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JUKKA LAITAMÄKI and RAIJA JÄRVINEN

The Impact of the 2008 Financial Crises on Finnish and American Households

ABSTRACT

This article compares the impact of the 2008 financial crises on family wealth and income between Finland and the United States. The crises started in the U.S. already in 2007, but in Finland during 2009 when GDP fell 8.8 percent and unemployment increased to 8.2 percent. An important difference was the increasing mean family wealth and income in Finland, while U.S. families saw their mean wealth and income decline 14.7 percent and 11.1 percent respectively between 2007 and 2010. The main reason for the decline in the U.S. family wealth was the collapse of the U.S. housing markets which left many home owners with large loans exceeding the value of their homes. Finnish families saw their wealth increase partly because the Finnish housing markets showed only a small decline in 2007 followed by a small increase in 2008. The mean U.S. family income has declined slightly every year since 2000 and the Great Recession just accelerated this decline over tenfold. The reasons for this decline include globalization and automation which have moved jobs to low-wage countries. Similar forces have also influenced Finnish family incomes, however in the U.S. the decline is bigger due to increasing healthcare costs, less powerful unions, and falling tax rates for affluent at the expense of the middle class' increasing tax rates. In spite of the differences the Finnish and the American households experienced also similarities regarding the impact of financial crises including indebtedness and savings ratios which increased in both countries as the value of assets declined and families started to save more due

JUKKA LAITAMÄKI, Ph.D. Clinical Professor
New York University • e-mail: JL142@nyu.edu
RAIJA JÄRVINEN, Ph.D., Research Professor
National Consumer Research Centre • e-mail: raija.jarvinen@ncrc.fi

to the economic uncertainties. Financial crises have continued and households in the U.S.A and Finland are still experiencing economic and financial instability.

***Keywords**: debts, financial crises, households, incomes, saving, wealth*

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1. INTRODUCTION

The 2008 financial crises have produced some of the most significant economic shocks for the global economy. The effect of these crises was first thought to be confined to the U.S. financial sector. However, due to the importance of the U.S. economy for the world economy the effects spread to several national economies. The impact on global markets emerged in August 2007, when a number of European banks announced their heavy investments in the U.S. mortgage backed securities. Due to the deterioration in confidence, the decline in housing and equity prices, and rising unemployment, households around the world made rapid re-evaluation of their spending plans, cutting back in particular on discretionary spending. As a result private consumption fell sharply (Edey, 2009).

Kamakura and Du (2012) suggest that a recession can influence consumers in two ways. First, it can reduce their disposable income, and second consumers tend to save more or pay down their debt more. Pantzar and Kytö (2010) suggest that at the beginning of a recession consumers postpone household investments like cars and boats and prefer cheaper brands. At the later part of the recession they are compelled to change their life style including cheaper housing, less travelling and leisure activities. However, majority of consumers are able to keep their living standards during the recession and afterwards.

This study conducts micro level analysis of Finnish and American households which is an important but overlooked area of financial crises research. Lehtinen (2012) points out that there is a limited amount of micro level studies, even though consumers and households are the key players in the markets and as tax payers they sometimes pay for the negative consequences of financial crises. Pihlanto (2012) suggests that the crises in the USA should be called financial crises but in the EU indebtedness crises due to their different nature. On the other hand, Jackson (2010) reports that International Monetary Fund (IMF) and the European Central Bank (ECB) claim that many of the factors leading to the financial crises in the USA created similar crises in Europe. These factors include low interest rates, credit expansion and rapid growth pushing up values of

equities, commodities and real estate. Over time, the combination of higher commodity prices and rising housing costs pinched consumers' budgets and they began reducing their spending.

This study compares the U.S.A., the leading economy in the world, and Finland which has shown more stability than other European economies during the recent crises. The study applies the comparative analysis research method proposed by Ragin (1989). This research method is considered appropriate for this type of study that first describes the economic environment leading to the crises and then compares key household financial variables across the U.S.A. and Finland. The study then discusses future household economic expectations and possible reasons for the differences in the impact of the 2008 financial crises on U.S. and Finnish households. The study concludes with limitations and implications for future research. The U.S. information is based on Federal Reserve Statistics and the Survey of Consumer Finances (SCF) panel data that was collected during 2001, 2004, 2007 and 2010. The Finnish information is based on statistics and studies provided by Statistics Finland, Bank of Finland and Federation of Finnish Financial Services. The longitudinal data across the time is inevitable in this type of research, because changes in consumption follow recession cycles.

2. ECONOMIC ENVIRONMENT

2.1 The U.S. Economic Environment 2007 through 2010

The main reason for the financial crises in 2007 was the U.S. sub-prime housing loan markets and the large increase in home construction and dwelling prices which started mid 2006 (Edey, 2009).

Families' finances are affected by their own decisions and the state of the broader economy. Between 2007–2010, the U.S. economy experienced its most substantial downturn since the Great Depression. Real gross domestic product (GDP) fell nearly 5.1 percent between the third quarter of 2007 and the second quarter of 2009 the official period of recession as determined by the National Bureau of Economic Research (Bricker et al., 2012; Shachmurove, 2011). During the same period, the unemployment rate rose from 5.0 percent to 9.5 percent, the highest level since 1983. Recovery from the so-called Great Recession has also been particularly slow; real GDP did not return to pre-recession levels until the third quarter of 2011. The unemployment rate continued to rise through the third quarter of 2009 and remained over 9.4 percent during 2010. The rate of inflation, as measured by the consumer price index for all urban consumers (CPI-U-RS), decreased somewhat over the period from an annual average of 2.8 percent in 2007 to 1.6 percent in 2010 (Bricker et al., 2012). The University of Michigan Index of Consumer Sentiment (ICS) fell from it's peak of close to 100 during the first quarter of 2007 to below 60 by the second quarter of 2009. Since then the ICS has remained between 60 and 80 and dipping below 60 once in July 2011.

Financial markets moved drastically over the three-year period. Major stock market indexes fell nearly 50 percent between September 2007 and March 2009, but about one-half of the losses in indexes such as the Dow Jones industrial average, the Standard & Poor's 500, and the Wilshire 5000 had been recouped by September 2010 (Bricker et al., 2012). Interest rates on new consumer loans generally fell; for example, the interest rate on a new 30-year fixed-rate mortgage averaged 6.38 percent in September 2007, and the average rate was 4.35 percent three years later in September 2010. Yields fell dramatically on liquid deposits, time deposits, and bonds; for example, the rate on a three-month certificate of deposit (CD) fell from an average of 5.46 percent in September 2007 to 0.28 percent in September 2010 (Bricker et al., 2012).

