Foreign Reserve Diversification: Should Pakistan Diversify into Euros?

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In the Name of Allah Almighty,
To my Beloved Parents.

Project Summary

Project Name:	Foreign Reserve Diversification: Should Pakistan Diversify into Euros?
Degree:	MBA
Submitted By:	Benazir Nasir
Submitted To:	Mr. Saad Sarwar
Starting Date:	July 20, 2007
Ending Date:	September 29, 2007
Tools Used:	Microsoft Word and Microsoft Excel

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Acknowledgements

First of all, I would like to thank Allah Almighty for giving me the strength to complete this immense task.

Next, I would like to express my deepest gratitude and appreciation to my supervisor, Mr. Saad Sarwar for providing me with his continuous help and assistance throughout the different phases of this project: initial data, the structure, the data collection, the supporting literature and the presentation of the results. Without his support, I could not have completed it.

I would also like to thank NUST Institute of Management and Sciences Administration for their cooperation and facilities that helped me develop and complete this thesis in an effective and efficient manner.

Lastly, I would thank my parents for their ever-present support and encouragement all these years.

Abstract

The foreign exchange reserves serve a pivotal role in a country's economy for various reasons. The Central Bank of a country is the major custodian of these reserves. The monetary value of such reserves will naturally be higher if the currency in which they are held is appreciating or is at least stable. However, if the reserve currency begins to show a depreciating trend over a longer period of time, it points out a reason for concern for that country. The dollar is the major reserve currency throughout the world till now. A significant proportion of the world reserves are denominated in dollars. However, due to a consistent downturn in the value of the greenback (dollar) since quite a few years, one can sense signs of diversification of reserves away from the dollar and towards more stable and appreciating currencies like the Euro and the Japanese Yen. Few have even suggested an increase in gold holdings for this purpose. Thus we see a gradual shift from a paradigm of single currency reserve model to a multi currency model. This trend is again gaining ground and major reserve holding countries of the world like China, Korea and other east Asian countries are either contemplating such moves or have already gone through a diversification. To decide whether such a diversification will be sustainable this time around and whether it would benefit these and other reserve holders, is a question that requires an insight into the dynamics of international trade.

This paper attempts to take a look at the history of dollar's evolution as a reserve currency, the need for and implications of a reserve diversification out of dollars into other currencies, the euro as a potential future reserve currency, and relate to examples of state banks which have took significant steps in this regard. Finally, it presents the rationale for the State Bank of Pakistan to diversify its reserves into a basket of currencies and a model to invest its excess reserves.

Chapter 1: Introduction

The foreign exchange reserves serve a pivotal role in a country's economy for various reasons. These reserves have been used for investments; for maintaining the balance of payments and for financing trade deficits. The Central Bank of a country is the major custodian of these reserves. It invests the foreign exchange reserves of the country. The Central bank also holds onto the gold reserves of the country. Most central banks have tried to get rid of their gold, due to its ever-declining prices.[1] Still, others are of the view that gold is reviving its role as a major reserve asset. Central banks use interest rates to keep the economy in line. Higher interest rates - lower economic activity and lower inflation. The reverse is also true.

The exchange rate system has seen various eras. The fixed exchange rate system is almost obsolete now and countries follow the managed or floating exchange rate systems to achieve the balance of payments. To understand this, we first get an understanding of the term "balance of payments". When the central bank buys domestic currency and sells the foreign reserve currency in the private FOREX the transaction indicates a balance of payments deficit. Alternatively, when the central bank sells domestic currency and buys foreign currency in the FOREX the transaction indicates a balance of payments surplus. [2]

A trade deficit means that demand for imports exceeds foreign demand for our exports. This implies that domestic demand for foreign currency (to buy imports) exceeds foreign demand for domestic currency (to buy our exports). So, under a fixed exchange rate regime, in order to keep the exchange rate fixed, the central bank would need to intervene by selling foreign currency in exchange for domestic currency. This would lead to a reduction of foreign reserves and hence a balance of payments deficit. Thus, by tracking sales or purchases of foreign reserves in the official reserve account we can determine if the country has a balance of payments deficit or surplus. In a floating exchange rate system a central bank can intervene in the private FOREX to push the exchange rate up or down. Thus, official reserve transactions can show rising or falling foreign reserves and hence suggest a balance

[1] http://www.answerbag.com
[2] http://internationalecon.com/Finance/Fch80/F80-8.php

of payments deficit or surplus in a floating exchange system. However, it is not strictly proper to describe a country with floating exchange rates as having a balance of payment deficit or surplus. The reason is that interventions are not necessary in a floating exchange rate. In a floating system, an imbalance between supply and demand in the private FOREX is relieved by a change in the exchange rate. Thus, there need never be an imbalance in the balance of payments in a floating system.

The monetary value of such reserves will naturally be higher if the currency in which they are held is appreciating or is at least stable. However, if the reserve currency begins to show a depreciating trend over a longer period of time, it points out a reason for concern for that country. The dollar is the major reserve currency throughout the world till now. A significant proportion of the world reserves are denominated in dollars. However, due to a consistent downturn in the value of the greenback (dollar) since quite a few years, one can sense signs of diversification of reserves away from the dollar and towards more stable and appreciating currencies like the Euro and the Japanese Yen.[3] Few have even suggested an increase in gold holdings for this purpose. Thus we see a gradual shift from a paradigm of single currency reserve model to a multi currency model. This is a trend similar to the one that we faced in the 1970s as dollar began to depreciate and obvious diversification patterns were seen. But in the 1980s, the dollar again began to catch stability and diversification was nowhere to be seen. This trend is again gaining ground and major reserve holding countries of the world like China, Korea and other east Asian countries are either contemplating such moves or have already gone through a diversification. To decide whether such a diversification will be sustainable this time around and whether it would benefit these and other reserve holders, is a question that requires an insight into the dynamics of international trade.

This paper attempts to take a look at the history of dollar's evolution as a reserve currency, the need for and implications of a reserve diversification out of dollars into other currencies, the euro as a potential future reserve currency, and relate to examples of countries which have took significant steps in this regard. Benchmarking those, an effort will be made to derive a framework for the Pakistani central bank to follow in their footsteps.

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[3] http://www.goldworld.com/atom/news

1.1. Objectives

The main objectives of this research report are:

- Observe and analyse the recent downturn in the US dollar as the universal reserve currency
- Uncover reasons for the downfall of dollar as a reserve currency and study in detail the consequences
- Study the latest trend of reserve and reserve currency diversification by central banks all around the world, and in particular by Asian countries, most importantly China
- Analyse the euro's potential for surpassing the dollar as the lead reserve currency
- Identify various options available for employment of reserves apart from keeping them as a buffer for imports and other forms of international trade
- Prove the benefits of such a diversification of reserves for Pakistan and propose a model for the Pakistani central bank to employ its foreign reserves in a more productive way

1.2. Hypothesis

The hypotheses for this research paper are:

- The Euro is going to become at least equivalent to the dollar as a major reserve currency in the near future, if not necessarily as the lead international currency.
- The latest reserve diversification by Asian tigers is not just a fad, or a repetition of the 1970s and mid 1980s dollar crisis, but a long term turn from submission to the supremacy of the dollar.
- Reserve diversification is going to prove beneficial for Pakistan as it is for other countries, and any delays resulting from short-sightedness in this regard would ultimately hurt the net worth of the foreign reserves held by Pakistan.

1.3. Methodology

The research methodology for this paper is presented as follows:

1.4. Duration

The duration for completion of this research paper is roughly seven months.

1.5. Inclusion/ Exclusion Criteria

This paper discusses diversification intentions of and implications of some prominent countries like China, Taiwan and Korea. It talks about similar intentions of other countries like Bahrain, Qatar, Saudi Arabia and others but does not delve into their details. It focuses more on China since it is the largest dollar reserve holder in the world and much has been said and done on China's attempts to diversify. This would help derive results with respect to the objectives for which this paper is being written.

1.6. Data Collection Procedures

Data will be gathered through both the primary and secondary means. Primary ones would be the direct access to the knowledge pools of websites of major central banks and websites of the governments. Other sources of data collection would be secondary. Internet articles, newspapers, published papers and books on relevant issues would be studied and referred to.

1.7. Organization of the Report

The report has been organized into following chapters which give a sequential understanding into the topic at hand.

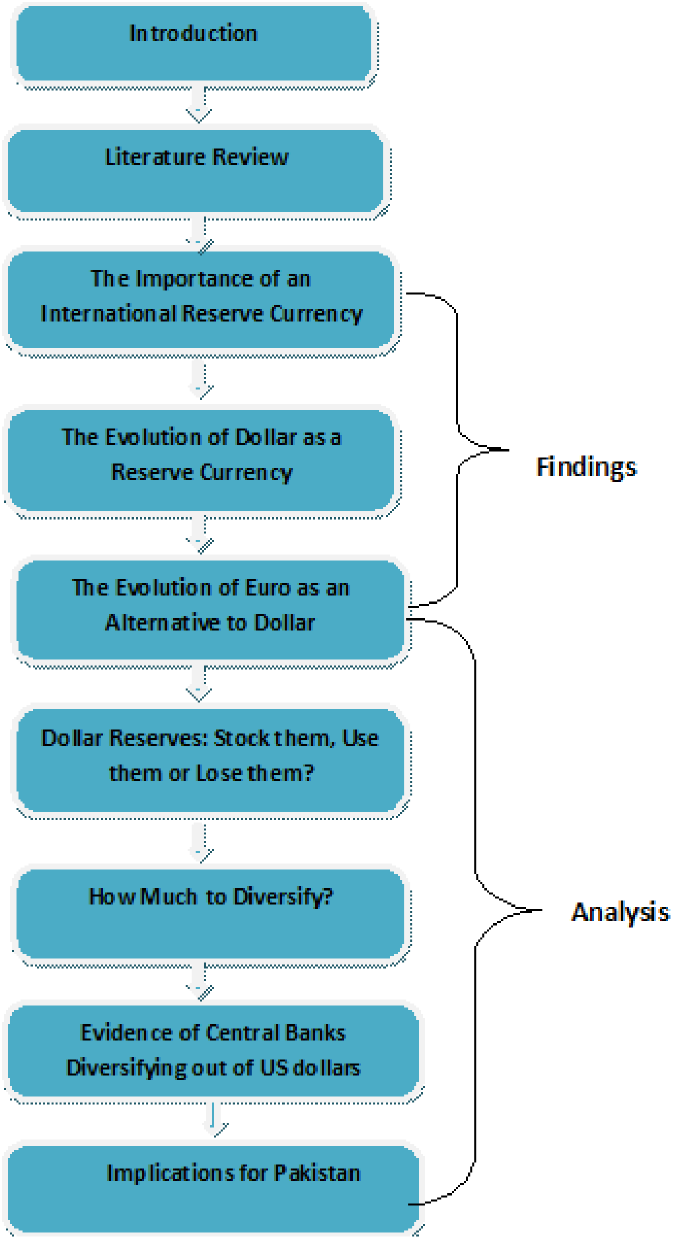


Figure 1: Organization of the Report

1.8. Major Data Sources

The important sources that will contribute towards the writing of this paper are cited below:

Online Sources

- http://pk.china-embassy.org
- http://www.gata.org
- **http://www.bis.org/speeches**
- http://www.jang.com.pk/thenews
- http://seekingalpha.com/article
- **http://www.washingtonpost.com**
- http://www.chinadaily.com
- http://www.marketwatch.com
- **http://www.rgemonitor.com**
- http://www.goldworld.com/atom/articles
- **http://www.rferl.org/featuresarticle**
- http://www.iht.com/articles
- http://i.today.reuters.com/media
- http://www.asiafinanceblog.com
- http://globalpolicy.org
- http://www.dawn.com
- http://arabnews.com
- http://www.saag.org/papers
- http://en.wikipedia.org
- http://www.thehindubusinessline.com
- http://www.snb.ch

Newspapers

- Business Recorder

- Jang Daily
- Pakistan Times
- The News
- Dawn

Chapter 2: Literature Review

During the course of the research, various articles relevant to the topic at hand, by various authors were studied. In addition to that, information was gathered from multiple internet articles, websites of the central banks, news blogs and reports published by financial authorities were consulted. Following is a summary of key articles studied.

2.1. Research Papers

The Euro and the Dollar: Toward a "Finance G-2"?
C. Fred Bergsten

This paper discusses prospects of euro overtaking the dollar and states some key factors, which it deems necessary for the euro to surpass the dollar as the lead international currency. Its major focus, however, is on the need to create a new consultative arrangement to monitor the evolution of dollar-euro exchange rate and to prepare contingency plans if market movements become disorderly in face of an ever-appreciating euro and an ever-declining dollar.

It starts off by saying:

"… The first five years of euro itself have been a spectacular success. Price stability has been maintained in previously low-inflation countries and remarkably achieved in member countries that were formerly prone to rapid price increases. The "European Central Bank" has seamlessly succeeded the Bundesbank as the guardian of European stability. Nominal interest rates are about 250 basis points below the weighted average of the predecessor currencies. The physical euro was introduced without a hitch. The euro became the leading currency for denomination of international bond issues in its very first year. The initial depreciation of the currency has now been replaced by appreciation to and beyond its initial starting point….."

" ….. countries throughout the world are expressing their admiration for the euro by seeking to join or emulate it. Virtually all the new members that will enter the

European union shortly wish to join eurozone as well as soon as possible. …..And being motivated at least partly by the success of the Euro, many countries in Asia aspire to eventually create an "Asian currency unit" ….."

This paper stresses that the euro faces a dual scenario. As a new currency itself, it has done remarkably well and is gaining ground at an amazing pace in world markets. On the other hand, the surrounding policy environment has not evolved as rapidly as it should have, to successfully complete the process of Economic and Monetary Union.

It then presents the dollar-euro struggle for international dominance at the systemic level, to hinge on certain factors. It states that the basic reasons for dollar's supremacy in the past were

- The absence of a competitor
- The sheer size of the US economy
- Dollar's easy acquisition of network externalities, economies of scale and scope and public goods benefits

Due to these reasons, the dollar reigned the world economy despite US's very poor economic performance, characterized by high inflation, mediocre productivity growth, unsustainable deficits and negative international investment position. It recovered from the 70s and 80s erosion of world market's share just because there was no viable alternative to it. Size variables are the most important in this regard. The Deutche mark, before the introduction of the euro, was the world's second key currency after the dollar, but could never attain a market share greater than one fourth of the dollar because the size of the economy of former West Germany was about one-fourth the size of the US economy. Japan whose economy at one point grew to be more than half as large as America's, never realized supremacy because of the underdevelopment of its financial markets.

The paper highlights the importance of size further for international currency purposes. It presents results from previous researches that "…..a rise of 1 percentage point in a key currency country's share of world product market (measured at purchasing power parity) is associated with a rise of 1.33 percentage points in that currency’s share of central bank reserves.”

It further states that the present Euroland is 20-30% smaller than the US in total output and about 25% higher in its share of world trade. Thus, the euro can be stated as a rough equivalent of the dollar. Also, if the eurozone is expanded to include all 15 members of current European Union, it would take the numbers above the US in output.

The paper wraps up this section by saying:
“…..It is clear that the euro provides the first real competition for the dollar since the latter’s ascent to global currency dominance. ….”

It elaborates that the real point of interest is the time period and adjustment path over which that competition will play out and its consequences.
According to the paper, some necessary factors which will shape the future are:
First, euroland will need to further integrate its money and capital markets. “…..The European financial markets have already made impressive strides.”

However, national rivalries have still impeded cross border mergers and development of a benchmark security or yield curve which can rival the US treasury bill and assets.
It also states:”…entry of the United Kingdom would accelerate such processes…”

It states that Europe has been able to challenge the US successfully because first, it is roughly equivalent to the US in trade volume, and second because Europe has centralized all its decisions into single entity: the European Commission.
Second, Europe must improve its economic performance for the euro to overtake dollar. It has already achieved price stability . improved performance will cause interest in the euro to rise all over the world.

Third, most important factor is the poor performance of the US economy.
A repetition of the bad eras for the dollar is on the scene nowadays, and the existence of the euro will speed that up.

Helene Wiik 5 Nov 2003 10:32 1/7

THE INTERNATIONAL ROLE OF THE EURO

Fourth quarter 2003 Briefing Paper to the ECON Committee of the European Parliament

Guillermo de la Dehesa,
Chairman of the CEPR: Centre for Economic Policy Research.
Chairman of the OBCE: Spanish ECB Watcher.

The paper talks about the potential the euro has as an international currency and gives some crucial statistics on its performance to the date it was written. It starts off by saying that history ahs taught a few lessons when it comes to currency domination worldwide:

i) A new currency takes long to overcome the incumbent or existing currency. Usually, the incumbent currency tends to coexist with the emerging currency for decades, before and after the emerging one becomes dominant.

ii) Only those countries that are more open and more active in the international trade of goods, services and capital and that have developed large trade and financial centres are able to get its own currency to a dominant position, independently of which country was military wise the dominant at that moment.

iii) Although in every country the currency is used because it has the full guaranty of the State that issues it, in the international markets this guaranty is not a sufficient condition to make it of preferred use. The private economic agents are the ones that decide which currency to use for their international transactions. These agents demand that:

- It is issued by a strong, open and competitive economy that takes itself a large share of the world's trade and financial transactions.
- The country that issues that currency has a very large and efficient financial system well developed and regulated, very deep and liquid that allows the economic agents to finance at very competitive costs and at high speed their transactions.

Large volumes and low transaction costs are the key drivers here.

However, for other leading currencies, it becomes difficult for the dominant currency to maintain such a monopoly position since these forces are increasingly counterbalanced by the opposing forces that emerge as a consequence of the portfolio diversification of financial assets, which tend to reduce the risk of the concentration by investors on one single currency by diversifying their allocations into other currencies.

The paper goes on saying that:
"…The more globalized are the financial markets the more fixed income securities and equities prices tend to evolve in the same direction given the increasing interconnection and contagion of the different financial markets, as it happened in the build up to the recent financial bubble..."

Therefore, currency diversification becomes increasingly necessary to reduce portfolio risk.

