From Chiang Mai Initiative to Regional Financial Arrangement*)

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The Setting

The 1997-98 financial crisis prompted East Asian countries to seek a closer regional cooperation and policy coordination in the financial sector. There has been a strong desire to develop a regional self-help financial networking. The early proposal initiated by Japan to set up an *Asian Monetary Fund* (AMF) was shelved because of strong rejection from the United States and the IMF, both of which argued that such an arrangement would create a double standard and worsen the moral hazard problem.[1] Hitherto, however, regional arrangements similar to AMF exist elsewhere, e.g., the *Latin American Reserve Fund* (LARF) established in 1991, and the *Arab Monetary Fund* set up after the first oil boom in 1970s.

The episode, however, did not stop the region from pursuing its efforts to strengthen the cooperation. A meeting of Finance and Central Bank Deputies of fourteen Asia-Pacific economies in Manila on November 1997 stressed the importance of a framework for regional cooperation to enhance the prospects for financial stability. The product of the meeting, *Manila Framework Groups* (MFG), recognized the importance of regional surveillance mechanism to complement the IMF global surveillance system and the need to enhance economic and technical cooperation particularly to strengthen the domestic financial systems and regulatory capacities. MFG also emphasized the need to help strengthen the IMF's capacity to respond to financial crises and to have a cooperative financing arrangement that would supplement IMF resources. Given the timing of the meeting, it is not surprising that the Group made particular efforts to link its initiatives with the IMF program (by then Thailand and Indonesia had just started the IMF program).

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[1] Feared that the AMF concept could strengthen Japan influence in the region, Beijing also opposed the AMF proposal.

Yet, between the lines the MFG affirmed the insufficiency of IMF's financial assistance and its slow disbursement process. One thing is clear, however, the idea of setting up a formal Regional Financial Arrangement (RFA) had recurred.

Various ideas emerged in a series of follow-up meetings. The process culminated in March 2000. Realizing the strong need to stabilize financial sector and the exchange rate—e.g., defending local currency should it be under a speculative attack, on that date ASEAN countries extended the existing *ASEAN Swap Arrangement* (ASA) to include 5 new members. More importantly, on May 2000 the arrangement was broadened in an important way by including the 3 East Asian countries with mighty economies: Japan, PRC and Korea (hence the term ASEAN+3). The new arrangement, known as the *Chiang Mai Initiative* (CMI), went beyond just expanding the common and bilateral (including repo) swap arrangements.[2] Focusing on a closer cooperation and aspiring for a concrete regional financial arrangement, the proposal also stipulates the need for cooperation in regional surveillance and monitoring, particularly of capital flows. Combined all together, these elements constitute something not far different from the earlier proposed AMF.

The emerging question now is: what would be the preferred format of cooperation? More specifically, what form of *Regional Financial Arrangement* (RFA) would be most suitable for achieving stability in the financial sector and low volatility of the exchange rate? Obviously, this involves a complex decision that must include not just economic rationales but also political and other considerations.

The discussion in this paper focuses on the efforts of East Asian countries to establish a regional financial arrangement by exploring various issues and important factors that

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[2] ASA was first established by the original five ASEAN monetary authorities in 1977. The committed total facility was US$100 million, subsequently raised to US$200 million. This common swap system was basically designed to provide necessary short-term liquidity mutually among member countries. Under CMI, the ASA membership was expanded to include the 3 East Asian countries, and the total amount of facility derived from members contribution was raised from $200 million to $1 billion. The *Bilateral Swap Arrangement* (BSA), on the other hand, is based on a network of bilateral agreements between member countries. The network was expanded under CMI. At the time of this writing, there are already a dozen of such agreements with total size of US$23.5 billion. This amount excludes the financing through the New Miyazawa Plan (e.g., Japan agreed to swap US$7.5 billion with Korea and Malaysia in 1999 under the Plan).

need to be considered in the establishment of such an arrangement. Attempts are subsequently made to illustrate how the complex interrelations among those factors are synthesized, based upon which the selection of a suitable form of RFA can be made.

Objectives, Goals, and Alternative Forms of RFA

Looking at the period between the first MFG meeting in November 1997 and the establishment of CMI on May 2000, there had been a number of important developments. The ASEAN Surveillance Process (ASP) was formalized in 1998 and became operational in 1999. It is one of the most important components in any financial arrangements. The ASP is based on a peer review process, almost in contrast with the "ASEAN way." The region also called for a reform of the international financial architecture in which the diversity of countries and the social impacts of the reform must be considered. During the period, some political stumbling blocks had also been removed (e.g., Beijing early reluctance).

The post-CMI progress has been slow, and results are mixed. The expansion and finalization of ASA and the "one-way BSA" (bilateral swap arrangement) strengthened the first building block. The subsequent expansion and finalization of the "two-way BSA" among the three East Asian countries would have erected the second building block (Chaipravat, 2001). But the ASP has not worked as planned. The unit responsible to coordinate the surveillance process, i.e., the *ASEAN Surveillance Coordinating Unit* (ASCU) is under-staffed and the quality of surveillance data has been disappointing.[3] The lack of a common template and the reluctance of member countries to submit data in a timely manner are among the noted reasons. Member countries also failed to agree on some proposed improvements on information sharing. The informality of the peer reviews and the unequal level of participation by authorities due to different degree of central bank independence in different countries affect the quality of the analysis as well.

[3] The *Terms of Understanding* (TOU) on the establishment of ASP stipulates that the role of ASCU consist of coordinating inputs and information from Member States and international finance organizations, conducting studies based upon which policies and courses of actions are recommended, and performing administrative functions among others for the ASEAN Finance Ministers meetings. It is a daunting task given the unit's small number of staff.

More seriously, the objection of some countries on the linking of regional BSAs with the IMF program remains strong, causing no significant agreement can be reached despite efforts made by a study group designated specifically to examine this matter. The IMF's position on this issue is clear:

"…….I would also like to express the IMF's strong support for the Chiang Mai initiative for expanded financial cooperation. I encourage the ASEAN+3 countries to make it operational. I understand this initiative as a complement to the IMF's own financial assistance for members in the region that undertake adjustment efforts.……...'' (Horst Köhler's remarks at Press Conference at the Japan National Press Club on January 12, 2001).

On the swap financing side, uncertainties also cloud the process. There is a relatively small size of liquidity available through the CMI despite the estimated ASEAN+3 combined foreign reserves of US$800 billion. Some expressed grave doubts about the ability of BSAs to function effectively should its service be actually needed. Then there is also "good news that is bad" factor. The recovery process throughout the region no longer provides a same degree of impulse for speeding up the process, especially when the member countries have to deal with other major domestic issues and internal political problems.

Yet, the slow progress and the above shortcomings are seen more as a challenge rather than deterrence. Almost all member countries realize that a more concrete RFA needs to be decided soon if such an arrangement is to be credible. It is also recognized that if future crises are to be avoided, a particular attention needs to be given to improving the surveillance mechanisms and the monitoring system. This is a real daunting task since there is solid evidence from around the world that financial opening increases the chance of financial crises, suggesting that the probability of future crises in the region remains big.[4] In effect, therefore, crisis prevention and crisis management should be the appropriate goals of any proposals.

[4] The link between financial liberalization and crisis has been widely verified in McKinnon (1991), McKinnon and H. Pill. (1996), Demirguc-Kunt and Detragiache (1998), Rodrik (1998), Glick and Hutchison (1999), and Kaminsky and Reinhart (1999). Azis (forthcoming) discusses such a link in the context of the Asian Financial Crisis.

