Marrying the micro- and macro-prudential dimensions of financial stability - the Hong Kong experience

Eddie Yue[1]

1. Introduction

Asia's ability to manage crises was critically tested in 1997. Subsequently, the region went through a testing phase of post-crisis reflection and structural reform. There is, however, another equally, if not more, important aspect that should be carefully examined: how to prevent similar crises from developing in the future. There is a need for crisis prevention mechanisms that enable the authorities to detect vulnerabilities and distress in the financial system and take remedial action early in the day. Such vulnerabilities could arise from the "micro dimension" - at the level of individual institutions - or from the "macro dimension" - imbalances in the economy or speculative excesses of the market.

Hong Kong was also subjected to rather severe pressure during the crisis. But it weathered the storm reasonably well - the banking sector remained largely healthy, and speculative attacks were successfully fended off. Moreover, the supervisory regime proved to be very robust and resilient during the economic downturn.

This paper sets out in detail the mechanisms that Hong Kong has put in place in order to keep its finger on the pulse of both individual institutions and the market so as to detect any stress points. It discusses how cross-sector surveillance is conducted in Hong Kong, given the current institutional structure of the regulatory agencies. It also discusses how official mechanisms and market behaviour may amplify or dampen financial cycles. Finally, it analyses various policy issues, including the monetary policy response under the constraints imposed by the linked exchange rate system.

2. Monitoring financial distress

2.1 The micro dimension

Current mechanism

The micro dimension refers to the microprudential regulation of individual institutions and the possible distress that they might experience, which might spread across the sector through contagion. The Hong Kong Monetary Authority (HKMA) is responsible for the regulation of "authorised institutions", which include banks, restricted licence banks and deposit-taking companies, whereas the Securities and Futures Commission (SFC) is the authority for regulating intermediaries in the securities market. This paper will focus mainly on the former.

For the banking sector, the HKMA has in the past put in place a number of prudential measures which help ensure that banks are not overexposed to undue risks in certain sectors and have sufficient capital to withstand any shock. These measures include:

70% loan-to-value ratio - the property sector has traditionally been a very important element of the Hong Kong economy, and property lending has long been the lifeblood of many retail banks in Hong Kong. But property prices, as with other asset prices, are susceptible to boom and bust cycles. Throughout the various cycles that we have experienced, the mortgage delinquency ratio has, however, remained at a relatively low level. Nevertheless, it would be prudent for banks to build in a cushion to protect themselves from a sudden downturn in the property market.

[1] The views expressed in this paper are those of the author and do not necessarily reflect the opinion of the Hong Kong Monetary Authority.

One of the most useful cushions is provided by the rule limiting the maximum loan-to-value ratio to 70% of the assessed property value for residential mortgages. This requirement was initiated by the banking industry itself back in 1991 when the property market was surging. The industry agreed that the then market practice of lending up to 90% of the assessed value should be adjusted to just 70%, providing a cushion for banks should the market come back down. It was then adopted by the HKMA as a prudential measure for all banks.

Throughout the peaks and troughs of the property market in the 1990s, the 70% rule has never been changed. It has never been used as a policy instrument to achieve housing objectives, nor has it ever been used as a countercyclical instrument to smooth economic cycles. It is simply a prudential requirement which provides a comfortable cushion for banks in mortgage lending, whether the market is experiencing an upswing or a downturn.

But homebuyers still have the choice to borrow more than 70% of the value of the property. Since 1999, the Hong Kong Mortgage Corporation (HKMC) has been offering mortgage insurance to property buyers for the portion of the loan above the 70% requirement, up to 85% of the assessed value. In August 2000, the scheme was extended to cover up to 90% of the assessed value of the property. Since the "above 70%" portion is insured, the risks that the banks are exposed to are still capped at 70% of the property value, and the prudential 70% rule is still in force.

Overall property exposure of banks - apart from residential mortgages, banks also lend to property developers and make other property-related loans. The overall property exposure of individual banks in Hong Kong can be as high as 70% of their whole loan book. The industry average is about 50%. In 1994, when property lending was rising quickly, the HKMA introduced a guideline requiring banks whose property exposure as a percentage of loans for use in Hong Kong was above the average of the industry as a whole (about 40%) to seek to stabilise or reduce that percentage. The guideline was, however, withdrawn in July 1998 during the market downturn as it was considered less relevant to the market conditions at the time. With or without the guideline, the HKMA has always kept a close and watchful eye on the property exposure of banks and maintained the practice of discussing with banks at the start of each year the increase in property lending which they are planning to make in the year ahead.