Housing was of greater importance than financial assets for the wealth position of most families. The national purchase-only Loan Performance Home Price Index by First American Core Logic fell 22.4 percent between September 2007 and September 2010, when house prices were 27.5 percent below the peak achieved in April 2006 (Bricker et al., 2012). Between 2007 and 2008 existing single-family home sales declined by 16.7 percent while new single-family homes sales declined even more by 37.5 percent. The declines continued through 2011 in new single-home sales while existing single-family home sales saw an increase in 2009 by 5.6 percent, followed by a decline of 4.2 percent in 2010, and slight increase of 2.1 percent in 2011. The homeownership had steadily declined in the U.S. from its peak of close to 68.5 percent during first quarter of 2007 to around 66 percent during last quarter of 2011. The decline in house prices was most rapid in the states where the housing boom had been greatest. For example, California, Nevada, Arizona, and Florida saw declines of 40 to 50 percent, while Iowa saw a decline of only about 1 percent. Homeownership rates fell over the period, in part because some families found it impossible to continue to afford their homes. By 2010, the homeownership rate was back down to a level last seen in the 2001 SCF, although that was still higher than in any previous Survey of Consumer Finances (SCF) at 1989 (Bricker et al., 2012).

The Congress and the President responded to the economic situation with several legislative measures, some of which had an immediate effect on family finances, and some of which were intended to help prevent future crises. In order to boost family after-tax-incomes, the 2001 and 2003 income tax reductions originally scheduled to expire in 2010 were extended. In addition, employee payroll taxes earmarked for Social Security were reduced. The Asset Relief Program allowed government infusion of equity into stressed financial institutions. The Dodd–Frank Wall Street Reform and Consumer Protection Act, passed in July 2010, contained prohibitions on certain lending practices and created the Consumer Financial Protection Bureau (Bricker et al., 2012; Khademian, 2011). In addition, many other proposals have been made for changes in financial regulations since the crisis started (Tropeano, 2011).

2.2. The Finnish Economic Environment 2007 through 2010

Finland among other EU member states initially viewed the 2007 financial crisis as a purely an American phenomenon. That view changed as economic activity in the EU declined in late 2008 (Jackson, 2010). Pantzar and Kytö (2010) argue that one could have noticed the crises signals, and perhaps anticipated the financial turbulence just by reading the Financial Times during the spring of 2007 or by recognizing the consumer barometer's threat of unemployment already in summer 2008. Same time consumer indebtedness reached record levels in nearly all Western societies (Hoelzl et al., 2011).

In Finland the downward trend started somewhat later than in the USA because GDP still grew 4.9 percent in 2007. However, it fell 0.2 percent in 2008 followed by an 8.8 percent decrease in 2009. The GDP grew again in 2010 by 3.3 percent. Unemployment rate was 6.9 percent in 2007, and it even improved slightly to 6.4 percent in 2008. But in 2009 the unemployment rate increased to 8.2 percent and another 0.2 percentage points in 2010. Indeed, the year 2009 was the worst for the Finnish economy, however the country started to recover already in 2010.

The inflation remained quite stable being 1.6 percent in 2007 and 1.7 percent in 2010. The only exception is year 2008, when the inflation was as high as 3.9 percent. The Bank of Finland (2012b) follows new mortgage interest rates instead of 30-year mortgage rates. In December 2007 new mortgage interest rate was close to five percent (4.94), and the highest peak was achieved in October 2008, when the rate reached 5.52 percent. In February 2009 the rate was first time below 3 percent, in January 2010 it was below 2 percent, and by the end of December 2010 it was 2.17 percent. Similarly the one month Euribor came down from 3.6 percent to 0.8 percent between 2007 and 2010 (Bank of Finland, 2012a and 2012b).

The Finnish monthly stock market index (OMX Helsinki) experienced a drastic decline in 2008 when it fell from 11627 in December 2007 to 5365 in December 2008. The index was at its lowest rate (4914) in March 2009, but recovered slightly by the end of 2009 and further in 2010 reaching 7516 in December 2010 (Bank of Finland 2012c). The economic uncertainties increased the fluctuations and instability of the index between 2008 and 2010.

Finnish housing index increased 5.5 percent in 2007, and 0.6 percent in 2008, but it fell slightly by 0.3 per cent in 2009. However, the inflation adjusted housing indexes showed 3.4 percent decrease already in 2008. The new boom started in 2010, when the index grew 12.2 points (Statistics Finland 2012a). The housing index is especially important in Finland where about 65 percent of households.[1] own their primary residence. The Helsinki metropolitan area has the most expensive housing prices in Finland, whereas the other large cities with their surroundings

1 The number of Finnish households is 1.455.073 in 2010 with an average of 2.1 persons per household (Statistics Finland 2011c)

have lower price levels. Small towns and rural areas experience either stable or negative housing prices due to the declining economic activity in their region.

Nearly 35 percent of Finnish households own some kind of secondary residence, which most often is a summer cottage by the lake without luxuries. The trend is either towards well-equipped secondary residences, so called country houses, or small renovated cottages. In addition, there are over one million forest owners in Finland, which means that every fifth Finnish citizen owns at least a couple of hectares forest. The Finnish tradition to own primary and secondary residences as well as forest has somewhat substituted investments in financial assets.

The Finnish government continued to follow its income tax reduction program until 2011. Exception was the Value Added Tax (VAT) increase starting in 2010 which was decided in the worst year of the Finnish economy in 2009. Regarding consumer protection Finland follows the European Union's consumer policy, which aims to empower consumers, enhance their welfare and effectively protect them by improving consumer safety, enhancing consumer knowledge, improving consumer regulation, securing redress, and promoting sustainable growth (European Commission, 2007 and 2012).

The recent financial crises have demonstrated how financial markets are highly interdependent with extensive links across national borders in the EU. This is forcing EU governments to work together to find mutually reinforcing and country binding solutions. However, the EU governance process gives Finland and other EU countries some discretion on how to regulate and supervise financial markets within their borders. On October 29, 2008 the European Commission released its European Framework for Action as a way to coordinate the actions of its 27 member states towards financial crisis, and on November 27, 2008 it proposed USD 256 billion Economic Recovery Plan (Jackson, 2010). In spite of these actions, by June 2009 it was evident that some of the EU countries, namely Greece, Portugal, Spain and Ireland, were grossly over-indebted (Singala and Kumar, 2012). Later these countries have been provided emergency assistance through loan packages by IMF and EC[2].

