Euro, Dollar, Yuan Uncertainties
Scenarios on the Future of the International Monetary System

June 2012
Preface

The initiative on Euro, Dollar, Yuan Uncertainties – Scenarios on the Future of the International Monetary System began in early 2011 against a background of increasing concerns among many Forum members and constituents about the state of the global economy. Currency volatility and fiscal crises have consistently featured as key global risks in the World Economic Forum’s Global Risks Report in past years. Over the course of 2011, the escalating sovereign debt crisis in Europe, discussions around the sustainability of US debt levels and questions around economic reforms in China have exacerbated the challenges to global economic stability.

In this context, the Forum has mobilized key resources, including its Strategic Foresight, Europe, Financial Services, Global Risks and Global Agenda Council teams, to initiate a process aimed at supporting stakeholders in better understanding how these uncertainties may play out, and how stakeholders can prepare for plausible yet challenging alternative scenarios.

This report is the synthesis of the insights generated in a process engaging over 200 policy-makers, private sector leaders and academic experts through discussions and a series of high-level workshops in Brussels, New York, London, Beijing, Davos-Klosters and Dalian.

This dynamic interaction complements a number of related Forum initiatives including those of the Global Agenda Councils on the International Monetary System, Fiscal Crises and Institutional Governance Systems, the B20 Task Force on the Future of the International Monetary System, as well as the Remodelling Europe Initiative which intends to deepen policy discussions on how to provide a more stable economic environment and increase the growth outlook for Europe.

We hope that you find the insights informative and thought-provoking, and that this report will continue to serve as the basis for productive strategic conversations between stakeholders.

Klaus Schwab
Founder and Executive Chairman
World Economic Forum

The analysis presented in this report builds on a series of strategic conversations with industry, public policy and academic leaders and has been developed in collaboration with Deloitte Touche Tohmatsu Ltd.
The rapid integration of global trade and capital flows over the past decades has made the links that connect different parts of the world economy ever more central to global prosperity. Yet the practices and institutions that regulate these links – the international monetary system – as well as the main international currencies that underpin this system are increasingly challenged. Against this backdrop, it is clear the current dollar-based international monetary system needs to evolve. But how it will evolve is highly uncertain. The widespread view is that the world is moving towards a multipolar currency system based on the euro, dollar and yuan. But each of these currency areas faces the need for significant internal adjustments that constrain their future international roles:

– The Eurozone is plagued by a weak governance structure, fragmented sovereign debt markets and an uncertain growth outlook.

– The United States must contend with a dim fiscal position, a persistently large trade deficit and a political system at risk of resorting to protectionism.

– If the yuan is to rise to international significance, China will have to ensure continued growth, resolve systemic weaknesses in its financial system and address limitations stemming from its system of capital controls.

These adjustment processes play out as complex two-level games. While at the global level synchronous and coordinated adjustments between individual players may be desirable, the challenges they face at the national and regional levels may direct them to take decisions that can lead to sub-optimal global outcomes.

This report explores the critical uncertainties underlying the future international roles of the euro, the dollar and the yuan and posits three plausible and divergent scenarios for the international monetary system in 2030, based on policy choices in each of the currency areas.

Analysing such alternative developments is critical to both public and private sector decision-makers for building robust and resilient strategies – not only to anticipate and prepare for possible future shifts that may affect them, but also to help stakeholders focus on what steps must be taken today to work towards a desired outcome.

The three scenarios for the international monetary system in 2030 are as follows:

**Reversion to Regionalism**

– Fiscal challenges in the Eurozone and the United States go unaddressed as policy-makers turn inward.

– Slowing global growth and decreased demand for exports make adjustments to China’s growth model more challenging, leading to stalling economic reforms.

– Trade and financial flows decrease at the global level as countries increase their focus on regional economic ties.

**G2 Rebalancing**

– Political deadlock and stagnating growth in Europe lead to a gradual disintegration of the European Monetary Union.

– Structural reforms lead to a gradual unwinding of imbalances between the G2: the United States and China.

– Continued high consumption in the United States and the growth of China’s consumer economy place pressures on natural resource sustainability.

**Reconciling a Two-speed World**

– While Europe successfully reforms its economic governance and emerges as a fiscal union, markets focus on the US’s unsustainable fiscal situation.

– Emboldened by strong growth, China actively pursues the use of the renminbi (RMB) for trade among emerging markets.

– An alternative monetary order emerges with the RMB at its core, and questions emerge about how to reconcile this two-speed world.

These scenarios are based on a series of strategic conversations among industry, public policy and academic leaders from around the world. They are not intended to be mutually exclusive predictions or the only possible outcomes. They provide a tool to foster strategic thinking about these challenges, to stretch the boundaries of what is perceived as possible and to open up new avenues of potential solutions.
Currency Uncertainties: A Business Issue

This section begins by explaining why uncertainties related to international currencies create important challenges for businesses, and calls for an assessment of possible alternative future developments of the international monetary system.

In a globalized economy, an orderly international flow of money is essential. If these flows are uncertain or prone to disruption, global prosperity can be undermined. In recent years, the vulnerabilities of this international monetary system have become increasingly apparent through persistent global imbalances, instability within the Eurozone and a series of increasingly global financial crises.

The international monetary system consists of conventions, policies and institutions governing international payments, the choice of exchange rate regimes and the supply of reserves. It creates an environment where international currencies facilitate the exchange of goods and services, the accumulation of savings, price setting and calibration as well as the denomination of balance sheets for both public and private actors. It also allows countries to run deficits in their external accounts and should ideally contribute to a gradual rebalancing of these external positions.

