

Fall 2013

Conflicting Currencies: An Examination of the USD and the Geoeconomics of the International Monetary System

Cullen Millikin
SIT Study Abroad

Follow this and additional works at: https://digitalcollections.sit.edu/isp_collection

 Part of the [Growth and Development Commons](#), [International Economics Commons](#), [Other Economics Commons](#), and the [Political Economy Commons](#)

Recommended Citation

Millikin, Cullen, "Conflicting Currencies: An Examination of the USD and the Geoeconomics of the International Monetary System" (2013). *Independent Study Project (ISP) Collection*. 2526.
https://digitalcollections.sit.edu/isp_collection/2526

This Unpublished Paper is brought to you for free and open access by the SIT Study Abroad at SIT Digital Collections. It has been accepted for inclusion in Independent Study Project (ISP) Collection by an authorized administrator of SIT Digital Collections. For more information, please contact digitalcollections@sit.edu.

***Conflicting Currencies:
An Examination of the USD and the Geoeconomics of the
International Monetary System***

By Cullen Millikin

Fall Semester 2013

SIT Switzerland: International Studies and Multilateral Diplomacy
Dr. Gyula Csurgai
Dr. Alexandre Lambert

Colorado College
International Political Economy

Abstract

What is the future of the United States dollar within the international monetary system? The dollar has certainly enjoyed supremacy as a unit of account, store of value, and medium exchange since World War II, but what about new challengers (most notably the euro and Chinese yuan)? Using “geoeconomic” analysis to determine what strategies or actions a state might pursue in the international political economy can help to begin answering these questions. Geoeconomic considerations used in this paper do not dismiss cultural, political, or military aspects of international power relations, *they supplements them*. The short-run status of USD preeminence within the international monetary system is stable, but medium and long-term prospects are more uncertain. Important currency contenders, such as the euro and yuan, raise important political and economic problems for the U.S.’s borrowing, policy options, and, ultimately, its national sovereignty. Future outcomes and possibilities will be explored to highlight the need for the U.S. to fix its domestic issues in order to retain currency supremacy and national control.

Preface

In the words of renowned economist John Maynard Keynes:

The ideas of economists and political philosophers, both when they are right and when they are wrong are more powerful than is commonly understood. Indeed, the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually slaves of some defunct economist.¹

It is with these prophetic words in mind that I began thinking about my Independent Study Project. The affects of changes in the international monetary system, while not typically understood by “practical men,” are so far-reaching that I decided to learn more about how the system functioned. Following the recent financial crisis and ensuing global recession, the stability of the international finance system was called in to serious question. As the U.S. is the principal actor in this field (given its size and political and physical dominance in the world arena), it seemed fitting to approach this project from the standpoint of the U.S. My focus has always been on the combination of political and economic forces in the international political economy, and geoeconomic considerations play a major part in how I now approach any analysis of international interactions. My interests, and the perfect location of Geneva, Switzerland, offered me the opportunity to study how these two dynamics interacted, and, ultimately, what the future may look like for all.

¹ John Maynard Keynes, “The General Theory of Employment, Interest, and Money (London: Macmillan, 1936).

Acknowledgments

I would like to thank the many people in my life who made this study abroad experience available to me. My parents, Robert Millikin and Sylvia Geiger, my grandfather, Erwin Geiger, and the many Political Science and Economics professors at Colorado College. Without my family's support to pursue interesting and relevant studies at the college of my choice, I would not be where I am today.

I would also like to thank my host-family, Jean-Louis and Laure Oriol, for welcoming me as part of the family for the past few months. I would like to extend gratitude to the Academic Directors, Dr. Gyula Csurgai, Dr. Alexandre Lambert, and Aline Dunant, for working to ensure the quality of this study abroad program. Lastly, I would like to thank my fellow students for being so kind and intelligent during our many lectures and interactions for the entire program.

Table of Contents

<i>Abstract</i>	1
<i>Preface</i>	2
<i>Acknowledgements</i>	3
<i>Abbreviation List</i>	5
<i>I. Introduction</i>	6
<i>i. Research Methodology</i>	
<i>ii. Definitions and Thesis</i>	
<i>iii. Literature Review</i>	
<i>II. History of the International Monetary System</i>	13
<i>i. Pre-World War I</i>	
<i>ii. Inter-War</i>	
<i>iii. Bretton Woods</i>	
<i>iv. Post-Bretton Woods</i>	
<i>III. The Domestic United States</i>	18
<i>i. Benefits and Drawbacks of Being a Reserve Currency Country</i>	
<i>ii. Twin Deficits</i>	
<i>iii. Foreign Held Debt</i>	
<i>IV. U.S.—China Relationship</i>	24
<i>i. Complications with Yuan Becoming a Reserve Currency</i>	
<i>ii. Geoeconomic Conflict</i>	
<i>iii. Future Relationship</i>	
<i>V. U.S.—EU Relationship</i>	30
<i>i. European Governance Issues</i>	
<i>ii. Future of the Euro?</i>	
<i>VI. Conclusion and Future Possibilities</i>	33
<i>i. The SDR</i>	
<i>iii. Geoeconomics of the Future</i>	
<i>Bibliography</i>	38
<i>ISP Work Journal</i>	43
<i>Interactive Log</i>	49

Abbreviation List

<i>ASEAN</i>	<i>Association of Southeast Asian Nations</i>
<i>C-20</i>	<i>Committee of 20</i>
<i>ECB</i>	<i>European Central Bank</i>
<i>EU</i>	<i>European Union</i>
<i>FDI</i>	<i>Foreign Direct Investment</i>
<i>IMS</i>	<i>International Monetary System</i>
<i>IMF</i>	<i>International Monetary Fund</i>
<i>JPY</i>	<i>Japanese Yen</i>
<i>PBOC</i>	<i>People's Bank of China</i>
<i>SWF</i>	<i>Sovereign Wealth Fund</i>
<i>USD</i>	<i>United States Dollar</i>
<i>RCC</i>	<i>Reserve Currency Country</i>
<i>RMB</i>	<i>Chinese Renminbi</i>
<i>SDR</i>	<i>Special Drawing Right</i>
<i>WEF</i>	<i>World Economic Forum</i>

I. Introduction

The recent global financial crisis brought the stability of the international monetary system (IMS) to the foreground of international economic debate. Though it has been discussed repeatedly in segmented capacities for decades (and truly for centuries), the crisis forced an in-depth resurgence of general, economic, and political interest in to how the international economic system is structured. The future status of the United States dollar (USD) as the international reserve currency, though seemingly not in immediate danger of being usurped by another (barring complete financial warfare), is highly uncertain. While the USD presently accounts for approximately 60% of international currency reserves (with the next closest being the euro at approximately 24%),² economists and politicians have brought serious doubt to whether the system should rely on the USD.³

In early October of 2013, the Peoples Bank of China (PBOC) and the European Central Bank (ECB) agreed to a 45 billion euro currency swap allowing China and the EU to borrow each other's currencies at a fixed rate.⁴ Perpetuating such swaps is a major step in internationalizing China's yuan (also known as the renminbi) and is indicative of a strong sentiment within the international finance community. Justified by the EU as enhancing a "backstop liquidity facility and to reassure euro area banks of the continuous provision of Chinese yuan,"⁵ the two trading giants (the EU is China's biggest export

² International Monetary Fund, "Currency Composition of Official Foreign Exchange Reserves," <http://www.imf.org/External/np/sta/cofer/eng/index.html>, (accessed November 4, 2013).

³ Rupa Duttagupta, and Rishi Goyal, Isabelle Mateos y Lago, "The Debate on the International Monetary System," *IMF Staff Position Note No. 2009/26*, November 11, 2009, 5.

⁴ European Central Bank, "Press Release-ECB and the People's Bank of China Establish a Bilateral Currency Swap Agreement," October 10, 2013, <http://www.ecb.europa.eu/press/pr/date/2013/html/pr131010.en.html>

⁵ *Ibid.*

destination, with €289.7 billion in goods in 2012)⁶ are pursuing bilateral currency agreements that implicitly limit the use of the USD. This is just one of the many developments within the IMS that casts *a negative light on the perceived stability and necessity of the USD*. Though the debate on the future of the USD and IMS is far from resolved, it is clear that the coming decades will see significant change.

As of August 2013, the U.S. owed over 28% (\$5.588 trillion) of its GDP to foreign holders⁷ and ran a current account deficit of -2.8% of GDP (approximately \$4.39 billion) in 2012.⁸ Growing debt and persistent negative current account balances “reduce [the U.S.’s] resilience to a host of shocks, political as well as economic.”⁹ This perpetuates the “risk that the United States’ need for external credit will constrain its policy options”¹⁰ at the hands of some of its biggest, though not so friendly, creditors: China, Caribbean Banking Centers, Russia, and Oil Exporters.¹¹ In essence, the role of the USD in the IMS can be interpreted as a geopolitical conflict of *national sovereignty and control*. It is worth posing a number of questions regarding the present financial system: How did this situation arise? How important is currency status in the IMS and domestic economy? What geopolitical motivations and strategies are countries using within the IMS? Most importantly, what will be the future role of the USD in the IMS?

This paper will begin by addressing the economic and geoeconomic reasons for debate surrounding the USD and present IMS. Part Two will be a brief review of the

⁶ European Commission, “Fact Sheet: Facts and Figures on EU-China Trade, October 2013,” October 2013, http://trade.ec.europa.eu/doclib/docs/2009/september/tradoc_144591.pdf

⁷ U.S. Department of the Treasury, “Major Foreign Holders of Treasury Securities,” August 2013, <http://www.treasury.gov/resource-center/data-chart-center/tic/Documents/mfh.txt>

⁸ The World Bank, “Current Account Balance (% of GDP),” <http://data.worldbank.org/indicator/BN.CAB.XOKA.GD.ZS>, (accessed on October 28, 2013).

