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Malaysia: Danamodal Nasional Berhad (Danamodal)[1]

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Abstract

The Malaysian economy was relatively well positioned at the beginning of the Asian Financial Crisis. However, the government's response of tight fiscal and monetary policy, along with contagion from surrounding countries, had severe negative consequences. The banking industry became particularly vulnerable due to substantial loan growth preceding the crisis and exposure to volatile sectors, leading to an increase in NPLs and capital deterioration. As part of its approach to assist the ailing banking sector, the Bank Negara Malaysia created Danamodal Nasional Berhad (Danamodal) on August 10, 1998, as a wholly owned subsidiary aimed at recapitalizing banking institutions. Funding for Danamodal came from RM3 billion in central bank seed capital and RM7.7 billion of five-year zero-coupon bonds. Beneficiaries submitted a recapitalization strategy to Danamodal, which performed assessments in conjunction with external advisors to determine the viability of the institution and required injection amounts. The first phase of injections consisted of interim Tier 2 Capital; beneficiaries then negotiated and signed Definitive Agreements that converted the temporary capital into various types of permanent capital and outlined a long-term relationship with Danamodal. Danamodal appointed two nominees to the beneficiary's board of directors with additional appointments dependent on the amount of Tier 1 capital injected. Through its Board presence, Danamodal facilitated mergers and implemented behavioral reforms. Injections through Danamodal totaled approximately RM7.6 billion into 10 banking institutions and all funds were repaid by 2007 resulting in a final pre-tax profit of RM200 million.

Keywords: Board nominees, Definitive Agreements (DAs), Exchangeable Subordinated Capital Loans (ESCL), first-loss principle, interim capital

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[1] This case study is part of the Yale Program on Financial Stability (YPFS) selection of New Bagehot Project modules considering broad-based capital injection programs. Cases are available from the *Journal of Financial Crises* at
https://elischolar.library.yale.edu/journal-of-financial-crises/.

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Malaysia: Danamodal Nasional Berhad (Danamodal)

At a Glance

As the Asian Financial Crisis began spilling over into the Malaysian economy, its banking industry quickly began to struggle. Substantial loan growth preceding the crisis and exposure to volatile sectors had led to an increase in non-performing loans (NPLs) and deterioration of capital. As part of a larger plan, on August 10, 1998 the Bank Negara Malaysia (BNM) created Danamodal Nasional Berhad (Danamodal), a wholly owned subsidiary aimed at recapitalizing banking institutions. The BNM funded this Special Purpose Vehicle (SPV) with RM3 billion in BNM seed capital and RM7.7 billion of five-year zero-coupon bonds.

Summary of Key Terms	
Purpose: To recapitalize and strengthen the Malaysian banking industry, while acting as an active shareholder and Board representative to instigate mergers and revamp corporate governance among beneficiaries	
Announcement Date	July 13, 1998
Operational Date	August 10, 1998
Sunset Date	December 31, 2003
Program Size	RM16 billion authorized
Usage	RM7.59 billion by 10 institutions
Outcomes	Risk-weighted capital ratio (RWCR) for beneficiaries increased from 9.9% in September 1998 to 12.3% by the end of December 1999
Key Features	Injections were initially in the form of Exchangeable Subordinated Capital Loans and then were converted to other types of capital after further due diligence; part of a coordinated government package to address the financial crisis.

Danamodal, along with international advisors, reviewed submissions and performed analyses on banking institutions to determine their viability and required injection amounts. Initially, Danamodal injected Exchangeable Subordinated Capital Loans (ESCL), a form of Tier 2 Capital, as a temporary injection to allow for further due diligence and negotiation. During this interim period, beneficiaries signed Definitive Agreements that converted ESCL into permanent capital and outlined a long-term relationship with Danamodal. The three primary forms of permanent capital included Common Shares, Irredeemable Non-Cumulative Convertible Preference Shares (INCEPS), and Subordinated Loans. The different instruments provided a range of expected returns, control, and subordination. Following the injection of capital, Danamodal appointed nominees to the beneficiary's Board of Directors based on the amount of Tier 1 Capital injected. Through its Board presence, Danamodal facilitated mergers and implemented behavioral reforms. In addition, Danamodal worked with beneficiaries to create performance targets and closely monitored their progress. Over its lifetime, Danamodal injected approximately RM7.6 billion into 10 banking institutions, resulting in an increase of risk-weighted capital ratio (RWCR) for beneficiaries from 9.9% at end of September 1998 to 12.3% at end of December 1999.

Summary Evaluation

All beneficiaries exited the scheme by 2007 resulting in a final pre-tax profit of RM200 million. Although Danamodal has been credited as an essential part of the banking industry's recovery from the Asian Financial Crisis, the IMF raised issues regarding its strategy to spur lending and enhance beneficiaries' leadership and corporate governance.

Malaysia Context 1997–1998	
GDP (SAAR, Nominal GDP in LCU converted to USD)	$101.4 billion in 1997 $72.4 billion in 1998
GDP per capita (SAAR, Nominal GDP in LCU converted to USD)	$4,638 in 1997 $3,263 in 1998
Sovereign credit rating (five-year senior debt)	Data not available for 1997 As of Q4 1998, Fitch: BBB Moody's: A3 S&P: A-
Size of banking system	$137.9 billion in 1997 $110.7 billion in 1998
Size of banking system as a percentage of GDP	100% in 1997 100% in 1998
Size of banking system as a percentage of financial system	100% in 1997 100% in 1998
Five-bank concentration of banking system	64.8% in 1997 61.5% in 1998
Foreign involvement in banking system	18% in 2001
Government ownership of banking system	0% in 2001
Existence of deposit insurance	Yes in 2008 Yes in 2009

Sources: Bloomberg; World Bank Global Financial Development Database; World Bank Deposit Insurance Dataset; Cull, Martinez Peria, and Verrier 2018.

