

# A SCHUMPETERIAN BEHAVIORAL FINANCE PERSPECTIVE ON THE SUBPRIME MORTGAGE BUBBLE

## **Abstract**

From a Schumpeterian behavioral finance perspective, the subprime mortgage bubble emerged as an episode of “reckless finance” that prolonged the secondary wave of speculative prosperity in the New Economy’s business cycle. While typical of the phenomena resulting from the behavior of bankers changing over the course of the cycle from responsibly lending to finance innovative new ventures of entrepreneurs that initiate the primary wave of prosperity to “recklessly” financing speculative excesses of the secondary wave, it was atypical because the “reckless finance” was encouraged and facilitated by the behavior of U.S. central bankers.

**Key Words** subprime mortgages, business cycle, “reckless finance,”  
mortgage-backed-securities

**JEL Classification** E3; E44, E52; G21

## **1. Introduction**

Following the collapse of the stock market bubble in 2000-2001, the U.S. economy avoided a serious recession largely because of a boom in housing prices that was fueled and sustained by the ease with which financing and refinancing could be arranged at temporarily low interest rates. Subprime mortgage loans, defined as “lending that involves elevated credit risk” due to deficient credit history and the lack of a demonstrated capacity to repay loans

(Gramlich 2004, p. 1), became both the hallmark and the Achilles heel of that boom. When interest rates were boosted by the Federal Reserve, defaults on subprime mortgages accelerated and the negative effects quickly spread to debt markets on a global basis through wide-spread holdings of collateralized debt securities (“structured products”) created from large pools of those mortgages. In September 2007, Federal Reserve Board Chairman Ben Bernanke (2007f) told a Congressional committee that: “. . . subprime mortgage losses that triggered uncertainty about structured products more generally have reverberated in broader financial markets, raising concerns about the consequences for economic activity. . . . [T]he turbulence originated in concerns about subprime mortgages, *but the resulting global financial losses have far exceeded even the most pessimistic estimates of the credit losses on these loans*” (p. 6, emphasis added).

In this paper, we examine the emergence and collapse of the subprime mortgage debt bubble within the context of Joseph A. Schumpeter’s theory of business cycles that are initiated by successful implementation of technological and organization innovations with financing provided by bankers. Three aspects of Schumpeter’s theory, which we review in section 2, make it particularly relevant to a behavioral finance perspective on the subprime mortgage debt bubble. Those are the manner in which the behavior of bankers changes over the course of a business cycle, the impact of financial innovations on that behavior, and the behavior of central bankers.

After acting wisely and responsibly in extending credit to finance the entrepreneurial ventures that initiate the primary wave of prosperity, bankers behave “recklessly” in financing a much larger secondary wave of speculative excesses that changes “normal” movements in the business cycle into larger “abnormal” ones. By providing new ways to create liquidity while giving the illusion of reducing risk to both lenders and investors, financial innovations enhance the “reckless” financing. When the speculative boom collapses, bankers react by excessively restricting credit, creating a credit crisis that turns the “normal” downturn into one of “abnormal liquidation.” Within that context, Schumpeter specified a limited response by central bankers, which included certain reforms in the financial sector to curb speculative excesses, but warned against policies that exceeded those limits.

In section 3, we review Schumpeter’s analysis of the “reckless financing” of mortgages during the secondary wave of speculative excesses of the 1920’s, that contributed to severity of the depression of the 1930’s. In section 4, we examine the subprime mortgage debt bubble as an “abnormal” occurrence in the New Economy’s Schumpeterian business cycle that was initiated in the 1990’s. But where the “reckless financing” of mortgages coincided with the boom and crash of the stock market bubble in the 1920’s, the subprime bubble peaked well after the New Economy’s stock price bubble had collapsed. As Leathers and Raines (2004) explained, Federal Reserve officials indirectly encouraged the “reckless finance” which resulted in the speculative excesses in the stock market and the formation of highly speculative “dot.com” companies. In section 5, we

note that those officials played a more direct role in prolonging the secondary wave of speculative excesses after the collapse of the stock market bubble. The central bankers (especially Chairman of the Federal Reserve Board Alan Greenspan) fostered an episode of “reckless financing” through policies of low interest rates and, more importantly, through assurances that lax lending standards were credibly based on risk-reducing financial innovations in the mortgage sector and in opposing stricter regulations to curb speculative excesses. We end section 6 with a Schumpeterian assessment of the Federal Reserve officials’ responses to the collapse of the subprime bubble.

