Can Emerging East Asia Weather Global Financial Instability?

Introduction

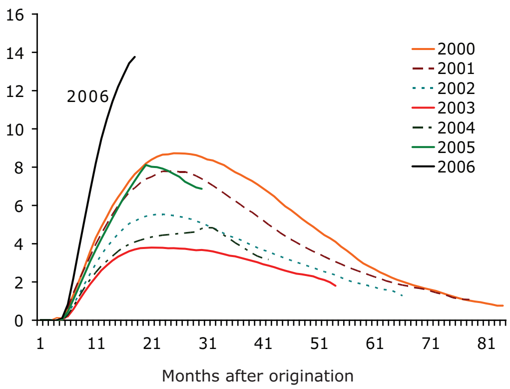
Emerging East Asia exhibited remarkable resilience during recent bouts of global financial turbulence. The region's financial markets tumbled in August 2007 amid concerns over United States (US) subprime mortgages and spreading global credit fears. But a relatively quick recovery followed by mid-September. Emerging East Asian share prices rebounded to record levels while the region's currencies resumed their upward trend against the weakening US dollar. Sovereign bond spreads in local markets remain significantly higher compared with the start of the year—in line with global market developments. But this reflects general credit risk re-pricing and a rather healthy market correction after an extended period of heightened risk appetites.

Several important factors can help explain this resilience. First, the region's financial institutions have relatively small direct exposure to US subprime mortgages and structured credit products. Second, strong growth prospects and sound external positions have continued to support investors' confidence in the region's economies. And third, improved and prudent policies in most emerging East Asian economies help mitigate the impact of external shocks.

This, however, does not imply that the region will remain shielded from global financial market developments. The external environment is increasingly uncertain and the current period of financial turbulence will likely continue. There are some important channels through which further instability can be transmitted to the region's financial markets—with significant impact to the regional economy as a whole. Heightened risk perception and eroding investor confidence is one. A swing in market sentiment and a sudden change in liquidity conditions is another. The contagion effects could become more serious if tightening credit conditions and financial instability dampen broad economic activities both at global and regional levels.

This section examines the region's strength and vulnerabilities in the context of current financial market situations to shed light on the challenges faced by the region's policymakers. After briefly summarizing recent events surrounding the US subprime turmoil

Figure 37: **Nonprime Mortgages Delinquencies** (60-Day Delinquencies by Vintage Year, in per cent)



Source: *Update on the Global and Regional Outlook,* International Monetary Fund presentation, 29 Nov 2007.

and its implications to the regional banking and financial markets, the section examines the various channels of contagion to the region's economies in light of ongoing developments in regional financial markets and institutions. Implications for future policy decisions are evaluated.

How Did Emerging East Asia Survive the Recent Turmoil?

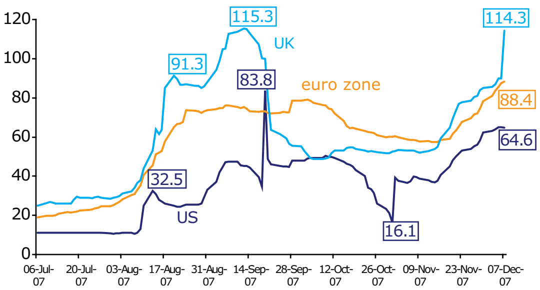
Riding the housing price boom during 2001–2005, US residential mortgage lending saw rapid growth—with increasing amounts going to borrowers with shaky credit histories. As the US Federal Reserve (Fed) began raising interest rates in July 2004, these subprime mortgage holders naturally faced larger interest payments. The subsequent cooling in the housing market also made it more difficult to refinance mortgages into loans with better terms—or pay off mortgages by selling homes. Consequently, delinquencies on subprime mortgages rose significantly from mid-2005 **(Figure 37).**

Proliferation of structured credit products—which helped bundle, repackage, and sell subprime mortgages to a broad spectrum of global investor groups—provided the link for financial contagion.[6] These new credit risk transfer products and mechanisms have gained popularity in mature markets as a way of boosting profits in an environment of relatively low interest rates, while helping manage risk exposures of financial institutions. But as defaults on US subprime mortgages spilled over onto the balance sheets of hedge funds and other investment funds, a number of banks have been affected through off-balance sheet financial "conduits," which invested heavily in related mortgage derivatives and credit products.

The uncertainty about who holds how much of these mortgage-related products—and where—generated widespread distrust among financial institutions worldwide. Add financial innovation and globalization, and the risks became dispersed on a broader basis throughout the global financial system. Also, while financial innovation has increased banks' ability to move risk off their balance sheets, it has not eliminated the possibility that this same risk could return unexpectedly, and suddenly. As concerns about

[6] For a more detailed discussion, see *Asia Bond Monitor*, November 2007, at http://asianbondsonline.adb.org/documents/abm_nov2007.pdf, pg 33.

Figure 38: **Key Short-term Money Market Rates** (in spreads over policy rate, basis points)



Source: Bloomberg.

credit and counterparty risks spread, banks became defensive and scrambled for liquidity. Key short-term rates in mature markets soared in early August **(Figure 38)**, prompting major central banks to inject large amounts of liquidity in the interbank money market.

Heightened risk aversion led global investors to retreat from risky assets during the August sell-off, including those in emerging East Asian markets. Stock prices plummeted across the region and regional currencies took a tumble. High-yield, high-risk emerging market sovereign bond spreads also widened sharply, as investors began to require higher compensation for assuming risk.

Because the region's banks—which continue to dominate emerging East Asian financial systems—were little affected by the US subprime problem, the impact on local financial systems was largely contained.

Disclosed exposures of emerging East Asia's banking institutions have been limited thus far and relatively small against total bank assets.[7] Banks in Indonesia and Malaysia have virtually no direct exposure. And while banks in the Philippines and Thailand deal with structured credit products, they are largely dispersed rather than systemic, and small in size. Some banks in the People's Republic of China (PRC); Hong Kong, China; Republic of Korea (Korea); Singapore; and Taipei,China reported more significant exposures to the US subprime market—through structured credit products such as collateralized debt obligations and asset-backed securities. But here again, the exposure is less than 5% of total assets for most. There are some reports of losses from nonbank financial institutions such as insurance companies in Taipei,China and banks' off-balance sheet investment funds in Hong Kong, China; but the general picture remains benign.