I. Overview

Background

In the years preceding the Asian Financial Crisis (AFC), market participants hailed East Asia as the global growth center for the next century, stemming from years of substantial economic growth through international inclusion, external facing strategy, and conservative fiscal policy (Abidin 2000). As a result, East Asian economies experienced "rapid export-driven growth, relatively low inflation, rising per capita incomes and reduced poverty." Unfortunately, certain characteristics of East Asia's rapid growth created a precarious economic situation that ultimately precipitated financial market turmoil. After years of pegged currency exchange rates, many regional currencies required realignment against the U.S. Dollar. The overvaluation of currencies fed a perception of uncompetitive export sectors and currency-peg instability. Additionally, macroeconomic imbalances began building as short-term investment from foreign investors financed large current account deficits across the region. Foreign capital began flowing into domestic financial markets as well. The final vulnerability emerged in the banking sector, where high credit growth in preceding years and the increase of funds flowing to illiquid and high-risk sectors such as property and equity markets had led to overall fragility. Eventually the increasing of interest rates to manage inflation and halt capital outflows exacerbated issues in this sector as asset quality weakened and non-performing loans (NPLs) rose (BNM 1997).

The immediate response by East Asian governments to curb currency pressures included hiking interest rates, direct currency exchange intervention, and implementing selective measures to curtail speculation. This approach proved untenable as foreign exchange reserves dwindled and other interventions had a perverse impact on domestic markets. The first clear indication of the AFC occurred when Thailand was forced to abandon its currency peg and float the Thai Baht on July 2, 1997, resulting in a rapid depreciation of the Baht by about 10-15%. Economies such as the Philippines, Indonesia, Malaysia, Singapore, Korea, Hong Kong, and Taiwan quickly felt the effects of this shock (BNM 1997).

Malaysia's economy remained strong at the onset of the crisis, with an economic expansion of 7.8% in 1997 (BNM 1997). Unlike other East Asian economies, it did not implement an IMF-supported plan or receive IMF financial assistance due to its relatively strong balance of payments position and its lower foreign debt load (BNM 1998a; Lindgren et al. 2000). However, the initial Malaysian response consisted of tight fiscal and monetary policy, similar to the IMF recommendation to neighboring countries (Abidin 2000). Examples of such policies included "reducing the current account deficit in the balance of payments, increasing the fiscal surplus through significant cutbacks in public sector expenditure, reducing credit growth and containing inflationary expectations by tightening further monetary policy" (BNM 1997). These measures aimed to repair market confidence in Malaysia, stem economic pressures, and stabilize the exchange rate (Abidin 2000). The government also targeted the banking sector by introducing stricter regulations regarding the categorization of NPLs and requiring increased transparency from financial institutions

(BNM 1997). However, it became clear that tighter fiscal and monetary policy had a deleterious impact on the economy as real output in 1998 declined 6.7% following twelve years of continuous expansion, averaging 7.8% annually. In response to these negative consequences, the Malaysian government decided to reverse course; it began to relax fiscal policies in March 1998 and ease monetary policy in August 1998. By this time, financial market turmoil had taken its toll; the Malaysian stock market, the Kuala Lumpur Stock Exchange (KLSE), fell by 72% and the Malaysian ringgit depreciated by 40% against the U.S. dollar from pre-crisis levels (BNM 1998a).

Similar to the overall economy, the Malaysian banking sector was well situated at the beginning of the AFC; this strength was displayed through quality of assets, strong capitalization, and prudential supervision (BNM 1998a). The primary forms of deposit-taking institutions within the banking sector included commercial banks, finance companies, and merchant banks (IMF 1999). Across the banking sector, by the end of June 1997, the risk-weighted capital ratio (RWCR) was 12% (substantially above the minimum of 8%) and net NPL ratios were 2.2%. In addition, the Banking and Financial Institutions Act 1989 (BAFIA) provided an integrated approach to bank supervision in Malaysia through regulations dictating capital ratios, transparency, and risk management (BNM 1998a).

Despite this perceived strength, underlying structural issues resulted in a deterioration of the Malaysian financial sector as the crisis continued. One contributing factor was the meteoric loan growth, averaging approximately 25% per year, between 1994–97. The private sector was especially reliant on banking sector financing due to the underdeveloped bond market (BNM 1998a). Increased lending led to elevated credit levels relative to GDP and significant credit exposures by institutions to at-risk sectors including property and equity markets (IMF 1999).

Due to the protracted crisis and ensuing contraction in economic activity, NPLs increased and capital deteriorated within financial institutions. By the end of June 1998, the net NPL ratio increased to 8.9% while RWCR had decreased to 11.2% (still above the 8% minimum) for the system as a whole (BNM 1998a).

The ailing banking sector prompted the Malaysian government to implement a multi-faceted policy approach to restore confidence in financial markets and struggling banking institutions (BNM 1998a).

Program Description

In July 1998, the National Economic Action Council (NEAC), on behalf of the Malaysian government, released a National Economic Recovery Plan (NERP) that outlined a strategy of government intervention. One stated goal of the NERP was recapitalizing the struggling banking sector to stabilize financial markets (Danamodal n.d.a). On August 10, 1998, Danamodal Nasional Berhad (Danamodal) was incorporated as a wholly owned subsidiary of Bank Negara Malaysia (BNM), the central bank of Malaysia. This Special Purpose Vehicle

(SPV) would serve two purposes: inject capital into banks and, through its shareholder role, merge core and weaker institutions and improve their management (BNM 1998a). Danamodal's Board of Directors included BNM representatives as Chairman, Managing Director, and other additional members along with a nominee from the Ministry of Finance and private sector appointees (Danamodal 1998a).

After performing a number of stress tests in various scenarios, BNM estimated the maximum budget for Danamodal to be RM16 billion. This amount would guarantee that the RWCR across the banking industry would stay above 9% (Danamodal n.d.a). Funding for Danamodal came from RM3 billion in BNM seed capital and RM7.7 billion of five-year zero-coupon bonds with a nominal value of RM11 billion, five-year maturity, and yield to maturity (YTM) of 7.25% (Danamodal n.d.a; Danamodal n.d.c). The bonds traded on the secondary market for Malaysian government securities. Unlike bonds issued by Danaharta, Danamodal's sister agency that purchased nonperforming loans, Danamodal's bonds did not carry an explicit government guarantee. However, they carried an implicit guarantee. BNM accepted them as collateral at its discount window and treated them as government securities on bank balance sheets in calculating banks' liquidity and capital requirements (IMF 1999).