"…This is the reason why the euro is becoming a growing alternative to the dollar, in terms of the asset allocation by portfolio managers and the yen keeps being still a third choice, in spite of the dollar dominance…."

iv) The expected investment return in the different currencies is also a very important factor. For instance, if today investors expect that the US economy is going to keep growing faster than the Euro Area because its productivity is growing at a higher rate and its economy keeps being more dynamic and flexible, they will prefer to invest in dollars, despite its larger fiscal and current account deficit.

v) Finally, for a currency to achieve a dominant position it needs to have a very well proven record of stability. Sometimes one currency can be very stable but loosing value versus another currency that is more volatile. However, in the long run, investors tend to prime stability versus temporary strength, because by definition they are, on average, risk averse. Only more opportunistic investors prime short-term value versus long-term stability.

The paper says that the best way to measure the role of the euro as an international currency is through its relative presence in three international different markets:

- The international liability management market
- The international asset management market
- The foreign exchange market

It states: "…The underlying concept, based on a portfolio balance framework, is that the international weight of a currency is determined by the balance between the demand for assets and the supply of liabilities, denominated in that currency."

It observes that in the international liability market, the supply of euro-denominated securities in the international markets shows a very large surge in its issuance since the introduction of the euro.

"…..However, its relative weight in the fixed income markets is still far more important than in the equity markets. In June 1997, the market capitalization of the US equity market was 7.2 trillion dollars and the Euro Area one was 1.9 trillion euros. In January 2003, the US market value was 10.1 trillion dollars and the Euro Area was 3.6 trillion euros. The gap has increased in absolute terms but it has narrowed in relative terms, given that the rate of growth of the Euro Area equity market has been faster, although coming from a much lower figure. On the contrary, fixed income markets have been much faster in realizing the greater potential gains of introducing a single currency. The elimination of the exchange rate risk and the convergence of the yield curves within the Euro Area have reduced the importance of economic factors that had previously led to the segmentation of the European bond markets.

Therefore, borrowers can now tap on a very large and expanded investor base with a single issue making the euro an attractive alternative to the dollar as a currency of denomination for debt, and as a consequence, the bond issuance has soared. Euro Area borrowers, both public and private have accounted for most of the increase in issuance volumes, but the biggest shift has been the increasing share of the private sector borrowers. In June 1997 the market capitalization of the US government bond market was 2.1 trillion dollars and the Euro Area one was 2.2 trillion euros. In January 2003 the US one was down to 2 trillion dollars and the Euro Area was up to 2.9 trillion. Taking into account the total international bonds outstanding (both government and corporate) the increase in the euro denominated bonds has been huge. In December 1996 the value of euro denominated bonds outstanding accounted for 75 billion and in June 2003 had reached 4 trillion. The same figures for the US denominated bonds outstanding were 1.2 trillion and 4.2 trillion respectively in both dates. …..”

But the author is of the view that the euro bond market is still far from reaching its full potential.

In the international asset management market, the currency diversification has notably increased.
“…Investors inside the Euro Area have been keen buyers of foreign securities denominated in euros, especially bonds, but euro denominated assets have been less successful with non Euro Area based investors. Japanese asset managers have been much more attracted initially by euro denominated assets, but later, the fall of the relative value of the euro discouraged them.”

Now to the foreign exchange markets: The only exact data available are the foreign currency reserves managed by the central banks.

The authors write:

"…..The latest data from the IMF indicate that there has been only a small change in the composition of international reserves. In 1995, the relative shares of the US dollar, the DM and the Yen were 57%, 13.7% and 6.8% of the total, respectively. At the end of 2002, the share of US dollar has risen to 64.8% and the Yen has fallen to 4.5% and the euro share has improved from 12.6% in 1999 to 14.6% in 2002. However, changes in exchange rates over the period mask an underlying increase in the share of the euro in the global currency reserves. The most accurate way of analyzing the relative change in central bank holdings is to look at the ratio of these quantities.

At the start of 1999, there were 5.4 times more dollars held than euros and at the end of 2002 central banks held only 4.4 dollars per euro."

They further state that the huge (but declining) difference between the US dollar and euro central bank holdings is due to the fact that the Asian central banks are by far the biggest holders of foreign exchange reserves. At the end of 2002, they were holding 1.6 trillion, about twice the amount held by Europe and the Americas combined.

The authors have presented perspectives in which euro has real potential for becoming the main forex reserve currency in the future:

"….If Asian central banks hold US dollar and euro reserves in the same proportion than the total central banks, that is 65% versus 15%, then a strong case for raising the reserves held in euros can be made by looking at the relative importance of the Euro Area and the US trade with Asia. The reserves held by Asian central banks in US dollars are four times greater than in euros while the US is less than twice as important as the Euro Area in trade with Asia. Total US trade with Asia represents 17% of Asian trade while the Euro Area accounts for 10%. Since EMU began the importance of the US trade has fallen from 20% of Asian trade to 17% while the Euro Area trade has fallen from 12% to 10%. The governor of the Central Bank of China has commented recently that a shift to a tradeweighted Yuan exchange rate system is still under consideration. Such a development, if implemented, would clearly lead to

the need for the Chinese monetary authorities to raise notably the share of euros in their FX holdings, if this potential decision by China would be followed by other Asian countries, the net effect on their euro reserves holdings would be very extremely important.
Another argument for the euro holdings to grow in the future is the based on the relative return on investing in the three alternative international currencies. Using relative returns of the three major international currencies, measured by the one-month interest rate on deposits, between 1995-2002, the optimal currency shares would be 61% for the US dollar, 32% for the euro and 7% for the yen. If the share of global reserves were to increase accordingly this would amount to a rise of the euro from 15% to 32%, that is, almost 300 billion dollars at today's exchange rates.
A final argument for the raise of the euro as a reserve currency is the "excess of reserves" in the Euro Area system of central banks derived from the introduction of the euro, which reduces the need to have large foreign currency reserves in every individual central bank, which are denominated in dollars. A reduction in the reserve holdings of Euro Area central banks would raise the demand for euros relative to the US dollars. The "excess reserves" in dollars are estimated in 165 billion US dollars, as for June 2003 (excluding the 27.3 US dollar billion held by the ECB). Since the start of EMU the IMF data reveal that the national central banks have reduced their holdings of foreign exchange reserves by only 38.3 US dollar billion. If the total excess would be eliminated, it would imply important consequences for the asset markets. For example, to sterilize the shrinkage in the foreign asset component of the monetary base, central banks could purchase own-currency government debt. The net result would be a run-down of foreign currency reserves to finance a reduction in the stock of outstanding domestic government debt, resulting in a stronger euro and lower bond yields….."

The author concludes by saying that he agrees to the ECB policy of neutrality with regards to the euro international use.
He writes:
"…. The ECB should try to make the euro the most stable currency by maintaining long-term price stability. That is a task hard enough for the ECB to make the euro attractive as an international currency. The international role of the euro is the

outcome of a market driven process and not the result of interference by central banks and political authorities. …"

"….The economic authorities of the Euro Area should only concentrate in integrating their still segmented banking and capital markets to achieve a larger and more competitive size to be able to attract more issuers and investors from the rest of the world and compete on equal terms with the US markets…"

Notes on Dooley and Garber's "Three Notes"

Barry Eichengreen

University of California, Berkeley

April 2005

This paper comments on research formerly done by Dooley and Garber, which gave us a forecast, namely, that the dollar will fall and U.S. Treasury yields will rise.

It states at one point about the reserve diversification intended by most Asian countries:

"…Mid-March, just prior to the Panel meeting, saw an increase in noise about the possibility that foreign central banks might diversify out of dollars. The governor of the Bank of Korea made some widely reported comments about the need for more active reserve management. Prime Minister Koizumi of Japan told a parliamentary committee that reserve diversification was "necessary." Indian Reserve Bank Governor Reddy said that the diversification of reserves was under active discussion. Ukrainian economy minister Teriokhin argued publicly that the country should diversify its reserves out of dollars and into euros. This upsurge in noise was associated with an eight-month high in U.S. Treasury yields. This correlation supports the belief that reserve diversification by central banks could eventually force the dollar down and U.S. Treasury yields up…"

In the end, the paper winds up by saying:

"… These are all reasons, then, why Asian governments are likely to move away from the strategy of export-led growth through undervaluation before long. Once countries they see their neighbors doing so, and thereby lending less support to the dollar, there will be an obvious incentive not to be late. At that point familiar models of speculative attacks, which the authors helped to pioneer, will not just be "dancing in our heads."

"The euro's challenge to the dollar as an international reserve currency"
Freddy Van den Spiegel
Chief economist at the Belgo-Dutch banking and insurance group Fortis

This article presents comments by Van den Spiegel, who is the chief economist at the Belgo-Dutch banking and insurance group Fortis. He is of the view that the globalization trend is going to snatch dollar's supreme status as world's sole international reserve currency and soon give it to other currencies mainly euro. He also discusses the potential of the Chinese renminbi and the Indian rupee to overtake dollar.

Spiegel starts off by saying that the dollar is still the world's major unit of account until now.

"……But a number of developments are now taking place in our rapidly globalising world which will sooner or later challenge the present international financial architecture."

He goes on repeating the most well-known advantages of dollar's supremacy to the Americans. But further says that there are limits to the size of potential imbalances (US's huge imbalance of payments). So, due to large US current account deficits, structural imbalances are causing markets and investors to be nervous.

"….The US current account has been negative for the past 20 years and recently reached 5% of GDP. The budget deficit stands at more than 4% of GDP and will be difficult to reduce. These deficits are not offset by sufficient levels of domestic savings: on the contrary, the savings rate of private households is a mere 2%

compared with an average of 12% for the EU. Capital inflows from the rest of the world have financed these deficits, and foreign investors account for more than 50% of new subscriptions to US government bonds. The net capital position of the US, which represents the difference between the assets held by US households."

He is of the view that reducing these imbalances will take many years and will require a highly cautious political strategy. If confidence in sustainability of US economy is disrupted, it would be impossible for dollar to keep playing its lead reserve currency role.

He then validates his stance on euro by presenting the background on euro's recent rise. He points out that the main objective of European monetary union is to improve the functioning of the EU's internal market and to guarantee financial stability in Europe. To achieve these goals, monetary policy is mainly oriented towards **price stability**. This is what has given credibility to the euro. Today, 19.7% of international monetary reserves are denominated in euros which have grown within a short time span of its debut, and its market share is growing. The more the sustainability of the dollar is questioned, the more the euro is being considered as a viable alternative, with or without the consent of the eurosystem.

This follows sharing of all those advantages to the eurozone that are currently available to the US. For example, being able to negotiate import and export prices in euros would make the economy, and the inflation rate, less vulnerable to foreign exchange fluctuations.

But he also drives home the point that becoming an international reserve currency is interesting, but is not a free lunch. Eurozone will have to face many challenges and remain in close coordination with US economic developments.

Moving away from the euro, he points out that there are new economic giants on the horizon, and China's impact on world markets is already one of the biggest political challenges facing the international community.

“….The sheer size of China, with its 1.3bn inhabitants, gives it a population that is almost double those of the US and EU together. If we add in India’s 1bn inhabitants and Russia and Latin America, we get a clearer picture of the challenge and the way it is dramatically changing the structure of the world economy.”

The global GDP when expressed in terms of purchasing price parity production points a new scenario.

“..The figures change dramatically; the US share goes down to 20 % and the EU’s to only 15%. China rises to 13% and together with India outships Europe. As their growth rates are at least double that of the US, together they will soon overtake the US in size…”

Quite apart from the geopolitical challenges this will bring, it is clear that it will also have an impact on the monetary architecture of the global economy. He then asks the sensational question: “How likely is it that China, which is set to become the world’s biggest economy over the next few decades, will continue to accept the supremacy of the dollar or the euro as international reserve currencies?”

The major conclusion he draws from all this discussion is :

“It would be naive to argue that a truly globalised world economy would need a single currency. But using the currency of a single country that itself represents a shrinking part of the global economy does not seem a sustainable solution. The basis should be broader so that the international unit of account is less dependent on the situation of a single issuer. It seems natural that the euro should play an increasing role, and perhaps now is also the time to reinvent such basket currencies as the SDR or the ECU.”

A very important insight that he has provided us into the future goes like this:

“…It is clear that greater coordination of international monetary policies is becoming necessary. The creation of the euro, which has reduced the number of “lead” currencies, can make this process easier since fewer parties now have to come together. But new “lead” currencies are going to develop, and they will have to be integrated into the worldwide monetary architecture.”

A complementary article also analyzes euro's potential like this:
The euro has become a credible currency to invest in.
"…It has done so by becoming a low inflation "hard currency" successor to the Deutsche-mark, a status which brings to eurozone companies the benefits of being able to borrow at low long-term real interest rates…"

ANTICIPATED EFFECTS OF FOREIGN CURRENCY RESERVE DIVERSIFICATION IN ASIAN COUNTRIES: DO CHINA AND INDIA MATTER FOR COORDINATION?

FRIEDRICH L. SELL
Department of Economics, University of the German Armed Forces Munich

The author asks some crucial questions, two of which are:

What are the opportunity costs of accumulating reserves, and how can these countries hedge the risk of value losses in terms of domestic currency of their stock of reserves?
How can these reserves be continuously diversified? Is there an optimal strategy for the management of these economies' foreign exchange reserves?

Autonomous versus coordinated management of Reserves

The author first presents a theory on growing Asian dollar reserves:

"…. Asian emerging economies, predominantly China and India, have been accumulating their foreign exchange reserves mainly in US dollar denominated assets, primarily US state bonds (Sell 2006). Such a policy has kept the price of the dollar high and, at the same time, widened the US current account deficit.

That is why a new fear of floating is arising: the dollar might suffer from a rapid fall in value in the foreign exchange markets which then would necessarily affect the value of other countries' own foreign exchange reserves held in dollar denominated assets. Such a monetary risk would also force the central banks of a number of emerging economies to continuously buy US dollars and thereby contribute to the stabilization of the greenback in the international foreign exchange markets (Sell 2007). Of course, such a policy makes the reserves grow further and accordingly the size of possible losses which accrue, at least in domestic currency equivalents, in the case of a more or less pronounced devaluation of the dollar.

This would suggest, at first glance, that the incentives to intervene in the foreign exchange market will tend to rise…"

But he argues against this paradigm by stating:

"….Even though every single emerging economy (for which the above described scenario holds) has a great interest in a stable US dollar, it may be less enthusiastic to contribute to its stabilization by own foreign exchange purchases. A smaller share of US dollars in its foreign exchange reserves through diversification (in terms of a portfolio containing dollars, yen, euros, etc.) serves as a hedge against expected devaluations of the US dollar. In addition, a larger number of currencies in the central bank reserves enables the authorities to switch from the de facto pegging to the US dollar to a more or less flexible peg against a basket of different currencies. In such a basket one would expect the currencies of the major trading partners of the emerging economy in concern."

What can a delay in diversification lead to?

He gives the answer to this important question.

"….the longer the diversification in the currency composition of central bank reserves is postponed, the higher will be the expected loss in value of the foreign exchange reserves…"

"In general, a reallocation of reserves and/or the exchange of currencies within the portfolio of a central bank′s reserves go along with the ordinary market forces, which, for example, tend to reduce the value of one currency, say the US dollar, but raise the value of the euro and/or the British pound in a either progressive or regressive manner."

Autonomous or coordinated diversification

The author suggests that autonomous or uncoordinated decisions to diversify can lead to uncertainty and volatile situation in foreign exchange markets.

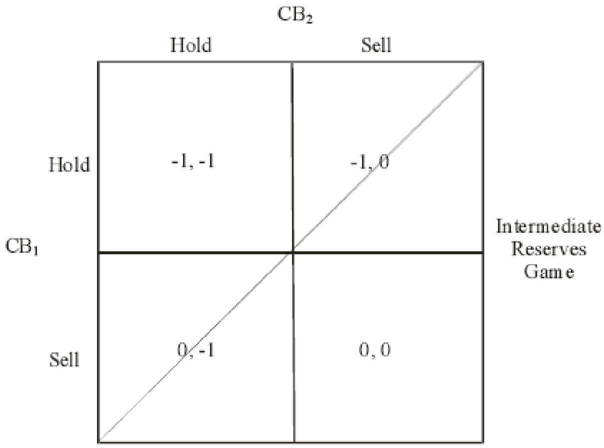
"…..An autonomous strategy chosen by a single (but significant) emerging economy like China could probably create an unpleasant and extremely volatile situation in the foreign exchange markets. The reason is the likelihood of possible panic reactions among other emerging economies following the first mover (China in our example). Each of these countries would then be tempted to immediately sell as many US dollars as possible in order to limit the anticipated value losses. The risk of losses may become more acute if the uncoordinated actions by the central banks selling a high share of their foreign currency reserves in a short period of time induce other market participants to bet against the US dollar, leading to a sharp devaluation of this currency in the end. Although each involved central bank would behave rationally from its own point of view, the group of the emerging economies' central banks could, however, endanger the stability of the world′s financial markets. This scenario reminds us of panic sales in the equity markets."

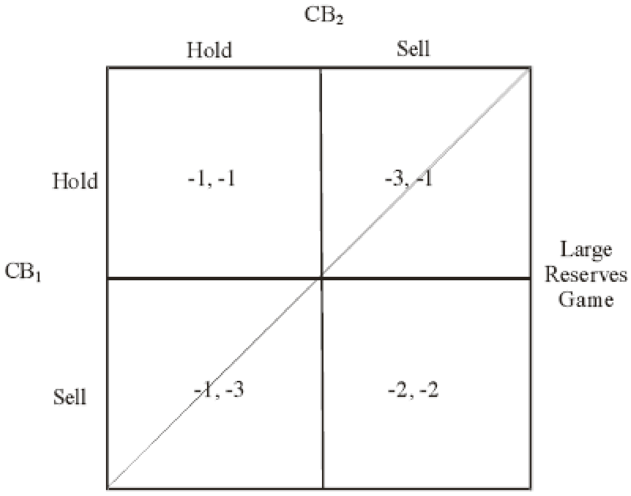
He suggests a coordinated diversification effort by central banks in this regard. The coordinated sales of gold carried out by central banks of industrialized countries in recent years, which have more than an eye on the gold price and its cyclical moves, could serve as a good example.

He then presents two scenarios under the Nash game theory model.