Still, the spillover from the financial turmoil emanating from G3 financial markets could be potentially large. Generally sound macroeconomic fundamentals and growth prospects helped limit the initial losses in emerging East Asian equities, bonds, and currencies. However, some recent trends in the region's financial systems warrant close monitoring. Asset prices are booming in several emerging East Asian markets, with heightened risks of mis-pricing. Banking systems are extending new business lines,

[7] The estimates are based on the surveys of Fitch ratings, Moody's Investors' Service, and Standard & Poor's.

bringing new exposure to new territories and types of risk. Foreign capital inflows to the region continue to rise—in some cases sharply—contributing to rapid growth in money supply and credit, thus fuelling inflation. Against this backdrop, heightened uncertainty over the duration and magnitude of capital inflows and increased financial volatility pose a significant threat to macroeconomic and financial stability.

Where Are the Lurking Vulnerabilities in Emerging East Asia's financial systems?

The region's largely bank-dominated financial systems—with weak systemic support for effective risk management—leave doors open to potential spillovers if conditions in global financial markets worsen or investor sentiment shifts.

In the aftermath of the Asian financial crisis, large-scale restructuring and reforms were undertaken to bring the region's bank balance sheets back to health—and to revamp highly-leveraged firms. Prudential regulations were also reinforced.[8] Ongoing efforts to develop capital markets help broaden sources for corporate financing, yet banks still dominate as the primary source for economic activity **(Table 10)**. To support currency and financial stability, macroeconomic management in general has become much more prudent, with inflation targeting introduced in several economies, fiscal budgets consolidated, and exchange rate regimes more flexible. However, some pockets of weakness remain in the region's banking and financial systems, while new challenges are emerging.

On balance sheets, the region's banks appear healthy, with virtually no exposure to the type of external credit risks that the current turmoil involves. Nonperforming assets have declined dramatically across the region since the crisis. Risk-weighted capital adequacy ratios are higher. And banks have reduced short-term external borrowings—which had previously exposed them to risks stemming from currency and maturity mismatches. Meanwhile, bank income sources have been broadened by diversifying into household lending, offering new types of financial services, and strengthening fee structures.

[8] For a more detailed discussion, see *Asia Economic Monitor,* July 2007, at http://www.aric.adb.org/pdf/aem/jul07/July%20AEM%20complete%20250707.pdf, page 54.

Table 10: **Sources of Finance in Emerging East Asia** (percentage of GDP)

	Commercial bank loans[1]		Domestic debt securities outstanding		Stock market capitalization	
	2001	Sep 2007[2]	1996	2006	2001	Oct 2007
China, People's Rep. of	102.1	111.0	7.2	44.4	40.0	121.7
Hong Kong, China	168.2	192.0	22.5	34.8	299.4	1021.9
Indonesia	18.7	24.1	3.0	24.0	14.5	49.5
Korea, Rep. of	57.4	88.0	50.8	113.8	41.1	116.5
Malaysia	97.2	109.4	72.5	98.6	131.9	187.3
Philippines	44.7	29.6	33.6	38.4	59.0	124.8
Singapore	106.2	93.7	26.5	65.5	216.5	348.2
Taipei,China	142.3	144.2	34.6	56.5	103.9	195.5
Thailand	83.0	74.6	10.1	54.0	31.3	86.1

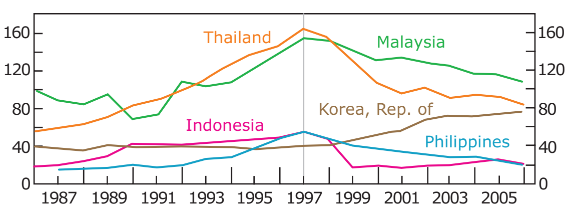
[1] PRC data refers to total loans.
[2] Philippines as of Aug 2007.
Source: OREI staff calculations based on data from CEIC, Bloomberg, and People's Bank of China.

The limited exposures of the region's banking systems to the US subprime fallout may be more a reflection of the region's relatively less-developed financial markets and institutions, which remain largely unsophisticated in terms of the array of products offered.[9] Indeed, bank lending generally fell in the post-crisis period **(Figure 39)**. Conservative lending practices and strengthened prudential regulations following the 1997 crisis have kept bank investments in relatively safe assets, such as local government securities **(Figure 40)**.

And risks may arise from the broadening scope of banking business and their exposures to new types of market risks **(Table 11)**. With the recent housing booms across the region, for example, mortgage-related lending has increased sharply. Elevated levels of household indebtedness also show signs of stress (see Assessment of Financial Vulnerability, pages 15–21).

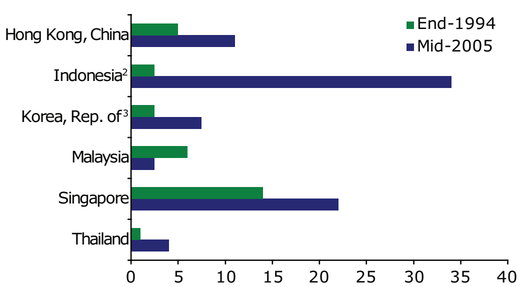
Securities holdings have increased as a share of total bank investments. Along with the rise in investment banking-type activities, this indicates exposure to greater market risks. Regional banks are participating in securities-related transactions—underwriting, dealing, and brokerage, for example—and in foreign exchange, leasing, and insurance activities. Banks have also been encouraged to take part in local bond market development—as issuers, underwriters, investors, and guarantors. This also exposes banks to new risks.

Figure 39: **Bank credit to the private sector before and after banking crises**[1]



Source: Turner, Philip (September 2007) *Are Banking Systems in East Asia Stronger?* Bank for International Settlements.

Figure 40: **Government securities held by commercial banks** (% of domestic credit[1])



[1] Of commercial banks.
[2] First bar refers to end-1996.
[3] Second bar refers to end-2004.
Source: Mohanty, et al (2006), Banks and aggregate credit: what is new?, *BIS Papers No 28*, August 2006.

[9] Banks in the newly industrialized economies (NIEs), however, are beginning to offer more sophisticated products, rapidly narrowing the gap with their counterparts in the G3.