General prudential requirements - the HKMA has in place a regulatory system which is fully in line with international standards, especially those formulated by the Basel Committee on Banking Supervision. Banks are required, among other things, to maintain adequate liquidity and capital adequacy ratios. For the former, banks are required to maintain the ratio of liquefiable assets to qualifying liabilities above 25%. For the latter, all authorised institutions are required to maintain a minimum of 8%, which can be raised to 12% for licensed banks and 16% for deposit-taking companies. All institutions are required to submit periodic returns to the HKMA on the required financial information, to adhere to limitations on loans to any one customer or to directors and employees, and to seek approval for the appointment of directors and chief executives, and for controllers. Vigilant monitoring of these prudential requirements ensures that the HKMA is able to spot potential problems at individual institutions before they escalate.

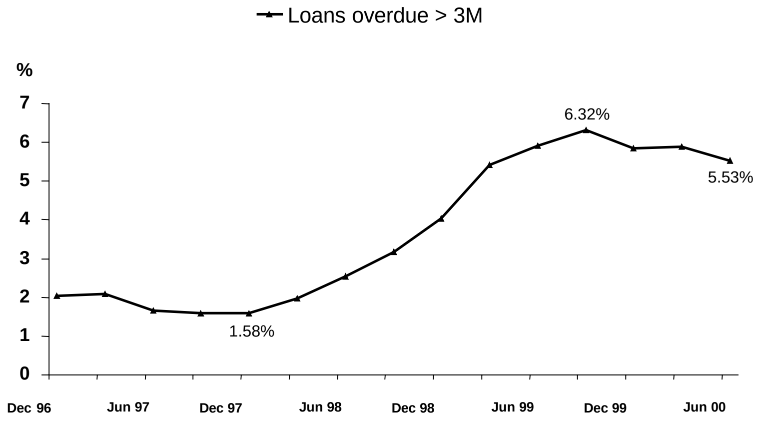
Public disclosure - monitoring of individual institutions is performed not only by regulators, but also by investors, shareholders and depositors. We are gearing our regime towards more transparency so that market discipline can also play an important role to complement prudential supervision. The HKMA issued its first Best Practice Guide on Financial Disclosure in 1994, and has been enhancing the disclosure standards with an annual package requiring more information to be published. Local banks are now required to disclose in their interim and final results a full range of financial information, including cash flow statements, asset quality, off-balance sheet exposures, maturity profiles, segmental information, and capital adequacy and liquidity information. Foreign banks meeting certain size criteria are also required to disclose major financial details such as asset quality, loan concentration, off-balance sheet exposures and liquidity information. We have already initiated a legislative procedure to provide legal backing for these disclosure requirements.

Performance during the crisis

The robustness of our supervisory regime underwent a severe test during the Asian crisis, when banks across the region were badly hit. The asset quality of banks in Hong Kong did deteriorate, especially with the default of a number of high-profile Chinese enterprises. Profits did dive, and one or two banks recorded losses for 1998 and 1999. But by and large, the banking sector remained very healthy, with no bank running into trouble.

In terms of asset quality, Figure 1 below shows that the ratio of non-performing loans of locally incorporated banks (defined as overdue for three months or more) to total loans peaked at 6.32% in the September quarter of 1999, and has subsequently come down gradually. It currently stands at 5.53% and is expected to come down further with improvement in the economy.

Figure 1
Local banks - overdue loans



With respect to the property sector, which is the largest single sector in the banks' loan book, the ratio of overdue loans for residential mortgages (defined as overdue for three months or more) to total loans rose from 0.29% in June 1998 to 1.16% in April 1999. With the property market remaining rather quiet during the first half of the year, and in the light of the possible lagged effect of the economic downturn on mortgage default, the ratio has indeed slightly increased since the beginning of this year to the current 1.26%. But with a healthier outlook for both the property market and the economy, we expect that the rate will come down gradually. In any case, a delinquency ratio of just 1.2-1.3% should be regarded as extremely low by any standard.

Throughout the Asian crisis, banks in Hong Kong remained very well capitalised and highly liquid. Figure 3 shows that, even at the height of the crisis, the average capital adequacy ratio still stood at around 18%, a whole 10% above the Basel standard. It has risen further to 18.7%. As shown in Figure 4, the average liquidity ratio of all locally incorporated banks, which was well above 40% even during the crisis, also far exceeds the 25% requirement laid down by law.

