Marketing Department: Skills and Structures for Tomorrow
Tuesday, May 19, 2015 | 8:30 a.m. – 4:00 p.m.
Fordham University, Gabelli School at Lincoln Center
New York City, NY

ENCLOSED
✓ Colloquium Notes
✓ Agenda
✓ Attendee List
✓ About the Speakers
✓ Pre-Reading
✓ Map

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EVENT NOTES
FILENE RESEARCH COLLOQUIUM

Title: Marketing Department: Skills and Structures for Tomorrow

Date: Tuesday, May 19, 2015

Time: 8:30 a.m. – 4:00 p.m.

Location: Fordham University
Gabelli School of Business at Lincoln Center
Lowenstein Building -12th Floor Lounge
113 W. 60th Street, NYC

Please Note: Once inside Lowenstein building, Go through SECURITY, Take escalator to PLAZA Level, Then take elevator to 12th Floor. Follow designated signs.

Printed map available at end of packet | LINK TO GOOGLE MAP

Dress: Filene Casual – Dress for your comfort! Wear whatever helps you soak up the most brain food. Jeans OK!

Online Access to Materials
FILENE COLLOQUIUM: MARKETING

Event Day Questions: Aida LaHood, Fordham University
Email: alahood@fordham.edu | Phone: 201.723.6578
FILENE RESEARCH COLLOQUIUM

Marketing Department: Skills and Structures for Tomorrow
Tuesday, May 19, 2015 | 8:30 a.m. – 4:00 p.m.
Fordham University | Gabelli School at Lincoln Center | New York City

AGENDA

8:30 a.m. | Arrival, Coffee/Tea, and Hello’s

9:00 a.m. | Welcome: Mark Meyer, CEO Filene Research Institute and Lerzan Aksoy, Fordham University, Professor of Marketing, School of Business

9:15 a.m. | Build a Brand, Don’t Just Manage One: Christopher Rector, Vice President and General Manager Global Toothbrush Division at Colgate Palmolive

10:00 a.m. | Partner Priorities: Dina Shapiro, CEO and Founder, Yorkville Consulting

10:45 a.m. | Break

11:00 a.m. | Why Your Loyal, Satisfied, Net-Promoting Members Choose Your Competitors: Lerzan Aksoy, Fordham University, Professor of Marketing, School of Business; Alex Buoye, Assistant Professor of Marketing at Fordham University

12:00 p.m. | Lunch

12:45 p.m. | 7 Sources of Distrust in Bank Marketing: Professor Hooman Estelami, Fordham University, Professor of Marketing

1:30 p.m. | What about Social? Tansley Stearns, Chief Impact Officer, Filene Research Institute

2:00 p.m. | Break

2:15 p.m. | Case Study #1: Building a Marketing Department for Tomorrow: Andrew Vahrenkamp, Elements Financial, SVP, Marketing and Member Experience at Elements Financial

2:35 p.m. | Case Study #2: Building a Marketing Department for Tomorrow: Danielle Brehmer, Lake Trust Credit Union, Brand, Strategy + Culture; Jon Eslinger, Lake Trust Credit Union, Creative Director

2:55 p.m. | Case Study #3: Building a Marketing Department for Tomorrow: Stephanie Jenkins, Assemblies of God Credit Union, Integrated Marketing Manager

3:15 p.m. | Case Study Panel

3:45 | Adjourn

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Lerzan Aksoy, Professor of Marketing, Fordham University Gabelli School of Business

Lerzan is widely regarded as one of the leading experts in the measurement and management of customer satisfaction and loyalty. Aksoy is the New York Times bestselling author of The Wallet Allocation Rule: Winning the Battle for Share, and the author/editor of four other books of customer experience and loyalty. Backed by rock-solid science published in the Harvard Business Review and MIT Sloan Management Review and numerous scholarly journals, this landmark book introduces a new and rigorously tested approach—the Wallet Allocation Rule®—that is proven to link to the most important measure of customer loyalty: share of wallet.

Her articles have been accepted for publication in top-tier journals in marketing (e.g., the Journal of Marketing, Journal of Marketing Research, Marketing Science, Journal of the Academy of Marketing Science, and Journal of Interactive Marketing), strategy (including Harvard Business Review and MIT Sloan Management Review), and service management (e.g., the Journal of Service Research, Journal of Service Management, and Managing Service Quality).

Lerzan earned a BS from Hacettepe University in Ankara, Turkey, and was awarded the Fulbright Scholarship to pursue her MBA degree at George Mason University in Fairfax, Virginia. She earned a PhD in marketing from the University of North Carolina at Chapel Hill's Kenan Flagler Business School.

Danielle Brehmer, Brand, Strategy + Culture, Lake Trust Credit Union

Danielle is passionate about innovation, creativity, and building energetic and effective teams. She is a 2012 member of the Filene Research Institute's i3 team -- a small, but mighty, group of innovators fighting for the future of consumers through credit unions.

In her role at Lake Trust, Danielle identifies and leads new strategies, concepts, and opportunities that strengthen the cooperative. Ensure the development and execution of the evolution of the brand in the marketplace and marketing strategies that drive member engagement. Return value to the member and the communities we serve through the organization's corporate responsibility function and create synergies to protect and invest in the interests of the membership.

Jon Eslinger, Creative Director, Lake Trust Credit Union

Jon is a graphic designer + independent thinker. He was born and bred in North Dakota, but currently make a living as the Creative Director and Designer in Lansing, Michigan.

Jon’s been in the business of creating eyeball bustin’ design since 1997. In that time, he’s had work featured in PRINT Magazine, LogoLounge and Creativity Magazine. He’s also worked with a lot of great people, organizations and businesses. Some of which, you may have heard of (General Motors, BIGGBY Coffee, Michigan State University and The Chrysler Group), and others he wishes you had. Jon has also won regional and national design awards, including a National ADDY® Award.

In addition to trying to sound important, Jon lives a life of hockey, professional wrestling, reuben sandwiches and Charles Bronson films.
Hooman Estelami, Professor of Marketing, Fordham University Gabelli School of Business
Hooman Estelami is a full professor in marketing at the Fordham Schools of Business. He received his PhD in marketing from Columbia University and has served as a consultant to several leading financial-services companies. He has received national awards for his research and teaching as well as several honors from Fordham, including the Gladys and Henry Crown Award for Academic Excellence in 2000, 2002 and 2009, and the Stanley Fuchs Teaching Award in 2010.


Stephanie Jenkins, Integrated Marketing Manager, Assemblies of God Credit Union
Stephanie develops and oversees the execution of strategic social media and digital initiatives, including developing and managing viral marketing campaigns, creating and supervising high-profile channel accounts, and integrating interactive media into the credit union’s overall business strategy.

Christopher Rector, VP and GM Global Toothbrush Division, Colgate Palmolive
Specialties: Getting people to perform beyond their own expectations. Driving alignment in a matrix organization, strategic thinking and executional excellence. Helping the team and allowing them to help me.

- Student and Teacher - Never stop learning or sharing what you learn
- Strategic and Tactical - See the forest for the trees but don’t forget to cut a path
- Introvert and Motivator - There is time to reflect and time to take action
- Dedicated Professional and Family Man - What you do is not who you are
- Leadership - Leaders find solutions, Managers find problems

Simple, straightforward and easy to understand, I’ve had the privilege to manage very different types of businesses and people in the US across various categories and disciplines of innovation and core business. Most recently outside the US in very different cultures and economic conditions and across different business units of Consumer Goods and Pet Nutrition. Start with the strategy, work through the tactics, be flexible and don’t fall in love with your own ideas. Most importantly, treat people with respect and you can get them to do things even they didn’t think they were capable of. The rest will fall into place so long as you have a plan and everyone is aligned to it.

Dina Shapiro, Founder and CEO, Yorkville Consulting
Dina has a rare combination of brand and marketing experience. Having worked inside both companies and agencies, at a 50/50 split over the course of her career, she understands both perspectives very well. If you work at a company, Dina can help you get the most out of your agency relationship. Or, if you work at an agency, she can help you better understand what challenges your clients face and how you can best help
them.

Dina has worked at Fortune 500 companies and top agencies, on iconic brands, leading the development of world-class, award-winning brand and marketing initiatives. She has built high-performing brand, marketing and advertising teams inside companies and agencies. She is uniquely qualified in marketing capabilities training due to having expertise both in the subject matter and as a trainer across all formats, audience sizes and subjects.

