

SINGLE FAMILY RENTALS:
DEMOGRAPHIC, STRUCTURAL AND FINANCIAL FORCES
DRIVING THE NEW BUSINESS MODEL

Calvin Schnure
NAREIT®*
March 31, 2014

Abstract: The transition to a lower rate of home ownership resulted in large flows of households into rental properties. Many of these households chose to rent single family properties, both because of the different characteristics of a single family versus a multifamily property, but also because the vacant stock of multifamily units was not sufficient to accommodate these flows in many metro areas.

The translation of housing stock from ownership to rental is not frictionless, however, and requires both capital to purchase homes for rental, and management expertise to operate the rentals. Institutional investors bought homes for rental in many MSAs where the magnitudes of the household flows were large relative to the local pool of potential individual investors. Indicators of housing stress, including the level of shared households, households with additional adults age 35+, and higher average household size, rose more sharply during the crisis in these MSAs than the country as a whole, suggesting there was a need for even greater amounts of rental and affordable housing in these MSAs. By providing capital and management teams in these markets, these investors may have helped prevent an even greater degree of housing stress in these cities.

*1875 I Street N.W., Suite 600, Washington DC 20006-5413.
Contact information: email cschnure@nareit.com, phone (202) 739-9434.
I would like to thank Shruthi Venkatesh for extensive research support.

SINGLE FAMILY RENTALS:
DEMOGRAPHIC, STRUCTURAL AND FINANCIAL FORCES
DRIVING THE NEW BUSINESS MODEL

Calvin Schnure
NAREIT®
March 31, 2014

I. INTRODUCTION

The transition of large numbers of households from homeownership to being renters has attracted considerable attention in both the popular press and the academic literature. These developments also require a parallel transition of the housing stock from owner-occupied to rental status. Such a transition is not frictionless, and requires both the capital to purchase a large number of homes and also the management expertise to operate thousands of rental properties. This transition has seen the rise of a new business model of institutional Single Family Rental (ISFR) investors.

The phenomenon of Single Family Rentals (SFR) is not new, as there were more than 10 million SFRs, constituting roughly 10 percent of the total U.S. housing stock, prior to the housing crisis that began in 2008 (Chart 1). Investors in the SFR model prior to the housing crisis, however, were individuals or partnerships managing one or a few homes in or near the community where they live. The operational difficulties of managing properties from a distant location limit the ability of individual investors to purchase rental properties in other cities. In addition, while it may be feasible for an individual to maintain a handful of rental properties, the management of a thousand properties or more would likely require a full-time management team. In many cities, therefore, the pool of local capital and management expertise available to purchase and operate

large numbers of SFRs is limited, and may be less than that necessary to support the growth of the rental market as it accommodates large flows out of single-family ownership.

Institutional investors responded to this need for additional capital and management expertise by raising external capital and purchasing tens of thousands of single-family homes, which they then operated as rental properties. By doing so, they have helped ease the transition from a higher home-ownership market to a lower home-ownership market. While there are single family rentals all across the country, institutional rental properties are concentrated in a small number of metro areas that experienced very large declines in single family ownership during the crisis. These markets also display greater signs of housing market stress, including greater incidence of shared or “doubled up” households and higher average household size.

The increase in rental homes through investments by these institutional investors helped make more homes available for rent in the markets with the greatest flow from ownership to rental. By doing so, ISFR helped prevent more severe crowding in housing markets in many MSAs that suffered the largest declines in home ownership during the housing crisis. Demographic trends and the financial conditions of many U.S. households suggest that there will be a need for an active market in single family rentals in many metro areas for the foreseeable future.

Following sections will examine the decline in home ownership and how it has changed the pattern of flows into and out of the housing market by tenure and structure type, the institutional investor in single family rental homes, the geographic patterns where the model has expanded, and a regression analysis of contributing factors to growth of SFR.

II. LITERATURE REVIEW

The choice of ownership or rental has been examined by many authors. See for example Henderson and Ioannides (1983), Goodman (1988), Coulson and Fisher (2012) and Coulson and Li (2013). Molloy and Shan (2013) examine transitions out of home ownership during the recent crisis by focusing on a small sample of foreclosed homeowners, and show that most ended up in another single-family structure in similar neighborhood.

There have been several recent descriptions of the rise of the single family rentals in general, and purchases by institutional investors in particular. See Chinco and Mayer (2013), Edelman and Sanchez (2014), Edelman (2013), Hiltz, Pereira, Bailey and Gorelik (2013), Immergluck (2013), Kurth (2012). Rahmani, George and O'Steen (2013), Trifon, Shen Callahan (2014), and Molloy and Zarutskie (2013). For analysis of shared households, see Mykyta and Macartney (2012) and Macartney and Mykyta (2012).

III. DATA

The 1-year estimates of the American Community Survey (ACS) report detailed data on households in 298 metro areas. We examine metro-level data on the total number of households, as well as the number of households by tenure and structure type, to document the patterns of growth of single family rental homes. The ACS also includes data on shared households (i.e. those with an additional adult other than head of household, or spouse or partner of the head) and average household size.

Information on ISFR investments largely come from company reports. Several of the large ISFRs, however, are privately held and do not file financial reports with the SEC. For these investors we rely on other public statements about their activity purchasing homes for rental.

IV. DECLINE IN HOME OWNERSHIP

The home ownership rate fell from a peak of 69 percent in 2006 to 65 percent in 2013 (Chart 2).

The decline in home ownership was accomplished by a major shift in patterns of household formation. For most of the past half-century, increases in owner-occupied households provided the bulk of household formation, and periods of declining homeowner households were rare.

Increases in rental households were generally smaller than the rise in owner-occupied housing, and growth of rental occupancy was negative during several periods (Chart 3).

Since 2006, however, this pattern has been reversed, all of the net growth in household formation resulted from increases in rental occupancy. The number of owner-occupied housing units nationwide declined by a significant amount over the past seven years.

V. TRANSITIONS OUT OF HOME OWNERSHIP

It can be useful when analyzing trends in household formation to focus on the tenure choice (ownership or rental) and the type of housing structure (single-family or multifamily). These choices can be represented in the matrix shown in Table 1. The most prominent trend since the onset of the housing crisis has been the movement out of the upper left quadrant, single family

ownership (SFO), into other quadrants, in particular to Multifamily Rental (MFR) and Single Family Rental (SFR). In 2007, there were 66.76 million households in single family ownership properties; by 2009, SFO had declined nearly one-half million, to 66.28 million (middle panel). Multifamily ownership (MFO, or condos), shown in the lower left corner of the quadrant, declined slightly over this period. Single family rentals (SFR) increased by more than one million, equal to nearly all of the net household formation over that two-year period. Multifamily rentals (MFR, or apartments) also rose. By 2011, single family ownership declined further and multifamily ownership posted a larger decline, and rental of both single family and multifamily units continued to rise (lower panel).

These transitions from ownership to rental have not been evenly distributed across the country. Large flows out of single family ownership have been concentrated in a relatively small number of metro areas. Table 2 reports data for the nation as a whole, as well as ten MSAs that experienced significant declines in single family ownership.

The second column reports this flow relative to an estimate of the number of multifamily units that were vacant in 2007. Ignoring for the moment that many of the households that made these transitions may have preferred more space than is available in most apartments, the available stock of vacant multifamily units for the nation would have been sufficient to absorb the entire flow out of single family ownership. These net flows out of SFO represented just 11 percent of the vacant apartment stock available. Because data on multifamily vacancy rates are not available across all MSAs we estimate the vacancy rate in each MSA based on an assumption of MSA vacancy rates of 10 percent.¹ For metro areas with large declines in home ownership, the flows out of single family ownership were very large relative to the available multifamily

¹ The national average at the end of 2007 was 9.6 percent. Source: U.S. Census Bureau, CPS/HVS.

vacancy. In Phoenix, Atlanta, Miami, Tampa and, especially, Jacksonville, the total flows out of single family ownership matched or exceeded total estimated multifamily vacancies at the start of this period. Even if multifamily vacancies in advance of the housing crisis were higher than those estimated for this simple exposition, the multifamily housing stock would have been hard-pressed to absorb inflows of households of these magnitudes from SFO.

VI. CHARACTERISTICS OF INDIVIDUAL INVESTORS IN SFR PROPERTIES

Individual investors continue to own the vast majority of SFR nationwide. One common way for a household to acquire a rental property is to hold on to their first property as an investment for rental income and potential for capital appreciation when, after several years of home ownership, they trade up to a larger home. Property acquisition by this means does not require a large amount of additional capital, as the investor may maintain the existing mortgage on the first property and take out a new mortgage on the new primary residence. It is rare, of course, to acquire a large number of new investment properties through this channel.

Individuals may also buy one or more homes in their neighborhood to operate as investment properties. The only limit on the number of homes they may purchase is their personal wealth, borrowing potential and their ability to manage maintenance and repairs on the properties.

Realtors may also buy homes to operate as rentals. Realtors may have a comparative advantage in the SFR business due to their insights about properties and valuations in the neighborhood, their list of contacts of contractors for home repair and maintenance, and inquiries from potential renters through their work.

The ability of local investors to acquire and manage a portfolio of SFRs depends on the financial strength of the households in the community. Not surprisingly, households that own rental properties tend to be significantly wealthier than homeowners without rental properties. The median net worth in 2010 of homeowners with rental income was \$228,000, nearly twice that of homeowners that did not receive rental income (Table 3).² Compared to the price of a typical SFR property of roughly \$150,000, this level of net worth would not allow for the purchase of several additional properties except with additional mortgage borrowing. Lenders have tightened their underwriting standards for lending against such investment properties, suggesting that only a few of the homeowners with investment properties would be able to increase their holdings of SFR significantly.

One can compare the relative frequency of households with rental properties in the SCF to the proportion of single family homes that are rented, in order to get a rough estimate of the number of investment properties a typical individual may hold. Since most of the investors in SFR are homeowners (the SCF shows very few rental households reporting rental income or owning additional residential real estate), we compare the frequency of SFR in the single family housing stock to the frequency of homeowners with rental income in the SCF. Homeowners with rental income in 2010 constitute 11.7 percent of total homeowners in the SCF. Single family rentals were 19.1 percent of total occupied single family housing stock in 2010, according to the ACS. The ratio of these two frequencies is 1.6x, which would be consistent with a typical household that invests in SFR owning one or two properties. These individual investors may be severely

² These data are from the Federal Reserve Board's *Survey of Consumer Finances (SCF)*. The SCF does not specifically identify investments in single family rentals. It does report ownership of additional residential properties, which includes vacation homes and secondary properties used by the owner rather than rented. The analysis here defines investors as those that receive rental income, which will exclude households with second homes or vacation homes for their personal use.

limited in their ability to finance and manage a significantly larger portfolio of rental properties, as may have been required to accommodate the decline in home ownership in many metro areas during the recent housing crisis.

