Gordon de Brouwer

HEDGE FUNDS IN EMERGING MARKETS

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Hedge Funds are among the most innovative and controversial of financial market institutions. Largely exempt from regulation and shrouded in secrecy, they are credited as having improved efficiency and adding liquidity to financial markets, but also having severely destabilised markets following the Asian financial crisis and the near-collapse of Long-Term Capital Management.

De Brouwer presents a nuanced and balanced account to what is becoming an increasingly politicised and hysterical discussion of the subject. Part I explains the workings of hedge funds. Part II focuses on the activities of macro hedge funds and proprietary trading desks in east Asia in 1997 and 1998, with case-study material from Hong Kong, Indonesia, Malaysia, Singapore, Australia and New Zealand. Part III of the book looks at the future of hedge funds, their role for institutional investors, and policy proposals to limit their destabilising effects.

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Hedge Funds in Emerging Markets

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Preface

My interest in hedge funds in emerging markets was sparked by my involvement in the Study Group on Market Dynamics, which reported to the Financial Stability Forum Working Group on Highly Leveraged Institutions, in 1999. At the time I was Chief Manager, International Markets and Relations, at the Reserve Bank of Australia, a position I left when I became Professor of Economics at the Australian National University in January 2000.

Much of the information used in this book was collected at that time, in visits to Auckland, Hong Kong, Johannesburg, Kuala Lumpur, New York, Singapore, Sydney and Wellington. A lot of important information was also gathered after that, in visits as an academic to Bangkok, Singapore and Tokyo and in subsequent conversations with market participants and officials.

It is important to stress at the outset that I have not used confidential information collected while I was a central bank official or discussed official meetings in this book. I have consulted widely with officials from relevant national and international authorities about the material presented here, and I am confident that I have not breached any commercial or official confidence. This is not intended to implicate these people; not everyone I consulted necessarily agrees with my analysis and views.

I am deeply indebted to many people for their advice, assistance, information and support in writing this book. It could never have been written but for the willingness of hundreds of market participants and officials to talk, often frankly, about the activities of hedge funds, banks and securities companies in financial markets in 1997 and 1998.

I am grateful in the first instance to my former colleagues at the Reserve Bank of Australia, especially Ric Battelino, Stephen Grenville, Philip Lowe, Bob Rankin and Mike Sinclair. I am deeply indebted to the other members of the FSF Study Group on Market Dynamics, Charles Adams (International Monetary Fund, convenor), Hervé Ferhani

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1 The issues

> "Stick to the boat, Pip, or by Lord, I won't pick you up if you jump; mind that. We can't afford to lose whales by the likes of you; a whale would sell for thirty times what you would, Pip, in Alabama. Bear that in mind, and don't jump any more." Hereby, perhaps Stubb indirectly hinted, that though man loved his fellow, yet man is a money-making animal, which propensity too often interferes with his benevolence.
>
> *Moby Dick* by Herman Melville, Chapter 93

Hedge funds are private collective investment vehicles for the very rich and, more recently, entities like university endowments, pension funds and insurance companies. They are designed to make money – and the more of it the better – which they do by taking positions on perceived price discrepancies in financial markets, although they have widely varying appetites for risk. They are institutions that tightly guard their privacy, which, combined with the fact that they are largely exempt from regulation, means that very little is known about them. Along with other institutions that sometimes engage in activities similar to them – like the proprietary trading desks of banks and securities companies – they are also called 'highly leveraged institutions' (HLIs), although this term can be misleading since they vary substantially in their use of credit. They are managed by some of the brightest and most creative people in the finance industry.

The first hedge fund was established in 1949 and they now number in the thousands. The growth of the hedge-fund sector has closely followed the liberalisation, development and internationalisation of financial markets, since this process has given rise to a system of large, flexible-price asset markets which provide the opportunity to bet on price changes. Such speculation provides two key benefits. First, it enables households and firms to shift financial risk to other entities which want to hold that risk. An exporter who wants to eliminate the risk that the currency will appreciate before he receives his foreign-exchange receipts, for example, can sell that foreign exchange now for delivery at some time in the future. A process of intermediation follows whereby banks trade the foreign-exchange risk until someone who wants the exposure – typically a speculator – can get it. The second advantage of speculation is that it provides depth and innovation to markets and may shift financial prices to their fundamental or fair value over time.