Danamodal aimed to inject capital into viable, core, domestic banking institutions "based on commercial and market-oriented principles" (BNM 1998a; BNM 1998b). Beneficiaries submitted individual capital injection strategies accounting for various operating and NPL scenarios prior to receiving funds (Danamodal 1998a). Danamodal would then assess the future viability of the institution, analyzing quantitative and qualitative factors (Danamodal n.d.a). Goldman Sachs and Salomon Smith Barney (then a unit of Citigroup) served as external advisors throughout this process, assisting a variety of projects including assessments and due diligence reviews (BNM 1998a; Danamodal n.d.a).

During the first phase of recapitalization, Danamodal injected Exchangeable Subordinated Capital Loans (ESCL), a form of Tier 2 Capital (Danamodal 1999a). It bore an interest rate of 7.5% annually and a three-month maturity; beneficiaries had the option to extend the maturity if required. After receiving the interim ESCL, beneficiaries negotiated and signed Definitive Agreements (DAs) that converted ESCL into permanent capital and outlined a long-term relationship with Danamodal (BNM 1998a; Danamodal n.d.a). The three types of permanent capital were Common Shares, Irredeemable Non-Cumulative Convertible Preference Shares (INCEPS), and Subordinated Loans. The different instruments provided a range of expected returns, control, and subordination (Danamodal n.d.a). Danamodal valued its investments based on market-based methods (Danamodal n.d.b).

Danamodal stringently observed a "first-loss" principle throughout the process, whereby "shareholders would be required to bear all losses before the recapitalisation by Danamodal" (BNM 1998a). Adherence to this principle resulted in beneficiaries selling their NPLs to Danaharta, an asset management company created to purchase NPLs from banks, prior to receiving capital injections from Danamodal.[3] The individual needs of each beneficiary, including safety (application of first-loss principle), control, return, capital base, exit potential, and monitoring requirements, would dictate the structure of its investments (Danamodal n.d.a).

Following the injection of capital, Danamodal would appoint a minimum of two nominees to serve as Executive Director and either Chairman or Deputy Chairman on the Board of Directors of beneficiary institutions. The amount of Tier 1 Capital injected dictated greater Board representation. Through its Board presence, Danamodal expected to facilitate mergers and implement behavioral reforms such as "sound risk management practices and credit culture, good corporate governance and higher operational efficiencies" (BNM 1998a). In addition, Danamodal worked with beneficiaries to create performance targets and closely monitored their progress (Danamodal n.d.b).

Danamodal stated that it had an expected lifespan of no more than five years, with the majority of capital injections occurring during the first two years (Danamodal n.d.a; Danamodal n.d.b). Beneficiaries exited the scheme through "initial public offering, strategic sales of its holdings, and sales of its holdings directly in the market" (Danamodal n.d.b).

Outcomes

Danamodal injected RM6.15 billion of ESCL into 10 banking institutions in 1998, resulting in an increase in RWCR across the banking system from 11.2% at end of June 1998 to 11.9% at end of January 1999 (BNM 1998a). Throughout 1998 to 1999, all ten beneficiary banks, with the exception of Perdana Merchant Bankers, finalized their injection amounts and terms through Definitive Agreements (Danamodal 1998c; Danamodal 1999d). Danamodal performed no additional capital injections following December 1999 (BNM 2001a). The composition of the injections are shown in Figure 1 and balances over time are shown in Figure 2.

[3] For more information on Pengurusan Danaharta Nasional Berhad (Danaharta) see Dreyer (2021) in the *Journal of Financial Crises*.

Figure 1: Breakdown of Danamodal Injections (RM millions)

Banking Institution	Total Injection Amount	Date of Definitive Agreements Signing	Not converted from ESCL	Common Shares - Tier 1	Preference Shares (INCEPS) - Tier 1	Subordinated Loan - Tier 2
RHB Bank Berhad	1,500	November 30, 1998	–	–	1,000	500
Arab-Malaysian Bank Berhad	800	February 5, 1999	–	–	600	200
MBf Finance Berhad	2,280	March 12, 1999*	–	362	1,238	680
United Merchant Finance Berhad	800	March 30, 1999	483	–	317	–
Oriental Bank Berhad	700	March 30, 1999	–	250	300	150
Arab-Malaysian Finance Berhad	500	February 5, 1999	–	–	200	300
BSN Commercial Bank (M) Berhad	420	February 5, 1999	–	–	420	–
Arab-Malaysian Merchant Berhad	400	February 5, 1999	–	–	–	400
Sabah Bank Berhad	140	February 12, 1999	18	24	72	26
Perdana Merchant Bankers Berhad	50	November 13, 1998**	50	–	–	–
Total	7,590		551	636	4,147	2,256

*Danamodal injected RM680 million of Subordinated loans into MBf Finance Berhad on December 30, 1999.

**Perdana Merchant Bankers received an injection of ESCL on November 13, 1998.

Source: Danamodal 1999a; Danamodal 1999b; Danamodal 1999c; Danamodal 1999d.

The actions taken by Danamodal supported mergers and acquisition activity within the sector. On October 8, 1998, Danamodal announced its intent to invest RM1.5 billion in the RHB Bank and Sime Bank merger. Following its purchase of Sime Bank for RM852.2 million, RHB Bank approached Danamodal to assist in a previously estimated RM1 billion capital shortfall (Danamodal 1998b). The injection of funds was estimated to resulted in an increase in capital adequacy to 10.5% and was performed on October 21, 1998 (Danamodal

1998b; Danamodal 1998d). Danamodal announced its plan to inject an additional RM723.4 million for a 30% share in RHB Capital on November 30, 1998 (Danamodal 1998d). However, Khazanah Nasional Berhad made this investment instead of Danamodal after expressing its interest and Danamodal's determination "that Khazanah is in a better position to undertake such an investment" (Danamodal 1998e).[4] RHB Bank was later acquired by Bank Utama during merger exercises performed by the BNM (Cook 2008).