The role of CEO of Yorkville Consulting is the culmination of Dina’s career, where she applies knowledge from her diverse and relevant experience to counsel clients. She provides smart thinking, new insights and actionable recommendations, all with the knowledge of what it’s like inside a myriad of organizations and business situations.

**Tansley Stearns, Chief Impact Officer, Filene Research Institute**

As Filene Research Institute’s Chief Impact Officer, Tansley Stearns moves the best of Filene’s research and innovation into action. With more than 14 years of credit union leadership experience across a variety of functional areas, she knows how to help an organization move ideas forward to drive business results. She has a passion for learning, creating, and executing.

In her previous roles at credit unions she was responsible for developing and implementing strategy and leading and driving business with all frontline teams including the call center, branches, lending, training, compliance, marketing, and business development. Tansley has been a key member of the Guiding Coalition at two credit unions, helping to build and develop sales and service cultures. She also helped her credit union win first place in both the Dora Maxwell and Louise Herring awards. Tansley was one of the original credit union professionals chosen to be a participant in Filene’s i3 innovation program. In her three years with i3, she worked with other credit union executives to create innovative projects including SmartScore, Decision Point, and Debt in Focus. Credit Union Times named her a Trailblazer 40 Below in 2013.

Tansley earned her BA dual degree in Psychology and English at the University of Michigan. She is a Credit Union Executive Society Certified Marketing Executive and Certified Senior Executive. She also is an Alumni Emeritus of Michael Neill and Associates. When not actively executing new ideas, Tansley can be found running marathons or dancing to the Dave Matthews Band with her daughter MacKenzie.

**Andrew Vehrenkamp, SVP Marketing and Member Experience, Elements Financial FCU**

Andrew is a results-driven credit union financial executive committed to profitable growth and optimizing member capital. Deep experience in marketing and product development offers capabilities uncommon in financial executives.

He has extensive national background in strategic consulting, which yields knowledge of key success levers across the credit union industry. His specialties include: Strategic marketing, asset/liability management, product design and pricing, leadership for financial institutions.
Marketing Department: Skills and Structures for Tomorrow

PRE-READING
Linking Member Satisfaction to Share of Deposits: Applying the Wallet Allocation Rule in Credit Unions

Lerzan Aksoy, PhD
Associate Professor of Marketing
Fordham University
What Is the Research About?

In this report, Lerzan Aksoy, PhD, draws on a new tool—the Wallet Allocation Rule—to investigate how credit union managers can do a better job of translating high customer satisfaction and Net Promoter Score (NPS) levels into improved share of deposits.

The findings of the research by Dr. Aksoy and her coauthors with regard to the satisfaction and NPS metrics that credit union managers typically measure and manage are sobering. Satisfaction and Net Promoter explain less than 10% of the variation in members’ share of deposits. This in large part explains why, despite the fact that credit unions hold the highest satisfaction levels for any industry tracked by the American Customer Satisfaction Index (ACSI), the share of deposits held by credit unions substantially lags that of their bank competitors.

It’s not that satisfaction and Net Promoter levels are not important. Rather, it is the way these metrics are analyzed that is the overriding source of the problem. Analyzing member satisfaction using the Wallet Allocation Rule, Dr. Aksoy is able to explain 55% of the variation in members’ share of deposits.

The key distinction of this approach is that instead of relying on the absolute satisfaction score or NPS, the Wallet Allocation Rule focuses on two critical factors in linking these metrics to share of deposits:

- The relative rank that this score represents vis-à-vis the other financial institutions that members also use.
- The number of different financial institutions that members use (i.e., “number of brands”).

The good news for credit unions is that they are highly ranked by members. Sixty percent of members classify their credit union as their exclusive first choice (i.e., no other financial institution received an equal or higher satisfaction score out of all institutions used).

The number one driver of credit unions’ high rank is the competitiveness of fees. This differs significantly from the most important driver of satisfaction, which is the in-bank service experience. Fortunately, competitive fees are a strong feature of credit unions compared to banks.

The bad news is that 65% of members also feel the need to use one or more competing financial institutions. The most important driver of a competing bank’s ranking for credit union members is Internet banking services. Two prominent market barriers contribute to the reason that members feel the need to use banks: (1) perceived
inconvenience of credit union locations and (2) perceptions of weak credit union ATM networks.

Implications for Credit Unions

Getting credit union members to move their deposits from banks will require directly addressing the reasons they use other financial institutions. In particular, credit unions—perhaps in partnership with Credit Union Services Organizations (CUSOs)—must seek to minimize banks’ advantages in Internet banking, branch locations, and ATM networks.

The size of the problem makes this an issue that credit union managers must take seriously. Of those members who use more than one financial institution, each has on average about $25,414 in deposits going to competing institutions.

About the Author

Lerzan Aksoy, PhD

Lerzan Aksoy is an associate professor of marketing at Fordham University in New York City. She is the cocreator of the Wallet Allocation Rule and is widely regarded as one of the leading experts in the measurement and management of customer satisfaction and loyalty.

A prolific writer, Lerzan has authored and edited four books. Her most recent book, Why Loyalty Matters, is grounded in the most comprehensive study of loyalty ever conducted. The book provides undeniable evidence that when it comes to business success, satisfaction in relationships, and even overall happiness, loyalty is essential.

Lerzan earned a BS from Hacettepe University in Ankara, Turkey, and was awarded the Fulbright Scholarship to pursue her MBA degree at George Mason University in Fairfax, Virginia. She has a PhD in marketing from the University of North Carolina at Chapel Hill’s Kenan-Flagler Business School.
An Ethnographic Study of Consumer Financial Sophistication

Hooman Estelami *
(Fordham University)

* Hooman Estelami is Professor of Marketing at the Graduate School of Business, Fordham University, 113 West 60th Street, New York, NY 10023; (212)636-6296; estelami@fordham.edu. The financial support of the Faculty Research Fund at Fordham University is acknowledged.
An Ethnographic Study of Consumer Financial Sophistication

Abstract

Existing research profiling consumer financial sophistication has examined specific decision errors that consumers may make in financial matters. While these errors have been replicated in multiple studies over the years, most have emerged from highly controlled experimental settings or through consumer surveys which measure only specific categories of financial behavior. This paper extends existing research on financial sophistication by utilizing an ethnographic study conducted over a 5 year time period. Results indicate that while some of the traditional categories of decision errors defined in earlier research affect consumers, decision errors not thoroughly examined in previous academic studies can have a notable and growing effect on consumers' financial decisions. Emerging categories of financial decision errors are identified and shifts in consumers' financial behavior resulting from the financial crisis are profiled.

Key Words:  Financial decision making; behavioral decision theory; buyer behavior
INTRODUCTION

The impact of poor financial decision making on human wellbeing is a well-documented phenomenon dating back centuries. The foundations of many cultural, national and even religious norms on consumption behavior emphasize controlled consumption by individuals, restraint from excessive borrowing to feed immediate desires, and refraining from risky behaviors (Howlett, Kees and Kemp 2008; Kivetz and Simonson 2002; Saad 2007). Yet, the practice of marketing today in many ways deviates from such ideals. The global economic crisis and the resulting public outcry often point to marketing activities which encourage excessive consumption. Much of this consumption is facilitated by financial products targeted at a consumer population that falls short in the discipline and education needed to comprehend and evaluate the wide array of financial choices made available to them.

As a result of consumer challenges in understanding financial offerings, the ideal notion of the utility maximizing consumer assumed in traditional economic thinking (Von Neumann and Morgenstern 1944) has been challenged by research that suggested that financial decision behavior of most consumers may reflect a strong human desire to simplify decision tasks. While much of the accumulating research has shown evidence that consumers lack the financial sophistication needed to objectively evaluate many financial decisions (Calvet, Campbell and Sodini 2009; Dhar and Zhu 2006; Fonseca, Mullen, Zamarro and Zissmopoulos 2012), the prevalence by which the typical consumer may fail to make optimal financial decisions in her daily life is unknown.

The purpose of this paper is to study consumer financial sophistication by profiling the array of financial decision errors that consumers typically make. Data on these decisions is captured using an ethnographic study conducted over a 5 year time period. The findings show
that consumers' financial decision errors are far more broad and complex than the typical categories of financial decision errors identified in past research. New forms of financial decision errors are identified, reflecting the evolving nature of consumer decision making. In the next section existing research on consumer financial decision styles will be discussed, following which the research methodology and results are presented. The paper concludes with a discussion of the findings and regulatory and marketing implications.

