

ADBI RESEARCH POLICY BRIEF NO. 2
FINANCIAL AND CAPITAL MARKETS

Reducing Currency and Maturity Mismatch

Based on ADB Institute Research Paper 30, *Avoiding Double Mismatches and Withstanding Regional Financial Crises: The Singapore Experience* (Khee-Giap Tan, T. Karigane & M. Yoshitomi, December 2001)

www.adbi.org/PDF/wp/rp30.pdf

Introduction: Identifying Policies, Factors and Conditions that Mitigated or Avoided Double Mismatches

The main objectives of this report are to identify and propose policies, factors and conditions that could mitigate or avoid double mismatches. It recognizes that not all policies can be replicated as they are very much affected by prevailing factors and conditions. By policies we mean any course of action pursued and adopted by the governing authorities as advantageous or expedient, that directly or indirectly alleviated double mismatches and paralysis in the financial system and financial institutions. Factors refers to the circumstances, facts or influences that have helped to mitigate or avoid double mismatches. Conditions refers to something that is a prerequisite to the granting of resultant stability and hence avoiding double mismatches.

In examining **Singapore's experience**, we began by giving some background about the nature of the East Asian financial turmoil and the high costs paid by the region's economies after undergoing hasty financial liberalization. We then identified the prerequisite conditions under the dichotomized financial system that help to avoid or mitigate the dilemma of double mismatches. We subsequently singled out major policies undertaken by the central bank that directly and effectively mitigated double mismatches. Moves such as the establishment of the existing large pool of multinational corporations (MNCs) and setting up of government-linked companies (GLCs), which happened for other reasons but nevertheless contribute significantly to mitigation of double mismatches, were also discussed. We extended our arguments to encompass broader general conditions undertaken sequentially and consistently at the national level that laid the foundation for minimizing system-wide instability.

Capital-Account Crisis and Double Mismatches

The East Asian financial turmoil has been particularly serious, because it was derived from a twin crisis, combining an externally

driven currency crisis with an internally induced banking crisis. In other words, it is capital account shortfall coupled with domestic credit contraction, which is distinct from the traditional current account crisis caused by a deterioration in domestic macroeconomic factors, such as inflation, fiscal deficits and low savings rates. Vulnerable banking institutions and financial systems were further typified and exacerbated by double mismatches, referred to as currency and maturity mismatches.

Although it is widely acknowledged that the East Asian financial crisis was essentially private sector-induced, we believe the governing authorities play the most critical role in creating, confronting and overcoming crises. Therefore, the respective regulatory authorities clearly should be held responsible for the imbalanced growth between the real and financial sectors as well as the ensuing financial tumult.

Regional governments often like to direct resources to promote financial centers and hasten the pace of financial liberalization. It is often overlooked that speedy capital growth through nonmarket-oriented promotions such as preapproved loans, directed lending, noncompetitive-priced borrowings and nonmarket evaluation assets are sure recipes for financial market instability.

Financial sequencing and spacing of policies between domestic and external financial market liberalization are typically ignored. Unsophisticated local corporations and indigenous financial institutions, in the midst of exuberant growth, have assumed sudden financial leverage or gearing without fully grasping the risks incurred. Regulatory authorities in particular did not realize or understand the grave implications of hasty financial liberalization and therefore failed to put in place the necessary institutional safeguards. The distortion in money market activities and currency funding exposures due to government interventions and caused by activities not motivated by market-oriented business considerations contributed to maturity and currency mismatches.

Buffer Impact of a Dichotomized Financial System

The Singapore terms of Asian Currency Unit (ACU) and Domestic Banking Unit (DBU) are potentially confusing. It is not known why they were coined in Singapore and became the subject of legislation. Often, the ACU and the DBU are misunderstood as currency units like the European Currency Unit (ECU, now euro) in Europe. Sometimes they are mistaken for demarcated financial markets. In fact, both are simply accounting conventions for financial legal entities established within financial institutions and registered to operate according to guidelines laid down by the Monetary Authority of Singapore (MAS). Technically, what distinguishes ACUs from DBUs is that the former are allowed to deal in any currency except the Singapore dollar. The two-tier financial entity serves to encourage foreign capital inflows to stay within the minimum-regulated offshore financial sector (i.e., ACU); while it also cushions foreign capital outflows, which are in the first instance discouraged but not prevented from flowing into the domestic financial sector (i.e., DBU).

