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Public asset management companies in East Asia: A Comparative Study

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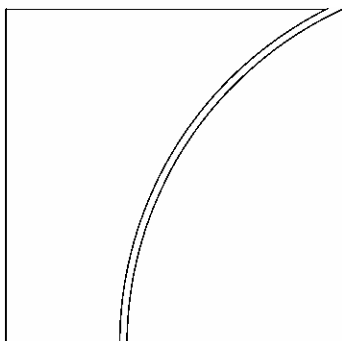
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**Public asset management
companies in East Asia**

A comparative study

Ben Fung, Jason George, Stefan Hohl
and Guonan Ma

February 2004



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Foreword

It is a pleasure for me to introduce the third occasional paper published by the Financial Stability Institute. The purpose of these papers is to create an awareness of, and provide information on, topics of interest to financial sector supervisors. For this third paper in our series, the Financial Stability Institute is pleased that a member of its own staff worked closely with our colleagues at the BIS Representative Office for Asia and the Pacific. This joint effort has produced a paper that describes the use of government owned asset management companies to reduce the level of problem assets in banking systems. In doing so, it draws on the recent experiences of several Asian countries as they worked to deal with problem assets arising from the Asian financial crisis.

The paper examines the common characteristics and differences in the Asian government owned asset management companies. By looking at the framework for the establishment of each country's asset management company, the transfer of assets to it, its resolution of those assets and financing issues, the authors are able to identify a number of important factors that contribute to the successful operation of an asset management company. The issues discussed in this paper are critical for not only banking supervisors, but also others who are involved in financial sector stability since asset management companies are typically only used in response to significant banking sector problems.

The issues raised in this paper will be discussed at a high-level meeting of central bankers, banking supervisors and other government officials being held in Bangkok in February 2004.

Josef Tošovský
Chairman
Financial Stability Institute
February 2004

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Conventions used in this Paper

- ... not available
- . not applicable

Executive summary

Banks play a dominant role in the financial systems of East Asia. The banking crises in East Asia have contributed to instability in the region's financial systems and retarded its economic development. Affecting the banks' soundness has been a high level of non-performing loans (NPLs) that could not be left unresolved if the region's banking systems were to be expected to continue functioning in a normal manner. In response to this, broad bank restructuring has been introduced in the form of a reduction of NPLs in the banking system, bank recapitalisation, the implementation of regulations and norms to bring about improved bank governance and risk management, the implementation of rules to promote transparency, and efforts to strengthen the capacity of supervisory authorities. To address the NPL problem, many economies have established a public asset management company (AMC) that acquires, manages and disposes of impaired bank assets.

This paper studies and compares the experiences of some of the public AMCs in East Asia since the late 1990s, focusing on public AMCs in China, Indonesia, Japan, Korea, Malaysia and Thailand. The main objectives of this study are to examine the common trends across and differences between these AMCs in order to identify and propose factors and conditions that could contribute to the successful operation of an AMC in resolving banks' NPLs while minimising the costs to the public. This is the first paper of a two-part study of public AMCs in East Asia. The second paper, entitled *Public asset management companies in East Asia - case studies*, provides a collection of more detailed studies of the AMCs in the region (Fung et al (forthcoming)). These case studies provide the background for the comparative study and will be available at www.bis.org/fsi/fsipapers03cs.pdf.

Public AMCs have been generally successful in removing a substantial portion of NPLs from East Asia's banking systems.

The extent of the banking problem, the political determination, AMC mandates, asset valuation and the need to urgently address the NPL problems have all influenced the amounts and kinds of assets transferred to these AMCs. In asset transfer, pricing is one of the key issues. Transferring assets at market value implies that the banks will have to realise the losses, which, in turn, may threaten their solvency, given the large NPL volumes that are often carried at unrealistic valuations. On the other hand, transferring assets at prices above their fair value subjects the AMC to potential losses. Some AMCs have used option-like profit- or loss-sharing agreements in acquiring NPLs from banks, which helps to facilitate NPL transfers and contain AMC losses. Most of the NPL acquisitions by AMCs are financed through bonds often issued by the AMC to the transferring bank. Losses accruing to the AMCs owing to both the transfer price above fair value and the potentially low level of collectibility of the acquired NPLs have raised concerns about the AMCs' ability to perform on the bonds, which has not been fully tested in many jurisdictions.

In asset resolution, public AMCs have achieved a total recovery of between 20 and 50%, figures that are comparable to the experiences of public AMCs created in banking crisis situations in other parts of the world. When discussing AMCs and the methods that they use to resolve their assets, two broad approaches have been used: restructuring of the debt/borrower and the outright sale of the loan/underlying asset. Among the AMCs studied in this paper, the relative importance of the two methods and the resolution progress has varied considerably. A range of factors influence the success of an AMC in resolving and recovering acquired NPLs, including the AMC's mandate, the underlying quality of the acquired assets, the political and financial backing, the legal environment, and the prevailing economic and market conditions. The experiences of public AMCs suggest that a prompt disposal of assets will better enable an AMC to achieve its objectives.

The success of an AMC in improving the balance sheets of banks needs to be qualified against the residual risks that the AMC, the banks themselves and the central bank are facing. While restructuring is a widely used tool for asset resolution, in some cases the restructured loan can over time become an NPL again, which in the end may cost the AMC more than originally thought. Banks are often engaged in complex relationships with an AMC, such as gain-/loss-sharing arrangements for their transferred assets. As a result, banks may again be exposed to the transferred NPLs. Moreover, banks typically sell their NPLs in exchange for AMC bonds. The ability of the AMC to repay these bonds raises concerns about the extent of genuine improvement of banks' balance sheets and, in many cases, these AMC bonds are either non-tradable or have only limited liquidity. For the East Asian central banks that are involved in AMC financing, the potential AMC losses also suggest that their balance sheets may be materially affected.

Based on the experiences of regional AMCs, we propose a set of major factors that can contribute to the successful operation of an AMC in the following box. Clearly, these factors need to be adapted to the particular environment of the economy in question.

Major factors contributing to the successful operation of an asset management company

Strong political will: Strong political backing on the part of the government to address NPLs in the system is a crucial starting point for any successful AMC. An AMC should operate with sufficient independence, free from political interference.

Explicit government financial support: Preferably, the government should fund the AMC's operations directly through its budget. If an AMC has to issue its own debt instead, an explicit guarantee by the government is needed to strengthen the financial positions of the banks and the AMC.

Supportive legal infrastructure: An effective legal regime - including bankruptcy and foreclosure laws as well as special legal powers granted to the AMC - that allows the AMC to resolve its assets more quickly and to achieve a higher recovery rate.

Efficient market environment: Well functioning capital markets facilitate asset sales, while permitting foreign investors to purchase assets from the AMC will also speed up asset disposition, especially when the domestic capital market is not so well developed.

Clear AMC mandate: The AMC must have clear objectives and procedures for its operation, such as the types of assets to be acquired and the resolution methods it is permitted to use. It should focus on asset sales and not be overly burdened by broad corporate restructuring.

Well defined AMC life: In general, the tenure of an AMC should be limited in order to prevent it from sitting on assets it acquires for long periods of time for fear of realising large losses, but it should also be realistic relative to the task on hand in order to give the AMC sufficient time to deal with the assets under its control.

Adequate governance: The AMC should have a sound internal control system and effective external supervision, and be audited regularly by an independent audit firm.

Good transparency: The AMC should periodically disclose the results of its operations vis-à-vis its mandate as well as its audit results in a manner that can be easily understood by the market and the public.

Realistic asset pricing: Generally, assets should be transferred to an AMC at market-based prices, especially for privately owned banks. Often, proper incentives, such as option-like profit-/loss-sharing agreements, or enforcements help facilitate asset transfers.

Speedy resolution: The AMC should aim for speedy disposition of acquired assets. Waiting for an economic turnaround to increase recovery often leads to slower resolution progress and larger losses.

1. Introduction

The banking system often dominates the domestic financial system in East Asia, with enterprises and individuals relying heavily on banks to provide financing and a vehicle through which to invest funds in the form of deposits. As a result, the problems experienced in recent years by many East Asian banking systems have had a more far-reaching effect than they would have had the financial sector not been so concentrated in banks. In some cases, most easily identified by a high level of non-performing loans (NPLs), these banking problems have contributed to major economic crises such as the Asian crisis that began in 1997, threatening the stability of the entire financial system and the economy. Therefore, the restructuring of the banking system and its return to a sound financial condition has become a key step in the overall revitalisation programme for the economy and is instrumental in the return of broader economic stability and growth. Conversely, countries such as China and Japan, which began dealing with their financial system problems at the same time as the crisis-affected countries, were dealing with problems that had been accumulating over a much longer period of time.

While broad financial restructuring is needed for the long-term health of the banking system, there is also a need to promptly deal with the banks - which are often near failing or in fact insolvent - and their asset quality problems so that they can resume their role as financial intermediaries. A resolution strategy that is often recommended and used by governments is to establish a public asset management company (AMC) that acquires, manages and disposes of impaired bank assets.

This paper studies and compares the more recent experiences of the government-established and -owned AMCs in East Asia (since the late 1990s). We focus our analysis on public AMCs in China, Indonesia, Japan, Korea, Malaysia and Thailand. Whenever possible, for the sake of completeness, we also include in the comparison the public AMC in Taiwan, China (hereinafter Taiwan), which has only limited activity, and the private AMCs in the Philippines. While these AMCs share

many common characteristics with the public AMC's in the other countries previously mentioned, they also differ in many aspects, for example, in their performance to date and in the ways in which each AMC goes about achieving its objectives. We identify the commonalities across and differences between the AMC's in the aforementioned countries by focusing on the following criteria: the legal framework that establishes the AMC and defines its operations, the process of transferring NPLs from banks to the AMC and the rate at which these transfers have occurred, the financing of the AMC's operations and, finally, the AMC's ability to resolve and recover on the NPLs that have been transferred to it. While we are interested in drawing useful lessons from the experiences of AMC's in these major East Asian economies, we do not attempt to evaluate the pros and cons of using a government AMC to resolve banking system problems. We do believe, however, that the lessons from East Asia are useful for authorities in economies that are contemplating the use of a public AMC to resolve excessive levels of NPLs.

This paper differs from most of the existing literature on the cross-country study of AMC's in two aspects. First, our study provides a focused coverage of AMC's in eight major East Asian economies, encompassing both the crisis-affected economies and those that were less affected by the Asian crisis, but which still have large volumes of NPLs (eg China and Japan). This distinguishes our paper from those either covering AMC's from several continents (Klingebiel (2001)) or focusing mostly on the crisis-affected East Asian economies (Cooke and Foley (1999) and Lindgren et al (1999)). It also provides the reader with an update on the performance of the AMC's against their respective mandates, now that many of them have been in operation for at least four to five years. Second, the perspective of our study differs from most of the existing literature in that we examine, compare and contrast the East Asian AMC's along several themes such as their mandate, the challenges of NPL acquisition and the related financing as well as asset resolution progress and recovery performance. We are more interested in examining the factors

that influence the performance of the AMCs. Our focus is also very much on the implications of AMC financing on the balance sheets of central banks and commercial banks alike. We highlight the risks to the central bank, supervisory authority, Ministry of Finance, banks, the AMC itself and, importantly, the public at large, of using an AMC as a resolution strategy. These important issues have not been explored in depth by most existing literature.