One in which both monetary authorities (CB1,CB2) have an intermediate level of reserves as shown in scenario 1, holding reserves is a strictly dominant strategy and the Nash equilibrium (0, 0) is in the southeast corner of the payoff matrix. A central bank which holds its dollar reserves (regardless of what its counterpart attempts) receives a negative payoff of − 1.The reason is that the dollar continues to devalue at a moderate pace in the international foreign exchange markets and that continuing to hold reserves means giving up the gains of diversification (0).

Referring to scenario 2, where both monetary authorities have a large level of reserves, things become more complicated. If one of the central banks sells its dollars in the foreign exchange market, the devaluation of the dollar will accelerate. If the other central bank continues holding dollars, its losses will be extremely high, say (-3). The selling authority also faces losses, but these are in part compensated by the investment in appreciating currencies (− 1). If both authorities get rid of their dollars, the downward trend of the dollar will be much more pronounced. Hence, each central bank incurs losses (− 2) in this case, which are greater than in the case of jointly holding dollars (− 1). Therefore, the northeast corner could be a coordination equilibrium, provided that both central banks are confident that neither will sell dollars. If each central bank is convinced that the other will sell dollars, then the southeast corner will be a Nash-equilibrium.





WP/06/153

The Euro's Challenge to the Dollar:
Different Views from Economists and Evidence from COFER (Currency Composition of Foreign Exchange Reserves) and Other Data

Ewe-Ghee Lim

Authorized for distribution by Armida San Jose

June 2006

This paper examines opposing views on the euro's challenge to the dollar as an international currency. One view emphasizes Europe's large economy and diversification effects as undergirding a vigorous challenge. The other emphasizes "network externalities," particularly undergirding continued dollar dominance.

The paper observes that generally, large economic size alone is insufficient to challenge the network externalities supporting vehicle currencies, but scope exists for

the euro to advance as an international store of value. The paper discusses the euro's medium-term prospects.

Even before the euro's launch in 1999, economists had differing views of its challenge to the dollar's status as the world's dominant international currency.

For and Against euro-----some prominent proponents

Indeed, Bergsten (1997) predicts that "as much as $1 trillion of international investment may shift from dollars into euros"; and Mundell (1998) predicts that "the euro will become an international currency on the same scale as the dollar," anticipating transition problems from investors shifting out of dollars to euros.

Other economists, notably Cooper (1997) and McKinnon (1998), were less sanguine. McKinnon (1998) argues the euro would only be an important regional currency, although this argument "in no way denigrate[s] the great contribution the euro could make to…the greater European economy (p. 60)."

Eichengreen (2005) is optimistic about the euro's prospects as a reserve currency. Taking a more historical perspective, Bordo (2003) and Dwyer and Lothian (2003) are cautiously optimistic, while Chinn and Frankel (2005) project a possible large role using econometric estimates.

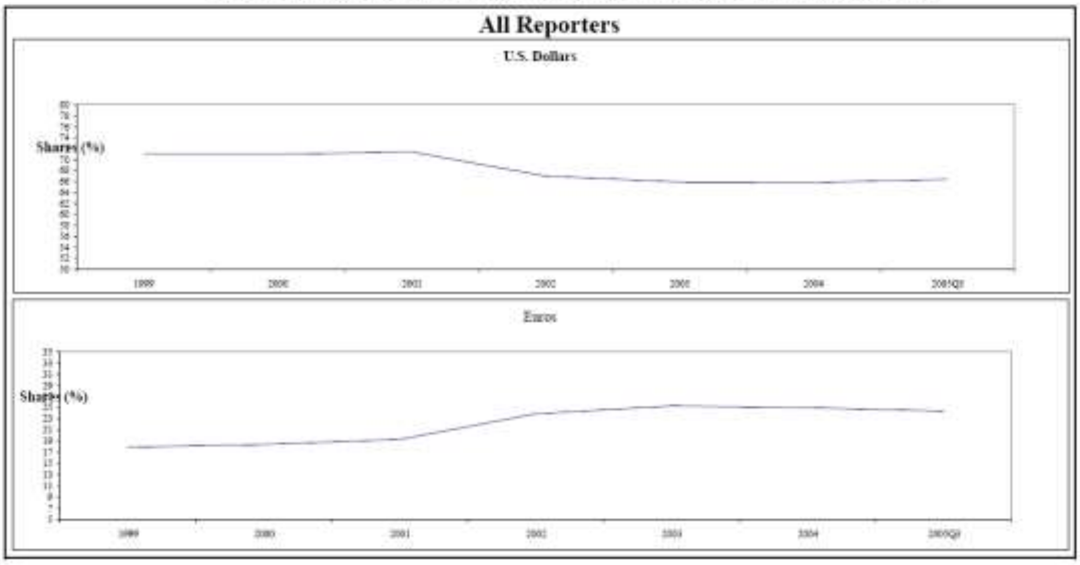
Summary of the Differences

The Bergsten/Mundell/Eichengreen (BME) view stresses large economic size and diversification effects as supportive of a larger euro role, while the McKinnon/Kenen/Cooper (MKC) view stresses network externalities, path dependence, strong dollar financial markets, and the nominal anchor role as supportive of continuing dollar dominance. Beyond that, Eichengreen has brought up an important new factor—**potential instability in the dollar's value**—which could have a larger impact on the dollar beyond its use as a reserve currency— the focus of Eichengreen's discussion.

EMPIRICAL EVIDENCE TO DATE

Currency Composition of Foreign Exchange Reserves (COFER)

Figure 1: Shares of the Dollar and Euro in Foreign Exchange Reserves



Empirical evidence suggests that the euro’s share for all reporters has risen steadily since its introduction—from 18 percent of allocated reserves in 1999 to 24 1/2 percent in 2005---a rise of 6 1/2 percentage points. Meanwhile, the dollar’s share has fallen from 71 percent to 66 1/2 percent.

The data thus confirm that reserve portfolios have indeed diversified 16 out of dollars into euros. Significantly, this result holds even if the euro’s share is compared to the estimate of about 17 percent for the share of all legacy currencies in 1998. The other significant development is a 2 ½ point decline in the yen’s share (6 1/2 percent to 4 percent), indicating the euro’s gain has also occurred at the expense of the yen.

Differences: size of the diversifications

The dollar’s decline of 2 points in the dollar area was quite limited compared to its 8-point decline in the euro area. Similarly, the euro’s increase of 4 points in the dollar area was more limited compared to its 9 1/2-point increase in the euro area.

“The data confirm that each currency is **dominant** within its domain. This is consistent with the general expectation as well as with the notion of an international currency as broad nominal anchor. In relative terms, the dollar appears more dominant within its domain, comprising 75 1/2 percent of reserves, compared to 57 1/2 percent for the euro in the euro area. Concomitantly, the dollar had a larger share in the euro area (31 ½ percent share) than the euro in the dollar area (17 1/2 percent share).”

2.2. Online Articles

World: Signs Grow Of Dollar Losing Favor As World’s Reserve Currency

Kathleen Moore

The author points out latest diversification efforts by countries all around the world. She starts off by saying that Russia was the first one to take the initiative.

According to sources, quoted on 24 February 2005, the Russian Central Bank has reduced the share of dollars in its foreign currency reserves. Then, Indonesia and Bahrain’s central bank governors said they were also pondering such a move. The next day, South Korean central bank also gave same hints and that it was selling off its US dollar reserves.

Ashraf Laidi, a currency analyst in New York, said diversification is a hot topic nowadays, because dollar has lost more than 30% of its value.

A survey last month by Central Banking Publications showed many central banks have increased the share of their reserves held in euros. They may not be actually selling dollars -- just buying fewer dollar assets, such U.S. government bonds.

Laidi said it's a gradual shift. **"Russia two years ago started off with nearly 90 percent holdings in U.S. dollars, and now today that proportion in U.S. dollars has fallen to just below 80 percent,"** he said. "And some central banks are either considering or making some moves towards that. Many central banks don't disclose the exact denomination in which currencies they have foreign exchange reserves.

But experts say any shift is important. One reason is that when central banks sell large amounts of dollars, the dollar loses value in the foreign-currency exchange market.

Any sign the biggest customers, central banks, are curbing their enthusiasm for U.S. dollar assets is bad news for the U.S. currency.

Gianluca Benigno from London's School of Economics said the trend is likely to continue. "The euro is an alternative reserve currency that the central banks are considering is becoming more liquid and important."

Malcolm Sawyer, an economics professor at Leeds University, said that's still a long way off.

"I could see a time, maybe 10-20 years hence, when the euro and the dollar have equal status, but I think that is really some time off,"[4]

From a Blog On China

China's foreign reserves are typically held in the form of U.S. Treasury bills and bonds and other U.S. dollar securities. The U.S. Treasury estimates that around two thirds of China's foreign exchange reserves are held in dollar assets. The return on these securities is estimated at 4%. However, China is expected to pay a rate of return of about 15% to inward foreign investment. Therefore, China is presumably paying foreign investors on their inward investment, part of which is financed by China's lending in the form of foreign reserves assets, a higher return than it earns from its investment by reserves assets. Such an institutional arrangement makes China lose money in the aggregate. Huge foreign exchange reserves have incurred large opportunity costs. In light of large U.S. trade deficits, the dollar is expected to depreciate over the medium to long term, and this will reduce further the return on holding dollar securities.

[4] http://www.rferl.org/featuresarticle/2005/02

But since, the US is the major trading partner of China, it should only try to diversify out of dollars gradually.

From a Blog On Korea

> "…The dollar fell the most in more than a week against the euro and dropped versus the yen, Korean won and the Canadian and Australian currencies after the Bank of Korea said it plans to diversify its reserves.
>
> South Korea's central bank, which has a total $200 billion in reserves, said in a report to a parliamentary committee on Feb. 18 that **it will increase investments in assets denominated in currencies such as the Australian and Canadian dollars.** Korean investors, including the central bank, are the fifth-biggest foreign holders of U.S. Treasuries.
>
> This Korean story is having quite an impact because it feeds into suspicion that others are also seeking to cut their exposure to the dollar."

Statistics on Reserve composition[5]

Currency composition of official foreign exchange reserves, end-2005			
	USD billions	Percentage of total	Percentage of allocated

[5] http://www.bis.org/speeches/sp060908.htm

Instrument composition of identified US dollar reserves at end-June 2005 In billions of US dollars			
	Short-term	Long-term	Total
Treasury securities	205	1,054	1,259
Other assets	695	604	1,299
Repos and deposits in the United States	155		
Commercial paper and certificates of deposit in the United States	122		
Offshore deposits	418	42	
Agency securities		324	
Corporate bonds		61	
Equities		177	
Total	900 (35.2%)	1,658 (64.8%)	2,558 (100%)
Memo: Share of Treasury securities in assets of the given maturity	22.7%	63.6%	49.2%
Total IMF-reported US dollar reserves at end-June 2005			1,789

Total	4,170	100	
Allocated	2,821	67.7	100
USD	1,880	45.1	66.6
EUR	687	16.5	24.3
GBP	103	2.5	3.7
JPY	101	2.4	3.6
CHF	4	0.1	0.1
Other	46	1.1	1.6

What are Central Banks doing in terms of diversification?

“Challenging the dollar's dominance[6]
Currency diversification may not be as scary as the market thinks”

By Wanfeng Zhou, MarketWatch
Feb 5, 2007

The article gives names of some countries contemplating diversification:
“…China wasn't the only country worried that its reserves were too concentrated on the U.S. currency, leaving it vulnerable in the event of a dollar rout. Banks from at least a dozen other countries, including Russia, Switzerland, Iran, Syria, Qatar, Venezuela and the United Arab Emirates, announced plans to cut their exposure to the dollar in favor of other currencies.”

The dollar's weakness last year changed valuations. Its decline against the euro from January through September, for example, accounts for almost half the rise in the dollar value of the euro-reserve holdings.

Investing reserves in other forms of investments

Investing in equities and non G3 markets

Stephen Jen, currency analyst at Morgan Stanley says: “Central banks will increasingly start to invest their excess reserves - those that they don't need for liquidity purposes -- like 'sovereign wealth funds' by diverting from the traditional investment patterns. Official reserve money will likely be allocated to equities and non-G3 (U.S., Europe, Japan) markets.”

Allocation to private fund managers

[6] http://www.marketwatch.com/news/story/currency-diversification-may-not-scary/story.aspx

Singapore, for example, has been a pioneer of more active reserve management in recent years, Chandler said. The IMF estimated that in 2003, 14 to 20 central banks allocated some of their reserve management to private fund managers.

Agency to manage reserves

There's also been talk that China is exploring the possibility of establishing a separate agency to manage some of its reserves and to acquire international assets.

China's Diversification Efforts

State Administration of Foreign Exchange (SAFE) chief Hu Xiaolian said :"

"We will perfect the management of our foreign exchange reserves and actively explore new ways to use our reserve assets even better. We will further improve the currency and asset structure in the foreign exchange reserve portfolio and continue to broaden the investment channels for our reserves. The diversification would serve the twin purposes of strengthening risk management and boosting the yields of forex reserve assets."[7]

A Gold Play on the Dollar's Demise[8]

Author: Yaser Anwar

Posted on: September 05, 2006

US lowering interest rates on dollar further depresses the dollar

The author says:

"On fears that the U.S. dollar is headed lower, China is slowly but surely trading in their U.S. dollars for Euros and yen. Over the recent months China has been buying the greenback to prevent foreign exchange inflows from boosting the yuan's value.

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[7] http://www.jang.com.pk/thenews/jan2006-daily/07-01-2006/business/b19.htm
[8] http://seekingalpha.com/article/16299-a-gold-play-on-the-dollar-s-demise

The nation wants to slow appreciation in the yuan, which has risen 1.5% since it was revalued a year ago, as it protects exporter profits. But last week China's National Bureau of Statistics said the country should begin diversifying its foreign-exchange reserves in order to hedge itself against a falling U.S. dollar."

Increase Gold reserves?

"As the nation gradually moves away from the U.S. dollar and into other currencies, Chinese economists are urging Beijing to significantly increase their gold reserves by almost four times!"

Chinese economists want to quadruple the country's gold reserves!

World Central Banks Tightening Policy

"There is no doubt that foreign central banks have been the primary buyers of U.S. Treasury debt in recent years, and the primary mechanism by which the U.S. current account (and the growth in U.S. domestic investment) has been financed. The central banks continue to tighten policy, so their absorption of U.S. Treasuries is slowing. When foreign investors fail to absorb the Treasury securities needed to finance U.S. government deficits, those Treasuries are forced into the hands of U.S. investors instead. No wonder you'll see some of the most world's greatest investors are betting against the greenback, from Warren Buffet to Bill Gates and Richard Branson to George Soros!"

China to diversify foreign exchange reserves[9] (China Business Weekly) 2004-05-08

What would linking Yuan to basket of currencies mean?

[9] http://www.chinadaily.com.cn/english/doc/2004-05/08/content_328744.htm

"In earlier comments, Guo said China wanted to move to a floating system that would link the yuan to a basket of currencies. He did not give a timetable for the switch.

A basket would include at least the euro and yen, in addition to the US dollar, and up to seven other currencies, including those of China's main Asian trading partners. Analysts have stressed this would not necessitate a change in the composition of reserves to reflect currency weightings in the basket."

If the US dollar is now a refuge, what is the yen? [10]

Brad Setser | Aug 20, 2007

"…Private Chinese and Russian money is quite happy to be in China and Russia. It certainly isn't financing the US deficit. The US deficit is financed by the Bank of Russia and the People's Bank of China…… Over the past few years, foreign equity markets have done better than US markets. And the dollar has slumped v most currencies …"

Rationale for financing US deficit

"….The strange thing is that foreigners have been willing to finance the US even though it hasn't offered very good (financial) returns – and doesn't really offer attractive risk-adjusted returns going forward. In at least my view, foreign central banks finance the US because they peg to the dollar and want to support their export sector, not because they believe in US markets. Think "Vendor financing." The service that the US has supplied the world is demand for their exports -- not large financial markets that offer a good store of value for the emerging world's savings…"

[10] http://www.rgemonitor.com

US treasury returns and foreigners' willingness to finance its deficit in the future

"….Treasuries don't offer returns large enough to compensate for the risk of dollar depreciation – that, presumably, is why recent troubles don't seem to have dented China's risk appetite.

The problem: the higher-yielding assets that the US financial system has produced recently currently don't look so good. Once things settle down, I personally suspect that it will be a bit harder to convince the rest of the world – even previously generous official creditors – to finance the US on quite the same terms…."

The dollar, still a currency that you run to?[11]

Brad Setser | Aug 16, 2007

Growing Awareness for Diversification

"……….Private inflows were not large enough, in net, to finance that deficit even when there was a lot of appetite for financial engineering. The world's central banks will no doubt continue to help the US out. But they too would rather not have all their eggs in one basket – ……."

U.S. Dollar Under Threat As Premier Global Reserve Currency[12]

2007-07-31

By James West

America's Global Supremacy

It hinges on two factors:

[11] http://www.rgemonitor.com

[12] http://www.goldworld.com/atom/articles

a) it is the world’s largest economy in terms of buying power; and

b) The U.S. Dollar is the reserve currency of choice for virtually all central banks around the world.

“…..the status of the U.S. Dollar as the premier reserve currency is seriously threatened. And that could have serious consequences for America’s lead position in terms of economic buying power as well…..”

Reasons for threat to US dollar’s reserve currency status

“……There are a lot of factors undermining the attractiveness of the U.S. dollar as a currency holding, not the least of which is its stubborn inclination to lose value over time…”

Importance of a stable currency

“…Central banks are interested in holding currencies in reserve that have a stable value unlikely to fluctuate excessively. Like any conservative investor, they get nervous when their ‘wealth preservation’ tactics fail.”

Dollar being replaced worldwide?

There are an increasing number of indications that the U.S. Dollar is already being replaced in many historically U.S. dollar transactional processes.

The Middle East

“….where the rejection of all things American persists in varying degrees of intensity coincident with Islamic fundamentalism, strong moves away from the dollar are under way.”

Qatar to diversify into gold and euro

“…The Government of Qatar increased its gold holdings by a factor of fifteen between April 2006 and April 2007. The central Bank of Qatar is carrying out a reserve diversification policy and stated last year that the euro would be one of the alternative currencies into which it would diversify."

