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Regional Currency Settlements in East Asia: Risks and Tasks for Korea

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Abstract

East Asian Countries has developed the financial cooperation via CMIM, ABMI after the Asian currency crisis. Lee and Park (2014) and Rhee and Sumulong (2014) advocate the use of local currencies in trade settlements. The regional currency settlements will reduce the USD dependency in the regional economy, so it will promote financial stability in the region. But they might induce risks for Korean economy. Korea's trade accounts are deficit with Middle East and Japan and surplus with other regions. Most USD settled trade surplus comes from trades with China and ASEAN. Therefore, if the regional currency settlement increases in East Asia, then USD settled surplus would be shrunk considerably since the trade deficit with Middle East still would be settled in USD. The increased interconnection of regional economy may speed up the spread of financial crisis if it happens in the region. And it is possible that currencies in East Asia are valued as a bloc regardless of Korean macroeconomy conditions. Traders may choose only Yuan for their settlement when the regional currency settlement is promoted since China promoted Yuan internationalization. The convertibility of local currencies should be guaranteed to avoid any problem caused by USD surplus reduction problem. The crisis prevention effort should be strengthened and local currencies' FX hedging tools should be provided to traders. We should make KRW more acceptable in the region in order to minimize potential risks associated with increased local currency settlements.

JEL Classification: F3, F4

Keywords: Regional currency settlements; Financial cooperation; trade settlement currency.

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1. Introduction

The Asian Currency Crisis in 1997~1998 awakened the necessity of the US dollar liquidity management in East Asia. The Asian Currency Crisis happened mainly due to mismanagement of dollar liquidity in the region. The Korean government insisted that the Korean macroeconomy was sound. However the Korean government requested and received the bail-out money from IMF with the stringent economic and financial restructuring since it ran out of foreign reserve due to Korean cooperates' large foreign borrowings. This currency crisis increased the necessity of the proper management of dollar liquidity so the countries in East Asia started to accumulate the official foreign reserve.

The countries in East Asia started their collective effort in financial cooperation along with individual countries' foreign reserve accumulations. The member countries in ASEAN+3 (Korea, China, Japan) agreed on the regional financial cooperation, CMI (Chiang Mai Initiative) while the individual countries accumulate their own precautionary dollar reserves. During Asian Currency Crisis, the East Asian countries witnessed that the dollar liquidity problems were not only individual countries' problem but also the regional problem thru the contagion effects. Beside the financial problems, the neighbor countries, which avoid the currency crisis, experienced the economic downturn due to the recessions of countries with currency crisis. And the countries with the currency crisis could get the bail-out money from IMF but they should do the painful and stringent economic restructuring as the result. They also suffered from the stigma effect in the international financial market. Therefore the ASEAN+3 tried to prevent the reoccurrence of the currency crisis through the regional financial cooperation and the accumulation of the foreign reserve.

The ASEAN+3 also agreed on ABMI (ASEAN+3 Bond Market Initiative) in order to promote the recirculating the regional foreign reserve in the region. When the East Asian countries accumulated the foreign reserve, the central banks managed their foreign reserve with advanced countries' financial assets. We could say that East Asian countries bought the advanced countries' financial assets using their current surpluses. The East Asian countries' accumulations of foreign reserves meant that they let the advanced countries borrow what they earned from trading. So they wanted to recirculate the trade surplus within the region by developing the local bond markets via ABMI.

The recent global financial crisis reminded the East Asian countries the necessity of regional financial cooperation such as CMI and ABMI. The US financial market instability affected the globe so the necessity of a proper dollar liquidity management increased. Scholars gave more attentions to East Asian financial cooperation after the Global financial crisis, Jung (2008), Park et al. (2010), Jang (2011) and many others checked the current status of the regional financial cooperation and recommended the future tasks for them under the shaking international financial markets. As the results of researches and the efforts of policy makers, the ASEAN+3 agreed to multilateralize the decision making processes of CMI (so it called CMIM now) as a network of currency swab within the region. Moreover they agreed to adopt the crisis prevention mechanism in CMIM and double the size of CMIM. And the member countries inaugurated the AMRO (ASEAN+3 Macroeconomic Research Organization) as surveillance mechanism for the member

countries' macroeconomy. Even though AMRO now is in its beginning stage, the member countries agreed to develop the AMRO as an international financial organization for macroeconomy surveillance unit in the region. The ABMI also made progress by making the CGIF (Credit Guarantee and Investment Facility) which guarantees the member countries bonds' credits. And it also gave help to set the infrastructures for the member countries' bond markets.

Beside the regional financial cooperation in effects, the discussion about unifying the regional currency continued. Girardin (2011), Pontines (2013), Yeh (2013) discussed the feasibility and practicality of the unifying currency, so called ACU (Asia Currency Unit). And the emergence of China as the huge economy in the region was gotten attention in term of its influences on the regional economy and financial cooperation. Especially the Chinese influence in the regional economy got bigger since the Chinese RMB internationalization policy from 2009. Ma and McCauley (2010) studied the effect of RMB development on the Asian currency stability.

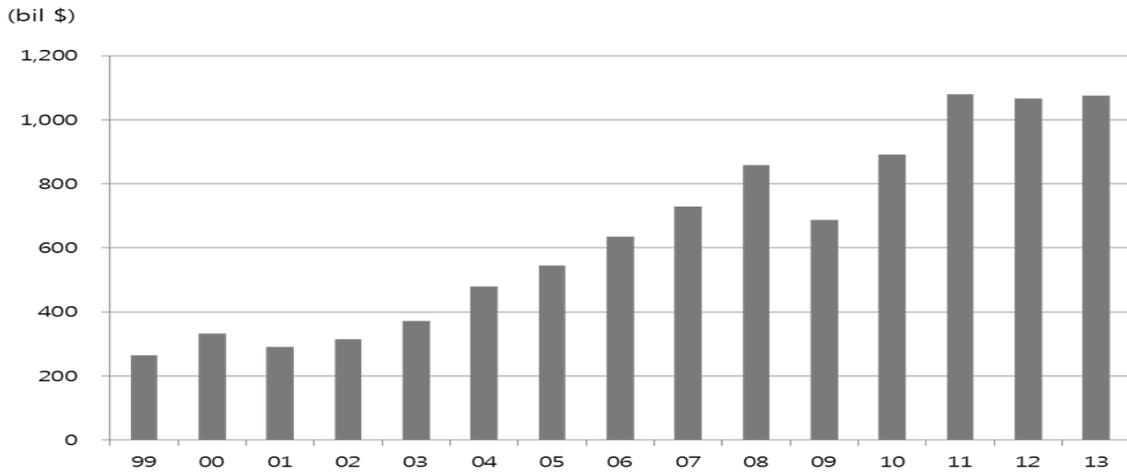
Lee and Park (2014) and Rhee and Sumulong (2014) proposed to settle the regional trade with regional currencies rather than US dollar. Before the RMB internationalization, many thought that it would be unrealistic to settle the trade with regional currencies due to relatively undeveloped financial markets of regional currencies. However, the RMB usages after 2009 proved the feasibility of regional currencies' trade settlements without the developed and free capital markets. Therefore they suggest promoting the regional currency settlements by setting up the regional currency clearance mechanism like the RMB's. This paper checks the potential risks on Korean economy associated with the regional currency settlements and propose the policies to minimize the risks.

Chapter II shows the current status of trade settlements of Korea by region and currencies. We need to know the current trade status in order to find out the potential effects of the regional currency settlements in East Asia. Chapter III checks the potential risks in Korea economy associated with the regional currency settlement in the region and the tasks to minimize them. Chapter IV concludes with summary.

2. Korea Trade by Region and Currency

Korea's trade volumes grew rapidly during 2000's. After the Asian currency crisis, Korea's trade volume in terms of custom clearance was 260 billion dollar in 1999. They reached over 300 billion dollar in 2000 but it shrank to below 300 billion dollar in 2001 due to the world economy slowdown caused by the IT bubble bust. After 2001, they had grown to over 800 billion dollar level in 2008. Korea's trade volume dropped to 700 billion dollar in 2009 due to the Global financial crisis. As the world trade recovered from the Global financial crisis, it started to resume on its growth path. Korea's trade volume reached 1 trillion dollar in 2011 and stayed over 1 trillion dollar in three consecutive years after.

