



*Federal Reserve System*  
*Community Development Research Conference*

---

# Why Did Young Families Lose So Much Wealth During the Crisis? The Role of Homeownership

April 11, 2013

William R. Emmons and Bryan J. Noeth  
Federal Reserve Bank of St. Louis

These comments do not necessarily represent the views of the Federal Reserve Bank of St. Louis or the Federal Reserve System.



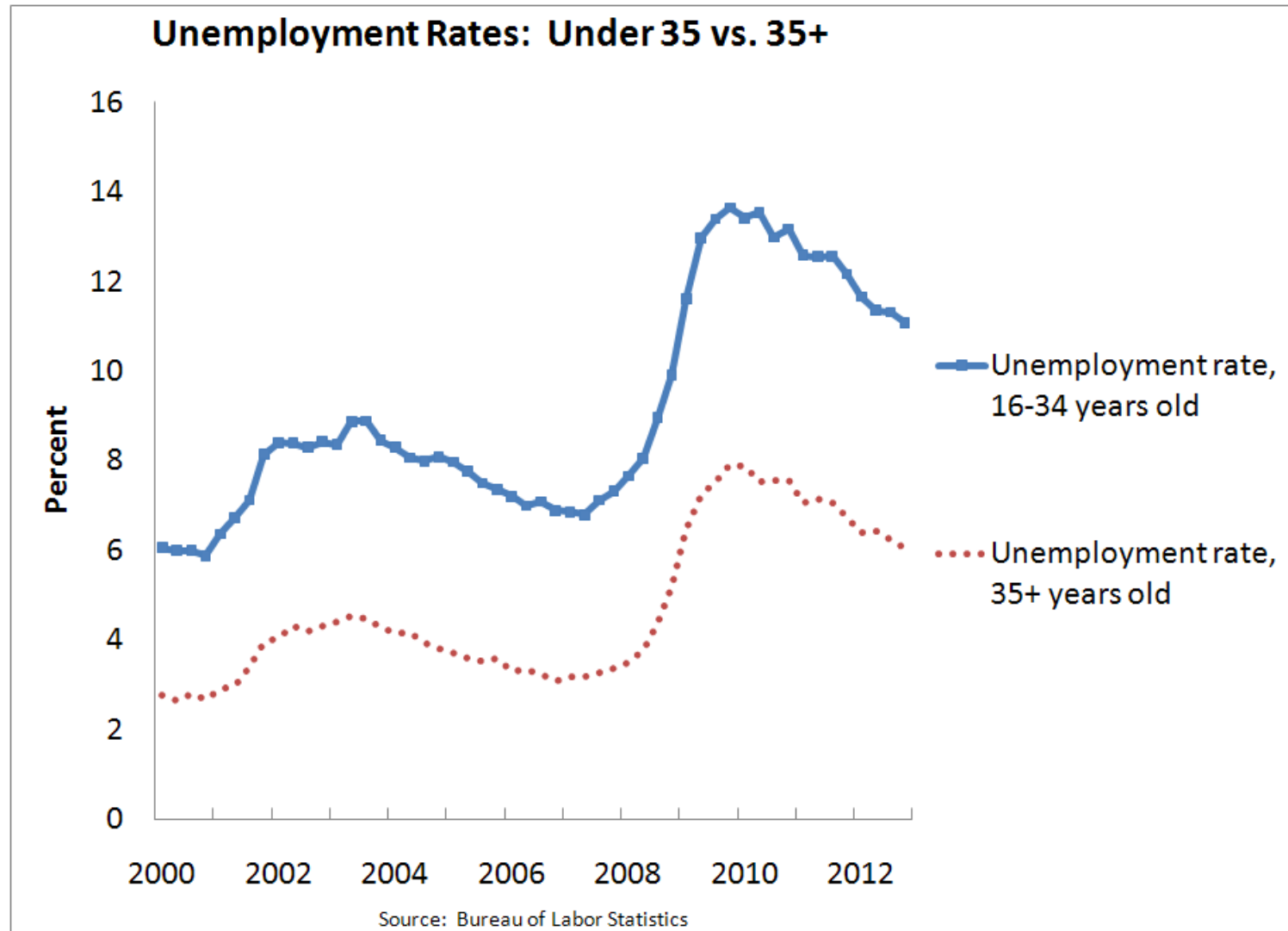
## *Why Did Young Families Lose So Much Wealth During the Crisis? The Role of Homeownership*

---

- **As a group, young families were unusually highly concentrated in housing with high balance-sheet leverage before the crisis.**
  
- **Large house-price declines therefore hit young families' balance sheets especially hard.**
  - **Large decline in value of largest asset.**
  - **Multiplicative effect on net worth through leverage.**
  