Hedge funds are an integral part of this process, and their development and growth goes hand in hand with the development and growth of large, internationalised flexible-price financial markets. They are widely regarded by market participants and regulators alike as among the most innovative of institutions in financial markets, and are widely credited with improving efficiency in, and adding liquidity to, the gamut of financial markets. They tend to lead the development of techniques and products in financial markets, and are widely seen as 'The Future'. Given that diversity and innovation in the financial sector are necessary for supporting both the development of business and long-term saving, institutions like hedge funds are one of the many important components underpinning sustainable economic growth.

But there are concerns that, under certain conditions, highly leveraged institutions can cause material damage to financial systems and financial markets, with potentially serious adverse economic impact. As shown by the near-collapse of Long-Term Capital Management (LTCM) in the United States in September 1998, some highly leveraged institutions have the potential to generate systemic risks in financial markets and systems (President's Working Group on Financial Markets 1999). As shown by elements of the east Asian financial crisis, some highly leveraged institutions also have the potential at times to destabilise financial markets and cause overshooting of key financial prices, like exchange rates and stock prices, and economic dislocation (FSF Working Group on Highly Leveraged Institutions 2000).

There is a wide range of views about hedge funds and other HLIs. The debate about them has become intensely politicised, which has conditioned policy responses in both developed and industrialised countries, and in east Asia and the United States, and led to the debate becoming highly polarised. There are those, on the one hand, who think that the benefits provided by hedge funds far outweigh any costs they may impose, and indeed dispute that hedge funds can cause serious systemic risk or damage to the integrity of financial markets at all.[1] Proponents of this view are inclined to say that speculation is necessarily stabilising. There are those, on the other hand, who think that hedge funds are a seriously destructive force in financial markets, and blame them for

[1] For example, see Baily, Farrell and Lund (2000).

undermining the rule of law and wreaking the havoc of the east Asian financial crisis.[2] Proponents of this view are inclined to say that speculation is necessarily destabilising.

The aim of this book is to provide some balance, nuance and middle ground in the debate. While hedge funds have become an essential feature of financial markets, and can make a substantial and important contribution to the continuing development of the financial sector and economic growth, they can also create vulnerabilities of which market practitioners and policy-makers alike need to be aware and to which they need to respond.

This book does not focus on systemic risk issues because they have been well covered elsewhere. The near-collapse of LTCM following the Russian debt default caused severe dislocation in US and emerging-market bond markets, and led to the Federal Reserve organising a creditor bail-out of LTCM and easing US monetary policy to accommodate the financial shock affecting the US financial markets. LTCM had extraordinarily large and concentrated positions in financial markets, made possible by virtually unlimited lending by its banks. Its positions were designed to exploit price discrepancies in a range of financial markets, but the size and leverage of these positions made the strategy vulnerable to shocks, as the Russian debt default revealed. This episode has shown the importance of proper counterparty risk management by banks and of proper risk assessment, especially of market and liquidity risks, by highly leveraged institutions. These have been the subject of considerable international policy discussion and action.[3]

What the book focuses on, rather, are the possible adverse effects some HLIs can have on market integrity, as shown by the experience in some east Asian financial markets in 1997 and 1998. This is controversial. To argue that HLIs can, under certain circumstances, materially undermine market integrity is not to argue that they were the cause of the crisis. The east Asian financial crisis was a complex phenomenon – its trigger was the deterioration in the Thai current-account deficit and pressure on the fixed exchange rate, but the severity of the crisis was exacerbated by large unhedged short-term borrowing in foreign currencies, weak banking and financial systems, policy errors by national governments and interna-

[2] This seems to be the view of the Malaysian Prime Minister, Mahathir Mohamad. He is quoted in Baily, Farrell and Lund (2000) as saying in January 1998: 'All these countries have spent 40 years trying to build up their economies and a moron like Soros comes along with a lot of money to speculate and ruin things.'