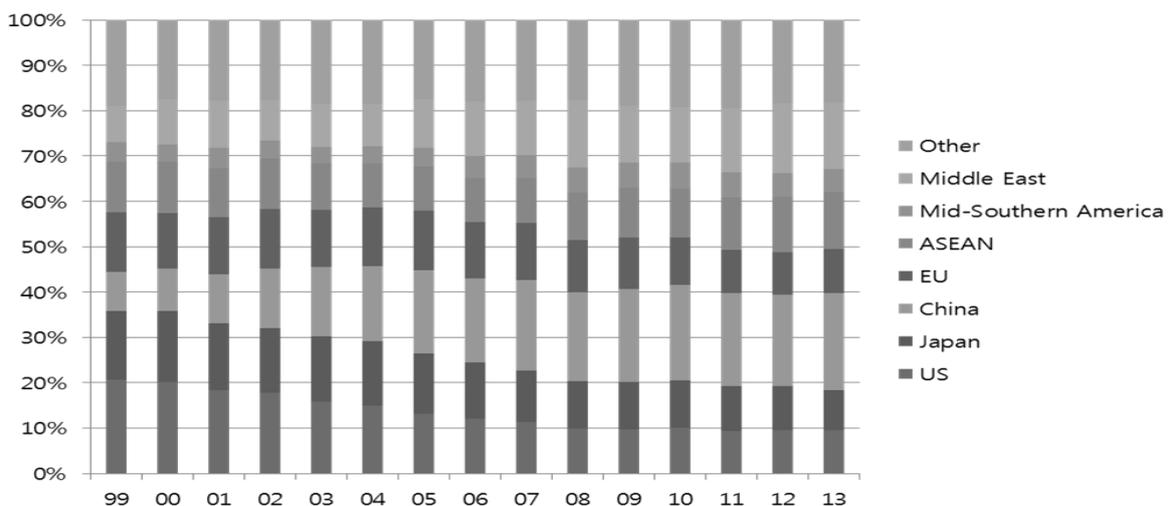
Figure 1. Trade Volumes of Korea



Source: Bank of Korea, <http://ecos.bok.or.kr> (accessed July 4, 2014).

Korea's biggest trade partner by regions is China as in 2013. If we grouped the world by regions as China, US, Japan, EU, ASEAN, Middle East, Central and South America, Korea's trade partners by its volumes were China, Middle East, ASEAN, EU, US, Japan, Central and South America. Korea traded over 20% of total trade with China. Korea traded with Middle East and ASEAN, 15% and 12.6% of total trade volume respectively. The Korea's trade volume with EU or US was less than 10%. The Korea's trade volume with Japan was less than 9% and that with Central and South America was 5%. The trade volume's portions with US shrank to less than 10% from 20% in 2000's. Those with Japan shrank also to less than 9% from 19% in 2000. While the trade volume portions with China increased to more than 20% from 9% in 2000's, those with ASEAN also increase to 12%

Figure 2. Portions of Korean Trade Volumes by Regions



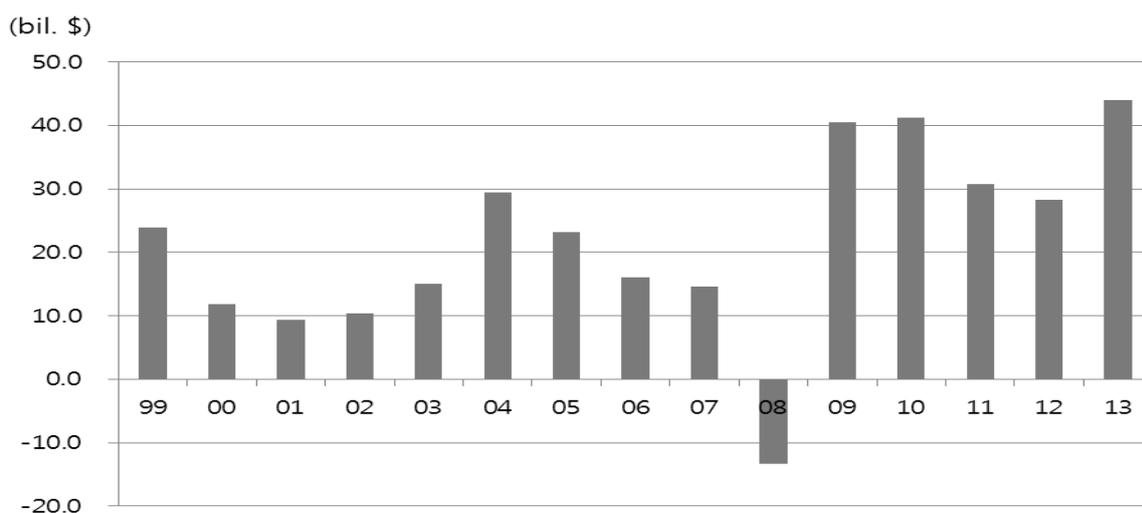
Source: Bank of Korea, <http://ecos.bok.or.kr> (accessed July 4, 2014).

from 10% in 2000's. The trade with Middle East increased to 15% from 10% due to oil price hike and the growth of Korea's oil refinery industry. If we grouped the ASEAN+3 (Korea, China and Japan) as the unit of East Asia financial cooperation, the trade portions with ASEAN+3 increased to 42.6% from 36.3%. Even though the trade portions with Japan shrank, those with China and ASEAN increased so does the trade portions with East Asia.

2.1. Korea's Trade Balances by Regions.

The trade surpluses at the custom clearance continued during 2000's except 2008. After the Asian Currency crisis, Korea went through painful restructuring required by IMF bail-out program in 1999 so the import decreased, export in-creased and it resulted more than 20 billion dollars' trade surplus. The trade surplus dropped to below 10 billion dollars in 2001 due to IT bubble burst. The world economy experienced boom due to the low interest rate with stable US macroeconomy, so the trade surplus increased during world economy booms. After 2004, the trade surplus shrank because of Korean won's appreciation, the gradual recovery of domestic demand and the commodity (including oil) price hike. The world trade decreased during the Global financial crisis but the oil price recorded the historical high at 150 dollar per barrel just before Lehman Brothers' bankruptcy. Therefore the import did not shrink much but the export shrank a lot so the trade deficit recorded. During the Global financial crisis the oil price dropped to about 30 dollar per barrel, so the import shrank. Therefore Korea's trade surplus was over 40 billion dollar in 2009. The European fiscal crisis resulted the decrease of trade surplus with EU, but the trade surpluses with US, China, ASEAN increased. Therefore the large Korean trade surplus persisted.

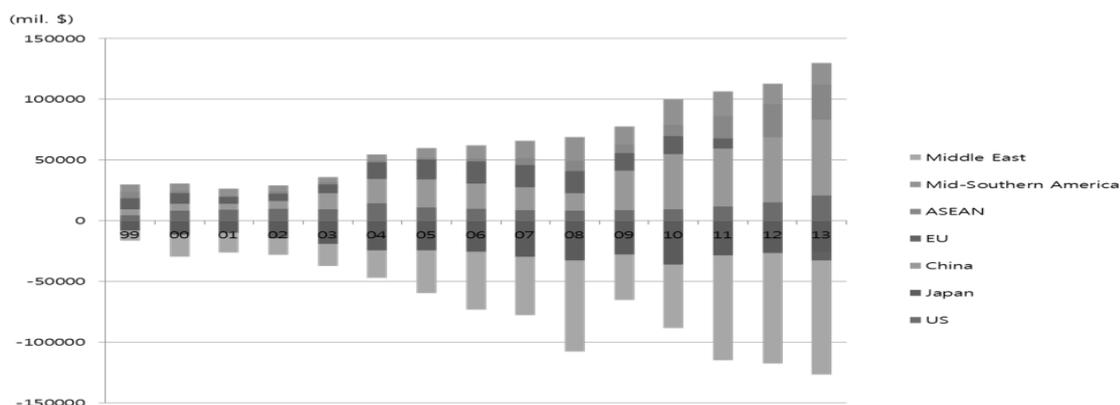
Figure 3. Trade Accounts of Korea



Source: Bank of Korea, <http://ecos.bok.or.kr> (accessed July 4, 2014).

