yet none of us has found any incompatibility between devotion to our own countries and joint action. Indeed, we have found on the contrary that the only genuine safeguard for our national interests lies in international cooperation."

Source: Department of State, United Nations Monetary and Financial Conference, Final Act and Related Documents, Publication 2187, U.S. Government Printing Office, Washington, D.C., 1944, pages 7-10.

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Nixon shock

"All the News That's Fit to Print"

The New York Times

LATE CITY EDITION

VOL. CXXI, No. 41,817

NEW YORK, MONDAY, AUGUST 16, 1971

11 CENTS

NIXON ORDERS 90-DAY WAGE-PRICE FREEZE, ASKS TAX CUTS, NEW JOBS IN BROAD PLAN: SEVERES LINK BETWEEN DOLLAR AND GOLD



Hate Pursues British Troops in Ulster

By BERNARD WERNER
Belfast, Northern Ireland, Aug. 15 — A 22-year-old paratrooper leading a platoon of 80 men in the Catholic area of Belfast, Northern Ireland, today said he was taking the action to stop "the

A WORLD EFFECT

Unilateral U.S. Move Means Others Face Parity Decisions

By EDWIN L. BALE JR.
WASHINGTON, Aug. 15 — President Nixon announced tonight that he would freeze wages and prices for 90 days, a move that would mean to many foreign-held dollars into government hands, a move that would mean to many foreign-held dollars into government hands, a move that would mean to many foreign-held dollars into government hands.

REACTION MIXED

Manfield Pleased by Wage-Price Action—McGovern Critical

By CHRISTOPHER LYONS
WASHINGTON, Aug. 15 — Republican and political commentators who commented on President Nixon's announcement tonight that he would freeze wages and prices for 90 days, a move that would mean to many foreign-held dollars into government hands, a move that would mean to many foreign-held dollars into government hands.



President Nixon after delivering national address

Highlights of Nixon Plan

President Nixon today announced a 90-day freeze on wages and prices, a move that would mean to many foreign-held dollars into government hands, a move that would mean to many foreign-held dollars into government hands.

SPRAKS TO NATION

Urges Business Aid to Bolster Economy—Budget Stashed

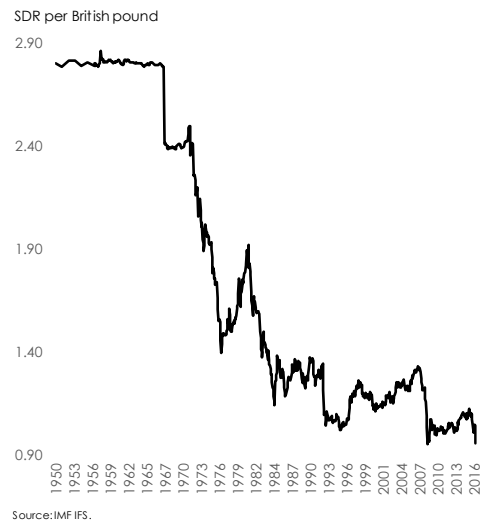
By JAMES H. NAUGHTON
WASHINGTON, Aug. 15 — President Nixon tonight in a 30-minute address, urged business aid to bolster the economy, a move that would mean to many foreign-held dollars into government hands, a move that would mean to many foreign-held dollars into government hands.

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2016, Brexit produces severe disruption in economic policy conduct.

[illegible]

Sterling demise



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Disorderly exchange markets

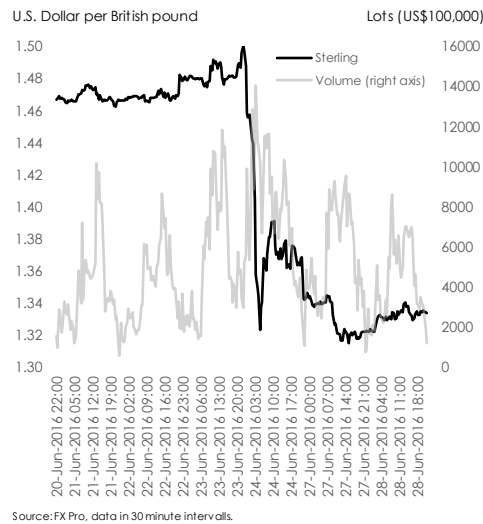
Exchange markets remain susceptible to sudden and disorderly exchange rate movements.

Sharp drop in sterling on E.U. referendum night indicative of sudden liquidity shortfalls.

Asymmetric liquidity shocks in foreign exchange majors suggest even greater potential shocks in foreign exchange crosses and exotics.

8

Liquidity asymmetry



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Need for international currency diversification

Demise of sterling set to increase concentration of international currencies and greater asymmetry in international liquidity distribution.

Brexit necessitates accelerating innovation in the international monetary system.

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Shortage of Safe Asset and Its Implications to GFA

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SDR: a Fantasy or an Instrument towards a Resilient GFA

"A New Wave of Anchor Searching in the International Monetary System"

HUANG Haizhou

Managing Director, CICC

A new wave of anchor searching in the international monetary system



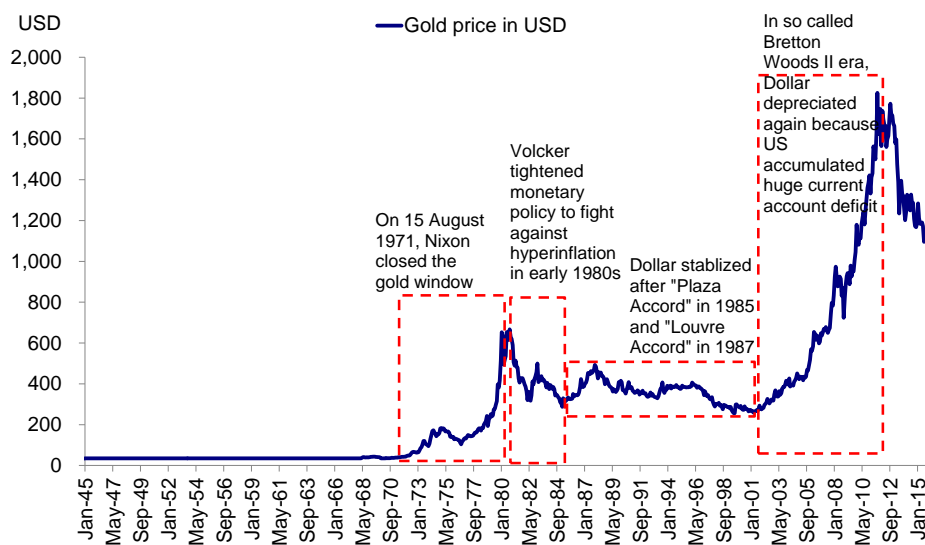
Haizhou HUANG

Chengdu, China

July 22, 2016



Gold Price in USD: Long View



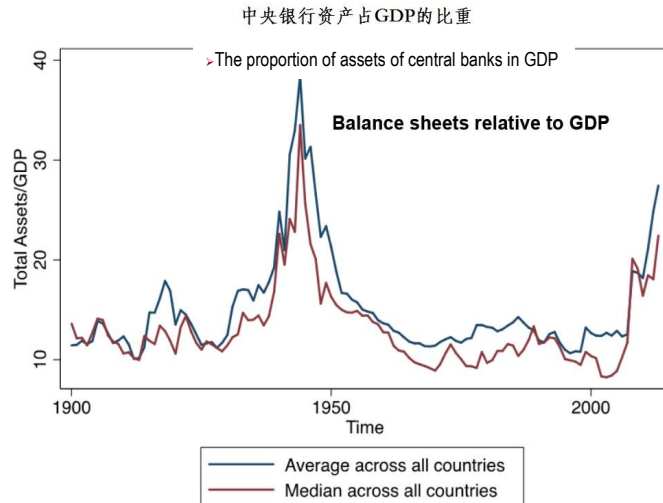
Source: Wind, Bloomberg, Haver, CICC Research



Global Monetary Base Dynamics: Long View

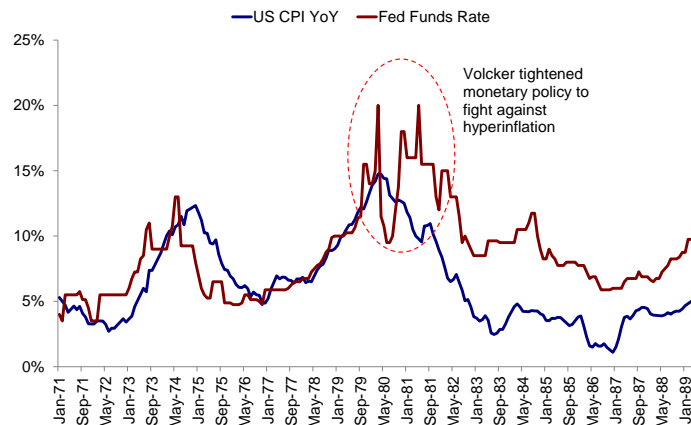
Since 1900, it is the second time of rapid expansion of balance sheet of the central banks of developed countries in over 100 years since the financial crisis in 2008, and the expansion is now slowly returning to the regular level.

The data is based on the balance sheets of the central banks of twelve countries: Australia, Canada, Finland, France, Germany, Italy, Japan, Norway, Sweden, Switzerland, the United Kingdom and the United States. The data after 1999 includes the balance sheet of the European Central Bank.



Anchoring inflation expectation: Volcker's anti-inflation measures

- US inflation once hit 14.8% around March 1980. To fight against hyperinflation, then Fed's Chairman Paul Volcker started to tighten monetary policy aggressively since second half of 1980, resulting the fed fund rate to increase significantly from 9.5% to 20%. By July 1983, inflation has dipped to 2.5% only.



Source: Wind, Bloomberg, Haver, CICC Research

The effects: the “Great Moderation”

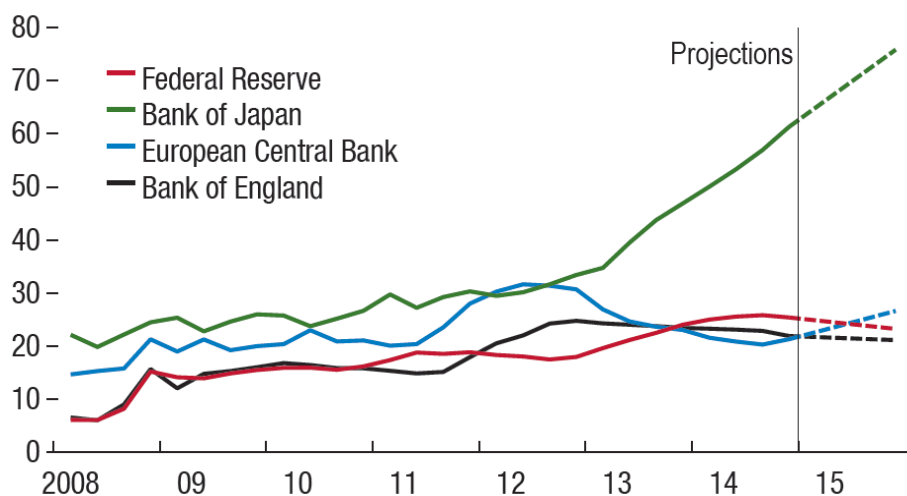
- The re-anchoring of currency and inflation enabled US economy to enter the so-called “Great Moderation”, a period of low volatility in growth and inflation. During this period of time, economic growth was relative stable except for a brief slowdown around early 1990's (GDP growth -0.9% in 1Q99) and tech bubble.
- Inflation Targeting (IT) became the dominant paradigm in 1990s, and many CB focused on a single objective.