Three new European level regulatory bodies have been established: the European Banking Authority, the European Securities and Markets Authority, and the European Insurance and Occupational Pensions Authority. In addition, the Basel III capital regulations have been revised as a part of the new EU level financial regulation (Tropeano, 2011). In May 2010 European finance ministers approved a 750 billion euro rescue package for ensuring financial stability and created the European Financial Stability Facility (EFSF) (Singala and Kumar, 2012). In spite of these regulatory actions, the EU structure gives the member countries considerable latitude to formulate their own policies in response to crises (Jackson, 2010).

2 See more about European debt crises e.g. Raitio (2012)

3. CHANGES IN WEALTH, DEBT AND INCOME

3.1 Changes in Wealth in the United States

According to the Federal Reserve Board's Survey of Consumer Finances (SCF) for 2010, the changes in mean family net worth were substantially larger than changes in mean family income between 2001 and 2010. The mean net worth increased 13.1 percent between 2004 and 2007 followed by a decrease of 14.7 percent between 2007 and 2010 due to the Great Recession (see Table 1). This decline in the median was felt by all demographic groups with the exception of the highest 10 percent of the distributions of income and net worth, where changes were relatively muted (Bricker et al., 2012).

Declines in the values of financial assets were important factors; however, the decreases in mean net worth appear to have been driven most strongly by broad collapse in house prices. A substantial part of these declines can be associated with decreases in the level of unrealized capital gains on families' assets. The share of total asset of all families attributable to unrealized capital gains from real estate, businesses, stocks or mutual funds fell 11.6 percentage points to 24.5 percent in 2010 (Bricker et al., 2012). Although the overall level of debt owed by families was basically unchanged, debt as percentage of assets rose because the value of the underlying assets (especially housing) decreased faster. The total debt payments relative to total income increased only slightly, and the median of payments relative to income among families with debt actually fell after having risen between 2004 and 2007. The share of families with high payments relative to their incomes also fell after rising substantially between 2001 and 2007 (Bricker et al., 2012).

Although mean financial assets declined from 2007 to 2010, financial assets as a share of total assets rose 3.9 percentage points (see Table 2). The share of financial assets in total assets had fallen 8.2 percentage points between 2001 and 2007. The relative shares of various financial assets also shifted. The decline in the percentage share of directly held stock was mostly offset by increases in the shares of transaction and retirement accounts. The share of financial assets held

TABLE 1. Changes in the Mean U.S. Family Net Worth between 2001 and 2010

Mean (Thousands)					**Mean change: Percent of USD**			
	2001	**2004**	**2007**	**2010**	**2001**	**2004**	**2007**	**2010**
All families	**$487.0**	**$517.1**	**$584.6**	**$498.8**	**-**	**+6.2%**	**+13.1%**	**-14.7%**
	549.7e	**379.0e**	**396.9e**	**376.4e**	**$=USD**	**e=euros**		

Source: Survey of Consumer Finances 2010, The Federal Reserve Board

in retirement accounts has nearly doubled since 1989, and as of 2010, it stood at 38.1 percent of families' financial assets (Bricker et al., 2012).

Family holdings of various financial assets as a percentage of households declined across the categories between 2007 and 2010. The only exceptions were transaction accounts and bonds that remained about the same percentage levels (see Table 3).

TABLE 2. Value of Financial Assets of All U.S. Families, Distributed by Type of Asset, 2001–2010 (percent)

Type of financial asset	2001	2004	2007	2010
Transaction accounts	11.4	13.1	10.9	13.3
Certificates of deposit	3.1	3.7	4.0	3.9
Savings bonds	0.7	0.5	0.4	0.3
Bonds	4.5	5.3	4.1	4.4
Stocks	21.5	17.5	17.8	14.0
Pooled investment funds (excluding Money market funds)	12.1	14.6	15.8	15.0
Retirement accounts	29.0	32.4	35.1	38.1
Cash value life insurance	5.3	2.9	3.2	2.5
Other managed assets	10.5	7.9	6.5	6.2
Other	1.9	2.1	2.1	2.3
Total	100	100	100	100
Memo:				
Financial assets as a share of total assets	42.2	35.8	34.0	37.9

Source: Survey of Consumer Finances 2010, The Federal Reserve Board

TABLE 3. ***U.S. Family Holdings of Financial Assets, by Type of Asset 2007 and 2010 (percent of families holding assets)***

Type of financial asset	2007	2010
Transaction accounts	92.1	92.5
Certificates of deposit	16.1	12.2
Savings bonds	14.9	12.0
Bonds	1.6	1.6
Stocks	17.9	15.1
Pooled investment funds (excluding Money market funds)	11.4	8.7
Retirement accounts	53.0	50.4
Cash value life insurance	23.0	19.7
Other managed assets	5.8	5.7
Other	9.3	8.0
Any financial asset	9.39	9.40

Source: Survey of Consumer Finances 2010, The Federal Reserve Board

3.2 Changes in Wealth in Finland

The mean Finnish family net worth is less than half of the mean of the U.S. households. The mean family net worth continued to increase in Finland after 2007 while the mean net worth was already decreasing in the USA. Table 4 shows how the mean Finnish family wealth increased by 14 percent between 2004 and 2009 (Statistics Finland, 2011e).

In Finland households tend to keep their money in transaction accounts, certificates of deposits, stocks, non-traded shares and life insurance (see Table 5). Between 2007 and 2010 certificates of deposits was the only type of financial asset that saw an increase from 9.9 percent to 15.8 percent which reflected the increasing conservatism of Finnish families. Transaction accounts saw the most declines from 21.3 percent to 18.1 percent followed by shares in investment funds which declined from 8.9 percent to 6.5 percent. The rest of the financial asset types saw either slight increases or decreases (Statistics Finland, 2011e).