⁹ Brad Setser, “Sovereign Wealth and Sovereign Power: The Strategic Consequences of American Indebtedness,” *Council on Foreign Relations Special Report No. 37*, (2008): 42.

¹⁰ *Ibid.*, 5.

¹¹ U.S. Department of Treasury, “Major Foreign Holders of Treasury Securities.”

history of the IMS and give contextual substance to the current debate. Part Three will describe current domestic U.S. actions affecting the IMS. Part Four will elaborate on the U.S.—China relationship and dynamic. Part Five will explain the U.S.—EU connection in the context of a rising euro. Finally, the conclusion will summarize and give a few additional possibilities for IMS structure. Before reaching the argument, brief research methodology, definitions and thesis, and literature review sections will frame the contemporary debate on the role of the USD in the IMS.

i. Research Methodology

Research for this paper was completed with interviews and academic research in Geneva, Switzerland. Academic research was conducted primarily at the UN Library in Geneva, Switzerland and in Nyon, Switzerland. Official reports (from the IMF, World Bank, WEF, etc.) were used to provide original data and interpretations from politicians and economists regarding the IMS. Following references from these reports, peer-reviewed papers and speeches from prominent economists were reviewed alongside official research briefings of large banks. Academic research was conducted primarily at the UN Library in Geneva, Switzerland and in Nyon, Switzerland.

All interviews were conducted in-person with the interviewees' permission and in good faith. One professor from the Graduate Institute of Geneva, one Economic Officer from the United Nations Commission on Trade and Development, and two private asset managers (who wished to remain anonymous) at prominent Swiss banks were interviewed. Interviewees were found and contacted through searches on academic institutions' websites and previous personal contacts. There were no ethical concerns with this topic; confidentiality, however, was of the utmost importance to the two bank

employees. The combination of official reports, scholarly analysis, and perspective-building interviews provided a broad range of information for the purposes of this paper. This paper will use the far-reaching research methods to develop a multi-faceted analysis of the USD, other reserve currencies, and the IMS.

ii. Definitions and Thesis

It is important to start with three basic definitions that will serve as the drivers for this paper: the international monetary system, a reserve currency, and geoeconomics. In addition, the unpredictable and highly complex nature of the IMS requires a thesis on the future of the USD to be dynamic and encompassing of multiple realistic scenarios. In this paper, geopolitical considerations on the role of the USD point merely to the fact that the IMS is changing and the U.S. must consider the resulting possibilities.

The International Monetary Fund (IMF) defines the international monetary system (IMS) as the “rules and institutions for international payments” which, more specifically, is the “currency/monetary regimes of countries, the rules for intervention if an exchange rate is fixed or managed in some way, and the institutions that back those rules if there is a problem.”¹² The key articulations in this definition are that “rules for intervention” exist for “institutions that back those rules.” The IMS is, therefore, not an abstract field of interactions, *it is a system that directly influences, and potentially threatens, national sovereignty and security*. With the combination of economic power and international competition, countries are able to exert power and control over rival countries.

Within the IMS, an international reserve currency is, very generally, a currency that private investors, Sovereign Wealth Funds (SWFs), or Central Banks hold in

¹² Duttagupta et al, “The Debate on the International Monetary System,” 5.

significant quantities as a medium of exchange, unit of account, and store of value. More narrowly, *the* international reserve currency is the USD as it fulfills three very important criteria as defined by the IMF: “[1] deep and liquid financial and foreign exchange markets that remain resilient during crises, [2] macroeconomic stability to ensure confidence in a currency’s long-term purchasing power, [3] wide use in private sector transactions.”¹³ While there are different reasons for each individual country to hold reserves, a country’s central bank holdings (usually the USD) act as a key tool for managing domestic instability and its foreign exchange rate.¹⁴ At the most basic level, the USD maintains its role as *the* international reserve currency due to *network externalities*—“the greater the number of people who use and accept it, the more useful it is to everyone, and the more entrenched it becomes.”¹⁵

Geopolitical factors contributing to the interaction of nations economically can be better defined with the term “geoeconomics.” In his landmark definition of “geoeconomics” Edward Lutwak notes the shift in political attention to “methods of commerce” that displace “military methods” in the arena of international interaction.¹⁶ Geoeconomics is a metamorphosed version of the closely related “realist” interpretation of international relations encompassing both the nature of states and the changing nature of their focus.¹⁷ This is not to say that states interact geoeconomically following purely realist logic, but that, using Helen Thompson’s definition of power as “the ability in

¹³ Duttagupta et al, “The Debate on the International Monetary System,” 17.

¹⁴ Maurice Obstfeld, Jay Shambaugh, Alan Taylor, 2010, “Financial Stability, the Trilemma, and International Reserves,” *American Economic Journal: Macroeconomics*, American Economic Association, vol. 2(2), pages 57-94.

¹⁵ Richard Cooper, “The Future of the Dollar,” *Peterson Institute for International Economics Policy Brief No. PB09-21*, September 2009, 1.

¹⁶ Edward Lutwak, “From Geopolitics to Geo-Economics: Logic of Conflict, Grammar of Commerce,” *The National Interest*, 20, 1990, 15.

¹⁷ Jean-François Gagné, “Geopolitics in a Post-Cold War Context: From Geo-Strategic to Geo-Economic Considerations?” *Raoul Dandurand Chair of Strategic and Diplomatic Studies Occasional Paper No. 15*, 2007, 5.

various forms of one agent to impose its will on another,”¹⁸ economic considerations must be taken in to serious account when interpreting power dynamics created in the international economy. Lutwak’s definition is worth quoting at length to set the *foundation of international geoeconomic power struggle* for the entirety of this paper:

Fundamentally, states will tend to act “geo-economically” simply because of what they are: *spatially-defined entities structured to outdo each other on the world scene*. For all the other functions that states have acquired as providers of individual benefits, assorted services, and varied infrastructures, their *raison d’etre* and the ethos that sustains them still derive from their chronologically first function: *to provide security from foes without* (as well as outlaws within). [Italics added]¹⁹

This perspective on the nature and importance of economic interaction between states serves as a key link to understanding the current debate surrounding the IMS and its many facets.

iii. Literature Review

Edward Lutwak’s articulation in 1990 of the geoeconomic interaction of states can be further developed to point to how states function internationally. According to Jean-François Gagné, geoeconomic analysis rests on four key developments in geopolitical analysis:

[1]That threats to a State’s national security are first and foremost related to its financial and/or commercial dependence on other States...

[2]States try to balance power distribution according to their strength, their position and their behavior and on the basis of a geo-economic rationale...

[3]When a State must choose between economic or military considerations, it will opt for the former...

[4]States harness their resources in order to deal with fiercer international economic competition.²⁰

¹⁸ Helen Thompson, “Debt and Power: The United States’ Debt in Historical Perspective,” *International Relations* 21, 2007, 309.

¹⁹ Edward Lutwak, “From Geopolitics to Geo-Economics,” 19.

²⁰ Jean-François Gagné, “Geopolitics in a Post-Cold War Context,” 13-15.

These four assumptions can be used to better define how states interact in the IMS as they are mostly concerned with increasing their power through “industrial capacities, access to and control of natural resources and financing, control of technology and stability of political institutions.”²¹ This is divergent from the realist approach to international political economy as states do not exert maximum power and control militarily.²² It is, rather, economic power and security that directs much of developed nations’ actions. When economic wellbeing replaces military security as the dominant motivator for international interaction, the dynamics of economic power must be explored.

Though there are certainly alarmists in the field of IMS study who predict the collapse of the dollar accompanied by financial chaos,²³ general consensus points to a stable IMS, at least for now. A (slowly) growing U.S., recovering Europe, and steady Chinese economy has quieted the eruption of instability resulting from the financial crisis. Current projections do not focus on an abrupt breakdown of the IMS and USD but concentrate, rather, on projecting long-term situations in the context of the USD, euro, yuan, and the possibility of an alternative international currency.²⁴ Forecasts by Deutsche Bank Research, the World Economic Forum (WEF), and the IMF all conclude that any shift towards major usage of the yuan would be two decades away and is uncertain.²⁵ The euro may play an increasing role as an international reserve currency, but this is also

²¹ Jean-François Gagné, “Geopolitics in a Post-Cold War Context,” 14.

²² Helen Thompson, “Debt and Power,” 314.

²³ See: Charles Goyette, “The Dollar Meltdown: Surviving the Impending Currency Crisis with Gold, Oil, and Other Unconventional Investments,” (New York, New York: Penguin Group, 2009).

²⁴ Richard Cooper, “The Future of the Dollar,” 6.