[3] See, for example, the reports by the President's Working Group on Financial Markets (1999), the Counterparty Risk Management Policy Group (1999, 2000), and the FSF Working Group on HLIs (2000).

tional organisations, excessive risk affinity followed by excessive risk aversion by international investors, and bouts of destabilising speculation by either residents or non-residents or sometimes both.[4] Nor is it to argue that hedge funds should be excluded from financial markets; they are a key source of liquidity and innovation, and, indeed, one argument of this book is that policy-makers do their countries a disservice if they think that the lesson from the crisis is that they should exclude speculators from their markets.

But the crisis has shown the possibility that, under certain conditions, some HLIs can damage the integrity of financial markets – that is, the fair and efficient formation of financial prices. This is evident in two respects. The first is that large and concentrated positions may have an undue and possibly destabilising influence on price dynamics in financial markets. Rapid adjustment of large positions can have a substantial impact on market prices, especially at times when liquidity in markets is thin. The effect can also be more subtle, with the presence of large players affecting decision making by other market participants, either encouraging them to mimic what they think the large players are doing, or to drop out of the market and hence not take contrary positions. This has the potential to generate overshooting in asset prices. These effects certainly occurred at times in east Asian financial markets in 1997 and 1998, and may or may not have been the intention of particular large players.

The second issue related to market integrity is that some macro hedge funds and proprietary trading desks of banks and securities firms appear to have engaged in highly aggressive trading tactics in east Asia in 1997 and 1998, designed explicitly to shift prices in a manner which helped the profitability of their positions. A number of incidents of this sort occurred in financial markets in Australia, Hong Kong, Malaysia and South Africa during 1998 (FSF Working Group on HLIs 2000). This marked a structural shift from such players being price-takers in markets, and adversely affected market efficiency.

These are serious issues but international policy cooperation in dealing with vulnerabilities to market integrity has not been forthcoming. This is partly because views about the seriousness of the issues differ between countries. There is a tendency, for example, for the authorities in major countries to downplay the impact of hedge funds on financial prices, perhaps reflecting their own experience that no market participant or set of participants is able to significantly affect markets as

[4] See, for example, Grenville (1998), Krugman (1998), Radelet and Sachs (1998) and de Brouwer (1999a).

deep and liquid as their own. This view should have been seriously challenged by the extraordinary fall in the dollar/yen exchange rate in October 1998, when the rate moved 15 per cent in 30 hours, and 25 per cent in a month, when hedge funds were forced to liquidate positions. This showed that liquidity, even in one of the world's largest foreign-exchange markets, is highly elastic, and that, in conditions of variable liquidity, large price changes can occur, either incidentally or by design. The reluctance of major countries to address issues of market integrity also lies partly in the perception that their interests may not be served by policy action. In particular, they appear to be concerned that measures to protect market integrity could adversely affect the operation of institutions based in, or operating from, their jurisdiction.

Structure of the book

This book has three parts. The first is background. Chapter 2 provides an explanation of what hedge funds are, and summarises published material on their performance. Hedge funds tend to be defined by regulators in terms of their legal structure or organisation, while they tend to be defined by market participants in terms of the strategy they use in financial markets. This provides two interesting 'cuts' at understanding hedge funds and what they do, and it shows just how heterogeneous hedge funds are. The strategies of macro hedge funds, which have been the funds of most relevance to the region in the past, are examined in relative detail.

The second part of the book, encompassing Chapters 3 to 8, focuses on the activities of macro hedge funds and proprietary trading desks in east Asia in 1997 and 1998. Chapter 3 provides an overview of some of the issues and reviews the events in east Asian financial markets in 1997 and 1998. It draws on the work of two major international reports.

The first is the study published by the IMF in 1998, which includes staff research into the structure and operation of hedge funds and an assessment of their activities in east Asia in 1997. Led by Barry Eichengreen and Donald Mathieson, the study has become a basic reference on hedge funds, and is often cited in support of the view that highly leveraged institutions pose no threat to financial stability or market integrity. While it contains much valuable analysis and insight, it has been overtaken by events and crucial aspects of the analysis now need reassessment.

