Household behavior and boom/bust cycles ☆

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A R T I C L E   I N F O

A B S T R A C T

I describe household behavior in boom and bust economic cycles with a particular focus on the recent financial crisis. The behaviors are motivated by cognitive limitations and psychological bias. In boom times, households' extrapolation bias and groupthink lead to chasing and extending asset bubbles (like tech stocks and real estate). Increasing use of debt spurs the economy and eventually overburdens households. In bust times, the biases and fear lead to selling previously popular assets at low prices. Households generally respond to bust times by spending less, repaying debt and saving more, which drags on an already slow economy. In addition, households influence businesses and governments into actions during the cycle. In the recent boom, predatory lenders preyed on cognitive limitations and biases of subprime borrowers to sell them high cost mortgages that they would not be able to repay. Another contributing factor is that during boom times, household attention is not focused on financial regulation. This is when business influences the political process and laws are enacted to loosen market regulation. These changes may extend the boom period into bubble territory. During bust times, public outcry influences politicians to tighten business regulation, likely inhibiting the economic rebound. Thus, household behavior plays an important role in economic boom/bust cycles.

1. Introduction

There are many groups, institutions, actions, and securities to blame for the financial crisis (Cukierman, 2011). Grant (2010) traces the roots of the problem to the Financial Services Modernization Act of 1999, which repealed the 1933 Glass–Steagall Act separating commercial and investment banking activities. Scott (2010) blames government policy. Specifically, he points out the very loose monetary policy that laid the foundation for the house boom. This was fed by a government housing policy that pushed for lower lending standards to increase homeownership rates. Eggert (2009) believes that securitization caused the subprime meltdown, leading to a general financial collapse. Other possible culprits are the shadow banking system (Rosen, 2009), bankers (Taleb and Triana, 2008), fair value accounting (Laux and Leuz, 2009), and failed risk management models (Jorion, 2009).

It might be beneficial to step back from the current crisis and take a wider view of financial crisis in general. How can markets seemly function well for a while and then suddenly falter. . .and then repeat the cycle? Consider just the recent few decades, sup-

posedly monitored by modern economics and finance. The stock market crashed in 1987 and was followed by the savings & loan collapse (and credit crunch) of the early 1990s. This was followed closely by the 1994 Mexican peso crisis and the Asian financial crises of 1997. Russia and Long-Term Capital Management stressed the financial system in 1998. The dotcom bubble deflated in 2000, followed by the energy market dysfunction associated with Enron in 2002. If the rational, equilibrium-based economic and financial models are so well developed, then how do these events have such dramatic impacts on the financial system? Tuckett (2009) argues that the root causes of these problems are behavioral, stemming from the way human nature and human institutions have co-evolved in financial markets. This perspective leads to the investigation of cognitive limitations, emotions, and psychological biases as the major factors common to all financial crises.

In this paper, I examine the role of the household. At the center of the financial crisis are the consumers who piled on debt, bought houses, took subprime mortgages, invested in the stock market, over spent, and exhibited their outrage to politicians over the financial failures. I discuss how cultural and social norms regarding debt and bankruptcy have changed over time, facilitating the increased use of debt. The psychological biases of people have inhibited their wealth accumulation by causing them to chase the past returns of one asset class after another. For example, whether stocks or real estate, the average household buys high and sells low. Outraged consumers demand their politicians tighten regula-

tion and punish the perceived wrongdoers after each crisis event. This swings the regulatory pendulum toward paternalism (see Shefrin and Statman, 1993). Then, when the economy is going great, these households are too distracted to notice that business interests influence politicians to loosen regulations—a move toward libertarianism. These behaviors exacerbate the business cycle by facilitating greater excesses in good economies and more restrictions in poor economies.

In some instances, these households can be viewed as victims from the exploitation of others. People and organizations try to exploit the limited and biased cognitive abilities of the household. For example, predatory lenders design products and marketing to take advantage of people's tendency to focus on only a couple salient dimensions of a mortgage contract. Also, the government presses social policies regarding bankruptcy, mortgage defaults, and spending that it deems good for the economy, regardless of the impact on individual households.