Table 11: **Composition of bank lending**[1]

	Housing loans			Consumer loans			Business credit		
	1994	1999	2004	1994	1999	2004	1994	1999	2004
Hong Kong, China	7	15	15	2	3	3	86	76	73
Singapore	14	20	26	13	12	15	60	51	39
Indonesia		5	6		7	18		60	37
Korea, Rep. of		9	33		18	17		69	47
Malaysia	10	18	28		8	16		64	45
Thailand	9	7	10	4	3	6	64	71	68

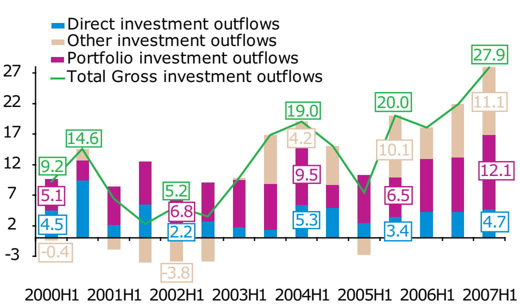
[1] Of commercial banks. As percentage of total domestic credit.
Source: Mohanty, M. et al (2006), Banks and aggregate credit: what's new?" *BIS Papers No. 28*.

Recent trends in the global financial system—notably the growing presence of nonbank financial institutions and proliferation of new instruments for risk transfer—will also become increasingly relevant in the regional context.

In regional economies with more advanced financial systems, technological progress and competition are rapidly modifying the overall risk profile of banking and the financial industry. Nonbank financial institutions such as insurance companies, pension and mutual funds, and leasing, factoring and venture capital firms, while still underdeveloped, have grown rapidly in recent years. Although small as a share of total financial system assets, the size of the managed assets is rising rapidly at 25.4% on average[10] over the past 5 years in NIEs.

Despite generally conservative banking activity in the region, largely unregulated nonbank financial institutions are already taking on increasingly risky investments for higher returns. Local institutional investors have also started to increase their overseas investments and diversify their holdings into riskier and more sophisticated equity, credit, and currency derivatives. Over the past few years, sharp increases in portfolio investment outflows (mainly debt securities from PRC and Korea) suggest that exposures in some emerging East Asian economies to mortgage-related securities—although the majority are likely to be prime rather than subprime mortgages—might be bigger than currently estimated **(Figure 41)**.

Figure 41: **Investment Outflows—NIEs**
(% of GDP)



Note: Negative values indicate that proceeds from redemption of earlier investment outflows exceed investment outflows for the period.

Sources: OREI staff calculations based on data from *International Financial Statistics*, International Monetary Fund, and country sources.

[10] The estimated growth is based on the size of managed assets of mutual funds and private pension funds in NIEs reported by the Organisation for Economic Co-operation and Development and the Investment Company Institute.

At the same time, a broadening investor base has led to increasing demand for new debt products and services, which is spawning increasingly complex new instruments. Take the region's bond markets, for example. Since the 1997 financial crisis, developing local currency bond markets in the region has become a priority—in part to offer alternatives to bank finance. The expansion of global liquidity and increasing demand for high-yielding assets also resulted in a sharp rise in short-term investment inflows, which poured into local currency debt markets. The size of local bond markets rose to 56.8% of GDP in the first half of 2007, up from 19.1% in 1997.

Furthermore, ongoing development of derivatives markets in some economies—and increasing off-balance sheet financial transactions in connection with rising local fund management activities—imply fundamental changes in the region's financial system balance sheet structures, in particular, the types of risks to which banks are exposed, and their magnitude. These financial market developments may contribute to a lack of transparency in banking operations and compound the opacity of risk exposures within broad financial systems.

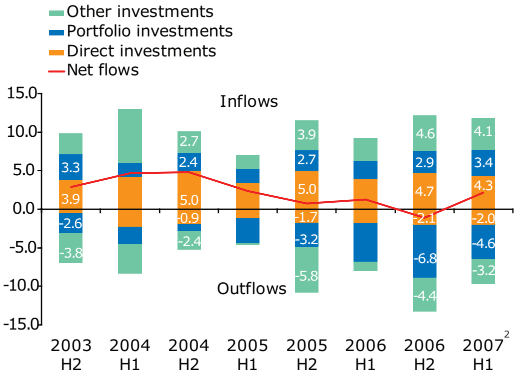
The complexity of new financial products and services present both challenges and opportunities in terms of risk management. On one hand, the availability of new financial instruments and markets such as credit-risk-transfer instruments and derivatives markets allows banks to broaden the scope of their risk management capabilities. But as business operations grow more complex and sophisticated, keeping risk management systems up-to-date will present increasing challenges to both banks and bank regulators.

Despite the resurgent capital inflows to the region following the August turmoil, a sharp reversal in risk appetite and financial flows remains a possibility in a climate of heightened volatility and uncertainty, due to a re-pricing of risk and the potential unwinding of the so-called "carry trade."

Effects from growing capital movement—and short-term investments—associated with increased financial market integration and capital account liberalization also pose a significant risk to the region's economies should an exogenous shock occur. This poses a potentially greater risk to the countries that have experienced rapid growth in portfolio investment flows and asset price inflation in recent years.

Capital flows to and from the region reached record highs in recent years **(Figure 42)**. With the volume of cross-border capital flows on the rise, so too have cross-border holdings of financial assets increased sharply **(Figure 43)**. Gross external assets and liabilities as a share of GDP reached 131% in 2004, up from 51% in 1990.[11]

Figure 42: **Financial account—Emerging East Asia** (% of GDP)[1]

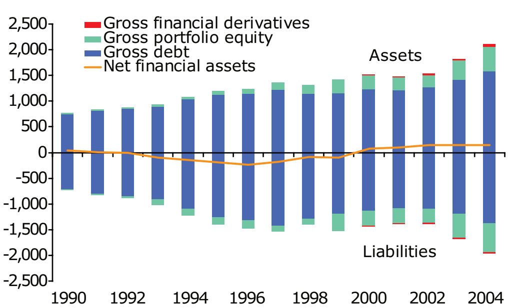


[1] Figures include China, People's Rep. of; Hong Kong, China; Indonesia; Korea, Rep. of; Malaysia; Philippines; Singapore; Taipei,China; and Thailand.
[2] 2007H1 figures do not include Malaysia because data are unavailable.
Source: OREI staff calculations based on data sourced from the *International Financial Statistics,* International Monetary Fund, and country sources.