²⁵ See: Dutttagupta et al., “The Debate on the International Monetary System”; World Economic Forum, “Euro, Dollar, Yuan Uncertainties: Scenarios on the Future of the International Monetary System,” *World Scenario Series*, 2012; and Markus Jaeger, “Yuan as a Reserve Currency,” *Deutsche Bank Research Briefing*, 2010.

uncertain given the current political climate, sovereign debt crisis, and growth forecasts.²⁶

Finally, within the U.S. there is considerable debate on the implications of its current deficit and debt levels. In a *Council on Foreign Relations* report, Brad Setser sees U.S. reliance on foreign financing as a “strategic vulnerability...[rather than a] strategic asset”²⁷ to allude to the possibility of future infringements on U.S. sovereignty. In close agreement, Helen Thompson of Cambridge University believes the dynamic of Chinese-held U.S. debt has “fundamentally changed the political terms on which the U.S. has borrowed since the 1960s.”²⁸ Slightly tempering these qualms of independence is noted Harvard economist Lawrence Summers’ argument that a “balance of financial terror”²⁹ exists between the U.S. and its creditors, as a downturn in the U.S. invariably exacts tremendous costs on their economies. In addition, the short and medium-term might not hold significant international economic threats for the U.S.; these threats may be primarily domestic.³⁰ These domestic threats will be explored in a later section.

The present geoeconomic, economic, and political challenges facing the IMS is certainly cause for debate on its future. The system has surely not been a stable one over the past century of economic, political, and military upheaval. A brief history will be explained to give context to the current debate.

II. Context and History

²⁶ Dutttagupta et al, “The Debate on the International Monetary System;” World Economic Forum, “Euro, Dollar, Yuan Uncertainties;” Markus Jaeger, “Yuan as a Reserve Currency.”

²⁷ Brad Setser, “Sovereign Wealth and Sovereign Power,” 4.

²⁸ Helen Thompson, “Debt and Power,” 305.

²⁹ Lawrence Summers, “The U.S. Current Account Deficit and the Global Economy,” *The Per Jacobsson Foundation Lecture*, October 3, 2004, 8.

³⁰ Cedric Tille, interviewed by Cullen Millikin, October 30, 2013.

The modern history of the IMS and currencies can, for the purposes of this paper, be summarized by the following eras: pre-World War I, 1870-1914; the inter-war period, 1919-1939; the Bretton Woods system, 1945-1971; and the Post Bretton Woods order, 1971-present. A brief overview of the monetary system in each period will show the similarities and differences compared to today's system.

i. Pre-World War I, 1870-1914

The period of 1870-1914 is typically defined as the “Classical Gold Standard”³¹ and was an era of a relatively stable IMS. Currencies were backed by gold in a fixed exchange rate regime and successfully fulfilled the three basic requirements of “money”: as a medium of exchange, as a unit of account, and as a store of value.³² From an economic standpoint, it was a period of great expansion, improvement, and growth. Most nations chose to join the standard where “competitive manipulation of exchange rates was rare, international trade showed record growth rates, balance-of-payments problems were few...and unemployment remained fairly low.”³³ Though backed by gold, in this period “about 60% of world trade was invoiced and settled in [pound] sterling.”³⁴ There is some debate as to when the sterling fell to the USD as the international reserve currency. Recent work by Barry Eichengreen (of U.C. Berkeley) and Marc Flandreau (of the Graduate Institute of Geneva) has shown that the sterling and USD may have shared

³¹ James Rickards, “Currency Wars: The Making of the Next Global Crisis,” (New York, New York: Penguin Group, 2012), 43.

³²Paul R. Krugman and Maurice Obstfeld, “The International Monetary System 1870-1973,” *International Economics: Theory and Policy, Sixth Edition*, (Reading, Massachusetts: Addison-Wesley, 2003).

³³ Giulio M. Gallarotti, “The Anatomy of an International Monetary Regime: The Classical Gold Standard 1880-1914,” (New York, New York: Oxford University Press, Inc., 1995), 18.

³⁴ David Williams, “The Evolution of the Sterling System,” in C.R. Whitlesey and J.S.G Wilson, eds, *Essays in Money and Banking*, (Oxford: Oxford University Press, 1968), 268.

reserve status for most of the 1920s.³⁵ This is a very significant point, as they draw the conclusion that “there is no reason therefore why the dollar and the euro, notwithstanding their respective recent difficulties, cannot both be consequential international currencies.”³⁶ With respect to IMS stability, the onset of World War I caused this halcyon age to end, never to return.

ii. Inter-War Period, 1919-1939

The interwar period of 1919-1939 had two central components, the rise of the USD and massive economic instability. The U.S. Federal Reserve System was created in 1913 which, in conjunction with massive wartime debts of European nations (most notably Great Britain), ushered in the era of U.S. dominance in the IMS. Problems such as re-pegging to gold, floating exchange rates, and economic destruction caused enormous damage to countries across the globe as protectionist measures and aggressive monetary policies dominated international relations. One of the stated purposes of the IMF (created at the end of World War II) was to prevent and “avoid [the] competitive exchange depreciation” which occurred during this period.³⁷ Hyperinflation in the Weimar Republic of Germany resulted from the floating of the German mark following World War I and destroyed Germany’s economy. Though advantages in moderate inflation (and, thus, currency depreciation) would have allowed Germany to export more and pay back hefty wartime reparations, hyperinflation destroyed the lives of citizens and “strengthened the hand of German industrialists who controlled hard assets”³⁸ –

³⁵ See: Barry Eichengreen, Marc Flandreau, “The Federal Reserve, the Bank of England, and the Rise of the Dollar as an International Currency 1914-1939,” *Graduate Institute of International and Development Studies Working Paper No: 16/2010*, August 2010, 1-28.

³⁶ Barry Eichengreen, Marc Flandreau, “The Federal Reserve...,” 2.

³⁷ International Monetary Fund, *Articles of Agreement of the International Monetary Fund, Article 1 Sec. 3*, Washington D.C.: International Monetary Fund, 2011.

³⁸ James Rickards, “Currency Wars,” 60.

essentially priming the pump for the Nazi Party's ascension of power. In the U.S., bank runs and the Great Depression caused President Franklin Delano Roosevelt to use extreme measures with Executive Orders to seize gold assets in the U.S. and to eventually devalue the USD against gold.³⁹ The goal of this devaluation was to make U.S. goods cheaper for other nations and, thus, allow the U.S. to increase its domestic productivity and exports to pull itself out of the Great Depression. The contagion of this domestic monetary policy effected all nations involved in the wars, as they had become more interconnected in the pre-World War I era. This was a period of great economic mistrust and animosity between nations as recovery and trade was seen as a zero-sum game. As is readily known, the closing of World War II was supplemented by the Allied nations' economic cooperation via the Bretton Woods system.

iii. The Bretton Woods System, 1945-1971

The Bretton Woods era of 1945-1971 "was on the whole a period of currency stability, low inflation, low unemployment, high growth and rising real incomes."⁴⁰ Though recessions were recorded in the U.S. and United Kingdom about every three to five years, fixing the USD to gold at \$35 per ounce with other currencies pegged against the USD provided both stability and maneuverability. Article IV of the Bretton Woods Agreement focuses on the "obligations [of the Fund] regarding exchange arrangements"⁴¹ and permits the "introduction of a widespread system of exchange arrangements based on stable but adjustable par values."⁴² This, in essence, required members to intervene in currency markets to keep their declared value of currency within a "band" (range) of one

³⁹ James Rickards, "Currency Wars," 70.

⁴⁰ James Rickards, "Currency Wars," 78.

⁴¹ International Monetary Fund, *Articles of Agreement of the International Monetary Fund*, Article 4.

⁴² International Monetary Fund, *Articles of Agreement of the International Monetary Fund*, Article 4 Sec. 4.

percent above or below its declared value.⁴³ This gave member nations the responsibility to hold enough reserves to maintain their peg to the dollar while also giving them slight maneuverability and ability to devalue their currency given extreme circumstances. The Bretton Woods system did not prove infallible in the face of international monetary instability—the so-called “gold window” beginning in 1968 when the open-market price of gold was higher than the fixed exchangeability rate of \$35⁴⁴—ultimately ended in 1971 with President Nixon’s declaration that the USD would no longer be convertible into gold by central banks. Subsequent devaluations in 1973 of the USD against European currencies caused major European countries (notably Germany, Switzerland, and Britain) to float their currencies against the dollar to effectively end the Bretton Woods system.⁴⁵

iv. The Post-Bretton Woods Order, 1971-Present

The effect of major global currencies floating against each other defined the post Bretton Woods era of 1971-present. International competitiveness for financial centers and investment implicitly forced many countries to liberalize capital controls and regulations to avoid being neglected by international investors.⁴⁶ The state of the U.S. economy in the late 1970s, “stagflation” and an appreciating dollar, caused the U.S. to actively intervene in the foreign exchange market to bring its value back down to a level where it could help the country compete internationally.⁴⁷ Developing nations in Latin America established Currency Boards in attempt to maintain their countries’ peg to the dollar

⁴³ Benjamin Cohen, “Bretton Woods System,” in R.J. Barry Jones (ed.), *Routledge Encyclopedia of International Political Economy* (New York, New York: Routledge, 2002).

⁴⁴ James Rickards, “Currency Wars,” 86.

⁴⁵ Barry Eichengreen, “Exorbitant Privilege: The Rise and Fall of the Dollar and the Future of the International Monetary System,” (New York, New York: Oxford University Press, 2011), 131.

⁴⁶ Barry Eichengreen, “Exorbitant Privilege,” 135.

⁴⁷ Barry Eichengreen, “Exorbitant Privilege,” 143.

while South East Asian countries focused on liberalizing their economies to spur foreign direct investment (FDI). Simultaneous liberalization of capital controls and maintaining domestic currency stability proved difficult for many developing nations. Europe, meanwhile, was busy integrating its economies and monetary policies in order to achieve greater currency stability. Though these efforts were largely tumultuous and unsuccessful in the 1970s, in the 1980s the major economies of France and Germany were successful in moving towards the monetary and political union of the present-day European Union. Though the euro emerged as a major contender against the USD, the present IMS relies on the USD and its underlying political stability.

