

Real Estate and the Credit Crunch: An Overview

Declining real estate values have shaken financial markets, undermined consumer confidence, and slowed economic growth around the world. From homeowners in California to billionaire real estate developers operating in New York, London, and Tokyo, all have seen their net worth dwindle as real estate prices have fallen. Sizable holdings of nonperforming real estate imperil the financial health of stodgy New England banks, aggressively managed Southwestern thrifts, and even the financial giants of Japan.

Direct investors in real estate are not the only ones adversely affected by declining real estate values. Capital-impaired banks and insurance companies may be less willing to make loans. U.S. taxpayers may be required to ante up for real estate bets lost by federally insured institutions, while in other countries governments work behind the scenes to shore up their financial institutions. And everyone suffers from the drag on the economy that these real estate losses have exerted.

In the fall of 1992 the Federal Reserve Bank of Boston convened a conference on "Real Estate and the Credit Crunch" to explore the causes of these real estate problems and their implications for financial institutions and public policy. The focus was real estate developments in the United States, but the discussion extended the topic to the world economy.

The conference consisted of six sessions. The first two examined the causes of the fluctuations in real estate markets in the 1980s, focusing on housing prices and on commercial construction and real estate values. Through much of the decade, housing prices in the Northeast and the West rose very rapidly and construction of commercial buildings was very strong. As the decade ended, however, home prices were falling and commercial construction had plummeted. Both sessions asked whether economic fundamentals could explain the swings in real estate activity or whether speculative bubbles played a role. The third and fourth sessions considered the consequences of real estate problems for

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financial institutions and the availability of credit. Why were some institutions more drawn to real estate lending than others? Have problems with real estate loans induced a credit crunch, as many small business representatives have alleged? The fifth and sixth sessions considered the implications of these problems for public policy. Could federal regulatory policy have prevented banks' and thrift institutions' overconcentration in real estate? And to what degree did tax changes and general macroeconomic policy contribute to the fluctuations in real estate markets and lenders' aggressive movement into real estate?

Several themes ran through the conference. First, real estate prices and construction levels do respond to economic fundamentals. These economic conditions may vary from one part of the country to another. Thus, local housing prices reflect local employment and income growth, as well as national interest rates. However, economic fundamentals alone cannot explain the extreme fluctuations in real estate values and construction that occurred in some regions.

Changes in federal tax policy and financial institution regulation contributed to increased real estate investment through much of the 1980s and to the eventual bust at the end of the decade. In addition, both residential and nonresidential real estate markets are prone to speculative bubbles and overshooting. Past price appreciation appears to generate expectations of future gains.

Speculative bubbles require financing, and the enthusiasm of depository institutions, particularly commercial banks, for real estate loans fed rising values and excessive construction. But while banks and thrifts had tax and regulatory incentives for financing real estate, their willingness to become so exposed was a subject of lively debate. Some participants were adamant that banks knew the risks they were incurring, while others were equally convinced that banks were victims of a lemming mentality.

The bursting of the real estate bubble directly affected banks by reducing their capital. And the regulatory response has been procyclical, as banks have had to reduce their lending in order to comply with directives to boost capital ratios. This curtailment of lending was seen by some participants as impairing the nation's recovery from recession, but others attributed the decline in bank lending to a lack of creditworthy borrowers.

What triggers a bubble remains unknown. However, public policy should avoid reinforcing such speculation. With the benefit of hindsight, bank

regulatory policy, fiscal policy, and tax policy all appear to have been procyclical in the 1980s. As these policies are reassessed, one lesson to be drawn from recent experience is that greater attention should be paid to the short-run transition effects of policy changes, and to the possibility that policy changes in one arena may interact with changes in a seemingly unrelated area. Thus, the investment incentives created by Economic Recovery Tax Act of 1981 (ERTA) were reinforced by financial deregulation and an expansionary fiscal policy.

Explaining the Pattern of Real Estate Activity

What explains the gyrations in real estate activity that occurred in the 1980s? Although such economic fundamentals as employment and income growth, construction costs, and real interest rates all contributed, speculation also seems to have driven price movements and construction levels in both the residential and nonresidential real estate markets.

Patterns and Determinants of Metropolitan House Prices, 1977 to 1991

Jesse M. Abraham and Patric H. Hendershott attempt to explain the volatility in local house prices that characterized recent years. Using a data set on repeat transactions developed at Freddie Mac, they first document that housing prices have changed at very different rates over different intervals and in different parts of the country. An examination of price changes in 30 metropolitan areas shows that the Northeast and the West had the highest rates of housing price appreciation from 1977 to 1991, with prices rising most rapidly in the West in the late 1970s and late 1980s and in the Northeast in the early and mid 1980s. Within each of these regions, the price changes in the individual metropolitan areas were fairly similar. In contrast, the experience of metropolitan areas in the central part of the country was quite diverse. The authors suggest that the Freddie Mac repeat-transaction data base is superior to the more familiar median price data from the National Association of Realtors because the repeat-transaction prices are better explained by construction costs and land prices.