The second is that published by the Financial Stability Forum (FSF) in 2000, which examined the issue of highly leveraged institutions in 1999, drawing mostly on the experience of financial markets in 1998.[5] The FSF Working Group on HLIs (2000) reported on the policy issues raised by the near-collapse of LTCM and the events in the financial markets of mid-sized economies in 1998.[6] It argued strongly for policy action on the systemic risks posed by HLIs but was mixed in its assessment of policy action on risks to market integrity. Nevertheless, it provides valuable detail about events in regional financial markets, and it sets out the basic issues of the effects of large and concentrated positions and highly aggressive action in already unsettled financial markets.

Chapters 4–6 examine in relative detail the experience of particular countries, or groups of countries, in the region. Chapter 4 examines the experience of Hong Kong, Chapter 5 examines the experience of Indonesia, Malaysia and Singapore, and Chapter 6 looks at what happened in Australia and New Zealand. These case studies offer a range of insights into the many diverse market activities and strategies of hedge funds, proprietary trading desks and other players, and show how private decision making is affected by recent experience and the policy environment. These chapters are structured in a similar way: after the economic context has been set, the price action in financial markets and the role of highly leveraged institutions are described, analysed and assessed. The cases studies draw on published material and interviews with officials and traders at relevant financial institutions, who, to preserve their anonymity, are referred to generally as 'market participants'.

Chapter 7 seeks to interpret the events in east Asian financial markets in terms of the insights provided by the academic literature on financial markets. Herding, market manipulation and multiple equilibria were all key features of east Asian financial markets in 1997 and 1998, and this chapter goes through key models for each of these topics. Three important policy insights flow from this exposition. First, while economists have conventionally argued that speculation is stabilising, it can in fact be destabilising and cause asset prices to deviate in both the short and medium term from their fundamental value.

Second, a crucial aspect for herding and multiple equilibria to occur in many models is an information asymmetry between players, with some participants having better information than others. This dovetails with

[5] The Financial Stability Forum comprises the finance ministers, central bank governors and securities exchange regulators of the G-7 nations (Canada, France, Germany, Italy, Japan, the United Kingdom and the United States), as well as central bank governors of Australia, Hong Kong, the Netherlands and Singapore.

[6] The Working Group established a Study Group on Market Dynamics to report to it. The Study Group examined financial markets in Australia, Hong Kong, Malaysia, New Zealand, Singapore and South Africa. Its report is Annex E of the Working Group report.

the experience of 1997 and 1998. The large macro hedge funds were widely regarded at the time as having the best analysis and understanding of the regions' economies and financial markets, with, in particular, an unrivalled understanding of the changing patterns of liquidity in markets. They also had information that everyone else wanted to know but could only guess at – knowledge of their own strategies and positions in markets. This was information that everyone in markets regarded as essential to predicting the immediate outlook for asset prices, especially exchange rates, and made them the focus for all other players, including the proprietary trading desks of banks.

Third, the literature on manipulation in financial markets has focused on stock prices and tended to ignore action-based and word-based manipulation because these have effectively been regulated out of existence in stock markets. But both these forms of manipulation are rife in foreign-exchange markets. If such attempts to influence prices are unacceptable in stock markets, surely they are also unacceptable in foreign-exchange markets.

Chapter 8 follows up on the issue of the size of HLI positions in east Asian markets in 1997 and 1998. A number of papers have argued that hedge fund positions can be inferred from aggregate returns data for individual funds, and have then concluded that these positions were either small or uncorrelated with changes in regional asset prices. This chapter argues that these assessments are premature and invalid. Not only do many of the estimates not make sense, but the method is fundamentally flawed on a number of counts. In particular, the reliability of the method is tested by using it to infer positions from an artificial portfolio where the true positions are known. The inferred positions differ substantially from the actual positions: they are misleading with respect to the magnitude, sign and the timing of the true positions, and they give false signals about changes in the true position. The implication is that there is no substitute for the facts.

The third part of the book looks forward. Chapter 9 argues that hedge funds have become integral and important institutions in financial markets and are here to stay. Hedge funds are becoming more important to other institutional investors, like pension funds and insurance companies, which are seeking diversified returns. They are also vital to banks, not just in the direct business they provide, but also because they are increasingly important to banks' asset management operations, which, among other things, provide seed capital to new funds. While the macro hedge fund sector declined somewhat in 2000, it is primed to return – and probably strongly – once the sector has finished restructuring.