Uncertainty around the smooth operating or expected outcomes of these functions can have significant implications for business, in particular when exchange rate volatility affects costs and prices.

This may impinge on investment decisions and reduce opportunities for growth and job creation – a dynamic playing out around the world today. The possibility of micro- and macro-shocks makes medium- and long-term planning more complex, in particular regarding revenue targets, liquidity management and supply chains. Small and medium-sized enterprises are particularly affected as they lack the resources multinational companies can devote to complex treasury operations.

Rapid Global Trade and Capital Integration with Fragmented Economic Governance

The rapid global integration of trade and capital flows over recent decades has been a key driver of global growth. World trade almost tripled from the early 1990s to 2010, while international capital flows increased almost five-fold over the same period (see Figures 1 and 2). These dynamics also fuelled the ongoing shift in economic power towards emerging economies that have greatly benefited from the opportunities of foreign investments, global supply chains and open capital flows.

Despite this rapid integration of economic activities, global cooperation on regulating these flows remains limited. The international monetary system remains largely unchanged from its origins in a world that was significantly less economically and financially integrated (see Appendix: Historical Overview of the International Monetary System). Many observers believe this played a role in fuelling the global financial crisis that began in 2008. The crisis spurred an unprecedented degree of global coordination through the G20 process, including a commitment from the French Presidency in 2011 to reform the international monetary system.

However, a focus on dealing with immediate pressures, in particular stemming from Europe’s debt crisis, has since overshadowed these global coordination and reform initiatives.¹

Many economists and policy-makers in the West argued that a free-floating regime of convertible currencies would lead to automatic adjustments and the most efficient allocation of resources at the global level. But developments over past decades have not matched these expectations. Countries have not universally discarded the management of exchange rates, and have often resorted to resolving domestic economic challenges without regard for external impacts. This has led to an accumulation of substantial macroeconomic imbalances that have left the international monetary system increasingly fragile.

It is clear that given these pressures, this system has to evolve. The widespread view is that the world is moving towards a multipolar currency system based on the euro, dollar and yuan, in which greater competition between reserve currencies would lead to greater discipline to maintain the respective economies in balance. But the path to such a system is highly uncertain. These currency areas, each of which could serve as an anchor for global stability, face the need for significant internal adjustments that constrain their international roles. This will be further explored in the following section.

The adjustment processes will play out as complex two-level games with effects at both the domestic and international levels. While at the global level synchronous and coordinated adjustments between the different economies may be desirable, individual players take independent decisions that may lead to sub-optimal global outcomes and thereby create a challenging environment for businesses and policy-makers alike.

Navigating the Uncertainties Ahead

Building robust and resilient strategies in the face of these uncertainties requires an appreciation of the different ways in which these adjustment processes may unfold. Traditional modelling techniques are ill suited to account for the dynamics of such complex systems at the intersection of politics and economics. They often rely on data that support existing expectations and assume that the future will largely resemble the past. It is thus important to complement such models with an approach that explores a wider set of plausible futures.

The World Economic Forum’s Euro, Dollar, Yuan Uncertainties initiative is aimed at exploring challenging futures where adjustments within the euro, dollar and yuan areas have a profound impact on the evolution of the international monetary system. It builds on a series of strategic conversations with leaders from the public, private and academic sectors, exploring their most pressing concerns and uncertainties.

The purpose of this report is not to advocate or predict specific outcomes. Rather, it explores the critical uncertainties underlying the future international roles of the euro, the dollar and the yuan, and depicts possible future states for the international monetary system based on policy choices in each of the currency areas. The year 2030 was chosen as a benchmark for these scenarios in order to allow for significant structural adjustments to play out independently from current political constraints.

Box 1: Implications for the real economy

Tensions and uncertainties in the international monetary system create a host of challenges for businesses. Interviews with executives from a range of companies in the real economy highlighted the following:

- Disaggregated supply chains have made firms sensitive to the currency fluctuations of dozens of countries and extremely reliant on a continued free flow of goods and capital across national borders.
- Small and medium-sized firms are more exposed to currency fluctuations than their larger counterparts, as they either cannot access or lack the capabilities to implement effective hedging practices.
- Large firms with globally distributed operations actively redistribute business activities from one jurisdiction to another in response to shifting currency values.
- Correlation between emerging market currencies is driving some firms in those markets to explore switching to trade contracts denominated in local currency rather than in dollars or euros.
- Executives are increasingly concerned about the possibility of extreme events, particularly the legal uncertainty surrounding the implications of a unilateral break from the euro by one or more countries.

Since the end of World War II, the world economy has relied on the US dollar to lubricate the flow of global trade and finance. It accounts for the majority of global foreign exchange reserves and worldwide foreign currency trading and is the dominant currency for invoicing international trade. However, the shift in economic weight away from the US and towards fast-growing emerging markets calls into question the world’s reliance on the US dollar (see Figures 3 and 4).
Many experts foresee a movement towards a multipolar currency system in which both the euro and the yuan play a bigger role. Since its introduction in 2001, the euro has grown to 27% of global reserves and accounts for some 12% of global trade settlements. In early 2009, the Chinese authorities started to promote the international use of the yuan in trade settlements with key trading partners and the development of offshore markets in Hong Kong.