The heart of the Abraham-Hendershott paper is a series of pooled time series cross-section regres-

sions, in which they test whether economic variables such as employment and income growth, inflation of real construction costs, and changes in real, after-tax interest rates can explain the variation in metropolitan area housing prices. While these economic variables are statistically significant determinants of residential real estate prices, they explain only 40 percent of the movement in prices. Including the lagged appreciation in housing prices increases the explanatory power to more than 50 percent. The regressions were also run over smaller geographic subsamples and shorter time intervals. The variables generally had the expected signs, but the coefficients varied considerably in magnitude over the different subsamples. The model explained a higher fraction of the price variation in the Midwest and Southeast, where price movements have been less volatile. The large increases in prices in the Northeast through most of the 1980s and in California in the late 1980s remain largely unexplained by the regressions.

The authors conclude that while economic fundamentals account for some of the variation in metropolitan housing prices in the 1980s, they do not explain the extreme changes that occurred in some parts of the country. Both this result and the finding that the past appreciation in housing prices increases the explanatory power of the equations seem consis-

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tent with arguments that bubbles can occur in real estate prices. However, the mechanisms that trigger both the extreme increases and the subsequent declines remain unknown.

William C. Apgar, Jr. expressed some concern about the Freddie Mac data base and the parsimonious nature of the Abraham-Hendershott model. The Freddie Mac data include refinancings; thus appraisal

values rather than actual sales account for a portion of the price data. Also, because Freddie Mac purchases only conforming conventional loans, the data set does not include low-valued homes that received FHA insurance or high-valued homes that exceed Freddie Mac guidelines. Finally, the Freddie Mac data do not include information on property characteristics; therefore, one cannot adjust for any changes in value that occur because of property improvement or deterioration. These weaknesses in the data may distort the pricing patterns developed in the statistical analysis. For example, if renovations are more likely in areas experiencing a housing boom, the rapid appreciation in real estate prices will be overstated unless corrections are made for the quality improvements.

With respect to the model, many factors frequently cited as causes of regional price variations have been omitted. Apgar notes specifically demographic factors and variations in zoning and land use restrictions. Apgar concludes by emphasizing the need for greater understanding of the links between regional housing and regional economic cycles. Housing is a major component of household wealth. Thus, rising housing prices may spur consumption and even increased housing expenditures. He also points out that regional housing cycles were much less synchronous in the 1980s than they were in the 1970s.

James A. Wilcox stresses the daunting task facing the authors. Not only are they trying to estimate short-run changes in the price of a long-term asset, but they are also doing so for diverse regions of the country over an economically turbulent period. All things considered, the equations perform very well. Moreover, Wilcox views the Freddie Mac data set as a considerable step forward, as it standardizes for location even if not for other property characteristics. He recommends, however, that the model include an error-correction mechanism that would allow housing prices to revert to a "steady state" level.

Wilcox also argues that a model of housing based on economic fundamentals may have considerable value even if it cannot explain extreme price changes. Indeed, the failure of economic fundamentals to explain rapid price increases may be evidence that a bubble is occurring and that market participants should be cautious. Not only does the autocorrelation of housing price changes suggest that housing markets may be inefficient and prone to bubbles, but Wilcox suggests that such a phenomenon could also exist in the commercial real estate market and, in light of recent declines in values, could explain the drying up of credit to this sector.

How the Commercial Real Estate Boom Undid the Banks

Lynn E. Browne and Karl E. Case examine the causes of the commercial construction boom of the 1980s and attempt to explain why banks were so damaged by the oversupply of commercial space. They argue that the commercial real estate market is prone to overshooting. Inherent cyclical tendencies are reinforced by lenders' enthusiasm or distaste for real estate investments, as attitudes formed in one time period may persist after economic conditions have changed.

Following very low levels of commercial construction in the late 1970s, construction, especially of office buildings, soared in the mid 1980s, plateaued, and then plummeted at the end of the decade. Echoing a theme introduced by Abraham and Hendershott, the authors find considerable variation in construction patterns in different parts of the country. The surge in construction in the 1980s was particularly pronounced in New England and further down the East Coast.