Such accounting conventions, operated according to strict guidelines within financial institutions, are facilitated by the comprehensive disclosures of information by banks on their financial activities. Such information matrixes are later used by the regulatory authority in its setting and fine-tuning of policies. This shows that from the early stage of development, when the authority had little experience, it focused on establishing an extensive matrix of data and monitoring information on financial activities within the two-tiered financial system.

Clearly such a dichotomized financial system assumes a unique role where financial institutions are expected to observe not just the letter but also the spirit of all rules, regulations and guidelines laid down by the regulatory authority. This “uneven handed” relationship between financial institutions and the regulatory authority is expected to be maintained at least during the initial period of financial development before the rules of the game can take shape. Such conditions tend to put more emphasis on the micro approach of protecting individuals, products and projects, in contrast to systemic risk monitoring, as the financial system and institutions mature.

Singapore has always stood for free trade and free market competition. It has also been at the forefront of liberalization and has benefited from it. Could not the same principles apply to financial services? However, because money is the lifeblood of the economy, the governing authorities regard institutions offering financial services in a different light from manufacturing companies.

Setting Prudential Safeguards

MAS is able to mitigate double mismatches through effective policies such as prudential safeguards, incentive measures and an unorthodox non-internationalization of the local currency. The requirement of a high capital adequacy ratio (CAR) of 12%, exceeding the 8% minimum set by the 1988 Basle Capital Accord, reflects MAS's conservative attitude. Local banks, in particular, operate with CARs of about 20%, which is consistent with their risk-adverse attitudes, given the protected and lucrative domestic financial sector and tightly monitored internationalization of financial intermediation by the regulatory authority.

Introducing Fiscal Incentives

Incentives refers to measures that help to promote market development, strengthen market forces and stimulate participants' interest. To spur greater participation in ACUs, the concessionary corporate tax on income was reduced from 40% to 10% in 1973. This made participation in DBUs relatively less attractive. Although the corporate tax on income was steadily reduced to 25% in 1999, it is still much higher than the 10% imposed on ACUs. The success of fiscal incentives can be seen from changes in the shares of "out-out" transactions and "out-in" transactions when comparing Singapore's two-tier financial system with Thailand's Bangkok International Banking Facilities (BIBF). While "out-out" transactions in Singapore's ACU

market have exceeded 90% since 1994, the pattern in the BIBF market is relatively low, ranging from 16% to 43%.

Gradual Internationalization of the Singapore Dollar

To deter currency speculation, distinguishing between residents and nonresidents enables the authority to demarcate the financial activities of bank and nonbank customers between DBUs and ACUs. This policy is known as the restrictive usage of the Singapore dollar for nonresidents and by geographical boundary. However, as the strength of indigenous financial institutions and the local economy grows, MAS should slowly relax the limits on Singapore dollar financing to residents for overseas projects, in a gradual internationalization of the Singapore dollar.

Putting it another way, the primary concern is not with internationalization per se. In fact, Singapore's move towards liberalization and deregulation should not follow the free and open "big bang" approach adopted by London and Tokyo. Singapore's economic circumstances, institutional features and monetary policy design impose constraints that would limit the effects of a full relaxation of the role of the Singapore dollar.

Shaping the Banking Industry's Assets-Liabilities Structure and the Corporate Sector's Financial Requirements

To comprehend how financial institutions within a dichotomized financial system "evade" maturity and currency mismatches, we need to examine the subtle measures that significantly affect the domestic banking industry's assets and liabilities structure, which in turn shield or cushion financial institutions from double mismatches and external shocks. While we are able to argue that such measures effectively enable local banks to "evade" double mismatches, it is much more difficult to establish that it is indeed MAS's explicit policy objective.