When we look into the Korea's trade relations with world by regions, we found that the surpluses and deficits persisted with the specific regions. Let's look into the trade accounts by regions such as China, US, Japan, EU, ASEAN, Middle East, Central and South America. As already noted in the previous section, Korea trade volumes were the biggest with China and the smallest with Central and South America. If we sorted the regions by trade accounts, Korea got the surpluses with China, ASEAN, US, Central and South America (by the order of surplus size). Korea got deficit with EU, Japan, Middle East from the smallest to the biggest. From the year 2000, Korea's trade account did not switch from surplus to deficit or from deficit to surplus for those regions except EU. Korea got the trade surpluses with EU until 2010, the trade accounts with EU became the deficits due to the recessions in EU caused by the fiscal crisis. The surplus persisted in trade with US. The trade surpluses with US decreased after 2004 due to the gradual appreciation of Korean won and were the smallest in 2008 due to the Global financial crisis. The trade surpluses with US rebounded in 2009, they reached 20 billion dollars in 2013. The trade surpluses with China ballooned after the Global financial crisis, they recorded 62.8 billion dollar in 2013. The trade surplus with ASEAN surpassed those with US after the Global financial crisis, and they were 28.9 billion dollar in 2013. The trade surpluses with Central and South America also increased after the Global financial crisis but they decreased after 2010. The trade deficits with Middle East fluctuated with the changes of oil prices. The deficit was highest in 2008 when the oil price reached 150 dollar per barrel. They decreased in 2009 but rebounded due to recovery of oil price after the Global financial crisis. The deficit with Middle East was 93.8 billion dollar in 2013. The deficits with Japan increased steadily until 2010, but they decreased in 3 consecutive years after 2011. After the earthquake in east Japan, the export of energy related product increased to Japan. If we look into the trade balance with East Asia, the trade deficit recorded up to 2008 due to large deficit with Japan. But the trade balances turned into surplus after the Global financial crisis due to ballooning surpluses with China and ASEAN. The trade surplus with East Asia recorded 66.1 billion dollars in 2013. So we could say that the trade surplus with East Asia was the main source of Korea's trade surplus since the total surplus in 2013 was 44 billion dollars in 2013.

Figure 4. Trade Accounts of Korea by Regions

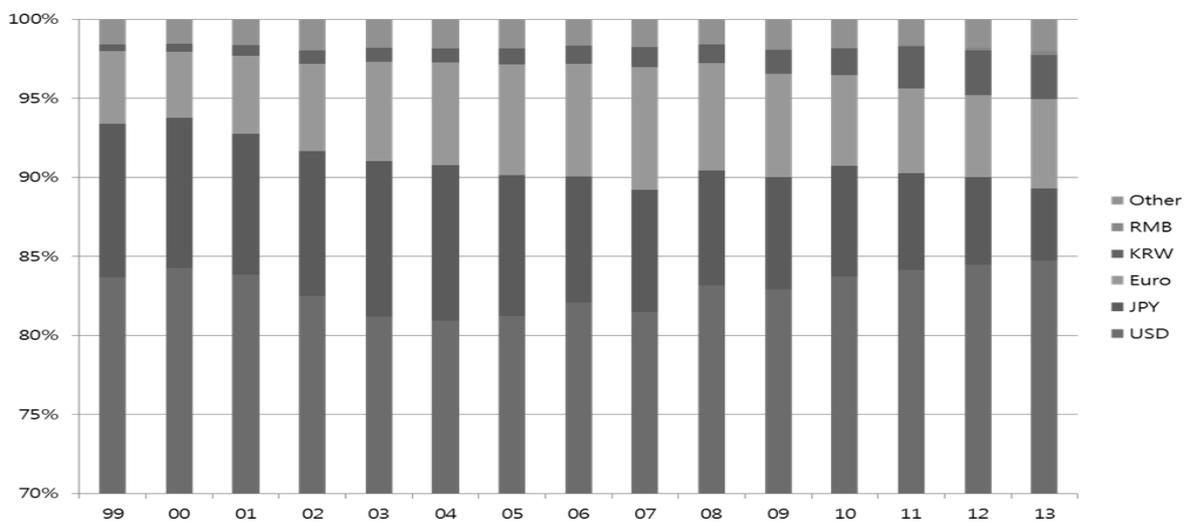


Source: Bank of Korea, <http://ecos.bok.or.kr> (accessed July 4, 2014).

2.2. Korea's Trade Settlement Currencies.

The most used currency in Korea's trade was US dollar (USD hereafter). In 2013, they settle about 85% of total trade with Korea in USD. Even though there was a big gap between 1st and 2nd most used currencies, the second most used currency was Euro which settled about 5.7% of total trade. The next currency used was Japanese Yen (JPY hereafter) which settled 4.7%. Korean Won (KRW hereafter) settled 2.8% of total trade. Chinese Yuan (RMB hereafter) had not used until 2009, but RMB settled 0.3% of total trade due to the policy efforts of RMB internationalization.

Figure 5. Portions of Trade Settlement Currencies of Korea



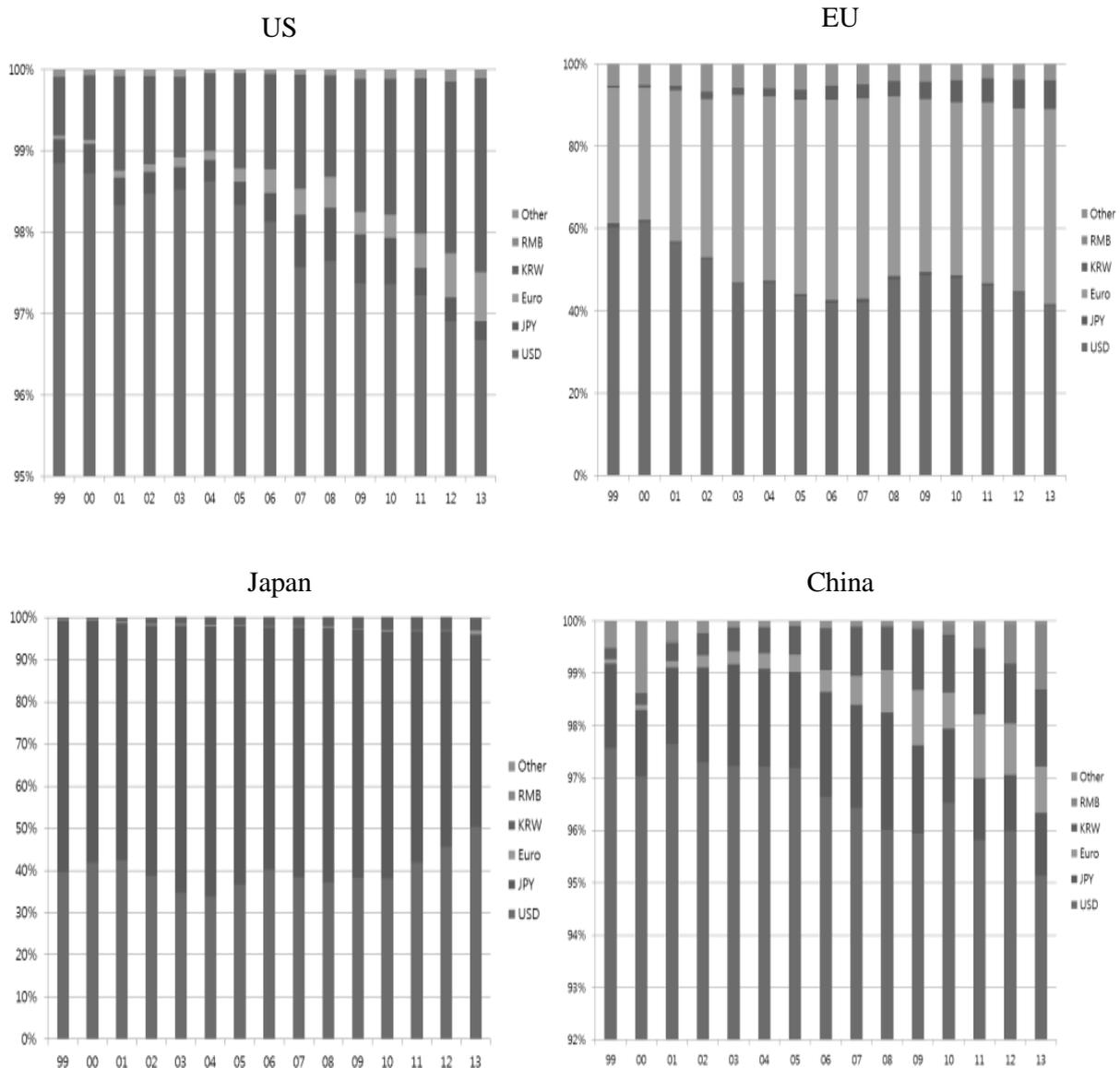
Source: Bank of Korea, <http://ecos.bok.or.kr> (accessed July 4, 2014).