Intensive discussions following CMI brought about debates over the ultimate objectives and the precise form of regional financial arrangement. The three major objectives of establishing RFA are: (1) minimize the exchange rate volatility; (2) strengthen the region's financial sector and securities market; and (3) avoid financial contagion that could destabilize even economies with strong fundamentals.

One of the proposed ideas regarding the exchange rate system under RFA is to implement a *Common Currency Area* (CCA) based on a certain basket, leading towards a *Currency Union* (CU). The argument supporting this idea rests upon a fundamental reason that in order to stimulate trade the exchange rate stability is essential. In fact, some currencies in the region have already been de facto following a basket system. The post-crisis Thailand and Korea, for example, have shifted to a de-facto managed-floating system in which the US dollar and the Japanese Yen have now a substantial weight in their currency-basket arrangement (Kawai, 2002).

In its critical report, the Tokyo-based *Asian Development Bank Institute* (ADB-I) argued that an intermediate exchange rate system would be most suitable for post-crisis Asia (ADB-I, 2003). Others who suggested a similar regime include Ito, Ogawa and Sasaki (1999), Yoshitomi and Shirai (2000), Williamson (2000), Park (2001), and Kuroda and Kawai (2002). They all argued that freely floating and currency board (hard peg) regimes are not appropriate. While a floating regime increases the exchange rate risk, thus potentially able to help limit capital inflows, it has however two potential problems: volatility in the short run and misalignment in the medium run.[5] A super fixed currency boards system, on the other hand, is typically used in economies where the public has lost confidence in domestic monetary and exchange rate policy due to bouts of hyperinflation, requiring that a fixed exchange rate serve as a new anchor for monetary policy. This is

[5] Since Asian economies tend to have narrow and shallow capital markets, they are highly vulnerable to exchange rate volatility, including manipulations by a few large players in the international capital market. Bandwagon or herding effects can easily magnify such volatility. On the medium-term misalignment, a currency appreciation following capital inflows can create "bandwagon" expectations that will induce even greater capital inflows, further appreciating the currency and resulting in a medium-term misalignment. The exchange rates can thus lose touch with fundamentals for an extended period of time, seriously distorting domestic resource allocation between tradables and non-tradables.

clearly not the case in Asian countries. Based on these arguments an intermediate system emerges as one of the proposed exchange rate regime.

Having a relatively open capital account, the region can adopt a managed float exchange rate policy which would be consistent with its sustainable competitiveness. If based on an appropriately trade-weighted currency basket rather than a single currency, adjusted appropriately for differences in international inflation rates, the exchange rate system could help facilitate trade, FDI, economic growth, and accommodate pressures from too abrupt and large swings in capital flows.[6] The proposed basket should include major currencies such as the US dollar, the yen, and the euro, as well as others representing major trading partners (Kawai and Akiyama, 1998; ADBI, 2003). The degree of flexibility could vary from economy to economy depending on differences in the magnitude of capital flows and the development of resilient capital markets. But such flexibility should be sufficient enough to limit large volatility and serious misalignment that would not be compatible with sustainable competitiveness and resource allocation.

It is important to note, however, that the proposed managed float system should be part of an integrated policy package, not a stand alone policy. For example, in adopting the system governments should also maintain a level of foreign reserves that exceeds the amount of its outstanding external short-term debt.

There is another floated proposal on the exchange rate regime that the proposed RFA can adopt. The proposal does not call for a uniformed fixed exchange rate system based on a certain basket, although it continues to focus on the exchange rate stabilization.

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[6] An appropriately trade-weighted basket can avoid wide fluctuations in international competitiveness caused by a single currency-dominant basket. Further, sufficient flexibility can accommodate moderate swings in capital flows without undermining monetary policy autonomy and smoothing operations can be used to limit excessive short-run exchange rate volatility. A serious misalignment of exchange rates in the medium term can also be avoided. Thus, a managed float system is consistent with Asian move towards greater financial integration and the promotion of real economic growth, while also allowing for reasonable monetary policy autonomy. But there are also a number of disadvantages. A managed float requires appropriate trade-weights and adjustments for international inflation differentials. This involves difficult calculations and careful evaluation. Also, it may be hard to judge whether or not a currency is seriously misaligned, and such judgment can differ from economy to economy.

Proponents of this idea argued that there is no reason why differential regimes and a floating system cannot be consistent with increased regional integration. The case of market integration in North America demonstrates that it can (e.g., Mexico's relative success in integrating with the US market without fixing the exchange rate).

With its domestic financial systems being less developed than in Europe, the risk of failure if East Asian countries adopt a common basket system is also higher (Eichengreen and Bayoumi, 1996). More seriously, without political wherewithal to operate it is difficult to ensure that a fixed and basket system will not end up like a standard fixed rate system that is vulnerable to speculative attacks (Bayoumi and Mauro, 1999).

Another argument against the adoption of a common basket relates to regional diversity. Forming a basket system requires some degrees of homogeneity in the economies of member countries. In this respect, East Asia as a whole is not only varied but also diverging overtime. Whether using σ or β convergence measures, based on per-capita income it is found that far from converging the economies of ASEAN countries diverged from one another at a rate between 2 and 3 percent per-annum during the past decades. Furthermore, it would take more-than 8 decades for the low income members to catch up with the region's average income per capita (Bunyaratavej and Hahn, 2003).

While there is a fundamental difference between common basket and floating system, the two require a same necessary condition, i.e., a stable and efficient financial system. It is in this connection another proposed RFA is simply to create a regional cooperation that focuses only on efforts to strengthen the financial system by neither specifying a particular exchange rate regime nor targeting exchange rate stability. More specifically, the proposal suggests the creation of some kind of *Regional Financial Institution* (RFI) in the following areas (Eichengreen, 2003): (1) technical assistance to strengthen prudential supervision and regulation; (2) training programs for bank inspectors, securities and exchange commissioners; (3) management of reserve, clearing and settlement services to member central banks; and (4) regional agreements on capital and liquidity standards and regulatory processes (to promote the stability of banking systems), and of standards for information disclosure, securities listing, and corporate governance (for the development of regional financial markets). Essentially, unlike the other two forms of RFA, the proposed RFI stays away from the attempt to stabilize asset prices and exchange rate since the two should be left to the markets.

Evaluating Alternative Forms of RFA

Each of RFA forms discussed above needs to be evaluated based on its BOCR, i.e., benefits (B) and opportunities (O) it can create, as well as the costs (C) and risks (R) it may entail. For that purpose, I will use a method known as *Analytic Network Process* (ANP) based on a series of pairwise comparisons between elements in the system.

ANP consists of two parts: (1) a control hierarchy or network of objectives and criteria that control the interactions in the system under study; and (2) sub-networks of influences among the elements and clusters of the problem, one for each control criterion. Basically, one makes priority ranking of the elements through a series of pairwise comparisons, hence forming a pairwise matrix based upon which the consistent ranking can be derived by taking its eigen-vector after being normalized.[7] Hence, all elements reflected in the objectives cluster of RFA discussed above need to be ranked. So do the elements contained in goals cluster, criteria cluster, and alternative RFA cluster.