A number of factors contributed to the construction boom. Strong growth in the late 1970s and early 1980s in financial services and other industries that

Browne and Case point out that the commercial real estate market is inherently vulnerable to cycles.

occupy commercial space pushed down vacancy rates and drove up rents at the start of the decade. The Economic Recovery Tax Act of 1981 provided additional incentives to invest in real estate. Commercial real estate offered particularly attractive opportunities for wealthy individuals to shelter income, as these properties could be financed largely by debt, depreciated at ERTA's rapid rates, and then sold for a capital gain. Further reinforcing these trends was the enthusiasm of lenders, especially commercial banks, for commercial real estate investments. Banks were both pushed and pulled into commercial real estate. Banks in the early 1980s had experienced increased competition in other lending areas; at the same time, real estate investments were seen as offering very attractive returns.

The authors point out how these seemingly separate influences interact with the long lead times required to put up a commercial building and with traditional commercial rental agreements to create a market that is inherently vulnerable to periodic overbuilding. Because of the long lags from planning to project completion, the stock of office space is relatively fixed in the short run. Thus, an increase in the demand for space temporarily pushes rents above the levels that will result when supply has adjusted. In a situation reminiscent of the "hog cycle" of elementary economics, developers and lenders may forecast a continuation of these short-run rents and build too much. Aggravating such tendencies are rental agreements that extend over several years. Because tenants signing new leases cannot compete for the space already under lease, a tight market can produce a spike in marginal rents, which may be misinterpreted as a permanent increase.

Lenders' favorable experience with real estate loans during the period of rising rents may also cause them to continue to finance real estate projects after conditions have started to change. In addition, because many tenants of office buildings are lenders themselves or in professions associated with construction and real estate, their prosperity during the real estate boom may create the impression that the long-term demand for office space is much stronger than is actually the case.

The authors illustrate how, under commonly used valuation approaches, real estate values are extraordinarily sensitive to the assumptions made about vacancy rates and rent levels. If values are based on current rental agreements and occupancy rates, the value of the Boston metropolitan area office stock appears to have fallen more than 70 percent since 1987. Because many projects were highly leveraged and because the owners were frequently individuals or partnerships whose assets were protected from the banks' reach or concentrated in real estate, which declined in the bust, banks have had to absorb much of the loss on commercial real estate projects.

Peter C. Aldrich touched off a lively debate that continued throughout the conference by asserting that bankers were well aware of the risks that they were incurring in their commercial real estate lending. Constrained by regulation and facing increased competition from mutual funds, pensions, and others, they adopted higher-risk lending practices in order to bolster returns. In this regard, Aldrich contends that the paper focuses too much attention on the mistakes of ERTA and too little on the failure of

public policy to deal with a constrained and fragile financial system.

While Aldrich views ERTA as providing an unfortunate stimulus to commercial construction, a more fundamental cause of the real estate boom was investors' efforts to hedge against inflation. Foreign investors and pension funds held a significant share of the commercial real estate market, despite their inability to receive the tax benefits available to real estate syndications and U.S. corporations. Even so, Aldrich believes that the returns that ERTA made possible were greater than indicated by Browne and Case. Moreover, the incentives for corporations to invest in real estate were even more powerful than those for individuals. However, because corporations frequently chose to invest through single-purpose entities, general corporate assets were not available to draw upon if projects floundered.

Aldrich agrees with the applicability of the "hog cycle" to the commercial real estate market and particularly with the observation that customary lease agreements can be an important contributor to overshooting. With respect to the authors' statement that once a real estate boom unwinds, "it does so with surprising speed," Aldrich counters that the reaction is actually very slow to get started but very deep.

David Shulman also believes that the paper over-emphasizes the role of tax policy in the commercial real estate boom. Commercial construction and real estate prices soared in London, Paris, and Tokyo, despite very different tax and bank regulatory environments. In addition, much of the commercial real estate boom occurred after the tax benefits were removed. Instead, Shulman attributes the boom to the Plaza Accord of 1985, which he argues resulted in easier monetary policy worldwide and set in motion an inflation in the prices of all kinds of assets, including real estate.

Schulman also thinks the paper devotes insufficient attention to the role of demand in stimulating the growth and contributing to the subsequent collapse of commercial real estate. Rapid growth in office employment in the early 1980s created conditions highly favorable to commercial construction, while the "white collar" recession at the end of the decade was the "final nail in real estate's collapse." The creation of suburban office centers also was an important phenomenon of the 1980s that reduced the value of downtown office locations.