More worrying is the changing structure of capital inflows, with short-term capital now accounting for more than 60% of total inflows. Substantial rises in the "other investment" inflows may also reflect increased "carry trade" activities and "hot money"—driven by interest rate differentials.[12] Against this backdrop, a sudden shift in the direction and magnitude of financial flows is a significant concern. The sharp increase in short-term investments in the mid-1990s has been often blamed as a major reason for the 1997 Asian financial crisis—as these instantly turned into significant capital outflows at the onset of the crisis. To the extent that this particular component of short-term capital inflows is extremely volatile and highly interest-rate sensitive, the region's financial markets are subject to the vagary of foreign investor sentiment. This also places regional authorities in a difficult position when pursuing autonomous monetary policies.

Large capital inflows, strong credit expansion, and adverse macroeconomic consequences are not new to emerging East Asia. Robust economic growth in recent years has underpinned surging asset prices by boosting the region's income and fueling market expectations for higher future returns. Key regional stock market indexes soared and property prices are rising rapidly in many regional economies. The jump in money supply and falling domestic interest rates has been behind the sharp rise in asset prices. But a prolonged period of macroeconomic stability also seems to have bred a bigger risk appetite and some complacency among investors.

Figure 43: **Cross border financial assets and liabilities of Emerging East Asia**[1] ($ billion)



[1] ASEAN + PRC + NIEs.
Source: OREI staff calculations based on data from Lane, P. and G. Milesi-Ferretti (2006), The External Wealth of Nations Mark II: Revised and Extended Estimates of Foreign Assets and Liabilities, 1970-2004, *IMF Working Paper 06/69*.

[11] Lane, P R and G M Milesi-Ferretti (2006): The external wealth of nations mark II: revised and extended estimates of foreign assets and liabilities, 1970–2004, *IMF Working Papers, no 06/69*, March.

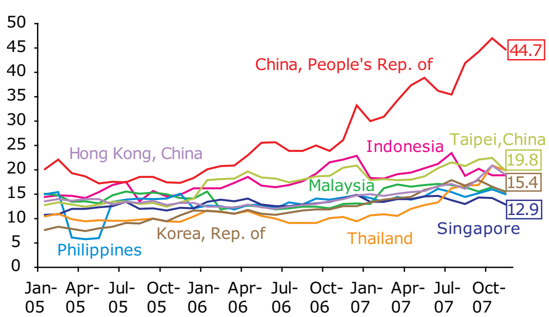
[12] These non-foreign direct investments (FDI) and non-portfolio inflows often represent short-term borrowings of the region's banking systems and trade credits. Although some country-specific factors can account for the recent increases—such as a sharp rise in overseas borrowing by banks in Korea to help local shipbuilders hedge their future US dollar receipts—this cannot be the full region-wide explanation.

The asset price boom has also been generally broad—covering local equity, bond, and property markets. Rapid liquidity growth, fueled by high official exchange reserves, has increased demand for various assets. The appearance of more institutional investors and their asset management activities in the region also increased the share of financial assets in individual investor portfolios. Growing size of asset markets vis-à-vis the economy has naturally led to increased exposures of various sectors—household, corporate, and financial—to changes in asset prices **(Box 3)**. Against this backdrop, if asset prices are affected as macroeconomic conditions worsen, the overall economic impact on the region's economies could be significant.

Could These Vulnerabilities Combine to Become "the Perfect Storm?"

Uncertainties about the evolution of the recent turmoil persist, especially on heightened volatility in financial markets, re-pricing of risks globally, and the increased odds of a US recession. Emerging East Asia boasts strong economic fundamentals and, as of now, there are few signs of financial market turbulence derailing the region's robust growth. But some of the recent trends have increased the region's vulnerabilities to prolonged financial instability and its continuing influence on the macroeconomic stability.

Figure 44: **Price Earnings Ratio**



Source: Bloomberg.

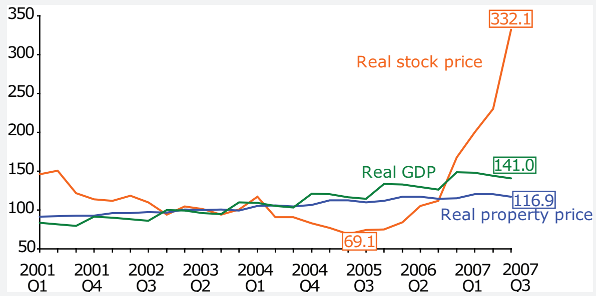
As equity prices rose sharply, price-earning ratios shot up **(Figure 44)**. With their new business lines, banks entered new territories of exposure and risks; exposure to consumer credit, housing loans, and securities investments could incur losses should macroeconomic conditions worsen with rising household indebtedness and falling asset prices. Inadequate information—and in many cases limited supervisory capacity—on off-balance sheet exposures such as derivatives is also a concern. In addition, the increased activity of nonbank financial institutions and growing complexity of available financial products (and services) contribute to the opacity of financial systems and their risk exposures.

Box 3: **Asset Markets and the Real Economy**

Asset markets (equity and property) in the nine bigger economies in emerging East Asia have been booming in recent years.[1] Since 2001, stock prices have risen over 100% on average, and property values have also soared (Figures B3.1a, B3.1b, and B3.1c). Policy makers across the region have expressed concern about surging asset prices and the potential impact on economic activity of a major correction in these markets.

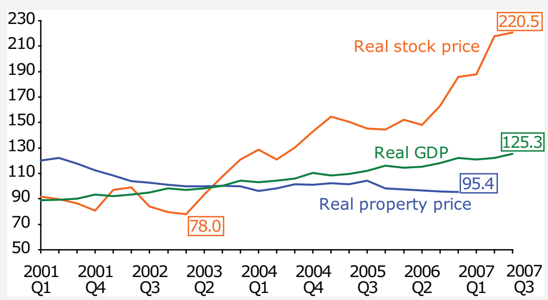
As asset markets grow in size, the regional economy is increasingly exposed to swings in asset prices. In the past six years, stock market capitalization, as a ratio to gross domestic product (GDP), has doubled or tripled in most of emerging East Asia, except for Malaysia and Singapore, where it has gone up less significantly. By the end of October, the average market capitalization for seven of the nine larger emerging East Asian economies—except Hong Kong, China and Singapore, whose market capitalization is much higher—was about 126% of GDP (Figure B3.2), more than double the average at the end of 2001. Property prices are rising fast as well. Although official data suggest property prices remain in line with economic growth, data limitations may have resulted in underestimation of property price increases in many of the region's economies, particularly the People's Republic of China (PRC). Data from the private sector, such as Jones Lang La Salle Research, suggest that property prices are rising faster in the region than official data indicate.