TABLE 4. Changes in the Mean Finnish Family Net Worth Between 2004 and 2009[3]

	Mean (Thousands)		Mean change: Percent of Euros	
	2004	2009	2004	2009
All families	137.4e	156.7e	-	+14.0 %
	$187.5	$224.6		
			$=USD e=euros	

Source: Statistics Finland, 2011e

TABLE 5. Value of Financial Assets of Finnish Families Distributed by the Type of Asset 2001–2010

Type of financial asset	2001	2004	2007	2010
Cash	1.0	1.2	1.5	1.8
Transaction accounts	25.4	25.1	21.3	18.1
Certificates of deposit	8.0	6.4	9.9	15.8
Bonds	1.5	1.6	1.7	2.8
Stocks	14.2	11.8	13.4	13.2
Non-traded shares	20.8	23.2	19.7	19.8
Shares in investment funds	4.0	5.7	8.9	6.5
Cash value life insurance	20.1	21.4	20.9	19.6
Derivatives	0	0.1	0.1	0.0
Loans to others	0.3	0.4	0.1	0.0
Other	4.1	3.1	2.5	2.4
Total assets	100	100	100	100

Source: Statistics Finland, 2011e

3 Statistics Finland provides wealth data every five years

The percentage of Finns with savings and investments increased from 52 percent in 2007 to 56 percent in 2010. Also the percentage of Finnish households saving increased from 27 percent in 2001 to 46 percent in 2004 (Federation of Finnish Financial Services, 2011).

Table 6 illustrates the percentage of Finnish households' holdings by the type of asset showing that the majority of households rely on less risky assets like certificates of deposits and transaction accounts with slight increase in stock ownership (Statistics Finland, 2011e). Between June 2007 and December 2008 the number of monthly net-transactions in Finnish investment funds declined. Since that time the monthly net-transactions have remained positive with a few exceptions such as May 2010. Also, the number of people owning stock in Finland increased from 713 000 in March 2007 to 780 000 in September of 2010 (Federation of Finnish Financial Services, 2011).

Keloharju et al. (2012) studied mutual fund and stock ownership in Finland and found that stock and fund owners are two separate groups. Only five percent of the population own both stocks and mutual funds. The size of the portfolios was only a couple of thousand euros, and the average stock portfolio contained three stocks, and the average fund portfolio two funds.

In spite of cautious investment policies there are many Finnish households that suffered from the financial crisis and lost their investment capital partly or totally during the years of 2008 and 2009. These unfortunate cases resulted in a peak in arbitrations and complaints towards Finnish banks, but as soon as markets improved the number of cases stabilized to pre-crisis levels (www.fine.fi, 2012).

TABLE 6. Finnish Family Savings Across Financial Asset Types Between 2007 and 2010 (percent of families holding assets).

Type of financial asset	2007	2008	2009	2010
Savings accounts and certificate of deposits	25	31	34	34
Transactions accounts	22	27	26	27
Mutual funds	17	19	17	18
Stocks	12	12	13	15
Retirement insurance accounts	9	10	9	9
Savings and investment insurance funds	6	6	6	8

Source: Statistics Finland, 2011e

3.3. Changes in Total Debt and Savings in the United States

Between 2007 and 2010 the share of families with any type of debt decreased 2.1 percentage points to 74.9 percent, reversing an increasing trend that had taken place since 2001. The majority of the family debt was used for the purchase of a primary residence. Between 2001 and 2010 the share of the primary residence debt decreased slightly from 75.2 to 74.1 percent (see Table 7). However, during this time period there was an increase in balances owed on residential real estate other than the primary residence.

The debt as a percentage of family income increased from 112.0 index to 116.4 index in 2010 (see Table 8). The aggregate and median debt payments to family income also increased from 12.9 percent to 14.7 percent and from 16.7 percent to 18.1 percent respectively (Bricker et al., 2012). The U.S. personal savings rate increased due to the Great Recession to 5.1 when U.S. consumers started to save more for rainy days (see Table 8).

TABLE 7. Amount of Debt of U.S. Families, Distributed by Type of Debt, 2001-2010 Percent Tab Amount of debt of all families, distributed by type of debt, 2001–10 surveys Percent

Type of debt	2001	2004	2007	2010
Secured by residential property				
Primary residence	75.2	75.2	74.7	74.1
Other	6.2	8.5	10.1	9.8
Lines of credit not secured by residential				
Property	0.5	0.7	0.4	1.0
Installment loans	12.3	11.0	10.2	11.1
Credit card balances	3.4	3.0	3.5	2.9
Other	2.3	1.6	1.1	1.1

Source: Survey of Consumer Finances 2010, The Federal Reserve Board

TABLE 8. Indebtedness and Savings Ratios of the U.S. Families 2001-2010

	2001	2004	2007	2010
Debt as a percentage of family income	112.0	115.0	114.8	116.4
Savings ratio	+2.7	+3.6	+2.4	+5.1

Source: Survey of Consumer Finances 2010, The Federal Reserve Board

The percentage of U.S. families that saved decreased between 2001 and 2004 from 59.2 percent to 56.1 percent. There was a slight increase to 56.4 percent in 2007; however the Great Recession reduced the percentage of families saving down to 52.0 percent in 2010 (Bricker et al., 2012). The motivation to save also changed between 2001 and 2010 (see Table 9). In 2001 retirement was the most important category (32.1 percent) followed by liquidity (31.2 percent). In 2010, liquidity was the most important reason to save (35.2 percent), and retirement declined to 30.1 percent in 2010. Saving for education also declined when 8.2 percent of families reported it as their primary motive, down from 10.9 percent in 2001. The frequency of reporting saving for purchases rose from 9.5 percent in 2001 to 11.5 percent in 2010. Buying own home declined in importance from 4.2 percent in 2001 to 3.2 percent in 2010. Finally, the percentage of non-saving families also declined from 4.9 percent in 2001 to 3.6 percent in 2010.

3.4. Changes in Total Debt and Savings in Finland

The number of Finnish families with residential property related debt has increased from 23 percent in 2001 to 28 percent in 2010 (see Table 10). The peak of 31 percent was achieved in 2007 before the worst year of the Finnish economy which occurred in 2009. Consumer credit has stayed around 30 percent and student loans have declined from 11 percent in 2001 to five percent in 2010. In 2010 the total amount of Finnish household debt was divided between primary residence

TABLE 9. Reasons U.S. respondents gave as most important for their families' saving, distributed by type of reason, 2001-2010 surveys (percent).