VII. INSTITUTIONAL INVESTORS IN SINGLE FAMILY RENTALS

The new institutional investors in rental homes collectively hold roughly 200,000 properties, or less than 2 percent of the 13 million total single family rentals nationwide. By itself, this would suggest that the institutional investors have had at most a negligible impact on housing market conditions and the transition from higher to lower rates of home ownership.

A simple comparison of the national figures, however, overlooks two points. First, as seen above in Chart 1, the number of single-family rentals was stable for two decades or more prior to the mortgage crisis. Since 2007, however, single-family rentals increased nearly 2 million, or 16 percent. At an average price of \$150,000, this would require roughly \$275 billion of new investment to purchase homes for rental purpose. This is a relatively large amount of money, especially if much of this amount must be raised by a pool of potential investors in a relatively limited geographic area in the metro areas with large flows from home ownership to rental.

Second, the increase in single-family rentals has not been uniform across the country. Rather, it has been concentrated in a few metro areas that were hit hardest by the housing crisis and the economic recession (Chart 4). The top dozen or so metro areas account for the lion's share of declines in single family ownership (dark blue bars), increases in rental of both single-family and multifamily rentals (lime green and purple bars, respectively) and increases in shared housing

with one or more additional adults in a given housing unit (light blue bars) (The top 40 metro areas sorted by change in single family ownership are shown in Table 4).

The rate of household formation has been slowed during the housing crisis and economic recession, especially in the MSAs that experienced the most strain in housing markets. We construct an estimate of the shortfall of total household formation relative to the trend growth prior to 2007. This shortfall is plotted for each MSA in Chart 5 as “phantom households”. The two dozen MSAs with the largest declines in single-family ownership, and increases in single-family rental, multifamily rental and shared households, also had the greatest concentration of “phantom households”. These phantom households may have “doubled up” with existing households, potentially increasing the housing market strain. Many others may have migrated out of the MSA to an area with better housing market conditions.

ISFR purchases of homes in select metro areas are shown in the third column of Table 2. In addition to the ten MSAs that had experienced large declines in single family ownership, ISFR investors have significant holdings in five MSAs where single family ownership rose on balance. There were 67,000 homes purchased by ISFR in other metro areas (not shown separately).³ ISFRs have invested over \$20 billion in purchasing homes for rental use. ISFR purchases reportedly slowed in 2014 as recent increases in house prices reduced the number of properties that could profitably be purchased for operation as rental.

These groups of MSAs are worth considering in turn. It is interesting to note that nearly half of ISFR purchases were in the ten MSAs that experienced large declines in single family home

³ This includes both purchases reported by public-listed ISFRs in MSAs with smaller totals, and also purchases by privately-held ISFRs that may or may not report the locations of rental homes in their portfolio.

ownership. ISFR purchases are large relative to the flows out of single family ownership in Phoenix, Atlanta, and the other metro areas with large declines in home ownership (column 4). Particularly noteworthy are Phoenix, where home purchases by ISFRs represent two-thirds of the net decline in owner-occupied single family units, and Indianapolis, where they exceeded the change in owner-occupied units; ISFR range from 20 percent to 60 percent of the flow out of single family ownership for several of the other metro areas in this group. Together with the lack of vacant units in multifamily structures, these data suggest that in the absence of conversion of these units to rental status, the displaced former homeowners in these cities may have needed to merge into shared living space with other households or move to another area.

Simply put, there would not have been any other space available in these areas to accommodate tens of thousands of displaced former homeowners.

The second group suggests a different dynamic is driving the ISFR purchases in those MSAs. In these cities, single family home ownership actually increased over this period. ISFR companies report strong demand for rental properties in these cities, however. This suggests that financial factors like a lack of down payment for a home purchase, tighter underwriting by lenders that limits the ability to obtain a mortgage, or a preference for renting rather than owning may be driving the demand for single family rental properties in these markets.

The final column of Table 2 reports the increase in total SFR (i.e. both individual investors and ISFR) both nationwide and for selected metro areas with a high level of ISFR properties. The number of SFR increased 16 percent nationwide during the crisis. Among several of the MSAs with large declines in SFO, the number of rental properties rose 25 percent to 40 percent or more; in Phoenix, the number of SFR properties rose nearly 50 percent. These large increases

during a relatively short period may have been much more difficult for the local pool of individual investors to finance, consistent with the hypothesis that the ISFR provided external capital and management expertise beyond the capacity of local investors.

VIII. SHARED HOUSEHOLDS AND OTHER INDICATIONS OF HOUSING STRESS

The information presented above on the finances and prevalence of individual investors in SFR does not prove that the size of the pool of local capital is a constraint on financing the purchase of homes for SFR. There were anecdotal reports of a lack of demand for homes sold at foreclosure for much of the crisis and early recovery, but individual investors did purchase nearly two million homes for rental.

One likely result of an incomplete adjustment of the housing stock from ownership to rental that might occur if lack of sufficient capital were a problem would be an increase relative to the country as a whole in signs of crowded housing conditions, like shared households or larger average size of households. Shared households are commonly defined as those including an additional adult other than the spouse or partner of the head of household.⁴ While people often form shared households to reduce housing expenses during periods of financial distress, shared households would also be likely to form if there is a lack of available rental housing to accommodate former homeowners displaced by the housing crisis.

The formation of shared households can be superimposed on the quadrants in Table 1. Some households that exit the SFO quadrant in the upper left corner may not end up as an independent

⁴ Macartney and Mykyta (2012), Mykyta and Macartney (2012).

household in the SFR or MFR quadrant. Instead they may move in with a pre-existing household, reducing the total number of independent households. The new shared household could be in any of the four quadrants—SFO, SFR, MFO or MFR. Some of these shared households lived with parents, children or other family members, while others lived with roommates or other non-relatives. The number of shared households nationwide as a percentage of total households rose significantly, from 17.6 percent in 2007 to 19.3 percent in 2010 (Table 5 and Chart 6). This increase in shared households has been reflected in an overall rate of household formation that has been well below the historical trend, which is the rate that is consistent with U.S. population growth.

The increase in shared households exceeded the overall rate of household formation in 2009 and 2010. As a result, the number of households without an additional adult declined over this period (Chart 7).

The number of shared households declined moderately in 2011. A pickup in job growth may have allowed many members of shared households to afford their own independent households once again. This decline may also reflect the fact that sharing a household is not a preferred situation for many, who subsequently found available housing elsewhere. An elevated level of shared housing likely reflects a degree of local housing stress.

The popular press has reported extensively on the phenomenon of young adults returning to live with their parents, which is one manifestation of the growth of shared households. This focus on young adults downplays the degree of stress experienced by many shared households, which is a much broader phenomenon that encompasses all age groups. For example, 40 percent of the increase in shared households in 2009 and 2010 involved an additional adult age 35 or older, an

age at which individuals are more commonly the head of household, or spouse or partner of the head (Chart 8).

Closer examination of the data on shared households in each of the quadrants of SF/MF/Owner/Renter shows that SFR households absorbed a disproportionate share of the increases in shared households compared to SFO households, MFO or MFR households. Chart 9 plots the percentage of households in each quadrant of the tenure/structure matrix that are shared households. Shared households were much more prevalent among single-family rental households even before the onset of the crisis, with 23 percent of total single-family rentals having an additional adult, compared to 18 percent of single-family owner households and 15 to 16 percent for multifamily households.

Single-family rental households absorbed a disproportionate amount of shared households during the crisis (Chart 10). The percentage of shared households among single-family rentals rose more than 2.2 percentage points from 2007 to 2010, whereas shared households among single-family owners rose 1.7 percentage points. Shared households in multifamily units, whether owned or rented, increased by 1.2 percentage points. This should not be surprising, as single-family structures tend to have a greater number of additional bedrooms, larger bedrooms for sharing, or rooms in attics, basements or other living space that can be converted to use as a bedroom.

SFR included a larger amount of additional adults age 35+, and also absorbed a disproportionately large amount during the crisis (Chart 11). Households with additional older adults rose 1.5 percentage points among single-family rentals, compared to less than one percentage point among single family owners and about 0.6 ppt among households in multifamily structures.

An increase in the average size of households is another potential sign housing stress. Households in single-family structures tend to be larger than those in multifamily structures, mainly because of the additional space available; indeed, the desire for additional space is an important factor when households choose a single-family residence rather than an apartment. Among single-family structures, however, the average household size is much larger among single family rental units than owner-occupied (Chart 12). Moreover, while the average household size in single-family owner households changed little during the housing crisis, the average size of a single-family rental household rose from 2007 to 2010.

The national averages on shared households and average household size suggest that many households came under strains because of an inability to find or afford suitable housing. The housing crisis precipitated a large flow from single-family ownership to shared households and rentals, in both single-family and multifamily structures. There is evidence of stress in the form of older additional adults moving into shared households, and larger household sizes.

Households in single family rentals absorbed a disproportionate amount of shared households, additional adults over age 35, and increased household size. This suggests that the increase in single family rentals helped prevent the displacement of households due to foreclosures from causing even greater stress.

GEOGRAPHY OF HOUSEHOLD STRESS

The rise in shared households and household size nationwide may have been due to frictions of converting from an ownership model to a rental model, but also could simply reflect stress due to economic hardship. Data from metro areas may help distinguish between these two possible

causes. If the housing market stress resulted solely from economic hardship, signs of stress may be similar across both MSAs that experienced large declines in home ownership and also those that experienced smaller declines or none at all. If the frictions in the adjustment from owner to renter models are a major contributing factor to these housing market strains, however, one would expect greater signs of stress in MSAs with large declines in single-family ownership.

As seen in Table 2, Phoenix had some of the largest declines in single family ownership as well as the highest ISFR purchases of homes. The Phoenix housing market also displays greater signs of stress than the national averages. The percentage of shared households among single-family rentals was well above the national average (Chart 13). The increase in shared households in Phoenix in 2008-2010 was large among single-family rentals, much smaller among single-family owner households or in multifamily units. This is consistent with single-family rentals absorbing a disproportionate amount of housing stress that resulted from the mortgage crisis.