Figure B3.1a: **People's Republic of China: Asset Prices and Real GDP** (2003=100)



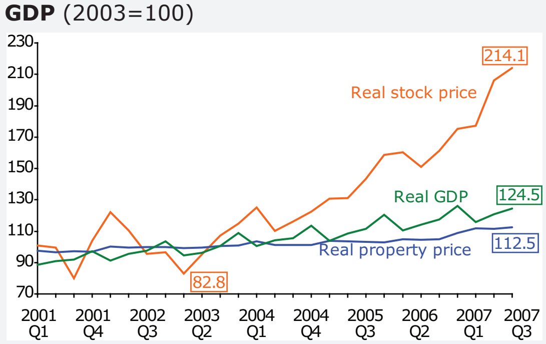
Source: OREI staff calculations based on CEIC and Bloomberg data.

Figure B3.1b: **ASEAN-4: Asset Prices and Real GDP** (2003=100)



Source: OREI staff calculations based on CEIC and Bloomberg data.

Figure B3.1c: **NIEs: Asset Prices and Real GDP** (2003=100)



Source: OREI staff calculations based on CEIC and Bloomberg data.

The wave of financial deepening has also accompanied the expanded size of financial asset holdings of individual investors. Fast rising stock prices and increasing new issuance—reflected in the dramatic rise in market capitalization—attracted ever growing participation of individual investors in local stock markets. In the PRC, the number of investor accounts doubled to 133 million by November 2007, from 66 million in 2001. Indirectly through mutual funds, the value of stock market investments rose to RMB3.3 trillion by end-October from RMB80 billion at the end of 2001. With growing income, housing ownership is also rising. In some large countries in the region, policy makers have already been concerned about the rapid rise in household mortgage debt.

Changes in asset prices could affect the real economy by the wealth effect and changes in the cost of capital. Higher asset prices increase the wealth of consumers, boosting consumer confidence and encouraging higher spending. Stronger asset values would also improve firms' and banks' balance sheets and thus induce banks to charge lower premiums or increase the size of loans by the so-called 'financial accelerator' effect. At the same time, booming stock markets would encourage corporate investment by lowering the cost of funding.

Empirical research shows that the wealth effect of asset prices, though small, is significant in emerging East Asia. Kuralbayeva, Karlygash, and N'Diaye (2006) finds that in Malaysia; Hong Kong, China; Indonesia; and Korea, a 10% rise in real stock prices increases private consumption by about 0.2–0.3%, similar in magnitude to estimates for industrialized countries.[2] Although results are not available for

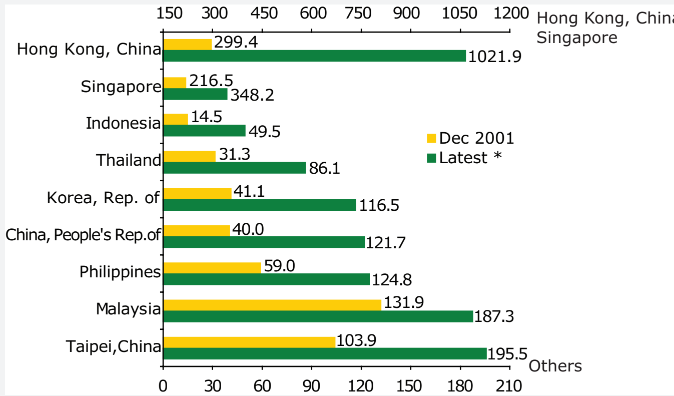
[1] The economies covered in this box are Indonesia, Malaysia, Philippines, and Thailand (ASEAN-4), the People's Republic of China (PRC), and the four newly industrialized economies (NIEs): Hong Kong, China; Republic of Korea; Singapore; and Taipei,China.

[2] Kuralbayeva, Karlygash, and Papa N'Diaye, 2006, Determinants of Private Consumption in A Selected Number of Asian Countries, IMF Working Paper (forthcoming).

the region, changes in asset prices have been found to have significant effect on investment as well in most industrial countries.[3] The 1997 Asian financial crisis was a vivid example that soaring asset prices, pushed by large capital inflows, increased the leverage of borrowers and expanded investment through the financial accelerator channel, contributing to financial and economic volatility.[4]

With surging asset prices and increasingly sizable asset markets, the main challenge for macroeconomic policy in emerging East Asia is to prevent any financial market excess from spilling over to goods and services markets, thus threatening macroeconomic stability. Policymakers should also aim to minimize the risk of financial instability as a sustained period of asset price inflation often undermines financial sector soundness, even if those gains initially appear broadly justified by fundamentals. This requires authorities to remain focused on containing inflationary pressures and expectations, and strengthening financial market regulation and supervision to address risks associated with asset price booms. Prudential measures, such as tightening lending standards and criteria, could limit the speculative participation that may lead to misalignment of asset prices and the consequent price collapse. Tightening supervisory policies can also be helpful, as they can target problem sectors more closely, while limiting the risk of derailing economic growth by using monetary policy that can have long-lasting and much broader macroeconomic consequences.

Figure B3.2: **Stock Market Capitalization** (% of GDP)



*As at end-Oct 2007.
Source: CEIC database.

[3] See, for example, Robert Barro, The Stock Market and Investment, *Review of Financial Studies, Vol. 3, No. 1* (1990), pp. 115–131, for US evidence.

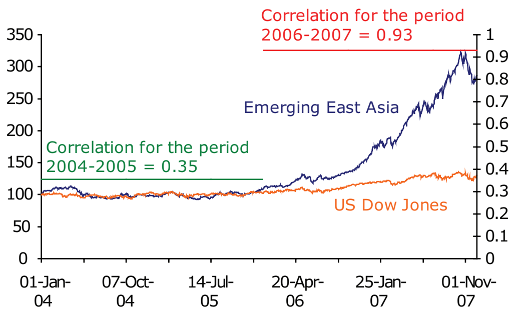
[4] Edison, Hali, Pongsak Luangaram, and Marcus Miller, 2000, "Asset Bubbles, Leverage and 'Lifeboats': Elements of the East Asian Crisis," *Economic Journal*, Vol. 110, No. 460, pp. 309–34.