## **2. Changing behavior of bankers during Schumpeterian business cycles**

In varying forms, behavior of lenders plays critical roles in several economic theories. Perhaps the earliest example is found in *Wealth of Nations*, where Adam Smith’s defense of legal ceilings on interest rates, one of the exceptions to his general advocacy of laissez faire, rested on behavioral tendencies of lenders. If interest rates are high, “the greater part of the money which was to be lent, would be lent to prodigals and projectors” who “were most likely to waste and destroy it” (1976, p. 357). But if a legal ceiling rate was set slightly above the lowest market rate, credit would be allocated to its most productive use because “sober people are universally preferred, as borrowers, to prodigals and projectors” (ibid). In the modern economics literature, changing behavior of bankers (and other lenders) plays a particularly well-defined role in Schumpeter’s theory of business cycles initiated by the implementation of technological and organizational innovations. Because of “reckless financing,”

the two “normal” phases—the “primary wave” of prosperity and recession—become amplified into much larger “abnormal” phases—a “secondary wave” of speculative prosperity and a plunge into deep depression.

### *2.1 Bankers as the “ephors” in the capitalist system*

The special role of bankers in financing entrepreneurs’ innovative new ventures is reflected in Schumpeter’s statement that the creation of credit is the “monetary complement of innovation” (1939, p. 111). As the “ephors” of the capitalist system, bankers “make possible the carrying out of new combinations, authorizes people, in the name of society as it were, to form them” (1934, p. 74). Bankers should be independent agents with the ability to judge the uses of their credit (1939, p. 118). Proficiency in their highly skilled work can only be acquired through experience, and requires exceptional intellectual and moral qualities (1939, pp. 116-117). The function of bankers “is essentially a critical, checking, admonitory one” (1939, p. 118), advancing credit only to proposed ventures have the potential to succeed and denying credit to all others. Schumpeter declared that bankers, like economists, “are worth their salt only if they make themselves thoroughly unpopular with governments, politicians, and the public” (ibid).

### *2.2 Behavioral changes over the course of the business cycle*

In a Schumpeterian business cycle, a primary wave of prosperity begins when the newly created money is spent by entrepreneurs to purchase materials and labor needed to launch their new ventures. The injection of new spending triggers speculative expectations of prosperity, which results in increased consumption spending by households and “induced investment” spending by

firms to create additional capacity to meet the expected increases in demand. The speed at which a secondary wave of speculative spending develops is indicated in Schumpeter's statement that: "Speculation in the narrow sense of the word will take the hint and start on its familiar course or rather, anticipating all of this, stage a boom even before prosperity in business has had time to develop" (1939, p. 145). The launching of highly speculative new business ventures gains steam when the bona fide entrepreneurs begin to realize monopoly profits from their successful new ventures. But the speculation becomes most intense in the financial markets and flows back into the general economy. In this matter, a secondary wave of speculative prosperity not only superimposes on the primary wave but becomes quantitatively more important and much more visible (Schumpeter 1939, p. 146).

The speculative excesses of the secondary wave are due to "reckless" behavior of bankers, which Schumpeter defined as "granting loans without regard to the borrowers' ability to repay" (1939, p. 260, fn) and financing "reckless, fraudulent, or otherwise unsuccessful enterprise" (1939, p. 148). He distinguished between credit (debt) which adds to productivity and that which does not. The financial system that functions properly in extending credit to entrepreneurs and any business that uses the new money to invest in productive assets must also "punish any other use" (1939, p. 147). Schumpeter noted that "the average businessman" is perpetually optimistic, seeking extensions of credit while trying to ignore the "hard objective facts" of economic reality (1939, p. 141). It is the responsibility of bankers to recognize the "hard objective facts" and

extend credit only to productive use. Instead, they act “recklessly” in financing the speculative activities that swell the secondary wave: “New borrowing will then no longer be confined to entrepreneurs, and ‘deposits’ will be created to finance general expansion, each loan tending to induce another loan, each rise in prices another rise” (Schumpeter 1939, p. 145).