Chart 14 plots the incidence of shared households with an additional adult age 35 or older, national averages and Phoenix. The single-family rental component again has the highest incidence in all years, and the largest increases during the crisis.

Chart 15 plots the average size of shared households in Phoenix along with the national average. Single-family rentals in Phoenix are on average over 4.0 members, compared to an overall national average of 3.5 members. The size of shared SFR households in Phoenix rose more sharply during the 2007-2010 period than did any other type of household.

Housing market strains were more severe in Phoenix than in the nation as a whole, and the SFR segment of the market absorbed a disproportionate share of the stress, in terms of the number of shared households, households with additional adults over age 35, and average household size.

These strains appeared despite institutional investors making available rental homes equivalent to two-thirds of the net decline in single family ownership. Had the ISFR not invested capital and management in the Phoenix housing market in order to make additional rental properties available, the housing market strains may have been more severe.

IX. REGRESSION ANALYSIS OF FORCES DRIVING SFR

Several factors have likely contributed to the growth of SFR and the entry of ISFR into certain markets. To understand the relative importance of a decline in MSA levels of single family ownership, worsening housing market conditions in general, or overall economic weakness, it is instructive to examine in more detail the areas with stronger growth in SFR and ISFR. Several of the MSAs with largest growth in the total number of SFR households did not suffer a decline in house prices during the crisis, including Houston, Dallas, El Paso and several other large cities in Texas (Table 6). It is interesting to note that ISFR purchases are growing rapidly in those cities, which suggests that general economic conditions and an insufficient amount of capital and management expertise among local households may be important factors in the rise of SFR and ISFR.

Table 7 reports a regression of the total increase in SFR occupied households on the change in single family ownership rate, change in house prices and MSA level unemployment rate.⁵ The coefficient on change in single family ownership is -0.35, suggesting that across all MSAs in the sample, a decline in ownership is associated with a rise in SFR about one-third as large. The coefficient is estimated with a high degree of precision and is stable across other regression

⁵ We use non-overlapping periods, with the variables on the right hand side from 2007-2009 and the independent variable from 2009-2011, to avoid problems with endogeneity.

formulations (not shown). The coefficient on house prices is also negative and statistically significant. It does not suggest a large impact, however, as each 1 percentage point decline in house prices would be associated with 67 more SFRs (or each 10 ppt decline, 670 more SFRs). In the context of markets where SFRs rose by thousands or tens of thousands, house prices do not appear to be the primary driver.

The coefficient on unemployment is not statistically significant, either in levels or percentage point change. It may well be, however, that the home ownership and house price variables sufficiently capture the variation in the broader economic impact of the crisis. The regression explains about one-quarter of the overall variation in SFR across metro areas.

X. CONCLUSION

The transition to a lower rate of home ownership resulted in large flows of households into rental properties. Many of these households chose to rent single family properties, both because of the different characteristics of a single family versus a multifamily property, but also because the vacant stock of multifamily units was not sufficient to accommodate these flows in many metro areas.

This translation from ownership to rental is not frictionless, however, and requires both capital to purchase homes for rental and management expertise to operate the rentals. ISFRs invested in many MSAs where the magnitudes of the household flows were large relative to the local pool of potential individual investors. Indicators of housing stress, including the level of shared

households, households with additional adults age 35+, and higher average household size, rose more sharply in these MSAs than the country as a whole during the crisis, suggesting there was a need for even greater amounts of rental and affordable housing in these MSAs. By providing capital and management teams in these markets, ISFRs may have helped prevent an even greater degree of housing stress in these cities.

Table 1

		Tenure	
		Owned	Rented
Type of Structure	Single Family		
	Multifamily		

Quadrant (in millions)

	2007	
	Owned	Rented
SF	66.76	11.34
MF	8.75	25.53

	2008	
	Owned	Rented
SF	66.68	11.85
MF	8.66	25.90

	2009	
	Owned	Rented
SF	66.28	12.37
MF	8.65	26.31

	2010	
	Owned	Rented
SF	66.49	12.69
MF	8.46	26.93

	2011	
	Owned	Rented
SF	66.05	13.18
MF	8.33	27.43

vs 2007:

	vs 2007:	
	Owned	Rented
SF	-0.07	0.51
MF	-0.10	0.38

	vs 2007:	
	Owned	Rented
SF	-0.48	1.03
MF	-0.10	0.79

	vs 2007:	
	Owned	Rented
SF	-0.27	1.35
MF	-0.30	1.41

	vs 2007:	
	Owned	Rented
SF	-0.71	1.84
MF	-0.43	1.91

Table 2

	(1)	(2)	(3)	(4)	(5)
	Change in Single-Family Homeowners, 2007-2011	Change in Single- Family Homeowners as percent of estimated Multifamily Vacancies (Percent)	Institutional Investor Purchases of Single-Family Rental Homes (Thousands)	Institutional SFR as a percent of Change in Single- Family Homeowners (Percent)	Change in total Single Family Rental Homes (Percent)
<i>National</i>	-709	11	200	28	16
<i>MSAs with large decline in SFO</i>					
Phoenix, AZ	-29	97	19	66	48
Indianapolis, IN	-12	41	13	102	11
Atlanta, GA	-55	114	18	33	41
Chicago-Gary-Lake, IL	-45	47	11	24	36
Tampa-St. Petersburg-C	-37	96	7	19	28
Nashville, TN	-9	87	6	66	26
Jacksonville, FL	-9	166	6	59	-2
Cincinnati OH/KY/IN	-11	54	6	56	22
Miami-Hialeah, FL	-17	100	5	30	14
Las Vegas, NV	-17	41	2	12	23
<i>MSAs where SFO rose</i>					
Dallas-Fort Worth, TX	32		17		34
Houston-Brazoria, TX	42		15		34
Charlotte-Gastonia-Roc	9		7		12
Tucson, AZ	1		1		28
Raleigh-Durham, NC	24		1		19
			ISFR in unidentified MSAs		67

Sources: American Community Survey, Company Reports.

Table 3

2010	Category	Median net worth	Median total financial assets	Median total nonfinancial assets	Median value of principal residence	Percent of population
	All homeowners					60.1
	Homeowners with rental income	228,000	44,220	260,100	333,000	7.0
	Homeowners without rental income	131,700	19,000	166,000	170,000	53.0
	All renters	14,760	3,000	12,000	--	39.9
2007	Category	Median net worth	Median total financial assets	Median total nonfinancial assets	Median value of principal residence	Percent of population
	All homeowners					61.2
	Homeowners with rental income	184,960	35,000	218,500	345,000	7.7
	Homeowners without rental income	99,000	14,100	147,400	200,000	53.5
	All renters	13,250	2,800	10,900	--	38.8

Source: Federal Reserve Board, Survey of Consumer Finances

Table 4
Metro Areas Sorted by Change in Single Family Home Ownership

Rank by Change in SFO	Metro Area	Level	Level	Level	Level	Level	Level
		Change in SFO ('000)	Change in SFR ('000)	Change in MFO ('000)	Change in MFR ('000)	Change in Shared ('000)	Change in Phantom ('000)
1	Detroit, MI	-71	35	0	12	10	87
2	Atlanta, GA	-44	37	-9	25	21	57
3	Los Angeles-Long Beach,	-41	42	-16	36	98	101
4	Chicago-Gary-Lake, IL	-39	44	-50	50	49	112
5	Phoenix, AZ	-28	51	-11	33	36	5
6	Miami-Hialeah, FL	-26	4	-13	14	16	52
7	Fort Lauderdale-Hollywo	-22	9	-19	29	14	28
8	Minneapolis-St. Paul, MN	-21	7	2	33	8	24
9	Tampa-St. Petersburg-Cle	-21	23	-13	17	15	37
10	Oakland, CA	-19	22	-11	27	21	15
11	Orlando, FL	-18	5	-3	5	8	40
12	Portland-Vancouver, OR	-16	21	3	14	11	7
13	Jacksonville, FL	-15	2	1	8	9	24
14	Orange County, CA	-15	15	-14	23	26	28
15	Seattle-Everett, WA	-14	22	1	25	20	5
16	Pittsburgh-Beaver Valley,	-14	14	-6	5	5	36
17	Birmingham, AL	-13	5	0	1	0	20
18	San Jose, CA	-13	5	3	22	30	5
19	Norfolk-VA Beach-Newp	-13	0	3	6	15	28
20	Fort Myers-Cape Coral, F	-11	3	-6	0	-1	23
21	Toledo, OH/MI	-10	7	-1	0	0	13
22	Nashville, TN	-10	6	1	17	20	7
23	Pensacola, FL	-10	-1	3	6	2	9
24	St. Louis, MO-IL	-9	15	-2	13	13	23
25	Providence-Fall River-Pa	-9	7	-2	3	3	16
26	Panama City, FL	-9	1	0	0	0	11
27	Grand Rapids, MI	-8	6	3	1	13	13
28	Las Vegas, NV	-8	20	-8	11	18	10
29	Barnstable-Yarmouth, Mz	-7	-2	0	3	0	8
30	Daytona Beach, FL	-7	2	-3	-2	2	17
31	Bergen-Passaic, NJ	-7	4	-5	13	5	14
32	Dayton-Springfield, OH	-7	6	1	5	2	10
33	Stockton, CA	-7	12	0	2	12	0
34	Tacoma, WA	-6	14	1	1	6	1
35	Knoxville, TN	-6	0	2	6	1	8
36	Louisville, KY/IN	-6	8	1	10	10	1
37	Athens, GA	-5	2	0	-3	-3	9
38	Youngstown-Warren, OH	-5	3	0	-1	-1	11
39	Des Moines, IA	-5	0	2	5	3	4
40	Mobile, AL	-5	1	0	3	2	10