Type of reason	2001	2004	2007	2010
Education	10.9	11.6	8.4	8.2
For the family	5.1	4.7	5.5	5.7
Buying own home	4.2	5.0	4.2	3.2
Purchases	9.5	7.7	10.0	11.5
Retirement	32.1	34.7	34.0	30.1
Liquidity	31.2	30.0	32.0	35.2
Investments	1.0	1.5	1.6	1.2
No particular reason	1.1	0.7	1.1	1.4
When asked for a reason, reported do not save	4.9	4.0	3.3	3.5
Total	100	100	100	100

Source: Survey of Consumer Finances 2010, The Federal Reserve Board

loans (73.6 %), consumer credit card loans (12.1 %), and other loans (14.3 %). A total of 32 percent of Finnish consumers had consumer credit card loans in 2007, but it declined to 28 percent by 2009 (Federation of Finnish Financial Services, 2011). The average level of primary residence loan increased from 65 300 euros per household in 2007 to 81 800 euros in 2010, and to 82 000 euros in 2011. One reason for the rising indebtedness was low mortgage interest rates which averaged five percent in 2007, four percent in 2008, and two percent in 2009. The interest rates of Finnish primary residence loans were mostly tied to Euribor in 2007, but only less than half were tied to Euribor in 2008. However, by the end of 2009 over 80 percent of lenders had returned to Euribor (Federation of Finnish Financial Services, 2012). The average payback time for primary residence loans has increased from 11 years in 1998 to 18 years in 2007 and to 19 years in 2009 (Federation of Finnish Financial Services, 2011).

Between 2001 and 2010 the household indebtedness ratio nearly doubled. During the same time period the savings ratio in Finland varied from slightly positive to slightly negative. As a result of increasing number of loans, more Finnish families face problems paying back their mortgages and credit card loans. Along with the crisis Finns started to save more (Table 11) which suggested that they were preparing for the uncertain future in economic sense. Yet, during the summer 2012 the Bank of Finland was concerned of the increasing number over-leveraged families in Finland.

TABLE 10: Percentage of Finnish Families Having Certain Types of Loans

Type of dept	2001	2004	2007	2010
Secured by residential property	23	28	31	28
Consumer credit	30	34	32	30
Student and other loans	11	6	6	5

Source: Federation of Finnish Financial Services, 2011

TABLE 11: Savings and Indebtedness Ratios in Finland 2001-2010

	2001	2004	2007	2010
Debt as a percentage of family income	66.8	79.1	108.0	119.0
Savings ratio	-1.2	+2.2	-1.1	+4.1

Source: Federation of Finnish Financial Services, 2011 and 2012; Statistics Finland, 2011b and 2011d

Finnish households save mainly for rainy days followed by saving for investments followed by the primary residence and retirement (Table 12). Finland has a mandatory pension system that all of work force must participate. By 2045 the average pension level will decrease to 45 percent of the earned income due to the 2005 pension reform (Risku et al., 2011). Therefore, it will be important for Finns to have extra savings for retirement in the future.

3.5. Changes in Income in the United States

Between 2001 and 2010 the median household income (in 2010 dollars) declined from $48,900 to $45,800, resulting in the median declining by 6.3 percent (see Table 13). Between 2001 and 2004 the median household income declined only slightly, however due to the Great Recession the decline increased to negative 7.7 percent. Individual level median income followed the same pattern; however the decline between 2007 and 2010 was negative 9.4 percent because the average household size increased from 2.59 persons in 2007 to 2.63 persons in 2010 while median family income fell. This decline in median income was widespread across demographic groups, with only a few groups experiencing stable or rising incomes such as retirees and non-working families (Bricker et al., 2012).

Between 2001 and 2010 the mean household income (in 2010 dollars) declined from $83,300 to $78,500 for families surveyed in the SCF panels, resulting in the mean percent change of negative 5.8 percent. Between 2001 and 2004 the mean household income declined only slightly, and it actually increased by 8.5 percent between 2004 and 2007. However, due to the Great Recession there was a significant decline of negative 12.6 percent. Individual level mean income followed the same pattern; however the decline between 2007 and 2010 was negative 12.6 percent because the average household size increased from 2.59 in 2007 to 2.63 in 2010 while median family income fell. The decline in mean household income was even more wi-

TABLE 12. Reasons for Savings and Investments in Finland 2009–2010

	2009	2010
For rainy days	54	56
Investments	23	28
Retirement	19	24
Primary residence	15	17
Inheritance	6	10
Vacation	4	3
Home renovation	3	2
Education	2	1

Source: Federation of Finnish Financial Services, 2011

TABLE 13. Changes in Median and Mean U.S. Family Income Between 2001 and 2010

	Median (Thousands)				Median change: Percent of USD			
	2001	**2004**	**2007**	**2010**	**2001**	**2004**	**2007**	**2010**
All families	**$48.9**	**$49.8**	**$49.6**	**$45.8**	**–**	**+1.8%**	**-0.04%**	**-7.7%**
	55.2e	**36.5e**	**33.7e**	**34.6e**				
Per person*	**$18.9**	**$19.2**	**$19.2**	**$17.4**	**–**	**+1.6%**	**+/-0.0%**	**-9.4%**
	21.3e	**14.1e**	**13.0e**	**13.1e**	**$=USD e=euros**			
	Mean (Thousands)				**Mean change: Percent of USD**			
	2001	**2004**	**2007**	**2010**	**2001**	**2004**	**2007**	**2010**
All families	**$83.3**	**$81.4**	**$88.3**	**$78.5**	**–**	**-2.3%**	**+8.5%**	**-11.1%**
	94.0e	**59.7e**	**60.0e**	**59.2e**				
Per person*	**$32.1**	**$31.4**	**$34.1**	**$29.8**	**–**	**-2.2%**	**+8.6%**	**-12.6%**
	36.2e	**23.0e**	**23.2e**	**22.5e**	**$=USD e=euros**			

***) based on average U.S. household size of 2.59 in 2001–2007 and 2.63 in 2010**
Source: Survey of Consumer Finances 2010, The Federal Reserve Board

despread than the decline in median income, with all demographic groups experiencing a decline between 2007 and 2010 (Bricker et al., 2012).