Danamodal became controlling shareholder in MBf Finance following its initial injection of RM1.6 billion in exchange for a 70% stake (Danamodal 1999c). The divestment of its injection resulted in further consolidation as Danamodal sold its stake to Arab-Malaysian Finance on August 3, 2001. The total price of the acquisition was RM925 million, composed of RM475 million in cash and RM450 million contingent on NPL recoveries (Danamodal 2001b). The sale recouped funds from the RM1.6 billion injection, although it resulted in an RM675 million loss. Additional mergers included EON Bank acquired Oriental Bank, Affin Bank acquired BSN Commercial Bank (M), Southern Bank acquired United Merchant Finance and Perdana Merchant Bankers, and Multi-Purpose Bank acquired Sabah Bank (BNM 2000; Danamodal 2001a; Danamodal 2000c). It is important to note that some of these mergers were a result of the broader effort by the Malaysian government to consolidate the banking sector and occurred after Danamodal funds had been paid back (BNM 2000).

Danamodal implemented behavioral reforms through its board representation alongside broader efforts by BNM to improve corporate governance. As part of this effort, BNM issued a framework for standard credit risk management by financial institutions. These guidelines covered appropriate oversight by the board of directors and management, adequate infrastructure for credit risk management, an integrated risk-management process, and comprehensive internal controls and audit procedures. Additional reforms included constructing a sector-wide training program for lending officers, limiting external interference in lending decisions, and intermittent assessments by BNM on executives based on whether they were "fit and proper" (Sulaiman 1999).

Over its lifetime, Danamodal injected approximately RM7.6 billion into 10 banking institutions, substantially less than the maximum budget of RM16 billion (BNM 2003). For these beneficiaries, the capital injections by Danamodal resulted in RWCR increasing from 9.9% at end of September 1998 to 12.3% at end of December 1999 (BNM 1999). On October 21, 2003, the five-year, zero-coupon bonds issued by Danamodal matured and operations ceased on December 31, 2003. At the time of its wind down, Danamodal had RM2.2 billion in assets remaining and RM1 billion of capital outstanding in RHB Bank (BNM 2003). These final holdings and assets were liquidated by the end of 2007, resulting in all institutions exiting the scheme and a final pre-tax profit of RM200 million (BNM 2007).

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[4] Khazanah Nasional Berhad is the sovereign wealth fund of Malaysia.

Figure 2: Outstanding Balance of Danamodal Injections Over Time (RM millions)

Banking Institution	Outstanding Balance (February 9, 2000)	Outstanding Balance (September 30, 2001)	Outstanding Balance (December 20, 2001)
RHB Bank Berhad	1,000	1,000	1,000
Arab-Malaysian Bank Berhad	800	460	460
MBf Finance Berhad	2,280	2,280	680
United Merchant Finance Berhad	–	–	–
Oriental Bank Berhad	700	–	–
Arab-Malaysian Finance Berhad	–	–	–
BSN Commercial Bank (M) Berhad	420	–	–
Arab-Malaysian Merchant Berhad	–	–	–
Sabah Bank Berhad	–	–	–
Perdana Merchant Bankers Berhad	–	–	–
Total	5,200	3,740	2,140

Sources: Danamodal 2000a; Danamodal 2001c; Danamodal 2001d.

II. Key Design Decisions

1. The Malaysian Government adopted a three-pronged approach—one component of which was recapitalization—to address the financial crisis and strengthen the banking sector.

The Malaysian government instituted a three-pronged approach to assist its ailing banking sector during the AFC. The three interventions dealt with purchasing Non-Performing Loans (NPLs), recapitalization, and debt restructuring. It included:

(1) Pengurusan Danaharta Nasional Berhad (Danaharta): an asset management company that purchased and managed NPLs from banking institutions;

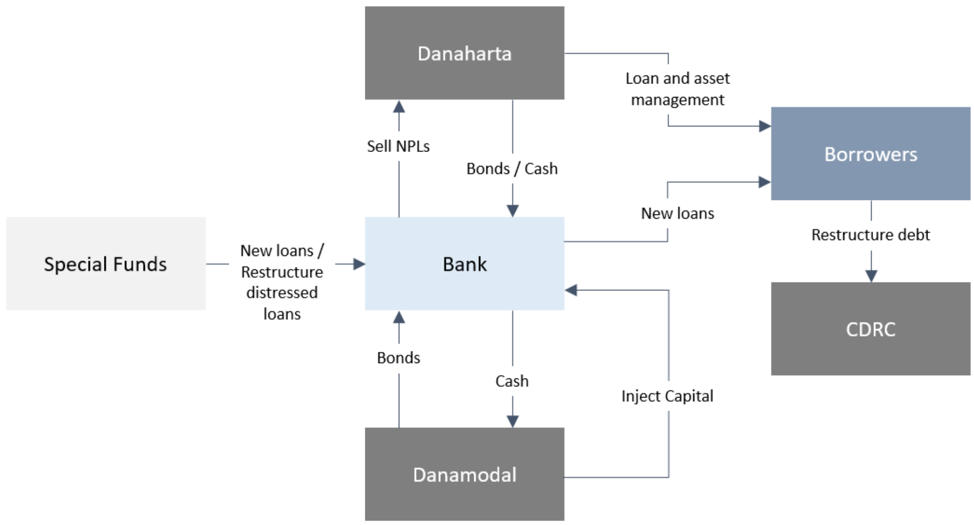
(2) Danamodal Nasional Berhad (Danamodal): a special purpose vehicle (SPV) that injected capital into banking institutions;

(3) Corporate Debt Restructuring Committee (CDRC): a debt restructuring agency that allowed borrowers and creditors to negotiate agreements and avoid legal proceedings (BNM 1998a).

Each individual program interacted with one another in various ways. For example, banks sold their NPLs to Danaharta at fair market value, resulting in substantial losses. In a healthy economic environment, these banks would be able to raise capital to make up for this shortfall through shareholders. However, due to uncertain financial conditions, there was insufficient appetite from investors. Therefore, Danamodal stepped in to recapitalize these institutions and restore capital levels. In fact, Danamodal required beneficiaries to sell their NPLs to Danaharta in order to receive capital injections, resulting in existing shareholders bearing the losses associated with these sales. Additionally, if negotiations undertaken by the CDRC could not reach a consensus, Danaharta purchased the NPLs from the dissenting institutions, which assisted the restructuring process (BNM 1998a).