- **Large negative wealth impact of homeownership was common across young families of all races, ethnicities, and education levels.**

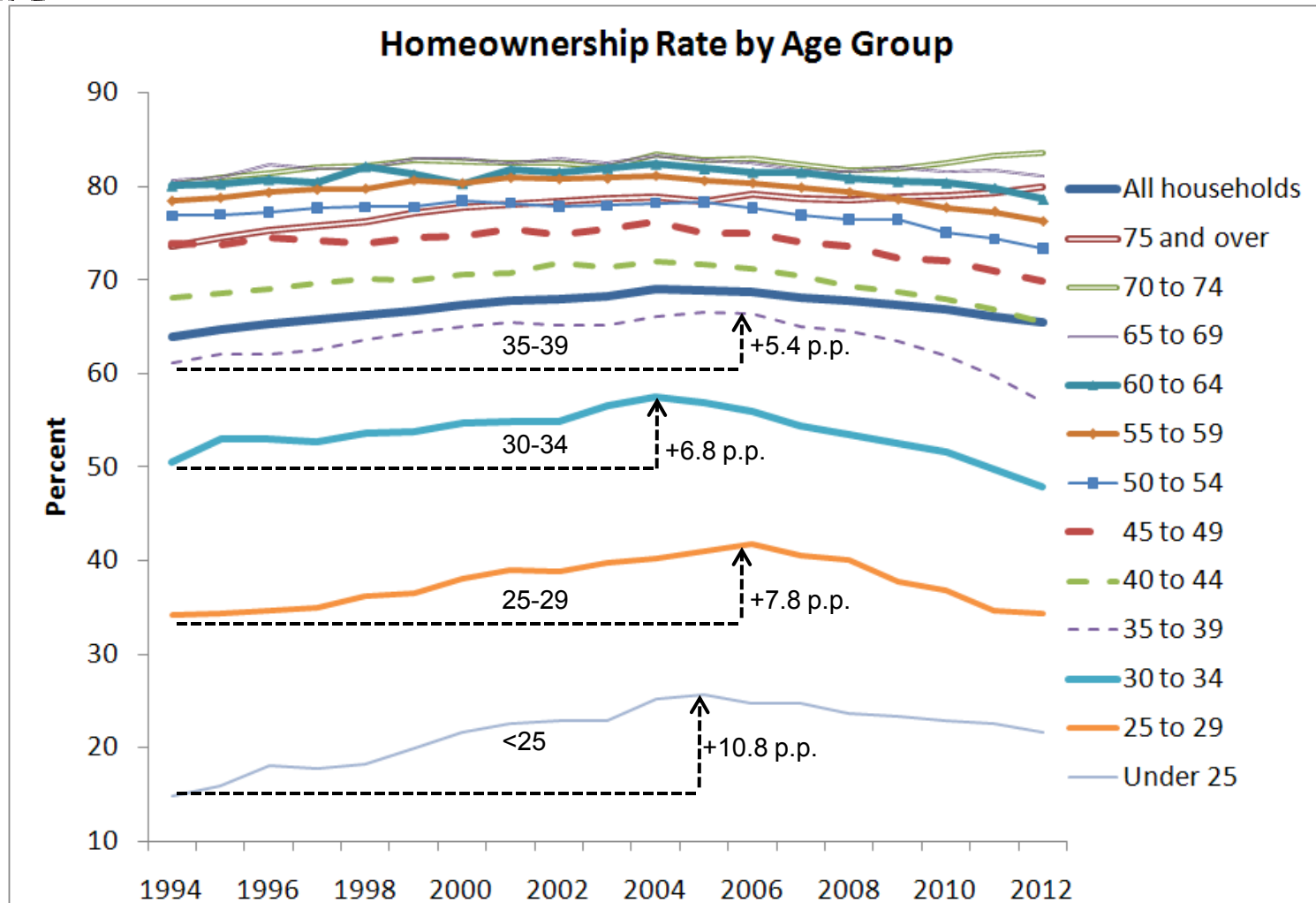


# *Young Workers are Economically Vulnerable*





# Homeownership Rates Increased Most Among Young Families

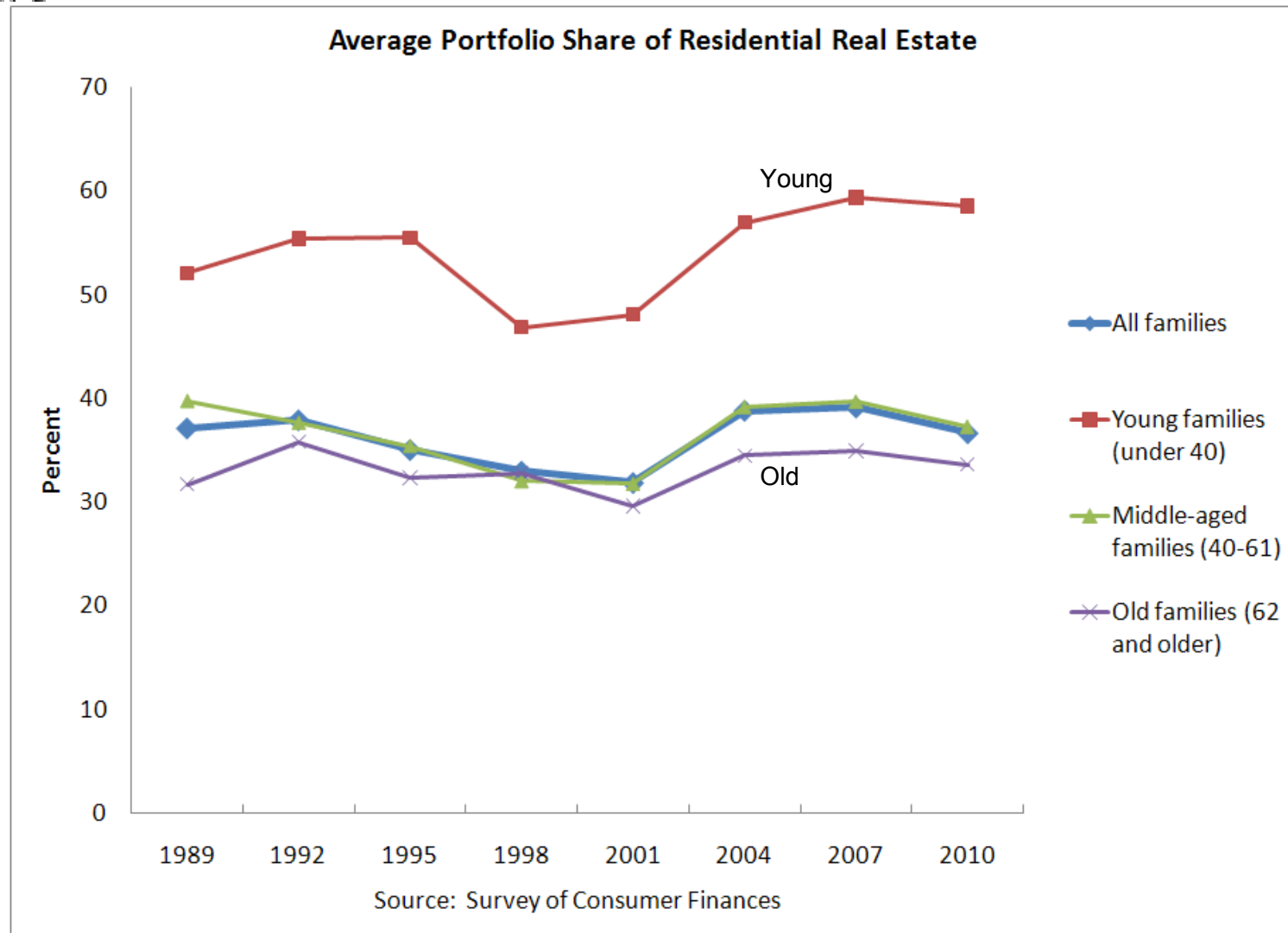