Source: U.S. Census Bureau, American Community Survey

Table 5
Households, Shared Households and Additional Adults Age 35+

	2007	2008	2009	2010	2011
Total households (millions)	112.4	113.1	113.6	114.6	115.0
Single Family Rental (SFR)	11.3	11.9	12.4	12.7	13.2
Single Family Owner (SFO)	66.8	66.7	66.3	66.5	66.0
Multifamily Renter (MFR)	25.5	25.9	26.3	26.9	27.4
Multifamily Owner (MFO)	8.8	8.7	8.7	8.5	8.3
Annual growth (%)					
Total		0.6	0.5	0.8	0.4
Single Family Rental (SFR)		4.5	4.4	2.5	3.9
Single Family Owner (SFO)		-0.1	-0.6	0.3	-0.7
Multifamily Renter (MFR)		1.5	1.6	2.4	1.9
Multifamily Owner (MFO)		-1.1	-0.1	-2.2	-1.5
Non-shared households	92.5	93.0	92.7	92.4	93.0
Shared households	19.8	20.1	20.9	22.1	22.0
Change, non-shared	0.0	0.5	-0.3	-0.3	0.6
Change, shared	0.0	0.2	0.8	1.2	-0.2
Shared with additional adult 35+	9.6	9.7	10.1	10.9	10.6
Shared w/o additional adult 35+	10.2	10.3	10.8	11.3	11.3
Shared households by tenure and structure type					
Total shared households	19.8	20.1	20.9	22.1	22.0
SFR	2.6	2.7	3.0	3.1	3.2
SFO	11.8	11.9	12.3	13.0	12.8
MFR	4.0	4.1	4.2	4.6	4.5
MFO	1.4	1.4	1.4	1.5	1.4
Percent of tenure/structure quadrant that are shared					
Total	17.6	17.8	18.4	19.3	19.1
SFR	22.5	22.8	23.9	24.7	24.2
SFO	17.7	17.8	18.6	19.5	19.4
MFR	15.7	15.7	16.0	16.9	16.5
MFO	16.3	16.1	16.6	17.4	17.1
Percent of tenure/structure quadrant with add'l 35+					
Total	8.6	8.6	8.9	9.5	9.3
SFR	9.6	9.7	10.3	11.1	10.9
SFO	9.2	9.3	9.6	10.2	10.0
MFR	6.1	6.1	6.2	6.8	6.5
MFO	9.4	9.3	9.5	10.1	9.8

Source: U.S. Census Bureau, American Community Survey

Table 6
Metro Areas Sorted by Change in Single Family Rentals

Rank by Change in SFR	Metro Area	SFR		House Prices	
		Level Change 2011-2007	Percent Change 2011/2007	Percent Change 2009/2007	Ranked by House Price Change
1	Phoenix, AZ	68,084	47.7	-35.7	7
2	Atlanta, GA	63,532	40.9	-12.8	49
3	Los Angeles-Long Beach, CA	58,741	16.4	-26.5	32
4	Houston-Brazoria, TX	53,696	33.5	2.2	224
5	Detroit, MI	49,162	37.5	-26.0	34
6	Riverside-San Bernardino, CA	46,355	26.6	-39.8	11
7	Chicago-Gary-Lake, IL	41,449	35.9	-16.6	42
8	Dallas-Fort Worth, TX	39,657	34.1	-0.4	186
9	Tampa-St. Petersburg-Clearwa	30,521	28.4	-29.1	20
10	Portland-Vancouver, OR	30,209	48.0	-15.7	48
11	St. Louis, MO-IL	29,266	37.3	-7.2	112
12	Sacramento, CA	25,805	31.4	-28.0	22
13	Cleveland, OH	24,649	39.5	-7.8	100
14	Seattle-Everett, WA	24,518	30.6	-17.4	41
15	Washington, DC/MD/VA	23,990	28.7	-19.0	64
16	Las Vegas, NV	20,882	23.0	-47.5	1
17	San Antonio, TX	19,750	25.3	5.3	246
18	Philadelphia, PA/NJ	19,200	35.8	-5.3	128
19	Denver-Boulder-Longmont, CC	18,089	28.5	-3.3	158
20	Orlando, FL	16,556	20.4	-33.3	13
21	San Diego, CA	15,549	13.7	-22.4	39
22	Minneapolis-St. Paul, MN	14,759	38.7	-14.9	57
23	Bakersfield, CA	14,219	30.4	-37.7	8
24	Memphis, TN/AR/MS	13,931	30.9	-7.5	99
25	Columbus, OH	13,736	27.8	-4.6	139
26	Stockton, CA	13,662	43.0	-43.6	4
27	Nashville, TN	13,601	25.8	-5.2	134
28	El Paso, TX	13,331	49.0	-4.1	154
29	Tucson, AZ	12,437	28.4	-23.2	26
30	New Orleans, LA	11,712	35.9	-6.3	136
31	San Francisco-Oakland-Vallejo,	11,426	25.5	-16.3	63
32	Toledo, OH/MI	11,422	53.7	-9.7	93
33	Charlotte-Gastonia-Rock Hill, S	11,112	12.1	-6.5	96
34	Colorado Springs, CO	11,061	54.8	-5.3	120
35	Albuquerque, NM	11,055	34.7	-9.3	85
36	Pittsburgh-Beaver Valley, PA	10,914	15.6	1.1	242
37	Raleigh-Durham, NC	10,899	19.4	-2.9	143
38	Milwaukee, WI	10,684	42.8	-7.4	97
39	Austin, TX	10,110	18.6	0.7	220
40	Vallejo-Fairfield-Napa, CA	10,087	39.4	-41.2	5

Source: American Community Survey, FHFA.

Table 7

SUMMARY OUTPUT

Independent variable: Change in SFR 2009-2011

<i>Regression Statistics</i>	
Multiple R	0.527
R Square	0.278
Adjusted R Square	0.269
Standard Error	5088.331
Observations	251

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	2.46E+09	8.19E+08	31.6245	2.46E-17
Residual	247	6.4E+09	25891110		
Total	250	8.85E+09			

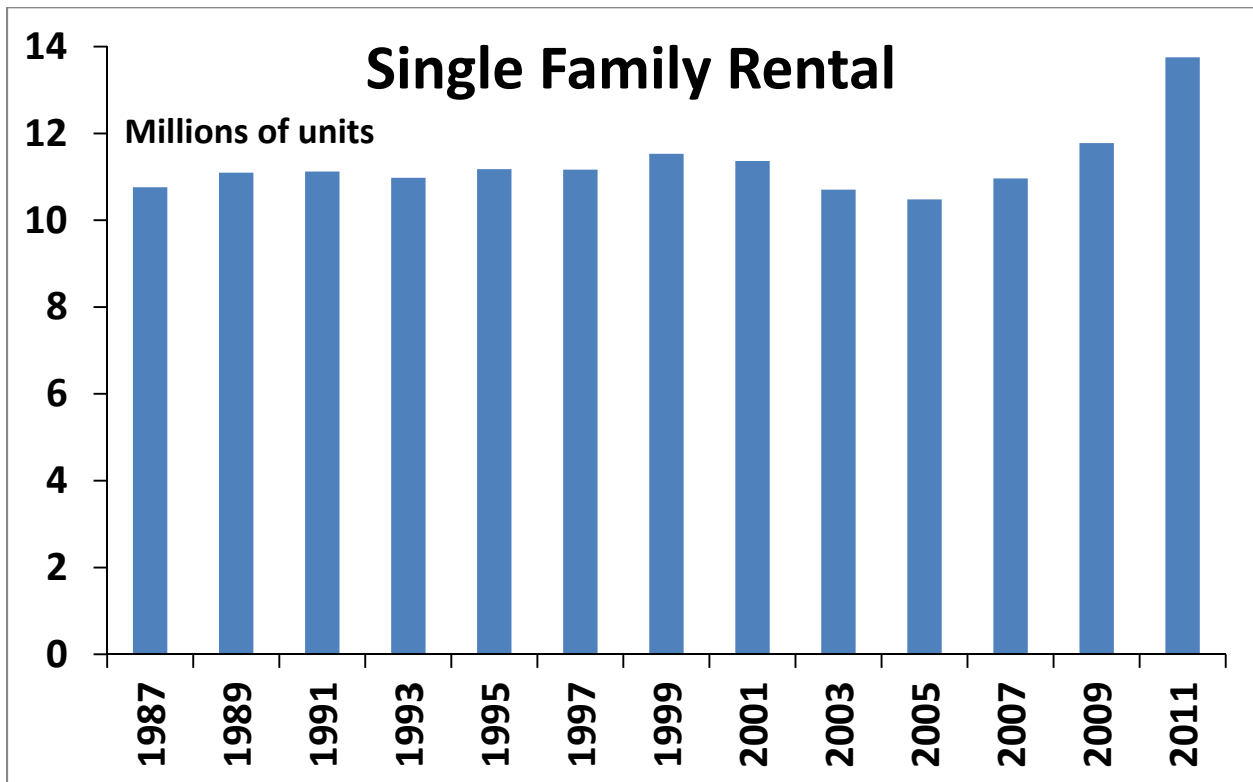
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	1532.48	847.05	1.81	0.07	-135.89	3200.85	-135.89	3200.85
dSFO 2007-09	-0.35	0.04	-7.79	0.00	-0.43	-0.26	-0.43	-0.26
dU 2007-09	-24.65	159.51	-0.15	0.88	-338.83	289.53	-338.83	289.53
dHPI 2007-09	-67.42	23.60	-2.86	0.00	-113.90	-20.94	-113.90	-20.94

REFERENCES

- Chinco, Alexander, and Christopher Mayer. 2013. "Understanding Investors in Single-Family Homes," mimeo.
- CoreLogic Inc. "CoreLogic Equity Report: Fourth Quarter 2013," 2013.
- Coulson, Edward, and Lynn M. Fisher. 2012. "Structure and Tenure," mimeo.
- Coulson, Edward, and Herman Li. 2013. "Measuring the External Benefits of Homeownership," *Journal of Urban Economics* 77(C): 57-67.
- Edelman, Sarah, Julia Gordon, and David Sanchez. 2014. "When Wall Street Buys Main Street," Center for American Progress.
- Edelman, Sarah. 2013. "Cash for Homes: Policy Implications for an Investor-Led Housing Recovery." Center for American Progress.
- Goodman, Allen C. 1988. "An Econometric Model of Housing Price, Permanent Income, Tenure Choice, and Housing Demand," *Journal of Urban Economics* 23(3): 327-353.
- Henderson, J Vernon, and Yannis M. Ioannides. 1983. "A Model of Housing Tenure Choice," *American Economic Review* 73(1): 98-113.
- Hilts, Stefan, Rui Pereira, Grant Bailey, and Greg Gorelik. 2013. "U.S. RMBS Sustainable Home Price and Economic Risk Factor Report – November 2013," Fitch Ratings Structured Finance.
- Immergluck, Dan. 2013. "The Role of Investors in the Single-Family Market in Distressed Neighborhoods: The Case of Atlanta," *Joint Center for Housing Studies*.
- Kurth, Ryan. 2012. "Single-Family Rental Housing – The Fastest Growing Component of the Rental Market," Fannie Mae Economic and Strategic Research.
- Macartney, Suzanna, and Laryssa Mykyta. 2012. "Poverty and Shared Households by State: 2011," U.S. Census Bureau.
- Mallach, Allan. 2013. "Investors and Housing Markets in Las Vegas: A Case Study," *Joint Center for Housing Studies*.