Figure 2
Mortgage delinquency ratio

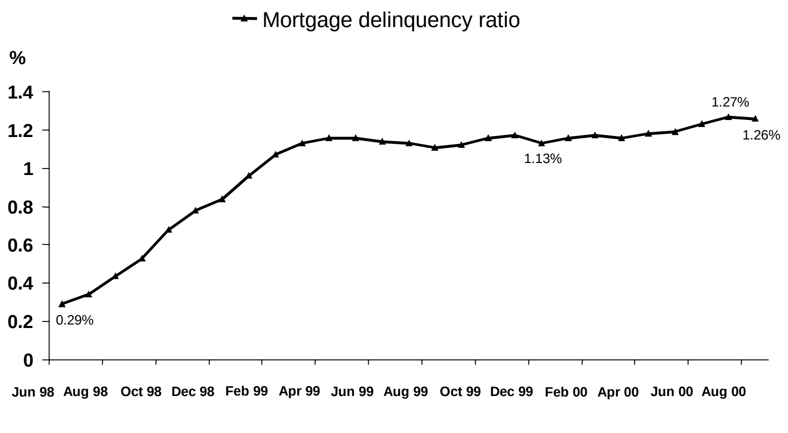


Figure 3

Capital adequacy ratio for locally incorporated institutions

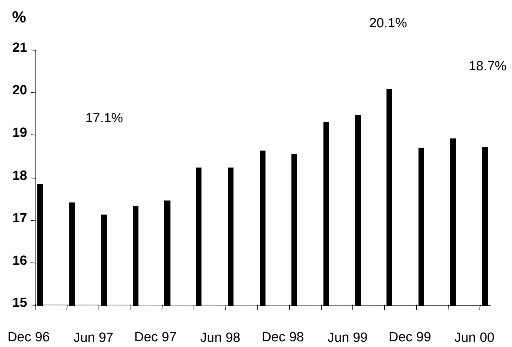
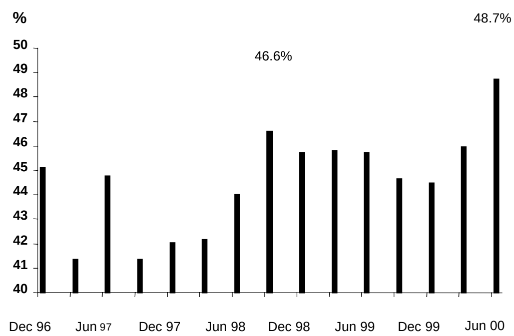


Figure 4

Liquidity ratio for locally incorporated banks



Further measures

We are seeking changes to our supervisory approach to make it more forward-looking and to improve its ability to spot the stress points at an early stage. Our current method of supervision evaluates the financial condition of an institution at a particular point in time. The final product, the CAMEL rating (Capital, Assets, Management, Earnings and Liquidity), is based for the most part on quantitative analysis of the various components of the rating system up to that point.

The main problem with the current approach is that it is based on historical data and thus fails to detect risks embedded in the business plans of banks. To tackle this problem, we are now introducing a risk-based element into our supervisory approach. Compared with the existing approach, risk-based supervision is a dynamic, fluid, forward-looking approach. It incorporates the risk profile, which encompasses the inherent risk and the quality of the risk management processes at the institution, into the CAMEL rating system. Each of the CAMEL components will be assessed taking into account one or more of the eight inherent risks (credit, interest rate, market, liquidity, operational, legal, reputational and strategic) which the HKMA has identified as risks to be assessed during the supervisory process. Unlike the current approach, which uses only historical data as the basis of assessment, the risk-based approach enables the supervisory process to inject more forward-looking judgment into the decision-making matrix in order to arrive at a final rating.

To assist in developing this new approach, the Fed has seconded one of its staff members to the HKMA since April 1999. It is expected that the HKMA will complete the implementation of the risk-based supervisory approach for all local banks within the year. The next step is to roll out the approach to all foreign banks.

With the implementation of the new supervisory approach, the preventive element of the regulatory regime will be greatly strengthened. Instead of examining banks' books when they are in trouble, we should now be in a much better position to foresee potential problems via regular discussion with banks on their business projections and via continuous assessment of the risks borne by the institutions through regular on-site examinations and off-site surveillance.

2.2 The macro dimension

Current mechanism

The macro dimension refers to the monitoring of aggregate economic and financial information economy, such as external indebtedness, the domestic credit level, and the aggregate positions of the market, such as the forex and equity positions taken by the major players.

Regarding the aggregate information on the economy, Hong Kong traditionally does not collect a wide range of macro data: we have no data on flow of funds as the government did not collect BoP statistics until recently (partly because there have been no exchange controls which would require such a reporting system); nor does Hong Kong have external indebtedness figures as the Hong Kong government essentially has no external debt.