Overall homeownership rate, 1994-2004: +5.0 percentage points

Source: Census Bureau

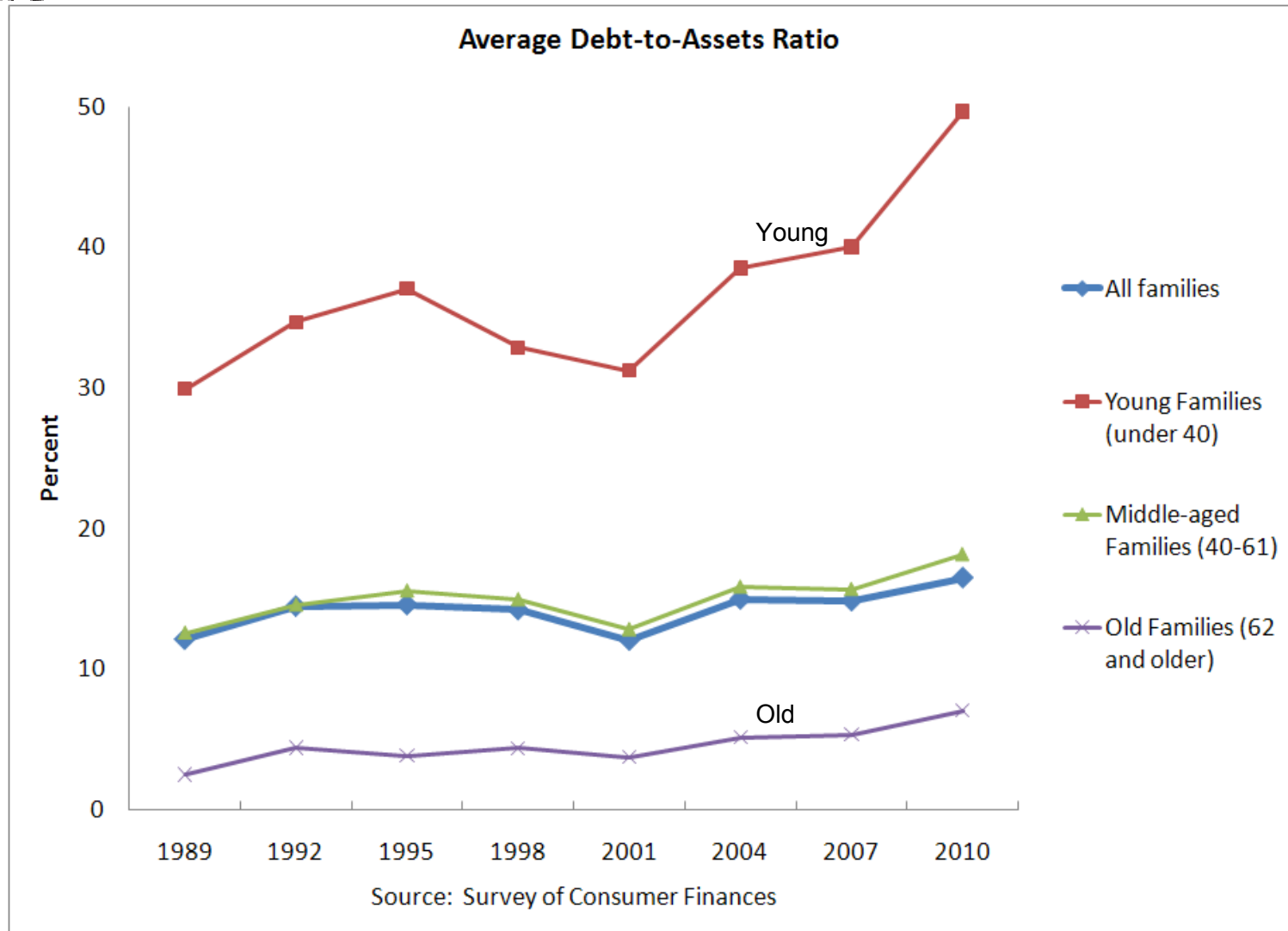


# *The Average Young Family's Portfolio Was Unusually Concentrated in Housing*



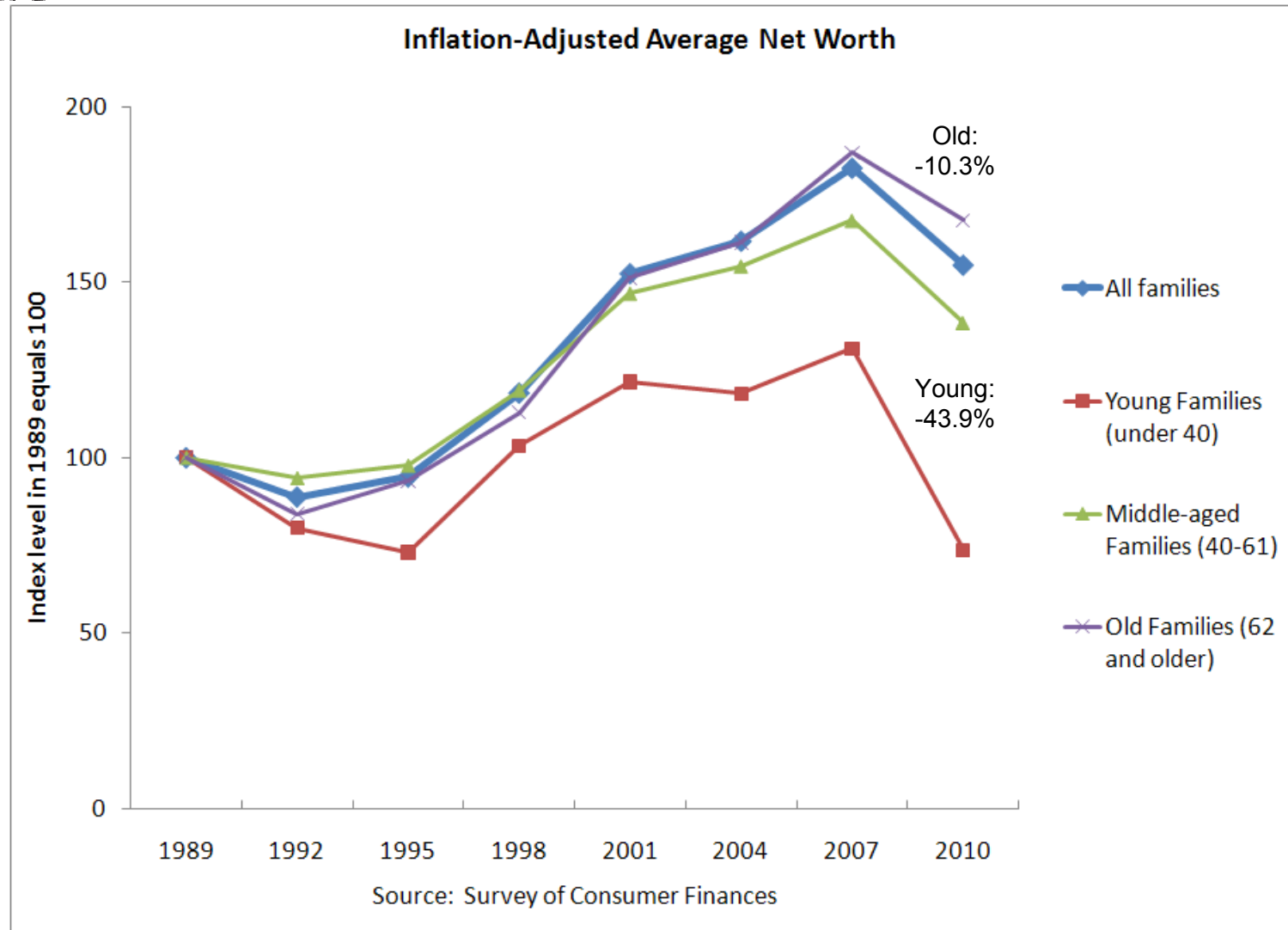