Mahathir presents gold dinar as an alternative

At the International Conference on Gold Dinar Economy 2007 held in Kuala Lumpur on July 24th, Former Malaysian prime minister Dr Mahathir Mohamad called on the Islamic world to embrace the use of the gold dinar for international trade and as an alternative to US dollar reserves in central banks.

"This is quite simple. It is nothing more than keeping gold bullions as savings. They can be traded and they retain their value in terms of purchasing power quite well…..With the usage of the gold dinar, some of the power of the Western banking system and the US dollar would be diminished. With this, the clout of these powerful countries would also diminish. On the other hand by refusing to use the gold dinar, Muslims could be impoverishing and weakening themselves"

Euro

"The more the US dollar falls, the more motivation international central banks will have to diversify their resources away from the US dollar, thus creating additional demand for the euro and additional supply of the USD as a direct result of such portfolio shifts rather than as a result of normal trade flows."

Iran

"OPEC's second largest producer Iran caused a stir in financial markets when it asked Japanese oil buyers to pay in yen rather than US dollars two weeks ago."

Libya and Syria

Libya and sometimes Syria also ask for payments in other currencies, an industry source said.

Is there any sense in diversifying?

"…Analysts said it would make economic sense for producers to diversify payment denominations, as it would reduce the volatility associated with the close ties to one currency and better reflect the region's trade relationships."

But the author says that as long as the major oil producing countries are using dollar as their major trading currency, as they have been and are doing until now, dollar retains its premier status.

ANALYSIS-FX reserve shift out of dollars can be costly[13]

Tue Apr 4, 2006 6:12am ET By Natsuko Waki

LONDON, April 4 (Reuters) - Central banks in key emerging economies are still keen to shift some of their largely dollar-dominated currency reserves into euros, but rising U.S. interest rates are making diversification a costly business.

US raising interest rate on dollar to make dollar more attractive

"…the Federal Reserve's 15 interest rate hikes since June 2004 has taken U.S. interest rates to 4.75 percent from historic lows of 1 percent in 2003, which makes ditching dollars less attractive from the yield point of view."

Following is a summary of a series of related articles on US deficit, dollar depreciation and Asian reserve diversification on asiafinanceblog.com. [14]

Asian appetite for US treasury

May 20, 2005

"Asian central banks in the recent years have purchased US currencies and debt worth USD 2 trillion to keep its local currency cheaper and remain export competitive…. While the US Fed has become increasingly dependent on the Asian banks' actions, Asian banks too have got caught in this vicious cycle of keeping the

[13] http://i.today.reuters.com/media

[14] http://www.asiafinanceblog.com/asiafinanceblog/2005/05

US dollar low, which they are trying to derisk now. The weak dollar is expected to improve the prospects of US goods in the international market but at the cost of lower purchasing power of US residents. It is quite likely that most Asian banks will behave cautiously when it comes to fresh exposure to US currency. They are unlikely to liquidate existing dollar reserves and shift to other currencies because this will adversely impact the valuation of their reserves and trade too…"

Should Korea be first out the door of US treasuries?
April 29, 2005

In a recent column William Pesek Jr. asks whether Korea shouldn't be the first out the door of U.S. treasuries, ahead of China or Japan. He makes the case that if Japan or China start moving out of U.S. treasuries it could start a wave of panic and that Korea could do so "stealthily." Interesting thesis and it raises the question: Which Asian country will be first to blink and head for higher-yields outside of U.S. treasuries?

Is Asia unnerving the dollar?

May 10, 2005

A bugbear called 'central bank reserve diversification' unleashed by the Bank of Korea's announcement early this year about diversifying its foreign exchange reserves is haunting the dollar and has led to volatility in the US currency and fixed-income market. With a large proportion of outstanding US Treasuries in Asia's reserve portfolio, the continent's appetite for the dollar seems to be satiated and it seeks to invest elsewhere.

- **Large scale Diversification not advisable**

Avoiding a widespread sell-off in the USD and USD assets is in the Asian interest. Asia is dependent on a robust US demand to support its export economy. If the dollar were to plunge sharply, the risk of a US recession would intensify, translating to a decrease in American demand for Asian goods. This in turn would negatively affect economic growth in Asia. Moreover, a rapid shift towards alternative currencies would be imprudent and deleterious as selling a sinking dollar would compound capital losses.

China's forex reserves raise alarm
April 10, 2006

Alternative ways for employing Chinese reserves

A Chinese economist too has urged for a slow down in forex growth and has outlined possible measures for it. According to him, China should ideally hold about USD 700 billion in forex reserves to ensure debt repayment, finance imports and maintain stability. He has suggested that the government should bring about more flexibility in yuan movement, increase gold reserves, use part of the forex reserves to recapitalize state banks and allow firms to hold more foreign currency in order to regulate the forex growth.

Diversification, rate speculation pressurize the dollar

April 05, 2006

ECB's rising interest rates?

Speculations about the European Central Bank raising interest rates faster than Federal Reserve and central banks diversifying their reserves hit the dollar hard on April 4. As a result, the dollar declined steeply against its major rivals, and hit a two-month low versus the euro.

An immediate and substantial shift from dollar holdings is unlikely, considering the US rates standing at 4.75, which are still higher than most others. However, as the interest rate gap begins to reduce it could spell a doom on the dollar.

Following is a summary of related articles from the website http://globalpolicy.org

Asian Central Banks Consider Alternatives to Big Dollar Holdings[15]

By Phillip Day and Hae Won Choi

Wall Street Journal, February 5, 2004

South Korea

South Korea, looking for better returns, plans to hand over as much as $20 billion of its foreign-exchange reserves, which total the equivalent of $157 billion, to private fund managers next year.

South Korea's plans are the most ambitious and could have the biggest impact on the dollar. Next year Seoul will hand over between $10 billion and $20 billion of its $157 billion in reserves to foreign asset-management firms.

The Korean finance ministry is establishing the Korea Investment Corp., and expects to fund it with at least $100 billion by 2012. Much of that money will be consigned to foreign investment firms to manage from offices in Seoul, thereby boosting the capital's efforts to become a financial center.

Taiwan: feeding dollars back into international economy

Taiwan wants to put some of its $200 billion of reserves toward helping local companies and diversifying the economy.

In Taiwan, the current system for managing the nation's $206.63 billion in reserves, the third-largest in the world, "might not be an efficient use of our resources," says government minister Hu Sheng-cheng. Taiwan's central bank has accumulated "too much" foreign exchange from Taiwanese exporters and from inflows to its capital markets, he says. Mr. Hu is heading a task force that will announce in the next few weeks details of a plan to use reserves to help local companies buy machinery and intellectual-property rights overseas, he says. The initial aid probably will go toward companies involved in biotechnology, which the government is promoting as a way

[15] http://globalpolicy.org

to diversify its economy, or making flat-screen displays, according to local news accounts.

Thailand

Thailand will use $7 billion of reserves to pay off the foreign debts of its government agencies and state enterprises. Thailand has been steadily reducing its foreign debt. It paid off the last of the $12 billion it borrowed from the IMF during the financial crisis ahead of schedule last July.

Asian Central Banks at a crossroads

Asia's bigger central banks face a difficult task. They want to reduce dollar risk and shift reserves to better returns, but they have to trim dollar holdings without spooking the U.S. debt market or currency markets -- and potentially fueling the dollar's downward momentum. That in turn would undercut another goal of Asian governments: to slow the rise of their currencies against the dollar, which makes their exports more expensive and threatens Asian jobs.

Asian Intentions

Elsewhere in Asia in recent weeks, however, some governments have begun discussing plans to chip away at their dollar mountains. The initial amounts are small, but taken together they send a clear signal.

Iran Leads Attack against US Dollar

By Jerome R. Corsi

While the world press has focused on Iran's plans to move ahead with enriching uranium, Tehran continues to wage economic war against the U.S. dollar behind the scenes. Tehran has reached a decision to end all oil sales in dollars, according to statements by Iran's central bank governor, Ehrabhim Sheibany, in Kuala Lumpur at the end of last month.

Zhuhai Zhenrong Trading, a Chinese state-run company that buys 240,000 barrels of oil per day from Iran, approximately 10 percent of Iran's 2.2 million barrels per day total output, has confirmed a shift to the euro for its Iranian oil purchases. About 60 percent of Iran's oil income is currently in non-dollar currencies, according to Hojjatollah Ghanimifard, who is responsible for international affairs for National Iranian Oil. Even Japanese refiners who buy some 550,000 barrels of oil a day from Iran have indicated their willingness to buy Iran's oil in yen.

<u>Iran's central bank governor Sheibany also confirmed Iran is cutting U.S. dollar reserves to less than 20 percent of its total foreign reserve currency holdings.</u> Iran plans to manage its foreign reserve currencies from oil sales in a basket of 20 different currencies.

<u>Dollar's Drop Challenges US Power</u>

By Steven C. Johnson

<u>Reuters</u>
April 27, 2007

As the dollar has steadily weakened over the past year, the value of the dollar-denominated assets held by central banks has also declined. The trend may motivate foreigners to start holding more euros instead, exacerbating pressure on the dollar and leading to faster U.S. inflation rates and a declining standard of living. That is increasingly possible because <u>euro-denominated debt today accounts for a bigger share of the international bond market than do dollar-based securities.</u>

Incentive for Oil exporters

That also means that oil exporters could find it easier to start pricing crude in euros, Rogers said, adding to the financial burden on the United States, the world's biggest consumer of oil.

<u>Euro Gives Dollar a Run for its Money</u>

By David R. Francis

<u>Christian Science Monitor</u>, January 8, 2007

"The euro is catching up, probably very rapidly," says Peter Pietsch, an economist at Commerzbank in Frankfurt, Germany. At this time, the dollar and euro are the only two important international currencies, and they are "competing fiercely against each other."

Some signs of the euro's global gains:

<u>As of this past autumn, the value of all euro notes in circulation worldwide exceeds the value of total US currency. With each euro worth about US $1.33 on the foreign-exchange market today, the 628 billion euro notes in circulation on Dec. 22 are worth $828 billion, exceeding the $753 billion of American currency in circulation as of Dec. 18.</u>

Last week, the European Monetary Union welcomed its 13th member nation, Slovenia, the former Yugoslav republic. That adds a little to the demand for euros.

<u>Seeing the dollar's decline in value - 11 percent against the euro in 2006 -</u> some central banks and finance ministries have been diversifying their financial assets and transactions into euros.

Besides Iran, other oil-rich nations are shifting to the euro. So is Switzerland, it's reported.

United Arab Emirates

The central bank of the United Arab Emirates, a close US ally, said it would convert <u>eight percentage points</u> of its foreign-exchange reserves into the euro. At present, some 98 percent of the UAE's $25 billion in reserves are in dollar investments.

What does Bank of International Settlements have to say?

New data from the Bank for International Settlements (BIS), an institution in Basel, Switzerland, that serves major central banks, shows that Russia and members of the Organization of the Petroleum Exporting Countries have cut their dollar holdings from 67 percent in the first quarter of 2006 to 65 percent in the second quarter. The euro's share of their overall financial holdings rose from 20 to 22 percent. That shift may seem modest. But it reflects a change of sentiment toward the five-year-old euro in the financial world. The euro is now recognized as a solid currency, worthy of succeeding the former deutsche mark as a bastion against the depredations of inflation.

A new BIS working paper by economists Gabriele Galati and Philip Wooldridge concludes: "The liquidity and breadth of euro financial markets are fast approaching those of dollar markets…"

The BIS paper estimates that the share of euro- denominated reserves has risen to 25 percent in 2005-06, up from 20 to 22 percent in 1995-96 for the currencies of the nations that subsequently joined the euro system.

John Williamson, a veteran economist at the Peterson Institute for International Economics in Washington says, "It's not healthy for one country to have a monopoly." But Special Drawing Rights, a currency system created by the International Monetary Fund in 1969 as a substitute for the dollar and for gold, have not caught on among central bankers. They have merely a minor role in world finance today.

Are Poor Nations Wasting Their Money on Dollars?

By Eduardo Porter

New York Times, April 30, 2006

The need for diversification and reserve management

It's often argued that foreigners funnel their money into the United States because it is a great investment. But for many countries, ploughing money into the United States these days is not all that compelling a deal.

Poor nations are financing much of the United States' current account deficit. They are losing money in the process, and as the losses mount, they will be tempted to do something better with their cash. Consider Russia. Over the last five years, its foreign currency reserves have multiplied by eight, to more than $200 billion.

"It is an irony of our times that the majority of the world's poorest people now live in countries with vast international financial reserves," Lawrence H. Summers, the president of Harvard and a former Treasury secretary, told an audience of Indian economists in Mumbai last month. "It seems appropriate that part of the focus of the international financial architecture move toward the challenge of deploying their large reserves as effectively as possible."

Alternatives to Hoarding reserves

There are cheaper forms of insurance: rather than accumulating reserves, poor countries could achieve the same level of financial security by limiting the accumulation of short-term debt, Mr. Rodrik said. Moreover, years have gone by without new financial disasters, and the memory of past crises is fading. If this continues, governments across the developing world will question the value of such costly insurance when there are so many other things to do with the money.

Reserve currency: will China be able to provide alternative?[16]

By Shan Saeed

The chairman of the US Federal Reserve Board, Allan Greenspan, now proudly uses the term “hegemony”, in congressional testimony to describe officially the US financial pre-eminence and structural advantage. The dollar hegemony is a structural condition in the world of finance and trade in which the US produces dollars and the rest of the world produces things that dollars can buy.

[16] http://www.dawn.com/2003/04/07/ebr4.htm

What can China do?

China has the power to make the yuan an alternative reserve currency in world trade by simply denominating all Chinese export in yuan. This sovereign action can be taken unilaterally at any time of China's choosing. All the State Council (the Chinese cabinet) has to do is to announce that all Chinese exports must be paid for in yuan, making it illegal for Chinese exporters to accept payment in other currencies. This will set off a frantic scramble by importers of Chinese goods around the world to buy yuan at the State Administration for Foreign Exchange (SAFE) making the yuan a preferred currency with ready market demand. Companies with yuan revenue no longer need to exchange yuan into dollars, as the yuan, backed by the value of Chinese exports, becomes universally accepted in trade. Members of the Organization of Petroleum Exporting Countries (Opec), who import sizable amount of Chinese goods, would accept yuan for payment for their oil.

The IMF—controlled by the US— aims at dismantling traditional Asian financial systems and forcing Asians to replace them with a structurally alien global system, characterized by open markets in products and, crucially, in finance and financial services. The real target is of course China. For the US knows: as China goes, so goes the rest of Asia.

Asian economies will find in China an alternative trading partner to the USA, and possibly with more symbiotic trading terms, providing more room to structure trade to enhance domestic development along the path of converging regional interest and solidarity. The rise in living standards in all of Asia will change the path of history, restoring Asia as a centre of advanced civilization, putting an end to two centuries of Western economic and cultural imperialism.
China, with a giant integrated market composed of a 5th of the world population, can swap market access for technology transfer from the world's transnational technology corporations. Once free from dollar hegemony, China can finance its domestic development without foreign loans and capital. The Chinese economy then will no longer be distorted by excessive reliance on export merely to earn dollars that by definition must be invested in dollar assets, not yuan assets. The aim of development is to raise wage levels, not to push wages down to achieve predatory competitiveness.

Yet export under dollar hegemony requires keeping wages low, a prerequisite that condemns an economy to perpetual underdevelopment.

What to Do With Dollar Reserves: China Shows the Way...[17]
Dr. Mohamed A. Ramady

By first quarter 2007, Saudi Arabia's accumulated foreign reserves were around $235 billion. Other Gulf oil producers have also accumulated sizeable foreign asset reserves, boosted by higher oil prices over the past four years. The major question is how to manage and use these dollar reserves in the face of a depreciating dollar? China, which is holding over $1.07 trillion, and expected to reach $1.3 trillion by year end 2007, seems to be showing one way that could be a model for the Kingdom.

China is thinking of implementing a "Singapore model" in using its accumulated reserves. Basically China is planning to create a new state investment agency that will manage a significant amount of the dollar reserves. This new state foreign exchange management agency — provisionally and rather cumbersomely named the "United FX Investment Management Corporation", will begin formal operations in 2008. The new agency's mandate is simple: to invest around 20 percent of China's foreign exchange reserves in domestic Chinese state enterprises. If this proves successful, the agency's mandate could increase to higher levels of national reserves, up to 30 percent. China will continue to invest in low-risk, liquid dollar instruments, but China's more import objectives seems to pursue several strategic aims.

One such aim is to promote the development of Chinese state enterprise groups in seven key identified sectors. The aim is to turn them into world-class, super multinational corporations by financing their international expansion plans and helping to modernize their domestic operations. Another key objective is to ensure that China secures stable sources of key mineral resources. China's appetite for mineral resources is well documented to feed the current phenomenal Chinese economic growth. The new approach, under the FX management program, will more likely finance international acquisitions and exploration activity overseas by Chinese state-owned

[17] http://arabnews.com

companies. The implication to the world's trading pattern is significant, with new potentials for Middle East and African countries.

China currently directly controls some 160 large enterprise groups, some more efficient than others, especially in their international operations. Over the next decade, as Chinese industries modernize, and become more cost and energy efficient, these state enterprises could well merge to a smaller number, which could well become global giants. They will in essence compete against the biggest companies in the Western world and rank amongst the world's top 500 largest companies in terms of revenue potential.

The proposed FX Agency will concentrate on some key priority industries. These include oil and petroleum, electrical networks and power, telecommunications, aviation, transportation — including shipbuilding, coal, and upgrading military industries. Secondary industries include automobiles, IT, equipment manufacturing, construction and steel.

What motivated China to plan for alternatives to holding US financial securities was the apparent success of Singapore's government-controlled investment firm, "Temasek". This agency devoted its resources to funding Singaporean state firms' activities in Singapore and oversees, mostly in Asia. The Chinese would also start in the domestic market before moving more aggressively overseas.

The implication for Saudi Arabia and other Gulf oil producers is clear: Either continue to sit on semi-liquid, dollar reserves depreciating in value, or embark on a modest and strategic program like China and Singapore. Saudi Arabia should seriously consider the establishment of an autonomous state investment agency to examine long term strategic investment opportunities. A certain percentage of the current foreign exchange reserves could be allocated to this new agency.