Developments over recent years have challenged this multipolar view. The European debt crisis threatened to evolve into a source of severe instability for the world economy; a growing need for structural adjustments in the Chinese economy and possible contagion from Europe raised new questions about the path and pace of yuan internationalization; and despite persistent fiscal challenges, the dollar continued to play the role of a safe haven currency for global investors.

The Eurozone, the United States and China all face policy choices while adjusting to internal and external imbalances, affecting the stability of the international monetary system. How these choices play out and are influenced by developments at the global level will determine whether the individual currencies will be able to function as anchors for global economic stability. While the individual challenges for each currency area are widely acknowledged, there is a high level of uncertainty about how policy-makers will respond to their being interlinked in a complex two-level game between domestic priorities and international impacts (see deep dive on the dynamics of imbalances).

**Box 2: Attributes of reserve currencies**

<table>
<thead>
<tr>
<th>Economic size and network effects</th>
<th>The size of the underlying economy matters for creating network externalities; the more users, the more attractive.</th>
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<tbody>
<tr>
<td>Transactions/trade</td>
<td>Countries are more likely to hold reserves in currencies in which they conduct commercial transactions.</td>
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<tr>
<td>Financial market development</td>
<td>Liquidity across a wide range of financial instruments (especially size and depth of the sovereign bond market).</td>
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<tr>
<td>Fiscal and monetary policies</td>
<td>Low risk of inflation/currency depreciation; e.g., whether budgetary policy is sustainable and monetary policy is geared towards price stability.</td>
</tr>
<tr>
<td>Reliability of rules and institutions</td>
<td>The institutional framework, such as the enforceability of contracts and legal procedures, matters to investors.</td>
</tr>
<tr>
<td>Non-economic factors</td>
<td>Countries hold their reserves in particular currencies for strategic and political as well as financial reasons.</td>
</tr>
</tbody>
</table>
The Euro
Adjustment challenges influencing the euro’s future international role

In the first decade of its existence, the euro developed into the second most important currency in the world. Underpinned by a strong and independent central bank, the euro contributed to the stability of the European economy for much of the past decade, and played a stabilizing role for Central and Eastern European countries seeking to join the currency bloc. Since the monetary union’s very beginning, however, critics have pointed to inadequacies in its governance structures, which were brought into focus by the advent of the sovereign debt crisis in 2009. The ensuing loss of confidence in the political cohesion of the Eurozone has made the management of existing internal imbalances more challenging, and tainted expectations for the euro playing a more prominent international role. Amid these developments, the following uncertainties will influence whether the euro becomes an anchor or a threat for global economic and monetary stability.

Governance structures:
To what extent will the Eurozone move towards comprehensive fiscal and economic governance?
One of the fundamental weaknesses of the Eurozone is its governance structure, initially created as a loose compromise between national and supranational competencies. Monetary policy for the entire Eurozone is determined by the European Central Bank (ECB), while fiscal and structural economic policies remain the prerogative of each member state, loosely controlled by the Stability and Growth Pact. Despite rapid expansion of cross-border lending with capital moving freely across the Eurozone, member states remain individually responsible for backstopping national banking systems. To ensure greater fiscal discipline across the Eurozone in response to the sovereign debt crisis, governments sought to reinforce fiscal rules through the “Six Pack” reforms introduced in 2010 and the negotiation of a new “fiscal compact” in late 2011. They also established the foundations of a permanent crisis resolution mechanism through the European Financial Stability Facility (EFSF) and the successive European Stability Mechanism (ESM). However, these steps have remained incremental and have not significantly changed the fiscally decentralized nature of the Eurozone. Implementation of these ongoing governance reforms as well as a more comprehensive alignment of monetary, fiscal and structural economic policies through its governance system will be critical for re-establishing the credibility of the euro on international markets.

The integration of sovereign debt markets:
Will European sovereign debt markets integrate or remain fragmented?
Despite increasing financial integration within the Eurozone, markets for sovereign debt have remained fragmented. While the total Eurozone sovereign debt market is comparable in size to the US treasury market, fragmentation into different national markets means that the Eurozone’s overall depth and liquidity is much smaller, limiting its ability to act as an international reserve currency. Given the recent readjustment of sovereign bond yields at the Eurozone periphery, experts and policy-makers have examined different forms of sovereign debt pooling. But such moves require a significant strengthening of surveillance mechanisms and are subject to a myriad of political uncertainties. Greater capital market integration and the development of more liquidity could be a driver of growth and also significantly strengthen the euro’s international role in financial markets.

Economic growth:
Will the Eurozone revive economic growth or stagnate and decline in relation to the rest of the world?
Beyond these structural and institutional uncertainties, the extent to which the euro will be able to play a leading international role also depends on the Eurozone’s ability to revive economic growth. Closing the competitiveness gap between periphery and core economies will be pivotal to building political cohesion and more effective monetary policy-making. Another question mark over economic growth is the Eurozone’s unfavourable demographic outlook, which may put further pressure on already strained national finances. The speed and success of EU and Eurozone enlargement could alter this outlook, however, with the prospect of new dynamic markets joining the currency zone over the next decade. This could significantly extend the reach of the euro’s sphere of influence in the region and become a new driver of growth.3

The Dollar

Adjustment challenges influencing the dollar’s future international role

Defying widespread predictions of decline, market behaviour since 2008 underlines the role of the US dollar as a safe-haven currency and the preferred vehicle of global trade. The dollar accounts for 84.9% of global foreign exchange transactions in 2010 and continues to be the chosen currency of financial markets, where it makes up 61% of global central bank reserves and 39% of all internationally held bonds. Nonetheless, persistent fiscal pressures continue to raise questions about its long-term soundness. The dollar’s continued role as a stable global anchor will be influenced by the following factors.