RESEARCH ON CONSUMER FINANCIAL SOPHISTICATION

Early Research on Consumer Financial Decision Making

The foundation of modern economic theory is a consumer who is able to make rational decisions in order to maximize his/her utility in the consumption experience (Von Neumann and Morgenstern 1944). The decisions made are assumed to be well-informed such that the consumer understands the full complexity of the decision elements and is well informed about competing offers (Black and Scholes 1973; Sharpe 1964). However, since the middle of the previous century, these critical assumptions have increasingly come under criticism.

Early challenges to the rational views on economic decision making date back several decades (e.g., Newell and Simon 1972; Kahneman and Tversky 1973; Tversky 1969). These works viewed human decision making as a process in which the cognitive burdens associated with making correct financial decisions may require one to compromise decision quality by utilizing decision short-cuts to ease and speed up decision making. In the context of consumer behavior and marketing Bettman (1979) built on this concept and developed a framework for how consumers may utilize information processing strategies to optimize the relationship
between cognitive effort and decision outcomes in their purchase decisions across a range of consumption scenarios.

**Behavioral Finance Research**

Research specifically focusing on consumers' financial decisions emerged in the 1960s and 1970s under the umbrella Behavioral Finance. Studies in this area provided evidence for how the context of financial decisions may shift decision strategies and outcomes of individuals (Tversky 1969) and demonstrated the systematic biases that dominate human decisions related to managing finances and risk (Slovic, Fischhoff and Lichtenstein 1977; Tversky and Kahneman 1973). Behavioral finance therefore contrasts rational financial models with how humans actually make their financial decisions (Kahneman 2013; Shefrin 2007).

Empirical research in behavioral finance has questioned the validity of the underlying assumptions of traditional economic thinking by demonstrating that individuals are often incapable or unmotivated to undertake the demanding mathematical computations and evaluations demanded by rational models of economic decision making. In fact, the decisions that individuals make in the context of their financial lives can be highly simplistic and often suboptimal (Bazerman and Moore 2008; Muneer and Saif-ur-Rehman 2012; Subrahmanyam 2008). The evolving framework emerging from early research emphasizes that for most individuals, financial decision making is an optimization process undertaken not with the objective of perfection but rather with the desire to approximate a good decision with minimal exertion of cognitive effort.
Behavioral finance research has for example examined the asymmetry by which consumers evaluate financial losses versus financial gains. Financial losses are found to carry a disproportionately heavier weight in human decisions than financial gains of equal magnitude (Kahneman and Tversky 1979). Furthermore, systematic misperceptions of the time value of money are evident in individual's decisions related to delayed consumption. For example, the study of trade-offs made by consumers in trading immediate access to financial resources versus receiving higher monetary amounts in the distant future reveal that consumers have an immense desire for immediate access to funds, resulting in discount rates which far exceed those offered in financial markets (Thaler 1981). The resulting effect is an overwhelming desire by consumers (and the public) for short-term gains while sacrificing the long-term benefits of disciplined saving behavior (Bazerman and Moore 2008; Kahneman 2011).

Research in this area also demonstrates systematic misperceptions of risk that bias decision outcomes. Generally, in financial decisions involving risk, individuals overestimate low-probability events while they underestimate high probability events (Tversky and Thaler 1990). This finding has had direct effects on regulatory and public policy perspectives on insurance markets, which are highly dependent on public perceptions (and misperceptions) of risk for specific categories of financial risk. Behavioral finance research has also shown that in planning future retirement needs, individuals systematically miscalculate current savings requirements and many do not have the sophistication necessary to accurately determine the required levels of savings needed to achieve specific retirement goals (Mckenzie and Liersch 2011).
Pseudo-rational Views on Consumer Financial Decisions

The emerging view from empirical research points to systematic patterns of decision errors which have been repeatedly validated and tested in laboratory settings. Some of these decision errors relate to the limitations in the cognitive circuitry of the human brain which constrain the ability of consumers to process the large volume of information associated with common financial decisions. For example, limitations in the number of information pieces that can be retained in human short-term memory can limit consumers' ability to evaluate financial service offers which have a large number of attributes (Estelami 2003; Estelami and DeMaeyer 2010). Financial decision errors emerging from misperceptions of the time value of money have also been systematically observed in consumer studies (Hausman 1979; Kivetz and Simonson 2002). These errors reflect situations in which consumers may overvalue immediate consumption and undervalue future savings. This results in financial decisions related to the timing of consumption reflecting implied interest rates which often far exceed those offered in financial markets, and has been associated with consumer hardship resulting from excessive debt accumulation and underinvestment for retirement needs (Benartzi and Thaler 2007). Therefore, in recent years, research has focused on establishing financial literacy programs and practices that may help consumers combat the ill effects of poor decision making, especially in relation to credit products and excessive borrowing (e.g., Bolton, Bloom and Cohen 2011; Navaro-Martinez, Salisbury, Lemon, Stewart, Matthews and Harris; 2011).

Decision errors emerging from lack of consumer knowledge on financial matters have also been identified in past research. Uninformed financial decision making can result in a passive consumer attitude regarding the acquisition of information necessary for making sound financial decisions (Goldsmith 2011), or a lack of desire to learn about the function and benefits
of specific financial offerings (Escalas and Bettmann 2005). It may also transpire in self-acknowledged consumer arrogance about poor financial decisions (Barber and Odean 2000). In some cases reliance on other (equally uniformed) individuals as a basis for making one's own decisions (Hastie and Dawes 2009) can result in poor financial decision, and studies have also shown that such decisions may be triggered by speculations rather than concrete information about other consumers' anticipated financial decisions (Lee and Andrade 2011). Decision research has also shown the overwhelming effect of emotions on human decision making. These include decision biases resulting from overestimation of risks of losses, whereby excessively conservative approaches in avoiding risks are taken (Rode and Wang 2000). This can result in consumers purchasing excessive amounts of insurance protection for categories of risk with low associated probabilities (Slovic, Fischhoff and Lichtenstein 1977) or excessive reservation from making financial decisions which in the past due to contextual rather than decision-maker factors have resulted in poor outcomes (Strahilevitz, Odean and Barber 2011). In addition research has shown that consumers can pay excessive attention to non-diagnostic elements of decision making such as the brand name or the image of a financial services provider and pay less attention to more diagnostic variables that reflect the quality of its offerings (Aspara and Tikkanen 2010; Estelami and DeMayer 2010). Research therefore indicates that consumers are generally weak in their ability to make optimal financial decisions, and their decisions are often guided by emotions, lack of access to diagnostic information, social forces, information overflow and time pressure. As a result financial decisions often transpire in sub-optimal forms and need to be improved and enhanced through other means such as financial advice, formalized financial literacy programs, and decision aids.
Financial Literacy, Capability and Sophistication Studies

A growing question in consumer financial research is regarding the ability of individual consumers and the population at large to make financial decisions on a day-to-day basis that serve their long-term financial interests. Research in this area has taken on a range of forms and has focused on a variety of related constructs such as financial literacy and financial capability. Financial literacy reflects an individual's knowledge and familiarity with financial matters (Fonseca, Mullen, Zamarro and Zissmopoulos 2012; Hilgert and Hogarth 2003). It is generally believed that increased financial literacy can help consumers arrive at better financial decisions. For example, Bernheim et al. (2001) have found that in the long-run consumer financial education mandates typically result in consumer populations that are more affluent and enjoy higher savings rates.