# *The Average Young Family Had Very High Balance-Sheet Leverage*





## *Result: Young Families Lost the Most Wealth During the Crisis*





## *Young Families Lost Much Larger Share of Wealth, Primarily Due to Housing*

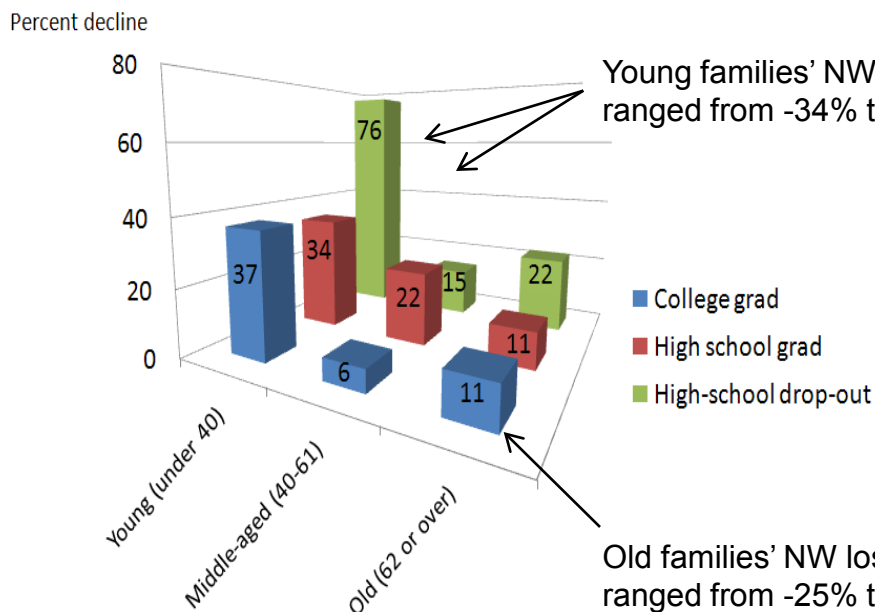
	Young ( $< 40$ )	Middle-aged (40-61)	Old (62+)
Average change in net worth, 2007-10 (inflation-adjusted)	-\$68,071	-\$121,847	-\$92,748
Average percent change in net worth, 2007-10 (infl. adj.)	-43.9%	-17.4%	-10.3%
Average 2007-10 change in residential real estate as fraction of total 2007-10 net-worth change	74.9%	53.2%	39.6%