Source: Wind, Bloomberg, Haver, CICC Research

The Change of Global Monetary Base: Short View

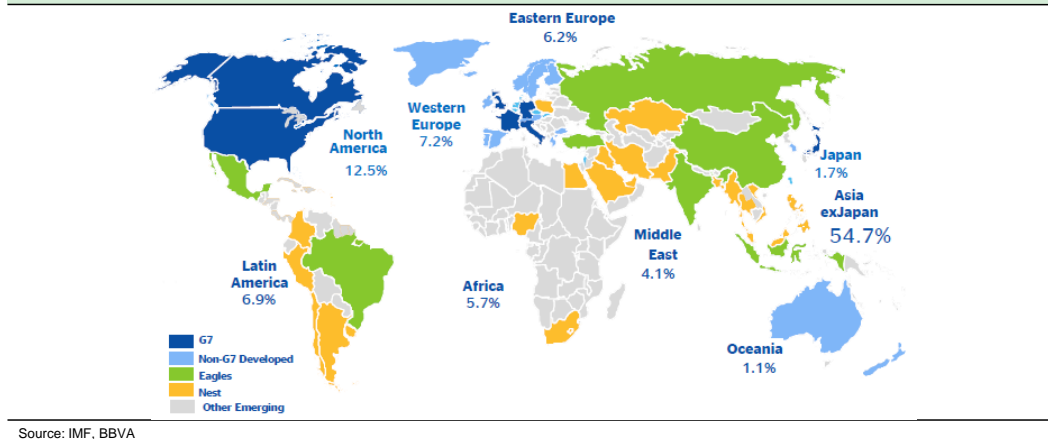
Proportion of the CB balance sheet of four major central banks in GDP



Fast Forward: Global economic growth contributors

- Emerging Asian economies to contribute close to 55% to global growth in next 10 years
- US and EU to contribute less than 20%
- Two economies with double digit growth contributions

Contribution to World economic growth by region between 2013-2023



Searching for new anchor in the international monetary system

- Anchor searching
 - 1929 - 1935
 - 1971 - 1987
 - 2008 - ?
- What anchor
 - USD in Bretton Woods: BWI
 - One leader, fixed exchange rate, capital controls
 - Free float exchange rate + IT (inflation targeting): BWII
 - A dominant leader and some leaders, free float and free capital movements
 - Key ADs + Key EMs coalition, adopting multi objectives (inflation, growth and financial stability): BWIII

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Explanation of sector ratings: Analyst expects a sector rated "OVERWEIGHT" to outperform the market by 10% or more, "EQUAL-WEIGHT" to end up between 10% below and 10% above the market, and "UNDERWEIGHT" to fall behind the market by 10% or more, over the next 6~12 months.

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Transition of the Current System into a Multiple Reserve Currency one

"Why and How to Bridge the Gap between the Existing SDR and an Effective Multilateral Reserve Currency?"

Christian Ghymers

Vice President of Robert Triffin International Association

Reform of Global Financial Architecture (GFA): Short Term Measures and Long Term Goals

Why and how to bridge the gap between the present SDR and an effective multilateral reserve currency ?

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I. WHY ? 1. The global crisis and the GFA

The hypothesis of a causal link between the asymmetry in the present IMS based upon the US \$ as the main reserve currency and the global crisis should deserve more attention: credit booms and capital flows were key-aspects of the global crisis.

Our thesis: the inability of IMS to provide and regulate adequate degree of global liquidities => global credit-boom due to spillovers => global crisis => need for a GFA reform able to ensure a more symmetrical IMS and a more collegial regulation of global liquidities

This thesis is not new: Robert Triffin developed it untiringly as soon as the 1950s, inclusive in the US (White House), at IMF (creation of the SDR and Art. VII), at Yale and Louvain Universities and in many international tribunes...but...

Amazingly Triffin's analysis showing a feasible Global "win-win game" through a better GFA has generally remained perceived as utopic by Central Bankers, except by Governors Zhou (2009, PB of China) and Camdessus (ex-IMF & France).

WHY? 2. The GFA relies upon an IMS (International Monetary System): what is an efficient IMS ?

“System” means an agreed and structured way for organizing international payments between “n” competing currencies.

= it implies collective actions for creating this public good ensuring 3 linked “*coordinating*” functions:

- 1) providing adequate liquidity for fluctuating levels of trade (i.e. preventing international waves of excess or scarcity of international currency)
- 2) providing means or tools for correcting global imbalances without net contraction in global demand and preventing conflicting practices (unfair protections damaging trade and capital movements);
- 3) Issuing a set of coherent rules, tools, institutions for warranting a minimum of coordination for preserving the public good of stable monetary and economic conditions

WHY? 3. But the present IMS is flawed for using the US \$ as its main reserve currency

- Triffin dilemma shows that with a national currency used as the dominant international reserve, an increase in demand for reserves implies growing external indebtedness of issuer; in consequence risk of too much or too few global liquidities
- = True whatever exchange-rate regime (not only in fixed-Bretton Woods regime) since floating increases the demand for reserves
- Any stable monetary system - national or international – requires a n+1th bank dedicated to make compatible the n others by issuing or withdrawing its own liabilities for ensuring macroeconomic stability
- Without this LOLR function through a n+1th currency (Monetary base) => banking over-indebtedness and crisis (national level) or global macroeconomic imbalances (international level) preventing adequate liquidity management

WHY? 4. From « Triffin Dilemma » to « Triffin built-in destabilizer » ...

- \$-based-IMS creates 3 destabilizing mechanisms : 1) the softening of the external constraint for the US resulting from the “automatic loans” by the (n-1) demands for reserves => global imbalances (de-saving => US becomes the “*consumer/borrower of last resort*”); 2) the US monetary stance generates automatic liquidity spillover: multiplication abroad, any excess of US monetary base is duplicated by (n-1) CB as they re-inject it in US economy, (not deposited on the FED accounts since they buy US T-Bills and CD on the market); 3) pro-cyclical movement in bank flows, leverages and spreads (as a result of the dramatic increase in the gross cross-border operations of banks combined to pre-eminent technical role that the US dollar plays in global banking): depreciation of the US \$ increases leverage outside and vice-versa (Shin Hyun Song 2012, 2014), therefore creating a new channel of transmission of FED monetary stance even when exchange rates are purely floating (Hélène Rey, 2013,2015)

WHY? 5. ...and its systemic pyramid of asymmetries

- These channels are inter-related, forming a vicious circle:
 - Demand for \$ reserves => lower US interest-rate => less fiscal discipline => excess of absorption => global imbalances
 - => less US jobs => FED must react and apply Keynesian stimulates => multiplication abroad => + demand for reserves for resisting \$ depreciation & growing financial risks: FED feeds imbalances and the excess of saving by some emerging economies
 - => + imbalances => + demand for US Keynesian policies => + liquidity creation (FED feeds the imbalances) => + demand for reserves
- => pyramid of asymmetries: in external constraint as far as growing demand of US \$ assets, in policy stances: can sustain longer Keynesian impulses with current account deficits, in cost of financing fiscal/ external deficits, in exchange-rate risks (invoicing and borrowing in \$ shift the burden to Foreigners), in yields and valuation effects: excess return on US assets over US liabilities and in resource transfer to the US

WHY? 6. removing these asymmetries exposes to a systemic risk of deflationary bias which could be prevented by creating a multilateral CB issuing a (n+1th) currency

- The basic reason for an additional (n+1th) bank/currency above the others is to make easier a regulation of liquidity supply since the n+1th allows for preventing to do it becoming a net debtor: at national level the n+1th agent = national Central Bank, as well as at international level the n+1th = an IMF as Global CB, both should issue their own liabilities against equivalent claims upon the n national agents or upon the n economies of the IMS = no net debt for the CB or for the IMF = LOLR functions
- In the past, precious metals were used as an imperfect rigid n+1th agent (currency) able to impose some anchorage to n agents (economies), although geologically dependent (but exogenous to n national agents)

WHY? 7. Multilateral currency collegially managed by multilateral CB is an accessible win-win game since it does not require additional loss of national sovereignty

- GFA status-quo exposes to very high global risks and costs
- Challenging monetary spillovers is only possible through collective actions
- What are the options? Policy coordination would be technically possible but politically (and constitutionally) utopian, capital controls would be technically difficult and also politically utopian, strengthening multilateral surveillance...
- In fact, moving to a SDR-based global reserve system (= genuine multilateral currency managed by an IMF upgraded to Multilateral CB) is the less costly in political economy terms: no additional loss of sovereignty, big progress in global stability, positive effects fairly shared, all economies better off, including the US.

II. HOW? 1. Existing SDR offers the ideal catalyst for achieving a true GFA reform

- SDR was consensually created for becoming this multilateral reserve upon which the GFA would be based (see Art. 7), still to be applied
- This embryo of the desired global currency was however marginalized for a combination of logical and contextual reasons, reaching only <1% of total reserves and 4% after the countercyclical creation of SDR decided by G-20 in 2009, but annual flows <\$ 20 bn
- The crisis context, the global shortage of « safe assets » cutting excessively risk premium, the higher weight of emerging economies, the RMB adhesion to the SDR, and the urgent need for a systemic solution should make easier the development of both public and private uses of SDR leading gradually to building-up the needed global consensus around a change in IMF and SDR status
- This is the RTI proposal: using present SDR -which is not a national liability and is managed at the multilateral level - as a lever towards the win-win game solution of SDR-based global reserve system

HOW? 2. Main advantages of the SDR

- SDR is the only multilateral monetary instrument
- SDR enjoys already universal acceptance by conventional officials and central bankers for being the official mean of payment across Central Bank, IMF and some IFIs
- SDR is the only existing instrument which can be issued without being a direct liability of any single economy
- SDR is the only component of global liquidity that can be subject to collective decision-making along existing procedures for direct countercyclical actions
- SDR is the easiest and most rational channel for providing alternative reserves to central banks especially for precautionary reason
- Reducing the Triffin dilemma and the asymmetries, introducing some external constraint on the US economy
- SDR has been a much better monetary standard in terms of long- term store of value and short-term stability than the US \$, being immune to the impact of floating exchange rates, saving so hedging costs

HOW? 3. Main obstacles to the SDR use

- SDR is *“SDR is neither a currency, nor a claim on the IMF....Rather, it is a potential claim on the freely usable currencies of IMF members”* (IMF 2009) the conversion of which has to be bargained and administrated, and limited use between only Central Banks, IMF and a very few other IFIs.
- IMF cannot issue directly SDR as a LOLR but only as “helicopter money”
- SDR has no market for exchanging it procedure is slow , volume too narrow
- IMF does not even use it for its General Account Department
- SDR interest rates are unattractive for holding official reserves (not market-based but calculated from official short-term rates)
- Periodical revision of the basket could provoke uncertainties and costs
- Procedure of SDR allocation are too rigidly linked to quotas (LDCs penalized)
- Absence of clear signal from authorities for making it the effective mayor reserve instrument and failure to set a substitution account for increasing its share while smoothing exchange-rate fluctuation of the US \$ affected the interest for developing its parallel private use

HOW? 4. What is feasible now ?

- Operationally, an IMF Substitution Account would be a necessary step: = appropriate instrument to diversify reserves into SDRs, without exposing the world economy to risky tensions in foreign exchange markets. No change requires in the IMF statute. Allows for a consensual shift away from the dollar as reserve-currency while maintaining the network externalities necessary for ensuring no breakdown in its role as a day-to-day transaction-currency; Conflictual issue about exchange-rate risks is solved allowing the account to exist indefinitely (**lcard**: i.e. preventing any exchange-rate loss to be realized by the IMF since the conversion rate is definite once and for all in bookkeeping terms and the SDR is the eventual permanent reserve currency of the IMS)
- However, for being successful this soft rebalancing in reserve composition requires parallel actions: providing legal certainty, and continuity, increasing rapidly depth, liquidity and volume of the SDR market, supporting the market infrastructures for developing a private SDR market (interbank clearing arrangement).