Median household income has declined in the U.S., and in 2011 it was eight percent lower than at its peak in 2000 based on inflation adjusted numbers. The main reasons for the decline are globalization and automation which move jobs to low-wage countries and replaces human labor with new technologies respectively (The New York Times, October 24, 2012). This decline is not due to higher taxation as federal taxes equaled to 15.4 percent of GDP in 2011, down from 20.6 percent in 2000. The declining middle class income is partly attributable to rising healthcare costs, less powerful labor unions, and falling tax rates for the affluent at the expense of the middle class. The income gap has widened between non-college and college educated whose unemployment rate is about half of the nation at 4.1 percent. Interestingly the studies suggest that illegal immigration has not lowered the median income, neither has the growth of the minimum wage increased it (The New York Times, 24/10/2012).

TABLE 14: Changes in Median and Mean Finnish Family Income between 2001 and 2010

	Median (Thousands)				Median change: Percent of Euros			
	2001	2004	2007	2010	2001	2004	2007	2010
All families	27.6e	29.9e	31.6e	33.4e	-	+8.3	+5.7	+5.7
	$24.5	$40.8	$46.5	$44.3				
Per person*	12.8e	14.0e	15.0e	16.1e	-	+9.4	+7.1	+7.3
	$11.3	$19.1	$22.1	$21.3	$=USD e=euros			
	Mean (Thousands)				Mean change: Percent of Euros			
	2001	2004	2007	2010	2001	2004	2007	2010
All families	32.8e	36.4e	38.7e	40.1e	-	+11.0	+6.3	+3.6
	$29.1	$49.7	$57.0	$53.1				
Per person*	15.3e	17.0e	18.4e	19.3e	-	+11.1	+8.2	+4.9
	$14.0	$23.2	$27.1	$25.6	$=USD e=euros			

*Based on average household size in Finland; 2001=2.15; 2004=2.14; 2007=2.10; 2010=2.08
Source: Statistics Finland 2011c, 2012b and 2012c

3.6. Changes in Income in Finland

In Finland the mean and median disposable incomes have steadily increased between 2001 and 2010 (see Table 14). The total increase between 2001 and 2010 was 21.0 percent in the median income, and 22.2 percent in the mean income. During the same time the average family size has slowly decreased, which has increased per person income even more. The reasons for net income increases are wage increases and tax cuts (Raijas and Kangassalo, 2010). Since the recession the income gap has widened in Finland due to the increase in low paying part-time and temporarily jobs.

4. FUTURE EXPECTATIONS

4.1. Future Expectations in the United States

Longer-term economic consequences of the most recent recession depend, in part, on the extent to which the downturn and financial crises led to changes in families' expectations and behavior. The University of Michigan Index of Consumer Sentiment (ICS) fell from it's peak of close to 100 during the first quarter of 2007 to below 60 by the second quarter of 2009. Since then the ICS has remained between 60 and 80 and dipping below 60 once in July 2011.

The Survey of Consumer Finances ((SCF) data from 2007 and 2009 suggested a shift toward caution: most families – especially those whose position in the wealth distribution improved – reported a desire for less risk and for higher reserve savings. Further, in most cases, heads of households that were working full-time planned on extending their working lives (Bricker et al., 2012).

The SCF panel asked how much savings families needed for emergencies and other contingencies – a measure of desired savings for precautionary purposes (Kennickell and Lusardi, 2004). Families' desired level of precautionary savings tends to increase over wealth groups (Bucks, et al., 2009). Most families in each of the relative wealth change categories reported greater desired precautionary savings in 2009 than they had in 2007, as might be expected if families generally believed they were exposed to a higher level of risk than they were previously. Nonetheless, a substantial minority of families reported either no change or a decrease in their precautionary savings in 2009. An analysis of families' reported willingness to take financial risk in investing and saving suggests that the recession and other economic developments may have led families to become more cautious. Working families that experienced negative wealth shocks from 2007 to 2009 might be expected to plan to work longer to recoup savings for retirement, and others might plan to work longer to hedge against future uncertainties (Bricker et al., 2012).

Survey of Consumer Finances (SCF) respondents in 2007 and 2009 were asked about their expectations for the state of the economy over the next five years relative to the last five years – specifically, if they expected the economy would be worse, better, or about the same. Across the wealth-change groups, there was greater optimism for all groups in 2009 regarding the five-year economic outlook (Bricker et al., 2012). In 2009 the respondents were also asked whether they thought the economy next year would be "better than now." The outlook over the year following the 2009 interview was less optimistic, and it was similar to the five-year outlook from 2007. The most common concern among families' future financial challenges was maintaining income or employment. Portfolio management was also a key challenge for the groups with the largest positive or negative changes in their relative wealth position (Bricker et al., 2012).

4.2. Future Expectations in Finland

Statistics Finland conducts the consumer survey every month which includes consumers' future expectations for 12 months ahead. The overall Consumer Confidence Indicator (CCI) measures consumers' assessments of their own economy, Finland's economy, unemployment rate and their own saving possibilities during the next 12 months. At the end of 2009 and 2010 the CCI was positive 14 but during 2011 consumer pessimism increased again, and the CCI declined close to zero and remained at the low level during the first half of 2012 (Statistics Finland, 2009; 2010; 2011a). This suggests that households first seemed to recover from the year 2008 and their optimism increased to previous levels, but then their confidence collapsed again during 2011.

Financial crisis have affected Finnish households and their attitudes towards their own household economy and Finland's economy negatively. The consumer confidence in the Finnish economy declined from 0 to negative between January 2008 and December 2009. The confidence turned positive during 2010, but declined again close to 0 during 2011. The consumer confidence in their own household economy declined during 2009 close to zero. Since 2010 the confidence increased to positive 10 and remained there throughout 2011 (Statistics Finland, 2008; 2009; 2010; 2011a). However, the optimism has grown as soon as there has been positive news regarding the economy in Finland and in the other European Union countries. However, Finnish consumers' belief on their future household economy has remained strong. The percentage of consumers that expect their own economy to improve during the next 12 months began to increase in 2009 reaching 29 percent in 2010. During 2011 the belief of one's own economy started to decrease again. (Statistics Finland, 2009; 2010; 2011a) However, the share of consumers expecting their own economy to turn worse has remained at low level. It can be concluded that in spite of serious threats in the economies of Greece, Portugal, Italy, Ireland and Spain, Finnish households have somehow managed to keep their positive attitude regarding their own future.