As a preview, we will highlight here a few key observations drawn from our analysis of AMCs in the region. First, the East Asian AMCs have removed a substantial amount of NPLs from their respective banking systems. In many cases, most of the transferred NPLs have been non-performing for an extended period of time and tend to be grossly overvalued on the bank balance sheet; in other words, the banks were carrying large amounts of unrecognised losses on their balance sheets. Therefore, resolving these NPLs will probably result in significant losses that in some cases will be absorbed by the AMC and ultimately the taxpayer. Second, the acquisition of assets in most cases is financed through bonds issued by the AMC to the transferring bank. The repayment of these bonds has not been tested in many jurisdictions. Strong support from the government in explicitly guaranteeing these bonds will help to somewhat mitigate the concern that the AMC will not have the cash flow to service, let alone pay off, the bonds. Finally, asset resolutions, by definition, are effected in large part through debt restructurings and asset disposal. Across these economies, the relative importance of these methods of resolution and their progress has varied widely. There is no strong evidence, however, to suggest that either one of these two methods or any others yield better results. Instead, success in resolving assets is best achieved with strong political support, a clear and well defined mandate, an effective and efficient legal framework, NPLs of better quality, and a less severe banking crisis.

The issue of success and how it should be measured is open to much discussion and is explored in this paper. According to the legislation for some public AMCs, an NPL, at one extreme,

may be resolved merely upon the restructuring of the loan or a reorganisation of the company's affairs. But is this really a resolution? Of course, resolution - in its purest form - is realised only when the NPL is in some way converted to cash. As is illustrated later in this paper, in fact, a large percentage of NPLs in the East Asian public AMCs are resolved through the aforementioned restructuring method. Unfortunately, at this point there is insufficient evidence to show the extent to which restructured loans, which are then considered resolved, are actually repaid by the borrower. Doubts exist as to this latter practice and the AMCs' ability to ultimately convert a large percentage of these restructured NPLs to cash.

The paper is organised as follows. The next section provides an overview of the banking problems faced by many East Asian economies and how they have responded to these challenges. Within this context, we examine the use of a public AMC as a tool in removing NPLs from the banking system. We focus on the structure, mandates and legal and operating environments for public AMCs in East Asia. Section 3 studies NPL transfers from banks to AMCs, comparing the amount and pace of asset transfers and the types of assets acquired by the AMCs as well as the pricing and methods of asset transfer. It explores the main factors influencing the process of NPL transfers from banks to AMCs. Section 4 then compares the financing of the AMCs' operations and examines the implications of AMC financing for central bank balance sheets. Section 5 assesses AMC performance with regard to asset resolution, focusing on the principal resolution approaches as well as the major factors influencing resolution progress and asset recovery. The final section offers a few brief concluding remarks, with a focus on the remaining risks of using a public AMC as a policy tool.

This is the first of two papers that study AMCs in East Asia. The second paper contains a collection of case studies of the eight East Asian economies involved (Fung et al (2003)). These case studies provide the background for the comparative study and also allow readers to have a more

detailed and better understanding of the experience of individual public AMCs in East Asia.

2. Overview

This section first provides an overview of the banking systems in East Asia, focusing on the size of the NPL problems and their impact on the banking systems. It then describes the broad issues facing the governments of the Asian economies when deciding how to respond to the banking system problems. More specifically, it looks at the issues involved in establishing AMCs as one of the policy instruments to meet the aforementioned challenges. Finally, the section summarises the mandates, structures, governance and operating environment of the AMCs selected for this study.

2.1 Banking system challenges in East Asia

Banking systems play an important role in most Asian economies. For example, firms in Japan and Korea raise, on average, 30-40% of their funds from banks, compared with only 12% in the United States. Over half of the financial assets of Japanese and Korean households are in bank deposits compared to no more than 10% in the United States. Moreover, banking sectors in East Asia tend to be large relative to the size of the region's economies (Table 1) as well as to the size of the local capital markets. Total bank assets in China and Taiwan are more than double their respective GDPs, and typically reach 150% of GDP in the cases of Japan, Korea and Malaysia. The apparently low ratio of bank assets to GDP in Indonesia in part reflects the fact that bank lending shrank considerably after the crisis. One main exception is the Philippines, where bank assets as a share of GDP are only half as high as in China or Taiwan.

Another salient feature of the banking systems in East Asia is that in many of the economies, state-owned banks play a very important, and sometimes dominant, role in the domestic banking sectors. In China, Indonesia and Taiwan, state banks represent half or more of their respective banking sectors in terms of total assets. On the other hand, state banks account for no more than one third of Thailand's total bank assets. NPL levels at the state banks, therefore, will have a bearing on the entire banking system's health and, under the circumstances, often require direct government involvement in their resolution.

One of the major problems plaguing many of the Asian banking systems has been a high level of NPLs. In general, banks begin to feel pressure on their earnings and a strain on capital when NPLs begin to exceed 5% of their loan portfolio. In Asia, NPLs as a percentage of total loans ran as high as 52% in the case of Thailand to lower, but still excessive, levels in other economies (Table 1). While the differences in the reported NPL figures across Asian economies can certainly be attributed to the differing degrees of banking system problems, one must also consider that these economies may use different accounting rules and NPL definitions, with different degrees of reporting accuracy.

There were a number of causes for the high level of NPLs in East Asian economies. For some of the crisis-affected economies that entered a rapid stage of growth in the 1990s, banks concentrated their loan portfolios in property lending at a time when the supply of newly developed real estate on the market was growing at a far faster pace than could be absorbed. Other problems were created when the banks granted loans denominated in foreign currency to borrowers with only local currency incomes, thereby creating foreign exchange risk in the portfolio. These risky lending practices, together with years of insider and connected or directed lending, poor credit risk management and insufficient governance, were masked during the economic boom. Once the crisis hit, however, these loans quickly became non-performing.

While the Asian crisis had less of an economic impact on China, Japan and Taiwan, their banking systems have also suffered from high NPL levels. A long history of policy lending, property speculation in the early 1990s, a lax internal risk control system and poor performance of many state enterprises are the major reasons for the large volume of NPLs in China (Ma and Fung (2002), BIS (1999) and Lardy (1998)). In Japan, the bursting of the asset price bubble, continued weakness of the domestic economy, chronic price deflation and the rising number of business failures and bankruptcies help explain the rise in NPLs. Although the NPL problems are slightly less severe in Taiwan, the root of the country's banking problems are similar to those in Japan and were also related to excessive entry into the banking system following the financial liberalisation in the mid-1980s.

2.2 Responses to banking challenges

High levels of NPLs erode the balance sheets of banks and threaten their solvency and to a lesser extent, their liquidity. This, in turn, results in widespread failures or in some cases government bailouts. In order to strengthen the banking system, broad bank restructuring is called for so that the balance sheets of banks can be cleaned up, they can be recapitalised, and their governance and risk management can be strengthened. In addition, the supervisory capacity of the bank supervisor must be strengthened. More broadly, corporate restructuring is also required to support and complement a successful bank restructuring. For example, in Korea and Malaysia multi-pillar approaches have been implemented in both corporate and banking restructuring. In the wake of the Asian crisis, regulators in most Asian countries have promoted bank risk management and corporate governance.

One specific way to achieve the objective of cleaning up bank balance sheets is to transfer NPLs from the banks to a public AMC. The AMC, in assuming the NPLs, is expected to maximise asset recoveries and minimise costs to taxpayers.

This public sector solution to NPL problems in East Asia's banking systems has been called for mainly because of the potential systemic risks involved, the perceived political impossibility of imposing banking losses onto general depositors and in some cases the dominance of state-owned banks in the domestic banking system.

While an AMC may be one solution to resolve excessive NPLs in banks, it cannot ensure that new NPLs will not be created. Moreover, its effectiveness depends on the broader bank and even corporate restructuring in the economy. For instance, the pricing of NPL transfers from bank balance sheets, to be discussed in the next section, not only affects the pace of NPL transfers to AMCs but may also have implications for the task of bank recapitalisation as well as for loss allocation. Cleaning up bank balance sheets in itself is often a key confidence-building and financial support measure to stabilise the banking system, particularly in times of crisis. Finally, given the dominance of banks in many Asian economies and the scale of NPL problems there, as discussed in greater detail below, it is sometimes desirable for AMCs to play some role in corporate restructuring while tackling the NPLs in the system.

In conclusion, the urgency of reducing the level of NPLs held by banks was certainly heightened after the onset of the Asian crisis. Some AMCs in East Asia (for example, in Indonesia) were first established in direct response to the banking problems which arose in the aftermath of the Asian financial crisis (Table 2). While the AMCs in China, Japan and Taiwan were also established after 1997, they were not a direct response to the Asian crisis. In the case of China, removing NPLs from state banks was part of a medium-term bank restructuring plan. In Japan, the deteriorating health of banks has impeded their intermediation function, thus impairing the effectiveness of monetary policy in dealing with deflation and

the sluggish economy.¹ Thus, resolving the bank balance sheet problem could be viewed as part of the long-term plan to revive the Japanese economy.

2.3 The establishment of the AMC

This section summarises the main issues involved in establishing an AMC, including its mandates, structures, governance and transparency, and the legal framework.

AMC mandates and structures

Clear mandates and a sound organisational structure of an AMC could enhance its effectiveness when assuming and subsequently disposing of NPLs. Depending on its specific mandates and priorities, the AMC could function as a fast disposal instrument selling loans or related assets, a medium-term corporate restructuring agency, a warehouse that holds the carved-out NPLs for an extended period of time, or a combination of the three. Typically, many AMCs will sell the loans or the underlying assets that are restructured.

There are two main arguments against the AMC playing an extended corporate restructuring role. The first is a human capital concern. Most AMC staff are from the central bank or failed commercial banks and do not have the necessary expertise to properly carry out corporate restructuring activities. Given the large volume of NPLs and the limited life of the AMC, it would be too ambitious for the AMC to take on massive restructuring. Second, in some cases corporate

¹ While the monetary base is expanding rapidly as a result of extremely easy monetary policy by the Bank of Japan, there has been little follow-through into broad money so far. This suggests that much of the monetary easing is not passed on to the fund users because banks are unwilling to lend or incapable of lending as a result of their balance sheet problems.

restructuring serves only to window dress the problem and repayment of the loan will be no more likely than it was before the corporate restructuring. In contrast, loan sales in a broad sense tend to be subject to less political interference (especially for selling real estate), putting assets back into productive use sooner and achieving greater long-term cost efficiency in cleaning up banks.

On the other hand, there are two important qualifications to the argument that an AMC should solely specialise in asset sales. First, sometimes it is important to avoid overwhelming the local loan/asset markets through fire sales and to enhance value recovery from those viable corporate borrowers. Second, an AMC should retain the discretion to participate in corporate restructuring, either directly or indirectly, in certain circumstances, depending on the types of assets and institutional arrangements. Generally, a more balanced view is that an AMC should not be overwhelmed by corporate restructuring tasks and should focus mainly on asset disposals.