The fiscal position:
Will the United States manage to control its public finances or will it continue to accumulate unsustainable levels of debt?
The fiscal position of the US government provides growing uncertainty for the international role of the dollar. The perception of US treasury securities as the world’s only safe and highly liquid asset has allowed the US government to consistently run large-scale deficits. This is particularly concerning in an economic environment plagued by high levels of long-term unemployment and a protracted domestic political context that has hindered progress on fiscal reforms. Despite a favourable demographic outlook, unfunded liabilities to entitlement programmes are bound to further expand the US deficit in the coming decades. Over the long term, this situation may well undermine market trust in the ability of the US government to service its debt, and thus reduce the attractiveness of US treasury securities.

The trade deficit:
Will structural reforms bring down the US trade deficit or will it continue to rely on debt-financed consumption?
Over recent decades, the United States has consistently spent more on imports than it has earned on exports, relying on inflows of foreign capital to fund the gap. Broadly speaking there are two main theoretical explanations for the persistence of this deficit, as well as diverging views on its seriousness. One focuses on the rise of export-oriented economies in Asia and the desirability of investments in US capital markets. This explanation posits that there is a “global savings glut” which sees emerging economies wishing to park their export revenues in a stable and liquid currency, creating a surplus of capital inflows that must necessarily be mirrored by a matching deficit in the current account. The other main explanation focuses on the high levels of US government debt and dis-saving by US households, arguing that the current account deficit is driven by profligate household spending that will persist in the absence of policy reforms. Regardless of the cause, however, it is known that reserve currencies may be subject to crises of confidence when they accumulate large deficits. The impact of a credibility problem may be even more severe if alternative reserve currencies emerge.

Protectionism and competitive devaluation:
Will the US revert to protectionism or support an open international trade system?
Disagreements about the reasons for the US trade imbalance have had a polarizing impact on discussions among policy-makers. The temptation to assign responsibility to foreign practices has the potential to escalate into protectionism and competitive devaluation of currencies. At the same time, US policies are often perceived by emerging market economies as destabilizing: For example, emerging economies fear that expansionary monetary policy in the US could export inflation. With the dollar at the centre of the current international monetary system, US monetary policy can cause volatilities around the world. These tensions may, in the long term, undermine the very fundamentals of the current monetary system and have a negative effect on the international role of the dollar.
The Main Currencies: Anchors for Global Stability?

The Yuan
Adjustment challenges influencing the yuan’s future international role

Over the last decade, China has embarked on a number of initiatives to promote the yuan as an international currency. In 2002, China allowed foreign investors to trade in its mainland stock exchanges under the Qualified Foreign Institutional Investor programme; the Hong Kong offshore market was launched two years later. Further steps include the issuance of RMB-denominated bonds (Dim Sum Bonds) in 2007, and the introduction of the RMB trade settlement pilot scheme in 2009. But despite China’s status as the world’s third-largest economy and second-largest exporter, the international use of the RMB remains limited. The following key uncertainties determine whether the RMB may become an anchor for global stability.

An economic growth model:
Will the Chinese economy move to a greater focus on domestic consumption or remain reliant on investments and exports?
The sustainability of China’s growth path over the next decade will be a significant factor. Exceptional growth over the past 20 years resulted from strong export performance and investment growth, but indications of a limit to this growth model are emerging. While the Chinese economy remained largely shielded from the financial crisis, the ensuing global economic downturn has highlighted the risks inherent in a strong reliance on investments and exports. In recognition of the limitations of the current model, the 12th Five-Year Plan announced China’s intent to transition away from export- and investment-led growth to a domestic demand-driven model. This would also mean a gradual reduction of the Chinese trade surplus and drive the expansion of international RMB liquidity.

Financial market development:
To what extent will China develop a robust market-based financial sector?
A successful growth transition would also require changes to China’s financial sector, which is currently characterized by state-owned banks, a closed capital account, and administered lending and interest rates that support very high levels of investment and exports. The entire structure of the financial system is geared towards the export sector and offers a limited range of investible assets. As a result, capital is channelled into the few investible sectors that exist, fuelling asset price bubbles. This has become most evident in the property sector, which in 2011 accounted for 12% of GDP and 18% of banks’ credit portfolios.7 The Chinese financial sector also runs the risk of undermining credit quality and accelerating the diversion of credit into unregulated markets, making financial surveillance increasingly difficult. There is also growing concern about the amount of outstanding local government debt, the unwinding of which could jeopardize both financial stability and economic growth. Market-driven interest rates would facilitate the emergence of a wider range of investible assets and allow markets to price financial investments more efficiently. A more robust financial sector would also be able to better absorb domestic and international liquidity.

Capital account liberalization:
To what extent will China transition to a convertible capital account?
Closed capital accounts are a potential barrier to a greater international role for the Chinese currency. While the RMB trade settlement pilot scheme and Hong Kong’s offshore RMB markets are first steps towards a wider international use of the currency, the transition to fully convertible capital accounts remains highly uncertain. Historically, rapid growth in RMB-denominated deposits in Hong Kong and unequal distribution of the RMB trade settlement scheme (89% of RMB settlements are in payment for exports)8 suggested that users hold RMB primarily in anticipation of a currency appreciation. However, there are indications that the recent slowing of Chinese growth is shifting market sentiment about RMB appreciation. Despite these uncertain prospects, gradual capital account liberalization has been a declared policy goal of the Chinese government and could significantly boost the international use of the RMB.