Chapter 3: The Importance of an International Reserve Currency

Before delving into the need for and the implications of reserve diversification, we should take a look at the dynamics of international trade which set rules for transactions between countries and hence influence the evolution of a reserve currency. To understand the role of a reserve currency, let us first look at the determinants that make a currency capable of achieving status of an international currency, because being a reserve currency is only one of the aspects or functions of being an international currency.

The three traditional functions of local or domestic currency have been:

- Store of value
- Unit of account
- Medium of exchange

An international currency, while serving these purposes, plays additional roles too. These include:

- Currency Substitution
- Denominating or invoicing foreign trade
- Invoicing international financial flows
- Pegs for currencies of smaller countries
- Foreign exchange trading

A country whose currency plays an important role internationally, entitles it to certain advantages and certain disadvantages at the same time. Some of the advantages include:

- **Business opportunities for its financial institutions**

  Although there is no proved relationship between these institutions getting more business and the country's currency being an international one, nevertheless, banks have a comparative advantage at dealing in their own currencies.

- **Convenience for its residents**

  Lenders, borrowers, exporters and importers all find it convenient dealing in their own currency.

- **Political influence and esteem**

  It goes without saying that the current power the United States holds and exerts is due to the important role its currency is playing worldwide. In fact, these both variables swap roles of cause and effect often.

- **Seignorage**

  It is deemed as the most important tangible benefit of having an international currency. Whatever is happening in context of the US's huge trade deficit, sprouts from this very core. A country that has made other countries hold its currency, also makes them give up real tangible goods and services, and ownership of real capital stock to add to these currency balances they use. Take the case of America. Analysts have defined "seignorage" in broader terms as"…America's "exorbitant privilege" of being able to borrow abroad large amounts in its own currency, especially while simultaneously earning much higher returns on FDI and other investments in other countries….". The continued willingness of Asian countries to finance America's trade deficit in return for accumulating dollar holdings has deemed dollar the powerful currency it is now today. The US has been earning more on its investments overseas than it has had to pay on its debts, a differential of about 1.2 per cent per annum.[18] Thus the debtor

[18] Paper: Will the Euro Eventually Surpass the Dollar As Leading International Reserve Currency? MENZIE CHINN, University of Wisconsin and NBER

becomes the creditor in effect, because he literally owns the whole net worth of the creditor.

Let us also look at some disadvantages this situation brings.

- **Fluctuations in currency demand**

  When a currency is being circulated internationally, its demand also fluctuates largely. This makes control over money supply difficult in the particular country. Also, if demand for the currency rises too much, it causes unwanted appreciation in the value of the currency, thus making its exports less competitive.

- **No more domestic isolated policies only**

  The monetary authorities in the country of the leading international currency may have to take into account the effects of their actions on international markets, rather than catering for domestic objectives only.

3.1. What Makes a Currency Suitable for an International Reserve Currency

The literature on international currencies points out a number of variables in this regard:

- **The Country's Position in the International Trade Market**

  The larger the share of the country in international trade, output and finance, the greater advantage its currency has over others. International trade in manufactured goods tends to be denominated in the sellers' currencies.[19] As an alternative to GDP, we could also look at countries' trading volume as another indication of their relative weights in the world economy.

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[19] JEFFREY FRANKEL, Harvard University and NBER
Newport, RI, June 1-2, 2005

- **The Soundness and Depth of the Country's Financial Markets**

  The capital and money markets in the home country must be open, free of control, deep, well structured and sophisticated. Very rarely, a capital market fulfils all these conditions.

- **Confidence in the Stability of the Value of the Currency**

  The key here is the stability in the value. Investors would put trust in a currency only if they see that its value does not fluctuate erratically over time. Also, a key currency is used as a form in which one can hold assets (firms hold working balances of the currencies in which they invoice, investors hold bonds issued internationally, and central banks hold currency reserves). Here confidence that the value of the currency will be stable, and particularly that it will not be inflated away in the future, that is the purchasing power of the currency would not erode in the future, is critical.

- **Network Externalities**

  Finally, a key-facilitating factor is "network externalities"—a phenomenon associated with international currencies—whereby a good or service becomes more valuable as more people use it. The classic example is the telephone—a telephone connection becomes more useful to a user as the number of people with telephones increases.[20]

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[20] Paper: The Euro's Challenge to the Dollar: Different Views from Economists and Evidence from COFER (Currency Composition of Foreign Exchange Reserves) and Other Data

Ewe-Ghee Lim

Our particular point of consideration is a currency's status as a reserve currency all over the world. A currency can achieve this status if and only if it fulfils above-mentioned criteria.

To summarize them: the currency must be fairly stable in value over time; home country should be a dominant world trade participant to back up its currency; its financial markets must be deep and open to investors (development of liquid instruments in that currency, and lowering transaction costs are important things to lookout for in this regard).

Chapter 4: The Evolution of Dollar as an International and Reserve Currency: A Brief History

We would start off with the dollar in the Bretton Woods era and go on analyzing its evolution as the single most powerful currency.

4.1. Dollar Under the Bretton Woods Era

After World War 2, gold was announced as the international reserve asset throughout the world, at Bretton Woods Conference in 1944. but, in practice, dollar was the actual reserve asset. The reason being the gold not freely convertible into other currencies for trade. A dollar shortage caused the dollar to be prized even further. Ironically, the Soviet Union began accumulating the largest dollar reserves out of the US. Dollar was deemed attractive due to its relative stability and liquidity. The Europeans and others began associating their economic recovery from the war, with their greater ability to earn dollars by improving their trade balances. Soon, the US began experiencing a trade deficit, which was financed by a European trade surplus. It gave birth to the famous Triffin dilemma under this fixed exchange rate system. The dollar began to be used widely as a supplementary reserve asset with gold. It was a dilemma because if the US would take any measures to correct its deficit, the rest of the world would be deprived of the dollar reserves and vice versa.

4.2. Dollar in the Floating Exchange Rate System

This gave birth to the floating exchange rate era and put an end to the fixed exchange rate regime. Surprisingly, the floating system did not reduce the need for reserves. Instead, central banks all around the world kept accumulating dollar reserves for their trade needs. In the late 1970s, the dollar began to decline in value, and so did the dollar denominated reserves. There were two other periods when dollar experienced devaluation, one between 1985-1988, and the most recent between 1993-1995.

Despite these fluctuations, the dollar held onto its status as the premier reserve and international currency. Some of the reasons are the same as discussed in the previous section.

- **The Sheer Size of the US Economy**

  The U.S. economy is still the world's largest in terms of output and trade.

- **The Depth of US Financial Markets**

  The large financial marketplaces like New York in the US are much stronger and deeper structurally than other markets around the world. Britain's markets also stand close in comparison, however to US markets. [21]

- **The Liquidity of Dollar**

  The dollar is a very liquid currency as compared to others and in the past, the US government's measures to curb inflation have also supported dollar's status as lead currency. The larger the dollar's network of users, the more attractive the dollar becomes to a user. The demand-side economies derive from the currency's increased liquidity, which results because a larger network implies more potential counteroffers for a trade, thus enhancing the probability of a favorable match and quick sale. The increased liquidity then induces even more people to join the network, resulting in a self-reinforcing cycle.[22]

- **Lack of an Alternative**

  Perhaps, the biggest reason for dollar still being the premier, is the lack of an alternative currency in which central banks could put their trust and diversify

[21] Paper: "The evolution of reserve currency diversification"
By Akina Horii. Dec 1986; BIS economic papers

7 The Euro's Challenge to the Dollar:Different Views from Economists and Evidence from COFER (Currency Composition of Foreign Exchange Reserves) and Other Data :*Ewe-Ghee Lim*

into, that is before the advent of the euro. This was primarily because of the attitude these countries all around the world had towards building and maintaining their foreign reserves. Most of the Asian and other European countries have been following an export-oriented model of trade which caused them to afford decline in their home currencies as opposed to the dollar to keep their exports competitive and to accumulate sufficient dollar reserves. This led to further strengthening of the dollar and gave birth to the dollar “Hegemony”.

4.3. Reasons for the Decline of Dollar

The dollar has been a currency of choice so far for traders all around the world, but as increasing realization of a depreciating dollar and dangers of too much reliance on a single currency is happening, the dollar has already begun to lose its premier status. Although experts say it will still take a long time for other currencies to tumble dollar, the process has already begun. This is what this research paper aims to highlight.

Some main reasons of the dollar’s downfall are:

- **Continuous Depreciation of the Dollar**

The biggest and main reason of the dollar’s decline is its continuing devaluation. This has made it increasingly unattractive for reserve holders and other investors all over the world. Like any other ordinary investor, the central banks also look out for wealth maximization and are alarmed when the value of their assets declines. This has raised doubts worldwide over dollar’s continuing role as the international invoice currency and as a foreign reserve currency.

Since 1960s, US treasury investments declined and now less than half of reserves are US treasury. Almost two-thirds of world’s reserves in 1970s were dollar denominated. The percentage has now fallen to only 66%.

- **Faster Growth in German, Japanese and Chinese Economies**

A new concept of “polycentric economy” is shaping up. Asian tigers are proving their might with the passage of time. The US is not the only participant influencing trade any longer. Since, US exports have fallen relative to others, more and more transactions are taking place in other currencies. So, central banks are naturally preferring to hold other currencies as well.

- **Exchange Rate Agreements of Dollar Pegging Obsolete**

  The US dollar once served as the only currency to which other countries used to peg their own currency to control fluctuations in demand and supply. But now countries like China which is the biggest holder of dollar reserves currently, have unpegged their currencies from the dollar, which is a blow to the dollar.

- **Floating Exchange Rate Regime Encourages Diversification**

  The floating rate regime which does not require countries to hoard reserves for sake of keeping the exchange rate fixed , has also encouraged diversification.

- **Realization of trade-offs of holding huge reserves**

  In fact, it has reduced the appetite of trading partners of the US for its reserves since the export-focused trade model is being abandoned by most countries. Countries like China have realized that excess dollar reserves can become a problem not only in the context of a depreciating dollar, but also because of the opportunity cost of holding billions of idle reserves. They have also realized that it is not prudent enough to hold excess reserves just for the sake of maintaining export competitiveness while actually financing the superpower's huge trade deficit by taking measures to strengthen the dollar and weaken the home currency.

- **Loss of Interest by Countries in US Treasury Investments**

We have discussed earlier the dollar hegemony phenomenon in broader terms. To be specific, state banks of the world have begun to realize that they are experiencing huge losses by investing in low-yield low-risk US treasury investments. While, on the other hand, they have to pay a much higher interest on foreign investments domestically. The US thus becomes a world banker by effectively accepting deposits at lower rates and then lending them back at much higher rates. The spread is significant and comes at the expense of the developing nations and other trade partners of the US. Thus, state banks worldwide have shown a declining interest in buying more of US assets.

- **Increased Depth in Foreign Exchange Markets**

As we had previously discussed, the home country of the reserve currency must have financial markets with sufficient depth and openness. With time, markets of other countries like Singapore, have developed much depth and traders can find alternatives to dollar instruments, which has reduced dollar's charm.

- **Other Alternatives to Dollar Reserves**

The Euro which is the common currency of many European countries has emerged as a strong opponent of dollar. Since it is the only currency right now which is considered capable of challenging the dollar's supreme status, we will discuss it in detail in another section.

Analysts have predicted gold as making a comeback as a reserve asset ever since the continuous decline of the dollar.

An increasing awareness among Muslims about having a single currency (like the gold dinar proposed at Kuala Lampur) can be a threat to dollar’s supremacy in oil-rich Muslim nations’ trade scenario.

Prospering Asian countries are contemplating various investment alternatives to dollar holdings. They plan to come up with ways and means for injecting these additional dollar holdings back into the international market through various investments, thus effectively reducing their own exposure to the devaluation risk.

Chapter 5: The Evolution of Euro as an Alternative to the Dollar

Since the Euro has emerged as a strong and viable alternative to the dollar, we have dedicated this section entirely to the rise of euro, before going into diversification options. After the demise of the Bretton Woods system, as discussed previously, the depreciation of the dollar was concentrated particularly in three major episodes, one per decade: 1977-79, 1985-88, and 1993-95. In each episode the dollar exchange rate became an issue of conflict between the United States and its trading partners, Europe in particular. American Treasury Secretaries were periodically faulted for a policy of "benign neglect" of the dollar's value.[23] The United States was accused, especially in the 1970s, of having neglected its social responsibility to supply the world with a stable international money. Such complaints pointed up the conflict inherent in the dual role of the dollar as America's currency and the world's currency. The charge also, in part, provided a rationale for the birth of the ECU in 1979 as a rival currency, which eventually in 1999 became the euro.

5.1. How much has the Euro Penetrated International Markets so Far?

There are a variety of indicators of international currency use, which we have already described. The one that is available on the timeliest basis is the currency of denomination in cross-border financial transactions.

5.1.1. Inside Europe Itself

The euro soon after its introduction came into wide use to denominate bonds. Within Europe there was a tremendous increase in issues of corporate bonds, denominated in euros, together with a rapid integration of money markets, government bond markets,

[23] Paper: **Will the Euro Eventually Surpass the Dollar As Leading International Reserve Currency?**
MENZIE CHINN, University of Wisconsin and NBER
JEFFREY FRANKEL, Harvard University and NBER
Newport, RI, June 1-2, 2005

equity markets, and banking.[24] But since all this was taking place inside home region, it wasn't termed as an international activity.

5.1.2. Outside Europe

Outside Europe, the euro has been a success as well. Detken and Hartmann (2000) studied the data from the euro's first year in operation, doing a careful job of netting out intra-euro-area holdings in order to be able to trace back a measure of euro precursor currencies for five years before 1999 that is comparable with post-1999 numbers. They found more of an increase in the supply of euro-denominated assets outside of Europe than an increase in demand. The stock of international debt denominated in euros increased from about 20 percent on the eve of EMU, to 30 percent in 2003.[25]

A paper named "Will the Euro Eventually Surpass the Dollar As Leading International Reserve Currency?" by Menzie Chinn, University of Wisconsin and NBER and Jeffrey Frankel, Harvard University and NBER was presented at NBER conference on G7 Current Account Imbalances: Sustainability and Adjustment Newport, RI, on June 1-2, 2005. This paper has tried to econometrically prove euro's real challenge to the dollar. It states at one place:

"……..the euro's share in central banks' foreign exchange reserves – 19.7% in 2003. Early estimates for 2002 equaled approximately the sum of the shares of the mark, French franc and guilder just before EMU, but is less than what one would get by adding in the share of ECUs. This is to be expected: before 1999, the twelve central banks had to hold foreign exchange reserves, including of each others' currencies; these disappeared at the stroke of a pen on January 1, 1999. …"

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[24] Paper: **Will the Euro Eventually Surpass the Dollar As Leading International Reserve Currency?**

[25] Paper: **Will the Euro Eventually Surpass the Dollar As Leading International Reserve Currency?**
MENZIE CHINN, University of Wisconsin and NBER
JEFFREY FRANKEL, Harvard University and NBER
Newport, RI, June 1-2, 2005

International use of the euro has continued to grow during the first five years of its life. About half of euroland trade with non-euro area residents is invoiced in the new currency. The euro's share in international debt securities has risen to above 30% (versus below 20% for the pre-1999 legacy currencies).[26] The comprehensive triennial survey of foreign exchange trading volume put together by the BIS showed the dollar still easily in first place in 2001, at 85% of all spot trades (out of 200%), followed by the euro at 43% and the yen at 26%.[27] The euro's share of foreign exchange transactions in 2003 reached one quarter (out of 100%) in Continuous Linked Settlement data. The most recent triennial BIS survey, covering April 2004, showed the dollar still at 85% of all spot trades and euro at 44%. Including also forwards and swaps, the dollar was involved in 89% of all transactions, and the euro in 37%.

The paper goes on describing the situation as…"" In short, the euro is the number two international currency, ahead of the yen, and has rapidly gained acceptance, but is still far behind the dollar, which appears comfortably in the number one slot…."

This paper also provides a valuable insight into various possibilities that exist in this context.

"…A **high-euro scenario would have many European countries joining EMU by the end of this decade. Most eager to join are the ten countries that joined the EU in May 2004 (8 of which are in Central Europe). It is also possible that the three remaining longstanding EU members, Denmark, Sweden, and the United Kingdom might join. All these countries together would make it likely that euroland exceeds the United States in income and trade. In that case, it becomes a real possibility that the euro would gradually gain on the dollar, and eventually challenge it for the number one position. The key question is whether the United Kingdom joins, not just because it is the largest of them, but also because it would bring with it the London financial markets……"**

[26] Paper: **Will the Euro Eventually Surpass the Dollar As Leading International Reserve Currency?**
[27] Paper: **Will the Euro Eventually Surpass the Dollar As Leading International Reserve Currency?**

The paper highlights some actual quantitative studies carried out to establish certain results in this regard. It states the results of its simulation in the following words:

" ……In order to focus on the dynamics between the two key reserve currencies, at this point we pare down the analysis to the dollar and the euro. We use a two-currency specification informed by what we have learned from our seven-currency regressions. In particular, we continue to transform the shares variable using the logistic function. Focusing on a two currency specification is helpful as (1) it is difficult to model the other reserve currencies with shares less than 10%, and (2) it allows us easily to impose up the adding constraint……"

The conclusions drawn are valuable because they put in front of us certain predictions about scenarios under which the euro can surpass the dollar in the near future as the world's leading reserve currency. It says that it depends on two things:

(1) **"Whether enough other EU members join euroland so that it becomes larger than the US economy and, in particular, whether the UK comes in, with its large financial markets; and**
(2) **Whether US macroeconomic policies eventually undermine confidence in the value of the dollar through inflation and depreciation. "**

The paper then gives us concrete timelines as to when the euro will actually overtake the dollar's might, based on the econometric analysis involving various variables. It states its conclusion in the following manner:

" We find that if all 13 EU members who are not currently in EMU join it by 2020, including the United Kingdom, then the euro overtakes the dollar a few years later. We also find that even if some of these countries do not join, a

continuation of the recent trend depreciation of the dollar, were it to occur for whatever reason, could bring about the tipping point even sooner.

Our results suggest that such dollar depreciation would be no free lunch, and could have consequences for the functioning of the international monetary system as profound as the dollar's pre-eminent international currency position, and along with it the exorbitant privilege of easily financing US deficits."