When the primary wave of prosperity ends and recession comes as a normal phase in the business cycle, the speculative excesses financed by “reckless finance” result in “Abnormal Liquidation” (1939, p. 149). While recession involves the process of “creative destruction” of firms and industries rendered obsolete by the impacts of innovations implemented by the entrepreneurs is a function of the recession, it only takes the economy down to the new higher equilibrium, or in Schumpeterian terms, to a permanently higher level of economic development. But with the collapse of the speculative excesses that rest on the huge amount of unproductive debt, bankers’ behavior changes again, becoming extra-cautious and defensive in their lending. The resulting credit crisis intensifies the “abnormal liquidation” that plunges the economy down past the new higher equilibrium as otherwise sound firms and banks are forced to liquidate due to the denial of access to liquidity (1934, p. 234, p. 238; 1939, p. 149).

### *2.3 The importance of responsible behavior of central bankers*

Schumpeter emphasized that central bankers must behave wisely and responsibly in responding the downturn in the business cycle. No effort should be made to interfere with the recession and the effects of “creative destruction,”

which are the normal processes of a dynamic capitalist economy adjusting to a higher level of economic development. But Schumpeter emphasized that “the losses and destruction which accompany the abnormal course of events are *really* meaningless and functionless” (1934, p. 253). He warned that a general and indiscriminant expansionary monetary policy that provides credit to all will only result in inflation and interfere with the normal functioning of both the business cycle and the credit system (1932, pp. 253-254). But there is a limited role for responsible action in the form of a selective monetary policy that grants credit to those firms and banks that merit it and denies credit to those that do not (1934, pp. 254-255). In addition, as Leathers and Raines (2004) noted, Schumpeter strongly supported regulations to curb “reckless banking” and speculation in the financial markets.

### **3. “Reckless financing” of mortgages in the 1920’s**

A prelude to our Schumpeterian perspective on the subprime mortgage bubble is provided by Schumpeter’s analysis of “reckless” mortgage lending in the 1920’s and its role in the subsequent “abnormal” depression of the 1930’s. The superimposing of a secondary wave of speculative excesses on the primary wave of prosperity initiated by technological and organizational innovations in the 1920’s exhibited the characteristic behavioral changes in the financial sector from responsible lending to creating “wild excesses” with financial practices becoming “clearly abnormal” (1951, p. 214). As part of the phenomena, the most serious features of the mortgage situation in the 1920’s “were entirely due to reckless borrowing and lending” (ibid). While mortgage interest rates were falling

somewhat, low rates did not spawn the housing boom. On the contrary, a general attitude of “uncritical optimism” caused the prices of houses or interest rates to matter to neither borrowers nor lenders. For borrowers, it was important to quickly get the homes desired “*provided money was readily forthcoming at those rates*” (1939, p. 746, emphasis added), and bankers responded by “recklessly” making the money forthcoming. As Schumpeter observed, “everything was done to make it easy for everyone to run into debt, for the purpose of building a home as for any other purpose” (1939, p. 747).

### *3.1 Behavioral changes of bankers and central bankers*

When incomes fell in 1930, the heavy load of mortgage debt contributed to the deep slide into depression, both directly and indirectly through the effects of falling housing prices on the overall credit structure (Schumpeter 1939, p. 748). In keeping with the contours of Schumpeter’s business cycle theory, the behavior of bankers in the early 1930’s quickly transitioned from “reckless finance” to excessive contractions of liquidity that plunged the banking and financial system into a deep crisis and contributed to the severity of the “abnormal liquidation” of the depression (Schumpeter 1939, p. 925).

The behavior of central bankers also enters the picture. The inability or unwillingness of the Federal Reserve to deal with the banking and credit crisis has been widely analyzed and criticized. From a Schumpeterian perspective, central bankers should have ensured that credit was extended to those firms and banks that were sound while leaving the speculative business ventures and financial speculators to be punished by market discipline and obsolete

enterprises exposed to the “gale of creative destruction” (Schumpeter 1950, p. 84). The Federal Reserve’s failures to cope with the situation in the early 1930’s have been a major influence on the willingness of Federal Reserve officials to quickly respond when secondary waves of speculative excesses begin to collapse. From a Schumpeterian perspective, since the stock market crash of 1987 Federal Reserve officials have tended to behave in a manner that encourages and sustains “reckless finance” on an ever-widening basis, with the subprime mortgage bubble being the latest case.