HOW? 5. First step: making official SDR more attractive and promoting private SDR

- Enhancing the use of official SDR and developing private use of SDR basket are mutually supportive. For the private SDR market to develop, a strong signal is first needed from the official side: Without need to change the IMF's Articles : 1) Deciding SDR allocation each year \$ 100-400 bn according to global needs 2) IMF, World Bank and the other multilateral or regional development banks should generalize the use of SDR and issue SDR denominated liabilities (supplying requested safe assets on the markets); the latter could promote SDR denominated loans. 3) National Treasuries and private borrowers will follow issuing SDR denominated debt once the transaction costs will be competitive.
- The existence of a liquid private SDR market will allow Central banks to hold reserves in private SDR and to use them for exchange market interventions.
- In parallel, public sector should promote multilateral clearing in SDR with private banks and do the necessary for ensuring the legal continuity and making predictable SDR composition (cfr ECU => € experience)

HOW? 6. Second step: linking official SDR to private SDR and allowing IMF to issue directly SDR against national assets

- With changes in the IMF Articles, private banks could hold SDRs on IMF accounts while Central Banks could use their official SDRs on private markets, allowing interventions directly in SDR. In particular, Central Banks could operate on the interbank Clearing House with both official and private SDRs and swap operations could ensure liquidity and yield curve
- Articles should also adapt SDR allocations to satisfy better the real demand for reserve as LDCs reveals a much higher need than developed economies (9 times higher in 2000-2010 in % GDP ! Ocampo 2015)
- Overall, the key step is to allow IMF status issuing directly SDR against eligible domestic earning assets from the “n” economies, transforming IMF into a “Multilateral Central Bank”-MCB and SDR into a genuine “Multilateral Reserve Currency”- MRC (at par with SDR value). This will allow for adjusting global monetary base under strict technical criteria and collegial decision by the Board, making possible a rational management of global liquidities, and meeting cyclical and crisis liquidity adjustment (counter-cyclical or emergency LOLR actions)

HOW? 7. Final step: eradicating the remaining asymmetries and the exorbitant privilege through rules

- IMF is now a MCB managing monetary base with 2 issuing modalities: exogenously in buying or selling national bonds (according to global liquidity needs), and endogenously through an overdraft facility (in % of quota) for national CB (national adjustment needs).
- Adjustment burden becomes manageable according to the global cycle: if negative output gap, adjustment bears more on surplus economies and the contrary in case of inflation tensions.
- But each economy faces eventually the same degree of scarcity of the international liquidity (after the temporary flexibility of the multilateral overdraft facility)
- This requires an additional condition: to regulate sterilized interventions for preventing to resist durably to the symmetric movement in monetary bases of deficit/surplus economies
- Ex: PB of China substitutes (stable) MDR for (unstable) US \$ T-bills; it sells T-bills on the market, shifts the \$ from its US bank to its account at the FED (US monetary base is cut), exchanges at the MCB its \$ deposits for MDR

HOW? 7. Final step: eradicating the remaining asymmetries and the exorbitant privilege through rules

- The MRC amount is taken from the FED deposit (or the FED overdraft) and increases the MRC deposits of the PB of China: no increase in global monetary base (as far as no sterilization in the US by increasing domestic assets of the FED), the US faces a debt in MRC and China accumulates MRC but increases its own monetary base = perfect symmetry balancing the adjustment between surplus and deficit economies, no deflationary bias.

CONCLUSIONS

Time and conditions to adapt the GFA to a multipolar world are met

- **The exorbitant irrationality of the present system based upon national reserve currencies is obsolete and too risky**
- **The temporarily coinciding incentives of the polarized creditor and debtor countries for maintaining status-quo are shifting toward shared interests for improving stability and governance through a soft and progressive set of reforms making the best from existing institutional procedures i.e. SDR and IMF.**
- **Any short-term actions or proposals should be assessed according to the long-term goal of making the SDR the main reserve currency for Central Banks**
- **Strengthening the IMF up to making it the needed Multilateral Central Bank issuing the SDR as the multilateral Reserve Currency is the most respectful option of national sovereignties since it internalize better the monetary spillovers than any other options.**

Annexes

- Balance-sheet presentation of the final stage of the Multilateral Central Bank issuing Multilateral Reserve Currency
- Charts

Analytic Scheme: Balance-sheet of the Multilateral Central Bank (MCB = IMF+) in MRC (=SDR+)

ASSETS

A1 + A2 = total claims upon "n" economies:

A1. National Bonds in "n" national currencies converted in MRC (= SDR+) (=valorized at daily market-rates against the MRC ("Multilateral Reserve Currency") basket

A1.1 Swapped Bonds

A1.2 Bought Bonds

+ A2. Overdraft Facility in MRC (SDR+) to National

LIABILITIES

= Global Monetary Base

P1+P2 = total liquid liabilities

L1. Deposits in MRC from « n » Central Banks as counterparts for « n » national Bonds sold to MCB (countervalue changing all days but assets = liabilities, no exchange-rate risks)

P1.1 = counterpart of swapped Bonds

P1.2 = net issuance of MRC (= exogenous variation in Global Monetary Base according to global needs)

+L2. Reserve Deposits in MRC (SDR+) from National

Comments to the analytic scheme of the issuance of MRC (SDR+) in the MCB (IMF+) Balance-sheet

A1.1 Swap between MCB and « n » national CB for 20% (for example) of their national assets backing their national monetary base (registered at current exchange-rate in MRC: such a swap does not create any new liquidity (substitution inside global monetary base)

A1.2 The MCB buys national Bonds for increasing Global Monetary Base (and sells for cutting it)

A2 The MCB opens an Overdraft Facility to national CB of deficit economies, usable according to objective rules (% of quotas) and after approval by Board qualified

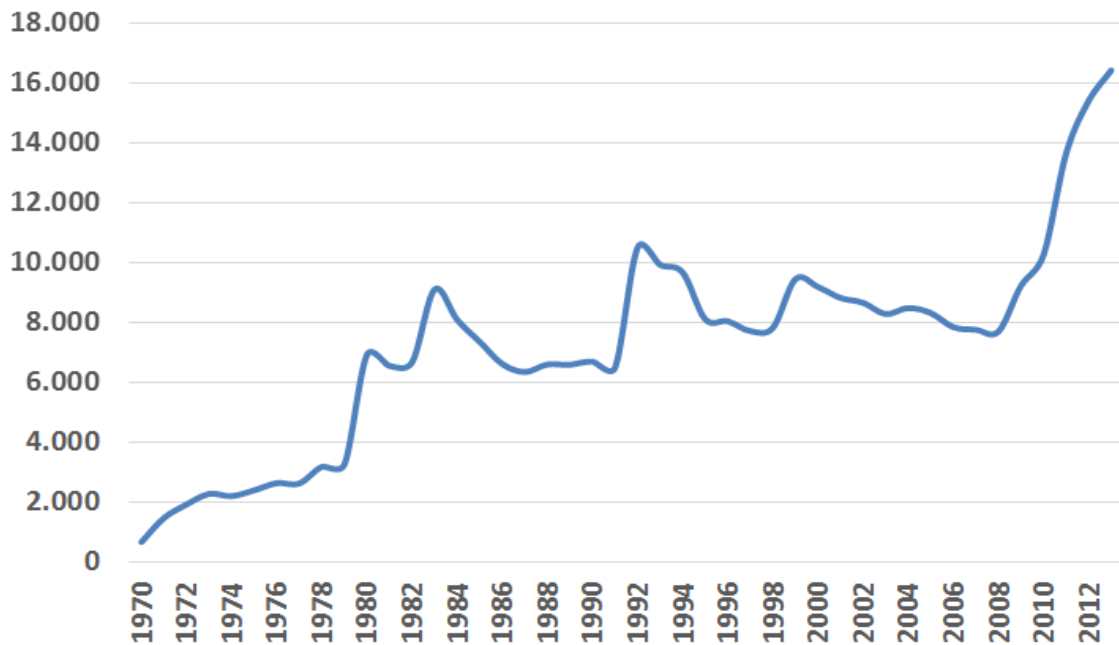
L1.1 In counterpart of 20% of assets swapped by the « n » CB the MCB issues MRC (SDR+) on the respective accounts of these CB usable between CB. If exhausted, possibility to borrow with the overdraft facility below (L2)

L1.2 Exogenous net issuance of MRC making IMF a genuine Global Central Bank able to change Global Monetary Base and SDR becoming a full international currency

L2 MRC issued as counterpart of overdraft uses: deficit economies pay to surplus economies by shifting MRC from their accounts to the

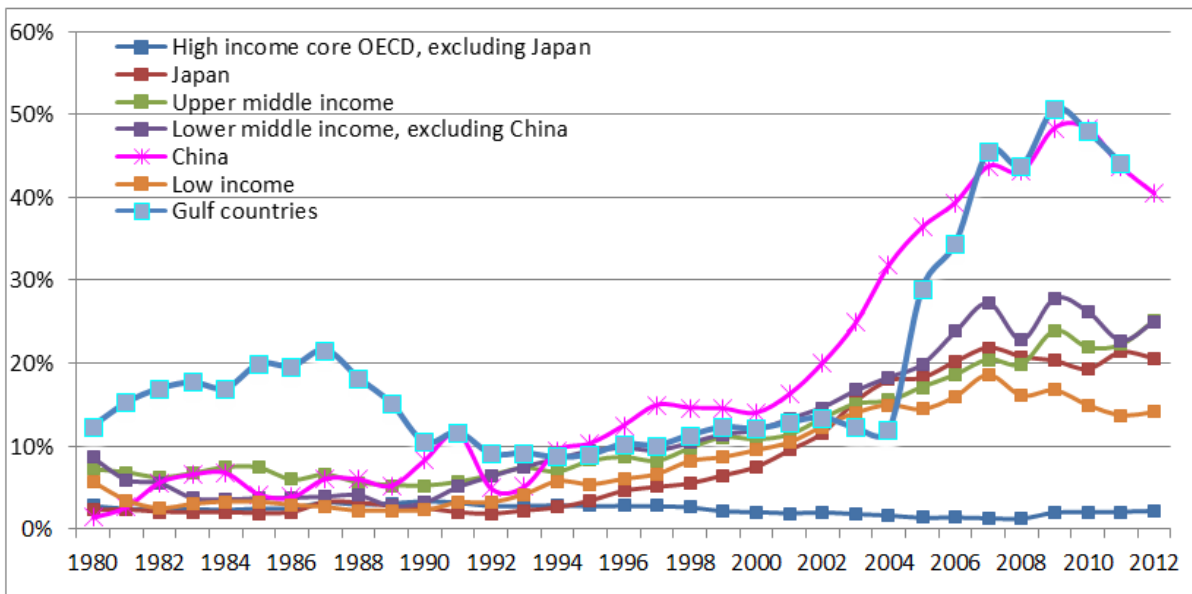
TOTAL NET DRAWINGS OF SDRs in millions of SDRs

(Source: B. Erten and J-A. Ocampo 2015)



International Reserves by Level of Development (% of GDP)

(Source: B. Erten and J-A. Ocampo 2015)



**Robert Triffin (1911-1993) in
University of Louvain-La-Neuve
Belgium 1984**



RT

“Preliminary Thinking on Promotion of SDR by Using Blockchain Technology”

GE Jiafei

Research Fellow, SDRF

Preliminary Thinking on Promotion of SDR by Using Blockchain Technology

Qiao Yide

Vice President and General Secretary of Shanghai Development
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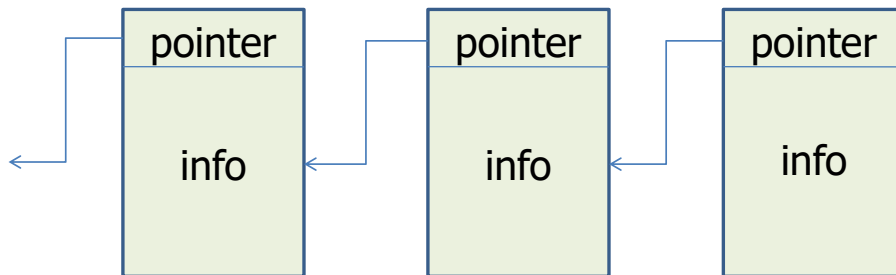
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Chengdu July, 2016

SDR

- **Targets**
 - 1969, to supplement members' foreign reserves
 - 1978, to be one of major foreign reserve assets
 - after 2008, the most probable choice for establishing super-sovereign reserve system
- **Status quo**
 - The proportion of SDR in global non-gold foreign reserves rose to 4% after two issuances in 2009, but drops to less than 3% again currently
 - The crisis has not led to critical improvements in mechanism.
- **Causes**
 - Fundamental reason: lack of political will
 - Direct reason: design flaws in SDR operation mechanism

Blockchain



- It can also be called distributed ledger.
- It can be widely used in finance and money, smart contracts, etc.

SDR + Blockchain

- SDR + Blockchain = digital SDR
- A digital SDR=a SDR + several smart contracts
- Initial restrictions can be added to digital SDR when it was issued.
- The usage of digital SDR can be stipulated when it was lent/donated.
- A SDR Blockchain is needed for data record and smart contracts operation.
- Blockchain cannot displace political will, but it can be helpful for improving SDR operating mechanism

1. Add more currencies into SDR basket?

- IMF criteria
 - Export
 - Free usable
- Joseph Gagnon
 - Sound macroeconomic policies
 - With bond markets meeting minimum standards of openness and supervision
- Is it possible to add all sovereign currencies into SDR basket?