This is not only something for the US to worry about, but also for all those countries keeping significant portion of their reserves in dollars.

Chapter 6: Dollar Reserves: Stock them, Use them or Lose Them?

Now that we have looked at all the compelling evidence about the dollar suffering from continuous depreciation and other currencies, especially the euro, surfacing, we should make a sound decision as to what should be done with the huge reserves that the Asian countries have piled up. It is an undeniable reality that the more of dollar reserves you keep in the wake of a continuous depreciation of the currency, the greater are your losses, regardless of the fact if or not there exists an alternative to the dollar. But, it is also worth thinking where should the current reserves be invested, how should they be managed and what would the future decisions about investing in US treasuries and bonds be?

To prove our point of the need for efficient employment of reserves and their diversification, we give certain reasons on the basis of which we say that dollar assets are no longer that lucrative a compared to others.

6.1. Why Dollar Assets not that Lucrative Anymore?

1. Low Returns on US Dollar Securities

Let us look at the statistics that we have on returns offered by the US treasury bills and comparable instruments.

For China, the return on US securities is estimated to be 4%, while it is paying 15% on inward foreign investment. Therefore, China is presumably paying foreign investors on their inward investment, part of which is financed by China's lending in the form of foreign reserves assets, a higher return than it earns from its investment by reserves assets.[28] So, China is losing money on the aggregate. Same is the case with almost every country financing the huge US deficit by hoarding dollars.

[28] From an internet blog on China

Also, analysts have said time and again that it is the central bank of an Asian country that is financing the US needs, and not the private investors. Over the past few years, foreign equity markets have done better than US markets. And the dollar has slumped versus most currencies.[29]

Furthermore, a strong point here is that the US Treasuries don't offer returns large enough to compensate for the risk of dollar depreciation. Market watchers also point out that the higher-yielding assets that the US financial system has produced recently currently also don't look so good. So, it will be a bit harder to convince the rest of the world – even previously generous official creditors like China– to finance the US on the same terms. They would most probably go for instruments earning better rates of return.

Also, as European Central Bank raised the interest rate faster than the Federal Reserve in April 2006, dollar depreciated to a record low. The US cannot keep raising interest rate on the dollar due to domestic reasons, because it will make domestic borrowing very difficult.

2. The Risk of Volatility and Instability

We have talked about this over and over again. Investors anywhere in the world, except for opportunistic ones, prefer to invest in stable currencies. Also, new theories on portfolio management stress on the need for diversification to reduce the variance or the risk of the portfolio. So, it becomes clear that in the presence of alternatives, and better rates of return, and a declining dollar: investors including central banks all around the world should not put all their eggs in one basket, rather they should offset the risk of volatility and wealth-reduction by maintaining a portfolio consisting of several currencies, not only the dollar. This would make central banks and other investors lesser prone to risks arising from bad US economic performance and inflation and a weakening dollar.

[29] If the US dollar is now a refuge, what is the yen?, http://www.rgemonitor.com

As Friedrich L. Sell at the Department of Economics, University of the German Armed Forces Munich puts it:[30]

> "….Even though every single emerging economy (for which the above described scenario holds) has a great interest in a stable US dollar, it may be less enthusiastic to contribute to its stabilization by own foreign exchange purchases. A smaller share of US dollars in its foreign exchange reserves through diversification (in terms of a portfolio containing dollars, yen, euros, etc.) serves as a hedge against expected devaluations of the US dollar. In addition, a larger number of currencies in the central bank reserves enables the authorities to switch from the de facto pegging to the US dollar to a more or less flexible peg against a basket of different currencies. In such a basket one would expect the currencies of the major trading partners of the emerging economy in concern."

3. The Risk of Inflation, Renegotiation or Default

Although the US is considered to be the military and economic superpower, one cannot eliminate possibilities of its default on the huge debt it owes, predominantly to the Asian countries. U.S. liabilities now exceed assets by around $3 trillion. U.S. direct and equity investments overseas are still slightly greater than foreign ownership of U.S. businesses, equities and real estate. But foreigners hold more than a net $3 trillion of U.S. debt, mostly bonds issued by the U.S. government, agencies and corporations. Most of that is owned in Asia. Debt is always at risk from default, inflation or renegotiation. Direct and equity investment — in which Europe predominates — is less vulnerable. So, the Asian countries must delve into the future value of their reserves in the wake of growing US inflation and its overblown trade deficit. Is not continuing to hold reserves in dollar, which is weakening by the day, a risky game?

4. Opportunity Cost of Holding Reserves

[30] "Anticipated effects of foreign currency reserve diversification in Asian countries: Do China and India matter for coordination?" Friedrich L. Sell

Researchers have proved that countries with idle reserves are the best candidates for diversification, since there are costs related with maintaining idle reserves and not investing them elsewhere. The countries, which keep reserves as transaction balances, will not benefit much from diversification. Again, we know that Asian countries maintain excess reserves, especially in the case of China, which holds reserves 11 months its import cover, which is unusually high from the 3 months rule-of-thumb cover all around the world. So, it is for these countries to decide themselves how much are they willing to sacrifice to meet American consumers' needs by stocking dollars and not investing them anywhere.

5. Alternatives to Holding Reserves

Poor countries keep reserves to avoid shocks. However, there are cheaper forms of insurance rather than accumulating reserves, poor countries could achieve the same level of financial security by limiting the accumulation of short-term debt. Moreover, it has been years since any financial disaster happened, and the memory of past crises is fading. They can either sell a portion of these unwanted reserves gradually or pump them back into international markets to get rid of the risk and effectively upgrade their economy at the same time.

6. Investing in Other Stronger and More Stable Currencies can be Lucrative---Euro presents itself as an amazing alternative

Analysts say that the future course of reserve diversification will depend roughly on three main things:

- The relative performance of reserve currencies on exchange markets
- The liquidity features of these currencies
- The level of international reserves in proportion to reserve needs

All said and done, now is the time to analyse the Euro's role as a potential substitute for the US dollar as a reserve currency.

With regards to features pertaining to liquidity, both domestic and international markets for liquid instruments in several reserve currencies have deepened and widened since the late 1970s as a result of financial deregulations and innovations. As a result, the scope for holding currencies other than US dollar as official monetary transaction balances and also the scope for active portfolio management has broadened and is still broadening.[31]

Economic developments in reserve currency countries influence diversification efforts not only through exchange rate movements but also through their impact on reserve ease.

Thus, looking at the rapid pace with which world financial markets, other than New York, are evolving, we can say that the euro and other currencies are good alternatives for US dollar for keeping of reserves. Their efforts to create depth and openness have earned them credibility.

Let us look at the Euro's performance in the international markets to check on its suitability as a reserve currency.

6.2. Euro's Outstanding Performance in International Markets

- The euro as a currency itself has performed really well. Its physical introduction was free of glitches.
- Euro maintained amazing price stability, the key factor investors look out for, against the dollar since its debut.
- The "European Central Bank" has seamlessly succeeded the Bundesbank as the guardian of European stability.
- Nominal interest rates are about 250 basis points below the weighted average of the predecessor currencies.
- The euro became the leading currency for denomination of international bond issues in its very first year.
- Economists consider size (of world trade, of world output) as the most important variable influencing the race for lead currency. The present

[31] Paper: "The evolution of reserve currency diversification"
By Akina Horii. Dec 1986; BIS economic papers

Euroland is 20-30% smaller than the US in total output and about 25% higher in its share of world trade. Thus, the euro can be stated as a rough equivalent of the dollar.

- Analysts also suggest that if the eurozone is expanded to include all 15 members of current European Union, it would take the numbers above the US in output.
- As discussed previously, the European financial markets have already made impressive progress, introducing more liquid and high return instruments.
- Europe has centralized all its decisions into single entity: the European Commission, which makes it easier for the ECB to take positive steps towards Euro's development.
- In the international liability market, the supply of euro-denominated securities in the international markets shows a very large surge in its issuance since its debut.
- In June 1997 the market capitalization of the US government bond market was 2.1 trillion dollars and the Euro Area one was 2.2 trillion euros. In January 2003 the US one was down to 2 trillion dollars and the Euro Area was up to 2.9 trillion. Taking into account the total international bonds outstanding (both government and corporate) the increase in the euro denominated bonds has been huge.
- Using relative returns of the three major international currencies, measured by the one-month interest rate on deposits, between 1995-2002, the optimal currency shares would be 61% for the US dollar, 32% for the euro and 7% for the yen. If the share of global reserves were to increase accordingly this would amount to a rise of the euro from 15% to 32%, that is, almost 300 billion dollars at today's exchange rates.[32]
- Today, 19.7% of international monetary reserves are denominated in euros which have grown within a short time span of its debut.[33]

[32] Helene Wiik 5 Nov 2003 10:32 1/7 THE INTERNATIONAL ROLE OF THE EURO

[33] "The euro's challenge to the dollar as an international reserve currency" Freddy Van den Spiegel

- A BIS paper estimates that the share of euro- denominated reserves has risen to 25 percent in 2005-06, up from 20 to 22 percent in 1995-96 for the currencies of the nations that subsequently joined the euro system.
- An online article reinforces euro's important role buy saying about the dollar:

  " Its decline against the euro from January through September 2007, for example, accounts for almost half the rise in the dollar value of the euro-reserve holdings."

- There are an increasing number of indications that the U.S. Dollar is already being replaced in many historically U.S. dollar transactional processes by the euro and other currencies. Recently, Chinese companies have agreed to purchase oil from Iran by paying back in euros—an obvious rebellion from the dollar's dominance. Even pro-American states like Qatar and the UAE have expressed desires to diversify their reserves out of dollars.

- The depreciating dollar also presents an interesting scenario. The more the US dollar falls, the more motivation international central banks will have to diversify their resources away from the US dollar, thus creating additional demand for the euro and additional supply of the USD as a direct result of such portfolio shifts rather than as a result of normal trade flows. This will further depress the US dollar.
- As the dollar has steadily weakened over the past year, the value of the dollar-denominated assets held by central banks has also declined. It has been acknowledged through research that Euro-denominated debt today accounts for a bigger share of the international bond market than do dollar-based securities. [34]
- As of last year, the value of all euro notes in circulation worldwide exceeds the value of total US currency. With each euro worth about US $1.33 on the foreign-exchange market today, the 628 billion euro notes in circulation on

[34] "Dollar's Drop Challenges US Power" By Steven C. Johnson

Dec. 22 are worth $828 billion, exceeding the $753 billion of American currency in circulation as of Dec. 18.[35]

Despite what everyone has to say about network externalities and depth of financial markets, which give the dollar an upper hand, we can say that the euro is rapidly emerging as a true alternative to the dollar and has established itself as a currency in which investors can put their confidence. Even the network externalities and the soundness of financial market factors are those that the euro is rapidly acquiring.

7. Better intra-regional trade

Another rationale for diversification is that of a better intra-regional trade among Asian countries. Much has been said on achieving economic independence and defying the superpower status of the US, but little has been done. We see this latest trend in diversification of reserves and gradual acquittal of the US dollar as a viable means to end the virtual economic slavery Asia has ever since been entitled to. The more these countries start trading with each other and the more they take initiatives to make their regional currencies stronger and a means of trade, the sooner they will be free of the woes of economic high-handedness by the superpower.

So, in light of all above reasons, we say that central banks all around the world, and Asian central banks in particular, are better off disposing a portion of their dollar reserves gradually and replacing them with euro, yen or the Australian dollar and a few other currencies which have shown a trend of stability and return over time. Accumulating excess reserves, over and above their trade needs is going to make them suffer from opportunity costs of holding them, and lose significant value in

[35] "Euro Gives Dollar a Run for its Money" By David R. Francis

terms of reserves in the face of a weakening dollar and a stable and appreciating euro.

Chapter 7: How much to Diversify?

Now that we have made our point on diversification, we will move on and decide on what should the pace of diversification be, what currencies are better suited for this purpose, and what other alternative uses of reserves could there be?

7.1. Gradual Versus Large-Scale Diversification

Much has been said about the pace with which state banks should diversify. Almost all economists and analysts agree on one point that large-scale and immediate diversification by selling out large proportion of dollar reserves will not be beneficial for the doers themselves.

7.2. What can a delay in diversification lead to?

This does not mean that the process should be abandoned or delayed for a while, because the longer the diversification in the currency composition of central bank reserves is postponed, the higher will be the expected loss in value of the foreign exchange reserves.

Proponents of gradual diversification present various reasons:

Decline in Value of Remaining Dollar Assets by Diversifying Countries

The biggest one being the sudden slump the dollar will face which will render the remaining reserves of these countries almost worthless. So it is advisable to diversify gradually into other currencies.

However, if we look at the consequences of a large-scale sudden sale of dollar assets around the world, we come to the conclusion that such a move is not advisable. This would depress the value of foreign reserves still held onto by certain central banks. In this context, the biggest dollar reserve holders like China are bound to be effected the most. Countries like China, Japan, Taiwan and Thailand cannot dispose off those huge reserves all at once or pump them back into international market without suffering significant losses.

Financial experts say that any shift in reserve currencies by these countries is important. One reason is that when central banks sell large amounts of dollars, the dollar loses value in the foreign-currency exchange market.

Implications of US being the Major Asian Trade Partner: Maintaining Export Competitiveness

The US is still a major trading partner in case of many Asian countries especially China. To remain export-competitive, China cannot afford to lose all US demand for its goods and services. It will in turn affect the employment level of China. So, China should contemplate a diversification effect in its full totality. It must diversify into a basket of currencies but gradually start replacing dollars with other currencies to avoid panic in the financial markets.

"It is quite likely that most Asian banks will behave cautiously when it comes to fresh exposure to US currency. They are unlikely to liquidate existing dollar reserves and shift to other currencies because this will adversely impact the valuation of their reserves and trade too…"[36]

Other countries, like India, however, can diversify to a greater extent, because they are not so much dependent on the US for the buying of their exports.

An online article makes this point:

"Avoiding a widespread sell-off in the USD and USD assets is in the Asian interest. Asia is dependent on a robust US demand to support its export economy. If the dollar were to plunge sharply, the risk of a US recession would intensify, translating to a decrease in American demand for Asian goods. This in turn would negatively affect economic growth in Asia. Moreover, a rapid shift towards alternative currencies

[36] http://www.asiafinanceblog.com/asiafinanceblog/2005/05: "Asian appetite for US treasury" May 20, 2005

would be imprudent and deleterious as selling a sinking dollar would compound capital losses."[37]

Rising US Interest Rates make Diversification Costly

The Federal Reserve of the US raised interest rates when the dollar hit low. This made dollar assets more attractive. Even though the ECB has also raised its interest rates, but the US dollar's interest rates are still the highest in the world, making diversification somewhat costly.

"…The Federal Reserve's 15 interest rate hikes since June 2004 has taken U.S. interest rates to 4.75 percent from historic lows of 1 percent in 2003, which makes ditching dollars less attractive from the yield point of view."

So, central banks have to be watchful of any step they take in this regard. They have to strike a balance between the hedging benefits of an inevitable diversification and the negative consequences of their sale of dollar assets.

7.3. What can Asian Countries do now? Be Careful in Fresh Exposure to Dollar Assets?

Asia's bigger central banks face a difficult task. They want to reduce dollar risk and shift reserves to better returns, but they have to reduce their dollar holdings without spooking the U.S. debt market or currency markets -- and potentially fuelling the dollar's downward momentum. That in turn would undercut another goal of Asian governments: to slow the rise of their currencies against the dollar, which makes their exports more expensive and threatens Asian jobs.

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[37] http://www.asiafinanceblog.com/asiafinanceblog/2005/05 **Is Asia unnerving the dollar?**

So, they should diversify, initially in smaller amounts, while allocating rest of their reserves to a variety of investments. This would significantly hedge the currency risk, which is the major driver for diversification, and also prevent a major financial crisis. What Asian countries can best do is to avoid or mitigate fresh exposure to dollar assets, now that they have realized that they do not have to accumulate huge reserves just to remain export competitive.

7.4. Autonomous or Coordinated Diversification

Having talked about the pace of diversification, we now look at a theory proposed by economists about the kinds of diversification and the scenarios they present.
The two possible kinds are:

- Autonomous
- Coordinated

Economists say that an autonomous strategy chosen by a single (but significant) emerging economy like China could probably create an unpleasant and extremely volatile situation in the foreign exchange markets. The reason is the likelihood of possible panic reactions among other emerging economies following the first mover.
Each of these countries would then be tempted to immediately sell as many US dollars as possible in order to limit the anticipated value losses. The risk of losses may become more acute if the uncoordinated actions by the central banks selling a high share of their foreign currency reserves in a short period of time induce other market participants to bet against the US dollar, leading to a sharp devaluation of this currency in the end. Although each involved central bank would behave rationally from its own point of view, the group of the emerging economies' central banks could, however, endanger the stability of the world's financial markets.

Friedrich L. Sell, at the Department of Economics, University of the German Armed Forces Munich, in his article "Anticipated effects of foreign currency reserve diversification in Asian countries: Do China and India matter for coordination?", writes:

"….The coordinated sales of gold carried out by central banks of industrialized countries in recent years, which have more than an eye on the gold price and its cyclical moves, could serve as a good example."

He presents two scenarios: one in which two involved parties (central banks) hold intermediate level of reserves. A central bank which holds its dollar reserves (regardless of what its counterpart attempts) receives a negative payoff. The reason is that the dollar continues to devalue at a moderate pace in the international foreign exchange markets and that continuing to hold reserves means giving up the gains of diversification.

In the second scenario, when both monetary authorities have a large level of reserves, things become more complicated. If one of the central banks sells its dollars in the foreign exchange market, the devaluation of the dollar will accelerate. If the other central bank continues holding dollars, its losses will be extremely high. The selling authority also faces losses, but these are in part compensated by the investment in appreciating currencies. If both authorities get rid of their dollars, the downward trend of the dollar will be much more pronounced. Hence, each central bank incurs losses in this case, which are greater than in the case of jointly holding dollars. The equilibrium point will be one in which both coordinate any decisions about sale or retention of dollars. Thus, losses can be minimized.

So, we can see that not only the pace of diversification matters, but also the extent to which a central bank is aware of its surrounding economic and political circumstances. By collaborating on such decisions, Asian countries can benefit greatly from diversification, while offsetting losses.