There are four groups of control criteria, one for each component of BOCR. Since each element in the control criteria may not only influence but also be influenced by the selection of RFA, the process involves some feedback effects. Similarly, the priority ranking in the RFA goals (i.e., comparing crisis prevention and crisis management) will influence and be influenced by the ranking of elements in each criterion. Hence, a network pattern emerges. When all the rankings are completed, the relevant matrix, called *super matrix,* would contain all the clusters. The matrix is subsequently weighted by the importance of each cluster to enable one to perform feedback multiplication of priorities by other priorities in a cycle an infinite number of times. converting non-

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[7] A brief explanation on pairwise matrix and the derivation of eigen value, eigen vector and consistent priority weighting is given in Appendix 1. For more detailed expositions of ANP, see Saaty (1996).

stochastic matrix to a stochastic one. The process would not converge unless the resulting *super matrix* is column stochastic known as *limiting super matrix* (each of its columns adds to one).[8]

For the presentation purpose, in this paper a highlighted label is assigned to each element in the model. Based on the discussions in the preceding Section, the overall objectives of establishing RFA are: ***ER Stability*** (to minimize the exchange rate volatility), ***Strengthening Financial Sector***; and ***Avoid Contagion***. In scrutinizing the various factors affecting the selection of RFA, given these objectives, the specific goals are: ***Crisis Prevention*** and ***Crisis Management***. Finally, the three alternative forms of RFA to be explored in the paper are: (1) ***RFA-CommER*** (with common basket system), (2) ***RFA-NoCommER*** (without common basket system), and (3) ***RFA-NoER*** **(**cooperating on how to strengthen the financial system with neither specifying an exchange rate regime nor targeting exchange rate stability). Next task is to identify the elements under each component of BOCR.

1. Benefits and Opportunities of RFA

We begin with the benefit (B) component. In the search for RFA, a real fundamental question to ask is: why does the region need another arrangement, especially given the fact that the IMF has been functioning as a lender of last resort through its *Supplementary Reserve Facility* (SRF) and *Contingent Credit Line* (CCL)? This is precisely the issue raised by those opposing the AMF concept in 1998.[9] Can't the stated objectives be acquired by simply making the necessary adjustments to the existing global institutions such as the IMF? Even if a new institution is justified, why shouldn't it be global, not regional, in its focus?

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[8] To see that one must compare clusters in real life, consider the following analogy: if a person is introduced as the president it makes much difference, for example, whether he or she is the President of the United States or the president of a garbage company.

[9] Unlike the reaction towards AMF, a senior official from the U.S Treasury who attended the meeting in Chiang Mai indicated that unofficially Washington supports the CMI although it had to wait for further development before an official reaction can be made. A few weeks after the CMI was announced, IMF's Horst Kohler was also positive towards the idea although he stressed the complementary nature of CMI to the IMF program (IMF News Brief No. 00/36, June 2, 2000).

Improvements can probably be made within the existing framework and institution without creating a new arrangement. But the severity of a crisis such as the one in 1997-98 would require a fast disbursement of a large amount of liquidity. This puts a serious constraint on the IMF to act in a timely manner with sufficient financial resources. This is in addition to the inappropriateness of IMF-recommended policies: while the 1997-98 episode was a capital account crisis, the policies suggested by the IMF were those appropriate for a current account crisis.[10] The IMF's global mandate is to provide financial assistance at any time to many member countries, not specifically to countries in a particular region. From this perspective, ***Regional-Focus*** and ***Quick Disbursement*** should be among the important criteria. To facilitate quick disbursement when needed without risking moral hazard, soft conditionalities, and low repayment capacity, a system of prequalification is needed (Azis & Woo, 2003).

The merit of a regional-oriented cooperation was evident from the far too small supplementary support from other countries in the region to the IMF program in Thailand and Indonesia in 1997-98 when such a cooperation did not exists.[11]

In a looming speculative attack, fast and area-focused actions are critically needed to stabilize the exchange rate. High volatility of the exchange rate will not only hurt trade but also reduce investment in the region. It could also causes two related problems. (1) Higher exchange risks when hedging possibilities are limited, causing the interest rates to rise to undermine economic growth, and (2) Discouraging the development of capital markets because residents face constant fluctuation in the real value of domestic assets due to exchange rate volatility, encouraging residents to invest in more stable and liquid financial instruments abroad. To be effective, therefore, the arrangement should be both regional in scope and capable of reducing the volatility of the exchange rate.

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[10] In some cases, policies imposed by the IMF could be detrimental, as was the case at the early stage of the Asian Financial Crisis; see Azis (2002) and Azis (forthcoming).

[11] It should not be surprising that at one point these two countries along with Malaysia opposed the idea of linking CMI with the IMF program. Only with the condition that if further studies (done by a designated study group) recommend otherwise, the link can be gradually cut off.

Another formidable argument favoring a regional financial arrangement is common to many cases, i.e., dis-proportionally weak voting rights of developing countries in international organizations. Individually, Asian countries have limited quotas and voting rights. For East Asia in particular, the voting rights do not appropriately reflect the region's economic power. A regional financial arrangement would certainly help raise the weight of the region's voice in the international community (hence, ***Voice*** is one of the elements in the benefit criteria).[12]

The next BOCR component is opportunity (O). The proposal to set up a new RFA provides a set of opportunities. The event in 1997-98 clearly shows that the region's pre-crisis macroeconomic fundamentals were not weak; the fragility was mainly in the financial sector. Unlike the IMF's mandate in overseeing all macroeconomic issues including financial matters, the proposed new arrangement is expected to concentrate only on financial issues.[13] Many of the problems in the financial sector are too complex to be addressed collectively with other macroeconomic issues. The financial sector-oriented nature of the regional arrangement would serve the purpose well; it will provide an opportunity for the member countries to coordinate more intensively activities in this sector, suggesting that ***Financial-Focus*** to be one of the elements within the opportunity cluster.

By focusing on financial matters alone, there could be a wider range of policy response to a financial shock. One such policy is capital control. While debates over the effectiveness of capital control continue, e.g., the Malaysian style or a-la Chilean model, many acknowledge the benefits of control. The Malaysian example indicates that selective and temporary controls could help contain the crisis; at the very least it provided a breathing

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[12] Horst Köhler's recent remarks in Kuala Lumpur reaffirms the presence of voting imbalances: "…..Asia's growing role will also need to be reflected eventually in a sizeable increase in the quotas of members in this region at the IMF—and, as a result, in their stronger voice in the IMF's decision making process."

[13] Commenting on the Asian Financial Crisis, the Director of the IMF Institute, Mohsin Khan, suggested that IMF was ill-equipped to combat the new type of crisis. He remarked: "A lot is related to financial sector issues, where the IMF staff did not have necessary expertise at all….we find ourselves making standard policy prescriptions….very seldom would you go wrong if you said 'raise interest rates and tighten fiscal policy'….I thought the teams in Asia were sort of conditioned by the framework they had in mind." (see Blustein, 2001).

space that would have not been possible without controls. Restricting non-residents' holding of domestic assets had also reduced the frequency and intensity of currency speculation. A suitable RFA could provide an opportunity for the region to implement such policies that may not be possible under the IMF program. Note that a unilateral policies of this sort can also thwart the process of regional contagion.

Another example of policy response that would have been difficult to implement under a normal IMF program is to get private creditors actively involve in the crisis resolution. If private sector simply walks away from a crisis, the shortage of international liquidity will seriously worsen and a larger amount of international assistance will be required.[14] This is the reason why there is now greater interest among multilateral agencies to involve private-investors/creditors.

There is also an opportunity for the region to conduct a more effective surveillance mechanism and to monitor the development of financial sector (e.g., monitoring capital flows) once a specific RFA is established. Therefore, ***Surveillance*** element is included in the opportunity cluster. This element is not only necessary for crisis prevention but also commensurate with conditionalities that must be imposed when some members need to get hold of financial resources through the swap mechanism under the new arrangement.