#### **4. A Schumpeterian business cycle and the subprime mortgage bubble**

From a Schumpeterian perspective, the subprime mortgage bubble emerged as an “abnormal” event in the New Economy’s business cycle of the 1990’s. A primary wave of prosperity was initiated by the implementation of productivity-increasing innovations in information technologies. In the secondary wave of speculative excesses that quickly superimposed on that primary wave, “reckless finance” was a contributing factor. As Leathers and Raines (2004) noted, financial innovations played a significant role by facilitating the financing of speculative new corporate ventures that were floated off on the stock market, e.g., dot.com companies, mergers and acquisitions, and speculation in the financial markets. The behavior of Federal Reserve officials also contributed to the “reckless finance,” not only in opposing regulation of those innovations with the greatest potential for creating speculative instability in the financial markets, but in protecting financial markets and institutions from the consequences of the Asian financial crisis and the collapse of the Long Term Capital Management

Hedge Fund. In addition, Alan Greenspan repeatedly suggested that the high stock prices and the “New Economy” rested on solid long-term stability due to a “virtuous cycle” of investments in new information technology that assured continuous increases in future corporate profits, and his “pre-emptive strikes” against inflation were presumed to provide ample protection to both speculators and lenders.

But following the contours of a Schumpeterian business cycle, the primary wave of prosperity ended in 2000-2001. With capital investment spending decreasing and the wave of technological innovations having generated an excess of aggregate production over demand in key sectors of global economy, the economy entered into the “normal” recession phase. As the speculative excesses of the 1990’s intensified the downturn, with dot.com companies collapsing and stock prices falling, bankers created a credit crunch by excessively tightened their lending. Federal Reserve officials became seriously concerned that the bursting of the stock market bubble could trigger global deflationary pressures for the first time since the early 1930’s (see Greenspan 2002d).

#### *4.1 The housing market Boom and the subprime bubble*

Instead, the secondary wave of speculative prosperity was prolonged by a housing market boom and its exceptional effects on sustaining a high level of consumer spending. Between 1995 and 2004, housing prices in real terms increased 36 percent, twice the increases during previous home price booms (McCarthy and Peach 2004, p. 1). The beginning of the boom coincided with the

secondary wave of the New Economy's business cycle. Between 1995 and 1999, the average capital gain on equity in houses was \$35,000, and between 1997 and 1999, mortgage originations for new homes and refinancing rose by 75 percent (Greenspan 1999a). But the uniqueness of this boom was reflected in the fact that housing prices continued to rise strongly during the recession of 2001.

By 2002, questions were being raised as to whether the rapidly rising prices of houses constituted a bubble. Economists at the New York Federal Reserve Bank claimed that their study showed there was little basis for viewing housing prices as a bubble (McCarthy and Peach 2004). Greenspan (2003b) argued that "any analogy to stock market pricing behavior and bubbles is a rather large stretch" for several reasons, including the high transactions cost of moving out of and into houses, the lack of a national market for houses, and the absence of any indications of an oversupply of new houses (p. 3).

A different interpretation was advanced by others. Baker (2002, p. 116) found that the only plausible explanation of the sudden surge in home prices was the existence of a bubble. In the headline for a survey of property values, *The Economist* (2003) announced that "In many countries the stock market bubble has been replaced by a property-price bubble." Two years later, *The Economist* (2005) opened a report on the global housing boom with the headline "The worldwide rise in house prices is the biggest bubble in history." Krugman (2005, 2006) repeatedly warned that housing prices were clearly in a bubble. Similarly, the editor-at-large for *Fortune* (Tully 2006) warned against the myths that attempt

to create the belief that housing prices were rational, stating that “the giant popping noise you’re hearing is the sound of yesterday’s myths exploding like balloons pumped up with too much hot air.” While insisting that long-term low interest rates would support high housing prices on a permanent basis, Samuelson (2006) admitted that the high percentage of houses being purchased were second homes for “investment” was evidence of speculation.

The focus of concern sharply narrowed to the subprime mortgages. From 1994 through 2000, when the economy experienced the primary and secondary waves of prosperity, the percentage of mortgage originations that were subprime rose from 4.5 to 13.2. By 2005, subprime mortgages accounted for 20 percent of mortgage originations and was playing a significant role in the housing boom (Braunstein 2007, p. 2).