Partly reflecting multiple policy objectives, most AMCs in Asia could be viewed in practice as hybrids of these different functions and resolution approaches (Table 2). As will be discussed in the resolution section, most Asian public AMCs have embraced both simple asset disposals and debt/corporate restructuring. For example, in Korea, KAMCO's corporate restructuring role is obvious in its handling of the huge distressed Daewoo loans, despite its strong mandate to dispose of acquired assets. This may in part be due, in part, to KAMCO's traditional responsibilities with respect to dealing with corporate restructuring even before the Asian crisis, and in part due to the reality that the chaebol dominate many sectors in the Korean economy (Fung et al (2003)). In Malaysia, there is a separate corporate restructuring agency (CDRC) collaborating with Danaharta, which has also been extensively involved in corporate restructuring, directly or indirectly.

The relative importance of simple asset sales and corporate restructuring varies among economies selected for this study and could also change over time. One extreme in this regard is Thailand's TAMC, which does not have the power to sell loans to third parties since its given principal mission is restructuring. In contrast, the role of Japan's RCC in corporate restructuring has been minimal until recently. More often, the relative importance of these two resolution approaches evolves over time. Listed official mandates in many cases are an outcome of the initial policy focus at the time of setting up the AMC. While the more recent focus of the four AMCs in China is to sell the acquired NPLs or the underlying assets through various means, in their earlier days they spent a considerable amount of time and resources on corporate restructuring through debt-for-equity swaps that involved hundreds of state enterprises and some one third of the total acquired assets (Ma and Fung (2002)). By contrast, given its mandate as a collection agency, the main method used by Japan's RCC so far has been straight loan collection. Only recently has restructuring been explicitly added to the RCC's functions. Finally, while IBRA's mandate and focus has been more on restructuring the largest debtors so far, there has been a lot of pressure to dispose of assets rapidly to help finance the budget deficits. It began to sell unstructured loans in 2002 (Fung et al (2003)).

The debate of asset sales versus restructuring may also affect the AMC structures. In general, a centralised AMC is more fit for simple asset sales, while a decentralised AMC model may better suit the task of restructuring. Most public AMCs in East Asia have been set up as centralised AMCs, which allows a consolidation of skills and resources. The notable exception is China, where a separate AMC was set up to resolve the NPL problems for each of the big four state-owned banks. Such a decentralised bank-based approach may also reflect the fact that the big four Chinese banks hold nearly 70% of the market share in China and are specialised in different areas of business. For example, the Agricultural Bank of China has a large number of debtors with a relatively small amount of

outstanding balances. An AMC may need a different approach or set of skills to deal with these loans than those in banks that specialise in industrial loans to large state-owned enterprises. A decentralised approach could also promote competition among the four Chinese AMCs in their operations. So far, these two different models seem to be serving Asian AMCs well.

In general, a well specified and realistic sunset date may help speed up the resolution of NPLs and allow sufficient time for the AMC to meet its objectives. A secondary benefit of a clear sunset date is that it allows the public a means by which to measure the AMC's progress. Many AMCs tend to have a lifespan of about five to 12 years (Table 2). Despite having the shortest lifespan of only five years, IBRA is unlikely to accomplish its mission by early 2004 given the large volume of non-performing assets (NPAs) transferred. Danaharta is set to wind down its operations in 2005 and TAMC in 2013. An exact sunset date for the Chinese AMCs is not clear. While the official media often mention a 10-year life for the four AMCs (the AMC bonds have a maturity of 10 years), there is no clear indication of such a term in the State Council executive order.

The role of definite sunset dates depends on the circumstances; for example, no sunset date was specified for the AMCs in Japan, Korea and Taiwan. There may be a valid case for not applying a sunset date to KAMCO, which had a strong mandate to deal with corporate restructuring even before the Asian crisis. While there may be some implicit understanding between KAMCO and the authorities regarding the time frame for restoring the banking system to health, the apparent absence of a limited lifespan does not appear to be hindering KAMCO's progress (Fung et al (2003)). In fact, KAMCO's role diminished five years after the crisis and it is currently looking for a new role. Incidentally, this role may have been found in the recent difficulties experienced with credit card companies in Korea. On the other hand, the lack of a specific sunset date may have contributed to the relatively slow progress of the RCC towards resolving, in a meaningful way, the NPLs in Japan. As the Japanese authorities are

setting up a new institution to buy NPLs from banks, with a focus on revitalising debtors, the future role of the RCC has become less clear.

Governance and transparency

Proper governance of the AMC is important for ensuring the efficient use of public funds and prompt resolution of NPLs. Since government monies are being used, the supervisory authority should assess the operations of the AMC. Depending on the AMC's legal status, the practice, including the methods and depth, of supervising the AMC varies across East Asian economies (Table 3). Typically, the public AMCs are accountable to the financial supervisory authority, the central bank, or the Ministry of Finance (or jointly). In China, the four AMCs report to the Ministry of Finance and The People's Bank of China (PBOC) on a monthly basis. The PBOC also conducts regular on-site inspections of the AMCs. More recently, the Chinese AMCs have started reporting directly to the nascent China Banking Regulatory Commission (CBRC), which is expected to take over from The PBOC the supervisory responsibility regarding the AMCs. Finally, since the Chinese AMCs are also licensed securities dealers, they are supervised by the securities regulatory authority as well. With so many supervisory agencies involved, it is sometimes not clear who is actually in charge of these four AMCs (Ma and Fung (2002)).

Most central banks do not play a major role in the supervision of AMCs, particularly if there are separate supervisory agencies as is the case in Japan and Korea: the Bank of Korea (BOK) participates only in joint inspections with the Financial Supervisory Service (FSS). Even in the economies where the central bank is also the bank supervisor, only The PBOC used to directly supervise the AMCs (as noted, this supervisory role is being assumed by the recently established CBRC). The Central Bank of Malaysia (Bank Negara Malaysia) is indirectly involved: as chair of the three-member Steering Committee that oversees Danaharta; and Thailand's

MOF delegates its supervision of TAMC to the Bank of Thailand (BOT), which conducts on-site examinations. The BOT, however, only reports its findings to the MOF; it has no power to take any supervisory action against TAMC to correct identified weaknesses. In other economies, the central banks are not involved in supervising AMCs.

Proper internal governance and adequate transparency are important for ensuring the functioning of the AMC. The AMCs in Korea, Malaysia and Thailand have a board of directors. The 11-member board in KAMCO comprises only the senior management of the AMC with no outside members. The boards of Danaharta and TAMC include outside members and are responsible for oversight of the AMC's activities. Danaharta also has a separate oversight committee comprising three members which approves appointments and terminations of special administrators and independent advisors. The four Chinese AMCs have boards of supervisors consisting of management and representatives from various government agencies. The president of each of the big four Chinese banks is also the party secretary of the respective AMC, providing an unusual link between the AMC and the bank it serves (Fung et al (2003)).

A high degree of transparency can foster market discipline in the AMC. The AMCs in Indonesia, Korea, Malaysia and Thailand publish an annual report with financial statements. Some AMCs have well defined internal audit committees and external audits carried out by independent auditors: KAMCO and TAMC release annual reports audited by an international accounting firm; Danaharta publishes an operational report every six months detailing its operations and major statistics; and IBRA produces a monthly report, which provides information on asset recoveries and other operations. In contrast, none of the AMCs in China publish an annual report or provide information about their financial positions, though The PBOC and now the CBRC regularly provide useful statistics on the resolution progress of the four AMCs.

Legal environment

There are a number of legal infrastructure needs that are vital if the AMC is to achieve its objectives of resolving NPLs. These requirements include functioning corporate, bankruptcy, contract and private property laws. Without these, AMCs will experience many of the same difficulties as banks do when attempting to collect their NPLs. While these laws have been revised recently in many East Asian economies, the Chinese bankruptcy law was drafted some 15 years ago and is probably outdated given the rapid structural change of its economy over this period. In Asia, where a large percentage of loans is secured by real estate, inefficient foreclosure laws have hampered and even prevented banks from seizing the underlying collateral in the event of default (Table 4).

In situations where the borrower is insolvent, bankruptcy laws often make it difficult for a company or individual to pursue voluntary bankruptcy. Restructuring of the entity and its debts then becomes delayed while at the same time the value of the credit declines. Worse still are situations where the debtor is unwilling to declare bankruptcy and creditors must pursue their claims through an involuntary bankruptcy filing.

Recognising these problems and that they cannot be corrected in the short term, AMCs are often given special legal powers in their enabling acts. These legal powers permit the AMC to accomplish its task of resolving NPLs in a more efficient manner by, in certain cases, circumventing the ineffective and inefficient laws and the legal system. For example, IBRA has the ability to seize assets of non-cooperative debtors without seeking court approval. Generally speaking, these legal powers allow the AMC to carry out its activities outside of the normal legal process. This, in turn, should help produce a higher recovery value on the resolved asset.

Aside from the business laws, there are two other matters pertaining to legal issues of importance to AMCs: legal protection and independence.² First, employees of an AMC should be provided with legal protection from personal and institutional liability for actions taken in good faith and in the normal course of business. Without such protection, AMC employees will be reluctant to pursue all available courses of action to resolve the asset. Second, while all AMCs should be held accountable, they should also operate free from political influence. In some cases, including in East Asia, the activities of banking supervisors are improperly influenced by political agendas. This influence is exercised in many ways, such as preventing the supervisor from taking appropriate enforcement actions against a bank and removing officers.

In sum, a clear and focused mandate, proper governance and transparency and a well developed legal environment all help facilitate the work of an AMC in achieving its objectives. It should be noted, however, that the organisational structure and framework and the operating environment are just a few of the many factors that account for the diverse experiences of the AMCs. Other important factors are discussed in detail in the following sections.

3. Asset transfers

The first task of an AMC is to take over targeted, often non-performing assets. The characteristics of the transferred assets - for example, the volume, type and quality of assets - will define to a large extent the complexity of the task facing

² Both legal protection and independence are also contained in Principle 1 of the Basel Committee on Banking Supervision's *Core Principles for Effective Supervision*, September 1997.

the AMC and its success. The pricing methodology used by an AMC to acquire assets will create incentives, or possibly disincentives, for financial institutions to transfer assets, with implications for the speed of NPL transfers, loss allocation and fiscal costs. Moreover, the initial scale of the bad debt problem, political backing and other institutional constraints seem to play a key role in AMC acquisition of NPLs. This section contrasts the amounts and types of asset transfers, as well as the related acquisition and pricing methods used by Asian AMCs. The message is that speedy NPL acquisition by the AMC is often a precondition for a successful resolution of the problem assets.