The Dynamics of Adjustments

The uncertainties outlined above for the euro, the yuan and the dollar may be specific to a particular region, but they also interact with each other in a dynamic way. While policy choices are based on the specific national settings, their consequences are felt throughout the world economy. In the past, policy choices within the Eurozone, China and the United States have all contributed to the build-up of substantial macroeconomic imbalances at the regional and global levels (see Deep Dive I and II), both contributing to and highlighting the vulnerabilities of the current international monetary system. How these adjustments and interactions may evolve in the future will be explored in the following section.
Deep Dive I: The current dynamics of US-China imbalances

The economies of the United States and China are interacting in a feedback loop that exacerbates global imbalances (see Figure 5). Export growth and reserve accumulation in emerging economies, particularly China, has expanded the demand for US dollar liquidity, an effect that has been compounded by investor flight to safety following the global financial crisis of 2008. Continued strong demand for US government debt instruments has allowed the country to significantly expand its debt and deficit without experiencing a corresponding rise in debt service costs (see Figure 6).

Symptoms

Figure 5: World Current Account Imbalances (% of world GDP)

Source: IMF

Dynamics

Figure 6: Major Foreign Holdings of US Treasury Securities (in billions of US$)

Source: Bloomberg
Deep Dive II: The current dynamics of Eurozone imbalances

The situation within the Eurozone has many similarities to the imbalance between the United States and China, but on a regional rather than a global scale. The design of the Eurozone – as a monetary union without common fiscal and economic policies – has created a number of interlinked feedback loops. High wage growth and low productivity in the periphery has resulted in declining competitiveness and the build-up of massive internal imbalances within the Eurozone (see Figure 7). Trade surpluses at the core were invested in higher-yielding investment opportunities at the periphery, driving down interest rates and facilitating strong borrowing behaviour as well as a misallocation of capital in that region. A loss of confidence in the political cohesion of the Eurozone and of the sustainability of public finances in periphery countries resulted in dramatic market reassessments and increases in borrowing costs for those countries (see Figure 8).

Symptoms

![Figure 7: Eurozone Current Account Imbalances (% of GDP)](image)

Source: IMF

Dynamics

![Diagram showing the dynamics of Eurozone imbalances](image)

Source: World Economic Forum 2011
Scenarios: The International Monetary System in 2030

This section outlines how different combinations of more or less successful adjustments within each currency area form a set of challenging scenarios for the international monetary system in 2030.

The way policy-makers deal with these internal adjustment challenges will significantly influence the context for the future of the international monetary system. The dominant narrative of how these adjustments will play out is that the continued growth of imbalances will progressively undermine international faith in the US dollar, leading to a gradual rebalancing towards the euro and eventually the yuan. The result will be a multipolar “tripod” of reserve currencies, which under cooperative management, creates a self-supporting system that is more resilient to the build-up of imbalances than a system characterized by a single reserve currency.

For many observers, this future is desirable. It is, however, far from certain. Within each individual currency area, the necessary adjustment processes may play out successfully, fostering continued growth in the underlying economy while alleviating imbalances within the international monetary system. But they may also play out in an unsuccessful manner, due either to a failure of adjustments to deliver continued growth or the pursuit of policies that serve domestic interests at the expense of global stability.

The following section explores how different combinations of more or less successful adjustments within each currency area could drive three very different scenarios for the international monetary system in 2030. While these are not the only possible scenarios, they reflect a range of views expressed by stakeholders over the course of this initiative and are intended to stimulate further discussion.

Box 3: What are scenarios?

Scenarios are stories about the future. They represent relevant, plausible, challenging and divergent possibilities, providing context around an issue for its stakeholders. Scenarios are not predictions, preferences or forecasts.

- They aim to shift the focus away from preferences and the false security of predictability. They are not predictive in terms of assigning any likelihood or probability to individual scenarios.
- They aim to raise awareness about the fact that opportunities and risks in each scenario depend on the context, who is involved and how they relate to the overall system. They are not normative in terms of depicting a clear best- or worst-case scenario.
- They aim to induce creativity in thinking about these challenges and stretch the boundaries of what people perceive as plausible futures for which to prepare. They are not exclusive in terms of being the only possible futures.
**Reversion to Regionalism**

- Policy-makers in Europe and the United States struggle with their respective fiscal challenges as they turn inwards and resort to increasing protectionism.
- Slowing global growth and decreased demand for exports make adjustments to China’s growth model more challenging, leading to stalling economic reforms.
- Trade and financial flows decrease at the global level, leading to a regionalization of economic interactions.

**G2 Rebalancing**

- Political deadlock and stagnating growth in Europe lead to a gradual disintegration of the monetary union.
- Structural reforms lead to a gradual unwinding of imbalances between the G2 – the United States and China.
- Continued high consumption in the United States and the growth of China’s domestic consumer economy place pressures on natural resource sustainability.