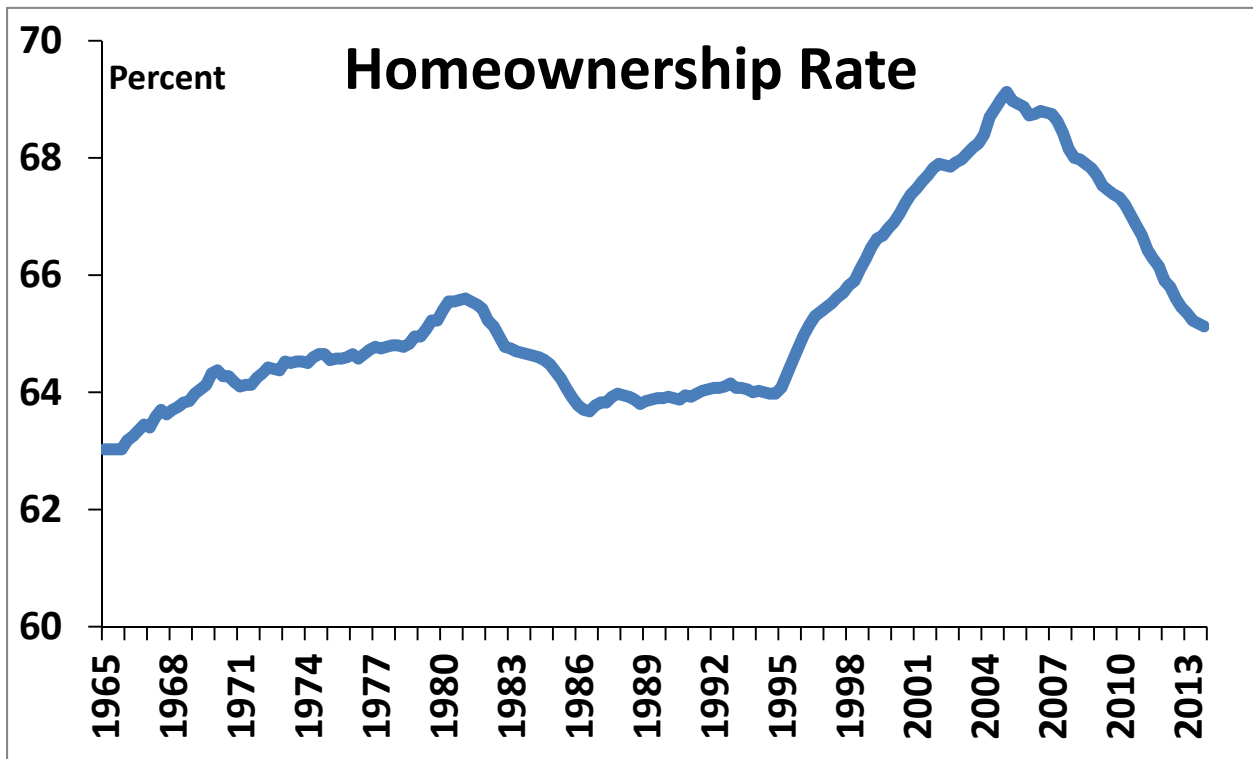
- Molloy, Raven, and Hui Sahn. 2013. "The Postforeclosure Experience of U.S. Households," *Real Estate Economics* 41 (2): 225-254.
- Molloy, Raven, and Rebecca Zarutskie. 2013. "Business Investor Activity in the Single-Family-Housing Market," *Federal Reserve Board FEDS Notes*, December 5, 2013.
- Mykyta, Laryssa, and Suzanne Macartney. 2012. "Sharing a Household: Household Composition and Economic Well-Being: 2007–2010," U.S. Census Bureau.
- Rahmani, Jade J., Bose George, and Ryan O'Steen. 2013. "Single-Family REO: An Emerging Asset Class, 3rd Edition," Keefe, Bruyette, & Woods.
- The Joint Center for Housing Studies of Harvard University. "America's Rental Housing: Meeting Challenges, Building on Opportunities," 2011.
- Trifon, Harris, Ying Shen, and Elen Callahan. 2014. "2014 Outlook: Single-Family Rental Securitizations," Deutsche Bank Markets Research.

Chart 1



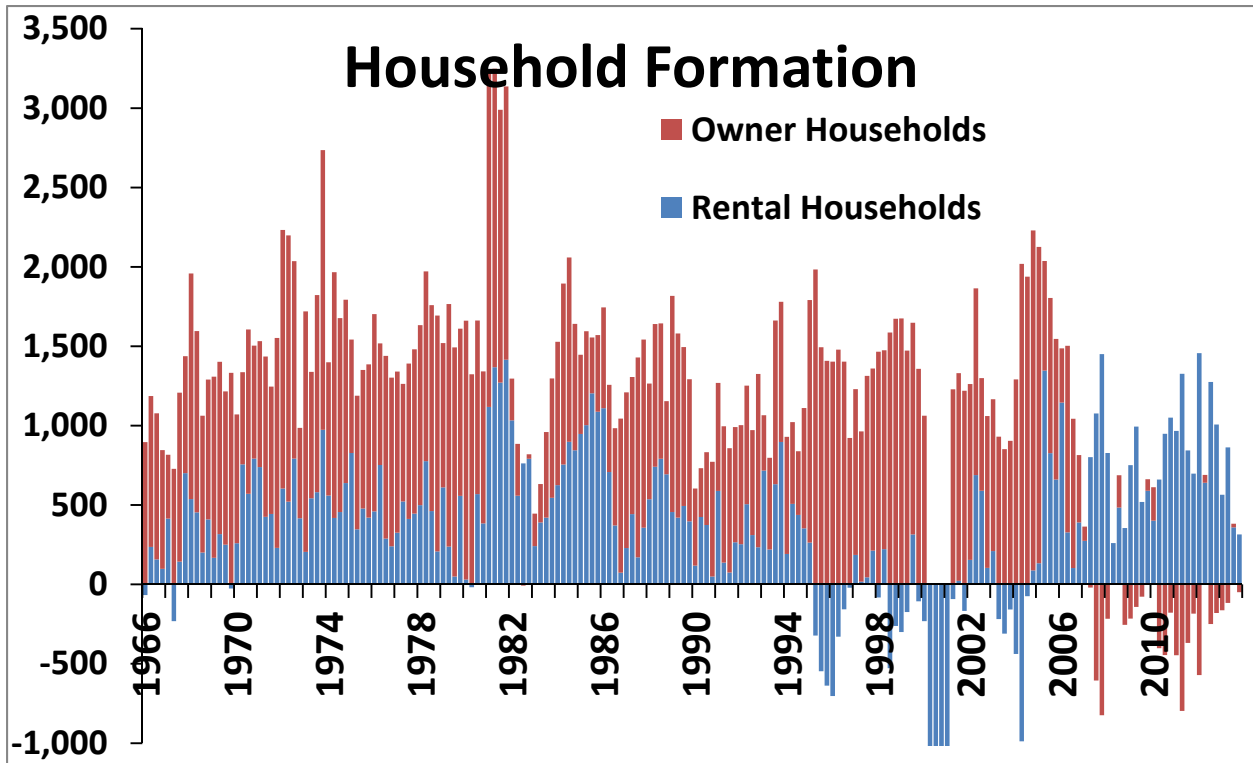
Source: U.S. Census Bureau, American Housing Survey