III. The Domestic United States

The U.S. is the central actor in the IMS and, thus, is discussed constantly in regards to its domestic policies and international position. The recent financial crisis' origin in the U.S. and contagion to the rest of the world has intensified research, predictions, and discourse on whether the future holds stability for the USD and IMS.⁴⁸ First, the benefits and drawbacks to the U.S. from being a Reserve Currency Country (RCC) will be explained. Second, the "twin deficits" (current account deficit and budget deficit) with respect to perceived stability and longevity will be explored. Lastly, the issue of large amounts foreign held debt will be argued to pose a geopolitical and geoeconomic vulnerability to other nations for the U.S. in the future.

i. Benefits and Drawbacks of being a RCC

There are many benefits for the U.S. being the main RCC, with net positive influence on the U.S. economy conservatively estimated to be between .3% and .5% of U.S. GDP

⁴⁸ Duttagupta et al, "The Debate on the International Monetary System," 5.

(approximately \$50 billion to \$75 billion) per year.⁴⁹ The two main benefits to the U.S. are seigniorage and the extension of low interest loans to the U.S. government and private sector. First, seigniorage benefits are earned by the spread between production and value of dollars, essentially, due to the “interest-free loans generated by issuing additional currency to nonresidents who hold US notes and coins”⁵⁰ to the benefit of the U.S.’s financial position. Second, foreign purchases of U.S. Treasury Bills push down interest rates and effectively allow the government, households, and corporations to borrow at cheaper rates than would be indicated by the U.S.’s fiscal state and current account balance.⁵¹ In addition to these main benefits, the ability to profit from borrowing cheaply and lending at higher rates in riskier investments (FDI and equity) has earned the classification of the U.S. as the “world’s venture capitalist.”⁵² Though it can be argued that this benefit is due to a risk premium, not reserve currency status,⁵³ “the U.S. balance sheet increasingly... [holds] high-return risky investments on the asset side.”⁵⁴ In terms of outstanding debt, the denomination of loans in USD offers supreme advantage to the U.S. Loans in USD effectively “shift the exchange rate exposure to the rest of the world”⁵⁵ as lenders are highly sensitive to the USD’s value for repayment. Similarly, when foreigners hold U.S. debt, depreciation in the USD *decreases the value of their loan and allows the*

⁴⁹ McKinsey & Company, “An Exorbitant Privilege? Implications of Reserve Currencies for Competitiveness,” *McKinsey Global Institute Discussion Paper, December 2009*, 18.

⁵⁰ McKinsey & Company, “An Exorbitant Privilege?” 8.

⁵¹ Francis E. Warnock, Veronica Cacadac Warnock, “International Capital Flows and U.S. Interest Rates,” *Journal of International Money and Finance* 28, (2009), 903–919.

⁵² Pierre-Olivier Gourinchas, H el ene Rey, “From World Banker to World Venture Capitalist: U.S. External Adjustment and the Exorbitant Privilege,” *The National Bureau of Economic Research* 7, (2007), 11–65.

⁵³ Cedric Tille, interviewed by Cullen Millikin, October 30, 2013.

⁵⁴ Pierre-Olivier Gourinchas, H el ene Rey, “From World Banker to World Venture Capitalist,” 22.

⁵⁵ Pierre-Olivier Gourinchas, H el ene Rey, “From World Banker to World Venture Capitalist,” 22.

*U.S. to pay it back with “cheaper” dollars.*⁵⁶ Benefits to the U.S. economy of its RCC status, while notable, are accompanied by drawbacks.

The central cost to the U.S. being the RCC is the overvaluation of the USD due to “greater inflows of foreign capital” causing the “dollar exchange rate [to be] higher than it would be without reserve currency status.”⁵⁷ The exchange rate has deep implications for international competitiveness and growth—if the USD is overvalued (current estimates are at 5% to 10%),⁵⁸ producers have either lower profit margins or are passed over entirely due to the expense of importing U.S. products. In addition, the economic influence of U.S. monetary and fiscal policies is integral to the stability and state of the IMS. When “international opinion may be more demanding than domestic opinion [in regards to monetary policy],⁵⁹ the U.S. finds itself in a position of “strategic vulnerability...[due to its] current reliance on other governments for financing.”⁶⁰ This geopolitical issue of sovereignty with geoeconomic foundations will be addressed after contextualizing these fears with the twin deficits.

ii. The Twin Deficits

The U.S.’s budget deficit (\$680 billion for Fiscal Year 2013)⁶¹ and current account deficit (aforementioned at -2.8% of GDP) is cause for concern to many studying the IMS.

Coupled with the U.S. Government’s shutdown and possible default in October 2013, the use of the USD as a reliable reserve currency has been called in to serious question.

⁵⁶ James Rickards, “Currency Wars,” 181.

⁵⁷ McKinsey & Company, “An Exorbitant Privilege?” 9.

⁵⁸ McKinsey & Company, “An Exorbitant Privilege?” 20.

⁵⁹ Richard Cooper, “The Future of the Dollar,” 5.

⁶⁰ Brad Setser, “Sovereign Wealth and Sovereign Power,” 4.

⁶¹ Congressional Budget Office, *Monthly Budget Review—Summary for Fiscal Year 2013*, November 2013, http://www.cbo.gov/sites/default/files/cbofiles/attachments/44716-%20MBR_FY2013_0.pdf.

The perception of U.S. Treasury bills as a “no-risk” asset has allowed the U.S. to run persistent budget deficits without significant fear of losing financing.⁶² Theoretically, as long as investors believe the U.S. will pay back loans fully, on-time, and with a reasonable currency valuation, the U.S. could run even larger budget deficits. Though the degree to which this ability has added to the U.S.’s budget deficits is disputed, basic economic theory dictates that the ability to borrow at low rates encourages spending. This perceived risk level, however, is increasingly unsteady when coupled with domestic political gridlock and outstanding liabilities to entitlement programs.⁶³ The long-standing ability of the U.S. to borrow cheaply may prove dangerous. Over borrowing could cause a decline in market trust of the U.S. government to service its debt and would damage international purchases of its Treasury securities to, therefore, increase interest rates. Current domestic political will power to reduce spending and increase revenues is by no means steady as the Federal Reserve and U.S. government favor domestic prosperity over international stability.⁶⁴ Related to wavering international sentiment of U.S. debt is its persistent practice of importing more than it exports.

A current account deficit is defined as the imports exceeding exports, or between net national savings and net national investment. A deficit reflects an inward flow of capital to the country. For emerging markets or industries, this may be used as a proxy for a heightened belief in the growth potential. In the case of the U.S., however, Lawrence Summers has shown that “net investment has declined over the last four or five years in the United States,” which implies that increasing current account deficits are due to

⁶² World Economic Forum, “Euro, Dollar, Yuan Uncertainties,” 11.

⁶³ World Economic Forum, “Euro, Dollar, Yuan Uncertainties,” 11.

⁶⁴ Cedric Tille, interviewed by Cullen Millikin, October 30, 2013.

“reduced savings and increased consumption.”⁶⁵ While this difference appears inappreciable, it indicates that the U.S. is fueling its own current account deficits and not enticing increased investment. What is the problem associated with this type of deficit? Deficits place increased strain upon a country in terms of long-term loan rates as they are seen as structurally unable to pay back loans. Baseline projections on American growth and consumption patterns prove this to be an unsustainable (not self-correcting) deficit. To international investors and Central Banks, this large current account deficit fuels uncertainty—something currency investors are not prone to accept.

The debate is not centered on whether the U.S.’s twin deficit is sustainable, few would dispute this; the contention among economists is about the consequences.⁶⁶ Current and future projections describe the problems the U.S.’s domestic policies pose on its sovereignty and role as the major RCC.

iii. Foreign Held Debt

The argument for an inevitable decline of U.S. power resulting from persistent budget deficits is not a new one—Paul Kennedy’s analysis of relative decline to the Soviet Union and Japan was immensely popular, *but in the 1980s*.⁶⁷ The present situation, however, is not one of projected decline, but of the intensely unique circumstance of the U.S. becoming significantly indebted to the world’s rising power, China.⁶⁸ The two diametrically opposed arguments for the geopolitical consequences for foreign holdings of U.S. debt are the “liberal internationalist” stance of increased integration bringing growing stability and the more “realist” position of greater strategic vulnerability. While

⁶⁵ Lawrence Summers, “The U.S. Current Account Deficit and the Global Economy,” 6.

⁶⁶ Helen Thompson, “Debt and Power,” 306.

⁶⁷ Samuel Huntington, “The U.S.—Decline or Renewal?” *Council on Foreign Relations: Foreign Affairs*, Winter 1988/1989, Accessed November 5, 2013, <http://www.foreignaffairs.com/articles/43988/samuel-p-huntington/the-us-decline-or-renewal>.