#### *4.2 Factors contributing to the subprime bubble*

A number of factors, what Schumpeter would call “agreed upon facts” (1951, p. 206), have been cited as contributing to the rapid growth in subprime mortgage loans. Federal Reserve Governor Gramlich (2001) cited the expansion of the economy in the 1990s, but since the real subprime mortgage bubble peaked well after that expansion had ended, the other factors were of greater relevance. Low interest rates have been commonly cited, but that must be viewed against the backdrop of the FOMC raising the targeted federal funds rate in 1999-2000. The interest rates that most directly affected the subprime bubble came when the FOMC began lowering the targeted federal funds rate in January 2001. Over a period of several years, that rate was reduced to a 40 year low

because of weakness in the economy, which typically would mean weakness in the housing sector. But the subprime mortgage bubble can not be explained simply by the temporary lowering of interest rates after 2000. The really critical factors were those that made lenders willing to offer low-rate mortgage loans when it was obvious that interest rates would return to normal levels, and to borrowers whose abilities to meet the repayment requirements would be questionable when the rates did rise. Those factors were financial innovations within the mortgage industry and regulatory changes (Gramlich 2001, 2004).

The innovations in the mortgage markets were in part technological, in part organizational, and in part in the form of derivative securities. Information technology was alleged to have increased the ability of lenders to assess the differential risks of making loans and quickened the administrative processes of approving loans. Organizational innovations resulted in a change from lending institutions holding the mortgages and bearing the risk of default to what has become described as an “originate-to-distribute” model, with institutions originating the mortgage loans selling the mortgages to other institutions or funds. Financial derivatives played a critical role, as the buying institutions and funds issued complex securities that passed through streams of interest and principal repayments on pools of mortgages to investors purchasing the securities. The originators of the mortgage loans and the institutions issuing the collateralized mortgage securities collected fees while shifting the risks of default ultimately to holders of the securities. With complex tranches based on exposures to default risk, the collateralized securities found ready markets among investors with

different willingness and, presumably, different abilities to bear the risk. Financial innovations in the lending process included mortgages with low down payments, interest-only mortgages, and mortgages with adjustable rates of interest that were temporarily low and would involve balloon payments at some point (see Cole 2007).

Interestingly, Gramlich cited both deregulation and regulation as contributing to the subprime bubble. Deregulation of interest rates in the early 1980's permitted lenders to charge higher interest rates to borrowers with elevated credit risk. With financial competition having become intense in the prime market, where mortgage lending had become essentially a commodity business, lenders were lured into the subprime market by the prospects of higher profits (Gramlich 2004, p. 2). Under deregulation, underwriting guidelines were redefined to lower down-payment requirements and to expand the criteria for assessing creditworthiness of borrowers with "blemished credit histories" (Gramlich 2001, p. 2). New regulations under revisions to the Community Reinvestment Act gave banking institutions a strong incentive to make mortgage loans to low- and moderate-income borrowers, "an unknown but possibly significant portion of which were subprime loans" (Gramlich 2004, p. 2). Subprime lending was further encouraged by the giant secondary government-backed buyers of mortgages, Fannie Mae and Freddie Mac, expanding into the lower-risk segment of the subprime mortgage market (Gramlich 2004, p. 2).

#### *4.3 The collapse of the subprime mortgage bubble*

As long as housing prices were experiencing “exceptionally strong growth” and interest rates were extraordinarily low, problems with loan payments on subprime mortgages were held below the surface. But conditions changed when interest rates rose and the increase in housing prices “decelerated” (Cole 2007). Subprime borrowers with “hybrid” adjustable rate mortgages were the first to experience major difficulties, a major problem since two-thirds of subprime first-lien mortgages had variable interest rates (Bernanke 2007c, p. 2). As further evidence of a problem of laxer underwriting standards in the subprime sector of the mortgage market, a high number of subprime loans began defaulting shortly after origination in 2006 (Cole 2007, p. 3).

How quickly the impact from the collapsing subprime mortgage bubble spread under the originate-to-distribute model is revealed in speeches and testimonies during 2007 by Federal Reserve Board Chairman Bernanke. In February, Bernanke (2007a) testified that “the weakness in housing market activity and the slower appreciation of house prices do not seem to have spilled over to any significant extent to other sectors of the economy” (p. 1), and that “signs of stabilization have recently appeared in the housing market” (p. 2). In March, Bernanke (2007b) testified that although developments in subprime mortgage markets were raising some questions about the housing sector, the impact on the broader economy and financial markets would likely be contained (pp. 1-2). In May, Bernanke (2007c) devoted a speech to “important economic, social, and regulatory issues” that were being raised by problems in the subprime mortgage market from the lowering of lending standards under the originate-to-

distribute process (p. 1). But he continued to see signs of self-correction in the market and was confident that no serious broader spillovers to banks or thrift institutions were occur (2007c, p. 3). In assessing the macroeconomic implications, Bernanke stated that “We believe the effect of the troubles in the subprime sector on the broader housing market will likely be limited, and we do not expect significant spillovers from the subprime market to the rest of the economy or to the financial system” (2007c, p. 6).