[14] One approach is to require private creditors to roll over the maturing claims, which effectively suspends payments and compels private creditors to negotiate. This approach, however, can raise the cost of future loan contracts and aggravate a crisis if creditors attempt to exit preemptively at the slightest hint of trouble. Further, the private sector's response to a forced burden-sharing scheme may reduce new lending. One way to avoid such a case is to put in place "bail-in" measures during normal periods so that the private sector will know that such measures can be activated in the event of a crisis. For example, bond contracts with greater flexibility can be introduced with the following collective action clauses: (1) collective representation of creditors; (2) majority action to alter payment terms of contracts; and (3) sharing of payments among creditors. Industrial countries can help by introducing the collective action clauses into their debt instruments so that it would be easy for developing countries to incorporate them in the debt contracts. To avoid any free rider problems, the collective action clauses should be applied to all classes of contracts. These "bail-in" measures will increase the cost of international lending and raise the share of costs associated with crisis resolution borne by private investors, both of which contribute to reducing moral hazard. In addition, these measures will decrease the financial assistance needed from multilateral institutions and will reduce uncertainties surrounding the debt workout process. Because countries that are highly vulnerable to a liquidity crisis will be charged higher interest rates under such measures, they will be discouraged from excessively borrowing abroad. Another approach is for governments to establish credit lines with private creditors in collaboration with multinational financial organizations that could be activated in the event of a crisis. Multilateral development banks could provide enhancements to such a scheme in the form of partial guarantees to private creditors.

As discussed earlier, the current ASEAN+3 surveillance process is inadequate. The ASP must specify the precise content of information (e.g., set the minimum information that should be included) to be exchanged among member countries. Providing a standard report by simply warehousing information has to be avoided. The ASP report should particularly address emerging problems and effectively signal the potential risks early enough to allow authorities to take the necessary policy response. The surveillance report should also indicate the repercussions of a policy on social conditions (e.g., income distribution, poverty etc). More importantly, the report should go beyond repeating the assessments made by other international organizations such as the IMF, the World Bank and the ADB. If fact-finding missions are deemed unacceptable, either because of the costs associated with a large bureaucracy or because of political sensitivity about foreign intrusion, a common template should be used (Azis & Woo, 2003; Wang & Woo, 2002, ADB-I, 2003).

Having RFA would also enable member countries to utilize foreign reserves in a more productive way (hence, ***Foreign Reserves*** element in the opportunity cluster). It is a basic rule for governments to maintain a level of foreign reserves that exceeds the amount of its outstanding external short-term debt. On the other hand, excessive accumulation of foreign reserves is a waste of valuable financial resources since it involves high opportunity costs (i.e., low US Treasury bonds' interest rate compared with high rate of return to domestic capital). RFA could considerably reduce such a waste of resources.

2. Costs and Risks of RFA

The first and perhaps most immediate cost is ***Complex Bureaucracy.*** This could always arise when a new institution is established. The problem could be aggravated by the fact that the region is heterogeneous. As the experience of other regional cooperation suggests, the problem of bureaucracy will be clearly manifested in ***Difficult Coordination*** among member countries. Unless clear and concrete cooperative mechanisms are laid out, there will certainly be a serious coordination adjustment problem.

A more concrete plan related to the financial arrangement is supposed to be established in the next meeting scheduled on May 2004. Badly needed is a specified target, both on the item and on the deadline for achievement (***Target Specification***). It is very difficult for a new arrangement to be credible if at this stage no specific targets are set. Unfortunately, the region--particularly ASEAN countries--does not have exemplary points in this regard. The principle of non-interference (should the target is not met) may deter the need to designate specific targets. The recovery process, albeit slowly and varies between countries, and the greater interest towards regional trade rather than financial arrangement can have some influence on this matter as well. Uncertainties and fears of failure may also prevent member countries to come forward with certain targets. Last but certainly not least, the "Asian values" glorifying consensus and informality could stand in contrast with explicit target setting.

All the above "costs" can seriously undermine the efforts to meet the original goals. But perhaps the most important cost that could significantly forestall the process is the large amount of financial resources required to make the swap arrangement credible or taken seriously by the financial market (in the model this is labeled ***Limited FinResources***). While Japan may be more willing to commit greater amount of resources, the PRC would not necessarily support such a move since it could be viewed as jeopardizing Beijing desire to become the major player in the region. Other member countries such as Singapore and Brunei may also be reluctant to increase the committed amount since they are aware of their position being more of a swap provider than direct beneficiaries in the arrangement.

Indeed, it has been very difficult to raise the amount of swap facility. Even if commitments among the swap providing countries can be strengthened, effectively raises the upper limit of available liquidity, the objection from the IMF remains a serious obstacle. The current *Bilateral Swap Arrangement* (BSA) only allows an immediate disbursement of up to 10 percent of the maximum amount, providing the swap providing countries can agree. Above that amount, the swap requesting countries are required to agree on the IMF program.

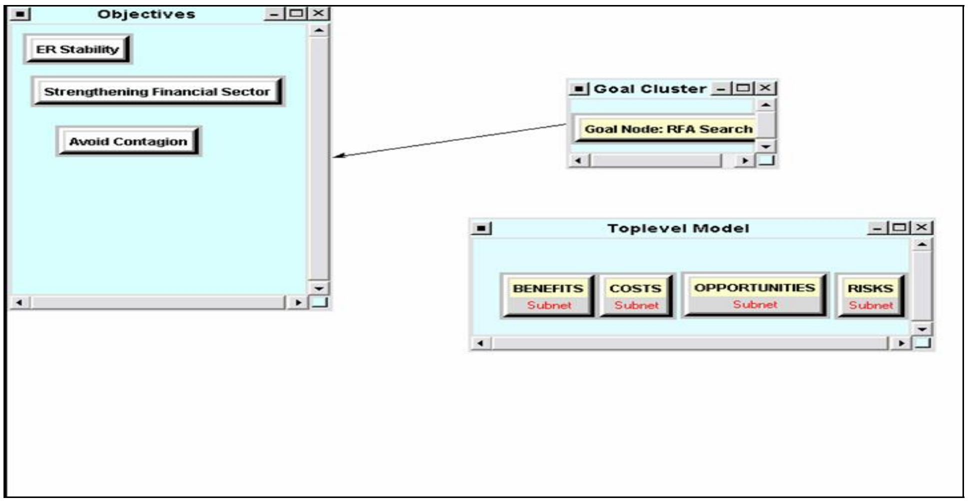
There are also some risks involved in the creation of RFA. Obviously, different forms of RFA pose different risks. One of the serious risks is the potential conflict arising due to the fact that some governments have to abide the existing arrangements they had made with other international organizations such as the IMF. The RFA may contain some features not in line with those arrangements. Capital controls and bail-in program discussed earlier are the noted examples. Given the gap in financial technology and in the number of expertise, the aforementioned conflict could be difficult to avoid. The resulting outcome may be a worsening problem of coordination particularly in making RFA features consistent with those of other arrangements (this risk is labeled ***DomCoordination*** in the model).

There are also risks of failures due to deep suspicions among member countries. This could arise because of the ***Heterogeneity*** factor. However, many would agree that the most serious risk is the lack of a concrete political integration (***Political*** element in the risks cluster). As long as there is no willingness to pool political sovereignty to make room for the creation of regional political institution with real power, any forms of RFA would not be effective. The absence of clear regional leadership and consensus only worsens the situation (related to Japan's feeble economy).