**Reconciling a Two-speed World**

- While Europe successfully reforms its economic governance and emerges as a fiscal union, markets focus on the unsustainable fiscal situation of the United States.
- Emboldened by strong growth, China actively pursues the use of the RMB for trade among emerging markets.
- As an alternative, a BRICS monetary order emerges with the RMB at its core; questions arise about how to reconcile this two-speed world.
Reversion to Regionalism
The World in 2030

The international monetary system has fragmented into various regional systems and there is little coordination of policy beyond the regional level. Barriers to trade have significantly increased and there is limited capital mobility between regions. The International Monetary Fund has been rendered largely obsolete, while various regional initiatives have flourished, such as the Chiang Mai Initiative in Asia. Growth has stagnated and there are rising fears that economic conditions will deteriorate further. The importance of an international currency and the need for global macroeconomic coordination has been decreased by this ongoing reversion to regionalism. But private sector actors are increasingly discussing ideas for reigniting growth through a newly designed structure for governing global trade and capital flows.

The Path to 2030

As the 2010 decade progressed, the Great Recession became the Great Stagnation and repeated fiscal crises forced both the United States and Europe to focus intently on their domestic concerns at the expense of global cooperation. Multilateral trade talks failed amid accusations of currency manipulation and unfair practices. Isolationism and xenophobia thrived as populist politicians on both sides of the Atlantic blamed faltering recovery on unfair competition from emerging economies.

In the United States, Congress slapped “retaliatory” tariffs on imports from low-wage economies as part of a drive to rebuild the domestic industrial sector. Populist legislation attacked the offshoring of domestic jobs by restricting US investments in low-income countries. Copycat policies proved an attractive common cause in Europe and served as a distraction from bickering over the haphazard internal governance of the euro.

As global trade negotiations failed, tariff-induced import substitution and slowing demand in advanced economies placed enormous pressure on the Chinese export sector, as did weakness in the euro and the US dollar. While these developments raised the urgency of the planned rebalancing of the Chinese economy towards domestic consumption, the contractionary environment made it much more difficult to implement this strategy. Exporters increasingly focused on opportunities in the Asian region, but it became apparent that this was not enough to prevent significant declines in growth rates.

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<th>Selected Private Sector Impacts</th>
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<tr>
<td><strong>Cost of foreign inputs</strong></td>
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<tr>
<td>Punitive domestic tariffs</td>
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<td>significantly increase the</td>
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<td>price of imported factor</td>
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<td>inputs, placing pressure on</td>
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<td>margins</td>
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<td><strong>Talent mobility</strong></td>
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<td>immigration limit the ability</td>
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<td>of firms to match talent with</td>
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<td>**Barriers to overseas</td>
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<td>Restrictions on foreign direct</td>
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<td>capital mobility mean pools of</td>
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<td>financing are smaller, less</td>
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<td>efficient and more expensive</td>
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G2 Rebalancing
The World in 2030

The relationship between the United States and China – the G2 – dominates the international monetary system. Global growth is strong, as savings that had previously been driven into US debt instruments are invested in more productive outlets. With sustained challenges and a gradual disintegration of the Eurozone, Europe is no longer a meaningful player on the international stage from both an economic and political perspective. The US dollar remains the dominant invoicing currency for oil and other commodities, but the RMB is the currency of choice in inter-Asian trade and, to a lesser degree, trade between Asia and other emerging economies. Unprecedented levels of global consumption make natural resource scarcity an increasingly serious global problem.

The Path to 2030

In the 2010 decade, the Eurozone embarked on a period of gradual decay. After repeated bailouts of Greece, each accompanied by harsher conditionality, politicians finally ran out of ways to calm public disquiet. Popular anger at biting austerity measures and national humiliation at their loss of sovereignty led Greece to unilaterally announce the reintroduction of the drachma. This sparked intense speculative pressures in bond markets, driving a number of other periphery countries to conduct similar exits. Judicious interventions by the European Central Bank kept the residual euro area’s banking systems functioning. Despite pockets of growth, Europe continued to falter as it searched for ways to re-establish regional identity and cooperation.

In the United States, fears grew that its own debt situation could lead it down a similar path. A wave of public outrage at brinksmanship and blame-mongering in the US political system led to a new bipartisan drive for fiscal reforms. A mixture of deep spending cuts, adjustments to entitlement programmes and targeted tax increases succeeded in balancing the budget and gradually reducing US public debt. At the same time, US firms became increasingly active at chasing growth opportunities in new global consumer markets.

In China, the 2010 and 2020 decades saw rising incomes and a fast-growing service sector. Fuelled by an expansion of consumer credit, demand for imports gradually moved the Chinese current account from surplus to deficit. Gradual liberalization of the Chinese capital account unlocked new investment opportunities and helped establish Shanghai as an international financial centre. Together with the ongoing adjustments in the United States, the global imbalances that had caused such concern in previous years slowly unwound.

Selected Private Sector Impacts

<table>
<thead>
<tr>
<th>United States exports</th>
<th>Chinese consumer credit</th>
<th>Access to financing in Europe</th>
<th>Demand for commodities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rising incomes in emerging economies significantly increase demand for a range of US products</td>
<td>Increased availability of Chinese consumer credit drives higher levels of consumption particularly in the luxury product space</td>
<td>Continued instability restricts financing in Europe, particularly in periphery countries that have left the euro and restructured their sovereign debt</td>
<td>Sustained consumption in the US, China and other growth markets drives commodity prices to new highs</td>
</tr>
</tbody>
</table>
Reconciling a Two-speed World
The World in 2030

While observers had long called the RMB a possible regional currency for Asia, it has now become the de facto BRICS currency. Within emerging economies, Bretton Woods institutions have been largely bypassed by the China-led BRICS Development Bank and Monetary Fund, which is aggressively expanding RMB-denominated trade financing. Even though the euro has successfully overcome its internal governance challenges and emerged as a true fiscal union, the expansion of its international use has been limited. Policy discussions are dominated by the question of how to reconcile this two-speed world.