Due to the overlap between programs, shown in Figure 3, the Malaysian government created a Steering Committee that coordinated the interventions of Danaharta, Danamodal, and CDRC. The Governor of the BNM chaired the Steering Committee, which met every two weeks. Its primary responsibilities included ensuring “operations of these institutions are well coordinated and complement each other, and to keep track of their progress” as well as properly sequencing interventions (BNM 1998a).

Figure 3: Malaysia's Multi-Pronged Approach



Source: Author's analysis based on BNM 1998a.

2. **Danamodal was a limited liability company and wholly owned subsidiary of BNM.**

Danamodal was legally categorized as a limited liability company and incorporated on August 10, 1998 as a wholly owned subsidiary of BNM (BNM 1998a; Danamodal 1998a). Its governance structure reflected this ownership as its board of directors had BNM representatives as Chairman, Managing Director, and other additional members. The board also consisted of a nominee from the Ministry of Finance and private sector appointees (Danamodal 1998a).

3. **BNM announced the creation of Danamodal through a press release and maintained transparency throughout its existence.**

On July 13, 1998, BNM announced the creation of an SPV to recapitalize the banking system. The press release occurred two months after the creation of Danaharta and it references the SPV as a complement to it; "as Danaharta was set up to help remove NPLs from the banking system, there is a need for us to explore other pre-emptive alternatives to recapitalise the banking system." The approach to recapitalization included a dual objective:

(1) To inject government capital, both in "core" banking institutions and in weaker institutions that BNM identified as viable;

(2) To merge core and weaker banking institutions, taking advantage of its role as a strategic shareholder (BNM 1998b).

The press release outlined a number of characteristics of the SPV including structure, lifespan, financing requirements, and operation and financing arrangements. It explains that the SPV would receive seed capital from BNM, with additional funding through bond issuances, and have a finite lifespan with the goal of selling its holdings once it achieved its objectives. The maximum expected budget was RM16 billion, which would maintain a risk-weighted capital ratio (RWCR) above 9% across the banking system. In addition, BNM would leverage international consultants to construct the operating details and financing arrangements of the SPV (BNM 1998b).

Danamodal was transparent in disclosing changes in management, operations, and selection criteria. A significant number of these announcements occurred through press releases. It also issued financial statements that aligned with international accounting standards (BNM 1998a). Deloitte Touche Tomatsu, an independent and external vendor, audited these annual financial statements.

4. Danamodal strictly employed a "first-loss" principle during interventions.

Under the "first-loss" principle, "existing shareholders were required to bear all losses prior to recapitalization." In practice, the application of this principle required banks to mark down the value of existing shareholders investments to accurately reveal net tangible assets and sell their NPLs to Danaharta prior to receiving capital injections from Danamodal. This forced shareholders to realize the losses stemming from declining investments and NPL sales. In addition, it resulted in "equitable burden sharing" and reduced the use of public funds (BNM 1998a).

The "first-loss" principle also played an integral role in the negotiation of Definitive Agreements (DAs), which specified the terms and types of capital used in capital injections (Danamodal 1999a).

5. Danamodal conducted an industry-wide stress test and determined it needed RM16 billion to recapitalize the banking sector.

The worst-case scenario estimated by BNM dictated a budget of RM16 billion. This funding amount would guarantee that the RWCR across all banking institutions would be at least 9% (BNM 1998a). To estimate a maximum budget the BNM conducted a preliminary, industry-wide stress test in May 1998 that examined how banking institutions performed based on a variety of parameters and assumptions. The analysis looked at institution-specific characteristics such as projected NPLs, specific provisions (property and shares), investments, and off-balance-sheet items. In addition, it included environmental factors such as interest rates (three-month Kuala Lumpur Interbank Offered Rate or KLIBOR), foreign exchange (USD/MYR exchange rate), real estate (property prices), equity markets

(Kuala Lumpur Composite Index), and contagion risk from exposure to Indonesia, Thailand, Korea (Danamodal n.d.a).

The results of the stress test, shown in Figure 4, prescribed a maximum funding requirement of RM16 billion, approximately 12% of Malaysia GDP. This was broken down into two phases; the first phase would recapitalize 14 banking institutions that the BNM deemed very likely to experience solvency issues and required a total of RM12.8 billion to bolster their RWCR to greater than 9%. The second phase involved 11 institutions that the BNM felt had a lower likelihood of experiencing solvency issues. Therefore, the BNM allocated RM1.6 billion to ensure that the RWCR of these lower-risk institutions stayed above 9%. In addition, the BNM added a precautionary 10% buffer, totaling RM1.6 billion (Danamodal n.d.a). Only 10 of the 14 institutions identified in the phase-one analysis received injections, as "Bank Bumiputra Malaysia Berhad, Bank of Commerce Berhad, Perwira Affin Bank Berhad and Utama Merchant Bank Berhad…opted for their own solutions to address their capitalisation issues" (Danamodal 1999c). Improved market conditions made injections for the institutions associated with phase two unnecessary (IMF 1999).

Figure 4: Stress Test Results

Type of Institution	Number of Institutions		Injection Amount		Total Injection Amount (RM billion)
	Phase 1	Phase 2	Phase 1 (RM billion)	Phase 2 (RM billion)	
Commercial Banks	8	5	8,586	475	9,061
Finance Companies	3	6	3,603	1,094	4,697
Merchant Banks	3	–	579	52	631
(10% buffer)	–	–	–	–	1,611
Total	14	11	12,768	1,621	16,000

Source: Danamodal n.d.a.