Another important risk is the possibility of a serious ***Moral Hazard.*** The problem of moral hazard is not only related to the behavior of borrowers (swap recipients), but also to the questionable representation of government officials in power whose interest may be inconsistent with broader interests of the citizens of the country concerned. This classical "principal/agent problem" could be severe when citizens do not fully understand or appreciate the consequences of decisions on complex issues--such as financial matters--that are made in their name. There is also a possible risk of financial support not being repaid. The moral hazard issue in this respect could be related to a situation whereby the financial support was given and used for reasons other than the agreed criteria. There is no question that the moral hazard problem poses a serious risk. On the other hand, some may question whether the RFA's moral hazard would be any more severe than that implied in the context of the IMF presence. What it suggests is, the formulation and enforcement of conditionalities will have to be a critical part of the swap arrangement.

Up to this point I have laid-out all the relevant clusters and elements in the system. A summarized list of them is displayed in Appendix 2. Our next task is now applying the ANP model to the system. Figure 1 displays the basic model framework.

Figure 1. Basic Model Framework



The three major objectives of establishing RFA are first pairwisely compared.[15] The resulting priority ranking is: ***Strengthening Financial Sector*** (.7223), ***ER Stability*** (.2050), and ***Avoid Contagion*** (.0727). Clearly, the penultimate objective of all the efforts to establish RFA is to strengthen the region's financial sector.

There are three clusters in each component of BOCR: goals cluster, criteria cluster, and alternatives cluster. The element inside the criteria cluster and those within the goals cluster are interdependent. Figures 2 to 5 display the clusters and elements in the network for the benefits, opportunities, costs, and risks.

[15] The pairwise comparisons are conducted by using *Super Decision* software. An approximation can also be made by following a series of step to generate the approximated eigen vector of the matrix (see Azis & Isard, 1996).

Figure 2. Network of Benefits Cluster

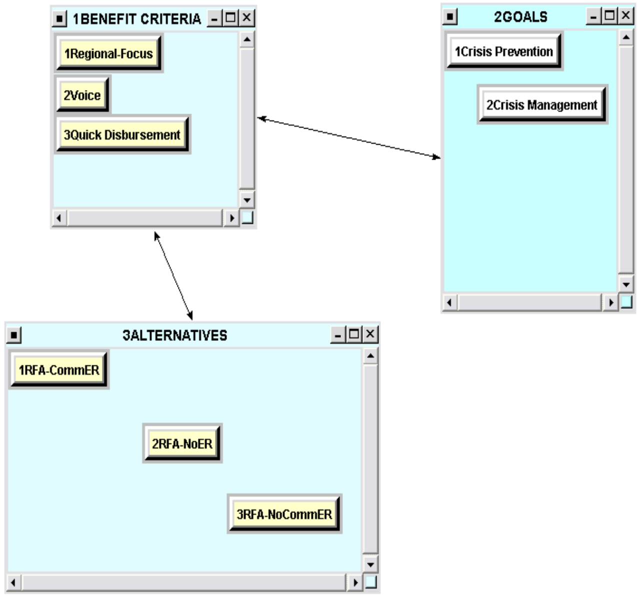


Figure 3. Network of Opportunities Cluster

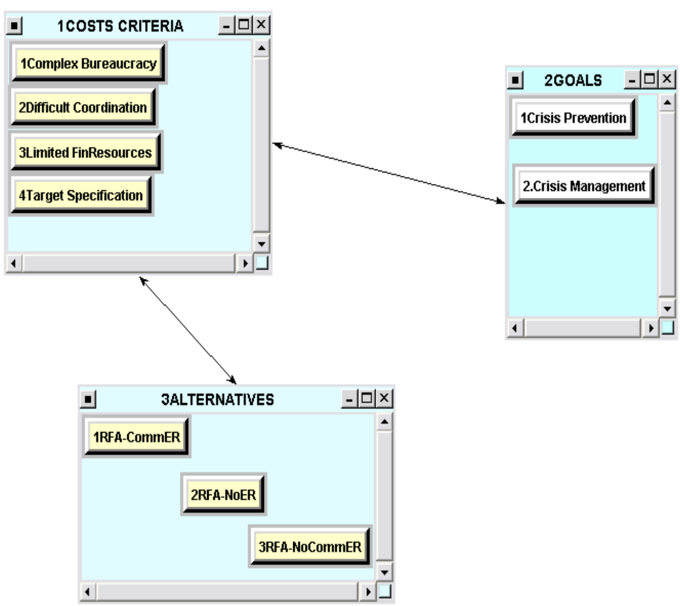


Figure 4. Network of Costs Cluster

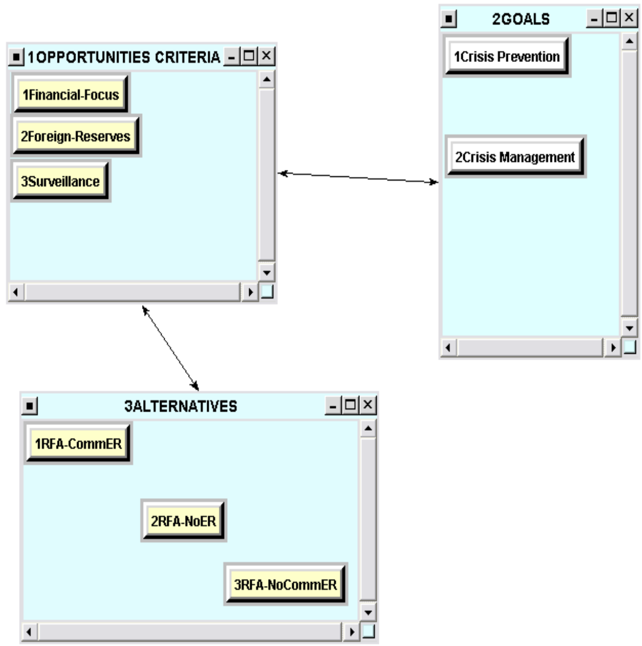
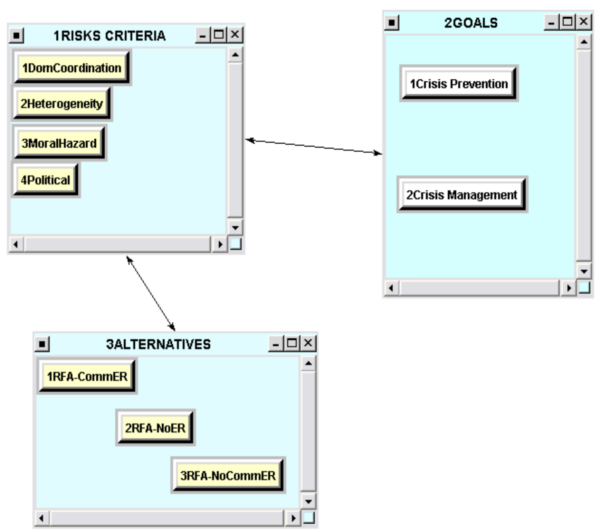


Figure 5. Network of Risks Cluster



Similarly, in comparing the alternative forms of RFA with respect to each of the criteria, there is also a feedback effect. Combining the prioritization results from linking the three clusters yields the relevant weighted and unweighted supermatrices, based upon which the limiting supermatrix is derived (Tables 1 to 4).