Tightening financial linkages increase the region's exposure to risks arising from global financial instability.

Booming asset markets in some regional economies also run the risk of correction should global financial instability reverse investment sentiment. The region's equity markets tend to move in tandem with global equity markets. Since 1997, greater market openness has enticed greater foreign investor participation directly into emerging East Asia's equity markets. Portfolio inflows to the region have been particularly strong, especially in recent years. So the region's equity markets remain highly sensitive to swings in foreign investors' risk appetite.

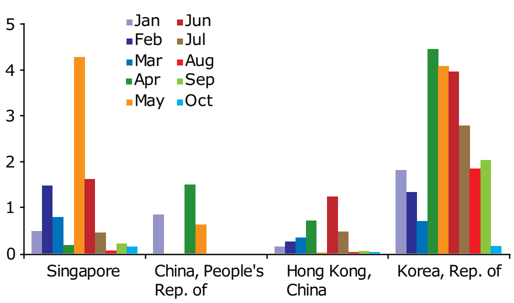
In the period since 1990, correlation between daily changes in stock prices in the region and those in the Dow Jones Industrial Average ranged from 20% to 40%, with the exception of the PRC, which showed almost no correlation. In the more recent period from 2006, however, the correlation of emerging East Asian markets with the US market picked up sharply to over

Figure 45: **Correlations between US and Emerging East Asia stock markets**
(1 Jan 2004 = 100)



Source: OREI staff calculations based on Blooomberg data.

Figure 46: **Foreign currency bond issuance**
(Jan to Oct 2007, $ billion)



Source: Bloomberg.

90% **(Figure 45)**. Should there be a sell-off in say, US markets, one could expect a similar move within the region. In general, the correlation within the region has also increased in recent years, reflecting the tightening financial integration at the regional level as well.

Although the environment for external funding remains broadly positive, heightened financial volatility—together with elevated funding costs—are expected to narrow external funding opportunities for emerging East Asian borrowers.

Sovereign credit spreads have already widened in the wake of the US subprime turmoil and have drifted higher in recent months. Credit risk re-pricing triggered by the recent financial ferment is also expected to broaden.

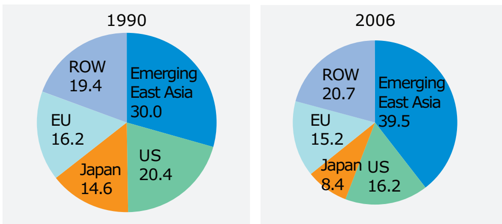
Emerging East Asia's debt markets have been growing strongly, attracting global investors in search of yield—particularly against the climate of generally low interest rates in mature markets. But heightened market volatility will likely slow growth in the market on both the demand and supply side. On the supply side, rising costs of financing and elevated uncertainty over the economic outlook may lead companies to delay plans for raising new capital. Across the region, offshore issuance of corporate bonds fell sharply in the wake of the subprime crisis **(Figure 46)**. Simultaneously, investors' heightened sensitivity to risk could force their retreat from the region, reducing demand for emerging market debt as well.

If the growing risk aversion—accompanied by a re-pricing of risk and a sudden shift in the global investment climate—leads to a credit crunch, tougher funding conditions could affect the region's economic activities more seriously. The US subprime problem and related global credit market turbulence has already adversely affected credit conditions in mature markets. Recent reports confirm tighter lending conditions in the US and the euro zone, which is expected to affect both household and corporate funding decisions.[13] If this global trend spreads to the region, tighter credit conditions and increasingly uncertain economic outlook could dampen investor confidence and slow corporate spending, particularly in economies that are less business-friendly.

[13] See European Central Bank (2007), the November issue of EU banking sector stability. The Fed quarterly reports also indicated tightening lending criteria and restrictions.

Strong trade ties to major industrialized countries suggest that the risk to the region might be greater if growth in those economies slows sharply.

Figure 47: **Composition of Emerging East Asia's Exports** (%)



Note: ROW = rest of world.
Source: Staff calculations based on data from *Direction of Trade Statistics*, International Monetary Fund.

The possibility of a slowdown in the US economy is a major concern, with its annual GDP growth projected to fall further to 1.9% in 2008—down from this year's moderation to an estimated 2.2%. The US economy remains the single largest market for emerging East Asia's exports **(Figure 47)**. Should the world's largest economy stumble into recession, knock-on effects on the region's economies could be considerable. Studies suggest that a 1% reduction in US GDP growth could shave the region's growth in the range of 0.3–0.5 percentage point through direct and indirect demand effects.[14]

There is little doubt that favorable external trade and financial conditions provided an important foundation for robust growth in emerging East Asia over the past 5 years. Although the region's growth appears set to continue, a sharp slowdown or recession in the US economy would certainly leave its mark on the region's economies **(Box 4)**.

First, accounting for nearly 30% of global GDP, the US economy could trigger a significant reduction in world income and demand for the region's exports should it slow much sharper-than-expected. Second, with the US as global financial center, any major disturbance in US markets could quickly transmit to other major global financial markets, with repercussions felt throughout emerging markets as well. As the recent subprime market turmoil showed, contagion through financial channels can be potent. Heightened financial volatility will also influence capital flows and investor confidence. There are other channels of transmission as well—via commodity price adjustments or terms of trade, for example. Changes in US monetary policy and exchange rates may also have second-round price and wealth effects on trade and global financial asset positions.

Past episodes of US slowdowns and their impact on the region's economies can provide some rough estimates of the potential effect should the US economy fall into recession. During the five US recessions between 1974 and 2001, emerging East Asia's growth fell by about 0.28 percentage points on average for every percentage point decline in US growth. But the average masks significant variance in the extent of spillovers depending

[14] See ADB, 2007, Developing Asia and the World, *Asian Development Outlook*.