Chart 2



Source: U.S. Census Bureau, CPS/HVS

Chart 3



Source: U.S. Census Bureau, CPS/HVS

Chart 4: Household Flows between Owner/Renter/SF/MF, by MSA

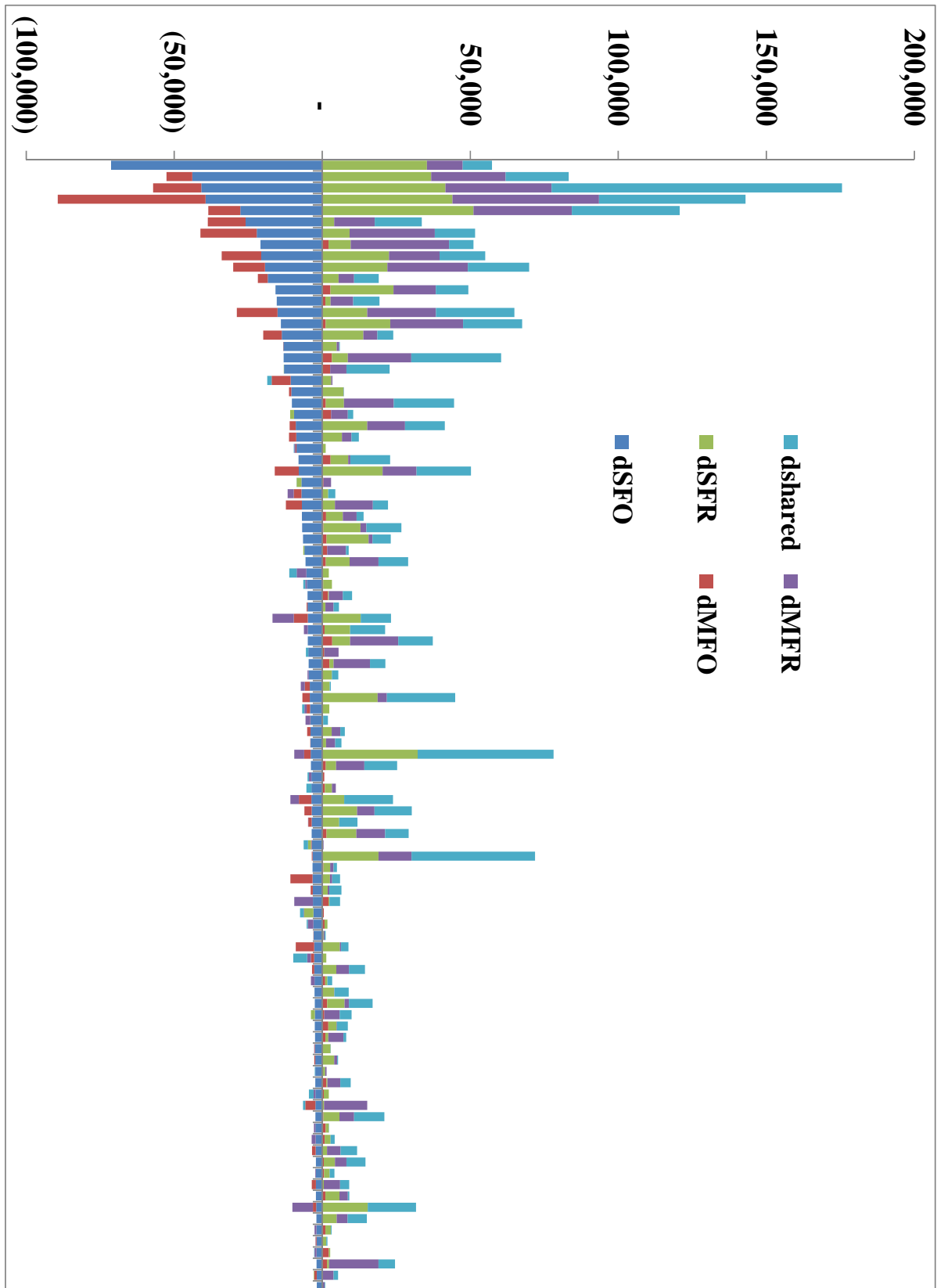
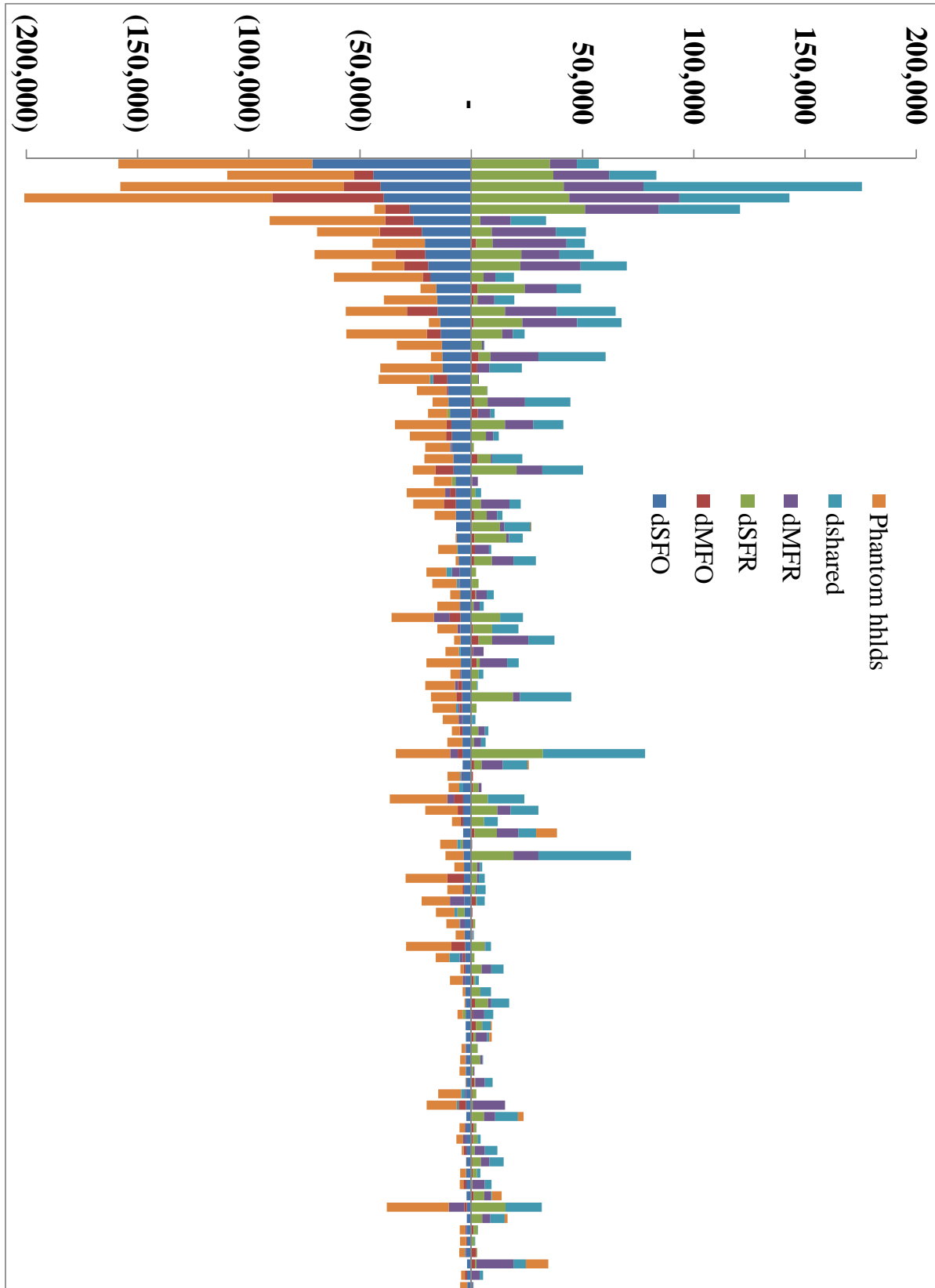
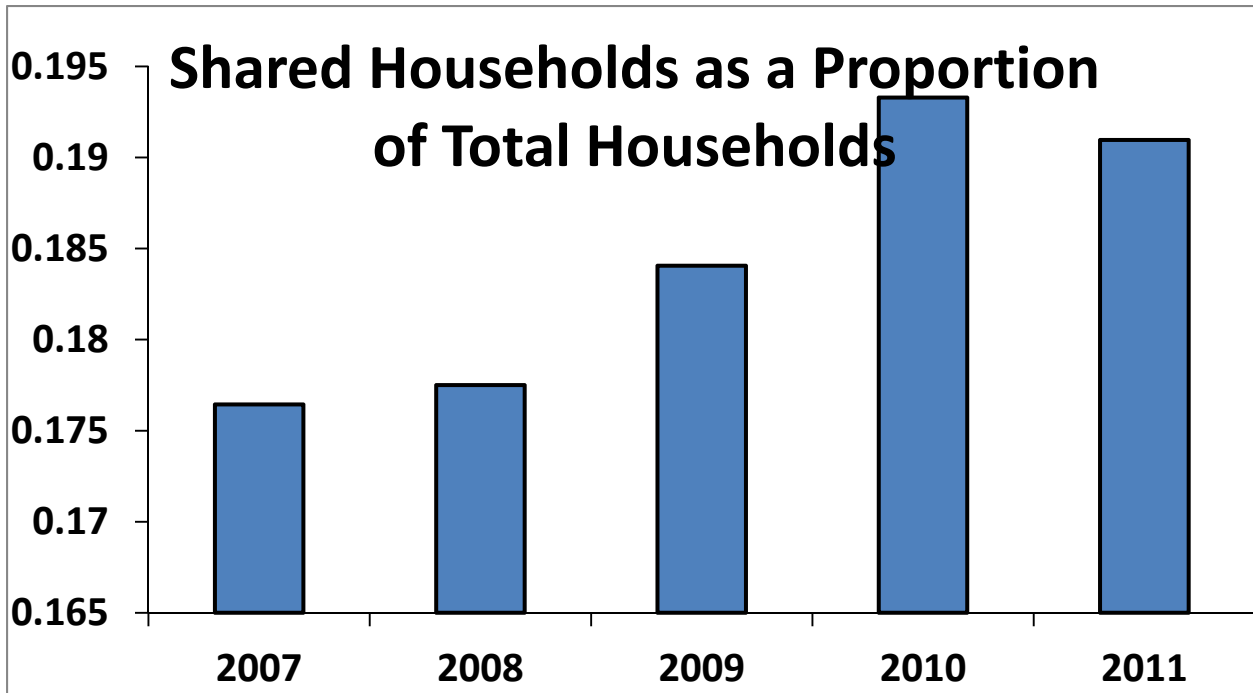


Chart 5: Household Flows between Owner/Renter/SF/MF, by MSA



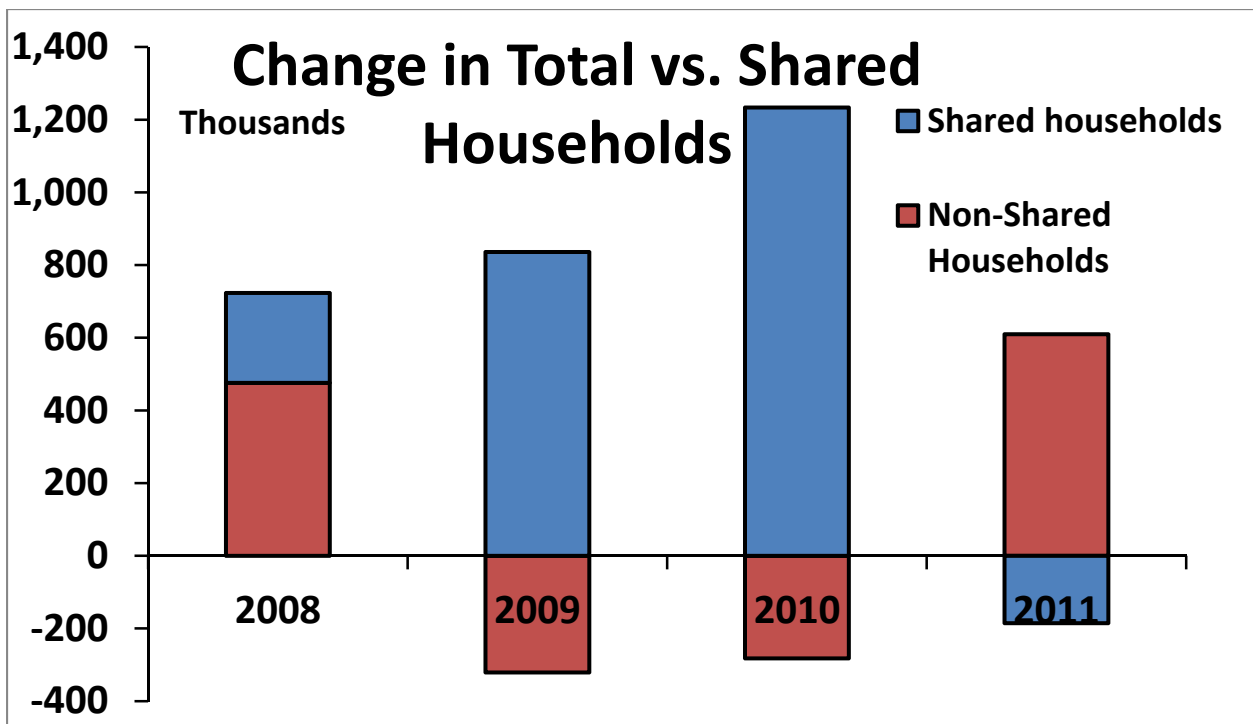
Source: U.S. Census Bureau, American Community Survey