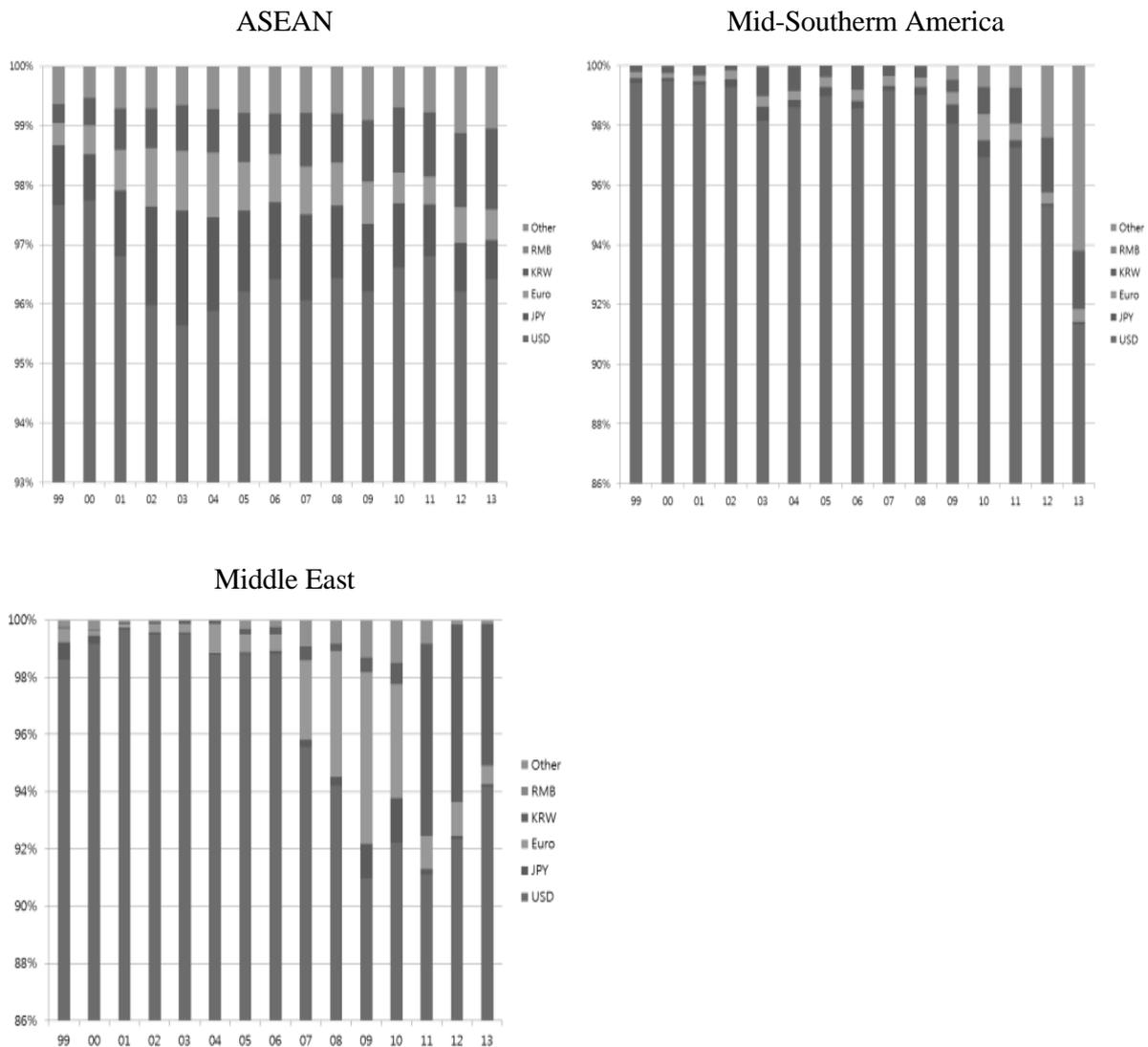
The USD settled portions of trade decreased early in 2000's because of the depreciation of USD, but they rebounded after the Global financial crisis. Even though the status of USD dented because of the Global financial crisis, the dollar settled portions increased. The JPY settled portions decreased throughout the data period and the 'Abenomics' which embarked the Japanese Quantitative Easing policy add the fuel to the decrease of JPY usages in Korea's trade. Euro settlements increased with the weak dollar until the Global financial crisis but the dollar has strengthened after then and the Eurozone also faced the fiscal crisis. So the Euro settlements decreased recently. While the traditional international currencies' (USD, Euro, JPY) settlements usage decreased, the usages of other currencies picked up by little. The usages of RMB increased because of the policy effort of RMB internationalizations and the settlement of KRW also increased since the KRW appreciated after the Global financial crisis.

There were big differences in usages of currencies when we looked at the trades with regions. Naturally the usage of the currency increased in the trade with the country which has the issuing power. In 2013, USD settled 96.7% of trade with US. The next frequently used currency in US trades was the KRW and the usage of Euro and JPY was less than 1%. But the usage of USD decreased after the Global financial crisis and the KRW and Euro usages increased instead. The JPY and USD settled 50.5%, 45.5% of trade with Japan respectively. In the mid of 2000's the JPY

settlements once increased to 64% of trade with Japan, but the JPY settlement decreased after the East Japan earthquake in 2010. The announcement of quantitative easing by Bank of Japan weakened the JPY and the JPY settlement reduced further so the USD settlements surpassed the JPY settlement in the trade with Japan. The USD and Euro settlements were 41.3% and 47.4% of the trade with EU respectively. The KRW settlements were 7% of the trade with EU which were the largest portions of KRW settlements comparing the trades with US or Japan by more than twice of the others. At the beginning of Euro in 1999, the USD settlements had been more popular in few years. However, the Euro settlements increased so the USD and Euro settlements used about the same. Even though the Euro and JPY are internationalized currencies like USD, the Euro and JPY settlements of Korea trades happen mostly in the trades with EU and Japan and not with other regions.

Figure 6. Portions of Trade Settlement Currencies of Korea by Region





Source: Bank of Korea, <http://ecos.bok.or.kr> (accessed July 4, 2014).

The Korea's trades with regions without international currencies mostly settled in USD. The 95.1% of trades with China settled in USD. They used the KRW, RMB, Yen, 1.5%, 1.2%, 1.2% of trades with China respectively. The Euro settlements of trade with China were less than 1%. The USD settlements decreased gradually from 97.7%, while the KRW and RMB settlements increased. The USD settlements of the trades with ASEAN were 96.4%. The portions of USD settlements decreased once in early 2000's, but they persists even with the Global financial crisis about 96~97%. The KRW settlements increased by little after the Global financial crisis, the Euro and RMB settlements decreased due to the Euro fiscal crisis and 'Abenomics'. The USD settlements in the trades with Central and South America were 91.4%. This was relatively low compared with other regions without international currencies. The USD settlements was higher than 99% before the Global financial crisis, but the KRW settlements increased a little bit and the Brazilian Real settlements increased by large portions after 2010. And the USD settlements of the trades with Middle East were 94.2%. Unlike the trades with other regions, the settlement currency choice was affected by political environments rather than economic reasons. The US financial sanctions against Iran which started in Dec. 2006 made it possible to settle the trade with Iran in USD. Therefore the

Euro settlements in the trade with Iran increased after 2007, but the EU also placed the financial sanctions in 2010 so the Euro also could not be used to settle the trade with Iran. As the result the KRW settlements increased after 2010. The USD was the most used currency for settlements by far differences in the trades with regions without international currencies.

The increased USD settlements after the Global financial crisis were resulted from the trades with Japan. As already stated, the USD settlements in the trade with Japan increased because of the East Japan earthquake and Abenomics. If the trades with Japan were excluded, the USD settlements did not increase and they were about 88~89% throughout the 2000's.