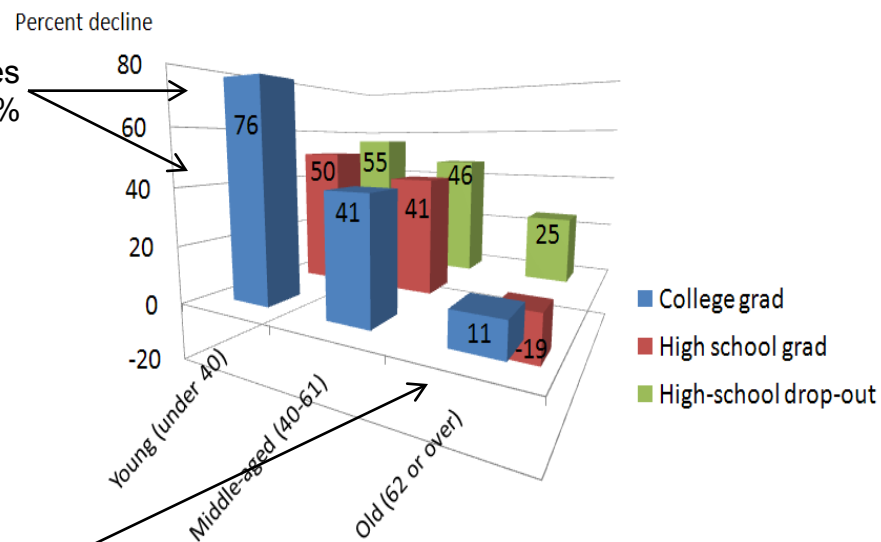


# African-Americans and Hispanics Lost More Wealth Overall, But Youth Dominates

Percent Decline in Mean Net Worth Between the 2004-07 Average and 2010 Among Whites, Asians, Other Minorities



Percent Decline in Mean Net Worth Between the 2004-07 Average and 2010 Among African-Americans and Hispanics





# Regression #1: Young Families' Home-ownership Rate Abnormally High in 2007

Logistic Regression: Dependent Variable = Have Residential Real Estate Assets		Demographic	Idiosyncratic	Both
		(1)	(2)	(3)
	Intercept	1.547***	0.831***	<b>1.563***</b>
Education	Less-than-high school dummy (High school or GED omitted)	-0.622***		<b>-0.608***</b>
Education	College grad dummy (High school or GED omitted)	0.831***		<b>0.655***</b>
Age	Age under 40 dummy (aged 40-61 omitted)	-1.677***		<b>-1.776***</b>
Age	Age 62 or older dummy (aged 40-61 omitted)	0.398***		<b>0.317***</b>
Race/ ethnicity	Member of historically disadvantaged minority dummy (white or non-disadvant. minority omitted)	-1.056***		<b>-1.095***</b>
Idiosync	Married deviation		0.740***	<b>0.805***</b>
Idiosync	Number of kids deviation (Normalized)		0.174***	<b>0.193***</b>
Idiosync	Square root of income deviation (Normalized)		0.837***	<b>0.814***</b>
Idiosync	Saved within the last year dummy deviation		0.331***	<b>0.354***</b>
Year	1995 Dummy (1992 omitted)	0.073	0.853***	<b>0.091</b>
Year	1998 Dummy (1992 omitted)	-0.135*	0.645***	<b>-0.123</b>
Year	2001 Dummy (1992 omitted)	-0.136*	0.661***	<b>-0.075</b>
Year	2004 Dummy (1992 omitted)	-0.064	0.721***	<b>0.006</b>
Year	2007 Dummy (1992 omitted)	-0.059	0.747***	<b>-0.035</b>
Young/yr	1995 Interacted with Young (1992 omitted)	0.054	-1.746***	<b>0.117</b>
Young/yr	1998 Interacted with Young (1992 omitted)	0.079	-1.795***	<b>0.119</b>
Young/yr	2001 Interacted with Young (1992 omitted)	0.136	-1.780***	<b>0.122</b>
Young/yr	2004 Interacted with Young (1992 omitted)	0.117	-1.771***	<b>0.129</b>
Young/yr	<b>2007 Interacted with Young (1992 omitted)</b>	0.263**	-1.640***	<b>0.334**</b>
	Number of observations	25889	25885	25885

Unweighted Regressions using RII techniques. \*, \*\*, and \*\*\* signify significance at .1, .05, and .01 levels, respectively. The deviation variables are deviations from weighted mean within the smallest demographic subgroup for age, race, and education level.