Bermanke expressed similar optimism in June (2007d). But in August, he acknowledged that financial turbulence originating from problems of the subprime mortgage market could affect the performance of the overall economy (2007e). The securitization of pools of subprime mortgages was generating significant “financial stress” beyond mortgage markets to the commercial paper market, the highly leveraged private equity sector, and even to the stock market. Investor uncertainty had “increased significantly” as the difficulty of evaluating the risks of mortgage-backed securities with complex payoffs had become more evident (2007e, p. 3). Banks were becoming more protective of their liquidity and balance-sheet capacity, and with liquidity drying up, “the functioning of financial markets became increasingly impaired” (2007e, p. 3).

##### **5. A Schumpeterian Critique of Behavior of Federal Reserve Officials**

In their assessments of the factors responsible for the emergence and collapse of the subprime bubble, Federal Reserve officials have contended that the problems with subprime mortgages were largely due to “predatory lending,” over which the Federal Reserve had limited control, and that it had promptly

taken corrective action within its limited authority at each step along the way (for a chronological listing of those actions, see Cole 2007, pp. 9-11; see also Braunstein 2007). While acknowledging that the loosening of underwriting standards under “the fragmented market structure of mortgage originators in the subprime-lending industry” had made it difficult for both regulators and investors to monitor, Bernanke declared that the major cause of the problems was “the *failure of investors* to provide adequate oversight of originators and to ensure that originators’ incentives were properly aligned” (2007e, p. 2 and p. 8, emphasis added).

But in their speeches, testimonies, and policies, Federal Reserve officials encouraged an episode of “reckless finance” that prolonged the secondary wave of speculative excesses of the New Economy’s business cycle by repeatedly asserting that financial innovations in both processes and products had greatly reduced the risks to lenders and by encouraging both the refinancing of existing homes and the expansion of subprime lending at low interest rates which clearly would be raised back to normal levels as soon as the economy returned to an expansionary phase.

#### *4.1 The “Greenspan put” effect*

A key behavioral factor was Greenspan’s image as a Federal Reserve Board Chairman who would protect speculators and “reckless” lenders from losses, which became expressed in the Wall Street jargon as the “Greenspan put.” From the late 1990’s until the end of his tenure as Chairman, Greenspan

continuously exerted his influence through optimistic statements about innovative developments in the mortgage markets and their highly positive effects on the general economic situation. Chronologically, his enthusiastic reports began when the New Economy's bubble was reaching its peak. But the critical point came in when the secondary wave of speculative prosperity of the New Economy's business cycle collapsed in 2001. To a large extent, Federal Reserve policymaking rested on the expectation that weak business investment spending and the reverse "wealth effect" of falling stock prices would be substantially offset by a high level of consumption spending being maintained through the refinancing of homes to "extract" equity. In that scenario, the rise in prices of houses that created extractable equity would be enhanced as an expansion in subprime mortgages increased demand for housing.

In March 1999, Greenspan happily reported that the housing sector was doing especially well in an economy that was experiencing the best of all possible performances. He attributed the surge in mortgage originations (up 75 percent since 1997) to innovations in mortgage lending, including the "staggering" growth in mortgage-backed securities, and encouraged mortgage bankers to continue implementing innovations to serve all corners of the diverse mortgage market (Greenspan 1999a, p. 4). In November, Greenspan (1999b) was praising "innovative lenders" for creating "a far broader spectrum of mortgage products" and increasing the efficiency of loan origination and underwriting (p. 4). The bundling of mortgages into pass-through securities

divided into tranches with different exposures to risk was providing safety and stability by efficiently allocating risk to those most able to bear it.

Greenspan exhibited a rather curious enthusiasm about the impact that mortgage-backed securities was having on the refinancing of existing houses. While the federal funds rate was being raised to counter a perceived wealth effect of soaring stock prices on consumption spending, he was applauding the refinancing of houses as having a positive impact on the economy by allowing capital gains to be released as “purchasing power” or “unencumbered cash” which households could spend (1999b, p. 2). Greenspan dismissed any concerns that housing prices could fall with the statement that “the general experience of homeowners is a modest, but persistent rise in home values that is perceived to be largely permanent” (1999b, p. 3).