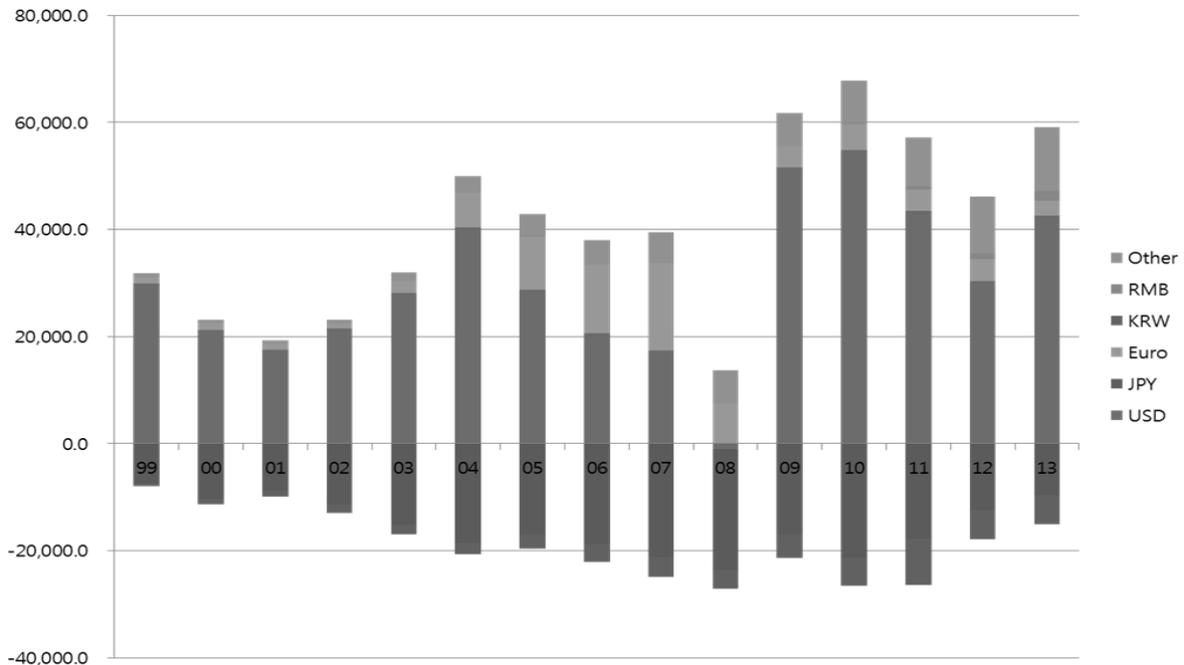
Except the USD, other currencies' settlements were very small in the region without international currencies. If we excluded the trade with Japan and EU, the USD settled 93~94% of total trades. Before the Global financial crisis, the USD settlements were 95~97% of total trades, but the USD settlements reduced a little after then due to the increase of the KRW settlements. The KRW settlements' increase mainly caused by the KRW settlements of the trade with Iran after the 2010's EU's financial sanctions.

2.3. Trade Accounts by Currencies.

As the trade accounts by regions, there were trade surplus currencies and deficit currencies. The Korea continued to have the trade deficit with Japan and the most JPY settlements happened in the trade with Japan. Therefore the JPY settled trade account recorded deficits also. The Korean won is not internationalized yet, therefore the KRW settlements will be more beneficiary to Korean traders due to KRW's limited convertibility. So the KRW settlements would be more common in Korea's import than in exports. As the results, the KRW settled trade accounts recorded deficits during 2000's. The Euro used mainly in the trade with EU. Therefore the Euro settled trade surplus were sizable before the Eurozone fiscal crisis, but they were reduced after. Even though the trade account with EU recorded deficits in recent years, those deficits settled in KRW. Therefore the trade deficit with EU did not result the Euro settled deficit. The Euro settled trade kept the surpluses with other regions' Euro settled surplus. The other regions trades mostly settled in USD, so the USD settled trade account fluctuate with the Korea's trade surplus. The other currencies' settlements increased and they were mostly surpluses.

The USD settled surpluses continued, because the trade surpluses with US, China, ASEAN and Central and South America surpassed the trade deficit with Japan, Middle East. Most trades with the regions without international currencies were settled by USD. Therefore the USD settled trade surpluses were not dependent to the trade with specific regions while the Euro and JPY settled trade accounts depended on the trade with EU and Japan respectively. The trade accounts with China, US, ASEAN and Central and South America were surpluses and the trade accounts with Middle East were deficit. Therefore the USD settled trade surpluses were determined by the world economic cycle and the commodity prices (especially oil) changes.

Figure 7. Trade Accounts of Korea by Settlement Currencies



Source: Bank of Korea, <http://ecos.bok.or.kr> (accessed July 4, 2014).

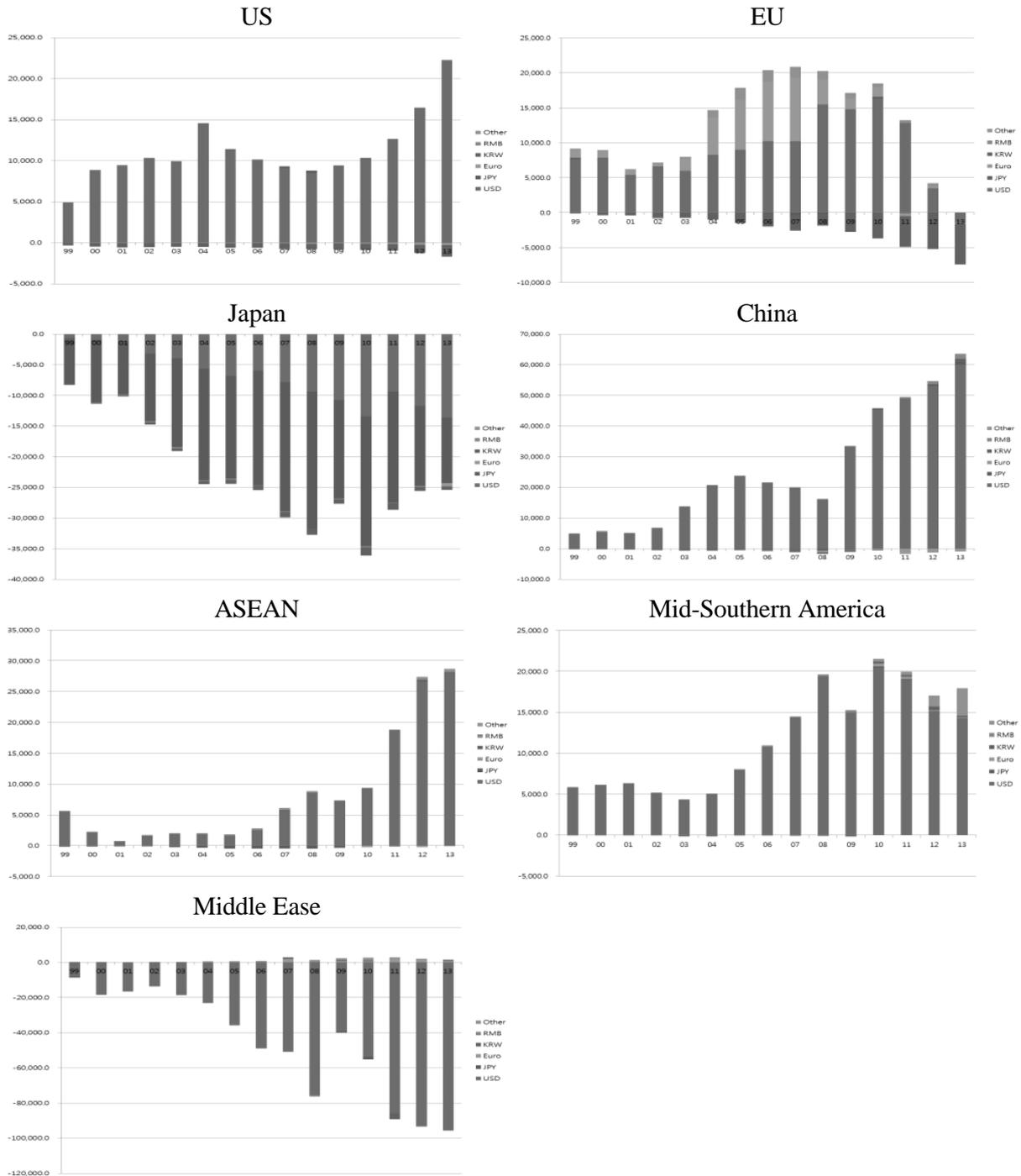
2.4. Trade Accounts by Regions and Currencies.