Chart 6



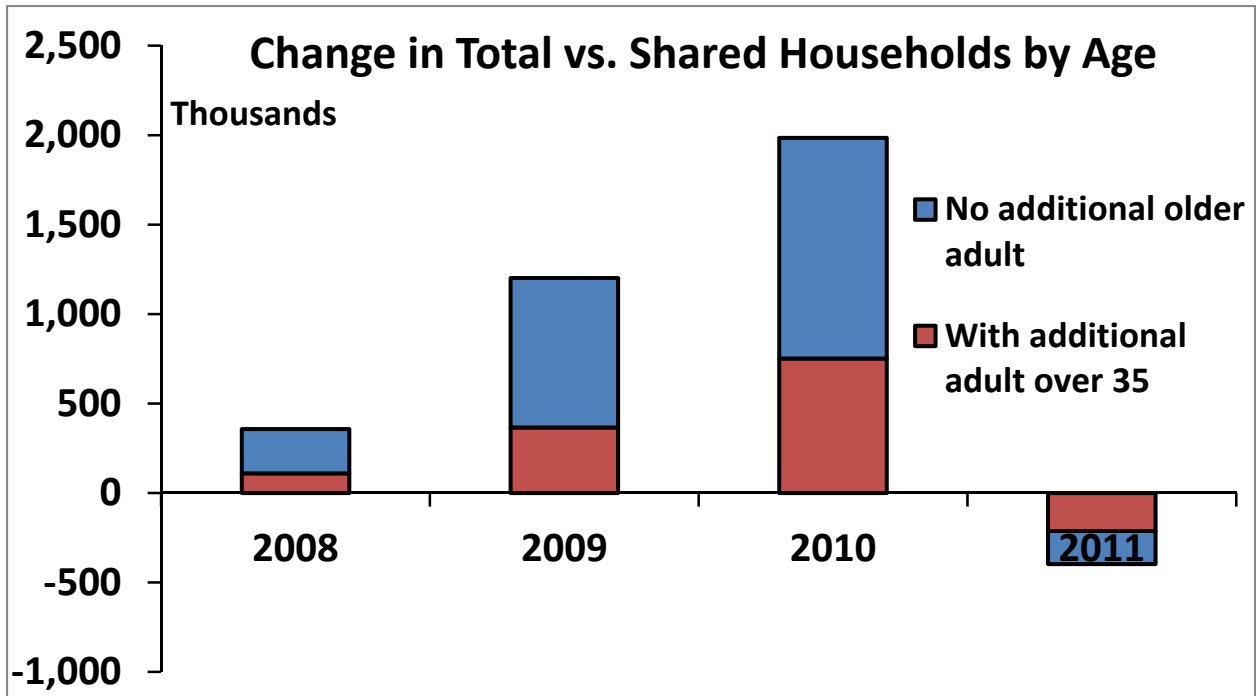
Source: U.S. Census Bureau, American Community Survey

Chart 7



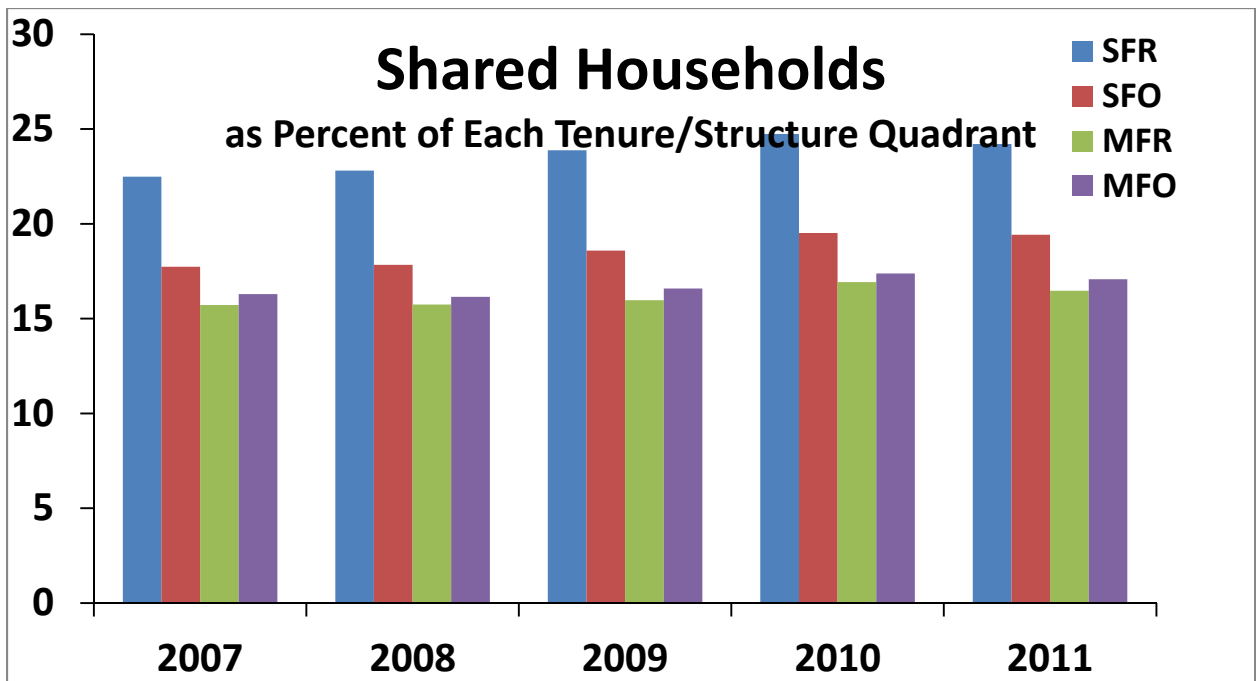
Source: U.S. Census Bureau, American Community Survey

Chart 8



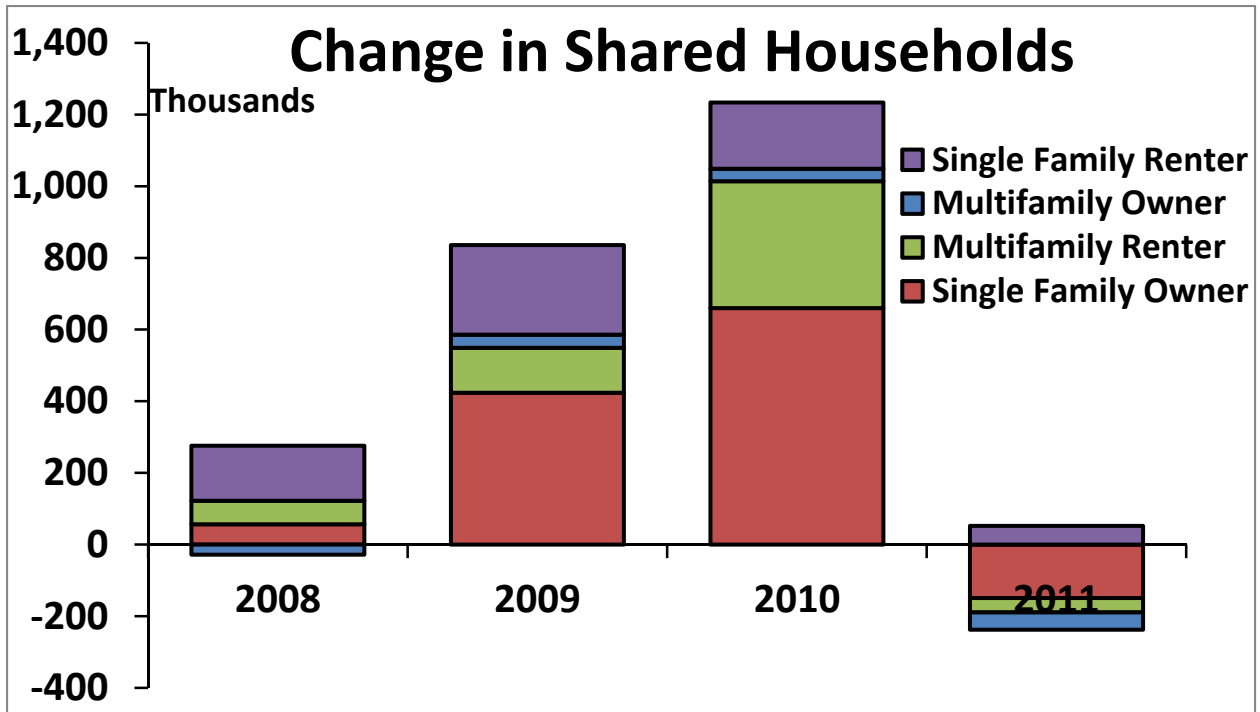
Source: U.S. Census Bureau, American Community Survey

Chart 9



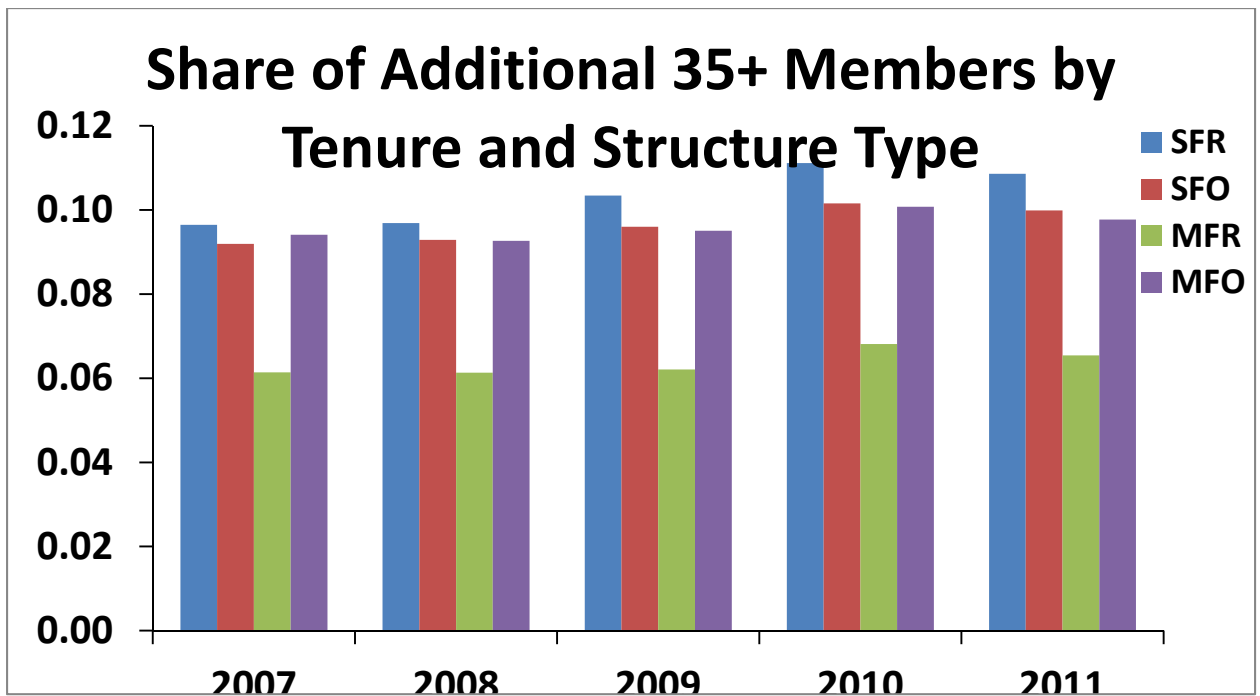
Source: U.S. Census Bureau, American Community Survey