Households' intentions to take loans have been stable; the amount of families with loan plans varied between 11 and 15.5 per cent. Car purchases were being planned between 14 and 18 percent of families. Primary residence purchases were planning around seven percent except in 2010, when nearly ten percent of households planned to purchase a new home. Consumers' expectations of Finish economy are linked to the whole euro zone financial news. In 2011 and 2012 when the euro crisis had already emerged, the Finnish economic activity had also started to decline. The negative mood affected also consumer savings when less than 50 percent of Finnish households had intensions to save in 2010-2012. According to the study of Federation of Finnish Financial Services (2012), Finnish households prepared for future financial crises by saving more (60 percent of respondents) and by buying more insurance (10 percent of respondents). Raijas and Kangassalo (2010) have studied consumer confidence indicator's links to macro economic cycles between mid-1990 and 2010. Their study shows that Finnish households are capable of estimating and anticipating future economic development. In addition, national economic policies have influenced consumer sentiments which are later seen in consumer behavior. For example changes in interest rates seem to affect consumers without delay.

The consumer perception index (of 100) regarding the appropriate time for taking a loan decreased from a positive 35 in 2006 to a negative 48 by mid-2009. By the end of 2010 the consumer confidence for taking a loan had increased but declined again during 2011. At the same time the confidence for saving first increased, then declined by the end of 2010 but increased again by the end of 2011. In 2009 Finnish households were hoping to increase consumption and luxury product purchases less than previous years (Sarpila and Haanpää, 2010).

Unfavorable economic trends influence household behavior towards financial risks. Table 15 illustrates the main criteria for selecting savings and investments based on a survey by the Federation of Finnish Financial Services (2011), and it shows that in this respect there are only minor changes between 2007 and 2010. Safety and low risk continue to be the most important investment criteria, but even their importance has lowered slightly due to the financial crisis. Interestingly, the importance of return has decreased between 2007 and 2010. Obviously, one reason for this is the exceptionally low Euribor rate and the stock market index (OMX Helsinki) which has stayed below the prerecession level. Therefore, it has been difficult to earn proper return for financial investments.

Finnish pension reform came into effect January 2005. Since then the actual retirement age has increased steadily and pensions based on unemployment have been withdrawn. The reform aimed to motivate and support people with vocational rehabilitation to return to work. The results have been somewhat encouraging when half of those with vocational rehabilitation were employed five years later, but more support, counseling and co-operation are still required (Gould et al., 2012). The average retirement age in Finland was 60.5 years in 2011, the increase from the previous year was 0.1 years, and the increase from the reform year 2005 was 1.5 years (www.etk.fi, 2012). Although Finnish government supports longer careers and disability prevention, only 35 percent of Finnish people consider current pension system fair, and over 67 percent see that regular changes in pension system decrease trust towards it (Kahma and Takala, 2012). According to OECD Finland's pension assets totaled about 150 billion euros, or 75 percent of GDP, in 2012 (The Wall Street Journal, 2012).

TABLE 15. The Main Criteria* for Selecting Savings and Investments in Finland 2007–2010

	2007	2008	2009	2010
Safety	74	76	72	72
Low risk	-	62	60	60
Return	51	51	44	44
Ethical and responsible	-	-	-	30
Ecological	-	-	-	26
Preparation for retirement	28	28	29	28

Source: Federation of Finnish Financial Services, 2011. n=2394. Respondents who answered " a lot" versus "somewhat"; "not at all"; or "don't know" to a question "How much do following criteria influence your selection of savings and investments?"

5. DIFFERENCES IN THE IMPACT OF FINANCIAL CRISES ON FINNISH AND AMERICAN HOUSEHOLDS

This study revealed several interesting differences between Finnish and American households regarding the impact of financial crises on family wealth and income. First, the crises started earlier in the U.S. which saw major declines between third quarter of 2007 and the second quarter of 2009 when GDP fell five percent and unemployment increased from five percent to 9.5 percent. In Finland the main impact was felt during 2009 when GDP fell 8.8 percent and unemployment increased from 6.4 percent to 8.2 percent. During this time period U.S. major stock markets indexes fell over 50 percent while Finland saw similar declines in the OMX Helsinki index which fell 46 percent.

The second important difference was the limited impact of financial crisis on family wealth. Finnish family wealth increased from 2004 to 2009 by 14 percent when U.S. families saw their wealth decline by 15 percent between 2007 and 2010. In spite of the above, in Finland the average household wealth remained still less than half of the average U.S. household wealth. There are no Finnish family wealth statistics available for 2007 and 2010 which may have shown small declines. However, Finnish housing indexes did not indicate U.S. type large decreases, but instead the small decline was followed by increases in 2007 and 2008. The reason for these differences in housing prices can partly be explained by the U.S. mortgage crisis which left many home owners with large loans exceeding the value of their homes.

U.S. unemployment spells are also associated with wealth declines, whether because of the necessity of dissaving or because cumulated late payments might have caused the loss of an asset, such as a home, through foreclosure (Bricker et al., 2012). Although continued saving might also account for some marginal differences, it appears that the major shifts were driven by revaluation of assets. As expected, changes in the values of principal residences and of stock and businesses equity appear to have played a substantial part in explaining the observed changes in wealth. Shifts in leverage that took place over the period are largely explained by the general decline in the value of assets (Bricker et al., 2012).

In Finland the non-financial assets have kept their value quite well, and this trend has continued even after 2009. About 65 percent of the Finnish households own their residence, and in most cases it is their main source of wealth. Finland did not experience a U.S. type home mortgage crisis which explains why Finnish family wealth did not decline as much because house prices were holding. The other interesting aspect of Finnish society is the ‘summer cottage culture’ meaning that Finnish consumers own over 500 000 summer cottages around the country. The third important non-financial asset is the ownerships of forests.

The third main difference was the impact of financial crises on family incomes. Between 2007 and 2010 the U.S. families saw their median and mean incomes decline by 7.7 percent and 11.1 percent respectively. Between 2007 and 2010 the opposite was true for the Finnish families which saw their median and mean incomes to increase by 5.7 percent and 3.6 percent respectively despite of high unemployment rate. These differences can partly be explained by the U.S. trend of declining median inflation-adjusted family incomes which have started to decline since 2000 with only modest increases between 2005 and 2007, followed by continued decline since 2008. The mean U.S. family income has declined slightly since 2000 and the Great Recession just accelerated this decline over tenfold. The reasons for this decline include globalization and automation which have moved jobs to low-wage countries. Similar forces have also influenced Finnish family incomes, however in the U.S. the decline is bigger due to increasing healthcare costs, less powerful unions, and falling tax rates for affluent at the expense of the middle class.