The USD settled trade accounts with US, China, ASEAN, Central and South America and Middle East decided by the trade accounts with those regions. They settled the trade with US using the USD, so the trade surpluses with US meant the USD settled surpluses of the trade with US. However the all other currencies settled trade accounts with US were deficit. The KRW got more and more used in trade settlements with US but the increasing KRW usages meant the increasing KRW settled trade deficit with US. We could conjecture that the KRW settlement mostly happened in importing from US. Except the USD settled trade account, the all other currencies settled trade accounts with China were deficit until the Global financial crisis, but except the Euro settled trade account, all other currencies settled trade accounts became surpluses after then. We might conjecture that the importers in China tried to reduce the USD settlements after the Global financial crisis. Especially the RMB settled trade surpluses increased after the RMB internalization policy from 2009.

The USD settled trade accounts with ASEAN were surpluses, and the other currencies settled trade accounts were very small. However the other currencies settled trade surpluses grew after 2011. The local currencies usages grew in trade with Central and South America after 2012. So the USD settled trade surpluses with Central and South America shrank after 2012 and the local currency settled trade surpluses increased. The Euro and KRW usages increased in trade with Middle East due to the US and EU's financial sanctions against Iran in 2006 and 2010 respectively, and the USD settled trade accounts were deficit while the Euro and KRW settled trade accounts were surpluses. Even though the USD settlement reduced because of the sanctions, the Korea's imports from

Middle East mostly were settled in USD while the Euro and won settled export to Middle East increased. The imports from the USD settlements dominant regions settled in USD, however the local currencies settled exports to those regions increased by little.

Figure 8. Trade Accounts of Korea by Settlement Currencies and Regions



Source: Bank of Korea, <http://ecos.bok.or.kr> (accessed July 4, 2014).

No matter which currencies settled, the trade accounts with Japan were deficits. The USD and JPY settled trade deficits were the most of the trade deficits with Japan. Since the JPY settlements decreased recently, the USD settled deficits were larger than the JPY settled deficits. While the KRW settlements were increasing, the KRW settled trade accounts did not change a lot.

Before the Global financial crisis, the USD and Euro settled trade surplus with EU were sizable, but they reduced after then and became deficits in 2013. And the KRW settled trade deficit continued during 2000's. The KRW settled trade deficits were the most among currencies in the trade with EU, so the USD and Euro settled deficits were relatively small compared to the KRW settled deficits in 2013.

3. Risk and Task of Regional Currency Settlement in East Asia

The regional currency settlement in East Asia is discussed as an effort to reduce the dependency on the USD in the region and the exchange market risks. Except Japan, Korea, China and ASEAN do not have the internationally convertible currencies. Therefore the 96.4% and 95.1% of the trades with China and ASEAN respectively settled in USD. Some ASEAN countries and Korea faced the Asian Currency Crisis during 1997~98 because of the lack of USD liquidity. Since the East Asian countries do not have the international currencies, they use the USD of which they do not have the issuing power. The USD usage in trade creates the financial demand from the exporting and importing firms in the region. Therefore the large demands for USD exist in the regional financial markets also. If there are ample USD liquidity so the international financial institutes are willing to provide the USD to the region, there is no worry about the financial crisis. But if the USD liquidity dries up with any reason, the large demand of USD in the region can result the currency crisis. If we can reduce the USD settlements and increase the local currency settlements, the region do not have to depend on the USD liquidity. Therefore the regional currency settlements could reduce the USD dependency of the East Asia so we could prevent the contagion effect from the international financial markets.

The Korea's trades with East Asia have grown because of rapid grown trades with China and ASEAN. At the beginning of 2000, the trades with US, EU, Japan were much larger than trades with East Asia, but the trade with China alone becomes larger than the trades with US and EU combined in 2013 and the trades with ASEAN is also larger than the trades with US or EU. At the beginning of 2000, Korea traded mostly with US, EU and Japan which have the international currencies, so the settlement currencies were those currencies; USD, Euro and JPY. But the situations have changed, the trades with East Asia become the largest portion of the Korea trade. Therefore the incentive to settle the trade in local currencies has grown.

We could say that the effort on the regional currency settlement already started. The USD settlement in Korea's trade has increased after the Global financial crisis. However the USD, Euro and JPY settlements has decreased by little if we look into the trades with China and ASEAN because of the

increases of RMB and KRW settlements. The USD settlements have increased in the trade with Japan due to the diminishing JPY usages after ‘Abenomics’. But the JPY and USD combined usages have decreased by little and the KRW settlements have increased. The RMB and KRW settlements in the trade with China also have increased, so the local currencies settlements portion has grown to 3% from less than 1%.

The RMB internationalization policy has gotten attentions recently. The China has tried to internationalize the RMB since 2009. The China government encourages the RMB settlement in trade while the Hong Kong becomes the RMB financial hub. Even though the Korean firms are still passive on the RMB settlements so far, the government acknowledges the necessity of the RMB settlements by promoting it via the currency swaps with China for the trade finance. Now KRW-RMB direct exchange market opened in Korea. Therefore the RMB settlements have increased much fast than the KRW settlements for trade.

The regional currency settlement, however, cannot solve all the problem of USD liquidity. The Korea’s trade accounts by currency shows the USD settled surplus and the JPY and KRW settled deficits. Therefore if we simplify the world, we could say that Korea exports in USD and imports in JPY and KRW. The USD settled trade account once has shown the deficit in 2008 because of high oil price and the Global financial crisis. If we exclude this kind of extreme situations, the USD settled trade has been surpluses since the Asian currency crisis. The USD is the most liquid and convertible currency in the international financial market. Therefore Korea does not have difficulties to fill the JPY and KRW deficit with the USD surplus. However the Korea has faced the USD liquidity problem when the USD settled trade has been deficit¹.

In the rest of this chapter, we will look into the potential risks associated with the regional currency settlement in Korean economy.

3.1. Currency Mismatches in Trade

When we look into the trade account of Korea by currency, there have been the surplus currencies and deficit currencies with structural reasons. The USD has been the surplus currency, and JPY and KRW have been the deficit currencies. This structural mismatches of the surplus and deficit currencies have not been the problem except the USD liquidity crunches in the Global financial crisis, since the USD is the most convertible currency. Even in the Global financial crisis which has rooted in the US financial market, the USD demand has increased because of the liquidity demand during the crisis. The demand for the USD has been there in the financial market, as long as Korea has surpluses in USD and deficits in other currencies, it does not have the liquidity problem.

If the regional currency settlements are successful, then Korean USD settled surpluses will shrink. Korea’s trade accounts have large difference by regions. The trade deficits with Middle East persist due to oil imports, and if Korea exports more, it has to import more energy. So the trade deficits

¹ At the custom clearance, the trade account was deficit in 2008, but the goods and service account in national account was surplus. So we could conjecture that the deficit in USD settled trade cause the the USD liquidity problem.

with Middle East tend to grow. Before the Global financial crisis, the Korea's trade surpluses with EU were sizable, but they became deficit after then. If the current situation continues, the trade with EU might not affect the currency mismatch problem of trade. The trade deficit with Japan is also increasing as Korea exports more, since Korea imports parts and intermediate goods from Japan for exporting. The USD settlements in the trade with Japan, however, increases after the 'Abenomics' and the deficits with Japan have reduced after the East Japan earthquake. Even though the regional currency settlement promoted in East Asia, the JPY settlements might not get the benefit since the JPY already has been internationalized and used for a long time. The portions of Euro and JPY settlements is less than 50% of total trades with those regions, even though they are the internationalized and convertible currencies. This shows the limit of local currency settlements given the USD as the international key currency. Therefore the JPY settlements will not get increased even with successful regional currency settlement in East Asia. The JPY settlements will be affected by the US and Japanese monetary policies and the exchange rate movements not by the policy effort on the regional currency settlement in East Asia. If the regional currency settlements are enlarged successfully, then the USD settled trade with China and ASEAN will be reduced. The portions of USD settlements in the trade with China and ASEAN are 95.1% and 96.4% respectively. If the trades with China settle in the RMB and/or the KRW, the RMB and KRW settled surpluses will increase while the USD settled surpluses decrease. And the regional currencies settled surpluses with ASEAN will increase as the USD surpluses decrease. In sum, if the regional currency settlements were successful, then the part of the USD surpluses with China and ASEAN will become the KRW, RMB or other regional currencies surpluses.