“Nurturing” Domestic Banking Institutions and “Evading” Double Mismatches

On the asset management side, measures such as imposing a ceiling on Singapore dollar credit facilities for resident nonbank customers of offshore banks are perhaps more effective in preventing foreign encroachment on DBUs. MAS has consistently denied that such a ceiling poses a constraint to offshore banks since every foreign bank has excess of up to \$150 million in Singapore-dollar loans and it is not fully utilized. Such an argument is technically valid since the credit ceiling has been steadily revised upwards over the years.

On the liability management side, the relative inaccessibility of local deposits to restricted banks and offshore banks also discourages foreign participation in DBUs. Offshore banks and restricted banks are not allowed to accept fixed deposits of less than S\$250,000 per deposit and savings deposits from nonresidents. In addition, offshore banks are not allowed to accept savings deposits, fixed deposits and other interest-bearing deposits in Singapore dollars from Singapore residents.

Other restrictions include limits on the number of branch premises; exclusion from the Network for Electronic Transfers, Singapore (NETs); and limits on the number of automated teller machines (ATMs) allowed. These factors have, naturally, discouraged offshore banks from participating in DBUs. The unequal treatment of foreign banks in the domestic sector, where they are excluded from electronic point-of-sale systems and the shared ATM network and are restricted from branching, is perceived by some as constituting a cartel to keep them out of DBUs.

The inertia of foreign banks when it comes to participating in DBUs cannot be explained by the interplay of market forces and competition. Rather, it has arisen as a result of the government’s policy-inspired regulations to nurture local banks and to insulate the domestic financial sector from foreign participation. This strategy, while having its upside, nevertheless discourages competition and does not make financial

services more efficient. After decades of nurturing by MAS, the five major local banks have grown in size and are among the top 20 in Asia based on tier-1 capital. Although the limit on foreign shareholdings of locally incorporated banks was raised from 20% to 40% in the 1990s, these local banks are still considered small when compared with global players.

Multinational Corporations, Government-Linked Companies and their Financial Requirements

MNCs have contributed more than 50% to Singapore's gross domestic product (GDP) since the middle of the 1990s. They also accounted for 63% of the total assets of businesses involved in manufacturing in 1995. Hence, Singapore's foreign direct investment (FDI) as a percentage of GDP is the highest in Asia, often exceeding 10% of GDP, in contrast with some other Asian countries such as Indonesia, Republic of Korea and Thailand. MNCs tend to utilize equity financing from their parent company, so the funds committed to Singapore can be viewed to be stable and long term. Furthermore, MNCs listed on the Singapore Exchange (SGX) are able to raise funds via share issuances. Thus, external shocks such as the East Asian financial crisis would not result in a large-scale withdrawal of loans from Singapore.

The call for domestic enterprises to be more competitive against MNCs led to a government initiative to set up GLCs, which were intended to be later transformed into indigenous MNCs. Initially, the funds required by GLCs were raised through long-term loans made available by cash-rich local banks. In such cases, borrowings were in Singapore dollars as were repayments, eliminating the possibility of a currency mismatch. Since these businesses received income in foreign currencies, they were capable of making repayments in foreign currencies as well. In addition, several GLCs have been successful and have significant

cash piles. Therefore, large borrowings have not been required. Even in cases where they were needed, it is believed that relatively cheaper funds were available from the government trust. We can conclude that a currency mismatch or a maturity mismatch could not have arisen in the case of the GLCs.

Mitigating Double Mismatches vis-à-vis Sequencing of Financial Development and Liberalization

Liberalizing the pricing mechanism for basic monetary aggregates in the 1970s. If the underlying principles of the regulatory framework and the way in which it has evolved over time are examined, it becomes clear that the governing authorities have consistently opted for a liberalized financial environment based on the operation of market forces and high capital mobility.

Restructuring the monetary policy framework in the 1980s. Singapore has adopted an exchange rate arrangement in which MAS concentrates on a single nominal anchor instead of monitoring several intermediate targets or control measures at the same time. Singapore also will not maintain an official peg of any sort as this could lead to unrealistic exchange rates. Macroeconomic stabilization by MAS since the 1980s has been dominated by monetary policy, which is essentially exchange rate management. Empirical studies suggest that the hypothesis known as the triad of incompatibilities, that is, the noncoexistence of exchange rate stability, free capital mobility and monetary autonomy, does not hold true, at least in Singapore.