# Regression #2: Young Families' RRE Concentration Abnormally High in 2007

Tobit Regression: Dependent Variable = Real Estate Portfolio Share		Demographic	Idiosyncratic	Both
		(1)	(2)	(3)
	Intercept	0.369***	0.286***	<b>0.375***</b>
Education	Less-than-high school dummy (High school or GED omitted)	-0.027***		<b>-0.030***</b>
Education	College grad dummy (High school or GED omitted)	-0.020***		<b>-0.020***</b>
Age	Age under 40 dummy (aged 40-61 omitted)	-0.191***		<b>-0.195***</b>
Age	Age 62 or older dummy (aged 40-61 omitted)	-0.006		<b>0.002</b>
Race/ ethnicity	Member of historically disadvantaged minority dummy (white or non-disadvant. minority omitted)	-0.125***		<b>-0.129***</b>
Idiosync	Married deviation		0.155***	<b>0.153***</b>
Idiosync	Number of kids deviation (Normalized)		0.036***	<b>0.037***</b>
Idiosync	Square root of income deviation (Normalized)		-0.011***	<b>-0.012***</b>
Idiosync	Saved within the last year dummy deviation		0.012**	<b>0.010</b>
Year	1995 Dummy (1992 omitted)	-0.003	0.054***	<b>-0.007</b>
Year	1998 Dummy (1992 omitted)	-0.030***	0.028**	<b>-0.031***</b>
Year	2001 Dummy (1992 omitted)	-0.036***	0.022*	<b>-0.035***</b>
Year	2004 Dummy (1992 omitted)	0.009	0.067***	<b>0.012</b>
Year	2007 Dummy (1992 omitted)	0.019*	0.076***	<b>0.017</b>
Young/yr	1995 Interacted with Young (1992 omitted)	0.021	-0.179***	<b>0.024</b>
Young/yr	1998 Interacted with Young (1992 omitted)	-0.017	-0.223***	<b>-0.014</b>
Young/yr	2001 Interacted with Young (1992 omitted)	0.005	-0.202***	<b>0.006</b>
Young/yr	2004 Interacted with Young (1992 omitted)	0.019	-0.192***	<b>0.017</b>
Young/yr	<b>2007 Interacted with Young (1992 omitted)</b>	0.041*	-0.167***	<b>0.047**</b>
	_Sigma	0.422***	0.413***	<b>0.411***</b>
	Observations	25889	25885	25885
	Censored	6728	6728	6728



Unweighted Regressions using RII techniques. \*, \*\*, and \*\*\* signify significance at .1, .05, and .01 levels, respectively. Deviations from weighted mean within the smallest demographic subgroup for age, race, and education level.



# *Regression #3: All Families' Leverage Abnormally High in 2004-07; Young the Highest*

Tobit Regression: Dependent Variable = Debt to Asset Ratio		Demographic	Idiosyncratic	Both
		(4)	(5)	(6)
	Intercept	0.142***	0.175***	<b>0.173***</b>
Education	Less-than-high school dummy (High school or GED omitted)	-0.070***		<b>-0.076***</b>
Education	College grad dummy (High school or GED omitted)	-0.053***		<b>-0.033***</b>
Age	Age under 40 dummy (aged 40-61 omitted)	0.368***		<b>0.347***</b>
Age	Age 62 or older dummy (aged 40-61 omitted)	-0.428***		<b>-0.405***</b>
Race/ ethnicity	Member of historically disadvantaged minority dummy (white or non-disadvant. minority omitted)	0.100***		<b>0.087***</b>
Idiosync	Married deviation		-0.007	<b>0.000</b>
Idiosync	Number of kids deviation (Normalized)		0.028***	<b>0.023***</b>
Idiosync	Square root of income deviation (Normalized)		-0.026***	<b>-0.020***</b>
Idiosync	Saved within the last year dummy deviation		-0.164***	<b>-0.167***</b>
Year	1995 Dummy	0.031	-0.120***	<b>0.031</b>
Year	1998 Dummy	0.023	-0.114***	<b>0.022</b>
Year	2001 Dummy	0.009	-0.131***	<b>0.001</b>
Year	2004 Dummy	0.068***	-0.061***	<b>0.069***</b>
Year	2007 Dummy	0.076***	-0.067***	<b>0.075***</b>
Young/yr	1995 Interacted with Young	-0.051	0.441***	<b>-0.054</b>
Young/yr	1998 Interacted with Young	0.012	0.495***	<b>0.013</b>
Young/yr	2001 Interacted with Young	-0.006	0.481***	<b>-0.000</b>
Young/yr	2004 Interacted with Young	-0.036	0.439***	<b>-0.041</b>
Young/yr	<b>2007 Interacted with Young</b>	0.048	0.542***	<b>0.047</b>
	<u>Sigma</u>	0.754***	0.759***	0.745***
	Observations	25115	25111	25111
	Censored	6371	6369	6369

Unweighted Regressions using RII techniques. \*, \*\*, and \*\*\* signify significance at .1, .05, and .01 levels, respectively. Deviations from weighted mean within the smallest demographic subgroup for age, race, and education level.