⁶⁸ Helen Thompson, “Debt and Power,” 306-323.

many liberal trade economists and politicians somewhat correctly assert that increased financial interdependence brings stability, the nature of power dynamics in the international economy point to this interdependence creating possible constraints for U.S. policy in the future.⁶⁹

In typical lending cases, creditors work to require structural changes among the debtor to provide future stability and to “get their house in order.”⁷⁰ Though the U.S. is in a markedly different circumstance, the U.S. is in the unique position of being able to devalue its currency and thus lower its external debt requirements. This opposes American and creditor nations’ (most significantly China) interests and brings strong potential for conflict. The situation is currently stable as China has not stopped purchasing U.S. securities or shifted its holding composition, but Chinese interests “lie in the American government pushing the burden of adjustment onto American citizens, something which, by reducing American domestic demand would hurt Chinese exports.”⁷¹ Though this may seem like a vindication of the liberal argument, in the event of Chinese action to assure repayment of U.S. debt and higher U.S. interest rates, “creditors have political leverage to make threats... [that] can be an effective instrument of hard power.”⁷² In the IMS, where countries are highly sensitive to future valuations, a threat can be as influential as an act in “dumping” or redistributing holdings.⁷³ Conflict with China as a significantly different nation both ideologically and economically stems from the combination of U.S. domestic concerns coupled with international interaction.

⁶⁹ Brad Setser, “Sovereign Wealth and Sovereign Power,” 27.

⁷⁰ Katherine Forslund, interviewed by Cullen Millikin, October 27, 2013.

⁷¹ Helen Thompson, “Debt and Power,” 316.

⁷² Ibid.

⁷³ Brad Setser, “Sovereign Wealth and Sovereign Power,” 19.

IV. U.S.—China Relationship

Research projections on the future of the IMS focus on the currently debated future of the yuan. There are realistic reasons to believe the yuan will grow in proportion of reserve holdings over the next few decades. Any analysis of the future of the IMS must take in to account the changes this would bring. The Chinese government has taken major steps to internationalize usage of the yuan (such as allowing foreign investor to trade in its stock exchange)⁷⁴ and have professed strong desire to move away from a system dominated by the USD.⁷⁵ Significant challenges face China in becoming a major player in the IMS and subsequently threaten the U.S. First, domestic complications in China will be detailed to explain roadblocks with the yuan becoming a reserve currency. Second, the geoeconomic conflict between the U.S. and China will highlight the necessity of the U.S. to consider strategic vulnerabilities with a rise in yuan usage. Third, the future relationship of the U.S. and China will show the developing nature of its unique situation.

i. Complications with Yuan Becoming a Reserve Currency

Issues with major international usage of the yuan are focused upon three lacking areas: first, an export-oriented growth model; second, an under-developed financial sector; and third, capital controls with the lack of rule of law. For the first, China faces an economic difficulty whose underlying theme has long been present in the field of international relations: domestic self-sufficiency. Though strong growth since 1978 (the beginning of Deng Xiaoping's economic reforms) has increased GDP per capita more than ten-fold to \$6,118 in 2012,⁷⁶ the export-led nature of its economy may be now yielding some

⁷⁴ World Economic Forum, "Euro, Dollar, Yuan Uncertainties," 12.

⁷⁵ Zhou Xiaochuan, "Reform the International Monetary System," published in *Bank For International Settlements Review* 4, March 2009, <http://www.bis.org/review/r090402c.pdf>.

⁷⁶ The World Bank, *World Development Indicators, GDP per capita (current US\$)*, Accessed November 12, 2013, <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>

limitations.⁷⁷ This has been articulated in Chapter Four of China's Twelfth Five-Year Plan as "establish[ing a] long term mechanism of expanding domestic demand."⁷⁸

Chapter Ten of Machiavelli's *The Prince* focuses on this issue of independence; "It is necessary to consider another point in examining the character of these principalities: that is, whether a prince has such power that, in case of need, he can support himself with his own resources, or whether he has always need of the assistance of others."⁷⁹ Without a domestic demand-based economy, China is unready to assume the responsibilities associated with being a RCC.

Second, China's financial sector is at odds with supporting major trading and the safety of foreign exchange reserves. China will need to implement domestic institutional reforms, such as central bank independence, inflation targeting, and a more liberalized banking center.⁸⁰ This causes ownership problems, however, as these reforms require the government "to implement a host of secondary reforms aimed at ensuring financial sector stability post-convertibility... and accept a significant diminution of direct control over the financial system."⁸¹ Indeed, it appears that China's stated aim to "strengthen and improve macro-control... [and] the coordination of fiscal, monetary, investment, industrial and land policy"⁸² to manage growth and control inflation are at odds with this liberalization.

Third, capital controls are a major roadblock to internationalizing the yuan and must be overcome if there is to be any serious usage of the yuan in international

⁷⁷ World Economic Forum, "Euro, Dollar, Yuan Uncertainties," 12.

⁷⁸ National People's Congress, *China's Twelfth Five Year Plan (2011- 2015)*, translation by the Delegation of the European Union in China, <http://www.britishchamber.cn/content/chinas-twelfth-five-year-plan-2011-2015-full-english-version>

⁷⁹ Niccolò Machiavelli, "The Prince," (New York, New York: The Macmillan Company, 1916), Chapter 10.

⁸⁰ World Economic Forum, "Euro, Dollar, Yuan Uncertainties," 12.

⁸¹ Markus Jaeger, "Yuan as a Reserve Currency," 2.

⁸² National People's Congress, *China's Twelfth Five Year Plan (2011- 2015)*. Chapter 4.

transactions. An open capital account with full convertibility would mean ending Chinese restrictions on capital flows (FDI and other investments) and allowing currency conversions to which foreigners currently have limited access and citizens are regulated.⁸³ The domestic bond market and foreign exchange markets are also small relative to the stresses that would be exerted upon them by negative shocks. These restrictions, though economically important to China's development, are signals of political aversion to a strict rule of law. Current prosecutions, most famously Bo Xilai's conviction of corruption,⁸⁴ have shown progress of maintaining a rule of law to other countries, China's "regulatory enforcement" score by the World Justice Project is below many countries in its income group such as Serbia, Russia, and Mexico.⁸⁵ With these multiple difficulties in mind it seems unlikely, even impossible, for the yuan to emerge as a reserve currency before enacting major reforms that could take upwards of two decades.⁸⁶ Though its status as a RCC is limited in the short-term, this does not mean China is irrelevant to the IMS and U.S.

ii. Geoeconomic Conflict

Chinese actions in the international economy may be interpreted as a long-term pursuit of greater power with a short-term nod to stability. Simultaneously acting as the U.S.'s main creditor and opposing Eastern power creates a unique dynamic not seen in contemporary political economy. Rising nations in the past (Spain in the 16th century and France in the 18th century), have used debt to finance a rise to power before being weakened externally

⁸³ Markus Jaeger, "Yuan as a Reserve Currency," 3.

⁸⁴ Simon Denyer, "China's Ousted Official Bo Xilai Convicted of Corruption, Sentenced to Life in Prison," *The Washington Post*, September 2013, http://articles.washingtonpost.com/2013-09-21/world/42299843_1_bo-xilai-wang-lijun-gu-kailai

⁸⁵ The World Justice Project, *Rule of Law Index Scores and Rankings*, 2013, <http://worldjusticeproject.org/rule-of-law-index-data>

⁸⁶ Markus Jaeger, "Yuan as a Reserve Currency," 3.

when they could no longer fund fiscal deficits for domestic reasons.⁸⁷ While Spain and France fell from military failings, the duality of increased Chinese holdings of U.S. debt and its own economic rise in other parts of the globe point to the new warfare of geoeconomics. As documented in Thompson's analysis of the role of debt to the finance power ascension of Spain, France, and Great Britain, "whether borrowing weakens or strengthens a state will depend not on the amount of the debt a state assumes, whether domestic or foreign, but its ability to service that debt."⁸⁸ This ability depends on the borrowing state's credibility as a debtor to reform and align domestic policies with creditors' desires. Within the IMS, further development of the Chinese domestic market and other exporting destinations (such as Europe, the Middle East, India, etc.) seems only to lead to greater Chinese power at the expense of the U.S. The Chinese have been very successful at gaining market-share and technological advantages.

Under geoeconomic assumptions, states think about penetrating new markets in much the same way that states think about occupying a new territory.⁸⁹ From *the Art of War*, "in the practical art of war, the best thing of all is to take the enemy's country whole and intact; to shatter and destroy it is not so good."⁹⁰ Strategic inclusion or investment in a specific market (such as state-owned Chinese firm investing in Sub-Saharan Africa's resource and infrastructure sectors)⁹¹ serves the country as a way to gain economic influence; with economic influence comes political influence. China has been concurrently developing exporting lines to countries other than the U.S. (mostly the EU,

⁸⁷ Helen Thompson, "Debt and Power," 310.

⁸⁸ Helen Thompson, "Debt and Power," 312.

⁸⁹ Gyula Csurgai, "Sovereign Wealth Funds: Strategies of Geo-Economic Power Projections," in Otto Hieronymi (ed.), *Globalization and the Reform of the International and Banking and Monetary System*, (Palgrave Macmillan, 2009), 8.

⁹⁰ Sun Tzu, "The Art of War," translated by Lionel Giles (El Paso, Texas: El Paso Norte Press, 2009), 108.

⁹¹ See: Raphael Kaplinsky, Mike Morris, "Chinese FDI in Sub-Saharan Africa: Engaging with Large Dragons," *European Journal of Development Research*, 21(4), 2009, 551-569.