Chapter 8: Evidence of Central Banks Diversifying out of US Dollars

There is much talk these days about central banks of the world diversifying out of the US dollars into other currencies or at least contemplating such a move. Some of the most significant in this regard are:

- The central bank of Russia
- The People's Bank of China
- Sweden's Riksbank
- Swiss National Bank
- Reserve Bank of Australia
- The central bank of Korea
- Qatar central bank
- The central bank of UAE
- Singapore Monetary Authority
- Hong Kong Monetary Authority
- Reserve Bank of India
- Central Bank of Syria

Here, we present some facts about changes in the currency denomination of reserves of some of them.
These are some of the developments that took place in the year 2006. [38]

Alexei Ulyukayev, Bank of Russia's first deputy chairman, announced that the central bank had started purchasing yen and intends to raise the proportion of the Japanese currency held in their total reserves up to several percent from close to zero at present.

[38] Reserve Diversification - Danger for the Dollar, Tuesday, 17 October 2006

http://www.dailyfx.com/export/sites/dailyfx/story/special_report/special_reports/Reserve_Diversification___Danger_for_1161098576630.html -->

On April 21 2006, the Swedish Riksbank announced that it has slashed its US dollar reserve holdings to 20 percent from 37 percent, and had boosted its euro assets to 50 percent from 37 percent previously. It caused the EUR/USD to surge 94 points.
In the month of May of 2006, central banks dumped $14.3 billion worth of bonds, the largest amount in over seven years.

In July of 2006, the UAE Central Bank Governor, Sultan Bin Nasser Al-Suwaidi, confirmed that a strategic decision had been made to shift 10 percent of its $29 billion of foreign exchange reserves into euros. Mr. Al-Suwaidi noted that while the US dollar is still the most important currency for the central bank due to its use in international trade, the euro is gaining strength as an investment vehicle.

8.1. Euro Attractive to Central Banks

European expansion has proven to be increasingly competitive against that of the United States. With the US Federal Reserve Bank holding interest rates steady at 5.25 percent and the European Central Bank has plans to raise its benchmark rate from 3.25 percent to at least 3.50 percent, the carry trade differential could eventually turn in the euro's direction and make it even more attractive to central banks around the world.

Here is data on composition and level of Australian reserves as per August 2007, from IMF's monthly data on central banks. [39]

IMF Monthly Data- Reserve Bank of Australia International Reserves and Foreign Currency Liquidity (Australian Dollar millions: August 2007)

[39] data from the official website of the central bank of Australia

Currencies in SDR basket	
US dollars	45,143
Euro	16,648
Japanese Yen	5,503
Other including gold and SDRs	2,746
Currencies not in SDR basket	315

Table 1: Currency Composition of Australian Reserve Assets (by Group of Currencies)

This shows that Euro occupies the second position by far in reserves, and its position could be made better by further diversification of the dollar assets.

8.2. Central Banks Shying away from the US treasury investments and into Long term Asset Classes

Following is the currency composition of foreign exchange reserves by the end of 2005, taken from an IMF COFER report.

Currency composition of official foreign exchange reserves, end-2005			
	USD billions	Percentage of total	Percentage of allocated
Total	4,170	100	
Allocated	2,821	67.7	100
USD	1,880	45.1	66.6
EUR	687	16.5	24.3
GBP	103	2.5	3.7
JPY	101	2.4	3.6
CHF	4	0.1	0.1
Other	46	1.1	1.6

Table 2: Currency composition of official foreign exchange reserves

Analysts indicate that today probably less than half of central banks' US dollar reserves are invested in US Treasuries. These holdings have declined in favour of investments in other asset classes including:

- Other US sovereign, semi-sovereign and agency paper

- US private (mortgage and corporate) bonds
- US corporate equities
- Central bank in-house pension funds

Also, central bank reserve managers have extended the duration of their portfolios, and now hold most of their dollars in long-term instruments.

Following data indicates diversification out of traditional investments in US treasuries. This data is taken from a site[40] which has collected them from the US Treasury, Federal Reserve Bank of New York, Board of Governors of the Federal Reserve System, Report on foreign portfolio holdings of U.S. securities as of June 30, 2005, June 2006, BEA, International Transactions and the BIS Quarterly Review.

Instrument composition of identified US dollar reserves at end-June 2005 In billions of US dollars			
	Short-term	Long-term	Total
Treasury securities	205	1,054	1,259
Other assets	695	604	1,299
Repos and deposits in the United States	155		
Commercial paper and certificates of deposit in the United States	122		
Offshore deposits	418	42	
Agency securities		324	
Corporate bonds		61	
Equities		177	
Total	900 (35.2%)	1,658 (64.8%)	2,558 (100%)
Memo: *Share of Treasury securities in assets of the given maturity*	*22.7%*	*63.6%*	*49.2%*
Total IMF-reported US dollar reserves at end-June 2005			*1,789*

Table 3: Instrument composition of identified US dollar reserves at end-June 2005

[40] http://www.bis.org/speeches/sp060908.htm

Data on Swiss Central Bank's foreign exchange reserves are the most positive with regards to currency diversification and a greater proportion of euros than dollars, among central banks data released so far. This data shows foreign exchange reserves and Swiss franc securities at end of the Q2 2007. The data is taken from the official website of the Swiss National Bank.

As at 29 June 2007, the key asset allocation data for the foreign exchange reserves and the monetary CHF portfolio were as follows (figures of previous quarter are indicated in brackets):

	Foreign exchange reserves		CHF securities	
Currency allocation, incl. derivative positions				
CHF	-	-	100%	(100%)
USD	27%	(29%)	-	-
EUR	48%	(48%)	-	-
GBP	10%	(10%)	-	-
JPY	10%	(9%)	-	-
Other	5%	(5%)	-	-
Investment categories				
Money market investments	2%	(2%)	-	-
Government bonds(1)	58%	(58%)	50%	(47%)
Other bonds(2)	27%	(27%)	50%	(53%)
Shares(3)	13%	(12%)	-	-
Duration of bonds (years)	4.2	(4.1)	5.1	(5.3)

Table 4: Currency Allocation of Swiss Reserves[41]

The trend analysis on currency composition is even more encouraging in terms of diversification. This table has been taken from the website of the Swiss national bank.

[41] http://www.snb.ch/en/iabout/assets/id/assets_reserves

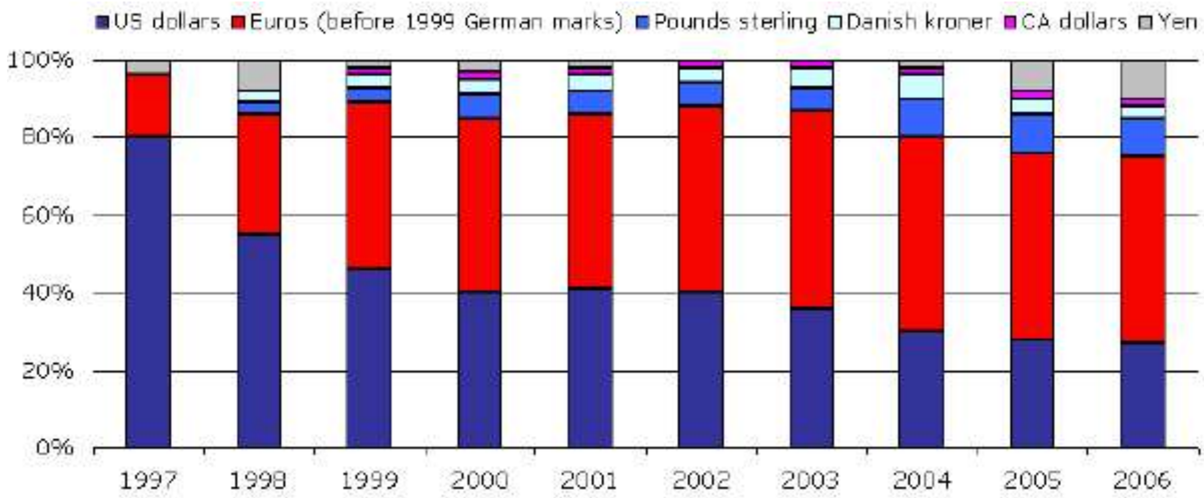

Table 5: Currency breakdown of foreign exchange reserves since 1997[42]

These data suggest that currency diversification is widely being considered by central banks all around the world.

[42] http://www.snb.ch/en/iabout/assets/id/assets_reserves

Chapter 9: Implications for Pakistan

Before deciding for a foreign reserve strategy for Pakistan, let us look at some statistics pertaining to the economy of Pakistan. We will then look at the political and economic scenarios surrounding Pakistan-----how other countries and to which extent have they felt the need for diversification. Then we look at alternate forms of investment contemplated by these countries to utilize these reserves. We study the Singapore model briefly in this regard, which has been very popular among Asian giants. Finally, we present a model for Pakistan, based on the Singapore model with some modifications, to efficiently manage its foreign reserves.

9.1. Background on Pakistani Foreign Reserves

In recent years Pakistan has experienced a current account surplus and a consequent rapid growth in hard currency reserves. Pakistan's current account surplus had put upward pressure on the Pakistani rupee, which rose from 64[43] rupees per dollar to 57 rupees per dollar. The State Bank of Pakistan (the central bank) stabilized the rise by lowering interest rates and buying dollars, to maintain export-competitiveness.

Export Driven Model

The Pakistani government is now pursuing an export-driven model of economic growth emulating countries of the South East Asia and China.

Rapid Growth in Foreign Exchange Reserves

The State Bank of Pakistan is the central bank of Pakistan. One of the major responsibilities of the State Bank is the maintenance of external value of the currency. In this regard, the Bank is required, among other measures taken by it, to regulate foreign exchange reserves of the country in line with the stipulations of the Foreign Exchange Act 1947. As an agent to the Government, the Bank has been authorised to purchase and sale gold, silver or approved foreign exchange and

[43] http://en.wikipedia.org/wiki/Economy_of_Pakistan

transactions of Special Drawing Rights with the International Monetary Fund under sub-sections 13(a) and 13(f) of Section 17 of the State Bank of Pakistan Act, 1956.[44]

The Bank is responsible to keep the exchange rate of the rupee at an appropriate level and prevent it from wide fluctuations in order to maintain competitiveness of exports and maintain stability in the foreign exchange market. To achieve the objective, various exchange policies have been adopted from time to time keeping in view the prevailing circumstances. Pak-rupee remained linked to Pound Sterling till September, 1971 and subsequently to U.S. Dollar. However, it was decided to adopt the managed floating exchange rate system w.e.f. January 8, 1982 under which the value of the rupee was determined on daily basis, with reference to a basket of currencies of Pakistan's major trading partners and competitors. Adjustments were made in its value as and when the circumstances so warranted.

In 2007 Pakistan's foreign exchange reserves were $13 billion - a twelvefold rise since 2001.[45]

A paper highlights this growth in the following manner:

"…a striking recent development and one which is totally at odds with the experience of the past two decades, namely, the substantial increase in the foreign exchange reserves during 2001–04. Since the country embarked on the most recent economic adjustment program, its foreign exchange reserves have increased from less than a billion dollars (few weeks' worth of imports) to more than US$12 billion. This is a historical high not only in nominal terms, but more importantly in relation to imports and short-term foreign liabilities. Clearly, Pakistan is better placed now than before to withstand external shocks, such as sharp increases in international interest rates and oil prices. Indeed, the authorities have indicated that reserves have reached such a comfortable level that they are in a position to repay in advance of maturity some of the more expensive external debt…"[46]

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[44] http://www.sbp.org.pk/about/core_functions/index.htm
[45] http://en.wikipedia.org/wiki/Economy_of_Pakistan

[46] IMF Working Paper: "Foreign Currency Deposits and International Liquidity Shortages in Pakistan"

Abbas Mirakhor and Iqbal Zaidi

Main export partners

The major export partners of Pakistan according to 2006 estimation[47] are:

- United States 22.4%
- UAE 8.3%
- UK 6%
- China 5.4%
- Germany 4.7%

Important Areas that have seen progress

Recently, Pakistan has seen progress in certain areas especially in the areas of oil and gas, telecommunication, financial services and information technology.
But there are major infrastructural and service related problems still to be overcome like basic facilities in health, sanitation and safe drinking water.

We now present the current situation prevailing among major reserve holders in the world, especially Asia. Most of them have already felt the need to diversify gradually out of US dollar and invest these reserves into other forms to stabilise their domestic economy.

9.2. Growing Willingness of Asian and other Countries to Diversify their Reserves

"….The central banks continue to tighten policy, so their absorption of U.S. Treasuries is slowing. When foreign investors fail to absorb the Treasury securities

September 2004

[47] http://en.wikipedia.org/wiki/Economy_of_Pakistan

needed to finance U.S. government deficits, those Treasuries are forced into the hands of U.S. investors instead. No wonder you'll see some of the most world's greatest investors are betting against the greenback, from Warren Buffet to Bill Gates and Richard Branson to George Soros!"[48]

Prominent reserve holders like China, South Korea, Thailand and Taiwan have felt the need for an efficient management of their ever-growing reserves in face of a weakening dollar. An online article discloses this news from China:

"Now, however, China's reserves are so gargantuan that it risks losing out on billions in potential profits by failing to intelligently invest and diversify its holdings. As one would expect, reconfiguring these reserves would involve not only investing in different types of securities, but also in many different currencies, steps which have serious implications for world forex and capital markets."

It quotes AFX news as reporting:

"The finance ministry [could] issue 200-400 billion yuan worth of bonds with maturities of at least 10 years. The bond proceeds can be used to buy foreign currencies from the central bank, which may then be invested in overseas markets. "[49]

9.3. Alternatives to Holding Foreign Reserves as Idle Balances

The Singapore Model

[48] http://seekingalpha.com/article/16299-a-gold-play-on-the-dollar-s-demise

A Gold Play on the Dollar's Demise, Author: Yaser Anwar

[49] Global impact : Katherine Ng

Monday, March 26, 2007, http://www.forexblog.org/2006/12/index.html

The Government of Singapore Investment Corp, set up by the island's government in the 1970s, is an example of managing excess foreign currency reserves through long-term investment to generate higher returns. Singapore's enormously successful model, in which Temasek, a government-funded company, makes billion-dollar investments in enterprises around the world using these reserves, is under consideration by Chinese and Indian concerned authorities, as their foreign exchange reserves are ballooning constantly.

Both China and India are convinced that their reserves can indeed be put to better use helping China's and India's infrastructure grow faster than in financing the infrastructure of G-7 countries by investing in their Treasury assets, by following the Singapore model.

China

Today, China invests most of its reserves in low-yielding securities of the US Treasury and the like. Even China's prime minister has raised doubts on whether this is the best way to manage the reserves. He had also reflected earlier on whether and how these reserves can be better used for improving the conditions in China's countryside — in particular, its education and health facilities.[50]

The Financial Times of January 22, 2007, reports that these suggestions by Chinese Premier about switching reserve policy opens the way to establish an agency similar to Singapore's Government Investment Corporation (GIC), to handle a portion of its massive reserves. This will mean diversifying out of investment in fixed income bonds and moving into stocks. [51]

Chinese Reserve Management Agency

China has set up an agency to manage its ballooning reserves. It is said to start operations this year with an initial expected sum of US$200 billion—about one-fifth of existing reserves. US dollar depreciation against the yuan was the major reason

[50] http://www.thehindubusinessline.com/2007/02/12/stories/2007021200520800.htm
[51] http://www.thehindubusinessline.com/2007/02/12/stories/2007021200520800.htm

China is setting up the agency. It has been recommended that the agency should invest overseas in equity and commodities markets and that it should hire overseas managers to run part of the funds. This is how Hong Kong's Foreign Exchange Fund operates, mandating part of the fund to certain professionals in designated areas like fixed-income or equity markets. Economists believe that the new agency will diversify into investments ranging through stocks, bonds, money market instruments, and direct equity holdings, to real estate.

Recapitalisation in China

With its foreign reserves now the world's largest, China is using a few billion dollars of the reserves to recapitalise its China Renaissance Group before it lists in the market place. China used a hefty $40-50 billion of its reserves to capitalise its ailing banks. China is also said to have planned large acquisitions of oil and other minerals by use of its reserves.

India

For India, the RBI Governor, Dr Y.V. Reddy too has stressed that he is open to the idea of alternative methods of deployment.

The Singapore's Government Investment Corporation, since its inception, is quoted to have earned a return of 9.5 per cent, in US dollar terms, over the last 25 years.

This compares with the annual return of 3.1 per cent on Indian reserves.[52]

It was pointed out that if India had successfully followed Singapore's example, it could have earned an extra six percentage points on is reserves of over $170 billion dollar. This would amount to at least $10 billion equivalent income per year. It could have easily filled the infrastructure-financing gap to a substantial extent.

The RBI could definitely invest a sizeable part of its reserves — say $10-20 billion — into the capital of the Government's newly-created infrastructure financing funds. This can help the institution leverage its borrowings.

[52] http://www.thehindubusinessline.com/2007/02/12/stories/2007021200520800.htm

9.4. Spending Reserves Directly on Local Infrastructure

The Government can guarantee returns on the investment if it ensures proper pricing policies for the output of the infrastructure projects, such as power, roads, water-supply, and so on. This will free the RBI from the charge that it is preferentially financing the infrastructure of richer G-7 countries through its low-cost investment in their Treasury assets. At the same time, it will help Indian infrastructure to grow at a faster pace.

While praising the Singapore model, we must not forget that this model entails a lot of technical expertise and financing in itself to be put to use efficiently. Let us look at some of the costs to assess its feasibility for other countries like India and Pakistan.

9.5. Costs of Implementing the Singapore Model

The strategy of diversification of investment of central bank's reserves on Singapore's model requires an approach similar to Singapore’s protocol of governance. It is obvious that the changes required to do this will carry a cost. They cannot be accomplished on a “business-as-usual” mode.

It might require a lot of intellectual capital (in case of Singapore: many non-resident Indian youngsters of the IIT are working as brains for the projects) and also sound support from a famous investment banker (in case of Singapore, Goldman Sachs, to which GIC had outsourced some of its investments). [53]

Solutions that have been proposed to India in this regard are:
India can also draw on a combination of local talents with its own technical personnel and also outsource firms abroad to manage its investments on a modified, Singapore-like pattern.