- “Computational complexity” problem
 - Computers can calculate and publish the value of SDR timely
- The adjustment of the weight of currencies in basket
 - It can be adjusted automatically according to established rules
 - For example, the weight of each currency = (export amount of its country + the value of global foreign exchange reserves in it) / (total amount of global export + global foreign exchange reserves)
- The problem of non-freely usable currencies or non-convertible currencies
 - To set a limit for SDRs converting into these currencies. Smart contracts could be used to do it.
 - Substitution marks are needed on SDR blockchain for above currencies may not be digital ones.

2. Can we issue more SDRs more effectively

- Lack of SDR issuance is the main cause for its unsatisfactory status.
- Many economists suggested regular and quantitative issuance of SDRs
 - Stiglitz etc. argues an issuance of SDRs equivalent to \$150-300 billion every year.
 - Ocampo proposed to issue \$250-300 billion every year.
 - An IMF staff report in 2011 suggested an amount of \$350-400 billion to be allocated in 3 years from 2014.
- Blockchain technology can provide regular and quantitative issuance of SDRs automatically, if rules are clearly stipulated
 - E.g., the amount of SDRs each year = short-term debts * 8%
 - E.g., the amount of SDRs each year = short-term debts * 5% + global GDP * (its potential growth – expected growth) — having the character of counter-cycle

- A serious asymmetry between SDR allocation and its usage
- SDR allocation should take members' needs of SDR into consideration, such as
 - $$AR_i = \frac{Q_i + k \times RSU_i}{\sum_{j=1}^{189} (Q_j + k \times RSU_j)}$$
 - Among them
$$RSU = \frac{\sum_{j=1}^{D-1} |HS_{j+1} - HS_j|}{AS \times D}$$
- Technically, blockchain can help to reach consensus and establish credibility with each other, mainly through imitating random
 - PoW, NA
 - PoS, only applicable on allocation according to share
 - Developing: variants of PoS, Braft, Paxos.....

3. How about substitution account?

- Substitution account:
 - Vital means to provide SDR liquidity and helpful to promoting SDR's role
 - However it failed due to the difficulty in potential loss sharing.
- possible sharing programs include:
 - IMF
 - Lower interest rate to reserve holders and more long-term assets in account
 - Reserve currency issuing countries
 - An insurance fund
- Reserve currency issuing countries bear half of the potential losses, and an insurance fund bears the other half.
- Technically, smart contract is an alternative.

4. The role of IMF and central banks of members in the new system?

- Traditional SDR operating system
 - IMF: central banks' central bank
- New system: before creation
 - IMF: promoter, platform provider
 - Members: promoter (expected)
- New system: after creation
 - IMF: supervisor, collector and reviewer of exogenous data required
 - Members: supervisors and managers of cross-border transactions
 - Private sector: voluntary holders, freely users (does permission need?)

- Technically,
 - unpermissioned
 - mature
 - Bitcoin
 - permissioned
 - Not open source private blockchain
 - Private blockchain + key
 - Limited IP
 - Further study is needed

Thank you !

Appendix I

PROPOSALS OF MEASURES TOWARDS ENHANCING THE ROLE OF SDR



Shanghai Development Research Foundation



Robert Triffin International

Special Drawing Rights (SDR) were originally created by the IMF to overcome deficiencies in the dollar-based international monetary system (IMS) by supplementing global reserve assets with a view to “making [them] the principal reserve asset in the international monetary system”¹. However, since its creation in 1969, the SDR not only failed to become a credible alternative for reserve diversification, but was also marginalized. After reaching in the 1970s the peak of 8.4% of global reserves (excl. gold), global SDR holdings went down to about 0.3% before the allocation in 2009. Even after that allocation, total outstanding SDRs (204 billion) increased only to about 4% of global reserves—still well under the peak.

A number of factors explain why the SDR missed the goal that had been assigned to it. First, due to lack of political will, the international community failed to take up the opportunity created during the dollar crisis in 1969 allowing for the creation of the SDR; second, the initial flaws in the design of the SDR operation mechanism prevented the SDR from playing its role efficiently; third, short-run interest considerations of individual members inhibited the necessary measures for promoting the use of SDR.

This note argues that the reasons for creating SDRs are still valid. SDRs would allow for a more orderly supply of global liquidities, preventing global excess of reserves, reducing the asymmetries and the deflationary bias of external adjustments and solving the Triffin Dilemma. What should be done is to target its deficiencies and to find the best consensual ways to resolve them. After stocktaking and analyzing possible options, the note presents joint SDRF-RTI proposals on pragmatic measures that could be implemented now and soon.

1. Making Stakeholders Aware of the Importance of SDR

In order to shape political consensus, it is necessary to make stakeholders aware of the potential of the SDR for reforming the IMS at the lowest costs and risks. The flaws in the IMS are generally considered as one of the major reasons for the outbreak of the global financial crisis, the weak recovery and the present dilemmas for national macroeconomic policies. Thus, there is a historical window of opportunity to seize for enhancing the role of SDR and strengthening the multilateral system.

The basic reasons for creating the SDR remain fully valid. Indeed, the current IMS deficiencies expose the global economy to growing risks, including over-concentration of the official reserves on the dollar and the potential massive currency substitution with erratic fluctuations in global liquidity. The SDR might help

¹IMF Articles of Agreement, Art.VIII section 7 & Art. XII

to build a more resilient IMS by diversifying global safe reserve assets and reducing deflationary or inflationary tendencies in effective world demand without creating any national debt overhang.

Reserve issuing countries would also benefit from expanding the role of the SDR. Their monetary policies have large spillover effects to other countries and spillback effects to themselves. The use of SDRs as a diversified reserve asset would mitigate capital flow volatilities and stabilize their economies. In particular, it is important to communicate clearly to public opinions and policymakers that SDR quota increases do not entail a real resource cost.

SDRs would be useful for small countries as well, especially during crises. Small countries are generally more vulnerable than big ones to external shocks and need SDR reserves as a buffer. Frequencies of SDR uses and the ratios of used to allocated SDRs are significantly higher for developing countries than for developed countries. The ratios of SDR uses in low-income countries are more than twice those in high-income countries.

Furthermore, IMF members should be reminded that they have the obligation to make the SDR the main reserve asset in the IMS according to the *Articles of Agreement of IMF*.

2. Improving the Operation Mechanism

In addition to shaping political consensus, improving the operation mechanism design is another vital aspect to strengthen the role of the SDR.

A significant increase in the volume of issuance of SDRs is the obvious very first necessity to ensure that the amount of global SDR holdings moves at least in parallel with the growth of the world economy and of world reserve assets. The ratio of global SDR holdings to global reserves (excl. gold) has declined from the peak of 8.4% to less than 3% these days. Much more SDRs are required for reaching the critical mass necessary for triggering the mutually supportive dynamic process between private and public demands for SDRs allowing them to play efficiently their expected roles. It was estimated that an annual allocation of USD 200 billion would increase the share of SDRs in total reserves to about 13% by 2020s.² Three channels could be used for issuing more SDRs, namely regular issues, counter-cyclical issues and setting up of a substitution account.

Regular issues should be organized to increase SDR liquidity. Theoretically, an assessment of the justification for a new SDR allocation should take place every five years (named “basic periods”), with SDRs allocated at yearly intervals within each basic period. But since the creation of the SDR, only four such regular allocations of

²Several other proposals are as follows: IMF(2011) recommends SDR allocations of USD 350-400 billion during 2012-2016 ; Stiglitz Commission(2009) suggests a regular issuing in the range of USD 150-300 billion a year ; Ocampo(2011) proposes an allocation of USD 250-300 a year ; Stiglitz et al.(2011) argues a yearly issuing of USD 240-400 billion.

SDRs have been made by the IMF for a total amount of SDR 204 billion to date. Regular issues should be resumed, and complemented by ad-hoc countercyclical issues, reaffirming the role of the SDR as the needed collectively-managed instrument for providing counter-cyclical impulses able to stabilize and anchor the global economy. Obviously the IMF should issue more SDRs in periods of crisis and fewer in periods of prosperity.

Except for the special part of the issue in 2009, SDRs were allocated to member countries on the basis of their IMF quotas, leading to a mismatch: advanced economies are getting more SDRs than they need, while the developing countries are getting less than their needs. We suggest that voting rights could be used as criterion for SDR allocation instead of quotas and the ratio of basic votes could be increased, so that the votes of developing countries would be increased, and more SDRs would be allocated to them.³

SDR interest rates, based on the basket currencies, could be calculated more frequently and published once a week. The calculation could be carried out once every working day, simultaneously with the publication of the SDR value, thus providing a continuous benchmark for reserve managers to facilitate their hedging. Nevertheless, the process for setting the interest rates for SDR holdings must be adapted in order to make these assets as attractive as alternative reserve assets. The first immediate step would be replacing the present short-term basis by long-term references for calculating them. Later, when the private market would be sufficiently developed, market rates would substitute the present administrative procedures for fixing the remuneration of official assets and liabilities. However, these improvements require some adjustment in the IMF Articles.

3. Promoting a Wider Use of the SDR

The IMF should take the lead in promoting a broader use of official and private SDRs in order to issue clear signals of the progressive but irreversible implementation of the Art. VIII & XXII objective. First, the IMF should use the SDR more systematically and visibly in its internal operations, using the SDR as the accounting unit for all items on its balance-sheet, as well as the reference standard in its researches, reports, data, speeches, and information published.

Member countries should be encouraged to use the SDR for data release and reports submitted to international institutions. China has taken the first step recently by using the SDR as a unit in data release of its foreign exchange reserves from April

³Several other proposals are as follows : Williamson (2010) made a proposal : to separate the developed and the developing countries into two groups, giving 80% of the SDR to developing countries, 20% to developed countries. And further allocation is conducted according to demand inside the two groups; Erten and Ocampo (2015) proposed to introduce the demand for reserves into the criteria for SDR allocations. Specifically, quotas from middle and low-income countries to be weighted by a factor that represents the several times they tend to demand reserves as a proportion of GDP relative to high-income economies.

2016. Hopefully, other members will follow it up.

Other international institutions (including the United Nations, the World Bank, as well as the Asian Development Bank, the Asian Infrastructure Investment Bank and other multilateral development banks (MDBs)) should also follow using the SDR as their accounting unit for data dissemination and researches well as for their lending and borrowing operations.

Another suggestion is to establish a link between SDR allocation and development finance (namely “development link”). It would enable the IMF to treat the unutilized SDRs as deposits from member countries, and to use them for development finance, for example investing in SDR denominated bonds of MDBs, which are generally low risky.

Using the SDR for setting up a green fund with the condition of risk control would probably make a breakthrough in this respect. To be specific, member countries could put their unused SDRs as equity investment into a green fund for climate finance. The return on the investments could be used to cover the interest charge for used SDRs, which would further stimulate member countries’ motivation to use SDR.

The most important and critical step for moving the SDR from an incomplete international asset to a genuine international currency would be using it directly for interventions on exchange-markets. This critical step would require appropriate structures for developing a significant private market for the SDR with competitive transaction costs compared to traditional reserve assets. The ground for it could be prepared if the SDR clearing house was already a “prescribed holder” like the BIS. In that case, central banks could get private SDRs by opening an account with the BIS and depositing also official SDRs. However, private parties are not allowed to hold them under current rules. *Articles of Agreement of IMF* is required to be modified, which would take time.

Before undertaking the heavy negotiation for revising it, the official sector could take the lead in SDR denominated bonds issuing and investing. The IMF could also issue on a regular basis SDR long-term bonds that Central banks would acquire for diversification purposes.

In fact, the IMF has issued 3.2 billion SDR notes with floating interest rate to the official sector, and signed notes purchase agreements of 45 billion SDRs with floating interest rates. But these notes will only be issued when the IMF needs supplementary resources. The IMF should expand and continue to issue SDR assets.

The IMF could help member countries to participate in promoting the development of the SDR asset market. China has announced its intention to issue SDR-denominated bonds. The IMF can help China to accelerate this process, and also encourage other member countries and other international institutions to do so. If SDR bonds could be issued with a large amount and on a regular basis, the SDR asset market would develop rapidly. The requirement of liquidity is relatively low for reserve asset holders, which supports the demand for SDR-denominated bonds in the early stage.

4. A New Initiative towards Setting up a Substitution Account

The substitution account would be an open-ended fund for global foreign exchange reserves based on the SDR and managed by the IMF. It would provide an appropriate instrument making possible a consensual reserve composition shift without exposing the world economy to risky tensions in foreign exchange markets by substituting sovereign currency assets with SDRs. Along with it, the defects of using a sovereign currency as an international reserve currency could be mitigated and the issuing of SDRs would be increased at the same time.