Box 4**: Is Emerging East Asia Decoupling from the US?**

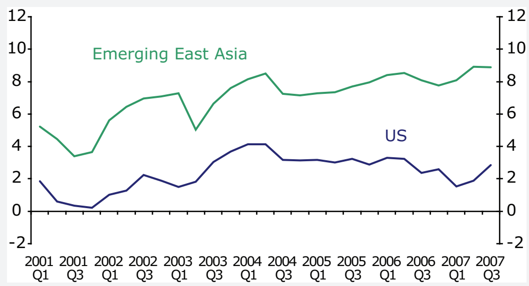
The idea that emerging East Asian economies in aggregate are decoupling from the US economy has become a hot topic lately. The region's GDP growth, for example, has not faltered despite a visible slowing in US growth in recent quarters **(Figure B4.1)**. Has emerging Asia become better able to insulate itself from economic fluctuations in industrial countries—and, if so, how and to what extent?

The region's resilient economic performance stems from better economic policies and strengthened institutional frameworks as a result of successful reforms in the 10 years since the 1997/98 Asian financial crisis. Strong growth and economic development have resumed in most crisis-affected countries. And, with increasingly open financial markets in the region—and relatively low interest rates in industrial countries—capital inflows to emerging East Asia have been strong during the past several years, boosting economic activity. More efficient financial systems coupled with positive expectations about future growth prospects and profitability in the region continues to attract foreign capital.

Improved macroeconomic policy frameworks and reforms to establish efficient financial markets was an important element of the post-crisis recovery. All five crisis-affected economies[1] have more flexible exchange rate regimes compared with pre-crisis period. And four out of the five also opted for inflation targeting. While increased currency flexibility increased the degree of monetary policy freedom, the adoption of inflation targeting has helped maintain macroeconomic stability against cyclical fluctuations and enhanced monetary policy credibility. Improved fiscal positions with more effective public debt management also have allowed increased options for fiscal action when appropriate—with further reforms currently underway that should create more effective automatic stabilizers. While reforms have yet to be completed in some areas, significant progress has been also made in banking supervision and regulatory reform in crisis-affected countries. Efforts are continuing to introduce greater market discipline in the overall financial system through better governance and enhanced market transparency.

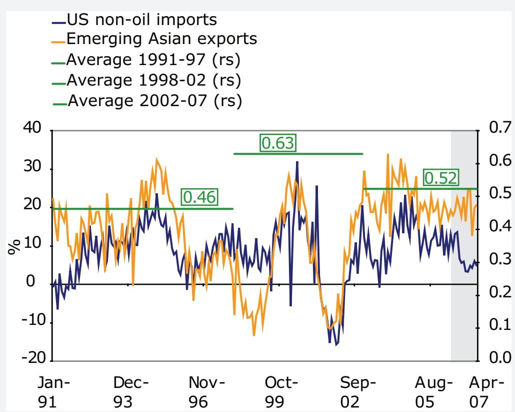
[1] The five crisis-affected countries are Indonesia, Malaysia, Republic of Korea, Philippines, and Thailand.

Figure B4.1: **GDP Growth in US and Emerging East Asia**[1] (y-o-y, %)



[1] Weighted by gross national income (atlas method, current $). Aggregates include People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei,China; and Thailand.
Source: OREI staff calculations based on national sources.

Figure B4.2: **Correlation between growth rates of US non-oil imports and emerging East Asian exports**



Source: OREI staff calculations based on data from *Direction of Trade Statistics,* International Monetary Fund.

Another likely reason for the region's continued economic strength is the diversification of emerging East Asia's export base—the geographic composition of its trading partners along with the rapid growth in intraregional trade. Trade is a major channel through which economic shocks are transmitted across borders. The region's export-to-GDP ratio—nearly 32.5% of GDP in 2006 compared with the world average of 24.9%—illustrates the region's relatively strong external dependency. But emerging East Asia's increasing trade openness has been accompanied by significant progress in the diversification of its export markets. Although the US remains the region's single largest market, it absorbed 16.7% of the region's exports in 2006, down from 23.2% in 1985. Japan and the euro zone now accounts for 24.0% of emerging East Asia's total export market, well above the US market share. Meanwhile, intraregional trade as a proportion of total exports also rose from 26.2% in 1985 to 42.7% in 2006. This increased diversification of the region's export markets suggests that an external demand shock arising from idiosyncratic individual market turbulence could be mitigated to some extent by stronger growth in other export markets. Indeed, the relationship between US non-oil imports and emerging East Asian exports loosened visibly in 2006-07 **(Figure B4.2)**.

However, changing demand conditions in the world's major economies—including the US—represent still an important factor behind emerging East Asia's export growth. Nearly 41% of the region's total exports are destined for G3[2] markets. Although loosening somewhat in recent years, the relationship between US

[2] G3 includes the euro zone, Japan, and US.

non-oil import growth and that of the region's exports also remains tight—their correlation over 2002–2007 was 0.52 (see Figure B4.2). Despite the growing share of intraregional trade, evidence indicates that a substantially large portion of emerging East Asia's intraregional trade still caters external demand[3]. Indeed, when taking into account the share of intraregional trade ultimately destined for the G3 economies, the share of G3 markets in the region's total exports rises to over 60% instead of the 42%. To the extent that intraregional trade is driven by trade of intermediate goods among the regional economies for final goods destined outside the region, emerging East Asia's intraregional trade dynamics remains sensitive to the changes in external demand conditions.

Clearly, with its unparalleled presence in world trade and financial market scenes, the US economy exerts by far the most significant leverage on the global business cycle. Often in the past, a US recession was accompanied by slower growth elsewhere to varying degrees.[4] Evidence drawn from past recessions and the direct and indirect trade linkages for the region's exports suggest that a US slowdown would have significant impact on the region's economies. The impact would be much greater should the US economy enter a recession with other major industrial economies slowing in tandem. There is also a chance that ongoing market corrections and re-pricing of credit risks could become much more disruptive, leading to prolonged financial instability and a severe global economic slowdown. Policies will need to remain flexible and readily accommodating against radical financial market movements, while continuing to improve economic resilience through deeper and more comprehensive reform efforts.

[3] ADB. 2007. Uncoupling Asia: Myth and Reality. *Asian Development Outlook 2007*.