3.1 Amount and pace of asset transfers

Since the Asian crisis, Asian AMCs have taken over substantial volumes of NPLs, amounting to some 6-20% of 2002 GDP (Table 5). The Indonesian, Korean and Malaysian AMCs have acquired more than 80% of the NPLs in their systems, while the Chinese, Japanese and Thai AMCs have taken over only 30-40% of their banks' NPLs. In Taiwan and the Philippines, public AMCs have made more limited headway, owing to legislative delays and/or alternative restructuring strategies. The NPL levels in the financial system, the politics and willingness of the government to provide sufficient financing and the legislated roles of AMCs appear to be among the most important factors that determine the size and pace of asset transfers from eligible institutions to the AMCs in our study.

The strength of political will and clearly mandated roles of the AMCs support speedy acquisition of NPLs. Bank Negara Malaysia's bank supervisors have put strong pressure on banks to promptly transfer their NPLs. If a bank was not willing to sell a non-performing loan to Danaharta at the offered price, it had to write the NPL down to 80% of the offer price. Similarly, as the Korean government injected equity in banks, it pressured them to strip off NPLs in return for state-backed AMC bonds in order to achieve capital adequacy quickly.

While in China the asset transfer was mandatory under direct government decrees, Thailand's case is mixed. While Thailand's state-owned banks are required to strip out distressed debts, private banks can decide whether they want to sell assets to TAMC or not. They also only transfer loans that have involved a multiple number of creditors.³ As a result, transfers to TAMC represent only some 30% of the peak volume of NPAs and these come mostly from state-owned banks. In Japan's case, offering unattractive pricing to banks for the acquisition of NPLs is one main constraint for the RCC in taking over NPAs, owing to political reluctance to recognise financial loss.

Adequate financial support and the scale of the initial NPL problem also affect the speed of stripping out NPLs. Korea and Malaysia seem to be quite willing to provide public financing of AMC activities, yet China, Japan and Thailand all appear more cautious in committing public funds to speed up NPL transfers (see Section 4 on financing). This may partly contribute to different paces of asset transfers to AMCs from the financial systems. A smaller scale of the initial NPL problem in the banking system eases the AMC's task of stripping out NPLs from the system, with the exception of Japan, in part because of political inaction. The scale of NPLs in Korea and Malaysia, at something like 15-30% of total loans, was only somewhat larger than the scale of the Nordic banking problem. Thus, by taking on about 8-30% of bank loans, KAMCO and Danaharta dealt with most of the NPLs in the financial system. In contrast, the extent and the urgency of the Indonesian banking problem after the 1997 crisis and IMF

³ Given the losses that would have to be taken by private Thai banks if they transfer assets, they are generally loath to do so. This point is clearly illustrated when one sees that nearly half of the peak NPL level was transferred by Thai government-owned banks; only 10% of NPLs held by private banks was transferred.

intervention help account for the decision to have IBRA take over some 80% of Indonesia's banking system.

Inasmuch as many of the AMCs in the region have a limited life, their ability to accept assets is similarly limited (Fung et al (2003)). Some AMCs, such as IBRA, KAMCO and the RCC, accept assets on an ongoing basis while others only accept assets over a predetermined period or in a few tranches. In Thailand, TAMC has thus far received assets from eligible institutions in five tranches, while China's asset transfer was a one-off and executed over a period of a few months. Some AMCs face a cutoff time, such as in the case of KAMCO, which stopped acquiring assets for the government's NPA Fund by November 2002, though it will continue doing so on its own account.

3.2 Types of assets transferred

The underlying quality of the asset transferred will affect the AMC's resolution and recovery performance, which will be discussed later. AMCs are permitted by their respective establishing laws to take on a variety of assets from different types of financial institutions (Table 6). All East Asian AMCs covered in this study have transferred assets from banks. Some AMCs, however, have accepted other types of assets from certain financial institutions. In this regard, Indonesia is the most extreme example. It has not only accepted NPLs, but also taken over a wide range of assets, including equity interests in corporations acquired from former shareholders who pledged their equity to settle claims for violating prudential norms or to obtain liquidity support from Bank Indonesia (BI), ownership in closed banks and other financial institutions, as well as buildings and other physical property. Similarly, Japan's RCC deals directly with failed banks and accepts assets from non-bank financial institutions. In Korea, KAMCO could acquire assets from all types of financial institutions, including banks, insurance companies, trust investment companies, securities companies and merchant

banks, but it normally does not deal with failed financial institutions directly.

Some AMC's deal with distressed assets only, while others acquire both performing and non-performing assets. One complicating factor in this respect is the evolving and inconsistent definitions and criteria used to classify non-performing assets, both over time and across economies, as discussed in Section 1. Indonesia's IBRA sometimes received whole banks, therefore accepting both performing and non-performing loans. At the other end of the spectrum are Korea, Malaysia and Thailand, where AMC's deal exclusively with problem assets. In China, the four AMC's have been asked to take over a large amount of NPLs as well as some supposedly performing loans from the big four state banks. All in all, it appears that both mandates and additional policy objectives are an important consideration for an AMC to decide whether to also transfer performing assets.

Restrictions on the size and vintage of assets that can be transferred to an AMC may also help define the quality of assets transferred to AMC's. Danaharta only accepts loans in excess of MYR 5 million (USD 1.6 million) to maintain efficiency in its asset resolution efforts. This appears to be well considered since acquired assets in excess of this amount represent more than 70% of system-wide NPLs. Thailand has a similar restriction, but with an interesting twist. TAMC will only accept assets from private banks with balances in excess of THB 50 million (USD 1.2 million) and even then, the loan must have two or more financial institutions as creditors. However, state financial institutions can transfer even small, single creditor loans. One extreme case is China's Great Wall, which acquired some CNY 345 billion (USD 40 billion) in loans that involved nearly 2 million debtors, of which 1.4 million are natural persons. In addition, the Chinese government specified guidelines on the vintages of the NPLs to be transferred to the four AMC's in order to recognise the earlier state-directed policy lending, with most of the acquired assets having been identified as non-performing for more than four years at the time of transfer.

There are a number of other useful ways to examine the attributes of the assets transferred. The sectoral distributions of the transferred assets, for example, differ across economies in the region, which is another factor defining asset quality. A comparison between Thailand and China reveals that whereas transferred assets in China concentrate more in the manufacturing sector, the property sector is much more prominent in Thailand (Table 7). Such sectoral distributions reflect the differences in the main sources of NPAs in these economies.

The size and vintage of the NPL account, as well as the sectoral composition of the impaired assets, would contribute to the broad quality of the acquired assets generally and help shape the AMC's prospective recovery performance in particular, as will be discussed in Section 5 on asset resolution and recovery. In general, larger loan accounts and more recent NPLs tend to contribute to the efficiency of asset recovery, though there are important exceptions. Because of the delinquency status of loans impaired for an extended period of time, the amount of value that can be recovered from such problem loans is uncertain. Another main factor that could influence asset recovery would be the portion of secured loans in the total transferred loans. For instance, some 70% of the loans acquired by KAMCO are secured, which should support recovery efforts. In addition, about half of the loans transferred to IBRA are denominated in foreign currency (mostly in the US dollar), pointing to the potential difficulties of relying solely on domestic resources to deal with the assets acquired by IBRA (Fung et al (2003)).

3.3 Asset transfer pricing and methods

Asset purchase pricing can have an enormous impact on the speed of asset transfers, a bank's financial statements, loss allocation and the subsequent recapitalisation programmes. Generally, there are two broad approaches for pricing of NPLs taken by AMCs in East Asia: book value and fair value (Table 8). Conceptually, carving-out of impaired assets at

book value from the selling bank to the AMC is distinct from recapitalisation itself. However, transferring NPLs at book value can also be viewed as a compound act of acquisition of bad assets and recapitalisation of the bank at the same time, by keeping the bank balance sheet whole. Often, the impact of asset transfers on selling banks' capital ratios depends in part on the chosen pricing approach. In many cases, the AMC replaces the purchased assets, which are typically associated with a 100% risk weight for purposes of capital adequacy, with other performing assets, ie bonds issued by the purchasing AMC (see Section 4 on financing), which sometimes carry a lower risk weight of 20% or even 0%. This helps to improve the regulatory capital ratios of the selling bank upon the NPL transfer.

In China, book value serves as the acquisition price for carving out NPLs from the big four state-owned banks. This is a case of compound NPL stripping-out and recapitalisation if the assets used to replace the impaired NPLs receive implicit government guarantees and, as such, can be viewed as performing assets (see Section 4, and Ma and Fung (2002)). During the carve-out of NPLs in Indonesia, IBRA effectively adopted a multi-stage operation: it typically offered a blanket guarantee for all creditors of the bank and, depending upon the condition of the institution, would sometimes nationalise the whole bank, stripping out its NPLs and then recapitalising it with government bonds in preparation for eventual sales. One interpretation of such NPL acquisition in this context is that IBRA effectively uses book value to transfer NPLs from a nationalised bank, except that there is no asset received from IBRA in direct exchange for the NPLs. At IBRA, the NPL acquisition and recapitalisation have been two distinct acts rather than a compound one, in contrast to the case of China (Fung et al (2003)).

Most other economies use fair value or some derivation thereof to arrive at the purchase price for NPAs. In Thailand, Korea and Malaysia, the actual average acquisition price ranges from one third to half of the book value of the acquired NPLs. Interestingly, Japan's RCC pays just 7% on average for

its asset acquisition from banks that are still operating, in part because of its self-imposed “no loss” policy under strong political resistance to spending taxpayers’ money to resolve NPLs at privately owned banks.⁴ Detailed pricing techniques differ among AMC’s in these economies, but the general principle is that these AMC’s pay market-based prices for their asset acquisition. In such cases, shareholders of selling banks directly recognise part of the losses when the asset transfer takes place. However, this may not matter much if the selling banks are wholly government-owned. In general, fair value approaches carry less moral hazard risk and cap fiscal burdens for taxpayers, if sufficient political backing is in place to effect speedy stripping out of NPLs.

However, there is a potential trade-off between speed and fair value in practice. Therefore, government pressure is often applied to banks to speed up NPL stripping-out to the AMC’s, for example in the case of Korea and Malaysia as discussed earlier. Also, to facilitate rapid asset transfers, sometimes certain profit-/loss-sharing or option schemes between AMC’s and the selling financial institution have been arranged (Fung et al (2003)). In Thailand, there are predetermined gain-/loss-sharing schemes between TAMC and selling banks for asset recovery after the stripping-out of the NPLs, with the gain (loss) being defined as the amount recovered from asset resolution in excess of (below) the acquisition price. In Korea, before late 1999, selling banks retained call options while KAMCO had put options in the event that the ex post market prices of the sold assets differed markedly from the original transaction prices. Exercising such options results in cancellations or recourses, accounting for one third of KAMCO’s resolutions. Viewed another way, such put/call

⁴ Another possible reason for the unusually low purchase prices for asset acquisition by the RCC might be the excessive asset valuation during the bubble years in Japan. For example, land prices have fallen by some 90% from peaked levels.

options injected much needed government-backed assets into Korea's financial system at the time of the crisis. In Malaysia, selling banks participate in profit-sharing with Danaharta, but in certain special cases and on a much more limited basis, Danaharta may also have a put option in the form of full recourse up to the purchase consideration if the recovery is less than originally expected. The implication of these put-back clauses is that they could keep the balance sheets of some selling banks partially exposed to the supposedly stripped out assets for a period of time.