We cannot expect that the increased regional currency settlements affect on the trade deficit currencies. If we look into the trade deficit with Japan, the large portions of trade with Japan already are settled in the JPY. Therefore the regional currency settlements won't change the JPY deficit status. We cannot expect any changes of currency settlements in trade with Middle East, US, EU and Central and South America with the regional currency settlement efforts in East Asia. So it is logical to expect the currencies that used in those regions won't change. Therefore the trade deficit currencies won't be changed with the regional currency settlements efforts, because the deficits come from the trade with Japan and Middle East.

If the regional currency settlements effort make fruits and the 30% of the trades with China and ASEAN are settled in regional currencies instead of USD, the USD settled surpluses shrink to 16.2 billion dollars from 42.6 billion dollars as in 2013. Because the USD settled surplus with China and ASEAN were 60.1 billion dollars and 28.2 billion dollars in 2013. The sum of the USD settled surpluses with China and ASEAN was larger than the total trade surplus, 44.1 billion dollars. So the fact let us acknowledge the importance of the regional trades in Korea's trade surplus. The regional currency settlements might induce the big changes in the Korea's USD settled surpluses. During 2000's, the least amount of the USD settled trade surplus was 17.4 billion dollars, if we exclude the year 2008 in which Korea had deficit. If we assume the year 2007 trade outcomes and about 30% of the regional currency settlements, then the USD settled surpluses become 9.6 billion dollar which is far less than the JPY settled deficit of 21.3 billion dollar. The reason of the decrease of the USD settled surplus is that the USD settled surpluses with China and ASEAN become in the regional currencies settled surpluses while the USD settled deficits with Middle East persist.

If the trade environments do not change, the regional currency settlements do not reduce the trade surpluses. It only results the decreases of the USD settled surpluses and the increases of the regional currencies settled surpluses, such as KRW, RMB, Ringgit, Singapore Dollar, Peso, Rupee and Baht². In other word, the USD settled surpluses are replaced by the regional currencies' surpluses. This could be a potential risk factor in the Korean exchange market. Until now, the directly traded currencies in Korean exchange market are the USD and KRW. The Korea's governments opened the Won-Yen market but it was closed due to the lack of trade. The Korean government tried to host the RMB financial hub in Korea, and the Won-Yuan exchange market open in 2014. So the other currencies except the USD can be only exchanged through the cross markets except the RMB. In the Korean capital markets, the foreign investors are from US or Europe so they use mostly the USD as the source currency. And the most loans from abroad are the USD. Therefore if the trade surpluses diversify in terms of their currencies, Korea needs to convert them into the USD capital in order to prepare for the potential sudden capital outflow. The convertibility of other currencies is limited compared to that of the USD, so it might be the potential risk for the Korean economy.

If the USD do not lose its status of the international key currency, the value of regional currencies plummet when the international financial market has some problems as we witnessed in the Asian currency crisis and the Global financial crisis. So if the crisis hit, the reduced USD surpluses because of the regional currency settlements could be the risk factor in the Korean exchange market since it could lead to the imbalance of currencies' supply and demand.

3.2. Financial Crisis Contagion

The regional financial cooperation in East Asia started since the member countries realized that they could not rely on the IMF bailout program after the Asian currency crisis. The ASEAN+3 financial cooperation started to get the financial safety net, the USD liquidity, for the region. And the efforts of the regional currency settlements also try to protect the region from the international financial instability by reducing the dependency of the USD in the region.

If the regional currency settlements could reduce the USD demands in region, it could increase the contagion possibilities of the financial crisis which happens in the region. If the regional currency settlements are successful, then Korea would accumulate the regional currency financial assets since Korea has surpluses from the trade with East Asia. If the trade surpluses persist as in 2013 and the 30% of the regional trades settles in the regional currencies, Korea will accumulate 26.5 billion dollar worth of regional currency assets annually. The part of the accumulated regional currency assets will be hold in USD, but the other would hold as in the currencies as it is. Not only Korea, but also other member countries will increase the each other's currencies financial assets. If the interconnection of financial markets increased, when the price of one country's financial assets drop because of the financial crisis in that country, it will affect the value of assets that held by other countries. So the financial crisis could spread more easily in the region. The successful regional currency settlements increase the mutual financial asset holding of member countries and the financial crisis contagion possibility within region will increase.

² Hong Kong dollar could also be the candidate, but the HK dollar use is limited due to the Yuan internationalization.

The mutual financial asset holding problems recognized during the Eurozone fiscal crisis as the channel of the crisis contagion. When the fiscal problems of Spain and Italy mentioned, the expert also worry about France whose fiscal status is much better than those countries because the France's problemed countries' asset holdings. This highlight that the mutual assets holding could be the channel of the financial crisis contagion.

3.3. Lose of Auto-Stabilization Mechanism of Exchange Rate

If the interdependency of the financial markets increased because of the increase of the regional currency settlements, the exchange rate will be affected not only by the domestic financial market but also by the member countries financial markets. The exchange rates act as the automatic stabilization mechanism by balance the domestic demand and foreign demand. After the Global financial crisis, the Korea's domestic demand was depressed while the current surplus was sizable, so the exchange rate of won decreased. And the won appreciations might boost the domestic demand which dent the export price competitiveness. If the exchange rate floats by reflecting the country's economic situations, it could be stabilize the countries macroeconomy by balancing the external and domestic demands. However, if the regional financial markets' interconnections increased due to the region currency settlements, then the exchange rates can be affected by the other countries' financial markets. And if the other countries' financial markets fluctuations are different from the own countries' macroeconomy then we cannot anticipate the auto stabilization mechanism to work. For example if the exchange market for the Won-Yuan become liquid and the external demand for China increases while the external demand for Korea is not increasing, then the increasing external demand for China can appreciate the Won. The Chinese capital market yet is not fully open to the foreign investors while the Korean capital market is. Therefore the foreign investor can invest on the Korean capital market instead of the Chinese as the alternative. And if the mutual financial asset holding is large, then the relation between the two currencies is also tight. So the regional currencies would be treated as one block of currencies. Then the won exchange rates fluctuate with the changes of the neighbor countries' macroeconomy. This connotes the possibility of the exchange rate movements which do not reflect the macroeconomic conditions of own country³.

3.4. Only Yuan Internationalization

China has pursuit the RMB internationalization since 2009. There is a peculiarity in China's RMB internationalization policy compared to other countries' policy. They separate the domestic liquidity and the offshore liquidity. China separates the liquidities in order to minimize the side effects from the currency internationalization, which are the lost control on the exchange rate and the emasculation of monetary policy. So they could pursuit the internationalization without lifting the capital control on the domestic market. The RMB internationalization is very successful so far.

³ As the economic relationship deepens in East Asia, the macroeconomies of the region would resembles each other. So this situation might be rare.

(Rhee and Sumulong, 2014) The external demand for the currency should be enough for the currency internationalization to be successful. The China's trade volume is the largest in the world and their GDP size is the second largest in the world. So their economic size and trade volume are large enough to create the large demand for the RMB. The inflation of China has been low and stable during 2000's. The obstacle of the RMB internationalization, however, is the low level of the capital market liberalization and the transparency of monetary policies. Yet, the People's Bank of China makes the currency swap agreements with various neighbor countries in order to promote the RMB internationalizations.

Hong Kong plays the important part in the successful RMB internationalizations. China has separated the onshore and offshore RMB liquidity, and Hong Kong has been the offshore RMB financial hub. Hong Kong is part of China and also has an independent economic system from China. Therefore it is perfect for an offshore RMB hub. Hong Kong has long been the financial hub of Asia and this helps for Hong Kong to be a successful RMB financial hub. The Chinese monetary authority separates the onshore and offshore liquidity of RMB and uses Hong Kong as the RMB financial hub.