In the ensuing general discussion, both Schulman's assertion that a global easing of monetary policy was a major cause of the boom and Aldrich's

contention that banks had deliberately taken risks in order to generate higher earnings were debated. Slow growth in monetary aggregates and declining rates of inflation seemed inconsistent with the international easy money hypothesis. Several participants agreed that banks had expanded into a higher-risk type of lending intentionally because their franchises were being eroded by competition. Others countered that banks could not have known the risks, pointing out that even banks that were not facing competition in their core businesses had pursued real estate lending aggressively.

Real Estate and the Banking Industry

The real estate boom would not have been possible if lenders had not been willing to supply financing. This section of the conference focused on the reasons financial institutions expanded so aggressively into real estate lending and the consequences of the real estate collapse for bank lending today.

Financial Institutions and the Collapse of Real Estate Markets

Donald D. Hester reviews the mortgage lending activity of commercial banks, thrift institutions, and life insurance companies and concludes that changes in mortgage lending by thrifts and life insurance companies in the 1980s were a rather "passive" response to regulatory changes, economic pressures, and other developments over which the institutions had little control. In contrast, commercial banks aggressively sought to expand their share of real estate lending and their concentration in real estate lending.

During the 1980s, commercial banks accounted for an increasing share of direct residential and commercial mortgage lending. Thrifts also increased their share of commercial mortgages in the first half of the decade. The insurance companies' share of the commercial market fell slightly, and their already small holdings of residential mortgages declined further. Insurance companies appear to have been shifting to more liquid assets. This shift was probably driven by the insurance companies' large, growing role as pension fund managers and by the increased public demand for term insurance rather than the traditional straight-life product.

Thrifts' increased mortgage lending stemmed from their dire financial circumstances at the start of

the decade. Soaring interest rates not only caused operating losses but meant that the net worth of many thrifts, if marked to market, was negative. To dig themselves out of this hole, thrifts took advantage of financial deregulation, deposit insurance, and brokered deposits in an attempt to grow sufficiently rapidly that profits would be large enough to build back their net worth. While theoretically feasible, the strategy failed.

Hester offers three explanations for commercial banks' aggressive mortgage lending. Better hedging tools enhanced control of interest rate risk and made the risks of real estate lending appear more manageable. In addition, the Tax Reform Act of 1986 encouraged individual borrowers to use residential mortgages as a means of borrowing for other purposes. Hester attributes banks' increased exposure to commercial real estate loans to growing competition in traditional banking markets from the commercial paper market and other financial intermediaries, here and abroad.

Because of these developments, banks may have seen real estate loans as offering higher returns than other lending opportunities. However, evidence was

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accumulating that real estate markets were weakening. Office vacancy rates rose sharply in the mid 1980s. Rates of return on commercial properties deteriorated in the second half of the decade. Moreover, macroeconomic problems, highlighted by declining real wages, may have reduced the economy's ability to service debt. Hester points out that the economy has suffered a deadweight loss from overbuilding and that the allocation of this loss among lenders, taxpayers, and others will be contentious.

James R. Barth agrees that the pattern of real estate lending by savings and loan associations can be explained by their financial problems in the early

1980s and by changing laws and regulations. Commercial banks' expansion into real estate is harder to explain. Commercial banks continued to expand their real estate portfolios even after the Tax Reform Act of 1986 had reduced the attractiveness of real estate investments. Various explanations have been proposed, including changes in monetary policy, the temptation to take risks with federally insured deposits, and managers' desire for larger empires; but sorting out the relative contributions is difficult.

Opinions differ, even among depository institutions, on the appropriate response to these problems. Barth advocates relaxation of regulatory restrictions on the activities depository institutions may engage in. He would expand the powers only for healthy institutions, however, and he would have regulators move more quickly to eliminate unhealthy institutions.

Gerard S. Cassidy reiterated the importance of nonbank competitors' encroaching on the profitable lines of traditional banking markets as an explanation for banks' expansion into commercial real estate. Nonetheless, he also believes that banks underestimated the risks in real estate lending because of the widely held perception that real estate prices rarely decline. The long duration of real estate cycles means that most of the loan officers making decisions in the 1980s had not experienced a weak real estate market. Their expectations were shaped by the inflationary years of the late 1970s and early 1980s. The unusual vigor of the Texas economy in the early 1980s and New England later in the decade also contributed to the enthusiasm for real estate loans in those areas.

Cassidy also attributes the banks' problems to management failures. Underwriting standards were relaxed in order to compete. Rapidly growing portfolios were not monitored carefully. And the use of interest reserves delayed the realization that problems were developing in commercial loan portfolios, as loans on projects that were unable to generate sufficient cash flow to cover debt service were still current because of the cash reserves.