Table 1. Limiting Supermatrix for Benefit Cluster

	1Regional-Focus	2Voice	3Quick Disbursement	1Crisis Prevention	2Crisis Management	1RFA-CommER	2RFA-NoER	3RFA-NoCommER
1Regional-Focus	0.20201	0.202	0.20201	0.20201	0.20201	0.20201	0.20201	0.20201
2Voice	0.05524	0.055	0.05524	0.05524	0.05524	0.05524	0.05524	0.05524
3Quick Disbursement	0.24275	0.243	0.24275	0.24275	0.24275	0.24275	0.24275	0.24275
1Crisis Prevention	0.07244	0.072	0.07244	0.07244	0.07244	0.07244	0.07244	0.07244
2Crisis Management	0.17755	0.178	0.17755	0.17755	0.17755	0.17755	0.17755	0.17755
1RFA-CommER	0.11268	0.113	0.11268	0.11268	0.11268	0.11268	0.11268	0.11268
2RFA-NoER	0.02633	0.026	0.02633	0.02633	0.02633	0.02633	0.02633	0.02633
3RFA-NoCommER	0.11099	0.111	0.11099	0.11099	0.11099	0.11099	0.11099	0.11099

Table 2. Limiting Supermatrix for Costs Cluster

	1Complex Bureaucracy	2Difficult Coordination	3Limited FinResources	4Target Specification	1Crisis Prevention	2Crisis Management	1RFA-CommER	2RFA-NoER	3RFA-NoCommER
1Complex Bureaucracy	0.05139	0.05139	0.05139	0.05139	0.05139	0.05139	0.05139	0.05139	0.05139
2Difficult Coordination	0.08641	0.08641	0.08641	0.08641	0.08641	0.08641	0.08641	0.08641	0.08641
3Limited FinResources	0.2902	0.2902	0.2902	0.2902	0.2902	0.2902	0.2902	0.2902	0.2902
4Target Specification	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072	0.072
1Crisis Prevention	0.0539	0.0539	0.0539	0.0539	0.0539	0.0539	0.0539	0.0539	0.0539
2Crisis Management	0.1961	0.1961	0.1961	0.1961	0.1961	0.1961	0.1961	0.1961	0.1961
1RFA-CommER	0.16001	0.16001	0.16001	0.16001	0.16001	0.16001	0.16001	0.16001	0.16001
2RFA-NoER	0.02698	0.02698	0.02698	0.02698	0.02698	0.02698	0.02698	0.02698	0.02698
3RFA-NoCommER	0.06301	0.06301	0.06301	0.06301	0.06301	0.06301	0.06301	0.06301	0.06301

Table 3. Limiting Supermatrix for Opportunities Cluster

	1Financial-Focus	2Foreign Reserves	3Surveillance	1Crisis Prevention	2Crisis Management	1RFA-CommER	2RFA-NoER	3RFA-NoCommER
1Financial-Focus	0.15999	0.15999	0.15999	0.15999	0.15999	0.15999	0.15999	0.15999
2Foreign Reserves	0.19698	0.19698	0.19698	0.19698	0.19698	0.19698	0.19698	0.19698
3Surveillance	0.14303	0.14303	0.14303	0.14303	0.14303	0.14303	0.14303	0.14303
1Crisis Prevention	0.12422	0.12422	0.12422	0.12422	0.12422	0.12422	0.12422	0.12422
2Crisis Management	0.12579	0.12579	0.12579	0.12579	0.12579	0.12579	0.12579	0.12579
1RFA-CommER	0.10646	0.10646	0.10646	0.10646	0.10646	0.10646	0.10646	0.10646
2RFA-NoER	0.03767	0.03767	0.03767	0.03767	0.03767	0.03767	0.03767	0.03767
3RFA-NoCommER	0.10587	0.10587	0.10587	0.10587	0.10587	0.10587	0.10587	0.10587

Table 4. Limiting Supermatrix for Risks Cluster

	1DomCoordination	2Heterogeneity	3Moral Hazard	4Political	1Crisis Prevention	2Crisis Management	1RFA-CommER	2RFA-NoER	3RFA-NoCommER
1DomCoordination	0.13273	0.13273	0.13273	0.13273	0.13273	0.13273	0.13273	0.13273	0.13273
2Heterogeneity	0.06831	0.06831	0.06831	0.06831	0.06831	0.06831	0.06831	0.06831	0.06831
3Moral Hazard	0.17517	0.17517	0.17517	0.17517	0.17517	0.17517	0.17517	0.17517	0.17517
4Political	0.12379	0.12379	0.12379	0.12379	0.12379	0.12379	0.12379	0.12379	0.12379
1Crisis Prevention	0.11946	0.11946	0.11946	0.11946	0.11946	0.11946	0.11946	0.11946	0.11946
2Crisis Management	0.13054	0.13054	0.13054	0.13054	0.13054	0.13054	0.13054	0.13054	0.13054
1RFA-CommER	0.15778	0.15778	0.15778	0.15778	0.15778	0.15778	0.15778	0.15778	0.15778
2RFA-NoER	0.02929	0.02929	0.02929	0.02929	0.02929	0.02929	0.02929	0.02929	0.02929
3RFA-NoCommER	0.06294	0.06294	0.06294	0.06294	0.06294	0.06294	0.06294	0.06294	0.06294

The next step is to conduct the ratings for BOCR. This step is necessary because in real world the importance of each component of BOCR is often time weighted differently (Saaty, 1996). In some cases, the benefits and opportunities are assigned higher rating than the costs and risks, in others the opposite may be the case. If this step is not done, essentially implying that all components of BOCR are assumed to have same weights, the overall results show that RFA without a common currency basket (***RFA-NoCommER***) is the most suitable form of RFA. The weights of the other two alternative forms, ***RFA-NoER*** and ***RFA-CommER,*** are .3010 and .2695, respectively:

Graphic	Alternatives	Total	Normal	Ideal	Ranking
	1RFA-CommER	0.5000	0.2695	0.6276	3
	2RFA-NoER	0.5583	0.3010	0.7008	2
	3RFA-NoCommER	0.7967	0.4295	1.0000	1

What about if the components of BOCR are not equally weighted? Considering the development since the announcement of CMI and the recent financial reform throughout the region, a more likely rating for BOCR would be:

Graphic	Ratings Alternatives	Total	Ideal	Normal	Ranking
	BENEFITS	0.9525	1.0000	0.2870	2
	COSTS	0.4612	0.4842	0.1390	4
	OPPORTUNITIES	0.9525	1.0000	0.2870	3
	RISKS	0.9525	1.0000	0.2870	1

Note that while the benefits and opportunities are rated high, the risks also receive an equally high rating. The heterogeneity among member countries, including in the speed and coverage of the post-crisis financial reform, augments the importance of the risk factor. Notably, the risk of creating more suspicions related to the repayment capacity of swap receiving countries on the one hand and the enforcement of conditionalities on the other remains high. With the above BOCR rating, the resulting priority of RFA is as follows:

Graphic	Alternatives	Total	Normal	Ideal	Ranking
	1RFA-CommER	0.5740	0.2995	0.6958	2
	2RFA-NoER	0.5179	0.2702	0.6278	3
	3RFA-NoCommER	0.8249	0.4304	1.0000	1

Clearly, the dominance of ***RFA-NoCommER*** continues, suggesting that such a choice is fairly robust. However, unlike in the preceding case, RFA with common currency based on a basket system is now ranked higher than RFA without specifying exchange rate target and exchange rate regime. The relatively low rating for costs criteria implies that difficulties in coordination, the provision of large amount of pooled financial resources, target specification, and overcoming the bureaucracy when a common currency is adopted are not too significant. This is also evident from the results of a sensitivity analysis. When these costs and risks criteria are given a higher rating than the benefits and opportunities, the priority ranking of RFA changes:

Graphic	Alternatives	Total	Normal	Ideal	Ranking
	1RFA-CommER	0.0742	0.0498	0.0947	3
	2RFA-NoER	0.7836	0.5259	1.0000	1
	3RFA-NoCommER	0.6323	0.4243	0.8069	2

Summary

The Asian meltdown in 1997-98 was categorically a capital account crisis. Yet, most of the policies imposed (especially at the early stage) were those suitable for a current account crisis. This policy mismatch, along with the insufficient amount of the IMF financial support and its slow disbursement process sparked the region's interest in creating a new and more regional-focus financial arrangement. The scale and severity of a crisis of this type require fast disbursements of a large amount of liquidity, suggesting that it puts serious constraints on the IMF to act in a timely manner with sufficient financial resources. The Fund's global mandate is to provide financial assistance at any time to many member countries, not specifically to countries in a particular region.