There were several efforts on initiating a substitution account in the past, but none of them was successful. The main reason of this failure was lack of consensus and political will. The main technical problems were how to share exchange risk and provide attractive revenue for SDR assets: indeed, the value of foreign exchange reserves in the substitution account would vary with fluctuating exchange rates and the revenue on SDR assets might be less than their potential investment return in other markets which have higher return than SDR interest.

Some proposals to resolve technically these problems would be the following: 1) The most coherent and easiest solution would be to allow the account to exist indefinitely i.e. preventing any exchange-rate loss to be realized by the IMF since the conversion rate would be definite once and for all in bookkeeping terms and the SDR would become the eventual permanent reserve currency of the IMS⁴. 2) Another solution would be to ask the IMF to cover the difference by the use of its own resources, such as gold reserves. However, this would result in sharing the burden in accordance of the quotas, leaving the United States with a cost significantly smaller than could accept some other members. 3) Paying reserve holding countries with a lower interest rate on SDRs, and increasing the proportion of long-term assets held to get the interest rate differential to compensate potential loss. 4) Letting the reserve currency issuing country to bear all risks. 5) Setting an annual fee which would be used to establish insurance funds for possible loss of substitution account. An annual fee of 1% would maintain the financial stability of the insurance fund basically.

A reasonable compromise would be to ask reserve currency issuing countries to cover half the potential loss of the account (what the US had accepted in the last episode of such a negotiation in 1979-80) and to multilateralize the other half (with either insurance funds or IMF resources).

Besides, the substitution account could be a starting point for the SDR to evolve towards a complete international asset from a basket asset. We recommend that the IMF build up as soon as possible a specialized team to conduct researches aimed at a new initiative towards setting up of a substitution account, resolving its technical issues, and exploring its further possibilities.

5. Setting up an Ad-hoc Committee Entrusted to Work-out a

⁴This idea was launched by André Icard in the context of the Palais Royal Initiative

Roadmap towards a SDR-based IMS

A special committee could be built to discuss above items of this proposal, and other proposals as well. Specifically, their feasibility, technical problems encountered, implementation and effects (especially the negative ones) arising are all important research contents of the committee.

In addition to discussing practical proposals, it could conduct further researches related to more comprehensive and long-term goal of an IMS based upon a SDR+ or a *Multilateral Drawing Right* (MDR), which would be a genuine international currency issued directly by an IMF+ transformed into a genuine *Multilateral Central Bank* (MCB).

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As mentioned previously, most of the above items are measures on enhancing the role of the SDR that could be implemented currently. They might not be all ideal, but all are desirable and feasible. They might not be all in line with theoretical solutions but they are practical, specific and deliverable, which is our wish at least.

Of course, analytical research on the long term goal of reform of the IMS, namely, an ideal SDR-based IMS as well as admission of more currencies into a more realistic SDR basket, has to be spurred in parallel to the implementation of this set of proposals in order to provide the roadmap towards the final goal which has to be clearly depicted and difficulties and challenges in this journey have to be thoroughly analyzed and properly addressed.

Appendix II

Historic perspectives on the purposes of the SDR

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Introduction

The inclusion of the renminbi into the IMF Special Drawing Right (SDR) basket may signal the revival of the SDR. There have been considerable fluctuations in interest in the SDR. The IMF has at times embraced but most of the times largely ignored it. The SDR is not the outcome of a singular vision but rather the campaign of competing views among IMF member countries. It offers a glimpse about countries' perspectives on the purposes of the SDR. With renewed interest in the SDR and shifting country influences at the IMF, those may offer valuable insights into the possible future direction of the SDR.

The SDR got a fillip in March 2009 with proposals by the Chinese and Russian authorities to establish greater reserve currency diversification based on the SDR.¹ This was followed by a large allocation of SDRs in August 2009. The decision to include the renminbi in the SDR basket in November 2015 now offers scope to sustain the momentum.

The SDR represents a unique reserve asset. It is created by the IMF and allocated to IMF member countries. Its role and objective have changed significantly over time. During the 1960s, under the Bretton Woods System, the creation and original motivation for the SDR was to constitute supplementary reserves and reduce dependence on national currencies notably the dollar. In the early 1970s, with the collapse of the Bretton Woods System and the demonetisation of gold, emphasis was put on establishing the SDR as the new numeraire of the international monetary system. Towards the end of the 1970s, focus shifted significantly towards operational concerns and enhancing the attractiveness of the SDR as a financial instrument with a view to promoting its adoption by financial markets and making the SDR the principal reserve asset. The latter has remained nominally the objective of the SDR.

Notwithstanding, the SDR never gained importance as a reserve asset. There are an equivalent of US\$285 billion of SDRs outstanding compared with US\$11,400 billion in central banks foreign exchange reserves. The small amount outstanding illustrates the interest of dominant IMF member countries that have to date constrained the further adoption and development of the SDR. Greater SDR allocations will be critical for the SDR's future.

The present chapter focuses on the IMF deliberations on currency inclusion in the SDR valuation basket. These are traced broadly in chronological order in large part based on Directors' comments in the minutes of IMF Executive Board meetings.² Directors are identified by their country of origin and the voting power of their constituency at the IMF at the time a comment was made (Directors, number of member countries, voting power and composition of constituency have changed continuously). While there is an ample literature about the SDR, the origins of the SDR valuation and different views of IMF member countries about the SDR have mostly been disregarded.³

Origins of the SDR

The SDR emerged during the 1960s to counter perceived impending shortages of international reserves. Official reserve holdings were critical for payments and settlements of international transactions. Concerns about the adequate supply of reserves are immediately related to the purpose and origins of the IMF itself. John Maynard Keynes stated as part of the objectives of his 1942 proposal of an international clearing union:⁴ "We need a *quantum* of international currency, which is neither determined in an unpredictable and irrelevant manner as, for example, by the technical

progress of the gold industry, nor subject to large variations depending on the gold reserve policies of individual countries [...]."

The 1950-60s were marked by the increasing importance of the dollar to become the principal reserve asset of central banks. Under the Bretton Woods exchange rate system, currencies were pegged to the dollar at fixed but adjustable exchange rates—par values—and the dollar was fixed to gold at US\$35 an ounce of fine gold. The system provided, in principle, to determine unequivocally the gold value of any currency via the dollar with gold representing the numeraire of the system. By 1960, the dollar overtook sterling as the largest foreign exchange reserve. By 1970, foreign exchange reserves overtook gold as the principal reserve assets with the dollar representing on average three quarters of central banks' foreign exchange reserve holdings.⁵ The collapse of the Bretton Woods system in 1971-73 was accompanied by the demonetisation of gold and the adoption of generalised floating of the main currencies.

During the 1960s, the IMF became increasingly concerned about the slowing pace of reserve accumulation.⁶ At the time, any rise in international reserves was mostly due to increased holdings of foreign exchange mainly dollars and it was feared that the accretion of dollars will soon abate leading eventually to a significant weakening of the structure of international liquidity.⁷ In 1965, the IMF included as part of its work programme the need for the creation of additional reserves.⁸ In 1967, the IMF began deliberations in earnest about a reserve facility based on "drawing rights in the Fund" and the Board of Governors adopted a resolution for a "supplement to existing reserve assets."⁹ In 1968, the IMF Executive Board issued a report recommending modifications of the IMF Articles of Agreement of the IMF to establish a facility for special drawing rights.¹⁰ In 1969, the amendment of the Articles became effective." On 1 January 1970, the first SDR allocation was made.¹¹

SDRs are created by the IMF normally through general allocations to IMF member countries. SDR allocations have to be based on an assessment by the IMF for a long-term global need to supplement existing reserve assets. Decisions on general allocations are made for successive basic periods of up to five years. There have been only three general allocations. Any SDR allocation requires an eighty-five percent majority of the voting power at the IMF Board.

SDRs are allocated to IMF member countries receiving an asset (SDR holdings) and a liability (SDR allocation) in SDRs at the same time in proportion to their IMF quotas.¹² SDRs represent a claim on the foreign exchange holdings of other IMF member countries that have the obligations to accept SDRs in exchange of foreign exchange.¹³ The SDR mechanism is self-financing and levies charges on allocations which are used to pay interest on SDR holdings. If a country does not use any of its allocated SDR holdings, the charges are equal to the interest received. If a country's SDR holdings rise above its allocation, it effectively earns interest on the excess. If it holds fewer SDRs than allocated, it pays interest on the shortfall. SDRs are held predominately by central banks in their accounts at the IMF and used almost exclusively in transactions within the IMF. The SDR is also a unit of account and all transactions of the IMF are accounted for in SDRs.

In 1972, at the IMF Annual Meetings, then U.S. Treasury Secretary George Shultz offered the international community a bold plan to reform the international monetary system and end the special role of the dollar as a reserve currency. The U.S. proposal came after the complete disruption of the then existing monetary order and as key countries growing mistrust in the U.S. administration's willingness to make necessary economic policy adjustments to ensure the stability of the dollar. Shultz presented the outlines of a plan including: Exchanging the dollar for the SDR to become the formal numeraire of the system, offering an exchange of existing reserve assets (dollars) into other reserve assets, eliminating the role of gold, transferring sovereignty to international institutions to manage the system.¹⁴

The exchange of existing reserve assets for SDRs was based on proposals for an SDR substitution account. In 1972-74, the Committee of Twenty analysed the possibility of a substitution account based on a compulsory exchange of

foreign exchange assets for SDRs.¹⁵ In 1975, the IMF debated a substitution account for gold to allow IMF member countries to obtain SDRs in exchange of gold.¹⁶ In 1979 after different iterations, the IMF reconsidered a substitution account to exchange dollars for SDRs. The idea attracted considerable interest and consisted of an account administered by the IMF that accepts deposits on a voluntary basis of eligible dollar-denominated securities in exchange for an equivalent amount of SDR-denominated claims. The account was seen to contribute significantly to promoting the SDR.¹⁷ In 1978, the Second Amendment of the IMF Articles of Agreement became effective providing among other for the SDR to become "the principal reserve asset in the international monetary system."¹⁸

However, interest in the SDR had already started to falter. The 1970 SDR allocation was part of the first general allocation in 1970-72 of SDR9.3 billion. In 1979-81, the second general allocation was of SDR 12.1 billion. In 1980, the substitution account ideas were abandoned.¹⁹ For almost 30 years, no further SDR allocations were made. In 2009, a third general allocation of SDR162.2 billion was distributed together with a special one-time allocation of SDR21.5 billion. There are SDR204.1 billion (US\$285 billion) outstanding today.

SDR valuation

The SDR was originally valued as an equivalent weight in gold consistent with the par-value system. In 1969, its valuation was set equal to 0.888671 grams of fine gold equivalent to the value of 1 dollar, being the par value of the dollar, so that 1 SDR equalled 1 dollar. The collapse of the Bretton Woods System and devaluations of the dollar led to an appreciation of the SDR against the dollar to US\$1.21. The latter value was maintained by the IMF through July 1974 even though the new par value of the dollar ceased to be observed amid the adoption of generalised floating. Since July 1974, the value of the SDR has been based on the market value of a basket of currencies.²⁰

The maintenance of the gold value of currencies constituted an essential element for the operation of the IMF. IMF transactions involved the exchange of currencies for assets of a fixed gold value comprising claims on the Fund and SDRs requiring a price link between these assets and currencies. The suspension of convertibility of the dollar into gold severed that link. The IMF had to establish a new basis for the valuation of its assets. In 1971, the IMF Executive Board advanced deliberations on the wider use of SDRs eventually to substitute gold with the SDR as the new numeraire of the international monetary system.²¹

The search for a stable numeraire led to the idea of valuing the SDR in terms of a currency basket. In October 1971, Director Liefstinck (Netherlands, 3.82 percent) submitted a proposal to tie the value of the SDR to a weighted average of currency values.²² The objective was for the basket to be relatively stable in purchasing power terms and that no single currency should have an undue influence on the value of the basket.²³ The decision to base the SDR on a basket of currencies was taken at a meeting of the Committee of Twenty in January 1974.²⁴

The valuation of the SDR was based on the transaction value and yield. The former is defined in terms of average exchange rates and the latter by the SDR interest rate. The IMF staff advanced proposals on possible valuation methods for the SDR based on the principle that *"to value the SDR for transactions purposes by equating it to a specified package of currencies, in which a number of currencies are combined with given weights; and to relate the interest rate on the SDR to a weighted average of the interest rate on the same currencies, combining them with the same weights [...]. There are difficult questions to be decided as to the currencies to be included in the package and the weights to be selected. Insofar as possible, a rather large number of currencies should be included so as to minimize the impact of unusual movements in the money market of an individual country. However, since one of the major purposes of the calculation would be to determine the rate of interest, one could only include currencies for which a suitable market rate of interest, in addition to a market exchange rate, could readily be determined."*²⁵ The valuation approached defined the framework and remained an important reference in subsequent deliberations on

SDR valuations. Decisions to change the basket and interest rate are taken by the Executive Board with a qualified normally seventy percent majority.²⁶

16 currencies

The SDR interest rate was a central focus of the initial IMF SDR valuation debates. The notion that the SDR has to offer an attractive interest rate to be adopted as a reserve asset dominated discussions. Directors debated whether the SDR interest rate should be determined on the basis of market interest rates or set discretely by the IMF. Director Brand (Australia, 4.29 percent), representing the dominant view proposed, that the SDR "should have an interest rate that is competitive with, or is broadly based on, or moves in sympathy with, those of alternative reserve assets."²⁷ The SDR interest rate eventually provides the basis for calculating the interest charged to countries on IMF loans, the interest paid to IMF member countries on their remunerated creditor positions in the IMF and the interest paid on their SDR holdings and charged on their SDR allocation.