[4] International Monetary Fund. 2007. Decoupling the Train? Spillovers and Cycles in the Global Economy. Chapter 4 in *World Economic Outlook* (April). Washington, DC.

on the nature of the US slowdown—spillovers were greater when the recession was triggered by a shock that was more global in nature. The most recent recession in 2001 was triggered by the bursting of the dot-com bubble and an associated downturn in the global IT industry. The region's median quarterly growth fell by 1.1 percentage points in connection with a 2.9 percentage point decline in US growth. Despite generally robust macroeconomic fundamentals and large accumulated reserves as a cushion, the region's economies need to plan in case of sharp swings in external demand and financial conditions.

Where Policy Can Make a Difference

Monetary policy anchored on inflation targeting, a prudent fiscal approach, and greater exchange rate flexibility could limit any spillover of continued global financial instability.

Gains achieved in fiscal consolidation and the application of prudential policies should be maintained to ensure appropriate insulation. Although post-crisis fiscal reforms and prudent policies have consolidated fiscal and external debt positions in many of the region's economies, public sector debt ratios remain substantial, ranging from a high of 72.7% of GDP in the Philippines to a low of 33.3% in Korea, reflecting the cost of financial system restructuring.

Monetary policy should continue to rein in inflationary expectations. Inflation—gathering steam across the region—has already pushed the long-term bond yields higher despite lower short-term rates, steepening the yield curves. The rise in long-term interest rates could raise the burden of interest rate payments on governments, particularly those with large public debt positions. With increased holdings of long-term government securities by the region's banks, this increase in long-term bond yields could also pose risks of capital losses if bond prices drop and assets are valued mark-to-market.

As the global financial markets enter a period of turbulence, heightened volatility can build higher risk premiums into emerging markets, bringing with it a higher cost of funding throughout the system. If emerging market credit risk spreads widen further and external funding conditions deteriorate sharply—associated with changes in investors' risk perception—related hikes in funding costs and the shortage of available funding could have harmful effects on the economies of emerging East Asia particularly those that still rely on external funds for infrastructure and other development requirements.

Against this backdrop, it is imperative for monetary and fiscal authorities to ensure sound macroeconomic policies remain in place with sufficient flexibility to adapt to the evolving external environment.

Policymakers will need to concentrate on enhancing risk management systems, strengthening disclosure requirements, and upgrading supervisory frameworks to better assess potential vulnerabilities.

Credit risk managers in emerging markets have a difficult time, as necessary information on credit ratings and traded security prices, for example, can be hard to come by. In many economies there are very limited data on default histories. Even if there were data—variables such as default probabilities and loss given defaults—might not provide a good guide to the true situation in a rapidly evolving financial environment.

Thus, enhanced supervisory review is critical in maintaining sound risk management and ensuring minimum capital requirements are met. A robust supervisory review process, including efforts by banks to assess capital adequacy can also allow bankers and regulators to engage in discussions to build a risk management system that is flexible, yet reinforces their risk assessment capacity.

Enhanced bank transparency can bolster market discipline. It should enable markets to reward banks that take responsible approaches to risk management and penalize those that do not. This is again the approach taken by the Basel Committee—to encourage market discipline by requiring disclosures that will allow market participants to assess key pieces of information about a bank's risks. One way is to follow a "menu of options" approach, whereby banks would be required to disclose information relevant to the approach(es) used in the measuring of capital requirements and on the basis of materiality.

The region's banking systems have gone through major structural changes since the financial crisis, but further reforms are needed to enhance their flexibility and resiliency against heightened volatility.

Although the region's banking systems so far exhibited resilience, some notable changes in the region's banking businesses such as increasing household lending and securities transactions require special attention. Rapid expansion by financial institutions into unfamiliar areas inevitably entails new types of risks. The growing involvement of nonbank financial institutions and the plethora of new instruments for risk transfer are changing the regional financial landscape. But the vastly different development stages of financial markets and systems across borders suggest immediate policy challenges and reform needs would differ greatly, thus requiring careful tailoring of the reform efforts to country specifics.

Some economies in emerging East Asia with more advanced financial systems need to better manage their banking system's risk exposures in light of the recent turmoil and continue to guard against potential spillovers. They could accelerate reform efforts to keep abreast with ongoing global financial market trends and developments, particularly in building toward Basel II compliance—several of the NIEs are planning to begin this in 2008. Strengthening information disclosure policies, upgrading standards in accounting and auditing, enhancing corporate governance, and enhancing institutional capacity are areas to address.

Economies with less-developed financial systems may not face immediate financial transmission from the subprime turmoil, but nonetheless could focus on longer-term development issues such as institution building, financial sector reforms, and capital market development.

For emerging East Asian economies that are in the process of building the basics of their financial systems, it is useful to pursue a broad policy framework that establishes legal and institutional infrastructure for finance. These can include insolvency regimes, creditor rights, and prudential regulations. Early efforts to build information and governance infrastructure—such as credit information systems, accounting and disclosure rules, and internal and external auditing systems—are also prerequisites. Strengthening systemic liquidity support through effective monetary operations, efficient payments and settlement systems, and liquid money and credit markets will follow suit. This type of institutional building is an important precondition for financial liberalization without undermining financial stability, particularly as these economies move toward structures that can take advantage of the benefits of economic and financial globalization.

Conclusion

Despite strong resilience to the weakening external environment, vulnerabilities in the region's financial systems should not be underestimated, as resurgent capital inflows and excess liquidity may complicate a true assessment of risk.

Against a backdrop of continued uncertainty over the future growth outlook and global financial stability, deeper and more comprehensive financial sector and market reforms are required to enhance flexibility and resiliency of the region's banking and financial systems—while maintaining strong macroeconomic prudence to underpin economic and financial soundness.

The recent financial market turmoil highlights the importance of transparency and governance in the financial systems. Globalized finance along with rapid innovation has complicated the task of effectively regulating and supervising financial institutions. Strengthening regulatory and supervisory frameworks is particularly important for emerging East Asian markets that have relatively weak financial market infrastructure for credit risk assessment and effective risk management.

A lack of institutional capacity among both financial institutions and regulators is another factor that can hamper effective risk monitoring and control, let alone the onslaught of evolving financial technology. Although country-specific requirements vary greatly depending on areas of immediate domestic policy concern, formulating an appropriate policy framework to prepare for possible risks from continued global financial instability can help insulate emerging East Asia from any major deleterious effects.