



VOL. 5, NO. 6
JUNE 2010

Economic Letter

Insights from the
FEDERAL RESERVE BANK OF DALLAS

Cycle-Resistant Credit Systems: Learning from Hong Kong's Experience

by Ying Guan, Jeffery W. Gunther and Sophia Tsai

Hong Kong's home mortgage market has remained among the world's most stable. Supervisory authorities point to the 70 percent loan-to-value policy.

Pledging their properties as collateral for home loans makes buyers more creditworthy and allows them to obtain financing at better terms. This practice also leaves credit markets vulnerable to house price swings, which can affect loan quality and access to credit.

When real estate prices rise, they enhance collateral values, boost borrowers' repayment capacity and protect lenders from losses. But when real estate prices fall, the results are reversed, often leading to loan losses and, in severe cases, lender insolvencies.

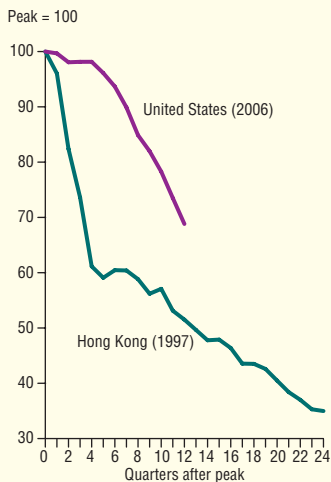
The scenario associated with falling real estate prices occurred recently in the U.S. and many other countries. Sinking home prices precipitated massive home-mortgage delinquencies and foreclosures, nearly collapsing the global financial system. This wasn't the first boom-to-bust real estate cycle to cause financial ruin. Over the past several decades, souring real estate loans, both residential and commercial, have played a central role in numerous credit cycles around the globe.

Given the frequency of these real estate crises—and the magnitude of the one just encountered—it may be time to ask whether real estate lending can be made less risky. Does a counterexample exist to the recent widespread susceptibility of mortgage markets to the boom-to-bust real estate cycle?

Hong Kong is one place with a remarkable degree of mortgage-market stability. Beginning in 1997, Hong Kong housing prices fell dramatically, declining more than U.S. prices did in the aftermath of the 2006–07 housing bust (*Chart 1*). Nevertheless, Hong Kong's home mortgage market has remained among the world's most stable. Supervisory authorities point to a key feature of the Hong Kong credit system—the 70 percent loan-to-value policy.



Chart 1
Hong Kong Housing
Prices Fell Steeply



SOURCES: S&P/Case-Shiller national home price index; private domestic units price index, Rating and Valuation Department, Government of the Hong Kong Special Administrative Region; authors' calculations.

The Credit Cycle

Real estate loans provide many benefits. Most important, they allow households to purchase homes and accumulate equity as they repay the borrowed money. However, this lending can also generate extreme credit cycles. The most disruptive financial crises—those that severely impair the banking system for an extended period—tend to involve loans backed by real estate.

The energy-related banking crisis of the late 1980s worsened when prices fell for many types of real estate collateral. New England's banking troubles of the early 1990s resulted from a boom-to-bust real estate cycle. So did Japan's financial crisis of the 1990s, as well as episodes afflicting several other East Asian countries toward the end of the decade. More recently, the financial crisis enveloping much of the world for the past three years primarily reflected falling house prices and souring home mortgages.

In all these cases, rising real estate prices lured droves of buyers wishing to capture some of the price increases. To fund their purchases, the buyers needed credit, and lenders, noting the appreciation in real estate prices, became increasingly accommodative. Lenders loosened credit standards, requiring lower and lower down payments on real estate purchases and offering repayment schemes that featured low monthly repayments early and higher ones later.

By the time real estate prices peaked, many property owners were highly leveraged, owing as much, or nearly as much, as the market value of their properties.

The booms then turned to busts as real estate prices fell. The owners, rather than building equity, became increasingly insolvent as the prices of their real estate fell further and further below their loan amounts. Worse yet, owners often faced increasing monthly payments on their loans as the periods of low initial monthly payments expired.

Absent safeguards, boom-to-bust credit cycles are likely to recur, with rising real estate prices once again luring buyers and lenders into over-extended positions. Once so many highly leveraged positions are allowed to develop, the system's vulnerability can't easily be undone and the probability of a crisis keeps rising. The best hope for making real estate-based credit systems more resilient lies in preventive mechanisms to hold down highly leveraged speculation during booms.

Loan-to-Value Policy

*Firm to the mast with chains
 thyself be bound,*

*Nor trust thy virtue to the
 enchanting sound.*

*If, mad with transport, free-
 dom thou demand,*

*Be every fetter strain'd, and
 added band to band.*

—*The Odyssey* by Homer
 (translation by A. Pope)

A longstanding policy goal has been to create a system of rewards and penalties that provides lenders and borrowers with incentives to secure, almost automatically, a degree of overall financial stability consistent with sustainable economic growth. Thus far, such an incentive-based system has remained out of reach.