Crunching the Recovery: Bank Capital and Bank Credit

The paper by Joe Peek and Eric S. Rosengren presents evidence that the collapse of real estate markets has induced a "credit crunch." The losses on real estate loans significantly eroded the capital of banks at a time of increased emphasis on capital requirements. To satisfy mandatory capital-to-asset

ratios while their capital continued to decline, banks were forced to shrink their assets. This shrinkage occurred primarily in loans rather than securities. As a consequence, Peek and Rosengren argue, banks have not been able to meet the credit needs of legitimate borrowers, many of whom are dependent on banks.

Peek and Rosengren present evidence that the collapse of real estate markets has induced a "credit crunch," defined as nonprice rationing of the supply of credit.

Reduced lending, by itself, is not sufficient to indicate a credit crunch, which the authors define as nonprice rationing of the supply of credit. In a weak economy, the demand for loans may have fallen or the creditworthiness of prospective borrowers may have deteriorated. Peek and Rosengren argue that it is possible to distinguish a capital-induced contraction in the supply of credit from a reduction in the demand for credit by looking at the lending behavior of different institutions facing similar demand conditions. If a reduction in capital was responsible for the reduced lending, poorly capitalized institutions would cut back their assets and liabilities more than their healthier competitors, whereas if demand conditions were responsible the contraction would be more uniform.

Peek and Rosengren use regression analysis to show that capital-to-asset ratios were a statistically significant determinant of deposit growth at New England banks in 1990. Thus, institutions with lower capital ratios experienced slower deposit growth or reduced their deposits more than better-capitalized institutions. Peek and Rosengren also present an examination of recent regulatory agreements issued in New England that links bank shrinkage to regulatory policy. These regulatory agreements required capital-to-asset ratios that were much higher than official minimum capital requirements, as well as being higher than the institutions' actual capital-to-asset ratios. The banks subject to these agreements

responded by reducing their assets, especially their lending.

The authors argue that the large number of undercapitalized banks in New England means that regulatory-induced restrictions in lending have the potential to seriously hinder the ability of small and mid-sized firms in New England to obtain bank credit. To reduce the capital crunch, they recommend ending restrictions on interstate branching so that capital will flow into capital-depleted regions, eliminating procyclical implementation of capital regulation, and focusing greater regulatory attention on the risks taken by banks when they initially increase their exposure rather than after the loans become troubled.

Albert M. Wojnilower agrees that imposition of more stringent regulatory scrutiny and increases in capital requirements at a time when bank capital was being eroded by loan losses has contributed to a serious contraction of credit. Nor is the problem confined to New England. The steep yield curve and a decrease in banks' managed liabilities are consistent with a national aversion to taking risks. Wojnilower takes issue with the term "crunch," however. Crunch implies a sudden and brief tightening of credit; Wojnilower fears that the current contraction will persist longer than past credit crunches because it is the result of regulatory policy.

Wojnilower argues that banks seeking to reduce their assets will call their soundest loans first, because these borrowers can pay. He also points out that a denial of credit to one customer will have a ripple effect on that customer's suppliers and services. These businesses may, as a consequence, curtail their own borrowing; and this, in turn, may be interpreted as a reduction in the demand for credit, whereas the precipitating cause was a reduction in the supply of credit.

While in agreement with the policy prescriptions offered by Peek and Rosengren, Wojnilower is skeptical that they will do much to alleviate current credit constraints. Instead, he advocates requiring banks to increase credit, preferably to the private sector, in line with the Federal Reserve System's targets for national credit growth. While this proposal could result in more loan losses in the future, he argues that defaults will be fewer if banks lend than if they do not. If a bank does not lend, he asks, who needs it?

William M. Crozier, Jr. argues that the supervisory agencies' emphasis on capital-to-asset ratios is preventing banks from taking advantage of attractive earnings opportunities that would enable them to build their capital back up. He disputes, however,

that capital regulations account for the drop in bank lending and that there is a large unmet demand from creditworthy private sector borrowers. Rather, if not restricted by capital constraints, banks would be buying government securities, which are highly liquid and are offering attractive yields.

With respect to private sector demand for bank credit, Crozier asserts that good projects are few and can easily secure financing. Many projects are unsuitable because the collapse of the real estate market in the Northeast has made gauging the value of collateral very difficult; also, borrowers have become more cautious and will not put their own funds at risk.

Crozier's contention that the decline in bank lending is attributable to a lack of creditworthy borrowers prompted a spirited general discussion. Some participants supported this view, citing surveys of small businesses in which credit disruptions were not identified as a problem. Other participants countered that New England banks that had aggressively sought new business customers received a flood of loan applications, many from seemingly qualified borrowers. One participant noted that banks could only generate significant earnings from purchasing U.S. government securities by exposing themselves to increased risk from interest rate changes.