4. Financing

Financing is an important issue that has implications for AMC operations, loss-sharing among the parties involved, and bond market development. If an AMC is to remove a significant amount of NPLs from banks, it has to be able to raise sufficient funds to pay for the purchases, more so if assets are purchased at face value. However, most public AMCs are likely to be loss-making entities, thus raising the issue of loss-sharing among those who provided the funds. The AMCs studied are either directly funded by the government or by some forms of AMC borrowings (Table 9). How the AMC is funded reflects the government's willingness to recognise the costs of restoring the banking system to health. It is most desirable that the government injects all the funds needed into the AMC through its budget or through issuing tradable government bonds. This has the additional advantage of encouraging bond market development by increasing market liquidity (McCauley (2003)).

However, many regional governments have preferred to keep their financial obligations off their books to avoid a direct budget hit; thus they chose to guarantee the bonds issued by the AMC. These AMC bonds are not only more costly than straight bonds in raising funds but they contribute little to local bond market development because they are either non-

tradable or only with limited liquidity. The least desirable situation is when the government guarantee for the AMC bonds is ambiguous. The banks that have sold NPLs in return for these bonds are exposed to the potential AMC losses again, raising questions about the genuine improvement of their balance sheets. Worse still is when the central bank is involved in financing the AMCs, which may have important implications for the financial health and operations of the central bank involved.

4.1 Direct government funding

Preferably, the government should fund AMC operations directly through its budget or by issuing government bonds earmarked for this purpose. The Taiwanese government provided all the funding for Taiwan's AMC and has been considering a plan to increase the funds substantially. The Indonesian government itself issued recapitalisation bonds to finance the massive bank recapitalisation, central bank liquidity assistance and deposit guarantee programmes and subsequently assets were transferred to IBRA. In Japan, the DIC issued government-guaranteed DIC bonds and injected the proceeds into the RCC as the initial capital. In the latter two cases, neither IBRA nor the RCC is required to service the debts so that from the perspective of these two AMCs, financing NPL purchases is entirely in the form of equity capital.

For other AMCs, direct government funding is not a major source of financing and accounts for about 0.4-20% of the total funds raised. In China, not only were the government funds provided relatively small compared to the size of the designated NPL transfer (some 3%), but also only a portion was actually cash whereas the rest took the form of office space, equipment and other businesses previously owned by the banks. Such contributions in kind from banks, directly or indirectly, not only leave the AMCs underfunded, but also may potentially complicate the AMC-bank relationship. In all economies except Thailand, the government injected some

initial funds into the AMCs. In Thailand, however, the Financial Institutions Development Fund (FIDF), a separate legal entity within the BOT, provided a small amount of initial capital of THB 1 billion to TAMC (less than 1% of the total financing need). TAMC can issue new shares to increase its capital; any unsold shares will be purchased by the FIDF. In other words, TAMC can be considered as owned by the central bank.

Many public AMCs in East Asia have only a small amount of direct government funding, thus requiring additional funding through debt in order to carry out their roles. These AMCs tend to rely on one or more of the following additional sources of financing: issuing AMC bonds, borrowing from other financial institutions, and borrowing from the central bank.

4.2 AMC bonds and other borrowings

While it may be less costly to raise funds with straight government bonds than with guaranteed bonds, issuing AMC bonds is still the preferred method of financing AMCs by many governments in East Asia. Since the potential AMC losses can be large, the government in question may eventually have to bear the bulk of the losses. To avoid worsening the budget considerably, many governments would rather have the potential liability off the balance sheet. In Korea and Thailand, AMC bonds account for over 90% of AMC financing; the percentage is lower (at some 60%) in China and Malaysia.

In the case of AMC bonds, typically issued directly to banks in exchange for their NPLs, an explicit government guarantee is needed to ensure their redemption at maturity. For example, the bonds are explicitly guaranteed by the governments in Korea and Malaysia, and by the FIDF (and implicitly by the BOT) in Thailand. Without government guarantee, most AMCs will not be able to repay the bonds since the cash recovered will be limited given the low quality of the underlying assets. Thus banks' balance sheets may be eroded again as NPLs are replaced with bonds that the AMC cannot afford to redeem. This explicit government guarantee is even more

important in cases where bank NPLs were purchased at face value, which essentially involved a compound act of NPL carve-out and bank recapitalisation. When bad assets were removed from the bank's balance sheet and replaced with interest-earning AMC bonds at face value, banks' earning power improved and, if these bonds carried a zero risk rating, their capital ratio was also restored.

In China, the four AMCs carved out NPLs at face value from the four big banks and suggested on first sight also recapitalisation of banks. However, the so-called constructive ambiguity, which means no explicit government guarantee was given for the bonds issued by the four Chinese AMCs, though many believe in an implicit guarantee, raises some doubts about the actual improvement to the banks' balance sheets (Ma and Fung (2002)). With the NPLs acquired at book value, the poor quality of these assets suggests that the AMCs will not be able to recover enough funds to repay the bonds on their own. If the government does not help repay these bonds at maturity, the four big Chinese banks could suffer losses from holding these AMC bonds that might erase their entire capital base.⁵ In addition, whether the capital ratios of banks will be improved by trading NPLs for the AMC bonds that do not carry an explicit government guarantee depends on the risk weight on these bonds. In any event, this raises questions about the government's willingness to explicitly recognise the cost of resolving the NPLs in a banking system that is dominated by state-owned banks.

⁵ The four AMCs in China issued over CNY 800 billion worth of bonds. Given the current recovery rate of about 23%, the four AMCs can at best repay some CNY 200 billion to the banks when the bonds mature. As such, the potential losses to the banks from holding these bonds could be as large as their combined capital as of end-2001. This may be one reason why many observers believe that there is an implicit guarantee for these bonds.

Another issue is whether the AMC can generate enough cash flow to pay the interest on these AMC bonds and whether the pressure of servicing these debts affects its operations. Thus, the level of interest rates paid on these bonds and who is responsible for paying them matter. This is particularly relevant for TAMC because it expects to receive only a small amount of cash from debt restructuring. On the other hand, the Korean government's undertaking to pay all interest on the bonds strengthened KAMCO's cash position in its operations, allowing it to use the cash recovered for further NPL acquisition (Fung et al (2003)). However, detailed information about the AMC bonds is not available for all countries. For China and Thailand, the AMC bonds tend to have floating interest rates, which are typically related to the prevailing deposit rates. The AMC bonds in China pay an interest rate equal to the one-year deposit rate while those in Thailand pay an interest rate no higher than the average rate for all types of deposits offered by the five largest commercial banks. One consideration of not fixing the bond rates when issued is that interest rates tend to come down after the financial markets stabilise. In China, the AMCs have only a small amount of initial capital and a low rate of cash recovery, which suggests that some of the Chinese AMCs might not be able to meet their interest obligations on their own. These banks might have given up NPLs that generate no income and carry a 100% risk rating in return for AMC bonds that generate uncertain interest-earning flow and may or may not carry a lower risk rating (Ma and Fung (2002)). As such, the improvement of the balance sheets may not be as significant as it looks.

Finally, in most economies, AMC bonds are either non-tradable or do not have good market liquidity, thus limiting banks' ability to trade the bonds for other income-generating assets. From the viewpoint of bond market development, issuing tradable government bonds is most desirable as they add liquidity to the local bond market.

Borrowings from other financial institutions are not widely used by regional AMCs. Only KAMCO raised about 5% of its funds through borrowing from the Korea Development Bank and

other financial institutions while Danaharta borrowed about 13% of its funds from the Employees' Provident Fund and Khazanah (an investment arm of the Ministry of Finance). In these cases, the AMCs raised funds from what can be considered as quasi-government financial institutions. Given the potentially large losses of its operations, it is unlikely that an AMC will be able to raise any significant amount of funds from commercial borrowings at favourable terms.

4.3 Financing by the central bank

The starting presumption is that the government, not the central bank, is responsible for the fiscal costs of bank restructuring, even if the central bank is part of the government in some cases. Financing AMC operations (such as purchasing NPLs at inflated valuations) through central banks runs the risk of damaging their balance sheets and subsequently their ability to carry out their monetary and supervisory responsibilities. This is in particular the case when a central bank is given the explicit task of keeping inflation within a given target. In practice, however, few central banks in the region manage to completely avoid getting involved in the financing of these operations. In the end, central banks in these economies have been involved in various ways: financing AMCs that carry NPLs at unrealistic valuations, providing deposit guarantees for depositors and creditors of failed financial institutions, recapitalising nationalised financial institutions, and providing liquidity advances to banks that prove to be insolvent. As illustrated below, the central bank's involvement in these activities can lead to a deterioration of its asset quality, net worth and profits, which in turn can affect its capacity to carry out its main tasks.

The central bank in China is heavily involved in the financing of the four Chinese AMCs, which raises the risk of damage to its balance sheet. The PBOC financed almost 40% of the AMC acquisition of CNY 1.4 trillion of NPLs in China mainly through a swap of credit to banks with claims on AMCs. This amounts to more than 10 times the PBOC's own capital base. In fact,

the PBOC has traded claims on the banking sector with some performing assets with claims on the AMC with mostly NPLs (acquired at book value) on their balance sheets. The potential losses for the central bank are large, given the low recovery rate. If the central bank has to bear these losses, it will affect its ability to carry out monetary policy and it may need government recapitalisation (Ma and Fung (2002)).

The BOT's substantial involvement in financing the TAMC and bank restructuring through its subsidiary, the FIDF, could affect its monetary operations. The FIDF not only provided the initial funding to TAMC but also guaranteed its bonds. Depending on TAMC's recovery performance, the BOT may be exposed to the potential TAMC losses. On top of this, the FIDF has already run up losses of THB 1.4 trillion since the Asian crisis in providing guarantees for depositors and certain creditors of failed financial institutions, recapitalising intervened financial institutions, etc. The need to finance the FIDF losses, through borrowing from the repurchase market, has implications for the central bank's monetary operations and balance sheet. For example, there is a potential policy conflict between minimising the cost of FIDF borrowing and the setting of interest rates consistent with inflation targeting. In 2002, the MOF and the BOT agreed on the resolution of these losses through the issuance of government savings bonds up to THB 780 billion to fund the unresolved FIDF losses.⁶ While the government is responsible for the interest

⁶ The government fiscalised part of the FIDF losses by issuing THB 500 billion in bonds (FIDF I) in 1998 and guaranteeing another THB 112 billion of FIDF bonds (FIDF II) in 2000, leaving THB 777 billion unresolved. While the government pays the interest expenses on these bonds from the budget, the assistance has not completely resolved the FIDF's losses. Addressing the government's concern over the effect of "too low" interest rates on household incomes and to minimise the impact of issuing a large amount of bonds on the bond market, Thai banks are marketing two issuances of government savings bonds (five-, seven- and 10-year maturities) to their retail clients (individuals, cooperatives and foundations) worth THB 300 billion and THB 480 billion. In September 2002, a total of

payments, the BOT undertakes to repay the principal of the savings bonds out of annual net profits on its foreign currency reserves from 2002 onwards. As such, there is no longer a need for the FIDF to raise funds in the repurchase market.