Furthermore, considerable variations in financial capability have been found across demographic groups. For example, a UK-based study conducted for the Financial Services Authority (Atkinson, McKay, Kempson and Collard 2006) found that while about a third of the population exhibits no weakness in measures of financial capability, most of these individuals are affluent, older and have formed families, while younger single individuals and those who lack financial resources and financial experience are generally weak in critical financial capability measures and account for nearly 40% of the population. Similar results were reported by Taylor (2011) who found that young single British adults who are unemployed tend to exhibit the lowest financial capability measures, while older married individuals possess the greatest degree of financial capability. High levels of financial literacy have also been associated with increased stock market participations by consumers (van Rooij et al. 2007).
Nevertheless, financial literacy does not assure sound financial decisions and many financial literacy programs need to be reexamined for their impact, relevance and modes of delivery (Estelami 2009; Lyons, Palmer, Jayarante and Scherpf 2006). A concept related to financial literacy is financial capability which does not reflect financial knowledge but rather the quality of financial decisions made by an individual (Atkinson, McKay, Kempson and Collard 2006). Financially capable individuals are able to make decisions on managing their wealth, planning for future expenditures, and selecting appropriate financial solutions that best meet their life objectives. Interestingly, studies around the world show a massive failure of the population on financial capability measures. For example a UK-based study has shown that a significant proportion of the population are deficient in multiple areas of financial capability (Atkinson, McKay, Kempson and Collard 2006). Another UK-based study has shown that 90% of individuals purchasing life insurance only considered a single insurance provider, bypassing the necessary steps in acquiring competitive information and making an informed financial decision (Schlesinger and Schulenberg 1993). In the United States, financial capability studies have shown significant variations in financial knowledge across demographic groups, though all groups regardless of their actual financial capability measures misperceive high levels of confidence in their own financial capabilities (Lusardi and Mitchell 2011). Similar results have been observed in financial capability studies, conducted in European countries as well as other parts of the world for a range of financial services (e.g., Atkinson, McKay, Kempson and Collard 2006; Ohner and Werner 2008; van Rooij et al. 2007),

Financial capability is a concept closely related to, and at times interchangeable with financial sophistication, defined as the ability of individuals to avoid making financial mistakes (Calvet, Campbell and Sodini 2009; Dhar and Zhu 2006). As will be outlined below, while
financial literacy can be measured by asking consumers about their knowledge of financial matters, financial capability and financial sophistication are often inferred from consumers' past financial decisions, either based on secondary data sources or through primary data collection such as direct questioning and observational methods (e.g., Smith, Finke and Huston 2011; 2012).

**CHALLENGES IN QUANTIFYING THE QUALITY OF CONSUMER FINANCIAL DECISIONS**

While much has been learned about consumers' financial decision behavior through the accumulation of research findings from previous studies, our knowledge regarding the types and frequency of financial decision errors has been affected by the research methodologies used in these studies. The majority of existing studies measure financial decision errors of consumers through inferences made from survey or secondary data sources, or they establish the existence of a particular form of decision error by replicating it in a controlled experimental setting. While these approaches have specific advantages, their shortcomings provide opportunities for broadening the scope of inquiry through alternative research designs.

**Inferring Errors from Past Financial Decisions**

One common approach for estimating the extent of specific financial decision errors is to utilize historic data on past financial decisions of individuals or households to determine the quality of those decisions and thereby infer the extent by which specific errors materialize. For example, utilizing the *Survey of Consumer Finances* (collected by the U.S. Federal Reserve),
Frank (2011) has established that American households underestimate the interest rates associated with their credit cards, and also undervalue the impact of credit card penalty fees. In a Swedish study, Calvet, Campbell and Sodini (2009) utilized the nation's entire tax database over a 4 year time period to identify common errors related to investment decisions by Swedish consumers. In these studies, historical financial decision data are used to infer the quality of decisions made by households or individuals. The occurrence of specific suboptimal decision patterns can signal weaknesses in consumer decision making capabilities in financial matters. However the scope of inquiry in these studies was constrained to the specific financial decisions examined (e.g., savings and investments) and does not cover the wider range of financial services decisions that consumers make.

Using this research approach, historical data on the buying and selling of securities by individual investors were used by Barber and Odean (2001) who identified intriguing patterns of sub-optimal investment behaviors. Their research for example showed that high levels of trading activity are negatively correlated with portfolio gains. The results suggest that consumers who are overly active in the stock market typically perform at levels below the market average. Their finding challenge popular misperceptions on the benefits of investment activity and suggest that in many cases highly active investors would benefit from delegating their investment decisions to index funds which track the overall market trends (and require minimal management effort). Other studies with similar approaches of inferring consumers' financial decision errors using historical transaction-based data include the work of Feng and Seasholes (2007) who extend the framework of Barber and Odean by utilizing longitudinal data examining investment behavior of individual investors from the very conception of their investment history. Feng and Seasholes'
work reasserts the decision biases established by Barber and Odean in the entire life-cycle of consumer investment decisions.

Using historical data on specific financial decisions of households and/or individuals has certain appealing features as well as specific weaknesses from a research perspective. Since actual financial decisions (rather than hypothetical ones simulated in lab settings) are studies, the realism and external validity of the findings are notable. However, since considerable data collection effort is required, access to data on the wide range of financial decisions that households make is often limited. For this reason, the majority of studies utilizing this approach have had to narrow their focus to specific financial decisions, such as investments, insurance and savings products, and fail to capture the full range of financial decisions made. These studies also often require considerable allocation of research effort as large-scale surveys involving consumer panels are frequently used in this research approach.

**Studies Based on Experimentation**

Financial sophistication research has also relied on experimental design methods to simulate for lab or field subjects the decision contexts which may result in decision errors. The intent is to carefully create contexts in which the outcomes of rational economic decisions can be empirically contrasted with human decisions which may deviate from rationality. Based on the subjects' responses the magnitude of these deviations can then be gauged. For example, in a classic study Thaler (1981) presented subjects with a series of scenarios where they had to choose between receiving payments at different points in the future versus receiving a lump sum amount at the present. By systematically varying the transaction amounts and time frame, Thaler
was able to demonstrate that consumers use excessively high discount rates -- far above market interest rates -- for immediate access to financial resources. The experimental design also enabled him to demonstrate that the discount rates vary as a function of the transaction amount such that lower transaction amounts are associated with higher discount rates. Other studies have replicated similar effects using lab-based or field experimental designs. For example, Wonder, Wilhem and Fewings (2008) utilized conjoint analysis to determine the drivers of automobile loan decisions. They found that decisions with respect to loans defy rational economic prescriptions, such that consumers prefer shorter to longer payment cycles even in cases of 0% interest loans. Consumers were also found to focus excessively on the first digit of the monthly payment and ignore the totality of payment outlays. These results demonstrate how lab-based experimental designs can create contexts that reveal consumers' systematic violation of basic economic principles and thereby identify underlying shortcoming in consumer financial capabilities.

Use of an experimental design enables the researcher to control the variables that may influence subject responses and therefore provide greater opportunities for empirically detecting the sought out phenomenon (Berkowitz. and Donnerstein 1982; Fontenelle, Phillips and Lane 1985). While this approach enables systematic examination of the potential impact that predetermined drivers may have on consumers' decision errors, it can have limitations in terms of external validity of the findings (Levin, Louviere and Schepanski 1983). In some cases researchers need to recalibrate and re-administer experimental stimuli in order to detect specific effects, further limiting the market relevance of the findings. This is because the market environments in which consumers arrive at their financial decisions may not be as finely
calibrated to result in the effects generated in the sterilized lab environments simulated by the researcher (Fontenelle, Phillips and Lane 1985; Schneider and Shanteau 2003).

The extent by which consumers may be facing scenarios similar to those in carefully simulated lab settings can therefore be challenged on the grounds that the market environment facing consumers tends to be considerably more complex than what experimental subjects may experience. As a result such studies of financial decision errors may be limited in their ability to capture the wide range of errors that consumers may make in the marketplace.

**Surveying Consumers Regarding Financial Decision Errors**

Another approach to quantifying financial sophistication is to inquire about such errors (or the propensity to make errors) by directly asking related questions from samples of consumers through a survey. For example, Atkinson et al. (2006) administered a test embedded in a consumer survey consisting of measures of five critical areas of financial sophistication and found that about a third of the population failed 3 or more of these tests. In a similar approach, Pollinen et al. (2007) utilized direct questioning methods by administering a survey consisting of 65 multiple choice questions to quantify consumers' financial sophistication. These results are alarming since, if one assumes the measures to be accurate, they suggest a high degree of consumer vulnerability and ignorance in financial decision making.

By surveying consumers specific questions related to their financial sophistication, these studies attempt to quantify consumer abilities in financial decision making. This approach is appealing since it very efficiently quantifies financial sophistication. However it is also limited in that the task of direct questioning may trigger heightened levels of respondent alertness and
produces social desirability biases that often reduce the validity and reliability of obtained measures (Churchill 2004; Lee and Andrade 2011).