Policy Implications

The final two papers looked for lessons that could be drawn from the real estate and banking crisis. One focused on the implications for the regulation of financial intermediaries, while the other considered how changes in tax policy may have contributed to the fluctuations in real estate and financial markets and how such disruptions might be avoided in future.

Banks and Real Estate: Regulating the Unholy Alliance

Robert E. Litan observes that a central objective of bank regulation with respect to real estate lending should be a structure that dampens the inherently cyclical nature of real estate markets. Regulatory policy did not achieve this objective in the 1980s. At a minimum, it failed to prevent banks' excessive concentration in real estate lending; and once problems developed, more stringent regulation appears to have worsened the downturn in real estate markets and

may have impeded the recovery. Nevertheless, Litan does not think regulatory policy should be eased. Rather, monetary and fiscal policy should be used more forcefully to offset the effects of tighter but appropriate regulation.

Litan's paper addresses four questions: Could regulation have prevented banks' shift into real estate loans? Did regulation exacerbate real estate difficulties once they developed? What changes should be

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made to regulatory policies in light of current problems? How should such changes be phased in?

With respect to regulators' ability to limit bank involvement in real estate, Congress passed several laws at the beginning of the decade that removed restrictions on banks' and thrift institutions' investments in commercial real estate. Had these restrictions remained in place, depository institutions would not have been able to shift so heavily into commercial real estate lending. But whether such restrictions would have prevented banks and thrifts from taking excessive risks is a more difficult question.

If banks and thrifts pursued commercial real estate loans as a strategy to earn high returns by taking large risks, then limiting their involvement in real estate might simply have caused them to look for high-return, high-risk opportunities in other areas. Conversely, if banks and thrifts shifted into real estate because they saw others doing so and seemingly making high profits, then restricting their real estate involvement would have reduced the general level of risk. Litan characterizes the former as the "moral hazard" motivation and the latter as the "lemming" mentality; he argues that the moral hazard motivation seems to characterize the actions of thrift institutions and some of the larger banks, but that most banks seem to have acted like lemmings. Even banks that were well capitalized and had a lot to

lose from taking large risks expanded their commercial real estate lending aggressively. Accordingly, a more restrictive regulation of real estate lending might have prevented subsequent problems.

Regulatory policy became more restrictive at the end of the decade as real estate markets were weakening. Litan shares the view expressed by Peek and Rosengren that more stringent regulation has exacerbated the problems in real estate and contributed to a general slowdown in bank lending. Litan is especially concerned that the risk-weighted capital standards established in the Basle Accord create a bias against lending and towards investment in government securities.

Litan favors a return to restrictions on loan-to-value ratios. He would also like to see larger banks required to meet some of their capital requirements through the issuance of subordinated debt. This would introduce more market discipline, as banks that could not sell subordinated debt would not be able to expand. For smaller banks that cannot issue subordinated debt, he suggests that excessive concentrations in commercial real estate should be offset by higher capital requirements.

To ameliorate the procyclical bias in current regulatory procedures, Litan proposes altering capital regulations and reserving procedure. To eliminate the incentives for investing in securities rather than lending created by the risk-weighted capital standards, he suggests allowing countries to obtain waivers permitting them to alter risk weights as long as the overall level of bank capital is not significantly diminished. The United States could then promote lending by increasing the risk weight on government securities and reducing that on conventional loans.

Litan also advocates changes in the procedures for establishing loan loss reserves. Banks should not be required to establish reserves for loans that are current on principal and interest payments but have suffered a decline in the market value of the underlying collateral. Furthermore, for loans that are truly nonperforming, reserves should be based on long-run economic values rather than current liquidation values.

Robert R. Glauber agrees with several of the regulatory changes proposed by Litan, but he is skeptical that the use of subordinated debt would do any more than provide an "early warning" of potential problems and he strongly opposes the reestablishment of loan-to-value restrictions on real estate loans. Loan-to-value ratios would have done little to discourage banks from investing in real estate during

the boom period when real estate values were rising. Furthermore, designing a set of regulations that could accommodate diverse and complicated real estate projects would be very difficult. The inevitable result would be a proliferation of regulations that would stifle bank vitality. More generally, bank regulators should focus on broad institution policies rather than micro-managing specific types of loans.

Glauber believes that the fundamental problem facing banks is that deposit insurance gives them an almost unlimited capacity to raise funds, while regulation allows very limited opportunities to put those funds to work. This imbalance leads banks to take excessive risks in those areas where they can invest. Banks need broader powers so they can compete more effectively with financial intermediaries that are not so constrained.