Bank Indonesia (BI) is still working on an arrangement with the government to sort out the sharing for the IDR 144.5 trillion losses resulting from BI's Liquidity Assistance (BLBI). At the height of the Asian crisis, BI provided a bridge loan to banks with liquidity problems and many of them failed afterwards. These insolvent banks and other assets pledged by their former majority shareholders were then transferred to IBRA. Thus, BI can be interpreted to have provided some of the funding for IBRA's asset acquisition. However, the government disputed its responsibility for the amount of BLBI losses, putting BI at risk of bankruptcy.⁷ More recently, an independent team set up to resolve the dispute suggested the government issue bonds to BI to cover its losses. The government does not pay interest on these perpetual promissory notes, to the extent that BI's financial condition will not be jeopardised. However, such an arrangement might still harm BI's financial soundness because following the initial BLBI, BI issued a large amount of Bank Indonesia Certificates (SBIs) to absorb this huge amount of additional liquidity in order to neutralise its effect. While BI will not receive interest

THB 305 billion of savings bonds were sold. The other part of this agreement is the redemption of the THB 500 billion in government bonds that are to be funded by 50% of the privatisation proceeds and 90% of the BOT's net profits. So far, privatisation has produced little money and the BOT General Accounts has been accumulating losses since 1997.

⁷ In 2000, a working committee of the Indonesian parliament concluded that BLBI was a government policy and thus was the government's responsibility. BI and the government agreed to share the costs. However, such a cost-sharing arrangement has never been realised. See *The Jakarta Post*, 15 June 2002.

payments from these special government bonds, it still has to pay interest on the SBIs.

Compared to Indonesia, the indirect involvement of the central banks in Korea and Malaysia is relatively small. The Bank of Korea (BOK) acquired about 10% of the total NPA bond issuance at an interest rate of 5% in 1998, which was below the prevailing double digit market rates at that time, mainly to meet the initial cash needs of the NPA Fund. Since the repayments of the NPA bonds are fully government-guaranteed and the BOK does not have direct financial exposure to the NPA Fund, the effects on the BOK's balance sheet are limited. The Bank Negara Malaysia is not directly involved in financing Danaharta's operations. Its exposure in the banking crisis is limited to its equity share of about MYR 3 billion in Danamodal, which in turn had injected MYR 7.6 billion cash for recapitalisation purposes into 10 banks. By the end of 2001, the beneficiary had repaid most of Danamodal's investments, mainly as a result of the consolidation of the banking system.

5. Asset resolution

Following asset transfers, the focus of an AMC is to resolve NPAs through a variety of methods. Given the acquired portfolio, mandate and general institutional and market constraints, practices of asset resolution differ across AMCs, ranging from rapid disposition, medium-term corporate and debt restructuring to combinations of some of these. Such differences in turn will, together with other factors, determine the principal resolution techniques adopted by AMCs, the pace of resolving the acquired assets and asset recovery. This section compares the resolution strategies, paces of asset resolution and recovery of AMCs in East Asia and examines the contributory factors to their differences.

5.1 Principal resolution approaches

The term “asset resolution” has different bearings across AMCs, in part owing to their diverse mandates and objectives (see Section 1). On balance, different mandates as well as their relative importance to a large extent determine the scope and techniques of asset resolution, and have an effect on the criteria used to evaluate performance. Even with similar mandates, the choice of techniques could still differ markedly, given the initial scale of the NPL problem and the prevailing economic as well as market environments. Many AMCs in East Asia have used multiple methods to resolve transferred assets, which could be categorised into two broad approaches. The first approach is to convert an NPA into a performing asset, mainly through restructuring of either the loan, or the borrower, or both. The second approach is to dispose of assets, including the associated collateral if possible, through various means.

It remains a policy debate whether an AMC should shoulder the task of corporate restructuring, as discussed earlier. Often, corporate restructuring encompasses debt restructuring, but not necessarily vice versa. The restructuring approach typically maintains the loan relationship with the borrower, tactically extending the relationship with the borrower to increase their chance for rehabilitation. A debt rearrangement typically embraces additional financial supports in altering the time horizon of the loan, grace periods, etc, and is quite common in dealing with viable borrowers. Debt restructuring is an approach with a longer-term perspective and is often supplemented by corporate reorganisation, which in general requires specific legal and administrative powers granted to the AMCs. In contrast, the second approach puts a greater emphasis on the quick removal of both secured and unsecured NPAs from the balance sheet of the AMC, which is executed mostly via straight loan sales (public, private or bulk sale), auctions, foreclosure on collateral, or some form of asset securitisation. Unsecured loans typically end up in either restructured loans or in collections of unhidden assets in case of bankruptcy of the borrower.

In practice, most Asian AMCs have embraced both resolution approaches, including TAMC, which, given its mandate, resolved most of its acquired assets by restructuring (Fung et al (2003)). As a share of resolved assets, broad restructuring varies from some 65% for TAMC to 25% for IBRA. In this regard, a comparison of Danaharta and KAMCO, two of the better performing Asian AMCs, proves useful. At both AMCs, the two resolution approaches are almost evenly split (Table 10). However, there are important differences. For example, within the general restructuring approach, KAMCO has relied much more on debt restructuring, while Danaharta appears to have embraced corporate restructuring more. Moreover, the mechanisms of corporate restructuring also differ between KAMCO and Danaharta. Whereas KAMCO mostly handles corporate restructuring directly by itself, Danaharta's corporate restructuring often involves a separate corporate restructuring agency. As to the general disposition approach, securitisation has played a greater role in Korea than in Malaysia. In the end, it seems that at both AMCs, strong political and legal backing has played a crucial role in their relative success, regardless of the differences in their resolution approaches.

One resolution technique that has not yet been widely used in Asia is asset securitisation, which recovers value through issuing securities backed by a pool of assets. This method has the advantage of attracting a broader investor base and the potential to reduce the administrative costs for the AMC, especially for the disposition of small enterprise assets and retail loans. The issued bonds can be either in domestic currency or in foreign currency, both of which have been used in Korea. KAMCO has been very keen on using this technique and in 1999 had already arranged its first issue, which has so far accounted for 22% of KAMCO's overall recovery. Danaharta has issued securitisation bonds only domestically, mainly due to the absence of a cross-currency swap market, where it has accounted for only 2% of its overall asset recovery. In Japan, since the expansion of the functions of the RCC in 2002, two securitisation deals have been constructed in order to diversify the resolution methods, but these have

only accounted for 1% of the total recovery. While asset securitisation is gaining popularity,⁸ the lack of a supporting legal framework as well as a well developed capital market and, in many cases, the small number of performing assets, a precondition for securitising a pool of assets, may restrain the more extensive use of this method in East Asia. In any event, asset securitisation on the one hand depends on, and on the other hand facilitates, the development of local securities markets in East Asia.

More generally, assessing the relative effectiveness of various resolution methods is no easy task, given a lack of required data. Some resolution instruments that are more effective in certain economies or for some types of assets may not be very useful in other situations. For instance, the use of asset-backed securities may work well in Korea but this may not be the case in Indonesia, given the differences in the capital market and legal framework. This is true even if the mandate would allow for its use. On the other hand, most AMC's use more traditional approaches such as auctions, loan collections and loan restructuring, with the notable exception of TAMC. As will be discussed next, the choice of resolution instruments may potentially contribute to different performances in resolution progress and asset recovery.

5.2 Resolution progress and asset recovery

The pace of resolution is important for both making assets available for alternative uses and managing bank restructuring costs. While some balance should be struck between fire

⁸ In Indonesia, IBRA has planned to offer collateralised debt obligations by securitising a diversified portfolio of restructured loans and loans in the MOU stage. Two of the four Chinese AMC's have recently announced the country's first ever ABS deals, one with Deutsche Bank and other with a domestic securities firm, though key details of the deals remain sketchy at the moment.

sales and extended warehouse parking, it is generally agreed that AMCs should aim for speedy resolution of their acquired assets. Hence, the resolution pace of the assets under the control of the AMC and the recovery amount from such resolution represent two key performance indicators of the AMC. However, it is a daunting challenge to compare resolution progress and recovery performance consistently across AMCs, owing to the marked differences in their starting points of operations, mandates, initial scales of NPL transfers, resolution techniques used and data availability.

With these caveats in mind, specific indicators can be constructed to shed light on the questions of resolution progress and recovery performance. To gauge the pace or progress of resolution, we employ a broad measure: the ratio of the cumulative assets resolved to the total transferred assets of the AMC, both in book value. This ratio informs us roughly what proportion of the acquired assets has been dealt with rather than simply parked in the warehouse.⁹ As to the asset recovery performance, our analysis is based on two measures, one broader and the other narrower, in order to reflect the important difference between cash and non-cash recovery. The broad approach takes the ratio of the cumulative total recovery, both cash and non-cash, to the book value of cumulative resolved assets. Non-cash recovery may assume the form of physical assets, financial assets (such as promissory notes) or invisible assets (such as goodwill). This approach accommodates the diversity of AMCs but tends to be more generous in measuring true recovery from resolving distressed assets. There is also the residual risk in the case of restructuring, as further economic

⁹ Of course, this ratio is not a perfect measurement of the resolution pace, as it fails to indicate different stages of incomplete resolution, which could be important in the case of IBRA, and does not account for the history of the AMC in question, since some AMCs (such as TAMC) only started their resolution operations in 2002.

downturns could lead to both more defaults of the loans/firms in question and a further decrease in the value of the acquired assets. The other and narrower approach is stricter and more demanding, using only cumulative cash recovery (as a ratio to the book value of cumulative resolved assets) for comparison. This narrow measure is based on the mark to market approach.¹⁰

The progress in asset resolution has been strikingly different across AMC's so far (Table 11). While Danaharta has almost resolved its entire portfolio of acquired assets within four years of its establishment, China's four AMC's so far have only managed to resolve, dispose of or liquidate some 20% of the total assets transferred to them into their fourth year. At this pace, it would probably take another 13 years for the four Chinese AMC's to entirely unload their acquired portfolios. KAMCO and TAMC fall in between, with some 60% and 40%, respectively, of their acquired portfolios having been resolved in one way or another. The progress in Indonesia and Japan is harder to gauge, as IBRA and the RCC do not provide information on the amount of NPAs resolved. Anecdotal evidence, however, points to much room for a possible acceleration in the pace of asset resolution at these two latter AMC's (Fung et al (2003)).

Generally, Asian AMC's are expected to recover one quarter to half of the book value of the acquired assets, comparable to the experiences in other parts of the world (Table 11). On the basis of the broader measure, Danaharta and KAMCO have been more impressive, achieving a recovery rate of some 50-60%. China's four AMC's have managed to recover 33.6% from their asset resolution. However, the more demanding cash recovery indicator reveals a somewhat different picture.

¹⁰ We supplement these two indicators of recovery performance with the target recovery, either the official or our own estimate, upon completion of asset resolution.