The RMB usages are expected to be increased if the regional currency settlements are successful. The RMB settled trades are 16% of total trade of China. Even though the RMB settled trade with Korea is less than 1% of the total Korean trades, the RMB is widely used in trade settlement with ASEAN. If the regional currency settlement in East Asia is successful, then the RMB settlements will also be enlarged. There are no other currencies in the region to have the internationalization efforts. The KRW internationalization has been discussed among many experts, but there still is a limit⁴ on the offshore residents borrowing in KRW. If the regional currency settlement is promoted, the traders should select one of the many regional currencies. It is better for the trader to use the currency with the convertibility in the international financial market. The RMB can be converted into other currencies through RMB hub, Hong Kong, because of the RMB internationalization policy. Therefore the RMB can be preferred by the trader in the region.

Except Japan, the other countries in the region do not have the internationalized currencies. The trader would like to settle the trade with the most convertible currencies in the region when they choose a regional currency for the settlements. The JPY, which is already internationalized, loses its popularity as the settlement currency because of the 'Abenomics', the large national debts to GDP ratio and the trade deficits of Japan. The progress of RMB internationalization is very rapid and successful since 2009. When we consider the trade volumes with East Asian countries, and Chinese policy, it is likely that the traders in East Asia choose the RMB as their settlement currency among the regional currencies. Then the effort on the regional currency settlement in East Asia would become the effort on the RMB internationalization.

If the RMB settlements increase by the effort on the regional currency settlement in East Asia, Korea needs to manage the USD liquidity and also the RMB liquidity in order to protect the domestic economy from external financial shocks. If the RMB settlements increased in the region, Korea will accumulate the RMB financial assets since Korea has the trade surpluses in the trade

⁴ 30 billion won.

with East Asia. As already noted in currency mismatch problem, if the RMB settlement increase in the region, the USD settled surplus will be replaced by the RMB settled surplus. Since the USD settled surplus is reduced, it becomes harder to manage the proper USD liquidity. In sum, the Korean government will get more complex tasks in managing the foreign exchange markets since they have to manage not only the KRW-USD market but also the KRW-RMB market. Moreover the Chinese capital market is not yet completely open to foreign investor, the RMB liquidity management would be more difficult than managing the USD liquidity.

3.5. Tasks for Korea

If we want to prevent the currency mismatch problems in trade account, we should promote the convertibility of regional currencies before using them in trade settlements. The trade currency mismatch is only problem when the convertibility of regional currencies is limited. Therefore we should think about setting the convertibility guarantee systems first. When we discuss about the regional currency settlements facility, we need to discuss about the guarantee mechanism as a form of regional financial safety net. In that system the member countries should be able to convert the regional currencies with a desired international currency. Through this convertibility guarantee systems, the traders can convert the regional currency with the international currency. We may develop this guarantee systems using existing currency swap agreements between regional central banks or developing the CMIM. The current CMIM is the regional safety net for the USD liquidity. We may develop the CMIM as the safety net for the regional currencies and use those for converting regional currencies as the guarantee system.

To prevent the financial crisis contagion problem, we need to monitor the possibility of financial crisis and prevent them before it happens. Through the regional financial cooperation, the member countries can prevent the financial crisis better than without it. In East Asia, we already established the CMIM as the regional financial safety net and introduce the crisis prevention function to the CMIM in 2013. The AMRO, ASEAN+3 Macroeconomy Research Office, is also set up for monitoring member countries macroeconomy. But these are not enough yet. The CMIM has never been used and the physical fund is not there. And there is opt-out clause in CMIM treaty. These should be improved in order for CMIM to be practical. And AMRO is only 2 years old and it needs more time and resources to be a practical monitoring international organization. The increase of regional currency settlement would make the region vulnerable for the intra-region contagion of financial crisis, so we have to prevent the financial crisis to happen in the region by monitoring and having the regional financial safety net.

We have to provide tools to cut the effect of the exchange rates on the trade. The Korean economy's dependency on the trade is larger than most other countries. The Korea's trade volume is larger than the size of Korea's GDP. Therefore the effect of exchange rate volatility on the trade is the more concerned problem than the effect on the domestic demand. If the regional currency settlements make regional currencies coupling by trade and financial integration, we need to find way to minimize the effects of exchange rate volatility on trade. The exchange rate risk can be hedged through the F/X hedging financial derivative products. If the regional currency settlements become

common, we need more variety of the F/X hedging financial derivative products, because we need to hedge the F/X risks with all regional currencies. Moreover the F/X markets for all regional currencies might be far less than perfect, which means that if the governments do not provide the F/X hedging products, the private financial institutes will not supply them in the market. So the ExIm banks or trade insurance cooperation should provide the F/X hedging products for the traders who settle the trade in regional currencies. If the trader can avoid the exchange volatility risk in trading, the trade account would not be affected by exchange rate volatility. So the economy as a whole would be free from the effect of exchange rate volatility in short term.

In order to prevent that the regional currency settlement only helps the RMB internationalization, Korea needs to promote the KRW internationalization or make the KRW more attractive to use. Even the internationalized currencies usages change according to the international financial market conditions. For example, the JPY settlements have been reduced due to the depreciations expectations of JPY. Therefore there is a chance for won to be used if Korea can make desirable environments for KRW to use. KRW has advantages over RMB, if we consider the Korean capital markets. The Korean capital market is open to foreign investors and the Korea's bond market is well developed compared to any other bond market in the region. So if the convertibility of KRW is improved, there will be traders who choose the KRW for their settlements. Ultimately, we need to internationalize the KRW in order to improve the convertibility. In the long term, if we can make the trader to settle in the KRW instead of any other currencies, we can eliminate the exchange rate risks in trade

4. Conclusion

When we look into Korea's trade, there are the surplus regions and the deficit regions also the surplus currencies and the deficit currencies. The trade accounts with China, ASEAN, US and Central and South America are surpluses, and those with Japan and Middle East are deficit. The trade accounts with EU have turned into deficit from surplus after the Eurozone fiscal crisis. The difference of the trade accounts by regions happens due to the structure of Korea's trade. Korea imports raw materials and or intermediate goods in order to export. The trades are settled most in the international currencies such as USD, JPY and Euro. More than 90% of trades with regions without international currencies are settled in the USD and the most trades that settled in Euro and JPY are the trades with EU and Japan. Therefore the JPY settled trade accounts are deficit and the USD settled trade accounts are surplus. After the Global financial crisis, the regional currencies settlements have increased by a little.

If we consider that the current trade situation continues, the regional currency settlements in East Asia could have the potential risks for Korean economy. First, it can induce the currency mismatch problem in trade accounts. The most regional trade settled in the USD. If they settled in the regional currencies, then the USD settled surpluses will shrink. Second, the intra-region contagion of the financial crisis could be speed up. If the regional currency settlements are successful, the economic integrations of the region will be deepened through the trade and financial integrations. So if the financial crisis happens in the member countries, it will spread out to the region at the faster speed.

Third, there is the possibility of losing the auto-stabilization mechanism of exchange rates. The regional currencies could be treated as a currency bloc so it is possible that the exchange rates move differently from the own countries' macroeconomic fundamentals. Lastly, it is possible that only the Yuan get used in the regional trade after the regional currency settlements promoted. The traders will choose the currency to settle which is more convertible and reliable in the international financial market. The other currencies than JPY and RMB in the region are not internationalized. And the RMB internationalization is successful so far. So the traders could choose the RMB for the settlements. Then Korea economy will be changed to the USD and RMB dependent economy from the USD dependent economy.

In order not to realize the potential risks associated with the regional currency settlements, we try the followings. First, we could avoid the trade currency mismatch problems if we can make the convertibility guarantee systems. Second, we have to prevent the financial crisis from happening in the regions. We should make the CMIM more practical and the AMRO should function as the macroeconomy monitoring agents for the region. Third, the government should provide the proper F/X hedging products for regional currencies. If the trader can minimize the effect of exchange rate volatility by using F/X hedging products, the economy as a whole can be free from the exchange rates volatility in short run. Lastly, we should make the KRW more attractive to use in the settlements. We have to improve the convertibility and credibility with the proper macroeconomic policies. Ultimately, we could avoid the foreign exchange risks, when we can use domestic currency in trade and international financial market.

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