Shefrin (2010) also examines behavioral characteristics in the crisis. He claims that the root cause of the recent financial crisis is psychological. Specifically, he links the "psychological pitfalls that affected the judgments and decisions of the various participants along the supply chain" of the mortgage processing industry. He details the biases of five participants along this mortgage supply chain. UBS, an investment banking firm that securitized mortgages, had fallen behind the performance of its peers and set a high standard to catch up. This caused them to take higher risks to reach this reference point. Shefrin calls these actions reference-point induced risk seeking behavior. Although there was much attention on the returns they sought, they were overconfident[1] in addressing the risks. Thus, they violated the basic finance tenet that expected return and risk are positively related. The AIG financial products division, which insured the mortgage securities through credit default swaps, exhibited conservatism bias[2] in its assumption that historical mortgage default rates would continue to be valid. Rating agencies, like Standard & Poors, showed groupthink behavior[3] by minimizing conflict in their internal discussions and reaching consensus about how to rate the collateralized debt without critically testing and evaluating their assumptions. The SEC, the regulator, suffered from confirmation bias[4] in ignoring the early warning signs of a frothy housing market and overconfidence in their ability to manage any problems it might cause. Lastly, Shefrin analyzes one investor of the complex mortgage securities, Narvik, a tiny town in Norway. The Narvik city council bought into a sophisticated strategy of borrowing money secured with its power plant's production and investing the proceeds in securities that included collateralized debt obligations. The comments expressed by the mayor in CNBC documentary titled "House of Cards,"[5] seems to express their overconfidence, or at least an optimism bias,[6] in a position they did not completely understand. Rosen (2009) also believes that these investors were overconfident because they overestimated the precision in their beliefs about the securities and felt that the high

yields offered were due to other investors' wrong overestimates of default risk.

Whereas Shefrin (2010) focuses on the biases of the organizational processes involved in the mortgage supply chain, Shiller (2008b) blames the irrational exuberance that drove the housing bubble, which peaked in 2007. Even more so than Shiller, this paper focuses on the plight of the household. Specifically, I describe from a behavioral finance and economics perspective the changes in culture and social norms leading up to the financial crisis, household behavior in the crisis, and consumers' role after the crisis.

Households are the topic of the next section. It first describes how biases like the representativeness heuristic[7] played a role in the dotcom and real estate bubbles. It then shifts to the changing social norms regarding debt and bankruptcy. Given that subprime mortgages played an important role in the current crisis, a special discussion is included on the cognitive limitations of households that were manipulated by subprime lenders. The ensuing crisis has led to high mortgage delinquencies and foreclosures. I describe how the stigma of foreclosure lessened and how the government is reacting by using social policy to pressure many households to stay in their homes, even when it is in the household's best interest to default. Regulation is the topic of the second section. Regulators and politicians are driven by the mood of their constituents. I illustrate how after each economic crisis, public outrage influences the next generation of regulations and policies. This process often leads to poorly designed laws. At other times, the public mostly ignores the political process in economics matters. Past regulation is described within the framework of Hirshleifer's (2008) legal psychological attraction theory and Shefrin and Statman's (1993) liberalism/paternalism pendulum. I then interpret current regulations and policies using these frameworks. I offer concluding remarks in the last section.

2. Households

2.1. Chasing past returns

Households do not have good reputations as investors (Barber et al., 2009). The general population does not get excited about an investment until after it has already experienced a large price increase. They are late getting in, and also late getting out. This behavior is an example of the representativeness heuristic. Specifically, Nofsinger (2010) explains that the brain will transfer the characteristics of something known to something unknown if they seem similar. For example, I do not know what the stock market will do next year, but I do know the characteristics of last year's stock market. The performance of the past and future stock market seems like they should be similar, so I transfer last year's return to next year's expectation. This is one application of the representativeness bias called extrapolation bias. People extrapolate past events as the best prediction of the future. In other words, they act as if they believe trends will continue.

Malmendier and Nagel (2011) show that peoples' experiences in capital markets have strong influences on their desire to take risk in those markets. People who have witnessed higher returns in stocks and bond markets participate more in stock and bond ownership, respectively. More recent market returns have the strongest impact, but experiences even decades old still have some influence. Thus, people who experienced the large bear market trends in the 1930s and 1970s are less likely to participate in the stock mar-

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[1] Overconfidence generally refers to a miscalibration in probabilities and also a better than average effect (Glaser and Weber, 2010).

[2] Conservatism bias is the tendency to overweight historical information relative to new information and can be called an under reaction (Shefrin, 2010).

[3] Group think is the psychological predisposition to conform to group expectations (Janis, 1982).

[4] The confirmation bias is a subconscious search to find information that confirms a prior decision and avoids information containing contrary evidence (Lord et al., 1979).

[5] See www.cnbc.com/id/28892719.

[6] Optimism bias is the belief that favorable future events are more likely than they really are (Weinstein, 1980).

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[7] The representativeness heuristic refers to the subjective judgment formed when probabilities are based on similar characteristics to better known outcomes (Taffler, 2010).