As the economy seriously weakened in 2001, developments in the mortgage markets took on special significance for Greenspan. While acknowledging that some problems had arisen due to the “embedded cost of lax credit standards and overly optimistic assumptions about borrower prospects,” he reported that innovative developments were keeping the housing sector very strong, as evidenced by below-average delinquencies on mortgages (Greenspan 2001a, p. 1). Greenspan noted with approval that collateralized mortgage-backed securities had received a boost from the Federal Open Market Committee deciding on a “temporary basis” to allow the Open Market Desk to conduct repurchase agreements with agency mortgage-backed securities as collateral (Greenspan 2001b, p. 5).

As the boom in housing continued against the backdrop of Federal Reserve officials worrying about the possibility that deflationary forces were emerging, Greenspan (2002a) brushed aside any serious concern about an increase in repayment difficulties for the subprime markets. On the contrary, he declared that financial innovations were contributing to a more flexible and efficient financial system mortgage market. He expressed confidence that the strong housing market would continue, noting that new home sales had remained “remarkably firm” due to the ease of obtaining mortgage financing (Greenspan 2002c and 2002d). There was a celebratory tone to his observation that 2002 had been “surely one of the most memorable ever experienced by the home mortgage market” (2003b, p. 1).

Throughout 2003, Greenspan repeatedly noted that while credit had become tight for business loans, the economy was benefiting from an unprecedented surge in mortgage refinancing (Greenspan 2003a, 2003b, 2003c). Even though prices of existing homes had risen by a third over the past four years, record sales of homes at record prices were continuing. The rise in mortgage debt to historical highs relative to disposable personal income posed no danger. Housing prices were being propelled ever higher by extraordinarily low interest rates, and changes in technology and mortgage markets had changed an illiquid asset (equity in homes) into a highly liquid asset that was being extracted to support consumption spending, which kept the economy strong. He applauded the “huge wave of refinancing” as being “impressive,” and predicted that it would continue at “an elevated level” (2003c, p. 3).

In early 2004, Greenspan (2004a) was even more upbeat, reporting that the ease of obtaining mortgage financing at low interest rates was continuing to contribute to record sales of houses. Even though home mortgage debt had increased 13 percent during 2003, delinquency rates were declining. Greenspan joined other Federal Reserve officials in denying that housing prices were in a bubble, even though speculators buying single residence rental and second home properties accounted for a rising percentage of total home mortgage originations. He also encouraged an expansion in subprime lending, insisting that improvements in lending practices driven by information technology had enabled lenders to safely reach out to households “with previously unrecognized borrowing capacities” (2004d, p. 2)

In 2005, Greenspan continued to applaud the increases in housing prices, which he noted were outpacing the rise in household mortgage debt (2005a), and especially the role being played by financial innovations. He declared that “In the United States, few financial innovations in recent decades have had so widespread an impact as the development of the secondary home-mortgage market” (2005b, p. 1). In July, Greenspan began to acknowledge the existence of some “froth” in the boom in home prices and that speculative fervor was driving some regional markets (2005c). And he conceded that the “froth” had interacted with financial innovations in mortgage markets in the form of the prevalence of interest-only loans and the introduction of more-exotic forms of adjustable-rate mortgages. While that was possibly enabling some households to purchase homes they could not afford and was adding to pressures in the

housing market, Greenspan refused to draw a sober conclusion about developments in the mortgage markets and housing sectors. Instead, he stated that while it was important for lenders to “appreciate” the risk that some households might be unable to meet monthly payments as interest rates rise and the economy slows, nationwide banking (the product of deregulation) and the widespread securitization of mortgages would provide ample protection if “regional house-price correction” should occur (2005c, p. 6).

In September, Greenspan (2005d) acknowledged that:

The apparent “froth” in housing markets may have spilled over into mortgage markets. The dramatic increase in the prevalence of interest-only loans and more exotic forms of adjustable rate mortgages exposed borrowers to both interest-rate risk and house-price risk than the standard 30-year fixed rate mortgages, and because they had become vehicles that enabled marginally qualified, highly leveraged borrowers to purchase homes at inflated prices (2005d, p. 4).

In other words, subprime mortgages were driving house prices higher and would expose lending institutions to significant losses in the event of “widespread cooling of house prices.” But while the situation would bear “ongoing scrutiny in the period ahead,” Greenspan refused to depart from his optimistic assessment of developments in the mortgage sector, declaring that the “vast majority of homeowners” would be able to comfortably “absorb a potential decline in house prices” (2005d, p. 5).