Chapter 9 also examines some key policy proposals. It argues for a clear break between thinking about what happened in regional financial markets in 1997 and 1998 and thinking about how to deal with what happened. Policies geared to solve the problems of the past may just create a new set of problems, and policies directed at particular categories of institutions are likely to lead to the creation of categories of other, unregulated institutions and may distract focus from other potential instabilities. In short, policies need to be directed at limiting the activity of destabilising speculation, and not necessarily be focused on institutions like hedge funds.

If east Asia is to develop its regional financial markets fully, it needs to involve hedge funds. And for east Asia to obtain the full benefits of international openness, it needs to be integrated financially with the rest of the world. But the events of recent years have shown that speculation in financial markets can be destabilising and costly to people's well-being. Experience and academic insight indicate that destabilising speculation is more likely to occur when there is some vulnerability in the economic or policy structure, which is precisely the time when stabilising forces are needed.

The chapter assesses four policy proposals to limit destabilising speculation: greater disclosure of positions by unregulated entities, more stringent margining requirements for borrowers, a code of conduct for market participants, and some regulation of foreign-exchange transactions conducted through electronic broking. It argues that, if adopted, these proposals are better pursued through indirect rather than direct means. That is, regulation is probably more effective and less easy to evade if it works through already regulated entities, like banks, than by a new set of restrictions on largely unregulated entities.

These proposals are modest and will certainly not prevent all future crises, but they are a step forward. They are not, however, on the agenda of policy-makers. Without recognition by the major countries of the damage to market integrity that some HLIs can cause, and without international policy coordination to address them, countries in east Asia and elsewhere will adopt the risk-averse strategy of limiting financial integration and looking inwards, for national and perhaps regional solutions. A shift to autarky and insular regionalism is ultimately not in the long-term economic and strategic interests of the major countries, nor, indeed, of benefit to the global community.

2 What is a hedge fund?

This chapter sets out definitions of hedge funds in terms of their legal structure and in terms of the strategies they pursue. It reviews evidence on the number and size of hedge funds, as well as their performance as investment vehicles.

The term ‘hedge fund’ was first coined in 1949 to describe a private investment partnership set up by Alfred Winslow Jones which ‘hedged’ the risk in its operations by buying what it perceived to be undervalued stocks and ‘short selling’ (Box 1) what it perceived to be overvalued stocks, with the combination varying over time as Jones’ assessment of market conditions changed.[1]

> Box 1: *Short-selling*
>
> Short-selling is the sale of an asset, such as a bond, equity or foreign currency, that the vendor does not own. The vendor first borrows the asset from another party, with the promise of repaying it back at some future time, and then sells it. If the price of the asset has fallen by the time the vendor is due to repay it to the lender, then he can buy it back in the market for less than he initially sold it. The profit is the selling price less the buying price and the cost of borrowing the asset.

This strategy effectively enabled Jones to secure good returns whether the market fell or rose. The use of gearing or leverage (Box 2) was also a crucial element in his strategy – it is implicit in the use of short-selling since this involves borrowing an asset in order to sell it. This combination of strategic, active management of sometimes leveraged positions by private partnerships in financial markets is the hallmark characteristic of a hedge fund. Since then, the number of hedge funds and the assets under their management have expanded rapidly, albeit not always uniformly.

Because they cover such a wide range of institutions and strategies, there is no standard definition of a hedge fund. There is also no legal

[1] See Caldwell (1995) and Chadha and Jansen (1998) for a history of hedge funds.

definition. Indeed, to a large extent, hedge funds are defined by what they are not, rather than what they are – they are collective investment groups or vehicles but they are not regulated institutional entities along the lines of mutual funds or pension funds. Accordingly, Sharma (1998) defines hedge funds as limited partnerships exempt from certain laws.

There are two main ways to describe hedge funds – either in terms of their legal structure or organisation, or in terms of their trading strategy in financial markets.