Hong Kong, and ASEAN countries),⁹² using its sovereign wealth fund (SWF) to gain technological, competitive, and political influence,⁹³ and securing energy supplies within the oil producing regions of Latin America, Sub-Saharan Africa, and the Middle East. China's massive investments in infrastructure linking it to "its energy-rich neighbors, most notably Russia... have inevitably extended its geopolitical reach and influence. A more consolidated strategic partnership between China and Russia represents the greatest potential threat to western dominance."⁹⁴ Chinese strategic interests for energy security, economic growth, and diplomatic influence diverge from U.S. power and economic security.

iii. Future Relationship

In 2011, China surpassed Japan as the U.S.'s largest creditor through U.S. Treasury securities.⁹⁵ As mentioned previously, affects of U.S. indebtedness to China have not yet borne significant policy alterations or domestic instability for the U.S. The recent decade of Chinese growth and only moderate upward valuation of the yuan has brought serious allegations that China is artificially keeping its currency undervalued against the USD and euro. China has been intervening in foreign exchange markets to keep the yuan "significantly undervalued" to the benefit of Chinese exporters, according the U.S. Department of Treasury's 2013 report on exchange rate policies.⁹⁶ The issue of intervention in the foreign exchange market is not particular to China—intervention to

⁹² The World Trade Organization, *International Trade and Market Access Data*, Accessed November 14, 2013, http://www.wto.org/english/res_e/statis_e/statis_bis_e.htm?solution=WTO&path=/Dashboards/MAPS&file=Map.wcdf&bookmarkState={%22impl%22:%22client%22,%22params%22:{%22langParam%22:%22en%22}}

⁹³ Gyula Csurgai, "Sovereign Wealth Funds," 217.

⁹⁴ Roland Dannreuther, "China and Global Oil: Vulnerability and Opportunity," *International Affairs* 87:6 (2011) 1345–1364.

⁹⁵ U.S. Department of Treasury, "Major Foreign Holders of Treasury Securities."

⁹⁶ U.S. Department of the Treasury Office of International Affairs, *Report to Congress on International Economic and Exchange Rate Policies*, October 13, 2013, http://www.treasury.gov/resource-center/international/exchange-rate-policies/Documents/2013-10-30_FULL%20FX%20REPORT_FINAL.pdf

devalue currencies to spur export growth is known as competitive devaluation, or “currency wars.”⁹⁷ In regards to what China may do currently with its foreign exchange interventions, none are wildly destabilizing or unfixable for the U.S.

Presently, there are three main economic changes in Chinese actions that would destabilize the U.S. in the short-term and act as an effort towards making the yuan more widely used. Outlined by Harvard University’s Richard Cooper:

[1] China could simply stop intervening in the foreign exchange market to acquire additional dollars or any other currency.[2]The Chinese could switch their foreign exchange intervention from dollars to euros or yen or some other currencies.[3]China could change the composition of its large reserves from one dollar security to another.⁹⁸

The first, non-intervention, would largely benefit U.S. exporters and is the stated desire of U.S. politicians and economists—it does not seem likely that China will give this boon to the U.S. The second, shifting purchases to currencies other than the USD, would result in the appreciation of (most likely) the euro, yen (JPY), or even the yuan. This would also benefit the U.S., but would be vehemently opposed by the EU and counteracted with its own currency intervention to protect sputtering domestic growth. The third, changing the composition of its holdings, would according to Cooper, “temporarily disequilibrate the market. [However,] once US authorities learned what the Chinese were doing, they could reverse it through their own actions.”⁹⁹ These short-term scenarios point to stability in the economic relations of China and the U.S. If the Chinese are successful in implementing the aforementioned structural reforms, however, geopolitical concerns of strategic vulnerabilities and conflicts must be taken into account.

⁹⁷ See: James Rickards, “Currency Wars,” 1-255.

⁹⁸ Richard Cooper, “The Future of the Dollar,” 5-6.

⁹⁹ Richard Cooper, “The Future of the Dollar,” 6.

V. U.S.—EU Relationship

The U.S. and EU are inexorably linked politically, ideologically, and economically. Following the creation of the euro, exuberant proponents projected its use to overcome the USD in international transactions as the world's dominant currency.¹⁰⁰ These hopes have clearly been dashed following the raucous instability and loss of credibility following the global crisis in 2008 and sovereign debt crisis of 2009. The creation of the euro in 1999 immediately encompassed 18% of allocated total foreign exchange holdings—due mainly to the merging of the Deutsche mark and French Franc.¹⁰¹ It has since grown to account for approximately 24% of official reserves and brings with it deep uncertainty as to the potential consequences for the USD.¹⁰² Though surpassing the USD as the dominant currency is highly unlikely, the euro holds significant value in the IMS and usage in the Eurozone and its periphery warrants its thoughtful consideration. First, issues of EU governance will be discussed to show weaknesses in the euro's macro-management. Second, an analysis of the future of the euro in the IMS will highlight its limitations.

i. European Governance Issues

The issue of fiscal sovereignty is one of the central difficulties in the economic governance of the EU.¹⁰³ Though the EU has successfully created a monetary union with its own central bank, the problem of fiscal independence has created an environment wherein a nation has the capability to sink the monetary union due to its own

¹⁰⁰ Menzie Chinn, Jeffrey Frankel, "Will the Euro Eventually Surpass the Dollar as Leading International Reserve Currency?" *The National Bureau of Economic Research Working Paper No. 11510*, August 2005, <http://www.nber.org/papers/w11510>

¹⁰¹ International Monetary Fund, "Currency Composition of Official Foreign Exchange Reserves."

¹⁰² James D Sidaway, "Asia—Europe—United States: the Geoeconomics of Uncertainty," *Royal Geographical Society*, (37.4), 2005, 373–377.

¹⁰³ Nicolas Jabko, "Which Economic Governance for the European Union? Facing up to the Problem of Divided Sovereignty," *Swedish Institute for European Policy Studies*, 2011, http://www.sieps.se/sites/default/files/2011_2_1.pdf.

irresponsibility. With the creation of the euro and convergence of borrowing rates, countries that had been “profligate and had defaulted on debt or devalued their currencies, such as Greece or Spain,”¹⁰⁴ now had the ability to borrow at rates very close to those enjoyed by fiscally prudent nations like Germany. World-renowned sovereign debt restructuring specialist Lee Buchheit notes that when politicians are given the ability to borrow unlimited amounts of money at extremely low rates, politicians will borrow unlimited amounts of money.¹⁰⁵ This high pre-crisis level of Greek borrowing triggered the financial crisis and credit crunch of 2009 leading to intense distress and the biggest sovereign debt restructuring ever recorded.¹⁰⁶ Misalignment of governance and interests impinges strong doubt on international investors as to the stability and security of euro holdings.

The European Commission and European leaders have been working vigorously to enact reform to strengthen “economic and fiscal governance.”¹⁰⁷ All EU members signed the “Fiscal Compact” in 2012 that “is intended to foster budgetary discipline, to strengthen the coordination of economic policies and to improve the governance of the euro area.”¹⁰⁸ Article Three of the Fiscal Compact intends to make budgetary restrictions part of national law “through provisions of binding force and permanent character, preferably constitutional, or otherwise guaranteed to be fully respected and adhered to

¹⁰⁴ James Rickards, “Currency Wars,” 60.

¹⁰⁵ Lee Buchheit, “The Eurozone Debt Crisis and the Greek Debt Restructuring,” (presentation, Graduate Institute of Geneva, Geneva, Switzerland, November 12, 2013)

¹⁰⁶ Lee Buccheit, “The Eurozone Debt Crisis and the Greek Debt Restructuring.”

¹⁰⁷ Céline Allard, Petya Koeva Brooks, John C. Bluedorn, Fabian Bornhorst, Katharine Christopherson, Franziska Ohnsorge, Tigran Poghosyan, “Toward a Fiscal Union for the Euro Area,” *IMF Staff Discussion Note 13/09*, September 2013, 4.

¹⁰⁸ “The Fiscal Compact and the European constitutions: ‘Europe speaking German,’” *European Constitutional Law Review*, 8: 1–8, 2012.

throughout the national budgetary processes.”¹⁰⁹ Proponents of the Compact hail its ability to restore positive sentiment and help growth. Skeptics see little improvement in enforcement mechanisms and see its weaknesses in times of strain as ultimately the same as the pact that preceded it. Even so, budgetary prudence in response to Northern Europe’s bailout of crisis-afflicted nations in 2009¹¹⁰ is critical to reestablishing credibility in the stability and long-term viability of investing in euros. What, then, might the future hold for the euro in the IMS?

ii. Future of the Euro?

Loss of confidence in EU political cohesion and fiscal impropriety in Portugal, Italy, Ireland, Greece, and Spain following the 2009 crisis has left IMS experts skeptical about increasing the role of the euro in the IMS in the short and medium-term. In addition to governance concerns, “while the total Eurozone sovereign debt market is comparable in size to the US treasury market,” difference in national market rates indicate that the EU’s total “depth and liquidity is much smaller, limiting its ability to act as an international reserve currency.”¹¹¹ The European Central Bank’s (ECB) July 2013 report on the international role of the euro states that, “in international debt markets, the share of the euro declined somewhat in 2012 as tensions in the euro area sovereign debt market possibly dented the appetite for new international debt issuance denominated in euro.”¹¹²

¹⁰⁹ *The Treaty on Stability, Coordination and Governance in the Economic and Monetary Union*, Article 3, http://www.eurozone.europa.eu/media/304649/st00tscg26_en12.pdf

¹¹⁰ Lee Buccheit, “The Eurozone Debt Crisis and the Greek Debt Restructuring.”

¹¹¹ World Economic Forum, “Euro, Dollar, Yuan Uncertainties,” 9.