In 1996, the government decided to start collecting BoP statistics to better understand Hong Kong's external transactions with the rest of the world, and the first set of statistics was released in April 1999, reflecting the position in 1997. At present, quarterly and annual BoP accounts are compiled in accordance with IMF standards. The government is looking into the feasibility of compiling higher-frequency BoP statistics. Should this be done, we will be able to analyse the fund flows in a much more useful and timely fashion.

As to surveillance of the financial markets, the Asian crisis has indeed sounded a warning bell on the need for such monitoring in Hong Kong. Prior to the crisis, we relied principally on price data, such as swap points, regular informal dialogues with market participants to monitor day-to-day activities in the local foreign exchange market, and regular returns submitted by banks on their foreign exchange exposures. Information on transaction volume and positions is scattered and infrequent, and there is no formalised cross-market surveillance.

After the crisis, a consensus has emerged in international forums that individual economies should strengthen financial market surveillance. The HKMA has since added a few surveys/returns to the ones it already has, all of which are listed below:

Monthly position reporting by banks - this is the usual prudential return for banks to report their foreign currency positions, including the HKD positions, on a monthly basis. The return form previously covered only net positions. In order to have a better understanding of the positions of the banking sector, gross positions will shortly be added to the return.

Weekly position reporting by 13 banks - since early 1998, the HKMA has requested 13 banks that are active in the foreign exchange business to file a weekly return specifying their net USD/HKD spot and forward positions as of Wednesday close. The data provide useful information on the changes in the banks' positions, and the aggregate open positions can be used as an indicator of market trend.

Monthly reporting of counterparty positions from three HKD liquidity providers - since July 1999, the HKMA has requested three major HKD liquidity providers to file monthly returns on net open positions with the 10 largest banks and non-bank counterparties. There is also an instrument breakdown into foreign exchange swap, spot, foreign exchange forward and money market instruments. Since large short positions must eventually be squared with the major HKD supplier banks, the reports from the banks provide useful information on the changes in the HKD positions in the market. Since September 2000, the frequency of reporting has been increased to weekly and the top 20 counterparties are now captured.

It might still be early days to assess how effective these mechanisms are in spotting early warning signals and in crisis prevention, as they have only recently been introduced. There is indeed a delicate balance between the need to improve our understanding of market dynamics and the risk of overburdening banks with reporting requirements. There is also the question of whether there is anything meaningful that we can do, under the constraints of the currency board system, even if we were alerted to, for example, a build-up of short HKD positions by one of the counterparties of the three major liquidity providers. To know is surely better than not to know, but it is important to weigh this against the reporting burden on the banks.

In discussing this, it is interesting to note that the Bank of Japan had in the past required institutions to report positions five times a day. But in response to this, institutions started shifting funds offshore to circumvent the requirements. So it turned out that while the Bank had asked for more frequent reporting, it ended up obtaining the same, or even less, information from the market. This experience is an interesting example of how over-reporting can be counterproductive at times.

Modelling/synthetic indices

The HKMA has not adopted any quantitative models for the monitoring of financial distress, nor has it compiled any synthetic index on a regular basis to serve as an indicator of the monetary conditions of the economy.

For research purposes, we earlier conducted a study on the construction of a monetary conditions index (using the real interest rate and real effective exchange rate) and financial conditions index (plus the change in equity prices) for Hong Kong. The study yielded very interesting results in explaining the underlying trend of the economy. There are, however, a couple of potential problems in using either of these indices as a policy instrument for monitoring financial conditions.

First, while the indices include important determinants of economic activity, they are not exhaustive and there could well be other elements that have been left out. For example, in Hong Kong, due to the limited scope for independent monetary policy, fiscal measures have particular significance in macroeconomic management. Expanding the indicators to include an estimate of fiscal stance should give a fuller picture. But trying to bring such an estimate in would be difficult as the data are mostly only available on a quarterly or even an annual basis, and computing an index on an annual basis would reduce its usefulness for timely analysis.

Second, the indices are built on models, which invariably contain errors and uncertainties in measuring the various determinants.[2] As discussed above, they also might not have contained all the relevant determinants. Therefore, using the indices in a habitual way to measure financial conditions might risk over-reliance on an incomplete set of data. If not used carefully, they might even provide a false sense of security. It is therefore important for those using similar indices to understand the limits of such indices and complement them with other monitoring mechanisms.

On the equities side, there have been attempts to devise early warning signals to help predict sharp corrections in the stock market, which might be driven by speculative excesses. High-frequency indicators such as interest rates, forward exchange rates and daily turnover in the cash and futures markets have been used to explain the movement of the stock index. Although some indicators appeared to be statistically significant, no model so far has provided satisfactory results in predicting abnormal volatility or sharp plunges in the local stock market. Findings generally supported the view that models can scarcely generalise market behaviour and provide a hard and fast rule for market surveillance.