An alternative approach would involve simply precluding, as a matter of policy, the extreme forms of risk taking that have proven most harmful. Such an alternative would supplement incentives with constraints—just as Odysseus had himself bound to the mast, knowing he would otherwise fall prey to the Sirens' song.

In essence, that's the strategy the Hong Kong Monetary Authority (HKMA) uses in supervising its mortgage market. As an international financial center and one of the world's freest economies, the Hong Kong Special Administrative Region experiences notable fluctuations in business activity and housing demand. At the same time, the region ranks as one of the world's most densely populated places, so the supply of land is limited.

Because swings in housing demand aren't easily accommodated by new construction, Hong Kong's housing prices can be extremely cyclical. In response, supervisory authorities, together with the Hong Kong banking industry itself, have sought to cycle-proof the home mortgage market, relying heavily on a loan-to-value policy.

The HKMA, with the general support of the banks it regulates, stipulates that banks lend no more than 70 percent of a home's value. As long as the home's price doesn't fall more than 30 percent, a loan remains fully collateralized, minimizing risk to the bank.

An exception is credit extended under the mortgage insurance program of the government-owned Hong Kong Mortgage Corporation (HKMC). This program allows qualified buyers to obtain loans up to 95 percent of their home's value. Even in this case,



however, the lending bank is exposed to only 70 percent of the property value because the HKMC insures the remaining 25 percent. Moreover, the HKMC applies conservative and strictly enforced qualifying standards.

In some cases, homebuyers can obtain cofinancing from developers and other sources outside the banking system, allowing them to borrow more than 70 percent of the sales price. They can also take out loans above 70 percent through a second mortgage program run through HKMC-authorized banks.

As with mortgage insurance, such practices could partly erode the stabilizing benefits of the loan-to-value policy by reducing buyers' initial equity position. But the direct credit exposure of the Hong Kong banks is still mostly limited to 70 percent in the first lien.

To be effective, Hong Kong's loan-to-value policy requires careful calibration and vigilant supervision. For example, the HKMC must ensure that while promoting homeownership in Hong Kong, it also maintains prudent credit standards and eligibility criteria for its special programs.

In addition, the various government bodies face the task of confirming the accuracy of the real estate values used to construct loan-to-value numbers. Moreover, the HKMA must be mindful of any indirect channels through which bank exposure might rise above the 70 percent rule, such as bank loans to developers extending second mortgages.

Under Hong Kong's strict policy, average loan to value has remained comfortably below 70 percent. By contrast, significantly higher credit amounts were granted to U.S. homebuyers during the recent housing boom—even buyers known to pose the highest credit risk. At the peak in 2005–07, at least half of U.S. subprime mortgage originations on new purchases had a cumulative loan to value of 100 percent or more (*Chart 2*).

Even with a loan-to-value rule of 70 percent, an extreme housing

downturn like the one that began in 1997 can still leave homeowners owing more than their houses are worth. Despite widespread restructurings, roughly 25 percent of Hong Kong's residential loans were underwater by the time the 1997 downturn had run its course—a calculation based on conservative estimates.

But the number would have been much higher if not for the conservative loan-to-value rules applied at origination. Once housing prices turned around, the share of underwater homeowners quickly subsided, underscoring the resilience of Hong Kong's home mortgage market.

Credit System Stability

The U.S. home mortgage delinquency rate has climbed to nearly 10 percent. In contrast, Hong Kong's mortgage delinquency rate never rose above 2 percent—at least according to survey data from the HKMA, first available in mid-1998 (*Chart 3*).

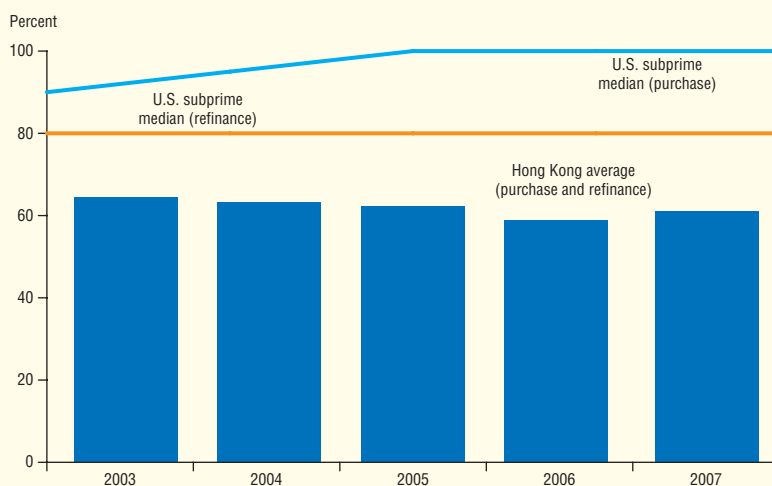
Besides high homeowner equity, several economic and institutional influences have helped Hong Kong achieve this stability, including substantial lender recourse in the event of default and a general tendency toward financial conservatism. However, Hong Kong supervisory authorities attribute special significance to their 70 percent loan-to-value policy, instituted in 1991.