## *Implications for the Future*

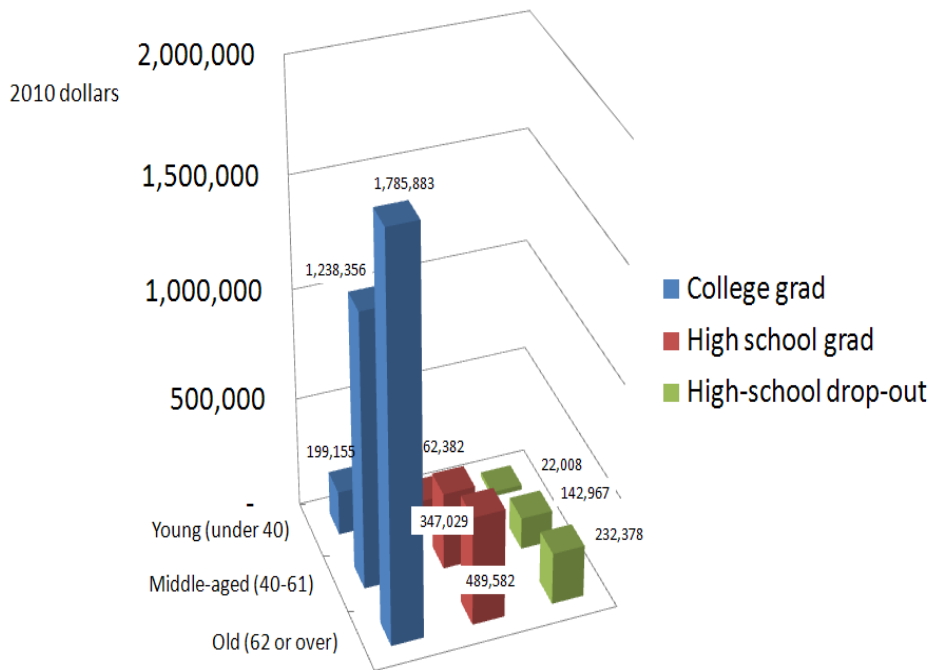
---

- **Many young families compounded their inherent economic vulnerability with risky financial choices.**
  - **Rapid increase in homeownership rates.**
  - **Highly concentrated in housing.**
  - **High balance-sheet leverage.**
- **The financial damage inflicted by the crisis on young families will take years to heal and will affect the entire housing market and the economy.**
- **Age-based housing and financial counseling may be appropriate.**

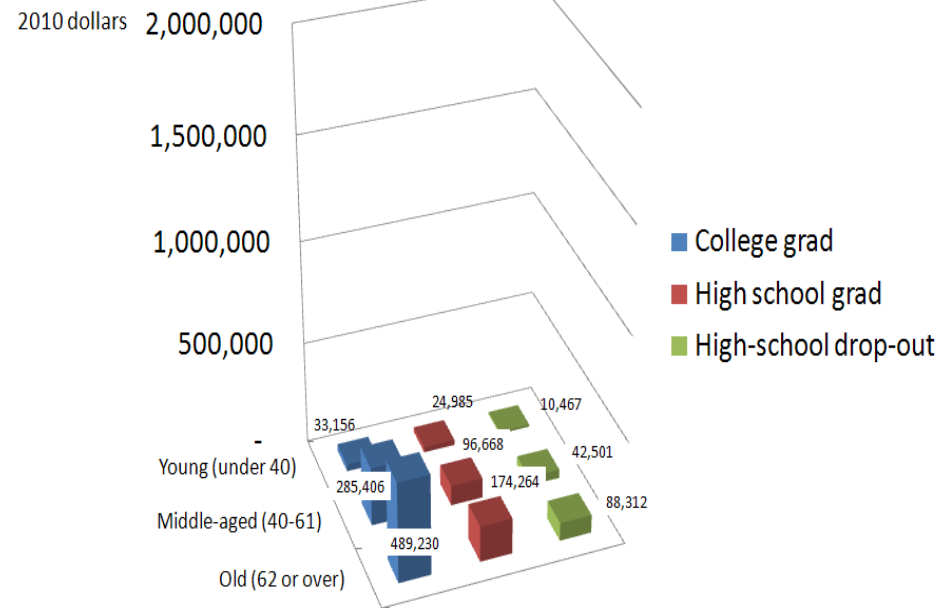


# Appendix: Pre-Crisis Wealth Disparities Were Re-inforced by Crisis Losses

### Average White or Asian Family Net Worth in 2010



### Average African-American or Hispanic Family Net Worth in 2010





## *Appendix: Ratio of African-American or Hispanic Wealth to Non-Minority Wealth*

**Historically Disadvantaged Minorities' Net Worth in 2010 as Share of Whites, Asians, and Other Minority Counterparts**