Starting with the short-lived AMF in 1997, the regional efforts reached an important stage in 1997 when the MFG was established. The Group underscored the importance of a regional surveillance mechanism. The mechanism itself was formally established in December 1998 in Washington D.C, and the process (known as ASP) became operational in March 1999 albeit without significant impact. A more important development took place in Chiang Mai on May 2000, when the ASEAN10 decided to broaden the existing swap arrangement (ASA) by including Japan, PRC and Korea; hence the term ASEAN+3. The new arrangement, known as the *Chiang Mai Initiative* (CMI) was clearly inspired by the idea of how to develop a more concrete RFA that could help stabilize the region's financial sector. It therefore went beyond just expanding the common and bilateral swap arrangements to include a concrete cooperation in regional surveillance and monitoring systems. All these elements constitute something very similar to those contained in the concept of AMF.

Some progress has been made since CMI, but the results are mixed, and skepticism remains. One of the unsettled issues relates to the precise form of RFA that could effectively stabilize the region's financial sector. At this stage of development a concrete format must already be specified if the arrangement is to be credible. Among the alternative forms of RFA, three are specifically explored in this paper: (1) RFA with common currency basket; (2) RFA without a uniformed fixed exchange rate system; and (3) RFA that focuses only on efforts to strengthen the financial system with neither specifying a particular exchange rate regime nor targeting exchange rate stability.

Selecting the most suitable form of RFA is obviously a complex decision, having to include not just economic rationales but also political and other considerations. As shown in the paper, the process must incorporate the benefits and opportunities as well as costs and risks (BOCR) of each of the forms under consideration. Considering the goals, the criteria and the alternatives, and taking into account the feedback influence among them, a consistent ranking of the forms of RFA is then generated by applying the *Analytic Network Process*. In the process, alternative ratings for BOCR are also made.

The results show that under the equal rating of BOCR a regional arrangement without a common currency basket is the most suitable form for the region. When a more likely rating of BOCR is applied, the choice remains the same. Hence, the results are fairly robust. Only when the costs criteria are rated much higher than the other criteria the results show that it would be better for the region to cooperate strictly in the financial sector without targeting asset prices and exchange rate stability.

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Appendix 1

Let A_1, A_2, A_3, ..., A_n be ***n*** elements in a cluster within a network. The pairwise comparisons on pairs of elements (A_i, A_j) that we have to make are represented by an ***n-by-n*** matrix **A** = (a_{ij}), where i,j = 1, 2, 3,....., n. Define a set of numerical weights w_1, w_2, w_3, ..., w_n that reflects the recorded comparisons, so that we can write:

$$\mathbf{A} = \begin{array}{cc} & \begin{array}{ccccc} A_1 & A_2 & & & A_n \end{array} \\ \begin{array}{c} A_1 \\ \\ \\ A_n \end{array} & \left[\begin{array}{ccccc} w_1/w_1 & w_1/w_2 & \ldots\ldots\ldots & & w_1/w_n \\ .. & .. & .. & .. & .. \\ w_n/w_1 & w_n/w_2 & \ldots\ldots\ldots & & w_n/w \end{array}\right] \end{array}$$

In terms of Figure 2 in the text, for example, the alternative forms of RFA are A_1 = **RFA-CommER**, denoting an RFA with a common basket currency, A_2 = **RFA-NoER**, which is RFA that focuses strictly on strengthening the financial sector with neither targeting stability of the exchange rate nor opting for a certain exchange regime, and A_3 = **RFA-NoCommER**, which is an RFA without a common currency system. These three forms of RFA are compared pairwisely with respect to all the elements in the control criteria (there are four clusters of control criteria, i.e., for benefits, opportunities, costs, and risks). As an illustration, in the case of the benefit control criteria in Figure 2, the three forms of RFA are pairwised compared with respect to each of the three elements: **Regional-Focus, Voice,** and **Quick Disbursement.** Note that the scales used in the pairwise comparisons in this study are based on Saaty's scaling system (Saaty, 1994), i.e., from 1 to 9

Given the presence of feedback effects discussed in the text, however, we also have to do the reverse, that is, to conduct similar comparisons for those three elements in the benefit criteria with respect to each of the alternative forms of RFA.

Since every row is a constant multiple of the first row, **A** has a unit rank. By multiplying **A** with the vector of weights ***w***,

$$\mathbf{Aw} = n\mathbf{w} \qquad \textbf{(1)}$$

To recover the scale from the matrix ratios, the following system ought to be solved:

$$(\mathbf{A}-n\mathbf{I})\mathbf{w} = \mathbf{0} \qquad \textbf{(2)}$$

Clearly, a nontrivial solution can be obtained if and only if **det(A-*n*I)** vanishes, i.e., the *characteristic equation* of **A**. Hence, ***n*** is an *eigenvalue* and ***w*** is an *eigenvector,* of **A.**

Given that **A** has a unit rank, all its eigenvalues except one are zero. Thus, the *trace* of **A** is equal to ***n.***

If each entry in **A** is denoted by a_{ij}, then $a_{ij} = 1/a_{ji}$ (reciprocal property) holds, and so does $a_{jk} = a_{ik} / a_{ij}$ (consistency property). By definition, $a_{ii} = a_{jj} = 1$ (when comparing two same elements). Therefore, if we are to rank ***n*** number of elements, i.e., **A** is of the size ***n***-by-***n***, the required number of inputs (from the paired comparison) is less than $\boldsymbol{n^2}$; it is equal to only the number of entries of the sub-diagonal part of **A** (see Saaty, 1994). Hence, when there are three elements (forms of RFA) in the cluster, only three pairwise comparisons are required.

In general, however, the precise value of w_i/w_j is hardly known simply because the pairwise comparisons we made is only an estimate, suggesting that there are some perturbations. While the reciprocal property still holds, the consistency property does not. By taking the largest eigenvalue denoted by λ_{max},

$$\mathbf{A^p}\, \boldsymbol{w}^{\mathbf{p}} = \lambda_{\mathbf{max}} \,.\, \boldsymbol{w}^{\mathbf{p}} \qquad \textbf{(3)}$$

where $\mathbf{A^p}$ is the actual, or the given, matrix (perturbed from matrix **A).** Although (1) and (3) are not identical, if $\boldsymbol{w}^{\mathbf{p}}$ is obtained by solving (3), the matrix whose entries are w_i/w_j is still a *consistent* matrix; it is a consistent estimate of **A**, although $\mathbf{A^p}$ itself does not need to be consistent. Note that $\mathbf{A^p}$ will be consistent if and only if $\lambda_{\mathbf{max}} = \boldsymbol{n}$. As long as the precise value of w_j/w_i cannot be given, which is common in a real case due to the bias in the comparisons, $\lambda_{\mathbf{max}}$ is always greater than or equal to ***n*** (hence, a measure of consistency can be derived based on the deviation of $\lambda_{\mathbf{max}}$ from ***n***).