While asset recovery by KAMCO is mostly in the form of cash, practically all of TAMC's asset recovery is in the form of non-cash restructured loans. China and Malaysia are in between, with their cash recovery amounting to one to two thirds of their total recovery. Thus, the overall recovery appears to be fairly high in some cases but is less so in terms of cash recovery. A combination of high total recovery and low cash recovery in the cases of Danaharta and TAMC may indicate some residual risk, as the market value of the non-cash recovery remains exposed to fluctuating market conditions.

5.3 Factors influencing resolution and recovery

Parallel to the possible determinants of asset acquisition (see Section 3), several similar factors seem to have also contributed to the marked differences in the pace of asset resolution and recovery across AMCs. They include the initial scale of the banking problem, legal/political backing of the AMC and the AMC's mandates. In addition, there are other more specific factors that could have a bearing on the pace of resolution and performance of asset recovery, such as the general market environment, the quality of the acquired assets and the resolution approaches used.

A smaller banking problem creates less of an overhang in the asset market and eases the challenges arising from the disposal of assets, especially where capital markets are not deep. This should help an AMC to obtain better prices from resolution, both speeding up the pace of resolution and lifting the recovery amount. For instance, IBRA faces the extremely difficult task of having effectively to deal with 80% of Indonesia's banking sector as it was at the height of the Asian crisis (Fung et al (2003)).

Stronger political and legal backing and clear AMC mandates tend to speed up resolution and facilitate recovery. Danaharta provides a positive example since its founding law granted it special powers to take over underlying assets more easily and quickly. Similarly, KAMCO has also received strong legal and

political backing. By contrast, IBRA has had seven different chairpersons in just five years, suggesting strong political influence on the AMC, which is unlikely to be conducive to its resolution and recovery efforts. TAMC's mandate mostly excludes the possibility of loan auctions, weakening its capacity to promptly resolve the acquired NPLs. The Chinese AMCs have been burdened with conflicting mandates (for example, to assist returning state enterprises to profits in three years) and have to operate under a less supportive legal system. However, the Chinese government does provide explicit cash incentives for the AMCs to encourage faster resolution and better recovery, which may be responsible for the latest pickup in the speed of asset resolution (Ma and Fung (2002)).

In general, prevailing market and economic conditions also influence the AMC's performance of resolution and recovery. In Japan and to a lesser extent in Taiwan, the protracted declines of property values through the 1990s have made it challenging for the RCC and FRF to achieve a high collection rate for real estate loans. On the other hand, the recovery in Korea's real estate market could have contributed to KAMCO's asset recovery performance. More generally, the ultimate recovery rate achieved by the AMC on a mark to market basis will hinge on the current market and economic conditions.

The quality of the underlying assets affects the choices of resolution methods and influences resolution pace and recovery. In general, recovery seems to be better with loans that have higher ratios of collateral and that were made more recently. This is especially true in the case of consumer loans. In contrast, loans which are individually large tend to reduce management costs, but in some cases might increase the difficulties and time needed for resolution, such as in the cases of the restructuring of chaebol in Korea and big companies in Thailand. Hence, a low recovery rate of one AMC itself need not be seen as an indication of its poor recovery performance, as the quality of the acquired assets has been predetermined. For example, the Chinese AMCs

have so far managed to recover only one third of the book value of the resolved assets, mainly because many of their acquired loans have low levels of collateral and have been non-performing for at least four years prior to their actual transfer. An asset that remains non-performing for an extended period of time is likely to see its value diminishing rapidly. Similarly, most of the NPLs taken over by IBRA are the lowest-quality category five loans and thus would mostly probably cap any potential recovery upside.

Finally, the different approaches for asset resolution in turn also contribute to the differences in AMC recovery performance. Our findings suggest that a more focused disposition strategy supplemented with some corporate/debt restructuring tends to work better in achieving speedy resolution and higher asset recovery (Fung et al (2002)). This is evident in the cases of Danaharta, KAMCO and also, more recently, in some of the Chinese AMCs. In particular, selling assets is a more efficient way of dealing with retail loans and developer loans or foreclosed collateral, while more could be recovered from loans to big manufacturing corporate borrowers via some combination of asset sales and corporate/debt restructuring, as can be seen from the cases of Danaharta and KAMCO.

6. Conclusions

Many East Asian economies have employed government-owned AMCs as a key component of their broad strategy to respond to their banking problems, with a view to restoring the health of financial institutions by dealing with NPLs as quickly as possible and minimising the associated costs to the public. While some AMCs are in the process of winding down, others may stay around for an extended period of time. Here, we summarise our main findings and observations, and point out the residual risks of using a public AMC as a major policy tool for NPL resolution.

In general, public AMCs have so far managed to take over a substantial portion of NPLs from East Asia's banking systems. The extent of the banking problem, political will, AMC mandates, asset valuation and the urgency of addressing the NPL problems, when combined, have had a significant influence on the amounts and kinds of assets that were transferred to the AMC. Pricing of the assets transferred appears to be a key issue since an AMC has to balance between enticing banks to sell their NPLs and the potential cost to the AMC and ultimately to taxpayers. Transferring assets at market value implies that the banks will have to realise the loss, which may force some of them into insolvency, given the large NPL volumes carried in some cases at unrealistic valuation. Those AMCs that acquired assets at prices above their fair value are likely to be subject to significant losses. The successful experience of some economies that use option-like profit- or loss-sharing agreements in acquiring NPLs from banks suggests that such an arrangement tends to facilitate NPL transfers and to contain potential AMC losses.

Asset resolution is arguably the most important task of an AMC and there are a wide range of factors that have influenced the resolution pace and recovery amount. These include the initial scale of the banking problem, the AMC mandate, the political and financial backing, the legal environment, the underlying quality of the acquired assets, and the prevailing economic and market conditions. Broadly, these factors work in favour of the AMCs in Korea and Malaysia, helping to explain the greater success of KAMCO and Danaharta in resolving and recovering assets. Total recovery from resolution for the AMCs studied, including both cash and non-cash, varies from 20 to 50 cents on the dollar, which is in line with international experiences. The experiences of these AMCs suggest that they should promptly dispose of their assets, rather than sitting on the impaired assets and hoping that an economic turnaround will reduce their losses. The East Asian AMCs have employed different resolution methods, including securitisation. However,

depending on market infrastructure and kinds of assets, certain resolution methods may be desirable but not practical in some economies. Many AMC's have favoured outright disposition of the acquired NPLs since this method can put assets back into productive use more quickly, makes it easier to measure recovery, can be conducted in a more transparent manner and is less subject to political interference. At the same time, almost all AMC's have also used debt/corporate restructuring for asset resolution. While all AMC's consider a restructured loan to be a resolved NPL, definitions can vary widely. In some cases, the restructured loan can become an NPL again, which could substantially increase the ultimate costs to the AMC's.

In general, we find that government-owned AMC's have contributed to the revival of the banking system, as can be seen in the improvements in balance sheets and regulatory capital of Asian banks. In most cases, a significant portion of the NPLs was stripped off and replaced with earning assets backed by governments. Moreover, market-oriented asset disposition, genuinely restructured debtors with viable prospects and better capitalised banks all help contribute to a stronger banking system and more efficient allocation of resources in the economy. This should in turn help restore the bank's credit creation capacity, which may also depend on other elements of the broader bank restructuring programmes, as reflected in the recent credit expansion of Korean banks. However, the intertwined relationship between the banks, the AMC and the central bank in many economies raises the issue of the residual risks in using AMC's as a major tool of NPL resolution.

The extent of the improvements in bank balance sheets needs to be qualified owing to the presence of residual risks to the banks as a result of the close and complex relationships between the banks and the public AMC in some cases. First, the put options retained by some AMC's and loss-sharing agreements between the AMC and the selling bank over the transferred assets may give rise to the possibility of continued bank exposure to NPLs supposedly already stripped out.

Second, bonds issued by AMCs in exchange for NPLs acquired from selling banks are the most common form of AMC financing. Thus, the structures of these AMC bonds, such as their seniority, government guarantees, interest payments and marketability, in some cases beg the question of whether bad assets are indeed replaced by good assets earning market returns and with market liquidity. These issues related to AMC bonds also have important implications for banks' regulatory capital. Finally, the unusually complex relationships between AMCs and banks sometimes raise the question of whether the assets transferred to AMCs are properly "derecognised".

The residual risk to the public AMC is not trivial, given the size of the NPL resolution task on hand. With a range of AMC policy assignments and a significant cost of acquiring NPLs, the eventual AMC losses will depend in part on how much value the AMC can recover from the resolved assets, measured in terms of ultimate cash recovery or more generously defined total recovery that also includes non-cash recovery. In some cases, cash recovery represents only a small portion of the total recovery. Thus, there are residual risks to the AMC's cash recovery, in part because the value of the "non-cash recovery" could be subject to fluctuating market and economic conditions and in part because some restructured debts may turn into NPLs again. Therefore, the ultimate recovery and final losses of the AMC remain uncertain.

The potentially large financial losses arising from public AMC operations also suggest residual risks to the central banks involved in AMC financing. Most government-owned AMCs in East Asia have been principally debt financed. The high leverage of AMC financing is in part motivated to avoid direct government budget hits through off-balance sheet arrangements and in part to allocate some of the expected AMC losses to other institutions, including central banks. For those East Asian central banks that are directly or indirectly involved in financing the AMCs, the potential AMC losses could have material impacts on their balance sheets, which

may affect central bank operations and also raises the interesting question of eventual loss allocation.

In sum, the East Asian experience suggests that public AMCs have played an important and positive role in helping the banking system return to health by removing NPLs from banks so that they can resume lending more quickly. The performance of these AMCs varies widely across the East Asian economies. The extent of genuine improvements in bank balance sheets, the ultimate AMC losses in cleaning up the bank balance sheets and the possible impact on central banks involved in financing these public AMCs can be better assessed in a few years' time when more AMCs are winding down their operations. In order for public AMCs to be a useful policy tool, governments need to have the commitment to recognising the eventual costs of dealing with NPLs in the banking system in one way or another.

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Appendix

Table 1
Overview of the banking system and NPLs
as of end-2002 (in percentages)

	CN	ID	JP	KR	MY	PH	TH	TW
Banking system assets as a % of GDP	210	74	149	154	158	84	136	211
Assets of state-owned banks as a % of total bank assets	63	49	NA	NA	NA	11.5	27.7 ¹	60
NPLs/GDP								
Peak	35	26.8	8.4	10	25.5	7.9	54.1	11.4
End-2002	20	2.1 ²	8.4	5.3	18.5	6.2 ³	8.4	9.1
NPLs/total loans								
Peak	42	48.6	9.7	15	30.1	18.1	51.6	7.5
End-2002	20	8.1 ²	9.7	3.9	8	15 ³	10.1 ¹	6.1

Note: CN = China; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = Philippines; TH = Thailand; TW = Taiwan, China.

¹ As of November 2002. ² Excludes NPLs transferred to AMCs. ³ NPLs in commercial banks under the central bank's new NPL definition.

Sources: National authorities; authors' own estimates.