6. **The recapitalizations were funded through seed capital from BNM and bond issuances.**

In order to fund itself, Danamodal received RM3 billion in seed capital from BNM (Danamodal n.d.a). It then raised an additional RM7.7 billion on October 21, 1998, through the issuance of zero-coupon bonds (Danamodal n.d.c). The BNM decreased its statutory reserve requirement from 6% to 4% in conjunction with this issuance (Cook 2008; IMF 1999). It also required banks to use the additional liquid capital from the lowered requirement to buy Danamodal bonds (Cook 2008). The bonds had a nominal value of RM11 billion, five-year maturity, yield to maturity (YTM) of 7.25%, and qualified as a class-one liquid asset with zero risk-weighting for capital requirements. Additionally, Danamodal had the ability to extend the duration of the bonds, either partially or fully, by a minimum of one year and maximum of five years. The new YTM, if Danamodal triggered the maturity extension, would equal the "sum of the average YTMs of Malaysian Government Securities (MGS) of similar or closest tenor to the extension period and 50 basis points (Danamodal n.d.c). Unlike Danaharta, Danamodal's bonds did not carry an explicit government guarantee (BNM 1998a). However, the bonds carried an implied government guarantee since Danamodal was wholly owned by BNM (IMF 1999).

Initially, 57 banking institutions subscribed to the Danamodal bond issuance and future pricing and liquidity were determined by the secondary market for Malaysian government securities, where Danamodal's bonds regularly traded (Danamodal n.d.a; IMF 1999). On October 21, 2003, Danamodal redeemed its bonds at maturity at a nominal value of RM11 billion (BNM 2003).

7. **Goldman Sachs and Salomon Smith Barney served as independent advisers during the recapitalization process.**

Danamodal leveraged the expertise of "reputable, international financial advisors," Goldman Sachs and Salomon Smith Barney (BNM 1998a; Danamodal n.d.a). They were selected due to their ability to:

(a) Immediately provide highly trained resources, bridging the learning curve gap;

(b) Supplement Danamodal's resources needed to meet performance expectations;

(c) Provide a third party objective and independent viewpoint;

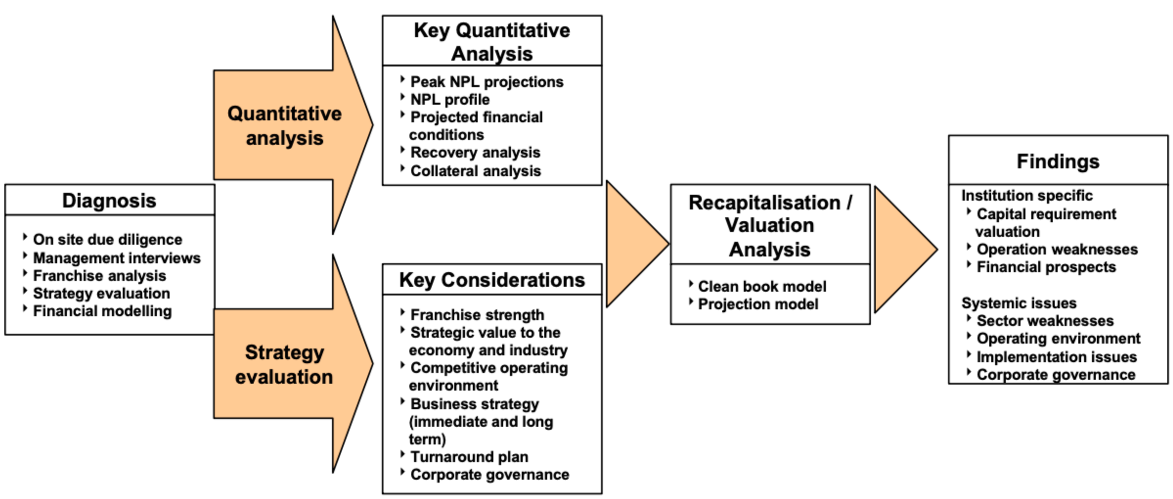
(d) Provide expert advice skills and methodologies to ensure an effective recapitalization process (Danamodal n.d.a).

The advisors had a number of functions, such as performing assessments and due diligence reviews (BNM 1998a). These reviews were a prerequisite to receive funds and aimed to gauge the overall health of the beneficiary as well as determine the amount of capital required (BNM 1998a; IMF 1999). Other responsibilities included the construction of an operational infrastructure along with overall policies and procedures governing capital injections (Danamodal n.d.a).

8. **To determine the viability of beneficiary institutions and recapitalization amounts, Danamodal conducted comprehensive individual assessments.**

Along with BNM, Goldman Sachs, and Salomon Smith Barney, Danamodal worked to assess the long-term prospects for each institution (Danamodal n.d.b; IMF 1999). The selection process included an in-depth analysis of competitive position and financial standing of each banking institution, quantification of potential synergies to be realized through consolidation, and CAMEL (capital, assets, management, earnings, and liquidity) analysis (Danamodal 1998a). The banks that were selected as beneficiaries were identified in the first phase of stress tests and defined as very likely to experience solvency issues (Danamodal 1999c). The risk profiles of these banks were determined through the stress tests outlined in KDD 5 (Danamodal n.d.a). Of the original 14 banks identified in phase one, 10 received capital injections, while Bank Bumiputra, Bank of Commerce, Perwira Affin Bank, and Utama Merchant Bank secured alternative solutions (Danamodal 1999c). Bank Bumiputra Malaysia and Bank of Commerce were merged with government assistance outside of Danamodal; Perwira Affin Bank acquired BSN Commercial and did not require a further injection of capital; and Utama Merchant Bank was recapitalized by its shareholders. It is important to note that none of the banks identified as lower-risk institutions in the second phase received injections (IMF 1999).

Figure 5: Danamodal Recapitalization Assessment Process



Source: Danamodal n.d.a.

9. **Danamodal injected Tier 2 capital then signed Definitive Agreements (DAs) with beneficiary institutions, converting the capital into three types of securities.**

Danamodal would first inject Tier 2 subordinated debt, in the form of Exchangeable Subordinated Capital Loans (ESCL), which was converted into equity, debt, or hybrid capital through Definitive Agreements (DAs) (BNM 1998a; IMF 1999). ESCL bore an interest of 7.5% annually and had a three-month maturity, with the option for beneficiaries to extend. The temporary funds allowed for additional due diligence and negotiations prior to conversion (Danamodal 1999a).