Direct questioning has the benefit of allowing detailed research focus on specific financial behaviors or specific segments of the population surveyed. For example, focusing on credit card usage of college students, Robb (2011) has found a positive relationship between financial knowledge and responsible use of credit cards. Gutter and Copur (2011) also surveyed college students and found those who exhibit higher levels of self-discipline in general are more likely to transfer disciplined behavioral norms into their credit card usage patterns, with both short-term and long-term benefits on their financial wellbeing. It is only through direct questioning that such detailed relationships can be established and quantified.

AN ETHNOGRAPHIC APPROACH TO ASSESSING CONSUMER FINANCIAL SOPHISTICATION

While direct measures of consumers' financial behaviors and attitudes can provide detailed perspectives on individual consumers and their financial decisions, such an approach can be affected by measurement error. The intrusive nature of survey-based inquiry into human behavior has been long recognized as a source of bias which can result in the collection of unreliable consumer data (Churchill 2004; Lehmann, Steckel, Gupta 1998). When asked about sensitive issues such as personal relationships, belief structures, social values, addictive behaviors, and personal finances individuals may choose to provide responses which are more socially acceptable, but not representative of their own actual behaviors. Many individuals may not be willing to acknowledge their decision shortcoming or subject themselves to intrusive questioning by researchers (de Jong, Pieters and Fox 2010; Tellis and Chandrasekaran 2010).
Self-reported measures can therefore be affected by the measurement process as the actual financial behaviors of respondents may not be directly observable by the researcher due to biases in under-reporting of poor decisions. Such measurement issues have also been a concern in related fields dealing with poor decisions by consumers in areas of nutrition and health (Roberts and Treasure 2012) and require innovative approaches to data collection such as use of secondary data or ethnographic informant-based observational studies.

In order to overcome some of the research limitations outlined above and to expand the horizon of research methodologies for examining consumer financial sophistication, an ethnographic approach was used in this study. Ethnographic studies have had a long tradition of use in consumer research (e.g., Arnould 1989; Belk and Sherry 1988; Marimpolski 2006). This research methodology is based on the observations of research informants and their field interpretations of target market consumers. The observations and interpretations of the behaviors reported by these informants is central to ethnographic research and helps identify the underlying phenomenon and thought processes that guide specific consumption acts. The critical elements of ethnographic research are therefore: (1) to rely on informants who are immersed in the target population, (2) to utilize the observations, interpretations and reflections provided by the informants on the behaviors of the target population, and (3) to subject such data to further interpretation and analysis in order to generate a comprehensive perspective of the focal behavior under study (Agar 1980; Fetterman 1989; Marimpolski 2006). Often the informants are representatives of the consumer target population or researchers who have immersed themselves in the consumption experience (e.g., Arnould 1989; Belk and Sherry 1988; Jayashighe and Ritson 2013; Schouten 1995).
Ethnographic research allows one to examine consumption acts and decision behaviors in the natural environment rather than simulated lab-based settings used in experimental research, and by doing so avoids response biases associated with direct questioning methods (Marimpolski 2006). Critical to ethnographic analysis is the central role of observer interpretation in reporting and dissecting incidents of consumption and the "analytical induction based on the subjective experience" of observers (Marimpolski 2006, p. 5). The resulting data allows the researcher to uncover underlying drivers of decision behavior and has been successfully used in a range of consumer studies on decision behaviors related to food consumption (e.g., Wallendor and Arnould 1991), consumer packaged goods purchases (e.g., Coupland 2005), and the consumption of recreational products (e.g., Schouten and McAlexander 1995) as well as other consumption contexts. In the context of this study on consumers' financial sophistication, the following research questions will be explored:

(1) What types of decision errors are evident in consumers' financial decisions?

(2) How have consumers' financial decision errors evolved over time?

(3) What decision errors are prominent for specific financial services categories?

Data Collection Procedures

Consistent with established ethnographic methods (Agar 1980; Hammersley and Atkinson 2007; Marimpolski 2006) observers were trained to assess and report on financial decisions made by consumers. It was important that the informants possess the skills to analyze and evaluate financial decisions, and the informants were therefore recruited from a pool of graduate business students who had received formal training in finance prior to data collection.
and completed the data collection as part of the requirements for an MBA course in marketing of financial services. Consistent with established ethnographic practices informants were asked to collect and provide written descriptions of financial decisions that they have observed being made by other individuals and to provide their own interpretations of the quality of these decisions. Informants could reflect on financial behaviors they had witnessed among individuals they have personally known or have spoken to in the past, or in other social contexts where the opportunity to observe financial behaviors of others exist. The observations could be based on direct contact and research-initiated conversation with target consumer, observation of financial decisions based on past knowledge of decisions made by individuals they personally know, or third-party accounts and descriptions of decisions made by other consumers. Informants were asked to write their description and interpretation of the financial behaviors observed, and were also asked to provide details of their observations in terms of the demographic characteristics of the individual observed and the related financial product category. It is important to note that this approach is consistent with norms of ethnographic research where, reliance on both the observation made by, and the interpretations rendered by the informant is central to the nature of collected data (Hammersley and Atkinson 2007; Marimpolski 2006). A natural limitation of this approach is that how an informant views a consumer's financial decision and the interpretation that she may give to such a decision can bias the results. For this reason ethnographic methods encourage the use of a multiple sources of data, and in the case of this study this was achieved by engaging a large number of informants across a large number of consumers, to control for any biases in interpretation that may occur due to a single informant's interpretation of specific decision behaviors.
The data were collected from a total of 271 informants between the years of 2008 and 2012. These observations were then subjected to content analysis procedures -- to be discussed below -- in order to provide frequency estimates for various forms of observed decision errors. Each informant could provide multiple observations, and on average reported 1.7 incidents. Fifty-nine percent (59%) of the informants were male, the median age was 27 and the median number of years of work experience was 8. The majority of the informants (65%) worked full-time and the median number of weekly work hours was 30. Additional details on the age and gender distribution of informants are provided in Table 1.

[Insert Table 1 about here]

The data collected over the five year time period consisted of 473 observations. Since informants were asked to provide information on the individual subjects and decision contexts observed, the demographic and product category characteristics associated with each observation could be analyzed and reported. Informants reported on the product category and decision details associated with each observation and if available to them, they also provided gender and age information related to subjects observed. The demographic data (age and gender) were provided for 64% of all observations. As expected the subject and informant demographics exhibit a high degree of association as informants are more likely to report on individuals within their own social groups. Overall, informants provided information covering a wide range of age brackets, reflecting individuals in all the age ranges profiled.
Content Analysis Procedures

Informants' written reports were subjected to content analysis procedures (Krippendorff 2012; Weber 1985). Content analysis relies on the systematic interpretation, categorization and quantification of qualitative data and is a widely adopted approach in a variety of areas including customer satisfaction research, branding, and pricing (Schreier 2012). Consistent with content analysis guidelines, two judges independent of each other examined a random sample of the written reports provided by the informants and developed relevant categories of financial decision errors. The judges were marketing faculty with over 10 years of academic and business experience in the field of financial services marketing. Following the development of the categories, the judges compared the categories which they had developed individually, and any differences in the naming and definition of the categories were resolved through discussion. In cases of non-resolution a third judge was used to finalize the category definitions. The final list of categories was then used by the two judges to code the entire set of informants' reports. Disagreements in the categorization of the informant reports were resolved by a third judge. As a result of this process, the intra-judge agreement was 86%, which reflects a high degree of reliability in the categorization of qualitative data (Krippendorff 2012). The resulting categories were then subjected to further statistical analysis as outlined below.

RESULTS

The observations collected from the informants were categorized through the content analysis procedure and the associated descriptions for these categories are listed in Table 2.

[Inset Table 2 about here]
The categories of decision errors emerging from the content analysis can be broadly categorized into three separate groups (meta-categories) to ease interpretation and analysis. The first group reflects a focus on the shortcomings which are observable in the decision process used by consumers. This meta-category reflects a range of decision error categories which are driven by consumers' own inability to assess the decisions facing them. The second meta-category reflects decision error categories that are a direct result of intentional activities by marketers to mislead consumers into making poor financial decisions. The third meta-category reflects persistent behaviors that demonstrate the carryover of past poor decisions by the consumer. Below is a detailed description of the categories.

(1) Errors Focuses on the Decision Process of the Consumer: Decision errors in this meta-category reflect faults in the decision process of consumers, as evident in lack of ability to objectively evaluate the financial offers being presented to them. Detailed descriptions and samples for each decision error in this meta-category are provided below.