Deepening further financial markets and revamping bond activities in the 1990s. Financial liberalization and reform programs have been vigorously implemented in Singapore since the East Asian currency crisis. The key strategic thrusts of MAS's policy reforms are to further develop deep and broad capital markets in debt, equity and derivatives. One of the main focuses of reform is the Singapore

dollar-denominated bond market. One objective of the reform effort has been to mitigate or avoid the problem of double mismatches, accomplished by expanding the options available for raising long-term funds.

Challenges from cross-border financial activities, cyber-banking and further deregulation measures beyond 2000. In the interests of effective banking supervision, central banking authorities should seriously take into account the characteristics and impact of online financial services (OFS). Issues pertaining to maturity and currency mismatches may become more ambiguous since electronic money, which cuts across borders and is more fluid in nature, may attract further gapping risks and invite greater currency exposure, which will be even harder to understand, assess and trace. Yet OFS features high on the agenda of financial innovation, which will inevitably lead changes in financial markets and financial institutions.

Minimizing double mismatches through balanced and sustainable macroeconomic policies. According to our econometric estimation, Singapore's potential output is about 8% per annum. As long as Singapore grows within its potential output path, avoiding overheating, the economy would be the best focus to minimize double mismatches. Exchange rate policy, therefore, should be used as a tool not only to keep import prices stable but also to cool down the economy when it gets overheated by choking off the marginal export demand. The rationale is that rapid appreciation of the Singapore dollar within a short time span may not allow the benefit of the lower inflation to feed through to lower production costs in order to offset the higher export prices resulting from swift exchange rate appreciation. Thus, swift internationalization of the Singapore dollar would undermine MAS's sovereignty over exchange rate policy, hampering the achievement of its twin objectives of price stability and noninflationary growth. One of the key factors for effective exchange rate management must therefore be a "healthy or comfortable" level of foreign reserves accumulation.

Conclusion: Some Recommendations and Lessons Based on Identified Policies, Factors and Conditions

To sum up, Singapore has built a credible dichotomized financial system. A more pragmatic approach to financial liberalization would be to work according to the established regulatory framework by initiating changes from within. The tight or “high-handed” micro supervisory approach adopted by the regulatory authority towards financial institutions is to be expected, especially when MAS is forging ahead in uncharted waters during turbulent periods. Conservative attitudes in the form of the higher CAR that is required for banks, reflect ample prudential safeguards. Government initiatives, such as attractive fiscal incentives in support of the various financial activities of ACUs, have formed the basis of the marketing effort. Foreign financial participation in ACUs was successfully expanded and encroachment on DBUs discouraged because of various push and pull factors. Push factors, such as the ceiling on Singapore dollar loans, the relative inaccessibility of local deposits and higher reserve costs, kept foreign banks from participating in DBUs. Pull factors, such as abolition of the withholding tax on the interest income of nonresidents, waiver of the statutory reserve requirement, plus a wide range of fiscal incentives pertaining to syndicated loans, foreign securities trading and fund management, led foreign banks to concentrate and expand their offshore banking activities within ACUs.

However, the authority’s efforts to “nurture” indigenous banks into bigger international players initially through domestic market protection for the past three decades will not be continued indefinitely. The recent attempt by MAS to entice foreign competition into the DBUs, with approval planned of another six fully-licensed banks, is meant to “force” modernization and innovation of indigenous banks but not to do away with the demarcation approach to “cushion” fund flows. This “nurturing approach” that has been adopted does entail a tradeoff. In exchange for nurturing indigenous banks so that they can be sufficiently large to

compete internationally, protectionist measures will inevitably result in lower quality, fewer choices and less competitiveness in financial services for consumers.

Factors such as the presence of GLCs and MNCs are peculiar to Singapore, as are broad conditions such as sequencing of financial development and spacing of financial markets liberalization. However, given Singapore's extensive experimentation and positive results, we tend towards the view that there are common core principles that can be adopted by other emerging economies, with modifications to reflect local context and circumstances. We believe that the measures outlined in this report, if adopted as part of postcrisis financial architecture reform, would enhance regional financial stability.