Table 2
Main characteristics of AMC

	Name of AMC	Year set up	Legal basis	Official mandate	Sunset date
China	Great Wall Asset Management (Great Wall)	1999	State Council executive order in 2000	Restructuring/rapid asset disposition	10 years
	Orient Asset Management (Orient)	1999	State Council executive order in 2000	Restructuring/rapid asset disposition	10 years
	Cinda Asset Management (Cinda)	1999	State Council executive order in 2000	Restructuring/rapid asset disposition	10 years
	Huarong Asset Management (Huarong)	1999	State Council executive order in 2000	Restructuring/rapid asset disposition	10 years
Indonesia	Indonesia Bank Restructuring Agency (IBRA)	1998	Presidential Decree in 1998 and revision of Banking Law	Restructuring	Feb 2004

	Name of AMC	Year set up	Legal basis	Official mandate	Sunset date
Japan	Resolution and Collection Corporation (RCC)	1999	A merger of HLAC and the RCC, following the revision of two laws	Rapid asset disposition/collection	NA
Korea	Korea Asset Management Corporation (KAMCO)	1962	Established by law in 1962, role expanded in 1997	Restructuring/rapid disposition	NA
Malaysia	Danaharta	1998	Incorporated under the Company Act of 1965	Restructuring/rapid disposition	2005
Taiwan, China	Financial Restructuring Fund (FRF)	2001	The Statute for the Establishment and Management of the FRF in 2001	Rapid asset disposition	NA
Thailand	Thai Asset Management Company (TAMC)	2001	Emergency Decree in 2001 later ratified by Parliament	Restructuring	June 2013

Sources: National authorities; authors' own estimates.

Table 3

Supervision, corporate governance structure and transparency of AMCs

	Legal status	External supervision	Internal governance	Transparency	
				Disclosure	External audit
China	NBFI	MOF, PBOC, CSRC, CBRC	Board of supervisors	Regular press releases via PBOC	No
Indonesia	Government agency	MOSOE, FSPC	Oversight committee	Annual report, monthly activity report, website regularly updated	Yes
Japan	Subsidiary of DICJ	FSA, BOJ	...	Website regularly updated	No
Korea	Subsidiary of KDB	FSS, MOF	Board with 11 members, no outside members	Annual report, website regularly updated	Yes
Malaysia	Government-owned corporation	MOF	Board with outside members, oversight and audit committee	Annual report, half-yearly report, operations report, website regularly updated, regular press conferences	Yes

	Legal status	External supervision	Internal governance	Transparency	
				Disclosure	External audit
Taiwan, China	Subsidiary of MOF	MOF	...	.	.
Thailand	State agency	MOF, BOT	Board with outside members, audit committee	Annual report, website regularly updated	Yes

Note: NBFi = non-bank financial institution; DICJ = Deposit Insurance Corporation of Japan; KDB = Korea Development Bank; CSRC = China Securities Regulatory Commission; MOSOE = Ministry of State Owned Enterprises; FSPC = Financial Sector Policy Committee; FSA = Financial Services Agency (Japan); BOJ = Bank of Japan; FSS = Financial Supervisory Service (Korea).

Sources: National authorities; authors' own estimates.

Table 4

Legal environment for AMCs in asset resolution

	Business laws (corporate, bankruptcy, foreclosure, etc)	Special legal powers¹	Legal protection for AMC staff	Independence
China	1986	Yes	No	Limited
Indonesia	Revised and updated in 1998	Yes	No	No
Japan	Ongoing revisions	No	No	Limited
Korea	Strengthened in 1998	Yes	No	Yes
Malaysia	Ongoing revisions	Yes	No	Limited
Thailand	Revised in 1998	Yes	No	Limited

¹ For example, power to seize assets or foreclose on loans without going through the courts, to buy or sell loans without debtor approval, or exemptions from taxes.

Sources: National authorities; authors' own estimates.

Table 5

Cumulative transfers of non-performing assets to AMCs

Book value as of 31 December 2002

	Total in USD (local currency)	As a % of GDP¹	As a % of total loans¹	As a % of total NPAs¹
China ²	170 bn (1.4 trn)	14.5	20.7	40.9
Indonesia ³	35 bn (314 trn)	19.5	76.4	90.4
Japan ⁴	290 bn (34.9 trn)	7.0	8.1	46.5
Korea ⁵	90 bn (110 trn)	19.5	29.8	85.0
Malaysia ⁶	15 bn (48 bn)	14.3	7.4	91.6
Thailand ⁷	17 bn (718 bn)	13.7	18.7	29.0
Total	370 bn			

¹ Both GDP and total loans refer to 2002 figures, while total NPAs are referred to as the estimated recent peak NPA level for the economy in question. ² China's NPL transfers are measured against the big four state-owned banks only and took place in 1999-2000. ³ According to IBRA, total bank loans transferred to IBRA as of 16 April 2003 amounted to IDR 392 trillion, including performing and non-performing loans, while total assets including loans, banks and other assets under IBRA's management amounted to IDR 505 trillion in 2001. IBRA's 1999 Annual Report mentioned that 64% of the loans transferred were category-5 loans. Using this figure and the assumption that all loans transferred to IBRA after 1999 were non-performing, we estimated about 80% of the loans transferred to IBRA were non-performing. To calculate total loans and total NPLs, we added back IBRA's holding of loans and non-performing loans to those in the banking system. Average exchange rate as at end-2002 is IDR 8,940 to the US dollar. ⁴ Total NPLs in Japan are taken as the sum of the latest official NPA estimate and the cumulative transfers of NPAs to the RCC. ⁵ For Korea, the transferred NPAs include those from both banks and non-bank financials. ⁶ Malaysia's NPLs managed by Danaharta, based on six-month classification. ⁷ Thailand's NPL transfer data is for June 2002.

Sources: Central banks; AMC publications; governments; authors' own estimates.

Table 6
Scope of asset transfers by AMCs

	China	Indonesia	Japan	Korea	Malaysia	Thailand
Participating institutions						
Selected banks	Y	Y	Y	Y	Y	Y
All banks	N	Y	Y	Y	Y	N
All banks and non-banks	N	N	Y	Y	Y	N
Types of assets transferred						
1. Performing	Y	Y	Y	N	N	N
Non-performing	Y	Y	Y	Y	Y	Y
2. Loans	Y	Y	Y	Y	Y	Y
Banks	N	Y	Y	N	Y	N
Other assets	Y	Y	Y	Y	Y	N
3. Loan size restriction	N	N	N	N	Y	N
Loan vintage restriction	Y	N	N	N	N	Y

Note: Other assets may include equity, real estate, commercial paper, automobiles and other types of assets. In the case of Taiwan, China, one failed financial institution was taken over by another bank with the government-backed Financial Restructuring Fund providing for the liquidity support.

Sources: Central banks; AMC publications; official estimates; authors' own estimates

Table 7

Sectoral distribution of transferred assets

(total book value = 100%)

	Manu- facturing	Real estate	Commerce	Exports/ imports	Others
China	47	7	16	8	22
Thailand	28	24	11	10	27

Sources: Central banks; AMC publications; official estimates; authors' own estimates.

Table 8
Approaches to asset transfers by AMCs

	China	Indonesia	Japan	Korea	Malaysia	Thailand
Average acquisition price (as a % of book value)	100	100 ¹	7.2	36.1	46.0	33.2
Pricing approaches used						
Book value	Y	Y	N	N	N	N
Fair value	N	N	Y	Y	Y	N
Others	N	N	Y	N	Y	Y
Incentives/penalties						
Statutory requirements	Y	Y	Y	Y	Y	Y
Gain- or loss-sharing (options)	N	N	N	Y	Y	Y

¹ For Indonesia, NPLs were transferred from banks at zero value. However, the government recapitalised or took over these banks through the issuance of government recapitalisation bonds. Thus, one can interpret that these NPLs were acquired at book value.

Sources: Central banks; AMC publications; official estimates; authors' own estimates

Table 9
Sources of funds for AMCs
as of end-2002 (in percentages)

	CN	ID	JP	KR	MY	TH	TW
Direct government funding	3	100	100	0.6	20	0.4	100
Debt	97	0	0	99.4	80	99.6	0
AMC bonds	58		0	94.9	67	99.6 ¹	0
Other borrowings	0	0	0	4.6	13	0	0
Loan from the central bank	39	0	0	0	0	0	0
<i>Memo item:</i> ²							
Total funds raised	1,440	654 ³	212	21.6	15	232	140
As a % of GDP	15	44	0.04	3.96	4.48	4.5	1.47
NPL/NPA acquired ⁴	1,400	606	9,548	38.7 ⁵	9	238	0

Note: CN = China; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; TW = Taiwan, China; TH = Thailand.

¹ To be issued. ² In billions of local currencies, except in Indonesia and Korea, which are in trillions of local currencies. ³ The bonds issued are for bank recapitalisation, liquidity assistance of central bank and deposit guarantee. ⁴ Assets acquired at purchase price. For Japan, as of September 2002; for Korea, as of February 2002; for Malaysia, as of June 2002. ⁵ Cumulative from November 1997.

Sources: AMCs; government publications; authors' own estimates.

Table 10
Methods used for resolution¹
in percentages

	Restructuring			Disposal		
	Total	Debt restructuring	Corporate restructuring	Total	Other	Asset securitisation
China	60	...	...	40	40	0
Indonesia	25	...	...	75	...	...
Japan	...	...	...	...	...	...
Korea	48	34	14	52	30	22
Malaysia	54	21	33	46	45	1
Thailand	64	42	22	36	36	0

¹ Percentage of resolved assets (book value) as of year-end 2002.

Source: Authors' own estimates.

Table 11
Disposition and recovery of assets transferred

Cumulative as of 31 December 2002

	CN	ID	JP¹	KR	MY	TH²
Resolution	301 bn	...	...	65 tm	52.5 bn	293 bn
% of asset transfer	22	...	...	58.8	100	40.82
Recovery						
Total recovery	101 bn	134.9 trn	5.99 trn	30.3 trn	29.7 bn	...
Total recovery rate (%)	33.6	34	...	47	57	...
Total cash recovery	67.5 bn	102.6 trn	5.99 trn	26.5 trn	14.6 bn	0.6 bn

	CN	ID	JP¹	KR	MY	TH²
Cash recovery rate (%)	22.4	25.9	Na ³	41.4	27.8	0.2
Total target recovery	Na	...	...	42 trn	30.2 bn	...
% of asset transfer	30	...	80	42	57	47

Note: CN = China; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; TH = Thailand. Amounts are in local currency. Total and cash recovery rates are defined as the total and cash recoveries over book value of the resolved assets, except in the case of the RCC.

¹ Includes both former RCB and HLAC assets; recovery rate is based on purchase prices. Based on conservative pricing and self-imposed "no loss policy". ² Information distinguishing between the volume of assets resolved and the amount received is not available in the case of Thailand. ³ Since the RCC did not report the amount of assets resolved, total and cash recovery ratios based on total assets acquired at purchase price are both 60%. While it is unlikely that the RCC has already resolved all the assets acquired, the actual recovery rate is probably higher than 60%.

Sources: Official estimates; authors' own estimates.