#### *4.2 Interest rate policies*

Greenspan and other Federal Reserve officials repeatedly credited low interest rates as the driving force behind the boom in mortgage financing. It was obvious that the extraordinarily low rates engineered by the FOMC from 2001 to 2004 would soon return to their normal levels. But Greenspan (2003b) created a sense of false confidence by assuring that any negative effect of rising interest rates on the housing sector would be minimal because “any sustained increase in rates presumably would occur only in the context of a more vigorous upturn in the pace of business activity, suggesting that the net effect on housing activity might be relatively limited” (p. 4). Rising housing prices due to a strengthening economy would offset the negative effects of rising interest rates.

In July 2004, Greenspan set the stage for the Federal Open Market Committee to begin increasing interest rates, which would impact adjustable rate mortgages at some point, in testifying that concerns with deflation had disappeared (2004c). At the same time, he continued to create a false sense of confidence that rising rates would have little, if any, negative effects on those holding adjustable rate mortgages. Citing “recent research within the Federal Reserve” (2004b, p. 4), he argued that while homeowners like fixed-rate mortgages, they could have saved substantially if they had been holding adjustable rate mortgages. Even as the Federal Open Market Committee was poised to begin raising the targeted federal funds rate, Greenspan was declaring that “American consumers might benefit if lenders provided greater mortgage product alternatives to the traditional fixed-rate mortgages” (2004b, p. 4).

Obviously, rising interest rates would directly affect borrowers of mortgages with adjustable interest rates and balloon payments. But as vividly demonstrated by the solvency problems encountered by the S&L's in the 1980's, rising interest rates would also negatively impact of the market values of fixed rate mortgages being held by institutions and investors. Yet, the Federal Reserve officials, who encouraged investors holding fixed rate mortgages and borrowers with adjustable rate mortgages to believe that somehow the inevitable would not negatively affect them, have attempted to avoid responsibility by blaming the low interest rates on the global financial markets. In September 2007, Bernanke told members of the U.S. Congress that low interest rates were the primary factor behind the rise of housing prices, but those rates were set in global financial markets, not by the Federal Reserve (Ip and Solomon 2007).

#### *4.3 Federal Reserve officials' response to the subprime bubble's collapse*

We can conclude our Schumpeterian critique of the behavior of the Federal Reserve officials with an assessment of the manner in which they have responded to its collapse. Essentially, two types of policies have been implemented. As reported by Bernanke (2007h), the Federal Reserve is taking certain actions aimed at raising the lending standards in the subprime mortgage business. If underwriting standards are raised and enforced to levels that will provide effective deterrents to "reckless" lending, those actions would be highly appropriate within the context of Schumpeter's theory. But the possibility of that happening remains in doubt, however, as the Federal Reserve officials remain

committed to a policy of encouraging subprime lending under terms that are favorable to the borrowers (see Bernanke 2007h, p. 5).

The lowering of the discount rate and the targeted federal funds rate in response to the collapse of the subprime bubble, and related actions to increase liquidity of banks and financial markets are more problematic. Schumpeter prescribed a selective monetary policy that provides credit and liquidity only to firms and banks that are fundamentally sound. Reductions in the discount rate and the federal funds rate are general credit policies that conflict with Schumpeter's warning that providing liquidity to all will only be inflationary while preventing the process of creative destruction and punishment of unproductive use of credit from going forward. From a Schumpeterian perspective, that is reflected in the October 31, 2007 statement by the Federal Open Market Committee expressing concern about rising inflation while lowering the federal funds rate in response to the problems in the credit markets.

## **5. Concluding statement**

Schumpeter's theory predicts that technological and organizational innovations will initiate another business cycle at some point in the future, and when that happens "reckless" behavior of bankers and other lenders will finance another secondary wave of speculative excesses that will lead to "abnormal liquidations" when it collapses. Perhaps the principal lesson to be drawn from the subprime mortgage bubble experience is that in the modern financial sector the combination of financial innovations and inappropriate behavior of central bankers have the potential for enhancing "reckless financing" of the speculative

excesses and prolonging the wave of speculative excesses. Central bankers must recognize the need for appropriate regulations to curb the negative effects of what is often referred to before the bubble bursts as “creative finance.” But it is essential that they also avoid fostering a false sense of optimism about the risk-reducing and stability-enhancing positive effects of the innovations and the perception of a “Greenspan put” that will protect speculators from losses when speculative bubbles collapse.

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