Glauber also disputes the existence of a regulator-induced credit crunch and attributes slow growth in bank lending to lack of demand. He notes that loan growth has also slowed at unregulated, nonbank sources of business financing and that funds raised through the commercial paper market contracted in 1991.

While Sherman J. Maisel concurs that banks behaved like lemmings in their eagerness to make commercial real estate loans, he also believes that the inherent cyclical biases of real estate financing should have been recognized. Long lags, high leverage, and appraisals that reflect the past rather than the future all interact to create a cyclical market with infrequent but very large risks of loss. Because the risks are so large, real estate warrants special regulatory attention aimed at preventing banks from becoming overexposed and from lending in a procyclical manner.

With respect to Litan's recommendation that banks be required to hold reserves only against loans that are actually nonperforming, Maisel notes that many construction loans are performing solely because of prefunded interest reserves and that requiring banks to recognize problems on these loans early may avoid larger losses later. Also, examiners may find it difficult to follow Litan's counsel that properties should be based upon long-run economic values rather than liquidation values. Maisel is dubious that appraisers can ascertain true value better than the market, although he suggests that replacement cost might be a useful indicator of value. Finally, he believes that the risk-weights used in capital standards should reflect true risks as accurately as possible and should not be altered to encourage lending.

Rather than making ad hoc regulatory adjust-

ments to ameliorate the real estate cycle, Maisel advocates revising regulations so as to dampen cyclical tendencies. He proposes, first, treating the rapid growth of any asset category as an early warning signal and, second, raising required capital-to-asset ratios during expansions and allowing them to decline during recessions.

Tax Reforms and the Housing Market in the Late 1980s: Who Knew What, and When Did They Know It?

James M. Poterba examines the effect of federal tax changes on housing values and residential construction levels. He concludes that the analyses made at the time the tax bills were enacted were generally accurate in predicting the changes that would occur,

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but that these analyses focused on the long term and ignored the adverse consequences for construction levels, asset values, and the health of financial institutions in the short run. Housing is one of the more volatile sectors of the economy, but the falloff in multifamily housing starts since the mid 1980s has been the largest contraction of the past 30 years. Changes in federal tax policy contributed to the falloff, first by encouraging "overbuilding" in the early 1980s and then by sharply reducing the incentives to invest in rental housing even as signs of weakness in the rental market were emerging.

By shortening depreciation lives and reducing the capital gains tax, ERTA increased the incentives for investment in rental housing. Stimulating residential construction was not the focus of ERTA, however, and Poterba believes that the favorable

consequences for real estate were largely unintended. In contrast, one of the central purposes of the Tax Reform Act of 1986 was discouraging tax shelters, many of which were based on rental housing. Policy analysts were well aware that the Tax Reform Act would reduce rental housing construction. Real rents were expected to increase significantly. However, analysts emphasized the potential long-run efficiency gains, and understated or ignored the short-term consequences for construction and property values.

While warning signs of rising vacancy rates and falling commercial property values were already appearing in 1986, little consideration was given to how removing tax incentives would affect an industry already on the verge of a downturn. Moreover, even the long-term effects may have been underestimated, as the analytical models failed to take account of the investment incentives that passive losses and churning opportunities had provided prior to tax reform.

Finally, policymakers failed to anticipate the implications of falling asset prices for financial intermediaries. By lowering the prices of existing as well as new assets, the Tax Reform Act eroded the capital of lenders. Some institutions failed as a consequence. Many found their ability to fund new investments limited. For public finance economists, this result runs counter to conventional wisdom, which views taxes that change the values of existing assets as non-distorting.

Martin S. Feldstein emphasizes the role of declining inflation on the incentives to invest in real estate. Inflation distorts the tax code, and the reduction in inflation in the 1980s had a larger impact on the user cost of capital than did the changes in tax rates and depreciation allowances that were enacted. Macroeconomists too frequently view inflation or money growth as neutral in their effects; but unexpected changes in inflation can interact with the tax code to significantly alter the incentives to save and invest.

Although the changes in tax rates and depreciation rules did not have much effect, the tax shelter provisions of the Tax Reform Act of 1986 substantially reduced the attractiveness of real estate investments. Feldstein particularly faults the retroactive character of the tax shelter changes. The retroactive changes encouraged limited partners of real estate partnerships to dump their properties, thereby depressing real estate values; but the changes produced no efficiency gains, since the properties already existed.