2.3 Marrying the micro and macro dimensions

Microprudential regulation and macroprudential stability feed through each other in various ways. It is therefore important to ensure that efforts on the two fronts are well coordinated. This partly relates to the institutional structure for the functions of monetary operations and prudential supervision. If those functions are carried out by different agencies, there is a strong need for established mechanisms for information-sharing and policy coordination. In the case of Hong Kong, the functions of both banking supervision and monetary management come under the HKMA, and there are very well established internal coordination mechanisms for the two functions.

To illustrate how macro policies might affect the regulation of institutions, one might look at the impact of exchange rate policy on the risks borne by banks. Under the linked exchange rate system in Hong Kong, since the exchange rate cannot be adjusted to reflect fund flows, interest rates may become more volatile than in other exchange rate regimes. The interest rate risks borne by banks might therefore be higher. The implication for the supervisors is that they will need to look closer at the interest rate risks borne by banks, and how they manage such risks. Also, the supervisors will need to watch more closely the exposure of banks to the asset markets which are vulnerable to interest rate changes. This is why the HKMA has come up with the various guidelines to ensure that banks' exposure to the property market is well managed and that there is a sufficient cushion (under the 70% loan-to-value ratio) to protect banks against sudden falls in prices.

The impact can also work the other way, from the micro to the macro dimension. For example, if, while examining banks, it is found that the exposure of the banking industry to a certain sector, for example the property sector, has ballooned, this might be an indicator of the build-up of a bubble in the property

[2] A relevant concept for the interest rate in developing a monetary conditions index is longer-term real interest rates based on inflation expectations rather than past inflation. However, in the absence of indexed instruments to ascertain inflation expectations, we have used statistical approaches to estimate the long-term inflation rate. Likewise, we have to rely on the model to derive the relative weights on different components - the real interest rate, the real exchange rate and the stock index - in the indices.

market. In such a case, the HKMA or the government will have to consider appropriate macro policies to deal with the problem, for example by expanding land supply.

It is not easy to find a systematic way of building macro considerations into micro regulatory decisions, or the other way round. Falling short of an explicit mechanism, the "cross-consideration" will naturally come up when both functions are housed under one roof. They will be discussed at management meetings, and staff having cross-department training will have a wider perspective in making decisions. Where the two functions are divorced from each other, there will be a need for enhanced coordination through regular liaison meetings or cross-representation on the boards concerned.

2.4 Cross-sector monitoring

One important lesson that Hong Kong learnt during the Asian crisis is that financial market surveillance has to be conducted across markets in a coordinated manner. During the speculative attack in August 1998, Hong Kong saw "double plays" scooping profits across markets, by selling HKD to jack up interest rates, thereby reaping profits from the futures that were taken out at the same time. It is clear from that episode that to spot and fend off speculative forces, it is important that market surveillance be carried out across financial markets and that the information from such surveillance should be shared among different regulators.

Before the crisis, the HKMA had already entered into a Memorandum of Understanding with the SFC which provides a mechanism for sharing information. There were also regular liaison meetings to discuss issues of mutual concern. But these mechanisms were mostly institution-based, or micro-oriented, and did not involve elements of macro market surveillance.

After the dust settled, the government in late 1998 set up a Cross-Market Surveillance Committee, whose members were drawn from the government's Financial Services Bureau as well as the HKMA and the SFC. The Committee met every month to exchange views on market trends and developments, and to discuss surveillance reports on different fronts. Regular reports were produced, covering a series of parameters such as the forward exchange rate, the transaction summary in both cash and futures markets, and stock borrowing costs.

In mid-2000, following a review of the arrangements for regulatory coordination in Hong Kong, the structure for cross-regulator discussions on both the micro and the macro fronts was made a lot clearer. Regulators will cooperate on two clear and distinct levels:

Financial Stability Committee - this has evolved from the Cross-Market Surveillance Committee. Its tasks are to monitor on a regular basis the functioning of the financial markets in Hong Kong and to deal with cross-market issues. Macro monitoring of the markets and exchange of market intelligence are performed in this forum.

Council of Regulators - this is a new committee which is expected to be formally established in late October. The Council will comprise all regulators, including the HKMA, the SFC, the Insurance Commission and the Mandatory Provident Fund Authority. It will be chaired by the Financial Secretary of Hong Kong. Its functions will be to share information on regulatory and supervisory issues and to minimise the overlaps/gaps in the regulation of financial institutions. Its focus is more institution-based and related to microprudential regulation.