The debate about the transaction value of the SDR centred mostly on the number of currencies and choice of weights. Director Schleiminger (Germany, 5.27 percent) reflected on the dimension of the debate noting *"it might be appropriate to include [in the SDR valuation basket] only those trading currencies the value of which was supported through active intervention in the market. However, that formula might have to be revised to take account of the interest of countries whose currency would not qualify for inclusion according to the formula but which had a legitimate interest in maintaining a stable store of value for their foreign reserves. [...] A question of prestige might be at issue but otherwise saw no merit in that proposal."*²⁸ Director Massad (Chile, 2.94 percent) retorted *"[t]he larger the sample of currencies included in the basket for the purposes of SDR valuation, the more stable would be the value of SDRs in terms of currencies in general. The size of the basket was not, therefore, a question of prestige, but involved the desire to have a formula that reflected the movement of currencies in general rather than just one particular group of currencies."*²⁹ Director Prasad (India, 4.02 percent) echoed concerns about the distributional consequence of the SDR valuation stating that an *"upward bias in the valuation of the SDR [could sharply affect] the relationship between debtors and creditors."*³⁰ Director Rawlinson (U.K., 9.16 percent) indicated that he *"would favour inclusion in the basket of the currencies most widely used in international trade and contemplated a somewhat larger number of currencies [than 5]."*³¹ Director Bryce (Canada, 4.50 percent) stressed his *"preference for a basket of currencies approach involving about 15 or 20 of the currencies most used in trade as suggested by Mr Rawlinson. The currencies in the basket should be weighted by trade, a formula which would reduce the weights of existing reserve currencies and provide a fairly objective measure."*³²

The IMF staff advanced different SDR valuation approaches and basket sizes. Approaches included varying cut-off levels in terms of international trade share of 6, 5, 3 and 1 percent resulting in inclusion of 5, 7, 9 and 16 countries.³³ Different basket approaches were reviewed comprising a standard basket and an asymmetrical basket. The standard basket involved setting the value of the SDR equal to a basket of currencies where the amounts of each currency in the basket would be specified for a long period; the value of the SDR in terms of any one currency would be the value of the amounts of each of the currencies in the basket expressed in terms of this one currency at the prevailing spot exchange rate. The asymmetrical basket was based on the principle that the value of the SDR was set equal to a group of currencies except that exchange rate devaluations were not allowed to influence the value of the SDR to be achieved by modifying sufficiently the weight of the currency subject to devaluation implying an appreciation bias of the basket. Another alternative to balance between revaluations and devaluation based on the system of par values was also rejected. Agreement was reached to adopt a standard basket.

Consensus emerged around a basket including 16 currencies. However, different views on the number of currencies and weights remained. Alternate Harley (U.S., 21.81 percent) stated that *"the size of the basket could be considered*

from two different approaches [...]. The first was that the SDR should be stable against the average of those currencies most likely to be regarded as alternative reserve assets and used most widely in international transactions. Such a basket should be constructed so as to minimize the effects of basket variations on the valuation of countries' reserve holdings. Those considerations would tend to argue for a small basket on the order of the [...] five currencies [...]. The second approach [...] would be that the SDR should be stable against the average of currencies in general, and that the impact of any single exchange rate change on the purchasing power of the SDR should be minimized. That approach would argue for the broadest practical coverage. Ready availability of market rates might limit the number of currencies and he agreed that operational considerations might limit the size of a large basket to around 16 currencies."³⁴ Director Liefstinck (Netherlands, 3.77 percent) indicated "the Netherlands strongly favoured a basket that would comprise countries with a share in world trade, measured by exports of goods and services, of 3 per cent. A smaller basket would give disproportionate weight to a few major currencies. Although they would not object to a somewhat larger group, their preference was for a 9-currency basket."³⁵ Director Bueso (Honduras, 3.34 percent) outlined that "[h]is preference was for a basket including the five major currencies [...], although he would consider adding two other countries, one of which might be an oil producing member. The logic of that position might argue in favour of a system of weights that reflected the relative share of currencies in reserve portfolios."³⁶

The first SDR basket with 16 currencies came into effect in July 1974 (Table). The currencies in the basket were chosen on the basis of an international transaction criterion approximated by the issuing countries' shares in international trade of goods and services of equal or greater than 1 percent in the period 1968 to 1972. A modified weight was assigned to the dollar of about one third of the total to reflect its special role and importance. The value of the SDR was calculated as the weighted average of the exchanger rates of the SDR basket currencies vis-a-vis to the dollar. The SDR interest rate was initially set at 5 percent by the Fund in July 1974.³⁷

The valuation of the SDR has been among the most controversial decisions in the IMF history. IMF Managing Director Witteveen commented on the adoption of a new valuation method for the SDR on 3 June 1974: "We are now coming to the concluding phase of agreement on what may be the most important and difficult complex of Decisions that this Board has ever taken under existing powers in the Articles of Agreement. In this connection, I would put before Directors a number of solutions on the issues which are still not fully agreed concerning the valuation of the SDR, its rate of interest, Fund charges and remuneration. It was clear from our last discussion on this subject that full agreement on valuation of the SDR is conditional, not only on a satisfactory set of weights but also on an acceptable view as to what these weights represent. Ideally, they should reflect the relative importance in the world's trading and financial system of the currencies that make up the basket. In practice it is, of course, difficult to establish weights that would convincingly reflect this relative importance."³⁸

The SDR valuation remained contested. Emphasis shifted away from the objective of the SDR being representative of the international transactions of IMF member countries towards strengthening and simplifying the SDR as a financial asset. Overarching concerns about the SDR interest rate gave way to consideration about the composition of the currency basket. In July 1976, the Fund modified the rate of interest to be determined by the weighted market rates of the daily interest rates of short-dated treasury bills of the U.S., Germany, France and the U.K and the call money rate of Japan.³⁹ The hitherto different reference baskets for the SDR transaction value and interest rate became a critical issue.

The review of the SDR in 1976 reflected broad-based satisfaction with the valuation of the SDR. However, the number of currencies remained a concern: "Many Directors commented on the desirability of keeping the present basket of currencies unchanged in order to foster general confidence in the continuity of the valuation procedure and thereby to promote the establishment of the SDR as an asset at the centre of the international monetary system. Even though several Directors would in principle favour a smaller number of currencies than the present 16, and a few Directors

would prefer expanding the number by using the criterion of a minimum share of 1 per cent in exports of goods and services, many of these Directors indicated an inclination to subordinate these preferences for the time being to the desideratum of constancy of the valuation procedure."⁴⁰

The adoption of the Second Amendment of the IMF Articles of Agreement brought about a reassessment of the criteria guiding the currency inclusion criteria. In April 1977, the Interim Committee of the Board of Governors, the main steering body of the IMF, requested the Directors to review the characteristics and uses of the SDR to assess whether it remains consistent with the purposes of the IMF and in particular with making the SDR the principal reserve assets as stipulated in the Second Amendment.

The review of the SDR was largely defined by issues concerning the composition of the basket. Four issues had been shaping the discussion: continuity, stability, representativeness and logical consistency.⁴¹ Continuity was based on the retention of the original 16-currency basket largely given the unit of account and standard of value function of the SDR also in view of the increasing adoption of the SDR in international treaties. The stability argument referred to the robustness of currency selection to minimise significant changes in the composition of currencies. The criterion of representativeness remained ambiguous between strict criteria on the usability of currencies to reflecting exchange rate movements among IMF members in general pointing towards a more inclusive basket. The logical consistency presumed that selection should be rules-based to reject any arbitrary selection of currencies.

Director Kafka (Brazil, 3.45 percent) highlighted the divisions regarding the choice of basket. *"If the SDR was to become an important reserve asset it would need to be based on a credible principle of valuation. He had never been convinced that the use of a basket of 16 currencies was the optimum method of valuation. And his reservations had increased with consideration of the criterion upon which entry into the basket had been judged, namely, representation of more than 1 per cent of world trade in goods and services. Under that criterion, one currency in the basket was no longer qualified to remain and three other currencies, not included in the basket, had qualified for admission. A smaller basket of five currencies would avoid that instability because the differences between the currencies representing the least share of world trade in the basket and the next most important currency would be relatively large."*⁴²

Director de Groote (Belgium, 3.80 percent) recalled the original purpose of the valuation approach: *"We also have to remember what our intentions were in deciding on a basket definition for the SDR, and on a 16-currency basket. Following an initial proposal by Mr. Liefinck, the intention was to provide monetary authorities with a reserve asset, the composition of which would reflect, as accurately as possible, the distribution of a country's reserves among the different money markets where reserves are normally invested, taking into account the relative magnitude of those markets. It is, however, impossible to measure directly the relative importance of money markets; the size of payments made in each currency could be a first approximation, but there also statistics are unavailable. As a second proxy, the decision was taken to use shares in world trade, but, at no point was it implied that these figures had in themselves, for this purpose, any other than an approximate value. The reason for including all currencies from countries having more than 1 per cent of world trade was, similarly, not that any sacrosanct importance was attached to the 1 per cent benchmark, but that the basket, defined on this basis, happened to include all currencies in which members normally invest, or could invest, their reserves."*⁴³

Director Ruding (Netherlands, 4.49 percent) argued that a basket of 9 or less currencies would be less acceptable because the share of world trade represented would become too low and stability would be impaired.⁴⁴ Others pressed for greater simplicity of the basket. Director Simone (Argentina, 2.75 percent) argued that a smaller basket of 5 currencies would facilitate forecasting the value of each underlying currency and hence the SDR.⁴⁵ Director Al-

Atrash (Syria, 2.49 percent) stressed that the retention of South Africa while excluding major OPEC countries could not be justified.⁴⁶

Apprehension that the SDR should not be dominated by the large economies remained prominent. Director Pieske (Germany, 5.35 percent) favoured to increase the trade threshold to 5 percent to insure greater stability in the basket composition based on international trade though he would lower the threshold to 3 percent to allow for a broader basket including Saudi Arabia to ensure the basket is not only confined to industrial countries.⁴⁷ Director Cross (U.S., 20.66 percent) remarked that *"the whole purpose of a basket had been to make the SDR an international reserve asset whose value would not depend primarily on the economic policy decisions of only one member government. The same logic called for a basket of more than five, seven, or nine currencies. The 16-currency basket originally adopted had been based on a sound idea [...] [to be] representative of a number of economies in different parts of the world, rather than one composed of the currencies of five large economies."*⁴⁸ Director Whitelaw (Australia, 3.10 percent) echoed similar concerns arguing that the SDR should convey an average experience of currencies and that the *"best way to get to a representative sample was to make it as large as practicable. In theory, the optimum basket would be one of 130 currencies, but by the same token, 16 was probably more representative than 5."*⁴⁹

The Executive Board decided on 31 March 1978 to maintain the 16-currency basket. The original basket saw a change with the substitution of the Danish krone and South African rand for the Saudi riyal and Iranian rial (Table). The IMF also decided that the basket was due for revision on the basis of a quinquennial review with effect on 1 July 1983 and that from 1 July 1983, the share of each currency in the basket will be based on the sum of components representing exports of goods and services and the share of a currency in other countries' international reserve holdings.