In assessing how Hong Kong's banking system managed to avoid the global financial crisis, the region's chief bank regulator had this to say:

“We also seem to have achieved a good balance in the relationship between the supervisor and the banking system. An excellent example of how that balance has contributed to banking stability is the 70 percent loan-to-value policy for residential mortgage lending by banks. This policy ... has survived strong political pressure for relaxation and market pressure for innovative credit risk transfer through securitization. The

Chart 2

Loan-to-Value Ratios Low in Hong Kong



NOTES: U.S. data are combined loan to values including both first and second mortgages provided by developers or other colenders. Currently, less than 10 percent of Hong Kong first mortgages, by value, are known to be coupled with a cofinancing plan.

SOURCES: “The Rise in Mortgage Defaults,” by Christopher Mayer, Karen Pence and Shane M. Sherlund, *Journal of Economic Perspectives*, vol. 23, no. 1, Winter 2009, pp. 27–50; Residential Mortgage Survey, Hong Kong Monetary Authority; authors' calculations.

Articles may be reprinted on the condition that the source is credited and a copy is provided to the Research Department of the Federal Reserve Bank of Dallas.

Economic Letter is available free of charge by writing the Public Affairs Department, Federal Reserve Bank of Dallas, P.O. Box 655906, Dallas, TX 75265-5906; by fax at 214-922-5268; or by telephone at 214-922-5254. This publication is available on the Dallas Fed website, www.dallasfed.org.



Richard W. Fisher
President and Chief Executive Officer

Helen E. Holcomb
First Vice President and Chief Operating Officer

Harvey Rosenblum
Executive Vice President and Director of Research

Robert D. Hankins
Executive Vice President, Banking Supervision

Director of Research Publications
Mine Yücel

Executive Editor
Jim Dolmas

Associate Editor
Kathy Thacker

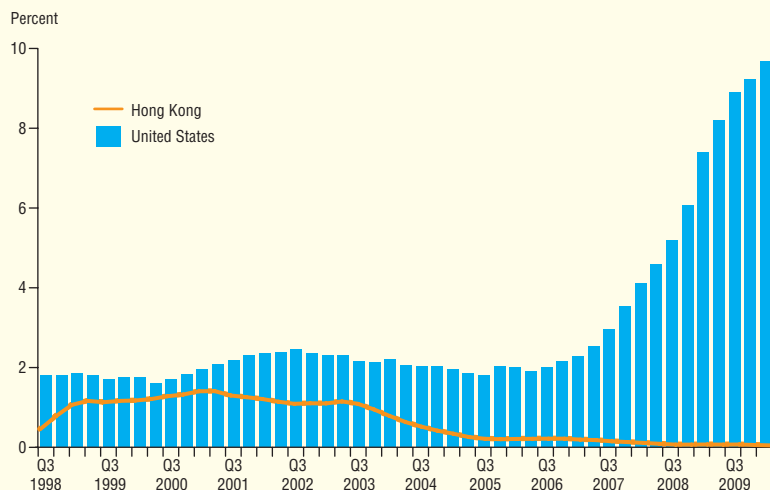
Graphic Designer
Ellah Piña



FEDERAL RESERVE BANK OF DALLAS
2200 N. PEARL ST.
DALLAS, TX 75201

Chart 3

Mortgage Delinquencies Stay Below 2 Percent in Hong Kong



SOURCES: Serious delinquency rate: National Delinquency Survey, Mortgage Bankers Association; delinquency ratio: Residential Mortgage Survey, Hong Kong Monetary Authority; authors' calculations.

policy—now nearly two decades old—fits in well with the macroprudential approach which, particularly in the light of the recent crisis, supervisors in other jurisdictions now consider to be essential to banking stability.”¹

Hong Kong isn't the only region to institute a conservative loan-to-value policy. For example, Canada has been successful with its version. Prior to the global financial crisis, federal law required mortgage insurance for home mortgages with a loan to value above 75 percent, with eligibility criteria that were highly regulated and conservative. Correspondingly, Canada has so far avoided this housing bust, though relaxation of these rules in recent years could lead to less resiliency.

Given that a conservative loan-to-value policy has played a positive role in other countries, such a policy might prove beneficial in the U.S. However, several obstacles could stand in the way.

Some might see a loan-to-value rule as contrary to the longstanding policy goal of increased homeownership because it makes qualifying for a loan more difficult. However, to the

extent increased homeownership is a goal, alternative approaches could be explored that don't involve the aggressive lending strategies that put the financial system at risk.

Others might view a loan-to-value rule as the government becoming overly intrusive. Because credit system malfunctioning can greatly disrupt the broader economy, however, some form of regulatory intervention to prevent excessive risk taking is prudent. Focusing on the reasonableness of loan underwriting seems like an appropriate task for supervisors.

Guan is a financial industry analyst and Gunther a vice president in the Financial Industry Studies Department of the Federal Reserve Bank of Dallas. Tsai is a student at Stanford University and was a summer intern in the department.

Note

¹ Speech by Joseph Yam, chief executive of the Hong Kong Monetary Authority, at the joint Hong Kong Association of Banks–Hong Kong Institute of Bankers dinner in honor of his retirement from the post, Hong Kong, Sept. 28, 2009.