Consumer Behaviour in Financial Markets: Financial Crisis and Policy Implications

By Sumit Agarwal

Are some consumers particularly likely to make financial mistakes? Do they learn from this experience? What role do financial education and counselling programmes play in improving consumers’ ability to make sound financial decisions? Sumit Agarwal presents some interesting findings from his research on these issues.

In light of the recent meltdown in the subprime mortgage market and the subsequent financial crisis of 2007-2008, there is a growing concern that consumers are ill-prepared to make sound decisions in an increasingly complex financial environment. Numerous examples come to mind – social security privatization, under-participation in the 401K plans (a defined contribution employee benefits plan that allows tax-deferred retirement savings), lack of sufficient portfolio diversification, choosing the right mortgage (Adjustable Rate Mortgage/Fixed Rate Mortgage), subprime mortgages, and optimal refinancing timing. Let me focus on one particular example. Bank One advertised that it had 3000 different types of credit cards with varying interest rates, fee rates, and reward options -- travel, auto, gas, and hotel rewards. To choose the right card that best suits a consumer’s needs seems like a daunting task.

Hence, some people argue that in this complex environment, consumers make incorrect financial decisions that ultimately lead them to incur high interest and fee payments. Others, however, argue that financial intermediaries are extracting excess rents from their customers. Most agree that consumers need education in financial planning and financial literacy. To provide further insights on these issues, this article will summarise some of my research on consumer behaviour in financial markets, and provide policy recommendations for the future, especially in light of the financial crisis.

Specifically, I will investigate questions such as:
(i) Do consumers make mistakes in choosing credit contracts? (ii) If yes, do they learn from their mistakes? (iii) Do financial mistakes vary by age? Is financial decision making related to cognitive abilities? Does financial counselling and education help them make better financial decisions?

Financial Mistakes: Consumer Profile

Looking at consumers’ choice between two credit contracts, one with an annual fee but a lower interest rate and the other with no annual fee but a higher interest rate, Agarwal, Chomsisengphet, Liu and Souleles (2006) find that 40 percent of consumers made a mistake in choosing the optimal credit contract. For a small minority of the consumers, these mistakes cost them hundreds of dollars in excess interest payments. The good news is that overtime consumers learn from their mistakes and the larger the costs, the more likely consumers will correct the mistakes.

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Next, studying late payments, credit limit payments, and cash advance fees of credit card borrowers, Agarwal, Driscoll, Gabaix, and Laibson (2008) show that over a four-year period, credit card fees payments dropped by 75 percent. However, we also find that consumers’ hard-earned knowledge does not persist, and overtime consumers tend to forget about the fee payments. These results suggest that experience produces learning, but only when the feedback is recent.

In an attempt to understand as to who makes these mistakes, Agarwal, Driscoll, Gabaix, and Laibson (2009) find that younger and older borrowers are more prone to making financial mistakes. We find that the age at which consumers are least likely to make financial mistakes (which we describe as the “Age of Reason”) is around their 53rd birthday. The findings were consistent across an array of credit instruments - three kinds of credit card fee payments, credit card interest payments, and interest rates on credit cards, mortgages, auto loans, home equity loans and credit lines, and small business. We hypothesised that this may be a consequence of the trade-off between “experiential capital” and “analytical capital” (cognitive ability). The young have high analytical capital, but little experience. The old have substantial experience, but declining analytical capital. To further study this issue in detail, Agarwal and Mazumder (2010) directly link the cognitive ability measures as represented in the Armed Forces Qualification Test (AFQT) scores and consumers’ ability to make financial decisions. We find that consumers who have higher math and verbal language scores are less likely to make balance transfer and home prices estimation mistakes.

Impact of Counselling: Mixed Evidence

If financial literacy drives suboptimal (or welfare-reducing) financial behaviour, then improving literacy could increase consumer welfare. A growing literature investigates whether financial education programmes are effective in improving financial literacy and financial behaviour. Though the evidence is mixed, it appears that some financial education programmes do improve the behaviour and outcomes of their graduates. The effects appear to be strongest for the most financially vulnerable, especially those with low incomes and levels of education. However, the relationships among financial education, financial literacy, and financial behaviour and outcomes are not straightforward.