**Bandwagon Effect:** Basing one's financial decisions on what others have decided for themselves or have suggested. For example one may choose to invest in a 'hot' stock because of recommendations made by a friend, or one may decide to divest from an investment because of rumors circulating in social media about the industry outlook (e.g., Goldsmith 2011; Koehler and Beauregard 2006).

**Affect-based Decision Making:** Utilizing feelings rather than logic to drive financial decisions. For example, the informant may report that an individual who they observed or interviewed had decided to invest in a company's stock simply because he had stated that he was affected by the emotionally charged advertising campaign for one of its brands (e.g., Aspara and Tikkanen 2010).
**Consumer Laze:** Knowingly deciding not to expend the required amount of evaluation effort to assess a financial decision. This mode of decision making reflects a state of mind in which the consumer arrives at a suboptimal decision, fully aware that it is not a well thought-out decision. For example, a consumer may decide to use a high interest credit card when a lower interest card is available. This behavior can be associated with lack of consumer motivation to optimize decisions (McInnis, Moorman and Jaworski 1991)

**Lapsed Judgment:** Unknowingly making a financial decision that is not in one's best interest. This state of decision making is similar to Consumer Laze (described above), but reflects scenarios where the consumer lacks awareness of the fact that the decision being made is suboptimal. In this mode of decision making, one may be unable to recognize the significance of the financial decision about to be made.

**Unidimensional Decision Making:** Focusing on a single decision attribute, and ignoring other diagnostic attributes of the financial product. This mode of decision making reflects a desire by consumers to simplify the complexity of their decision environment by focusing on a subset of the available information as a basis of their decision making. For example, in a loan transaction a consumer may focus on the monthly payments and ignore other aspects of the offer such as the interest rate, processing fees and closing costs (e.g., Estelami 2003; Frank 2011; Wonder, Wihelm and Fewings 2003).

**Lease/Buy/Rent:** Given that leasing, buying and renting are three common approaches to obtaining long-term access to large-ticket assets such as homes and automobiles, this form of decision error reflects choosing one option (e.g., leasing), when another option (e.g., buying through financing) may be more economical (Smith, Finke, Huston 2011; Wonder, Wihelm, and Fewings 2008).

**Time Value of Money:** Not recognizing the significance of interest expenses that may accumulate over time or not realizing that cash devalues with the passage of time. For
example the consumer may not pay attention to the interest payments that accumulate on credit card debt if balances are not paid off fully (e.g., Benartzi and Thaler 2007; Ellen, Scholder, Wiener, and Fitzgerald 2012; Thaler 1981).

*Risk Misperceptions:* Overestimating unlikely risks, or underestimating significant risks. For example, a consumer may be overly concerned about a certain category of risk which is very low in probability and as a result may find a need to obtain risk protection though additional insurance coverage for fear of the unlikely (Slovic, Fischhoff and Lichtenstein 1977; Tversky and Kahneman 1981; Yates et al. 1989).

*Tax Implications:* Ignoring the tax benefits that may exist in certain financial products or the tax penalties that may apply due to certain financial transactions. For example, a homebuyer may ignore to take into account the tax deductions allowed by the Federal government for interest payments on mortgages (Smith, Finke and Huston 2012).

(2) *Decision Errors Driven by Marketing Actions of the Financial Services Provider:* Decision errors in this meta-category reflect the results of intentional activities carried out by financial services marketers to lead consumers to make sub-optimal decisions. Informants' reports for these categories of decision errors focused on the behavior of the marketer (rather than the consumer) and possible misperceptions that may have resulted from such behavior.

*Fees:* Marketers using fees as a means for extracting additional revenues from customers who may not be alert or sensitive to such fees. For example, a mortgage product may have high pre-payment penalties associated with it, or a credit card may have high fees for specific types of transactions (Estelami 2003; Frank 2011).

*Marketer Trickery:* A financial service being promoted in such as way that intentionally deceives, confuses or misleads consumers into purchasing it. For example, in an advertisement for an insurance product, the cost may be quoted in terms of the cost per day rather than the overall annual premium since the latter is a larger amount while the
former is categorized into a short-term mental account and creates more positive impressions about the offer (Thaler 1985).

(3) Decisions Which are the Outcomes of Continuous Careless Behavior: Decision errors in this meta-category reflect persistent sub-optimal behaviors exhibited by the consumer over time. They are a result of poor discipline and lack of initiative by the consumer to change the path of previous poor decisions.

Inertia: This behavior is exhibited by continued patronage towards a financial services provider that is recognized as one that is not providing an optimal offering. Loyalty is exhibited despite the poor offering since the consumer may consider the task of switching to be overwhelming. An example would be to continue maintaining an account at a retail bank that is considered by the consumer as having poor customer service (e.g., Lee and Neale 2012; Jones and Farquhar 2007).

Current Overspending: This behavior is a result of excessive consumption by the consumer beyond his means to the point that specific financial products have to be used in order to enable consumption. Examples would be the purchase by a low-income household of high-end luxury automobiles beyond the households' financial means (Kivetz and Keinan 2006).

Excessive Borrowing: This behavior is focused specifically on credit products and their excessive use. Though related to overspending (above category) it is associated with scenarios where the informant explicitly mentions the use of credit products such as bank loans and credit cards. Examples would be the accumulation of large amounts of credit card debt or the use of home equity loans to pay off daily household expenses.

Frequency Distribution of Meta-Categories

Table 3 provides the frequency distribution of the various decision errors. Errors related to the decision style (first meta-category) in sum account for nearly 2 in 3 of all decision errors
reported. The most prominent decision error in this meta-category relates to the time value of money. This is a somewhat expected result given that the context of many financial decisions facing consumers relates to the tradeoffs between present and future consumption and the financial assets needed to facilitate purchases (e.g., Benartzi and Thaler 2007). The second most prominent decision error in this meta-category is the bandwagon effect. This too reflects much research in social psychology literature which suggests that individuals gravitate to the behavioral norms of their social group and may take cues from decision leaders within their social group (Goldsmith 2011; Koehler and Beauregard 2006).

[Inset Table 3 about here]

Another frequent decision error related to this meta-category is misperceptions of risk. This error relates to studies on human propensity to overestimate unlikely events and to underestimate likely ones (e.g. Hsee and Weber 1999; Tversky and Kahneman 1981). In a financial services setting where many products are risk-related (e.g., insurance and investments), the prominence of this form of decision error is a significant finding. It also reasserts the focus of much of the research being done in the field of behavioral decision making which has recognized the systematic biases in human perceptions of risk.

The second most prominent meta-category of decision errors relates to marketer-based activities. In total this error family accounts for nearly one in every five decision errors reported. The significance of this form of decision error is that it reflects deliberate attempts by financial services marketers to mislead consumers. It also highlights the high degree of vulnerability that consumers may experience as a result of such attempts. The high frequency level associated
with this meta-category further validates the need for regulatory oversight, consumer education, and the rebuilding of consumer trust in financial institutions (Akinbami 2011).

The third meta-category relates to careless financial behavior and in total accounts for 17% of all decision errors reported. Inertia in particular accounts for about 7% of reported cases and validates past research on the persistent effect of consumer resistance to switching financial services providers (Andrews et al 2003; Campbell 2006). Consumers’ lack of discipline accounts for the remaining 10% of observations reported under this meta-category. This too reflects the significance that factors such as impulsive decision making and lack of self-control can have on the decisions and behaviors of consumers (Benartzi and Thaler 2007; Thaler 1981).

**Decision Error Determinants**

Since the data for this study were collected between the years of 2008 and 2012, it was possible to examine the changes in the frequency of financial decision errors over time. The impact of technology integration into the consumption process, the changing economic climate and shifting societal norms are known to have an evolutionary effect on consumer behavior (Saad 2011). For example, in the specific context of credit products social acceptance of borrowing as a means for product acquisition and consumption has grown over the years. However in the post financial crisis era this trend may have declined as households have become more conservative in their financial decisions (Akinbami 2011; Van Der Cruijsen, De Haan, Jansen and Mosch 2012). The effects of such shifts may become evident in the degree by which consumers avoid specific financial decision errors. To investigate this, Table 4 provides the distribution of the meta-categories across the 5 year time span of this study.
As can be seen from Table 4, gradual changes in meta-category frequencies may be associated with the passage of time. For example, meta-category 3 has gradually declined over time. Similarly, meta-category 2 which reflects poor consumer decisions that are intentionally driven by marketers' actions seems to have grown after the financial crisis. These shifts are very subtle and a chi-square analysis does not show significant changes in the meta-categories over time ($\chi^2=4.97; \phi=0.11; p=0.76$). Furthermore, the incidence of decision errors did not show statistically significant relationships with age or gender of the subjects, and demonstrate the universal nature of the decision errors studied. However, at the more detailed level of the underlying decision error categories (rather than the meta-categories), it is possible to examine how specific decision error frequencies were affected by the financial crisis. To examine if the financial crisis has affected the rate of occurrence of the various forms of financial decision errors, the percentage frequency of each decision error was computed pre-crisis versus post-crisis. The differences in these percentages were then tested for statistical significance using Chi-square analysis. The results of this analysis are shown in Table 5.