Chart 10



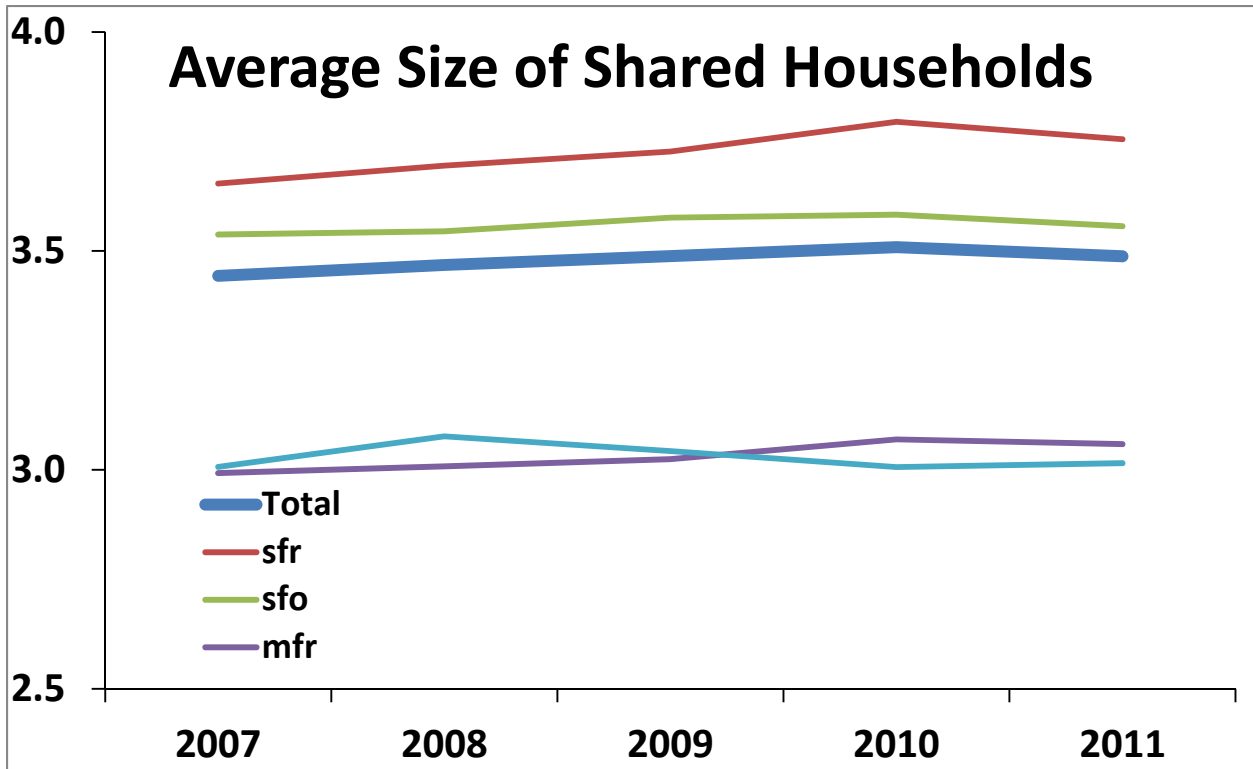
Source: U.S. Census Bureau, American Community Survey

Chart 11



Source: U.S. Census Bureau, American Community Survey

Chart 12



Source: U.S. Census Bureau, American Community Survey

Chart 13

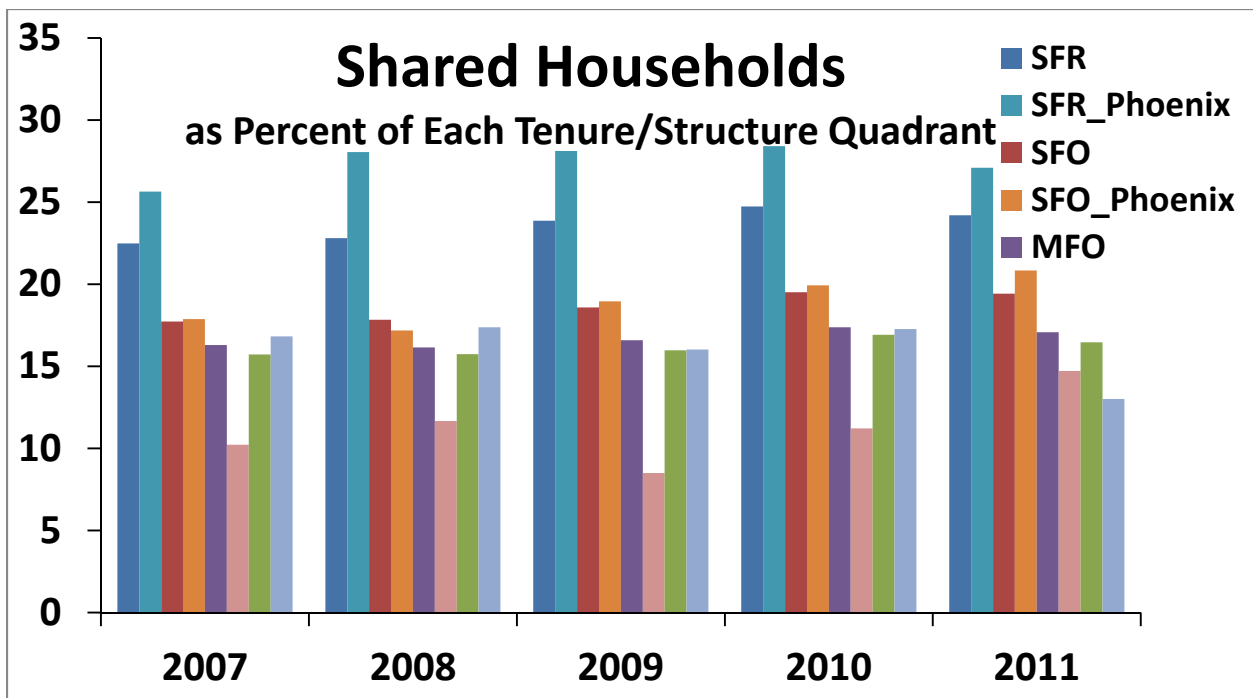


Chart 14

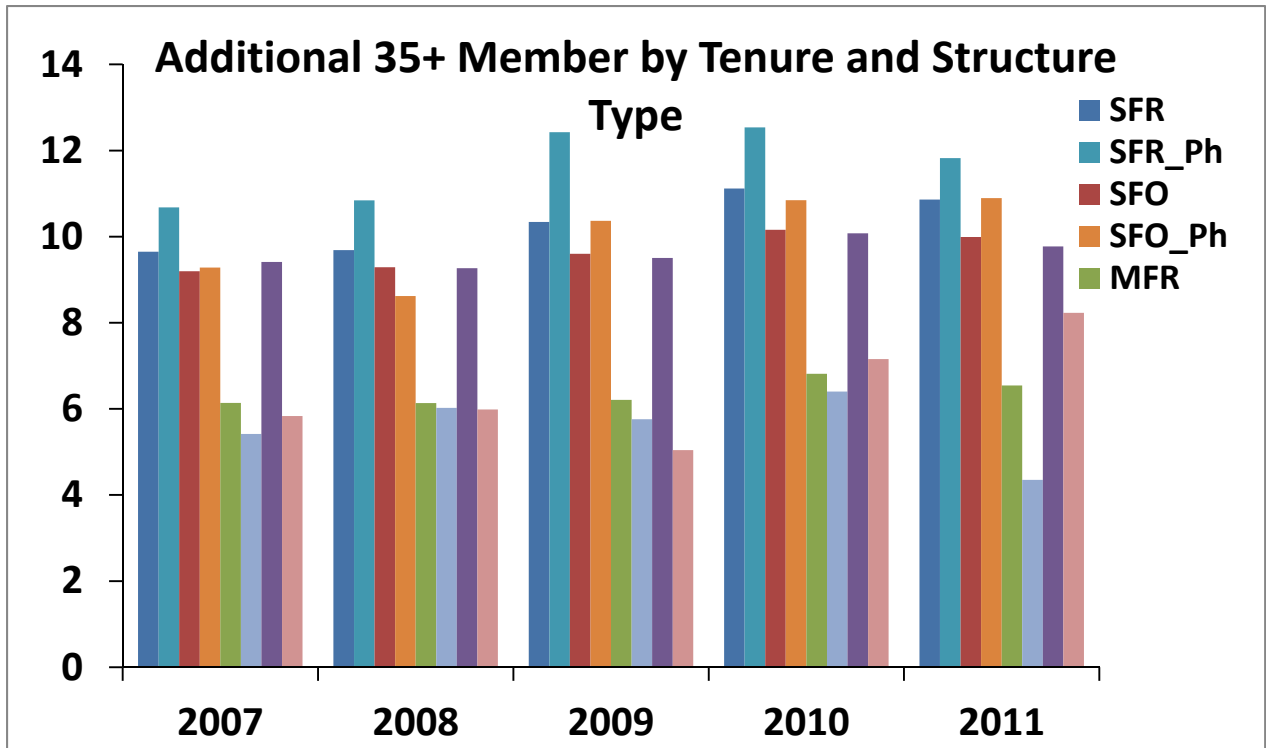


Chart 15