Following this interim period, stakeholders signed DAs that outlined recapitalization amount and instruments used (including the decision whether to convert the ESCL into permanent Tier 1 and/or Tier 2 capital), pricing of instruments, investment protection, exit option, shareholder's call option (Danamodal n.d.a). It is important to note that Danamodal used market-based valuation methods in making investment decisions (Danamodal n.d.b). The DAs varied across institutions due to the unique situation of each individual beneficiary, and time constraints required an accommodating and practical approach. Six main principles guided Danamodal's structuring of investments: safety (application of first-loss principle), control, return, capital base, exit potential, and monitoring requirements (Danamodal n.d.a).

The three primary instruments used for capital injections by Danamodal and their characteristics are outlined in Figure 6. The different instruments allowed Danamodal to tailor injections to the issues faced by the at-risk institution. The composition of the capital injection depended "primarily on the cash flow characteristics of the instruments and the unique circumstances of the banking institutions concerned" (BNM 1998a).

Figure 6: Characteristics of Capital Used by Danamodal

Type of Capital	Capital Category	Expected Rate of Return	Control Level	Subordination Level	Additional Features
Common Shares	Tier 1 Capital	12%	Direct control through proportionate voting rights and board representation	Potential for complete erosion of value if company performs poorly	Call option that results in existing shareholders compensating Danamodal by transferring shares at nominal value
Irredeemable Non-Cumulative Convertible Preference Shares (INCEPS)	Tier 1 Capital	8% (12% when converted)	Moderate control through board representation (negotiation and potential for conversion)	Priority to common equity in liquidation proceedings	Fully convertible to common shares in all cases
Subordinated Loans	Tier 2 Capital	10%	None	High downside protection behind senior debt	N/A

Sources: Danamodal Nasional Berhad n.d.a; Danamodal 1998a, BNM 1998a.

10. In order to institute behavioral reforms and facilitate mergers, Danamodal appointed nominees to the boards of beneficiaries.

Danamodal appointed a minimum of two nominees to serve as Executive Director and either Chairman or Deputy Chairman on the Board of Directors of beneficiary institutions. The amount of Tier 1 Capital injected dictated additional Board representation beyond the minimum two appointees. Through its Board presence, Danamodal facilitated mergers and implemented behavioral reforms such as "sound risk management practices and credit culture, good corporate governance and higher operational efficiencies" (BNM 1998a).

The restructuring process employed by Danamodal encompassed improvements in financial analysis and capital frameworks, operations, IT, organizational structure, human resources, and the beneficiary's business portfolio. The initial phase consisted of an internal and external situation assessment, followed by the development of a strategic plan (strategic position, operational design, IT design, etc.) and implementation plan (changes in restructuring, governance, consolidation, etc.) (Danamodal n.d.a).

11. Danamodal created performance targets for the beneficiary institutions and monitored their progress towards these targets.

Prior to receiving capital injections, beneficiaries were required to provide a comprehensive business plan and establish, in conjunction with Danamodal, "a list of comprehensive performance targets, monthly reporting, and swift and firm remedial actions against the banks in the event of material shortfalls in performance relative to such targets" (Danamodal n.d.b). Danamodal closely monitored these performance targets, tightening its overall approach to banking supervision. This included requiring financial statement reporting to the BNM on a quarterly, semi-annual, and yearly basis, along with weekly and monthly balance sheet disclosure. The BNM also deployed CAMEL-based supervision, which focused on capital adequacy, asset quality, and management, regarding both in-person assessments, which were increased to a minimum of once per year for all banks, and external monitoring. Additional supervisory changes included BNM approval of financial statements prior to public disclosure and creation of "prompt corrective measures" which created pre-agreed responses by bank managers and owners to breaches of regulatory levels (IMF 1999).

Many of the indicators that were assessed are outlined in Figure 7.

Figure 7: Major Performance Indicators

Performance Measure	Monitoring Strategy
Rate of Migration of Performing Loans to Non-Performing Loans	• Monitor percentage of loans in each loan class (current, substandard, doubtful, bad) on a monthly basis • Monitor loan migration between classes of loans
NPL Recovery	• Monitor amount of NPLs converted into collateral • Monitor amount of collateral sold in each period
Average Recovery Rate	• Make assessments of FMV of underlying collateral on all categories of loans on a periodic basis • Monitor actual cash values received versus estimates. Encourage cash sales of collateral/loans
Net Interest Margin	• Monitor performance and trend of Net Interest Margin on a monthly basis • Identify sources of strengths and weaknesses of Net Interest Margin • Conduct monthly reviews of pricing by product compared to competitors
Non-Interest Income Growth	• Performance of fee-based business lines as well as prospects for growth • New initiatives that may be undertaken to develop new, fee-based businesses
Cost Structure	• Identify and monitor the sources of strengths and weaknesses in overall cost structure
Non-Interest Expense Growth	• Encourage major focus by management on appropriate level of overhead needed to match current business opportunities • Detailed management reports on salary, overhead expenses, and

	other operational costs
Cost to Income Ratio	• Benchmark progress in improving overall efficiency relative to other institutions
Loan Growth	• Gross loan production figures provided monthly with periodic assessment of negative or positive trends • Amounts and trend of new loan disbursements
Deposit Growth	• Total deposit figures provided monthly with periodic assessment of any trends

Source: Danamodal n.d.a.

12. BNM anticipated that the recapitalization process would take five years.

At inception, BNM predicted that the recapitalization process would take no more than five years. This timeframe would allow Danamodal to accomplish its short and medium-term objectives and make significant headway towards the long-term goal of industry consolidation and restructuring (Danamodal n.d.a). It is important to note that Danamodal expected the majority of capital injections to occur during the first two years (Danamodal n.d.b). Danamodal's exit strategy followed the below principles:

(a) Seize the earliest chance to exit;

(b) Achieve objectives of recapitalization or enhance prospects of future achievement;

(c) Aim for full recovery of investments;

(d) If the overall economic recovery helps to restore solvency issues among banking institutions, the need for Danamodal's continued involvement may be reduced;

(e) Adhere to the overall policies views of the Malaysian government and BNM regarding the timing of the exit (Danamodal n.d.a).

On October 31, 2003, approximately five years after its creation, Danamodal closed its operations (BNM 2003). It exited the scheme through "initial public offering, strategic sales of its holdings, and sales of its holdings directly in the market" (Danamodal n.d.b).