As can be seen from the table, some of the categories show significant shifts as a result of the financial crisis. Specifically the bandwagon effect seems to have grown following the financial crisis ($p<.1$). This may be a result of consumers' helpless state of mind following the financial crisis and the inability to determine for themselves what financial decisions are best for them. Under such a confused state in financial markets, consumers have a difficult time evaluating the financial markets by themselves and may instead rely on others for direction on
their own financial decisions, thereby increasing the prominence of the bandwagon effect. The effects of inertia also became stronger following the financial crisis (p<.1). This may reflect forces at work similar to what has caused the bandwagon effect to grow. Given the instability of the financial markets many consumers may have decided to hold tight by remaining with their existing financial services provider rather than seeking alternatives, thereby increasing the degree of observed inertia following the financial crisis.

It's important to note however that certain decision error categories experienced a decline following the financial crisis. In particular, as one would expect, following the financial crisis consumers curbed their spending. As a result, the percentage of decision errors associated with overspending experienced a sharp post-crisis drop (p<.01). Similarly, consumers' increased awareness to financial matters and the risks associated with financial decisions seems to have grown following the crisis. The percentage frequency associated with misperceptions of risk witnessed a noticeable drop following the financial crisis. This difference is statistically significant ($\chi^2=3.8; \phi=0.09 ; p<0.05$), and indicates that following the financial crisis consumers examined risk more closely and were more attentive to accurately evaluating the risks associated with their financial decisions. This finding concurs with recent research on shifts in public behavior and consumers' more cautious spending patterns resulting from households' economic challenges following the global financial meltdown (Akinbami 2011; Saad 2011).

In addition to the examination of the effects of time on consumers' financial decisions, the collected data allows one to examine the prominence of the decision errors related to various financial services categories. Figure 1 outlines the distribution of the meta-categories described earlier across the financial categories. As can be seen, for categories such as insurance, investments and savings products, the decision style of the consumer is primarily attributed as
the cause of the decision error. For these financial services categories this attribution is made in over 75% of the reported cases. Consumer errors that contribute to such cases are the bandwagon effect (e.g., investing in a stock due to peer pressure), ignoring the time value of money (e.g., not saving for the future) and misperceptions of risk (e.g., purchasing insurance for improbable risks).

[Insert Figure 1 about here]

For retail banking and credit cards, the highest frequency of decision errors is attributed to marketers. These scenarios for example relate to hidden fees associated with credit cards and checking accounts and marketing trickery as outlined in earlier discussions. The differences shown in Figure 1 between the percentage distribution of decision error meta-categories across the various financial services were tested using Chi-square analysis and found to be statistically significant at the p<.01 level ($\chi^2=120.2; \Phi=0.504$) and indicate varying degrees of consumer vulnerability to decision error types as function of the financial service category.

DISCUSSION

The findings of this study suggest that specific types of decision errors are prominent in consumers' financial decisions. The decision errors reported by the informants in this study indicate that a wide range of decision errors appear in consumers' everyday lives. For example, nearly one in every ten decision errors in this study was found to be a result of misperceptions of risk by consumers. This is an important concern since future research on this topic may need to provide further input to regulatory needs in specific financial services categories which are risk-related, such as insurance and investing. For example current insurance regulations in most
countries do not require the disclosure of underlying risk probabilities or actuarial tables to the public and may therefore feed misperceptions of risk which characterize a large number of financial decisions made by the public.

A similar proportion of decision errors was found to be driven by the bandwagon phenomenon. The bandwagon effect can have very harmful societal effects as it can transpire in the form of an epidemic of bad financial decisions passed on from one consumer to the next. The results of this study show that this effect has grown over time, and there is a desperate need for academic research to catch up with this phenomenon which can further accelerate due to the mass adoption of social media tools. Other categories of financial decision errors which were notable in the results are those related to consumers' lack of motivation to objectively assess financial decisions, their ignorance about the tax implications of these decisions, and a unidimensional focus in decision making. Although past research has identified the effects of such decision errors on financial decision outcomes (e.g., Mullainathan and Thaler 2000; Wonder, Wihelm and Fewings), these categories of financial decision errors clearly are deserving of more intensive scientific examination as they may have great societal impact. They may also require careful examination by educators and public policy advocates charged with improving the public's level of financial literacy.

**FUTURE RESEARCH**

The findings of this study have research and practical implications related to regulation of communications in financial markets. For example since, as noted earlier, a significant proportion of consumers' financial decision errors are attributed to misperceptions of risk, more
research is needed on the impact of disclosure of risk probabilities to the public. Such research would need to address the collective needs of public policy advocates, regulators and the industry and aim to create a market environment that equips consumers with information aimed at improving the quality of their decisions.

Along the same lines, one can conduct a regulatory audit to examine whether the array of existing regulations used in a range of financial services markets address the more prominent financial decision errors identified in this study. Where discrepancies exist, new regulatory measures may need to be considered. The frequency of various forms of decision errors reported in this study can also help motivate consumer education programs that aim to counter the harmful effects of these decision errors. For example, an audit of existing programs can be conducted to determine if existing financial literacy campaigns are addressing the major decision errors affecting consumers. Furthermore, the longitudinal nature of this form of investigation can be used as an ongoing resource for evolving and modifying financial literacy curricula to better protect consumers against poor financial decisions. Though the scope of the sample in this study was constrained due to sample size and geographic location (United States) where the data were collected, continuous replications of this form of study over the years and across different countries will help build longitudinal measures of consumer financial sophistication. The resulting increase in sample size and measurement accuracy related to consumers' financial capabilities would help public policy advocates and consumer researchers develop a better understanding of the evolutionary nature of consumer financial capabilities.
CONCLUSION

While it can be argued that the vulnerability of the public following economic shocks such as those observed at the end of the last decade or the recessionary period of 1930s is a result of irresponsible management and poor regulations, it can also be argued that individual consumers bear some responsibility for having made poor financial decisions. The inability of individual consumers to make good financial decisions can collectively contribute to an aggregate state of economic weakness which will contribute to such meltdowns.

It is therefore important to understand the level of consumer financial sophistication and its drivers. This understanding can help guide consumer education and public policy initiatives. While existing academic research has effectively identified and addressed a finite range of financial decision errors, emerging forms of decision errors has largely remained unexamined. Understanding the sources of these errors, their evolutionary nature, and the vulnerabilities they present to the public is an obligation shared by regulators, educators, marketers and industry researchers. It is therefore hoped that this study has inspired additional work in this highly significant line of inquiry.
TABLE 1: Informant and Subject Demographics