Richard A. Musgrave points out that major economic reforms can be undertaken only when public and political support exists. And because the senti-

ment for change can be short-lived, it may be necessary to enact these reforms when current economic conditions are less than ideal. Musgrave argues that 1986 was a unique period in that support existed for fundamental tax reform. Little attention was paid to short-term effects because of the prospect of long-term equity and efficiency gains. He believes this was the correct decision, and he opposes those who would try to undo the Tax Reform Act of 1986 and restore the inefficiencies it eliminated. Rather, the appropriate response to the short-term problems tax reform created is to find a way of helping those who were harmed. Musgrave also suggests that if tax shelters are to be used as policy tools, they should be used judiciously to encourage investment in areas that will enhance productivity and increase growth over the long term—and housing is not such an area.

Conclusion

The effects of declining real estate prices have been far-reaching. While economic fundamentals, including changes in inflation, contributed to the real estate cycle, the price changes and fluctuations in construction levels in some parts of the country confounded fundamentals. Both residential and commercial real estate markets through much of the 1980s seemed to be driven by speculative bubbles.

As these bubbles collapsed, financial institutions as well as property-owners experienced substantial losses. With hindsight, it is apparent that banks and thrift institutions were concentrating their risks ex-

cessively. For thrift institutions, this risk-taking was a deliberate strategy, followed in an attempt to recoup earlier losses. Whether banks were following a similar strategy is more problematic. Some contend that banks knowingly took high risks to earn high returns; others believe that banks were caught up in a lemming-like mentality and simply followed others' lead. Real estate losses have eroded banks' capital and, in some cases, have forced banks to shrink their assets and liabilities. Some believe this shrinkage has resulted in creditworthy borrowers being denied credit; others argue that slow growth in bank lending reflects a lack of demand from suitable borrowers.

Federal tax policy and changes in financial regulation exacerbated the boom-bust nature of the real estate cycle. The effects of these policy changes were not fully anticipated, in part because they reinforced one another. Thus, tax policy, macroeconomic policy, and regulatory policy all encouraged real estate investment in the early 1980s; and both tax and regulatory policy became more restrictive in the second half of the decade. Moreover, as policies became more restrictive, little attention was paid to signs that real estate markets were already weakening. Some would contend that the short-run transitional problems created by these policies may prevent achievement of the long-term goals of more efficient investment patterns and a more vital banking sector. Others would argue that opportunities to enact major reforms are rare, and that the pursuit of long-term goals for tax policy or bank capital standards cannot be forever delayed because current economic conditions are not optimal.

Real Estate and the Credit Crunch

At the Federal Reserve Bank of Boston's most recent economic conference on September 16, 17, and 18, 1992, economists, bankers, investors, regulators, and other interested parties met to discuss the origins and consequences of the real-estate-related problems of the financial sector of the economy, and to explore potential remedies. The conference agenda is outlined below.

The Pattern of Residential Real Estate Prices

Patric H. Hendershott, Ohio State University

Jesse M. Abraham, Federal Home Loan Mortgage Corporation

Discussants: William C. Apgar, Jr., John F. Kennedy School of Government, Harvard University

James A. Wilcox, University of California at Berkeley

Nonresidential Real Estate Developments

Lynn E. Browne, Federal Reserve Bank of Boston

Karl E. Case, Wellesley College and Federal Reserve Bank of Boston

Discussants: Peter C. Aldrich, Aldrich, Eastman & Waltch, L.P.

David Shulman, Salomon Brothers Inc.

The Impact of the Real Estate Collapse on Financial Institutions

Donald D. Hester, University of Wisconsin at Madison

Discussants: James R. Barth, Auburn University

Gerard S. Cassidy, Tucker Anthony, Inc.

Has the Collapse of Real Estate Caused a "Credit Crunch"?

Eric S. Rosengren, Federal Reserve Bank of Boston

Joe Peek, Boston College and Federal Reserve Bank of Boston

Discussants: William M. Crozier, Jr., BayBanks, Inc.

Albert M. Wojnilower, First Boston Asset Management Corporation

Implications of the Financial Crisis for Regulatory Policy

Robert E. Litan, The Brookings Institution

Discussants: Robert R. Glauber, John F. Kennedy School of Government, Harvard University

Sherman J. Maisel, Sherman J. Maisel Associates, Inc.

Implications of the Crisis for Public Policy and Economic Analysis

James M. Poterba, Massachusetts Institute of Technology

Discussants: Martin S. Feldstein, Harvard University

Richard A. Musgrave, University of California at Santa Cruz

The proceedings, Conference Series No. 36, will be published in 1993. Information about ordering will be included in a later issue of this *Review*.