Notwithstanding, discomfort with the 16-currency basket remained. The objective now shifted towards making the SDR gain greater acceptance among private sector participants with the possibility to develop deposits or other liabilities denominated in SDRs. The arguments included the lack of replicability and the difficulty for private market participants to hedge the 16 currencies amid the lack of well-developed local capital markets.⁵⁰

From 16 to 5 currencies

The Interim Committee at its meeting in Hamburg in April 1980 endorsed the objective of simplifying the SDR basket to enhance the attractiveness of the SDR and expressed the view that it would be desirable for the interest rate and valuation basket to be identical.⁵¹ The focus was on a proposal to reduce the SDR currency basket to 5 currencies.

The SDR discussion highlighted mounting tensions between the large advanced economies and other IMF member countries. Director Drabble (Canada, 4.27 percent) encapsulated the debate shift by stating: *"[A] a five currency basket could' be perceived as further institutionalizing the special role of the Fund's five largest members—the only countries which at all times have a right to appoint Directors and whose currencies are the only ones to have been designated so far as 'freely usable' currencies."*⁵² Alternate Director Schneider (Austria, 3.61 percent) favoured a basket of 9 currencies indicating that it would *"have flexibility to include eventually developing countries"* upon meeting the inclusion criteria.⁵³ Director Amuzegar (Iran, 2.91 percent) stressed that a *"drastic reduction of the basket size [is] not warranted"* and highlighted that *"the international character of the Fund would be damaged if the currencies in the valuation basket were limited to those of the five most highly industrialised countries."*⁵⁴ Director Muns (Spain, 4.96 percent) indicted that the reduction of the basket to 5 currencies *"would be a departure from the initial objective of making the SDR a reserve asset with as wide an economic and political base as possible [and that the] concentration of monetary power would be inconsistent [with that]."*⁵⁵

The objective to increase the SDR in private markets dominated the discussion. Director Cross (U.S., 20.01 percent) stated that a small basket would *"make the SDR a true financial instrument rather than a political statement."*⁵⁶ Alternate Director Price (U.K., 6.99 percent) argued that a *"combined basket should increase attractiveness of the SDR as reserve asset and as unit of account for public and private transactions."*⁵⁷ Executive Director Hirao (Japan, 3.98 percent) stressed preference for a 5-currency basket *"because of simplicity and acceptability to the market."*⁵⁸ Director Laske (Germany, 5.16 percent) stated preference for a 5-currency basket *"to increase attractiveness of SDR in the international monetary system and private markets."*⁵⁹

The decision to reduce the basket to 5 currencies was taken on 9 September 1980 to become effective on 1 January 1981 (Table). The new SDR basket comprised the U.S. dollar, German mark, French franc, Japanese yen and British pound. The international transaction criterion for selecting the currencies for inclusion in the basket was modified to contain the currencies of the five IMF member countries whose exports of goods and services during the five-year period ending 12 months before the effective date of the SDR revision had the largest value.⁶⁰

IMF Managing Director de Larosière remarked in his summing-up of the Executive Board Meeting: *"First of all, I think we can say that there has been an overwhelming sentiment that a five-currency basket is an acceptable solution; those whose first preference is for a five-currency basket account for more than 75 per cent of the total voting power in the Fund. Thus, in drawing the sense of the meeting, I am in a position to state that the Board has accepted as a matter of principle a five currency basket and the identity of the two baskets."*

The 1985 review of the SDR basket focused mostly on technical matters. The controversy regarding the current basket had abated. The debate about the SDR during the 1980s came to a standstill. The lack of further SDR allocations and progress on the substitution account reduced further interest in the SDR.

From 5 to 4 currencies

The reduction from 5 currencies to 4 was based entirely on the introduction of the euro (Table). The euro replaced the mark and franc at their combined weight at the prevailing valuation method. The proposed continued use of government securities for Germany and France received some criticism. In December 1998, the IMF incorporated the euro into the SDR valuation basket effective 1 January 1999. The basket comprised the dollar, euro, yen and sterling.

The October 2000, the IMF amended the method for the inclusion of currencies. The international transaction criterion for the SDR basket was changed to comprise a second criterion stipulating that the currency in the SDR valuation basket are among the most widely used in international transactions. The relevant benchmark would be based on an assessment by the IMF that the currency is "freely usable" meaning widely used to make payments for international transactions and is widely traded in the principal foreign exchange markets.⁶¹

The IMF remained reluctant to support greater SDR allocations which damped interest for the SDR more generally. For the conclusion of the eighth basic period in 2011, Director Wei (China, 2.95 percent) stated: *"The Fund should make efforts to make the SDR a principal reserve asset. However, the continuous decline of the ratio of SDR volume in global aggregate reserves from nearly 9 percent to 1-2 percent over the past two decades as indicated by the staff report, will weaken the ability of the Fund to safeguard the stability of the international monetary system. Therefore, we advocate the increase in the SDR allocation and the enlargement of the use of the SDR in international financial system, which we believe will be of great significance to the stability of the international financial system and the promotion of international trade."*⁶² Director Zoccali (Argentina, 2.00 percent) expressed considerable frustration that was echoed by several Directors: *"In any event, the arguments in favour of a general SDR allocation are of little value if the political will to keep the SDR alive is not there."*⁶³ The dominant attitude among the IMF membership towards SDR

allocations was expressed by Alternate Director von Kleist (Germany, 6.02 percent): *"We cannot support the finding of a 'long-term global need.' The current slowdown of the world economy can be attributed to many factors—the lack of availability of SDRs is surely not one of them."*⁶⁴

Beyond 4 currencies

The SDR gained renewed momentum with the financial and economic crisis. While in the past, the SDR debate was dominated by the advanced economies, China and emerging markets increasingly assumed leadership. In March 2009, proposals were advanced by the Chinese and Russian authorities to establish greater reserve currency diversification based on the SDR.⁶⁵ In August 2009, a large SDR allocation of US\$250 billion was made following a request by the International Monetary and Financial Committee (IMFC), successor of the Interim Committee, to strengthen the global financial safety net in the face of the severe crisis. In preparation of France's Group of Twenty (G20) Presidency in 2010, further momentum built amid emphasis on the need to reform the international monetary system including a special role for the renminbi.⁶⁶ The IMFC and the Ministers from the G20 countries instructed the IMF in 2010 to develop a criteria-based path to broaden the composition of the SDR basket.

Past debates on the SDR revealed mounting divergence between large advanced economies and other countries. While the initial discussions to establish the 16-currency basket had not shown marked divisions by country size or income, the adoption of the 5-currency basket caused a schism amid strong preferences for a smaller basket among the large advanced economies. This divide underscored fundamentally different perspectives on the purposes of the SDR. The need for near consensus on SDR allocations and the large majorities required for changes in the SDR valuation, makes it necessary to reach broad-based support among IMF member countries for any meaningful change. As in the past, this will be determined by essential alliances among key countries.

The inclusion of the renminbi with the 2015 SDR valuation review marked the first net addition of a currency to the SDR basket. However, the IMF maintained prevailing valuation criteria affirming the bias towards the SDR as a financial instrument adopted in 1980. The amendment of the SDR valuation criteria in 2000 further tilted the SDR towards continuity rather than innovation.⁶⁷ The significant accumulation of central bank foreign exchange reserves especially in 2002-2014 also remains inconsistent with the notion of a lack of global need to supplement existing reserve assets.

The SDR has failed as a reserve asset. The hoped success of the SDR and greater acceptance by private markets never materialised. Alternate Director Ahmad (Malaysia, 2.88 percent) noted in 1985 *"that the method of valuation, based on a basket of five currencies, had not achieved all the aims of the 1980 decision. The attractiveness of the SDR either as a reserve asset, or as a unit of account in the private market, had not significantly improved."*⁶⁸ The lack of success of the SDR has not to date lead to retrospection whether the valuation framework and purpose of the SDR, in particular the assumption that attractiveness of the SDR rests in its simplicity and replicability, remain valid and adapted to current circumstances. The fundamental failure to make the SDR the principal reserve asset as prescribed by the Articles of Agreement for 40 years since the Second Amendment reflects a profound weakness to rally IMF member countries to reform the international monetary system.

The inclusion of the renminbi in the SDR basket may mark a new beginning. In 1980, at the time of the decision to reduce the basket from 16 to 5 currencies, Director Kharmawan (Indonesia, 3.19 percent) emphasised that *"[i]f countries could change their reserves that were at present composed of 100 per cent or 90 per cent U.S. dollars into an asset composed of only 44 per cent U.S. dollars, they would have made a move in the right direction."*⁶⁹ If diversification in the international monetary system remains an important objective, IMF member countries may consider simply finding their way back to the original purpose of the SDR currency basket by basing currency inclusion on the representativeness of IMF member countries. Similarly, complementarity to rather than substitutability of existing

reserves may be the more relevant concept to increase attractiveness of the SDR. While as before the inclusion of 140 currencies may not be feasible, a basket bigger than 5 would be.⁷⁰

Table. SDR basket composition

Initial weights							
	Jul 1969- Jun 1974	Jul 1974- Jun 1978	Jul 1978- Dec 1980	1981-85	1986-98	1999- 2016*	from Oct 2016
Gold (grams)	0.8887						
U.S. dollar		0.330	0.330	0.420	0.420	0.419	0.417
Deutsche mark		0.125	0.125	0.190	0.190		
Pound sterling		0.090	0.075	0.130	0.120	0.113	0.081
Japanese yen		0.075	0.075	0.130	0.150	0.094	0.083
French franc		0.075	0.075	0.130	0.120		
Canadian dollar		0.060	0.050				
Italian lira		0.060	0.050				
Netherland guilder		0.045	0.050				
Belgian franc		0.035	0.040				
Swedish krona		0.025	0.020				
Australian dollar		0.015	0.015				
Danish krone		0.015					
Norwegian krone		0.015	0.015				
Spanish peseta		0.015	0.015				
Austrian shilling		0.010	0.015				
South African rand		0.010					
Saudi Arabia riyal			0.030				
Iranian rial			0.020				
Euro						0.374	0.309
Chinese renminbi							0.109

Source: Boughton, J. (2001), *Silent Revolution: The IMF 1979-1989*, IMF (corrected); IMF. *In January 1999, the Deutsche Mark and French franc were replaced by equivalent amounts of euro, weights with effect from January 2011.

Words: 7882.