The Path to 2030

As Europe’s leaders struggled to preserve the Eurozone in the early 2010 decade, they converged around the idea that only a fundamental redesign of the monetary union could ultimately bring stability. Arduous negotiations led to a multilateral accord establishing a European Finance Ministry with sweeping competences for fiscal and economic policies. The effort of establishing these new institutions while managing the subsequent political fallout that emerged in several key member states made European policy-makers largely disconnected from developments in the rest of the world. In spite of this, the economic outlook for Europe became increasingly optimistic as structural reforms in the periphery began to show signs of success.

In the United States, a deeply divided Congress repeatedly failed to make meaningful fiscal reforms. Investors increasingly questioned the sustainability of the US economy in the 2010s, though the dollar retained enough of a dominant role to continue driving the capital inflows necessary to support unsustainable spending. These dynamics were placed under increasing pressure in the 2020 decade by the consolidating market confidence in the Eurozone as investors moved towards its new common bond market. The first failed bond auction of US treasuries clearly underscored a major shift in the international role of the US dollar.

<table>
<thead>
<tr>
<th>Selected Private Sector Impacts</th>
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<tbody>
<tr>
<td><strong>Use of RMB financing</strong></td>
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<tr>
<td>Growth in RMB liquidity</td>
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<tr>
<td>through increased RMB trade</td>
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<tr>
<td>financing and bond issuances</td>
</tr>
<tr>
<td><strong>Size and importance</strong></td>
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<tr>
<td>of US markets</td>
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<tr>
<td>As US growth stagnates the</td>
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<tr>
<td>importance of American</td>
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<tr>
<td>consumer spending is</td>
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<td>eclipsed by growth in</td>
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<td>emerging markets</td>
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<tr>
<td><strong>Size of Chinese service</strong></td>
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<tr>
<td>sector</td>
</tr>
<tr>
<td>Steady growth in average</td>
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<tr>
<td>wage rates and deregulation</td>
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<tr>
<td>create opportunities for</td>
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<tr>
<td>foreign and domestic firms in</td>
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<tr>
<td>the Chinese services sector</td>
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<tr>
<td><strong>US domestic inflation</strong></td>
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<tr>
<td>Growing inflationary pressures in the US create disincentives for saving and make capital planning more difficult</td>
</tr>
</tbody>
</table>
Outlook: Perspectives for further discussions

The analysis presented in this report builds on strategic conversations with industry, public policy and academic leaders. These individuals share a commitment to a stable international environment as a facilitator of global economic growth. They also share a concern that the current international monetary system needs to evolve to continue to guarantee this stability.

A rocky road to multipolarity

Many observers perceive a multipolar currency system as a better guarantor for global stability in an increasingly multipolar world economy than the current Dollar-based system. But the pathway towards such a multipolar system will necessarily be slow and fraught with political challenges. It presupposes significant structural adjustments in the main currency areas, the Euro, Dollar and Yuan, so that they can individually become anchors of global stability.

As the report explores, the policy choices in the Eurozone relate to its governance structure, the integration of its sovereign debt market as well as its future economic growth outlook. In the United States, they relate to the US fiscal position, its trade deficit and the prospect of protectionist policies. In China, they relate to the sustainability of its economic growth model, financial market development and its system of capital controls.

Furthermore, a successful transition towards such a multipolar currency system also requires a high degree of coordination at the global level. It has become apparent that achieving coordinated structural adjustments in today’s globalized economy is increasingly challenging given the multiplication of actors with competing interests both within and across countries. The scenarios discussed in this report highlight that different combinations of these adjustment processes may create diverse future environments for the international monetary system and for the world economy.

A changing global environment

These scenarios play out in a context of more fundamental changes to the international system. The shift of economic weight towards fast-growing emerging economies has left the existing global institutional governance structure ineffective and unrepresentative – at a time when it is most needed to manage the externalities of growing connectivity.

The extent to which internal adjustments affect the world economy also depends on the effectiveness of governance processes at the global, regional and industry level. As evidenced by the developments in the Eurozone, cooperation is required not only between national, regional and international policy-makers, but also, increasingly, between policy-makers and the private sector.

The World Economic Forum seeks to facilitate such dialogue by bringing together the key stakeholders to consider these different adjustment challenges. The various interactions held over the course of this initiative have led to important milestones. It is our hope that this report will further contribute to a lively debate on future opportunities and challenges.

Key Questions for Stakeholders

Regardless of which scenario materializes, collaborative strategies to address the challenges will require policy-makers and business leaders from both the financial sector and the real economy to develop answers to the following questions:

- How can different stakeholders contribute to international monetary system reform and a more stable international environment?
- How can we build resilience to failures in these domestic adjustment processes so their effects on the overall system will be mitigated?
- To what extent are businesses prepared for the different scenarios that may result from more or less successful adjustment processes in the different currency areas?
How can scenarios be used?

The process of developing and using scenarios helps those concerned generate learnings and insights, both by exploring each scenario individually and by comparing and contrasting them.