<table>
<thead>
<tr>
<th>Age</th>
<th>Informants</th>
<th>Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>8.3%</td>
<td>3.0%</td>
</tr>
<tr>
<td>25-29</td>
<td>46.3%</td>
<td>26.8%</td>
</tr>
<tr>
<td>30-34</td>
<td>33.0%</td>
<td>29.1%</td>
</tr>
<tr>
<td>35-39</td>
<td>10.3%</td>
<td>11.0%</td>
</tr>
<tr>
<td>40-44</td>
<td>1.8%</td>
<td>7.4%</td>
</tr>
<tr>
<td>45-49</td>
<td>0.3%</td>
<td>8.6%</td>
</tr>
<tr>
<td>50-54</td>
<td>0.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>55-59</td>
<td>0.0%</td>
<td>2.4%</td>
</tr>
<tr>
<td>60+</td>
<td>0.0%</td>
<td>6.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Informants</th>
<th>Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>41.5%</td>
<td>48.3%</td>
</tr>
<tr>
<td>Male</td>
<td>58.5%</td>
<td>51.7%</td>
</tr>
<tr>
<td>Category</td>
<td>Category Description</td>
<td>Sample Incidents</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Bandwagon</td>
<td>Following others' decisions instead of taking the time to think for oneself</td>
<td>- Going with the common beliefs on what investments to get into</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Using advice received from friends who may not be financial professionals</td>
</tr>
<tr>
<td>Current Overspending</td>
<td>Spending too much</td>
<td>- Spending beyond one's means</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Not saving for retirement</td>
</tr>
<tr>
<td>Affect-Based Decision Making</td>
<td>Using feelings to arrive at financial decisions</td>
<td>- Investing in a stock since one believes in the company cause and not</td>
</tr>
<tr>
<td></td>
<td></td>
<td>because of the underlying financials</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Making decisions based on feelings about an ad campaign</td>
</tr>
<tr>
<td>Fees</td>
<td>Not considering the impact of fees on the financial transaction</td>
<td>- Not realizing the credit card fees associated with specific transactions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Not taking into account ATM fees when withdrawing funds from a bank account</td>
</tr>
<tr>
<td>Inertia</td>
<td>Continuing to use the same financial services provider despite it not being the best option</td>
<td>- Continuing to use the same bank despite poor customer service</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Using the same insurance company year after year despite the rates</td>
</tr>
<tr>
<td></td>
<td></td>
<td>being uncompetitive</td>
</tr>
<tr>
<td>Lapsed Judgment</td>
<td>Not being able to understand the complexity of the financial decision</td>
<td>- Not understanding the terms of a credit card</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Obtaining a mortgage without understanding the details of the financial obligations associated with the product</td>
</tr>
<tr>
<td>Consumer laze</td>
<td>Not caring enough to make a good financial decision</td>
<td>- Knowingly buying an insurance policy that you know if overpriced</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Withdrawing money from an ATM with high fees which are disclosed</td>
</tr>
<tr>
<td>Lease/buy/rent</td>
<td>Choosing to lease, buy or rent, when one of the other options is financially more sound</td>
<td>- Leasing a car when it is financially wiser to finance it</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Continuing to rent a property when it is cheaper to buy it</td>
</tr>
<tr>
<td>Risk misperceptions</td>
<td>Under estimating or over estimating probabilities</td>
<td>- Purchasing excessive amounts of insurance coverage when the risks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>are not that high</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Buying lottery tickets</td>
</tr>
<tr>
<td>Tax implications</td>
<td>Not taking into account tax benefits or tax penalties in specific forms of financial decisions</td>
<td>- Not realizing the Federal tax deductions associated with interest payments on home mortgages</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Not using tax deductible Flexible Savings Accounts (FSA) for medical expenses</td>
</tr>
<tr>
<td>Time value of money</td>
<td>Not recognizing that money today is more valuable than money tomorrow</td>
<td>- Paying off an interest free loan early</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Not taking into account interest payments associated with credit card borrowing</td>
</tr>
<tr>
<td>Excessive borrowing</td>
<td>Utilizing credit products excessively</td>
<td>- Having too much credit card debt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Getting a home equity loan to pay for a vacation</td>
</tr>
<tr>
<td>Trickery by marketers</td>
<td>Being mesmerized by the pitches in the marketplace</td>
<td>- Advertisement not disclosing all the costs of using a financial service</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Presenting prices in ways that appear attractive</td>
</tr>
<tr>
<td>Uni-dimensional decision making</td>
<td>Focusing only on a subset of attributes of the decision, and ignoring the rest</td>
<td>- Focusing only on the interest rate for a mortgage and not the additional fees associated with it</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Choosing a bank based on its convenient location</td>
</tr>
</tbody>
</table>
### TABLE 3: Frequency of Decision Error Meta-Categories

<table>
<thead>
<tr>
<th>Meta-Category</th>
<th>Decision Error Category (and % frequency)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(1) Decision Style</strong></td>
<td></td>
</tr>
<tr>
<td>Bandwagon</td>
<td>11.8%</td>
</tr>
<tr>
<td>Affect-based Decision Making</td>
<td>2.7%</td>
</tr>
<tr>
<td>Consumer Laze</td>
<td>9.3%</td>
</tr>
<tr>
<td>Uni-dimensional Decision Making</td>
<td>6.1%</td>
</tr>
<tr>
<td>Lease/Buy/Rent</td>
<td>1.3%</td>
</tr>
<tr>
<td>Lapsed Judgment</td>
<td>7.6%</td>
</tr>
<tr>
<td>Time Value of Money</td>
<td>12.7%</td>
</tr>
<tr>
<td>Risk Misperceptions</td>
<td>10.4%</td>
</tr>
<tr>
<td>Tax Implications</td>
<td>1.9%</td>
</tr>
<tr>
<td><strong>(2) Marketer-Based</strong></td>
<td></td>
</tr>
<tr>
<td>Trickery by Marketers</td>
<td>9.9%</td>
</tr>
<tr>
<td>Fees</td>
<td>9.7%</td>
</tr>
<tr>
<td><strong>(3) Careless Behavior</strong></td>
<td></td>
</tr>
<tr>
<td>Inertia</td>
<td>6.6%</td>
</tr>
<tr>
<td>Current Overspending</td>
<td>3.6%</td>
</tr>
<tr>
<td>Excessive Borrowing</td>
<td>6.3%</td>
</tr>
</tbody>
</table>
**TABLE 4: Distribution of Meta-Categories Across Time**

<table>
<thead>
<tr>
<th>Meta-category</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meta-category 1: Decision Style Errors</td>
<td>67.21%</td>
<td>59.52%</td>
<td>62.24%</td>
<td>61.27%</td>
<td>70.59%</td>
</tr>
<tr>
<td>Meta-category 2: Marketer-Based Errors</td>
<td>13.11%</td>
<td>23.81%</td>
<td>20.98%</td>
<td>22.54%</td>
<td>15.29%</td>
</tr>
<tr>
<td>Meta-category 3: Careless Behavior</td>
<td>19.67%</td>
<td>16.67%</td>
<td>16.78%</td>
<td>16.20%</td>
<td>14.12%</td>
</tr>
<tr>
<td>Total:</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>
### TABLE 5: Distribution of Decision Error Categories Pre- and Post-Crisis

<table>
<thead>
<tr>
<th>Decision Error Category</th>
<th>Pre-Crisis</th>
<th>Post-Crisis</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandwagon</td>
<td>4.92%</td>
<td>12.86%</td>
<td>p&lt;.1</td>
</tr>
<tr>
<td>Current Overspending</td>
<td>9.84</td>
<td>2.67</td>
<td>p&lt;.01</td>
</tr>
<tr>
<td>Affect-Based Decision Making</td>
<td>0.00</td>
<td>3.16</td>
<td>p=.16</td>
</tr>
<tr>
<td>Fees</td>
<td>6.56</td>
<td>10.19</td>
<td>p=.37</td>
</tr>
<tr>
<td>Inertia</td>
<td>0.00</td>
<td>7.52</td>
<td>p&lt;.05</td>
</tr>
<tr>
<td>Lapsed Judgment</td>
<td>3.28</td>
<td>8.25</td>
<td>p=.17</td>
</tr>
<tr>
<td>Consumer laze</td>
<td>13.11</td>
<td>8.74</td>
<td>p=.27</td>
</tr>
<tr>
<td>Lease/buy/rent</td>
<td>3.28</td>
<td>0.97</td>
<td>p=.13</td>
</tr>
<tr>
<td>Risk misperceptions</td>
<td>16.39</td>
<td>9.47</td>
<td>p&lt;.1</td>
</tr>
<tr>
<td>Tax implications</td>
<td>3.28</td>
<td>1.70</td>
<td>p=.39</td>
</tr>
<tr>
<td>Time value of money</td>
<td>16.39</td>
<td>12.14</td>
<td>p=.35</td>
</tr>
<tr>
<td>Excessive borrowing</td>
<td>9.84</td>
<td>5.83</td>
<td>p=.23</td>
</tr>
<tr>
<td>Trickery by marketers</td>
<td>6.56</td>
<td>10.44</td>
<td>p=.35</td>
</tr>
<tr>
<td>Uni-dimensional decision making</td>
<td>6.56</td>
<td>6.07</td>
<td>p=.88</td>
</tr>
</tbody>
</table>
FIGURE 1: Distribution of Decision Error Meta-Categories Across Financial Services Categories

Frequency percentage differences across financial services categories are significant at the p<.01 level; $\chi^2=120.2$; $\Phi=0.504$
REFERENCES