¹¹² The European Central Bank, *The International Role of the Euro*, July 2013, <http://www.ecb.europa.eu/pub/pdf/other/euro-international-role201307en.pdf?4c76471697141917926e0f0011372ee>

Further internationalization of the euro to penetrate market usage outside of the EU, its periphery, and parts of Northern Africa remains doubtful.¹¹³ In regards to possible future (15-20 years) rise of the Chinese yuan, the euro looks especially lackluster due to demographic and economic growth projections. The WEF's *European 2020 Competitiveness Report* concludes that "competitiveness should lie at the heart of Europe's economic agenda"¹¹⁴—for without the "necessary reforms and undertaking the investments"¹¹⁵ to make all members more competitive, the EU will remain vulnerable to crises. Wage growth and low productivity in periphery countries has caused massive internal imbalances leaving Nordic and Western countries (using the WEF's classifications)¹¹⁶ such as Sweden, the Netherlands, Germany, and Belgium, with much stronger outlooks for the future. These disparities in present and future economic statuses continue to hold back prospects for political cohesion and, therefore, increased euro usage.

VII. Conclusion and Future Possibilities

The future of the IMS in relation to the USD, while uncertain, is relatively stable in the short-term. Network externalities have developed massive inertia behind the USDs usage in international transactions and as the dominant reserve currency. China's small financial market and export-led economy necessitate major structural reforms over the next few decades. Growth potential and strategic market capture, however, render China poised to become an important player within the IMS in about two decades. For this

¹¹³ Benjamin Cohen, "The Euro Today: Is There a Tomorrow?" *Working Paper*, http://www.polsci.ucsb.edu/faculty/cohen/working/pdfs/Berlin_WP_6-13.pdf.

¹¹⁴ The World Economic Forum, "The Europe 2020 Competitiveness Report: Building a More Competitive Europe," *Insight Report*, 2012, 31, http://www3.weforum.org/docs/CSI/2012/Europe2020_Competitiveness_Report_2012.pdf

¹¹⁵ The World Economic Forum, "The Europe 2020 Competitiveness Report," 31.

¹¹⁶ See: The World Economic Forum, "The Europe 2020 Competitiveness Report," 18.

reason, the U.S. must fix its twin deficit problem and put itself on a sustainable path to reduce its foreign held debt. What is presently a unique situation in history (the world's dominant power being indebted to the world's rising power)¹¹⁷ may turn in to a severe geopolitical conflict for power and influence in decades to come. The U.S.'s strongest ally, the EU, might play a similar regional monetary buffer as it did as a physical cushion between the U.S. and Soviet Russia during the Cold War. Prospects for increased usage of the euro in foreign transactions and official holdings seem dim, but not impossible. If traditional currency statuses are uncertain in the future, what are possible changes to the IMS?

i. The SDR

The Special Drawing Right (SDR) is an international reserve asset “created by the IMF in 1969 to supplement its member countries' official reserves. Its value is based on a basket of four key international currencies [the USD, euro, JPY, and sterling], and SDRs can be exchanged for freely usable currencies.”¹¹⁸ The SDR has been issued in three periods, 1970-1972, 1979-1981, and 2009, to IMF members currently with 204 billion SDRs in existence.¹¹⁹ In practice, the SDR is neither a currency, nor a claim on the IMF; it is a potential claim on the freely usable currencies of IMF members.¹²⁰ In function, the SDR has acted as the unit of account for the IMF over the past four decades. Recent calls from China to make the SDR's role in the IMS more pronounced¹²¹ have returned it to the forefront of IMS reform. Proponents of a system with an increased role for the SDR believe that its disconnect “from individual nations [would allow it] to remain stable in

¹¹⁷ Helen Thompson, “Debt and Power,” 305.

¹¹⁸ The International Monetary Fund, *Special Drawing Rights (SDRs) Fact Sheet*, October 2013, <http://www.imf.org/external/np/exr/facts/sdr.htm>

¹¹⁹ The International Monetary Fund, *Special Drawing Rights (SDRs) Fact Sheet*.

¹²⁰ The International Monetary Fund, *Special Drawing Rights (SDRs) Fact Sheet*.

¹²¹ Zhou Xiaochuan, “Reform the International Monetary System.”

the long run, thus removing the inherent deficiencies caused by using credit-based national currencies.”¹²² Critics, however, see a shift towards the SDR as inherently unworkable, as “fundamental aspects of any reserve currency are the fiscal capacity of the issuing country and the liquidity and market reliability of its treasury bonds.”¹²³

Though different economic problems associated with the SDR—lack of liquidity, debt issuance, and market capitalization— are certainly roadblocks, the political strength required to shift towards major usage of the SDR makes it unrealistic. Conflict over increasing the IMF’s role in the IMS can be viewed as intrinsically geoeconomic. History has already seen this conflict in 1972 during the IMF’s Committee of Twenty (C-20) meeting following the breakdown of the Bretton Woods system. Though the prevailing international view was one of increasing the IMF’s control, “the United States was not prepared to consign the advantages it accrued from issuing the world’s reserve currency, at least not without much-stronger assurances that it could rely on the rest of the world to adjust when needed.”¹²⁴ The likelihood of the U.S. ceding its power as the dominant reserve currency is very low.¹²⁵ Further implementation of the SDR would also limit the ability of countries to use their nominal exchange rates to make “necessary adjustments in response to asymmetric shocks [such as a recession].”¹²⁶ For economic and geoeconomic reasons of power and control, the U.S. Federal Reserve will not outsource to the IMF its right to decide monetary policy.¹²⁷

iii. Geoeconomics of the Future

¹²² Zhou Xiaochuan, “Reform the International Monetary System.”

¹²³ Emmanuel Farhi, Pierre Olivier-Gourinchas, Helene Rey, “Reforming the International Monetary System,” *Centre for Economic Policy Research*, 2011, 44.

¹²⁴ John Williamson, “Understanding Special Drawing Rights (SDRs),” *Peterson Institute for International Economics Policy Brief No. Number PB09-11*, June 2009, 2.

¹²⁵ Anonymous 1, interviewed by Cullen Millikin, November 6, 2013.

¹²⁶ Emmanuel Farhi, Pierre Olivier-Gourinchas, Helene Rey, “Reforming the International Monetary System,” *Centre for Economic Policy Research*, 2011, 44.

¹²⁷ Cedric Tille, interviewed by Cullen Millikin, October 30, 2013.

Contemporary geopolitical analysis includes geoeconomic factors to better reflect the changed nature of how international state and non-state actors interact. Issues of national sovereignty are inherent in the geoeconomic debate over how states interact; it does not dismiss cultural, political, or military aspects, *it supplements them*. When “states seek to protect their national economic system, to obtain and master important technologies, to penetrate new markets and to maintain a predominant power position in traditional markets,”¹²⁸ they are acting geoeconomically within the realm of geopolitics. Related to the USD’s role in the IMS, the U.S.’s large external debt poses a long-term problem of national sovereignty and influence.

Even in the face of political and economic frustrations, the euro will remain dominant within Europe and its periphery. An internationalized yuan, though presently unfeasible, will allow future investors to avoid purchasing U.S. debt if they fear the U.S. could default. This is an option not available since the switch from sterling to USD before World War II, as no major currency has challenged the USD’s preeminence in the IMS. The future of the USD is in the hands of both domestic and external policy decisions, but is primarily one of U.S. concern.

Along these lines, the future of the IMS may be destined for a multipolar system relying on the USD supplemented by a combination of the euro and yuan. Continuing deterioration of the U.S. financial position (increasing twin deficits and the possibility of inflation) would warrant greater desire for other currency holdings. The euro, though its shortcomings have been discussed, is the major alternative to the USD and may be able to play a larger role in reserve compositions, much like the USD and sterling during the

¹²⁸ Gyula Csurgai, “Sovereign Wealth Funds,” 127.

1920s and 1930s.¹²⁹ The liquidity of European bond markets offers a realistic substitute for the U.S. but it is still unlikely to overtake the USD as the dominant reserve and transaction currency. The future may remain uncertain for the USD and IMS, but U.S. politicians and economists must realize the dangers of placing short-term control above long-term influence. Without its present level of dictation over the world's monetary policy, the U.S.'s international influence will wane.

¹²⁹ Barry Eichengreen, Marc Flandreau, "The Federal Reserve...", 19-20.

Bibliography

- “The Fiscal Compact and the European constitutions: ‘Europe speaking German,’” *European Constitutional Law Review*, 8: 1–8, 2012.
- Anonymous 1, interviewed by Cullen Millikin, November 6, 2013.
- Anonymous 2, interviewed by Cullen Millikin, November 7, 2013.
- Barry Eichengreen, “Exorbitant Privilege: The Rise and Fall of the Dollar and the Future of the International Monetary System,” (New York, New York: Oxford University Press, 2011).
- Barry Eichengreen, Marc Flandreau, “The Federal Reserve, the Bank of England, and the Rise of the Dollar as an International Currency 1914-1939,” *Graduate Institute of International and Development Studies Working Paper No: 16/2010*, August 2010, 1-28.
- Benjamin Cohen, “Bretton Woods System,” in R.J. Barry Jones (ed.), *Routledge Encyclopedia of International Political Economy* (New York , New York: Routledge, 2002).
- Benjamin Cohen, “The Euro Today: Is There a Tomorrow?” *Working Paper*, http://www.polsci.ucsb.edu/faculty/cohen/working/pdfs/Berlin_WP_6-13.pdf.
- Brad Setser, “Sovereign Wealth and Sovereign Power: The Strategic Consequences of American Indebtedness,” *Council on Foreign Relations Special Report No. 37*, (2008): 1-68.
- Cedric Tille, interviewed by Cullen Millikin, October 30, 2013.
- Céline Allard, Petya Koeva Brooks, John C. Bluedorn, Fabian Bornhorst, Katharine Christopherson, Franziska Ohnsorge, Tigran Poghosyan, “Toward a Fiscal Union for the Euro Area,” *IMF Staff Discussion Note 13/09*, September 2013, 4.
- Charles Goyette, “The Dollar Meltdown: Surviving the Impending Currency Crisis with Gold, Oil, and Other Unconventional Investments,” (New York, New York: Penguin Group, 2009).
- Congressional Budget Office, *Monthly Budget Review—Summary for Fiscal Year 2013*, November 2013, http://www.cbo.gov/sites/default/files/cbofiles/attachments/44716-%20MBR_FY2013_0.pdf.