Some financial education programmes improve financial literacy, but not financial behaviour; others lead to improved behaviour and outcomes without improving financial literacy; and still others do not appear to be effective at all.

Agarwal, Amromin, Ben-David, Chomsisengphet and Evanoff (2009) find little evidence that a state-mandated pre-mortgage counselling programme for high-risk borrowers in select Chicago zip codes led to better mortgage choices. However, their study shows how a financial education programme can affect outcomes without necessarily improving literacy. The authors find a significant drop in default rates of mortgages originating in the treated zip codes during the period of mandatory counselling. However, this drop appears to occur because the na"ivest lenders and borrowers left the market, not because the remaining borrowers chose better mortgage products. The threat to lenders of increased oversight and potential fraud detection, as well as the perceived cost to borrowers of attending counselling sessions, dramatically reduced...
both the supply and demand for credit. Borrowers who were able to choose less risky products to avoid counselling did so, and lenders rejected far more loan applications and originated fewer low-documentation loans during the treatment period (activity resumed to normal levels when the programme ended). While some borrowers followed the advice provided by counsellors, many modified their loans in ways that were contrary to counsellor recommendations, and others took out loans they had been told they could not afford. In aggregate, the counselling programme did not appear to materially improve loan outcomes for individuals who stayed in the market.

Mortgage and credit counselling programmes often include services apart from financial education, such as client advocacy and proactive intervention, which make the effects of financial education difficult to disentangle. One such programme is the Indianapolis Neighbourhood Housing Partnership (INHP), a voluntary mortgage counselling programme evaluated by Agarwal, Anromin, Ben-David, Chomsisengphet and Evanoff (2010a). The study finds that, controlling for loan characteristics, borrowers who participated in INHP, some of whom had mortgages originated and serviced by INHP itself, had significantly lower default rates 12 and 18 months after origination. This result is robust to several econometric specifications.

A vast majority of the respondents in India appear to be financially literate – they answer the numeracy, inflation, and diversification questions correctly. The Indian financial literacy level is the same as in Netherlands but 20% higher compared to the USA.

Risk Preferences among Consumers

We also observe that there are significant variations across demographic groups. Looking at risk tolerance by gender we see that men tend to be more oriented toward risk than females with 30% of males being categorised as aggressive growth compared to only 8.7% of females. This is mirrored on the conservative returns side with 17% of males being conservative compared to 38% of females. The women in the sample also appear to have more education, with 68% of women having more than a graduate education and only 50% of men having a similar degree. Contrasting salary with risk and education levels, we see that higher income individuals tend to be more educated and seek aggressive growth portfolios. Looking at family size, there does not appear to be a strong correlation between education and number of dependents. However, looking at risk profiles we see that lower risk planners tend to have smaller families. The average number of dependents for low risk planners is 1.45 as opposed to 1.27 for aggressive planners. Combining information about goals, investments, liabilities and insurance policies we can discern some patterns in the data. As the number of goals increases, we find an increase in the number of financial instruments, i.e., an increase in the number of investments, liabilities and insurance policies, with investments showing the largest increase as the number of goals increase. Looking at the distribution of products as a function of the number of investments also yields interesting results. We find that aggressive growth individuals tend to have more insurance policies. This increase seems to be correlated with the increase in the number of investments, suggesting that the insurance policies may not be as conservative as they initially appear.

The research has enormous implications for consumers’ selection of mortgage products (e.g., adjustable rate versus fixed rate mortgages), mortgage refinancing, no-need-to-decide-anything pension and retiree health care plans, and 401K retirement-savings plans that require financial sophistication.

In this article, I have summarised my research that shows that some consumers make financial mistakes but they tend to learn from their mistakes. However, some consumers (old and the young) are more prone to making financial mistakes and these mistakes are also correlated with cognitive abilities. I also look at the role of financial counselling and education and find mixed evidence. We need continuing research in this extremely important area and specifically, look at Indian consumers and compare and contrast their behaviour to behaviour around the world.