In addition, there is a Risk Management Committee of the Hong Kong Exchange Limited which deals with all the risk management issues relating to the equity and futures markets. The regulators, ie the HKMA and the SFC, are both members of the Committee, so that their regulatory concerns could be channelled to the Exchange.

3. Mechanisms amplifying or dampening financial cycles

3.1 Official mechanisms

Within the regulatory framework for financial institutions, there are usually some built-in mechanisms that will dampen the financial cycle. While the regulations are mostly imposed for prudential reasons, there is often the supplementary benefit of slowing a market upswing or downturn. In the context of

Hong Kong, the new risk-based supervisory approach as described above is a good example. By adopting a forward-looking stance in supervision, risks inherent in the business activities of banks can be identified early and mechanisms to manage such risks will be set up to deal with them effectively as they arise. This helps to nip any problem in the bud.

The property market is the largest single sector of exposure for financial institutions in Hong Kong. Movements in property prices will seriously affect the asset quality of banks. As explained above, there is currently a rule restricting banks' lending to a maximum of 70% of the assessed value of the property. Theoretically, this rule can be varied at different points of the property cycle to serve a countercyclical purpose: the ratio can be lowered as property prices surge, or raised as property prices sink. Lowering the ratio will dampen the ability of purchasers to buy, as they will need to come up with a larger downpayment. This will therefore serve to cool down the market when prices are going through the roof.

Another instrument that could serve the same purpose is the premium charged by the HKMC for providing mortgage insurance for the portion of the loan which is above 70% of the property value. If the HKMC raises the premium as the property market is heating up, homebuyers will find it less economical to take out the insurance, which will dampen their desire to buy and thus cool the market down. There is, however, the additional question of whether it is appropriate to use the HKMC insurance premium as a policy tool, since the HKMC is supposed to run on commercial principles and decide its premium on the basis of an assessment of the risks of the property market.

The HKMA so far has not sought to vary prudential rules like the ones set out above for the purpose of dampening financial conditions, as there may be a few drawbacks in doing so:

- **Policy consistency** - the consistent application of a policy like the 70% loan-to-value ratio rule will give it credibility over time. Since its introduction in 1991, the rule has undergone both the peaks and troughs of the property cycle and has remained unchanged, on the grounds that it is a prudential measure having little to do with economic or asset cycles. If it were to be varied to achieve other purposes, it might create market uncertainties with people second-guessing when the policy is going to be changed again.
- **Moral hazard** - it may not be right for market participants to rely on official assessments of risks. There is the signalling problem in that if the official sector does not impose any countercyclical measure such as varying the capital ratio or the mortgage loan-to-value ratio during a slowdown of the economy, the market might take it as a signal that the government considers the system-wide risk to be low. This will encourage further risk-taking by banks or investors at a time when they should be more cautious.

While some regulatory requirements have built-in countercyclical elements, many others are procyclical in nature. This has in fact been a subject of intense discussion in various recent international forums. Typically, during a recession, supervisory standards will tend to tighten, and higher provisions and capital ratios might be required. This will lead banks to restrict credit, thus causing difficulties for borrowers, and triggering even more problems for corporates, which will feed back to the banks. There seem to be several options in dealing with this. The first is to vary the regulatory standards through time to mitigate the amplifying impact of supervisory rules on financial cycles. The pros and cons of this approach have been discussed in the paragraph above. The second is to improve the understanding of financial system risks through the supervisory review process. Supervisors and banks should take a forward-looking approach in assessing provisioning and capital requirements. In Hong Kong, this has been incorporated in the new risk-based supervisory approach.

Market mechanisms

Some market behaviour can be very procyclical. Momentum asset management tends to exaggerate market fluctuations as investors or traders enter into momentum trading, largely disregarding the fundamental analysis of markets or individual stocks. Portfolio hedging may also tend to amplify market reactions. During a severe market downturn, fund managers might rush to hedge their portfolio at about the same time, thus driving the market further down and necessitating more hedging, which might eventually culminate in a vicious cycle. The stock market crash in 1987 was partly due to portfolio insurance, which worked in a similar way. Another example is the dynamic hedging behaviour of currency option writers. Their strategy of "buy high, sell low" unambiguously reinforces market swings and exacerbates market volatility.

However, with the advance of financial technology and more experience in dealing with market downturns, many institutions are now applying position limits for trading based on value-at-risk models. This should help institutions to limit their exposure at a relatively early stage, avoiding a mass exit as the market comes down. In all likelihood this should be a helpful countercyclical development which will prevent institutions from engaging in excessive risks. There is, however, still the problem that institutions may sharply adjust their limits when market volatility increases, which may force fund managers to unwind certain positions quickly.