- David Williams, "The Evolution of the Sterling System," in C.R. Whitlesey and J.S.G Wilson, eds, *Essays in Money and Banking*, (Oxford: Oxford University Press, 1968), 268.
- Edward Lutwak, "From Geopolitics to Geo-Economics: Logic of Conflict, Grammar of Commerce," *The National Interest*, 20, 1990, 1-19.
- Emmanuel Farhi, Pierre Olivier-Gourinchas, Helene Rey, "Reforming the International Monetary System," *Centre for Economic Policy Research*, 2011, 1-78.
- European Central Bank, "Press Release-ECB and the People's Bank of China Establish a Bilateral Currency Swap Agreement," October 10, 2013, <http://www.ecb.europa.eu/press/pr/date/2013/html/pr131010.en.html>
- European Commission, "Fact Sheet: Facts and Figures on EU-China Trade, October 2013," October 2013, http://trade.ec.europa.eu/doclib/docs/2009/september/tradoc_144591.pdf
- Francis E. Warnock, Veronica Cacadac Warnock, "International Capital Flows and U.S. Interest Rates," *Journal of International Money and Finance* 28, (2009), 903–919.
- Giulio M. Gallarotti, "The Anatomy of an International Monetary Regime: The Classical Gold Standard 1880-1914," (New York, New York: Oxford University Press, Inc., 1995).
- Gyula Csurgai, "Sovereign Wealth Funds: Strategies of Geo-Economic Power Projections," in Otto Hieronymi (ed.), *Globalization and the Reform of the International and Banking and Monetary System*, (Palgrave Macmillan, 2009), 1-20.
- Helen Thompson, "Debt and Power: The United States' Debt in Historical Perspective," *International Relations* 21, 2007.
- International Monetary Fund, "Currency Composition of Official Foreign Exchange Reserves," <http://www.imf.org/External/np/sta/cofer/eng/index.html>, (accessed November 4, 2013).
- International Monetary Fund, *Articles of Agreement of the International Monetary Fund*, Washington D.C.: International Monetary Fund, 2011.
- James D Sidaway, "Asia–Europe–United States: the Geoeconomics of Uncertainty," *Royal Geographical Society*, (37.4), 2005, 373–377.
- James Rickards, "Currency Wars: The Making of the Next Global Crisis," (New York, New York: Penguin Group, 2012), 1-255.

- Jean-François Gagné, “Geopolitics in a Post-Cold War Context: From Geo-Strategic to Geo-Economic Considerations?” *Raoul Dandurand Chair of Strategic and Diplomatic Studies Occasional Paper No. 15*, 2007, 1-21.
- John Maynard Keynes, “The General Theory of Employment, Interest, and Money (London: Macmillan, 1936).
- John Williamson, “Understanding Special Drawing Rights (SDRs),” *Peterson Institute for International Economics Policy Brief No. Number PB09-11*, June 2009, 2.
- Katherine Forslund, interviewed by Cullen Millikin, October 27, 2013.
- Lawrence Summers, “The U.S. Current Account Deficit and the Global Economy,” *The Per Jacobsson Foundation Lecture*, October 3, 2004, 8.
- Lee Buchheit, “The Eurozone Debt Crisis and the Greek Debt Restructuring,” (presentation, Graduate Institute of Geneva, Geneva, Switzerland, November 12, 2013).
- Markus Jaeger, “Yuan as a Reserve Currency,” *Deutsche Bank Research Briefing*, 2010.
- Maurice Obstfeld, Jay Shambaugh, Alan Taylor, 2010, “Financial Stability, the Trilemma, and International Reserves,” *American Economic Journal: Macroeconomics*, *American Economic Association*, vol. 2(2), pages 57-94.
- McKinsey & Company, “An Exorbitant Privilege? Implications of Reserve Currencies for Competitiveness,” *McKinsey Global Institute Discussion Paper*, December 2009, 1-49.
- Menzie Chinn, Jeffrey Frankel, “Will the Euro Eventually Surpass the Dollar as Leading International Reserve Currency?” *The National Bureau of Economic Research Working Paper No. 11510*, August 2005, <http://www.nber.org/papers/w11510>
- National People’s Congress, *China's Twelfth Five Year Plan (2011- 2015)*, translation by the Delegation of the European Union in China, <http://www.britishchamber.cn/content/chinas-twelfth-five-year-plan-2011-2015-full-english-version>
- Niccolo Machiavelli, “The Prince,” (New York, New York: The Macmillan Company, 1916), Chapter 10.
- Nicolas Jabko, “Which Economic Governance for the European Union? Facing up to the Problem of Divided Sovereignty,” *Swedish Institute for European Policy Studies*, 2011, http://www.sieps.se/sites/default/files/2011_2_1.pdf.

- Paul R. Krugman and Maurice Obstfeld, “The International Monetary System 1870-1973,” *International Economics: Theory and Policy, Sixth Edition*, (Reading, Massachusetts: Addison-Wesley, 2003).
- Pierre-Olivier Gourinchas, H el ene Rey, “From World Banker to World Venture Capitalist: U.S. External Adjustment and the Exorbitant Privilege,” *The National Bureau of Economic Research* 7, (2007), 11-65.
- Raphael Kaplinsky, Mike Morris, “Chinese FDI in Sub-Saharan Africa: Engaging with Large Dragons,” *European Journal of Development Research*, 21(4), 2009, 551–569.
- Richard Cooper, “The Future of the Dollar,” *Peterson Institute for International Economics Policy Brief No. PB09-21*, September 2009, 1.
- Roland Dannreuther, “China and Global Oil: Vulnerability and Opportunity,” *International Affairs* 87:6 (2011) 1345–1364.
- Rupa Duttagupta, and Rishi Goyal, Isabelle Mateos y Lago, “The Debate on the International Monetary System,” *IMF Staff Position Note No. 2009/26*, November 11, 2009, 5.
- Samuel Huntington, “The U.S.—Decline or Renewal?” *Council on Foreign Relations: Foreign Affairs*, Winter 1988/1989, Accessed November 5, 2013, <http://www.foreignaffairs.com/articles/43988/samuel-p-huntington/the-us-decline-or-renewal>.
- Simon Denyer, “China’s Ousted Official Bo Xilai Convicted of Corruption, Sentenced to Life in Prison,” *The Washington Post*, September 2013, http://articles.washingtonpost.com/2013-09-21/world/42299843_1_bo-xilai-wang-lijun-gu-kailai
- Sun Tzu, “The Art of War,” translated by Lionel Giles (El Paso, Texas: El Paso Norte Press, 2009), 108.
- The European Central Bank, *The International Role of the Euro*, July 2013, <http://www.ecb.europa.eu/pub/pdf/other/euro-international-role201307en.pdf?f4c76471697141917926e0f0011372ee>
- The International Monetary Fund, *Special Drawing Rights (SDRs) Fact Sheet*, October 2013, <http://www.imf.org/external/np/exr/facts/sdr.htm>
- The Treaty on Stability, Coordination and Governance in the Economic and Monetary Union*, http://www.eurozone.europa.eu/media/304649/st00tscg26_en12.pdf

- The World Bank, “Current Account Balance (% of GDP),”
<http://data.worldbank.org/indicator/BN.CAB.XOKA.GD.ZS>, (accessed on October 28, 2013).
- The World Bank, *World Development Indicators, GDP per capita (current US\$)*,
Accessed November 12, 2013,
<http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>
- The World Economic Forum, “The Europe 2020 Competitiveness Report: Building a More Competitive Europe,” *Insight Report*, 2012, 31,
http://www3.weforum.org/docs/CSI/2012/Europe2020_Competitiveness_Report_2012.pdf
- The World Justice Project, *Rule of Law Index Scores and Rankings*, 2013,
<http://worldjusticeproject.org/rule-of-law-index-data>
- The World Trade Organization, *International Trade and Market Access Data*, Accessed November 14, 2013,
http://www.wto.org/english/res_e/statis_e/statis_bis_e.htm?solution=WTO&path=/Dashboards/MAPS&file=Map.wcdf&bookmarkState={%22impl%22:%22client%22,%22params%22:{%22langParam%22:%22en%22}}
- U.S. Department of the Treasury Office of International Affairs, *Report to Congress on International Economic and Exchange Rate Policies*, October 13, 2013,
http://www.treasury.gov/resource-center/international/exchange-rate-policies/Documents/2013-10-30_FULL%20FX%20REPORT_FINAL.pdf
- U.S. Department of the Treasury, “Major Foreign Holders of Treasury Securities,” August 2013, <http://www.treasury.gov/resource-center/data-chart-center/tic/Documents/mfh.txt>
- World Economic Forum, “Euro, Dollar, Yuan Uncertainties: Scenarios on the Future of the International Monetary System,” *World Scenario Series*, 2012
- Zhou Xiaochuan, “Reform the International Monetary System,” published in *Bank For International Settlements Review* 4, March 2009,
<http://www.bis.org/review/r090402c.pdf>.