III. Evaluation

BNM championed the success of the Danamodal program; it found that the speedy creation and implementation of the scheme was an essential part of the banking industry's recovery from the AFC. The capital injections performed by Danamodal helped struggling but viable banking institutions raise capital and instill enhanced corporate governance (BNM 2003). This resulted in beneficiaries resuming lending activities and led to increased consumer confidence along with a revival of business and economic activities in the domestic real sector (BNM 2003; Danamodal n.d.a). In addition, BNM stated that Danamodal's strict observance to the "first-loss" principle successfully minimized the total cost of recapitalization (BNM 2003). BNM felt the capital injections were performed "with a strong commercial orientation, focus on speed and outcomes, transparency in [Danamodal's] policies and operations, sense of public accountability and credibility, and bias for hope and possibilities" (Danamodal n.d.a).

On the other hand, the IMF expressed concerns regarding Danamodal's attempts to replace ineffective leadership with more capable alternatives. In particular, the IMF feared, even with new senior leadership, the potential for "inadequate, ineffective, or otherwise deficient management teams [to] remain." This could lead to similar issues occurring in the future. Additionally, the IMF felt that the emphasis on loan growth by BNM and the interventions aimed at sparking growth had the potential to generate poor quality loans (IMF 1999).

Abidin (2000) credits the Malaysian government's interventions as having "made serious efforts and registered good progress in restructuring its financial and corporate sectors," specifically citing the success of Danaharta and Danamodal. These two programs were particularly effective "because they were executed efficiently, in a transparent manner and at a cost much lower than that incurred by the other crisis-hit countries" (Abidin 2000).

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VI. Appendixes

Appendix A: Timeline of Interventions

Date	Actions Taken by the Malaysian Government
July 2, 1997	Thailand forced to abandon its currency peg and float the Thai Baht resulting in depreciation of the Baht by 10-15%
January 1998	The Malaysian Government created the National Economic Action Council
March 1998	The Malaysian Government begins to relax previously tight fiscal policies
May 1998	BNM performed a stress test to ascertain the likely size of a recapitalization scheme
June 20, 1998	Danaharta, an asset management company for the purchase and management of NPLs, was incorporated
July 1998	The NEAC announced a comprehensive National Economic Recovery Plan (NERP) to bring about stability and expedite economic recovery
July 13, 1998	BNM releases a press release describing its recapitalization plan
August 1998	The Malaysian Government begins to ease previously tight monetary policy
August 10, 1998	Danamodal Nasional Berhad incorporated by BNM
September 1, 1998/ September 2, 1998	The Malaysian Government introduces selective exchange control measures/fixes the RM3.80 to USD
October 21, 1998	Danamodal issued RM7.7 billion in five-year, zero-coupon bonds
November 13, 1998	Danamodal injected RM50 billion into Perdana Merchant Bankers
November 30, 1998	Danamodal signed DA with RHB Bank Berhad
February 5, 1999	Danamodal signed DA with Arab-Malaysian Bank Berhad, Arab-Malaysian Finance Berhad, BSN Commercial Bank (M) Berhad, and

	Arab-Malaysian Merchant Berhad
February 12, 1999	Danamodal signed DA with Sabah Bank
March 12, 1999	Danamodal signed DA with MBf Finance Berhad
March 30, 1999	Danamodal signed DA with United Merchant Finance Berhad, Oriental Bank Berhad
December 30, 1999	Final Injection performed by Danamodal
October 21, 2003	Bonds issued by Danamodal mature
December 31, 2003	Danamodal ceased operations

Sources: BNM 1997; BNM 1998a; BNM 1998b; BNM 2001a; BNM 2003; Danamodal 1998c; Danamodal 1998d; Danamodal 1999a; Danamodal 1999b; Danamodal 1999c; Danamodal 1999d; Danamodal n.d.a; Danamodal n.d.c.

Appendix B: Breakdown of Injection Process

Core Process	Objective	Tasks
Assessment of Recapitalization Requirements	• To assess the criticality of capital deficiency • To quantify the amount of capital required by the banks to withstand the full impact of the crisis	• Establish the framework to assess capital needs • Establish methodologies and tools to assess recap requirements • Conduct due diligence • Quantify capital needs
Recapitalization/ Investment	• To speedily inject capital into viable banking institutions • To structure investment in order to optimize safety, control, return, capital	• Establish selection criteria and assess each potential candidate against these criteria, which will include (but would not be limited to): criticality of capital deficiency, systematic impact of the bank's failure, non-feasibility of market

	adequacy, exit potential, and monitoring capabilities • To satisfy stakeholders' expectations • To maintain or promote objectivity, consistency, independence, credibility of process	solutions, potential synergies to be realized through consolidation, and specific requests from shareholders • Formulate options • Structure the recapitalization investment (i.e. price, terms and conditions, type of securities) • Negotiate with banks on recap amount, valuation, timing, mode of investment, representation, and other terms and conditions • Finalize contractual agreements
Financing of the Recapitalisation	• To obtain cost-effective funds to finance Danamodal's recapitalization initiatives	• Ascertain the funding requirements vis-à-vis quantum and timing • Evaluate financing alternatives (sources and modes of financing) • Liaise with BNM and other agencies to ensure a well-coordinated capital and fundraising program
Restructuring and Monitoring	• To restore stability • To effect turnaround • To use shareholder's rights to inject best practices, promote managerial excellence, enhance operating efficiency, and improve profitability • To protect the value of investments through constant monitoring of financial, operational, and managerial performance of banks	• Participate actively in the corporate governance process • Influence management agenda • Establish performance targets and regular reviews of performance/status • Act decisively and effectively in dealing with deviations from expectations • Formulate restructuring strategies and determine specific policies and instruments for achieving the goals • Seize opportunities to strengthen the banking sector through consolidation

	• To promote consolidation and restructuring of the industry	and restructuring
Exit	• To dispose of Danamodal's stake in banks and optimize returns on Danamodal's investments and the achievement of restructuring objectives	• Determine timing and amount of disposals • Evaluate disposal alternatives: initial public offerings (IPOs), strategic sales, and direct sale to market • Distribute gains on disposal to Danamodal's shareholders

Source: Danamodal n.d.a.