The implications of the emergence of e-trading for such market feedback mechanisms are interesting. The e-trading platform helps to increase market liquidity, reduce trading costs, increase leverage and enable trading to be done round the clock. This unfortunately will probably exacerbate the procyclical nature of market behaviour because portfolios can move around a lot faster. E-trading helps broaden the investor base, increasing two-way trades. However, as evidenced by occasional asset bubbles, financial markets are, from time to time, afflicted by herd instincts and speculative excesses. E-trading is, however, a trend that is growing ever stronger, and what policymakers will need to do is to consider how best to manage the risks arising from these developments. International cooperation is particularly required, given the difficulty of imposing and enforcing regulations on e-trading that transcend national boundaries.

4. Policy issues

4.1 Monetary policy response

Under the linked exchange rate system, the HKMA has no room to vary interest rates to relieve financial stress. Indeed, the autopilot response under the currency board system is in a way quite procyclical. When there is an outflow of funds, interest rates will increase, thereby stifling growth and pulling asset markets down, in turn causing more outflows and so on.

To mitigate the impact of interest rate volatility on the economy, the HKMA built in a cushion through the technical measures introduced in September 1998, under which Exchange Fund Bills and Notes (totalling about USD 15bn) can be discounted through the discount window operated by the HKMA. Effectively, this means that the impact of any outflows on interest rates will only fully kick in when the outflow is larger than the size of the cushion. Since the introduction of the measure, interest rate volatility has come down considerably even with occasional outflows from Hong Kong.

In the light of the constraints placed by the currency board system on our ability to use monetary policy to relieve distress, the Currency Board Committee of Hong Kong (responsible for ensuring compliance with currency board principles and for seeking refinements to the monetary system) will start to monitor regularly the risks and vulnerabilities, both domestic and external, that might affect Hong Kong. This macro surveillance mechanism will enable evaluation of market conditions and to prepare policymakers, within the discipline of the currency board system, for dealing with any shock to the system.

4.2 Fiscal policy response

Falling short of the use of monetary policy to deal with financial distress, fiscal policies play a relatively more important role in dampening financial distress. As the property market overheated in the mid-1990s, partly due to easy monetary conditions imported from the United States, the government implemented a package of measures to dampen the housing market. The package included an increase in land supply, an increase in stamp duty for land transactions and an increase in public housing supply. All these measures were aimed at cooling the property market. The timing of the package was somewhat unfortunate, though, in that the property bubble was already about to burst due to the onset of the Asian crisis when the package was introduced in 1997. As the bubble burst, the package was widely seen as procyclical as it exacerbated the rapid fall in prices after end-1997.

Tax measures can also be an effective means to counter financial cycles. But there is a limit on how far they can go in Hong Kong, when the Basic Law, Hong Kong’s mini-constitution, specifies that public finance has to be managed prudently and deficit spending should be avoided. Notwithstanding this, some useful tax measures were implemented in the aftermath of the Asian crisis, including a partial cash rebate of tax paid for the year 1997/98. More tax relief was also granted. As for government fees and charges, they have been frozen since the onset of the crisis to avoid causing further stress to the system.

4.3 Regulatory response

As discussed in the above section, one contentious option for dealing with financial distress is to vary regulatory requirements through time to reduce their amplification of financial cycles, or even to make them countercyclical.

The regulatory approach adopted by the HKMA has been applied very consistently through boom and bust. There was pressure for us to relax the 70% loan-to-value ratio during the market downturn, on the grounds that the market risks have substantially come down with the drop in prices and that the relaxation can help the revival of the property market. The HKMA has strongly resisted such calls. We consider that our role is to set prudential standards to ensure that banks are not exposed to excessive risks, and not to take a view of where the market should stand. We believe that a consistent policy, free of any adjustment to suit market conditions, will be much better understood by the market and will be able to command more credibility.

The same goes for capital adequacy rules. The HKMA has all along required a comfortable margin over and above the minimum requirement stipulated in the Basel Accord. Indeed, the average CAR of local banks during the crisis remained at a high level of 18%. This has reduced the pressure on the banks to cut back on lending due to capital concerns during the recession, though they did cut back for other reasons such as credit concerns.

Rather than varying prudential requirements during boom or bust, there are measures that, if implemented, we believe will help dampen financial cycles. One example is an ongoing request from the banking industry in Hong Kong for more favourable tax treatment for general provisions. The banks are seeking to have the provisions made tax-deductible. This will provide incentives for them to make appropriate provisions at an early stage, rather than only recognising losses en masse at the height of a crisis. However, this has been rejected by the tax authorities several times for fear that the tax base will be eroded.