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- ¹ Xiaochuan Zhou (2009), "Reform of the international monetary system," People's Bank of China website <http://www.pbc.gov.cn/english/detail.asp?col=6500&id=178>, 23 March 2009; President of Russia (2009), "Russian proposals to the London Summit (April 2009)," President of Russia website <http://eng.kremlin.ru/text/docs/2009/03/213995.shtml>, 16 March 2009.
- ² There are 24 IMF Executive Directors being the IMF member countries' representatives at the IMF Executive Board responsible for conducting the day-to-day business of the IMF. The Board usually meets several times a week and carries out work largely on the basis of documents prepared by the IMF staff.
- ³ E.g. James Boughton, *Silent Revolution, The International Monetary Fund 1979-1989*, Washington, D.C., 2001.; Warren Coats et al, *The SDR system and the issue of resource transfers*, Princeton, N.J., 1990; Robert McCauley and Catherine Schenk, *Reforming the international monetary system in the 1970s and 2000s: Would an SDR substitution account have worked*, BIS Working Paper, 2014; Christopher Wilkie, *Special Drawing Rights: The first international money*, Oxford, 2012;
- ⁴ International Monetary Fund, *The International Monetary Fund 1945-1965, Volume III: Documents*, Washington, D.C., 1969. Italics as per original.
- ⁵ IMF Annual Reports.
- ⁶ International Monetary Fund, *The outline of a new facility in the Fund*, DM/67/58, 15 September 1967.
- ⁷ International Monetary Fund, *Gold and international liquidity*, EBD/64/85, 10 July 1964.
- ⁸ International Monetary Fund, *Future work on international liquidity and related topics*, EBD/65/168, 18 October 1965.
- ⁹ International Monetary Fund, *An outline of a reserve facility based on drawing rights in the Fund*, SM/67/69, 29 May 1967. International Monetary Fund, *Proposed amendment to the Articles of Agreement of the International Monetary Fund prepared pursuant to Board of Governors Resolution No. 22-8*, SM/68/75, 10 April 1968. The Board of Governors is the highest decision-making body of the IMF.
- ¹⁰ International Monetary Fund, *Report of Executive Directors*, SM/68/38, 1 March 1968; International Monetary Fund, *Board of Governors Resolution 22-8*, SM/68/78, 16 April 1968.
- ¹¹ International Monetary Fund, *Allocation of Special Drawing Rights*, EBD/70/4, 6 January 1970.
- ¹² Quotas represent the subscription to the IMF. Each IMF member country is assigned a quota based broadly on its relative position in the world economy. The quota determines the maximum financial commitment of a country to the IMF, its voting power and guides its access to IMF financing.
- ¹³ The SDR designation mechanism provides that in the event there is insufficient capacity under the voluntary trading arrangement, the IMF can ask member countries with sufficiently strong external positions to buy SDRs with freely usable currencies up to a certain amounts from member countries with weak external positions.
- ¹⁴ The New York Times, "Text of Shultz talk before International Monetary Fund and World Bank," 27 September 1972.
- ¹⁵ The Committee of Twenty was an ad hoc committee in 1972-74 made of representatives of the IMF Executive Board to review options for reforming the international monetary system; see e.g. Boughton *idem*.
- ¹⁶ International Monetary Fund, *A Substitution account for gold*, SM/75/94, 24 April 1975.
- ¹⁷ International Monetary Fund, *Report of the Executive Board to the Interim Committee on a Substitution Account* SM/80/89 15 April 1980.
- ¹⁸ The IMF Articles of Agreement constitute the international treaty on which the IMF was established. The Articles were adopted in 1944 and came into force in 1945. The Articles were subsequently amended in 1969, 1978, 1992, 2009 and 2011. International Monetary Fund, *Articles of Agreement*, Article VIII section 7, 1 April 1978.
- ¹⁹ Boughton *idem*.
- ²⁰ See, International Monetary Fund, *The SDR as a basket of currencies*, DM/79/86, 26 November 1979.
- ²¹ International Monetary Fund, *Proposals for wider uses of Special Drawing Rights in the drafting of the Amendments*, SM/71/29, 5 February 1971. See also International Monetary Fund, *The numeraire of the system*, SM/72/57, 8 March 1972.
- ²² Director for Cyprus, Israel, Netherlands, Romania and Yugoslavia. International Monetary Fund, *Statement by Mr Liefstinck*, BUFF/71/151, 27 October 1971.
- ²³ International Monetary Fund, *Interim valuation of the SDR*, SM/74/59, 8 March 1974.
- ²⁴ International Monetary Fund, *The SDR as basket of currencies*, DM/79/86, 26 November 1979.
- ²⁵ International Monetary Fund, *The rate of interest on the SDR and its value in terms of currencies*, SM/73/99, 8 May 1973.
- ²⁶ The IMF Articles of Agreement prescribe the conditions for changing the valuation (Article XV): The method of valuation of the special drawing right shall be determined by the Fund by a seventy percent majority of the total voting power, provided, however, that an eighty-five percent majority of the total voting power shall be required for a change in the principle of valuation or a fundamental change in the application of the principle in effect.
- ²⁷ Director for Australia, New Zealand, South Africa, Swaziland and Western Samoa. International Monetary Fund, *Minutes of Executive Board Meeting* 74/24, 22 March 1974.
- ²⁸ Director for Germany. *Minutes of Executive Board Meeting* 73/60, 18 June 1973.
- ²⁹ *Minutes of Executive Board Meeting* 73/60, 18 June 1973.
- ³⁰ Director for Bangladesh, India and Sri Lanka. *Minutes of Executive Board Meeting* 73/60, 18 June 1973.
- ³¹ Director for United Kingdom. *Minutes of Executive Board Meeting* 73/60, 18 June 1973.
- ³² Director for Barbados, Canada, Ireland and Jamaica. *Minutes of Executive Board Meeting* 73/60, 18 June 1973.
- ³³ International Monetary Fund, *Interim valuation of the SDR*, SM/74/59, 8 March 1974.
- ³⁴ Alternate Director for United States. *Minutes of Executive Board Meeting* 74/24, 22 March 1974.
- ³⁵ Director for Cyprus, Israel, Netherlands and Yugoslavia. *Minutes of Executive Board Meeting* 74/24, 22 March 1974.

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- ³⁶ Director for Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Venezuela. Minutes of Executive Board Meeting 74/24, 22 March 1974.
- ³⁷ International Monetary Fund, Interest rate on the SDR and rate of remuneration, BUFF/74/66, 5 June 1974.
- ³⁸ International Monetary Fund, Minutes of Executive Board Meeting 74/58, 3 June 1974.
- ³⁹ International Monetary Fund, Proposal by the Managing Director concerning the valuation of the SDR and the determination of its rate of interest Executive Board Meeting 76/92, BUFF/76/85, 25 June 1976.
- ⁴⁰ International Monetary Fund, Proposal of the Managing Director concerning the review of the valuation of the SDR and the determination of its rate of interest, EBM/76/85, 25 June 1976.
- ⁴¹ See e.g. International Monetary Fund, Review of the valuation of the SDR, SM/77/222, 2 September 1977.
- ⁴² Director for Brazil, Colombia, Dominican Republic, Guyana, Haiti, Panama, Peru and Trinidad and Tobago. International Monetary Fund, Minutest of Executive Board Meeting 77/142, 7 October 1977.
- ⁴³ Director for Austria, Belgium, Luxembourg and Turkey. Idem.
- ⁴⁴ Director for Cyprus, Israel, Netherlands, Romania and Yugoslavia. Idem.
- ⁴⁵ Director for Argentina, Bolivia, Chile, Ecuador, Paraguay and Uruguay. Idem.
- ⁴⁶ Director for Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Pakistan, Qatar, Saudi Arabia, Somalia, Syria, United Arab Emirates, Yemen Arab Republic. Idem.
- ⁴⁷ Director for Germany. Idem.
- ⁴⁸ International Monetary Fund, Minutes of Executive Board Meeting 78/12, 30 January 1978.
- ⁴⁹ Director for Australia, New Zealand, Papua New Guinea, Philippines and Western Samoa.
- ⁵⁰ See e.g. International Monetary Fund, Minutes of Executive Board Seminar 80/3, 10 July 1980.
- ⁵¹ International Monetary Fund, press release 80/34, 25 April 1980.
- ⁵² Director for Bahamas, Barbados, Canada, Grenada, Ireland and Jamaica. See IMF, Statement by Mr Drabble on the unification of the SDR valuation and interest rate basket, BUFF/80/101, 15 May 1980. The statement refers to the fact that the 5 largest IMF member countries all have the right to appoint their Directors. The adoption of an all-elected IMF Executive Board now became effective in December 2015 with the 2010 quota reform package.
- ⁵³ Alternate Director for Austria, Belgium, Luxembourg and Turkey. International Monetary Fund, Minutes of Executive Board Seminar 80/3, 10 July 1980.
- ⁵⁴ Director for Afghanistan, Algeria, Ghana, Iran, Morocco, Oman and Tunisia. International Monetary Fund, Minutes of Executive Board Meeting 80/133 and 80/134, 8 September 1980.
- ⁵⁵ Director for Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Spain and Venezuela. Idem.
- ⁵⁶ Idem
- ⁵⁷ Alternate Director for United Kingdom. Idem.
- ⁵⁸ Director for Japan. Idem.
- ⁵⁹ Director for Germany. Idem
- ⁶⁰ International Monetary Fund, SDR valuation and interest rate basket, SM/80/206, Decision, 22 August 1980.
- ⁶¹ International Monetary Fund, IMF completes review of SDR valuation, press release 00/55, 12 October 2000.
- ⁶² Director for China. International Monetary Fund, Minutes of Executive Board Meeting 01/128, 12 December 2001.
- ⁶³ Director for Argentina, Bolivia, Chile, Paraguay, Peru and Uruguay. International Monetary Fund, Minutes of Executive Board Meeting 01/128, 12 December 2001.
- ⁶⁴ Alternate Director for Germany. International Monetary Fund, Minutes of Executive Board Meeting 01/128, 12 December 2001.
- ⁶⁵ See footnote 1.
- ⁶⁶ French G20 to seek reform of global monetary system, Reuters 27 October 2010: "One official said a key area of discussion was how to encourage greater use of China's yuan as a reserve currency in the future, including talks on a possible timetable for its inclusion in the basket of currencies which underpin the IMF's Special Drawing Rights. Other ideas include encouraging a greater role for the SDR itself as a reserve currency, in an effort to move away from reliance on the U.S. dollar, officials say."
- ⁶⁷ See e.g. Ousmène Mandeng, SDR valuation review: A test nobody can pass, 9 August 2015, <http://www.ousmenemandeng.com/comments/15-8-9-IMF-SDR-valuation-review.html>.
- ⁶⁸ Alternate Director for Burma, Fiji, Indonesia, Lao, Malaysia, Nepal, Singapore, Thailand and Vietnam. International Monetary Fund, Minutes of Executive Board Meeting 85/102, 1 July 1985.
- ⁶⁹ Director for Burma, Fiji, Indonesia, Lao, Malaysia, Nepal, Singapore, Thailand and Vietnam. International Monetary Fund, Minutes of Executive Board Seminar 80/3, 10 July 1980.
- ⁷⁰ The IMF has 188 member countries of which 13 do not maintain their own currencies and 39 are in 4 different currencies unions.

Southwestern University of Finance and Economics

Southwestern University of Finance and Economics is a top university specialised in finance, Economics and business. It is known for its entrepreneurial character and unremitting endeavours to address the needs of the people and society through academics, research and influence of alumni, drawn from legacy of its founders and generations of excellent alumni. SWUFE is located in Chengdu, the enginecity for development of western China and the fourth largest aviation hub in China.

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6th in terms of Applied Economics in discipline ranking by Ministry of Education

12th in terms of Management in discipline ranking by Ministry of Education

13th in terms of Theoretical Economics in discipline ranking by Ministry of Education

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7 Institutes and Research Centers:

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Beijing Research Institute

Southwestern University of Finance and Economics

Research Department of Psychical Education

Shanghai Development Research Foundation(SDRF)

Shanghai Development Research Foundation (SDRF) was established in 1993. As a public-foundation and a non-profit legal person established in accordance with the relevant governmental regulations, SDRF is devoted to the public welfare undertakings by utilizing donations from individuals, legal persons and other organizations.

SDRF aims at actively promoting the research on the development issues and the development of decision-making consultation. Its business scope includes capital raising and operation, and researching, communicating, sponsoring and awarding the consultation projects concerning economic, social and urban development strategy.

Since established, SDRF has been strongly supporting the research work on decision-making consultation in Shanghai, with a lot of projects being sponsored and numbers of awards for great research achievements being held. Meanwhile, we have accomplished many research projects set up by ourselves or other organizations.

For the last several years, SDRF has been continuously endeavoring to fulfill its missions. We hold “Shanghai Development Salon” monthly, inviting distinguished experts and scholars home and abroad to make speeches on hot topics and sensitive questions, and make interactive discussion with the attendees. The high-level symposiums are held twice or thrice annually, gathering numbers of domestic and overseas experts, and the noble guests from political, business and academic circles together to discuss the important issues in the development of global economy and Chinese economy. In addition, SDRF holds a series of mini-seminars themed “The Future of Chinese Economy” for a thorough discussion on the depth-rooted problems in the development of Chinese economy. SDRF has also sponsored and jointly held many academic conferences with Fudan University, Shanghai Jiaotong University (SJTU) and Shanghai University of Finance and Economy (SHUFE). Taking the advantage of the fruitful contents of these conferences, SDRF has compiled its booklets *Discussion Record* and *Research Review* so as to further spread the achievements of research and discussion on the development issues.

Since 2008, SDRF and the Development Research Centre of Shanghai Municipal Government have jointly founded the “Shanghai Development Research Scholarship”, sponsoring more than ten doctoral or master degree candidates for the purpose of encouraging and training the reserve force of the research team of the development issues and decision-making consultation.

Reinventing Bretton Woods Committee (RBWC)

RBWC is a not-for-profit organization that orchestrates an open dialogue among high-level stakeholders committed to redefining the global financial architecture and monetary system to better respond to the changing economic landscape.

RBWC was established in 1994 by its current Executive Director, Marc Uzan. RBWC has organized numerous seminars and conferences covering many highly relevant topics and has worked with partners from across the globe. In its drive to stimulate debate and to generate a framework for new policy directives RBWC has become an important forum for prominent policy makers who want to put their thinking up for debate and into a market context in an exclusive environment that gives sufficient room for deep interactive dialogue and the opportunity to build strong peer networks.