The Chinese reserve management agency and other countries like India and Pakistan could emulate following examples:

Calpers Example

[53] http://www.thehindubusinessline.com/2007/02/12/stories/2007021200520800.htm

The California Public Employees' Retirement System, or Calpers, the world's biggest pension fund, may be a good example to study.

"A large portion of our money invested in stocks is 'passively managed.' We are long-term investors - we buy and hold," the fund's board said on their official Web site. "We do maintain some active equity management and have contracted with a group of US and international money managers with expertise in specialized areas."

This pension fund, with assets of US$232.5 billion, has developed diversified strategies in international and domestic markets with an asset allocation of about 60 percent in equities, 26 percent in fixed income, 8 percent in real estate and 6 percent in direct investment.

Compared with the low US Treasury yield of about 3 percent, Calpers' total return in the fiscal year ending January was about 11.96 percent, while its three-year and five-year returns were 13.05 percent and 10.66 percent, respectively. [54]

Norwegian Example

Another example is the world's fifth-largest oil exporter, Norway. Its US$292 billion global pension fund has invested all oil revenues abroad to prevent the domestic economy from overheating, with the long-term goal of paying for future pensions.[55]

9.6. Should Pakistan Follow the Singapore Model of Growth?

In light of above discussion, we can say that although Pakistan has experienced an admirable and rapid growth in its foreign exchange reserves, it must take initiatives to hedge itself against a depreciating dollar. Pakistan has to keep in mind that the decisions by China, India and other reserve holders in the region, to diversify, will eventually force Pakistan to do so as well. Pakistan should start shifting some of its reserves out of dollars into euros, keeping in view the ever-declining dollar and

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[55] http://www.thestandard.hk/news_detail.asp

appreciating euro. Also, it is high time that Pakistan start realizing that it cannot go on being part of financing the US deficit. It has to invest some part the almost 13 billion dollars of its reserves in infrastructure related projects. It should set up a foreign reserve management agency to keep a check on reserves over and above its trading needs and find ways to invest these excess reserves. It could also consider adapting the Singapore model with some constraints. Obviously, Pakistan will be lacking to a certain extent in providing its agency with a lot of intellectual capital and huge amounts of financing to manage such funds extensively. But it can take a start by setting up such an agency, and monitor its performance in terms of investments in projects related to crucial areas of development like water and sanitation and other infrastructure.

Here are some guidelines for Pakistan to follow:

- Diversify some of its dollar denominated reserves, say 10-15% for a start, into euros.
- Hold some of its reserves in a basket of other stable currencies like the Australian dollar and the Yen to hedge itself from risks arising from reliance on a single currency.
- Take initiatives to foster trade with regional partners like China, India and other East Asian countries and with Europe to stop being increasingly dependent on the US for its exports.
- Reduce its investments in low-yielding US treasury bonds and explore other higher return investments like the pension funds discussed above.
- Set up an agency to manage its foreign exchange reserves to keep a check on reserves over and above its trading needs and find ways to invest these excess reserves.
- Deploy a portion of its reserves into infrastructural development related projects.

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Appendices

Appendix 1: Data Analysis Charts

1. Composition of International Reserves (1995)

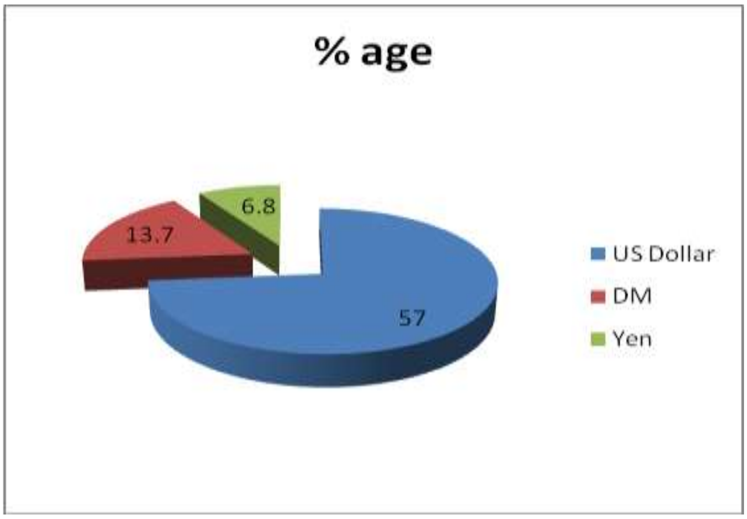

Chart 1

2. Composition of International Reserves (2002)

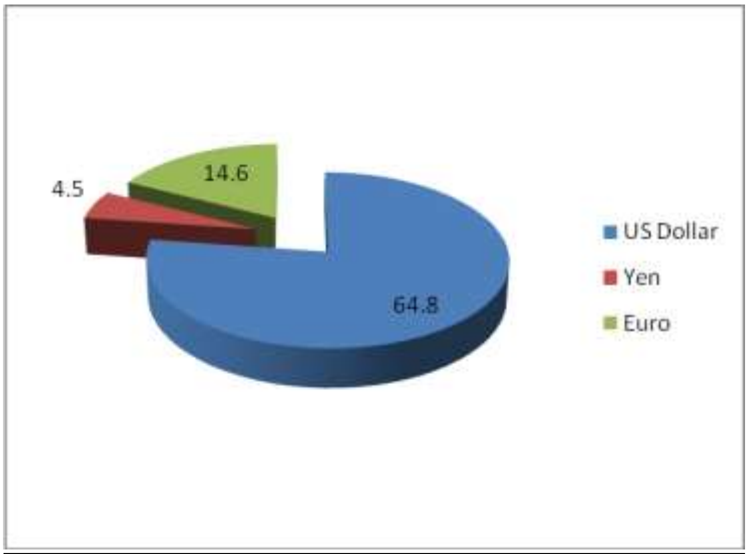

Chart 2

3. Optimal Currency shares based on Relative Rates of return (one-month interest rate on deposits) 1995-2002

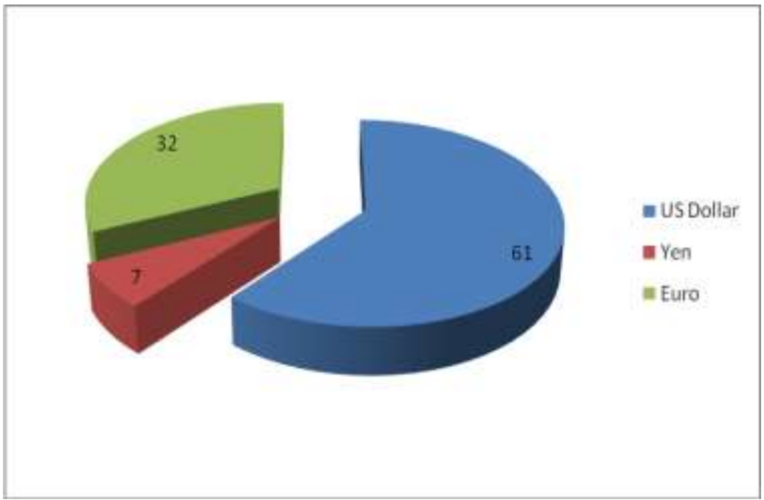

Chart 3

4. **Share of Central Banks in Financing US deficit from 1999-2003 (%age): the Balance of Payments Statistics provided by the Bureau of Economic Analysis (BEA)**

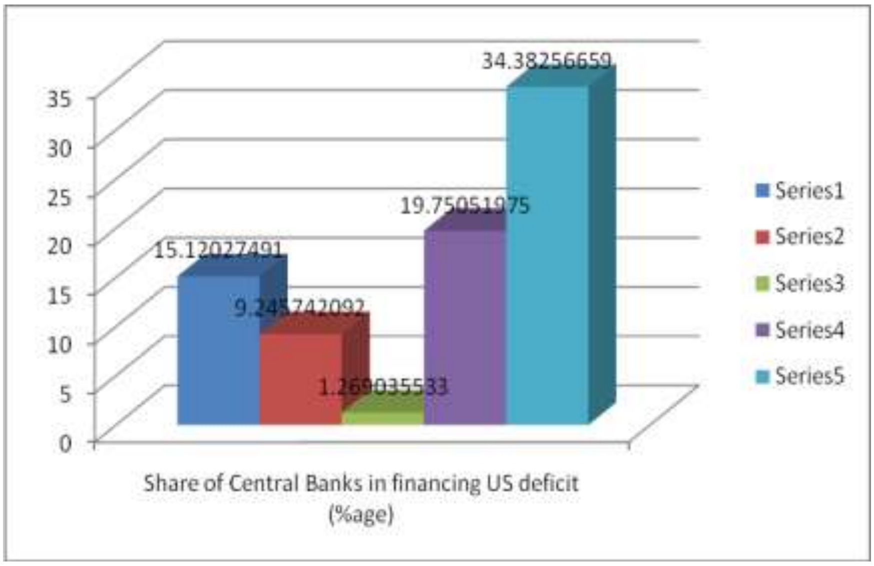

Chart 4

5. **Contribution of Asian Central Banks Financing US Current Account Deficit (Data from IMF Sources 2003)**

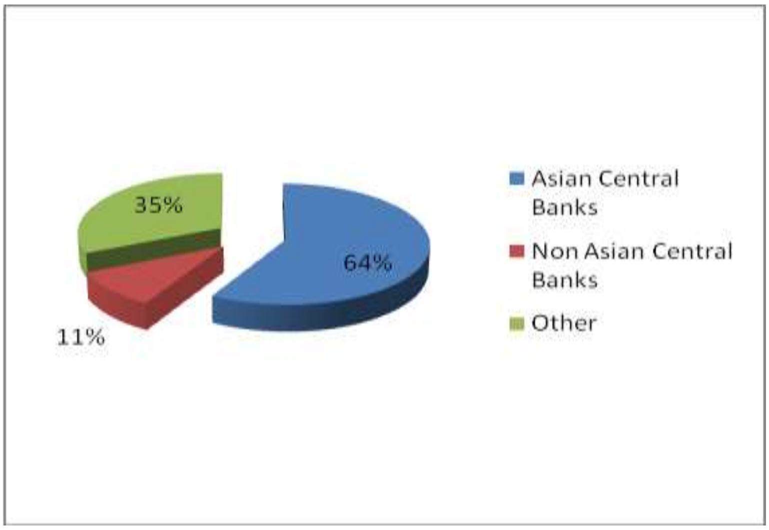

Chart 5

6. Value of All Currency in Circulation in Billions of Us dollars (as of 2006)

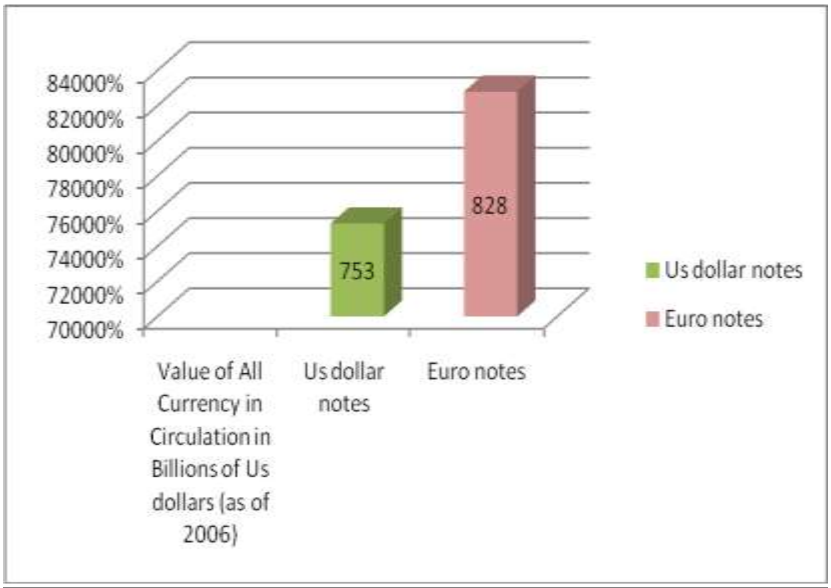

Chart 6

7. Share of Pre-Euro Currencies versus Euro in International Debt

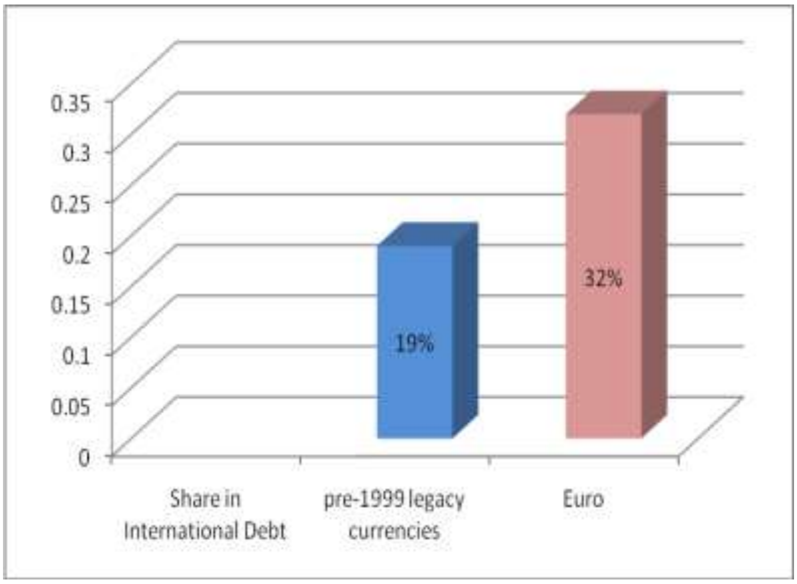

Chart 7

8. Share of Dollar versus Euro in International Spot Trades : Triennial BIS survey results (2004)

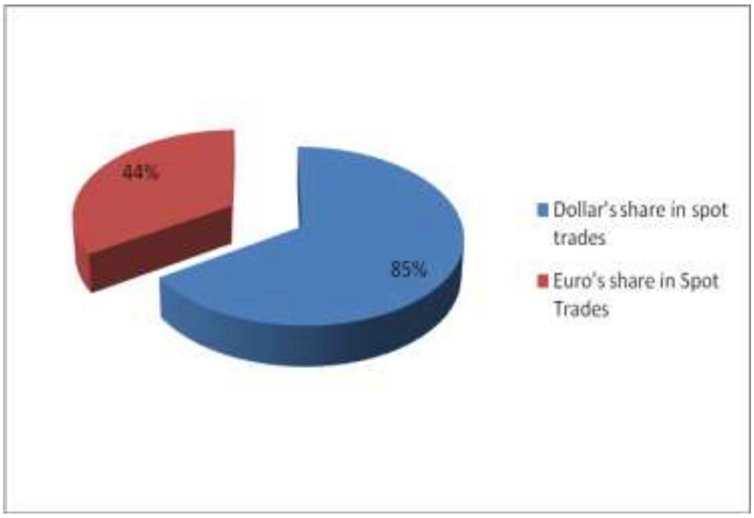

Chart 8

9. Market Capitalization of bonds in trillions (2003)

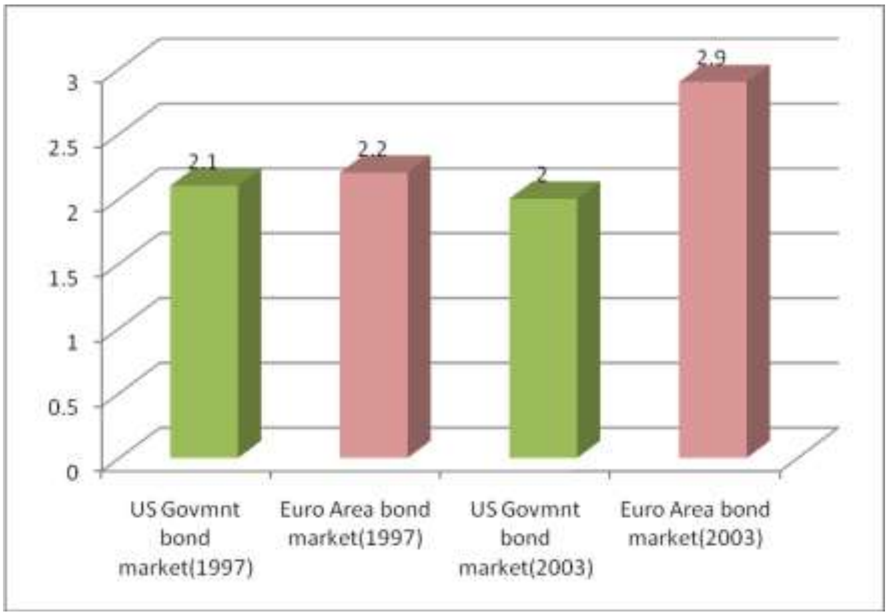

Chart 9

10. Major export Partners of Pakistan(2006)

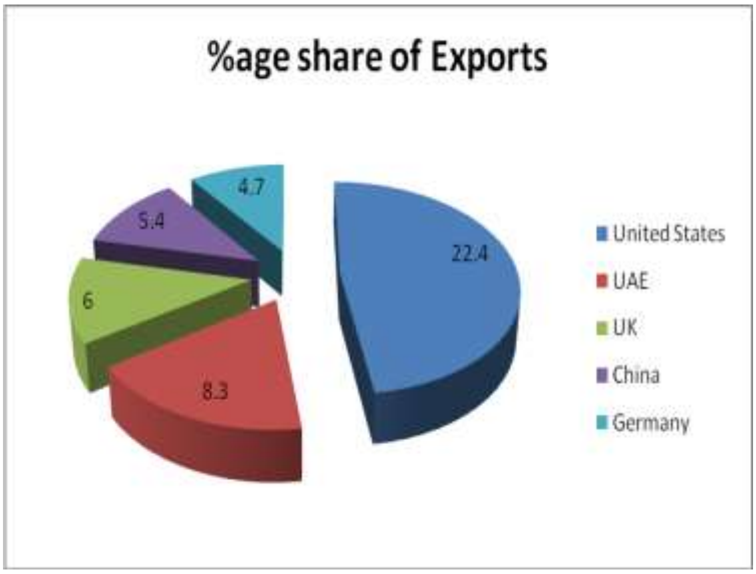

Chart 10