4.4 Other policy responses

Since there is a constraint on the use of monetary policy in dealing with excesses in the financial markets, the government had to resort to an unorthodox response in dealing with the strong speculative attacks in 1998. It went into the market to buy shares, thus frustrating the attempt of the “double plays” to profit from their speculative positions. The Hong Kong equities purchased during the operation are now being disposed of gradually through the Exchange Fund Investment Limited, in a way that will cause the least disruption to the market.

The unorthodox market operation was not an easy decision as Hong Kong is a keen supporter of free markets. But when free markets fail to work properly, and when the market is failing in its function to discover prices, there is a need for the government to step in and return the market to its normal functions. However, with the technical measures implemented in September 1998 to improve the workings of the currency system, the necessity of such an extreme response will be considerably lessened.

4.5 Transparency

An important lesson learnt during the Asian crisis and the LTCM debacle is that enhanced transparency, in both the macro and the micro sense, is a very effective means to reduce the systemic risks of a financial system and to contain the risks borne by individual institutions. If investors had had a better grasp of the economic balances of some Asian countries through up-to-date data, the crisis might not have hit so hard and quickly. If LTCM’s creditors had had a better understanding of its leverage, the impact of its downfall on the financial markets might have been a lot smaller.

At the macro level, the IMF has been improving the SDDS standards and stepping up the surveillance of compliance by emerging economies. In the context of Hong Kong, we have further enhanced our already quite transparent system:

- monetary data such as changes in the monetary base, including the aggregate balance of the banking system, are available in real time;
- records of the meetings of the Currency Board Committee are published with a short time lag;
- full subscription to the SDDS standards, including monthly disclosure of international reserves, the Exchange Fund balance sheet data, and the SDDS template on international reserves and foreign currency liquidity.

At the micro level, the HKMA issued a Guide on Financial Disclosures back in 1994, and has been introducing annual packages to improve the disclosure standards. Investors, shareholders and depositors can now review a full range of financial data from the banks' announcements of their interim and final results.

Another aspect of transparency involves the credit information made available to banks. Following the crisis, lending to small and medium-sized enterprises in Hong Kong has dwindled considerably, partly due to the collapse in the prices of their collateral (mostly properties) and partly due to the inability of banks to assess their creditworthiness without adequate financial information. The channel of banking intermediation to these small enterprises is effectively blocked by the lack of information. To enhance data transparency in this sector, thus encouraging more lending to the creditworthy enterprises, the HKMA has proposed the establishment of a commercial credit reference agency, which will aggregate and disseminate credit information on these small borrowers. This will provide banks with more information to assess the creditworthiness of these borrowers, thus allowing the resumption of lending to them. This is another useful tool to reduce the procyclicality of banks' behaviour, which sees them restricting credit to borrowers during a recession, thus causing liquidity problems for these borrowers, forcing them to default, and further increasing the stress on the system. The proposal is now under public consultation, and we hope that a decision will be made before the end of the year.

5. Concluding remarks

This paper has reviewed how micro and macro monitoring of financial distress are conducted in Hong Kong. While we have a very well developed prudential regulatory system, macro monitoring has only recently been strengthened following the experience of the Asian crisis. In particular, cross-sector coordination, in both financial market monitoring and policy formulation, has been enhanced with the setting-up of various regulatory liaison forums. We find such coordination very useful in establishing an overall picture of the market and in understanding the underlying dynamics.

While some of our regulatory tools are countercyclical in nature, the HKMA has so far not sought to introduce regulatory measures solely for the purpose of dampening financial cycles. Nor has it tried to vary regulatory requirements in different cycles of the economy. We believe that consistent application of policies should remove uncertainties and enhance the credibility of those policies. But if within the supervisory framework there are elements which are procyclical and which can be amended without affecting the prudential aspect, then such an amendment might be worth considering. But it has to be explained clearly and applied consistently thereafter.

Having established the various monitoring systems, it is necessary to consider the policy response if distress is spotted. Under the currency board system in place in Hong Kong, there is a limit on how far the monetary policy instrument can be used to relieve financial distress. Fiscal measures will therefore play a bigger role. Unorthodox measures like the market operations in 1998 might have to be conducted when there is a market failure. But with the implementation of the various technical measures to strengthen our monetary system, the need for this should be much reduced.

There is no easy way to find an airtight system for financial monitoring. Even establishing reliable early warning signals will be extremely difficult. There is also no set formula as to what policy response is appropriate when certain stress points are spotted. The important thing is probably to remain highly alert and be prepared to deal with different stress scenarios at all times. This is especially true for small and open economies, which might be most vulnerable to volatile international capital flows.