Scenarios can enrich learning as well as decision-making at both the organizational and individual level. In particular, they provide leaders with the ability to:

- Enhance the robustness of existing strategies by identifying and challenging underlying assumptions and established wisdom
- Make better strategic decisions by revealing and framing uncertainties, leading to a more informed understanding of the risks involved with substantial and irreversible commitments, and by contributing to strong and pre-emptive organizational positioning
- Improve awareness of change by shedding light on the complex interplay of underlying drivers and critical uncertainties, and raising sensitivity to weak and early signals of significant changes ahead
- Increase preparedness and agility for coping with the unexpected by making it possible to visualize possible futures and rehearse responses
- Facilitate mutual understanding and collaborative action by providing different stakeholders with common languages and concepts in a non-threatening context, thereby opening the space for creating robust, effective and innovative multistakeholder strategic options.

For more information on the World Economic Forum’s scenario and foresight practice, see [http://www.weforum.org/issues/strategic-foresight](http://www.weforum.org/issues/strategic-foresight)

References and Further Reading


Ettore Dorucci and Julie McKay (2011): The International Monetary System after the Financial Crisis, Frankfurt: European Central Bank


Paola Subacchi and John Drifill (2010): Beyond the Dollar, Rethinking the International Monetary System, London: Chatham House

Shahin Valée (2012): The Internationalisation Path of the Renminbi, Brussels: Bruegel
Appendix

Historical Overview of the International Monetary System

The Gold Standard Era

In the latter half of the 1920s, loose monetary policy in the United States, adopted to support the stabilization of international capital flows, created a speculative bubble in domestic asset prices. The bursting of this bubble triggered a contraction of the US money supply, initiating a deflationary process that rapidly snowballed, ravaging economies around the world. The deterioration of national economies, made worse in countries like Germany by heavy borrowing earlier in the decade, placed enormous pressure on governments to violate the “rules” of the international monetary system by adjusting the value of their currency relative to gold. A coordinated and temporary expansion of liquidity by major central banks may have been able to alleviate these pressures, but little progress was made in achieving such cooperation.

As a result, the future value of currencies was called into question. Trade flows ground to a halt and speculative attacks on the pound sterling and the deutsche mark further undermined transaction stability. Countries that left the gold standard were able to escape their deflationary spiral but often did so at the expense of other nations, employing competitive devaluation and erecting significant trade barriers. The eventual collapse of the system was accompanied by widespread bank failures in the United States and sovereign defaults across Europe, ushering in the beginning of the Great Depression.

Bretton Woods

The creation of the Bretton Woods agreement following World War II was the first fully negotiated international monetary system. It focused on fostering the kind of policy coordination that could have averted the collapse of the gold standard. Under this system, only the value of the US dollar was fixed to gold; other currencies were pegged to it. As a result, the dollar effectively replaced gold as the international reserve currency.

However, the rapid growth in international trade throughout the 1950s and 1960s steadily increased demand for the international dollar liquidity necessary to fund these transactions. Economist Robert Triffin noted that if continued indefinitely, growth in dollar liquidity would eventually call into question the ability of the reserve issuer to repay its obligations (this later became known as the Triffin Dilemma).

At the same time, rapid expansion of the US money supply in the late 1960s placed downward pressure on the value of the dollar, undermining its role as a store of value and undermining transaction stability. In August of 1971, as the US gold coverage ratio deteriorated and a growing number of countries left or considered leaving the system, US President Richard Nixon suspended gold convertibility, effectively ending the Bretton Woods era.

Implications

Under both the gold standard and the Bretton Woods agreement, a combination of external and internal forces created a feedback loop that undermined faith in the reserve currency and global transaction stability.

In the case of the gold standard, the conventions, rules, policies and institutions governing the international monetary system were no longer up to the task of managing the global economy. With Bretton Woods, irresponsible monetary policy by the reserve currency issuer undermined confidence in the reserve currency issuer's ability to fulfil its obligations.

As we consider the state of the existing international monetary system, we should pay close attention to the impact similar forces may have on its stability.
The project was supported by Deloitte Touche Tohmatsu Limited.

This publication synthesizes the ideas and contributions of many individuals whom the project team would like to thank for contributing so generously of their time, energy and insights.

In particular, we would like to thank the following individuals for their support and initiative in defining the scope of the project.

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We would also like to thank Members of the Forum’s Global Agenda Councils as well as other experts who helped to shape the content of this report by sharing their insights and experience and participating in the various workshops throughout the project (see below for an overview of the different workshops).

- **October, 2011**
  - Future of the Dollar, New York
- **September, 2011**
  - Annual Meeting of the New Champions, Dalian China
- **June, 2011**
  - Future of the Euro, Brussels (with CEPS)
  - Future of the Euro, London (with Chatham House)
- **January, 2011/12**
  - Annual Meeting, Davos-Klosters
- **April, 2011**
  - Global Risks Meeting, New York
  - Summit on the Global Agenda, Abu Dhabi
- **December, 2011**
  - Future of the Yuan, Beijing
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In addition, the project team expresses its gratitude to the following colleagues from the World Economic Forum for their advice and support throughout the project (in alphabetical order):

Guillaume Amigues  
Andrew Bishop  
Carl Björkman  
Jennifer Blanke  
Amy Cassidy  
Nicholas Davis  
Celine Devouassoux  
Trudy Di Pippo  
Michael Drexler  
Martina Gmür  
Alexandra Hawes  
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