Box 2: *Leverage*

A fund can acquire assets either by using its own capital or by using borrowed funds. Leverage commonly refers to the use of debt to acquire assets. Leverage is usually expressed in terms of a ratio of assets to capital. For example, a ratio of 3 (that is, 3 to 1) means that one dollar of capital supports three dollars of assets, implying that the fund has two dollars of debt for each dollar of capital. This definition of leverage is called on-balance-sheet leverage, since assets, capital and debt (or liabilities) are all balance-sheet items – in a simplified balance sheet, assets are equal to capital and other liabilities. Hedge-fund data providers typically use the on-balance-sheet definition of leverage.

Leverage can also arise through off-balance-sheet transactions, such as short positions, repurchase agreements, and derivatives contracts. In a short sale, for example, a fund does not have an asset and corresponding liability on its balance sheet – it has borrowed the asset and then sold it – but it does have an exposure or a position which is 'off balance sheet'. It is a contingent liability in the sense that it is a future, not current, liability. This definition of leverage is called economic leverage and is a measure of risk. A fund may have little or no on-balance-sheet leverage but may have substantial economic leverage associated with its off-balance-sheet exposures. The amount of economic leverage obtained by a fund depends on the willingness of financial intermediaries to provide the credit underlying the off-balance-sheet transactions, the cost of leveraging, and the risk appetite of the fund itself. No comprehensive information about hedge funds' economic leverage is available.

Leverage can be important for a number of reasons. On-balance-sheet leverage allows a fund to boost its assets, and economic leverage enables a fund to boost its positions or exposures in financial markets. This can add depth and liquidity to a market. But it can also make these markets more vulnerable to sharp price movements when positions shift, and it can make positions vulnerable to changes in the credit intermediation process (Counterparty Risk Management Policy Group 2000). These vulnerabilities have the potential to adversely affect the stability of the whole financial system (President's Working Group on Financial Markets 1999).

Defining hedge funds by organisation

Some, particularly regulators, define hedge funds in terms of their *legal structure* or *organisation*. The President's Working Group on Financial Markets (1999: 1), for example, defined a hedge fund as 'any pooled investment vehicle that is privately organised, administered by professional investment managers, and not widely available to the public'.

Typically, hedge funds are limited partnerships or limited liability companies, they trade in financial instruments, they are not permitted to solicit funds from the public, and they are exempt from investor protection and (some) disclosure legislation. The minimum investment in a hedge fund ranges between $100,000 to $5 million, with $1 million common. As limited partnerships, managers also own capital in their fund, at least equal to the fund's minimum investment requirements. The main investors in hedge funds to date have been wealthy individuals or families and, to a lesser degree, university endowments and foundations. As discussed in Chapter 9, institutional investors are also investing in hedge funds.

Hedge funds charge high fees – 'incentive' fees of between 15 to 20 per cent on realised trading profits and 1 per cent annual management fees are standard. If a fund makes losses, not only do the fund's managers not receive the incentive fee, but they are not usually paid the incentive fee on later earnings until losses have been made up – so-called high watermark provisions. Some funds charge up-front entry fees as well. Investments in hedge funds are usually locked in for a specified period, or withdrawals are subject to advance notification, with three months being the most common. Individual investors in hedge funds in the United States number in the tens of thousands.

Most hedge funds use leverage, but the degree of leverage can vary enormously between hedge funds and between types of hedge fund (OECD 1999). The President's Working Group on Financial Markets (1999) reckons that most hedge funds have on-balance-sheet leverage ratios of less than two, suggesting that hedge funds support their asset base with a broadly even mix of capital and debt. Estimates by private data providers tend to be similar (Chadha and Jansen 1998). There is, however, substantial variation between hedge funds, with a dozen or so large hedge funds leveraging their capital more than 10 times. At September 1998, the highest ratio for on-balance-sheet leverage by a large fund was 37, although higher ratios have been reported at other times, up to 71 at the end of 1997 (President's Working Group on Financial Markets 1999). General estimates of economic leverage are not available.

This contrasts starkly with US mutual funds. Like hedge funds, they are also pooled investment vehicles. But, unlike hedge funds, US mutual funds are registered with the US Securities and Exchange Commission (SEC) and are incorporated under state law as corporations or business trusts. They are subject to a wide range of federal legislative restrictions