The fourth difference was the U.S. inflation which declined from 2.8 percent to 1.6 percent while in Finland inflation remained mostly stable around 1.6 percent.

The impact of the financial crises on other economic indicators was quite similar between the two countries. Savings ratios between 2007 and 2010 increased in both countries. During the same time period debt as a percentage of family income increased slightly less in the U.S. than in Finland. Chiriacescu et al. (2012) suggest that the degree of indebtedness impacts on defaults on bank loans together with unemployment, exchange rates, industrial production and interest rates. In addition, mortgage and deposit interest rates reached exceptionally low levels.

Edey (2009) indicated that increase in family savings may act in as a brake on reviving the economy in the short run. According to the Survey of Consumer Finances, a large proportion of U.S. families in all wealth groups and across the range of changes in wealth, expressed the need for greater precautionary savings. In general, compared with families with relative losses, the families with relative gains appeared more pessimistic and cautious before the crisis, and in the 2009 survey they remained cautious even though their wealth had increased. Overall, it appeared that families may be relatively reluctant to spend more when asset prices rise and may more readily reduce spending when asset prices fall (Bricker et al., 2012).

Yet financial markets have caused problems also in Finland and many households have experienced losses. Especially the fall of Nokia's stock has impacted strongly Finnish financial markets in both individual and national level, and Nokia's downturn has affected its Finnish subcontractors. Problems in Finnish financial markets are partly the consequence of turbulent European economies such as Greece, Portugal, Spain, Italy and Ireland. Finns are quite conservative when it comes to taking debt and there is a long tradition to pay back loans. Finns are proud that during the Depression, Finland was the only European country to honor fully debts incurred to

the U.S. during and after World War I (The Wall Street Journal 2012). Also Finns still remember the relatively brief but deep recession after the 1990's banking crisis.

6. DISCUSSION

Recovery from the financial crisis has been slow and complicated. In 2011 there were more than 24 million Americans out of work because they could not find full time work. About four million families had lost their homes to foreclosure, and millions more had slipped into the foreclosure process or were seriously behind on their mortgage payments. Nearly $9 trillion in household wealth had vanished, and the country still suffers from serious debt problems at the household and national level. The U.S. government debt and over one trillion of U.S. securities is owned primarily by China and other foreign countries and entities (Khademian, 2011).

Singala and Kumar (2012) summarize Europe's core problems as the lack of economic growth coupled with high wages, large subsidies, complex regulations and high taxes. Other concerns include an aging population, increasing unemployment and growing globalization. Finland suffers from the same problems but in a somewhat smaller scale. The ECB provided large quantities of reserves through routine short and long term open market operations. Various governments, through their central banks, injected funds directly into banks and other financial firms (Jackson, 2010), and the European Stability Mechanism (ESM) was established in July 2011 (Singala and Kumar, 2012). In spite of all these actions to recover European economies, at the beginning of 2012 S&P downgraded the long-term government debt of nine European countries including France, Italy and Spain (Singala and Kumar, 2012). So far, Finland has survived better than most Eurozone countries and has managed to keep its triple A grading.

The European Commission has further plans to strengthen the current rules concerning unfair practices in the financial services. The Commission pays close attention to increasing problems with households' over-indebtedness and retail banking service fees. There are also plans to adopt legislative proposal on packaged retail investment products (European Commission, 2012). According to the European Central Bank, retail banking services still remain segmented along national lines as a result of differences in national tax laws, costs of national registration and compliance, and cultural preferences (Jackson, 2010).

The study of Kamakura and Du (2012) suggests that there is a link between household economy and macro-level economic conditions. This study suggests that the household financial decisions are influenced by broader social context and macro-level economic conditions. It confirms the link between macro-level economy and household economy. It also shows that the saving rates seem to be higher during recessions than during economic booms. However, consumers financial behavior is strongly influenced by their own economic reality and their future ex-

pectations. After all consumers seek information about macro economic climate but suffer from information biases. Therefore, their financial assessments and decisions are formed by a mix of limited information, experience, feelings and ideas (Raijas and Kangassalo 2010).

Household saving and borrowing habits influence their other economic behavior. Loibl et al. (2011) argue that saving habits are commonly related to highly conscious and deliberate financial decisions. For most people these saving habits are formed over a long period of time, whereas loan habits are not self-evident. Consumers know the size of installments, but the majority of them seem to be unaware of the interest rates they pay (Berthoud and Kempson, 1992). The household behavior is dependent on family wealth, and mental budgeting is more common with less wealthy families (Antonides et al., 2011). Finally, consumers are not often able to accurately understand and use financial products (Hoelzl et al., 2011).

Knupfer (2011) suggests that in many countries the financial crises have led to consumers' unwillingness to invest in private financial instruments. The main reason is lack of trust, for example in the USA only 15 percent of consumers trust in stock markets. Knupfer (2011) and Karila (2012) suggest that Finnish consumers are unwilling to take financial risks due to their political and cultural ideologies. However, this study suggests that safety and low risk are more important criteria in household investments in Finland. Trust is considered to be an important factor for financial markets to function properly. During the economic recession consumer trust on financial markets has been tested regularly, and it seems that trust has not yet recovered completely. On the other hand, Pihlanto (2012) argues that the distrust and greed took over the financial markets and resulted in the financial and economic crises.

Finally, the crises have underscored the growing interdependence between financial markets and the U.S and European economies (Jackson, 2010). Jackson (2010) suggests that due to the financial interdependence between the USA and the EU they share common concern over the global impact of the financial crisis and the economic downturn. This interdependence is also a serious matter across the national borders in the EU. Therefore, Finland and the USA share mutual interests in solving financial crises. This interdependence raises four critical questions: Are some financial institutions too big to fail? Who should supervise these too big-to-fail financial institutions? Who should rescue them? What is the impact of these possible rescues and insolvencies on household economies? (Jackson 2010)

The European debt crisis is far from over and nobody knows how long it lasts and what kind of new problems will arise (Singala and Kumar, 2012).

This study follows the traditions of comparative analysis (Ragin, 1989). It has some limitations due to the availability of directly comparable data because Finland follows the Eurostat system while the USA has its own statistical standards. The future studies could address this data issue as well as compare other European economies to the U.S. and Finland. An important area of

future research is behavioral finance as it relates to households during and after the financial crises. Future studies could explore the differences between U.S. and Finnish consumer behavior during financial crises based on behavioral finance concepts such as the Prospect Theory.

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