Note that when more than two elements are compared, the notion of consistency can be associated with *transitivity* condition: if $A_1 \succ A_2$ and $A_2 \succ A_3$, then $A_1 \succ A_3$. It should be clear that in solving for ***w***, the *transitivity* assumption is not strictly required; the inputted comparisons do not have to reflect a full consistency. Yet, as shown above, the resulting matrix and the corresponding vector remain consistent. It is this consistent vector ***w*** that reflects the priority ranking of the elements in each cluster.

Appendix 2

Main structure of toplevel network.

Alternative(s) under it:	• 1RFA-CommER • 2RFA-NoER • 3RFA-NoCommER
Network Type:	Formulaic
Formula:	$NormalNet(BENEFITS)*$SmartAlt(BENEFITS) + $NormalNet(COSTS)*(1-$SmartAlt(COSTS)) + $NormalNet(OPPORTUNITIES)*$SmartAlt(OPPORTUNITIES) + $NormalNet(RISKS)*(1-$SmartAlt(RISKS))

Clusters/Elements	• **Goal Cluster:** *Cluster indentifying specifically the goal of the study, i.e., to search for the most suitable RFA form.*
	  o **Goal Node: RFA Search:** *Exploring alternative forms of Regional Financial Arrangement (RFA)*
	• **Objectives:** *asian countries objectives*
	  o **Avoid Contagion:** *Avoid financial contagion in the region that could destabilize even the relatively strong economy*
	  o **ER Stability:** *Minimize exchange rate instability.*
	  o **Strengthening Financial Sector:** *Strengthen the region's financial sector and develop the non-bank securities market*
	• **Toplevel Model:** *This cluster contains Benefits, Costs, Risks and Opportunities*
	  o **<u>BENEFITS</u>:** *Benefits Merit of having a certain form of RFA*
	  o **<u>COSTS</u>:** *Costs Merit of having a certain form of RFA*
	  o **<u>OPPORTUNITIES</u>:** *Opportunities Merit arising from having a certain form of RFA*
	  o **<u>RISKS</u>:** *Risks Merit of having a certain form of RFA*

Main structure of BENEFITS network

Alternative(s) in it:	• 1RFA-CommER • 2RFA-NoER • 3RFA-NoCommER
Network Type:	Bottom level
Formula:	Not applicable

Clusters/Elements	• **1BENEFIT CRITERIA:** *This cluster contains the benefits criteria*
	  o **1Regional-Focus:** *Focus on East Asian region, unlike the IMF's golbal coverage*
	  o **2Voice:** *Raise the Asian voice and concerns in the international financial fora*
	  o **3Quick Disbursement:** *Quick disbursement of liquidity support to arrest the volatile movement of the ER*
	• **2GOALS:** *The Goals of RFA*
	  o **1Crisis Prevention:** *Crisis prevention*
	  o **2Crisis Management:** *Crisis management*
	• **3ALTERNATIVES:** *This cluster contains the alternatives*
	  o **1RFA-CommER:** *RFA with a common currency basket in order to achieve ER stability*
	  o **2RFA-NoER:** *Regional Financial Institution focusing on the problems of weak banking system and undeveloped securities market without specifying ER system and ER target*
	  o **3RFA-NoCommER:** *RFA without a common currency basket but aims at ER stability*

Main structure of COSTS network

Alternative(s) in it:	• 1RFA-CommER • 2RFA-NoER • 3RFA-NoCommER
Network Type:	Bottom level
Formula:	Not applicable

Clusters/Elements	• **1COSTS CRITERIA:** *This cluster contains the costs criteria*
	  o **1Complex Bureaucracy:** *Bureaucracy that may arise because of establishing a new international/regional institution*
	  o **2Difficult Coordination:** *Difficulties arising from the requirement of a cooperative mechanism for coordination adjustment that would be costly in terms of financial resources, time, and building trust*
	  o **3Limited FinResources:** *Requires a large amount of financial resources*
	  o **4Target Specification:** *It must have a target deadline to meet a specific goal in order to be credible*
	• **2GOALS:** *The goals of RFA*
	  o **1Crisis Prevention:** *Crisis prevention*
	  o **2.Crisis Management:** *Crisis management*
	• **3ALTERNATIVES:** *This cluster contains the alternatives*
	  o **1RFA-CommER:** *RFA with a common currency basket in order to achieve ER stability*
	  o **2RFA-NoER:** *Regional Financial Institution focusing on the problems of weak banking system and undeveloped securities market without specifying ER system and ER target*
	  o **3RFA-NoCommER:** *RFA without a common currency basket but aims at ER stability*

Main structure of OPPORTUNITIES network

<table>
<tr><td>Alternative(s) in it:</td><td>1RFA-CommER
2RFA-NoER
3RFA-NoCommER</td></tr>
<tr><td>Network Type:</td><td>Bottom level</td></tr>
<tr><td>Formula:</td><td>Not applicable</td></tr>
<tr><td>Clusters/Elements</td><td>
1OPPORTUNITIES CRITERIA: This cluster contains the opportunities criteria
1Financial-Focus: Provide opportunities to the region to concentrate on financial issues including the choices of policies which otherwise unavailable under the IMF program (e.g., capital control, bail-in)
2Foreign-Reserves: Providing opportunities in terms of alternative use of foreign reserves which otherwise unproductive
3Surveillance: An opportunity to have a more effective surveillance and monitoring mechanisms that could be consistent with the necessary conditionalities
2GOALS: The goals of RFA
1Crisis Prevention: Crisis prevention
2Crisis Management: Crisis management
3ALTERNATIVES: This cluster contains the alternatives
1RFA-CommER: RFA with a common currency basket in order to achieve ER stability
2RFA-NoER: Regional Financial Institution focusing on the problems of weak banking system and undeveloped securities market, without specifying ER system and ER target
3RFA-NoCommER: RFA without a common currency basket but aims at ER stability
</td></tr>
</table>

Main structure of RISKS network

Alternative(s) in it:	• 1RFA-CommER • 2RFA-NoER • 3RFA-NoCommER
Network Type:	Bottom level
Formula:	Not applicable
Clusters/Elements	• **1RISKS CRITERIA:** *This cluster contains the risks criteria* o **1DomCoordination:** *Risks of a conflict arising from the incompatibility of RFA with the previous and existing arrangements, e.g., with the IMF and other international organizations, and from a low degree of financial technology and lack of expertise* o **2Heterogeneity:** *Risks of a conflict and further suspicions due to heterogeneity and disagreeable conditionalities* o **3MoralHazard:** *Risks of creating a strong moral hazard, especially when the conditionalities are too "soft"* o **4Political:** *Risks associated with a lack of political integration. The integration allows the creation of new institution with real power. Absent of it could risk a failure of RFA* • **2GOALS:** *The goals of RFA* o **1Crisis Prevention:** *Crisis prevention* o **2Crisis Management:** *Crisis management* • **3ALTERNATIVES:** *This cluster contains the alternatives* o **1RFA-CommER:** *RFA with a common currency basket in order to acieve ER stability* o **2RFA-NoER:** *Regional Financial Institution focusing on the problems of weak banking system and undeveloped securities market withour specifying ER system and ER target* o **3RFA-NoCommER:** *RFA without a common currency basket but aims at ER stability*