Economic Policy Program

Housing Commission

The State of the Residential Construction Industry

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BIPARTISAN POLICY CENTER

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Executive Summary

In the heady days of the early 2000s, the U.S. homebuilding and remodeling industry achieved unprecedented levels of production. Consumers' intensifying reliance on homes as financial assets spurred an ever-expanding demand for new and remodeled housing. At the same time, financial and technological investments in the homebuilding industry transformed the operations and structure of homebuilders, remodelers, material suppliers and related sectors involved in every aspect of housing construction. An industry previously stereotyped as fragmented, parochial and technologically stagnant transformed into one noted for increased market agility, innovation and competitiveness across all firm types. As a result, the homebuilding and remodeling industry of 2007 was qualitatively different than the industry of just a decade before.

The Great Recession curtailed the demand and revenue that led to the industry's growth, but the verdict is still out on whether the structural changes seen in the boom years were temporary. The persistent housing downturn muddled the arrival of a clear new future direction for the homebuilding industry. While key players in the industry are waiting for the economy to recover and housing-related policies to be settled, one question arises repeatedly: what will the future industry look like? To address this question, this paper reviews the industry's distant and recent past, surveys current trends, and sketches out potential fundamental shifts in future housing demand and supply as they affect the residential construction industry. Specifically, it explores issues that are of national importance *and* can be impacted by policies adopted at the national level.

The residential construction industry's contribution to the economy should be a matter of national concern.

The extent of the industry's fall due to the recent recession exceeded that of previous downturns. Looking back, however, the industry's historical role within the broader economy has been significant even during down markets, including the current one. The same has been true of all economically developed nations despite differences in housing finance, regulatory and incentive policies. Even in nations with significantly lower homeownership rates, residential construction activity still counts as a source of significant economic activity and employment. The residential construction industry will always play a key economic role in the United States, particularly given current population projections. The proportion of the industry working in certain sectors (remodeling, single-family and multifamily) and the product that each offers, though, has altered over time. Any successful, transformative vision of American housing and

communities must consider the industry that produces them. ***The primary question, then, should not be whether the industry will play a role in the future economy, but what that role will be.***

National policies promoting the housing sector's recovery will also impact future construction trends.

While the extent of the current housing downturn is unparalleled, some of its symptoms are only temporary. Many of the firms that have survived the recession are simply waiting out the housing crisis. Others have dabbled in other sectors (like small homebuilders working as remodelers) as they have done during other depressed markets. In this light, the downturn could be viewed as simply the current bust in the industry's historical boom-and-bust cycle. While there is some truth to this notion, there were also profound structural changes occurring during the boom years that suggest continued change in the industry.

Even through the downturn, production builders and, to a lesser extent, large remodelers sustained market share. Material suppliers increasingly consolidated. Demographic changes that surfaced at the end of the boom like smaller households, aging occupants and more diverse housing preferences continued to determine the location, design and construction of homes. However, going forward, changes in housing, tax and economic policies will also affect the demand for different home types and affordability, and their physical location, construction and design.

Policy designed to spur a short-term housing recovery should also consider the long-term effects on the residential construction industry's operations. Stabilizing and strengthening a single sector (like new single-family housing) in the short term will continue that sector's evolution but could limit the advances the industry has made in other sectors in responding efficiently to housing demand. Appropriate incentives for multifamily housing production and alternative financial tools for remodeling and retrofitting could sow the seeds of the industry's future growth across all sectors.

National policy can improve agility and productivity across industry sectors.

While demographic shifts and economic conditions are changing future housing demand, the industry itself has been altering the way it supplies housing. Production builders' investments during the boom years spurred new operational efficiencies in some cases, and provided higher capacity to gain and negotiate land and entitlements. Though dormant, these advances still exist in their institutional memory. Publicly traded production builders' ability to deal with ever-changing building and land regulations as well as volatile building material and labor costs have led them to experiment with new

product types (like multifamily). Large remodelers' new partnerships with DIY retailers, insurers or other sources of steady work also led to their growing market share.

Yet, the bust also proved that the smaller builders and remodelers who still make up the bulk of construction businesses were more agile across sectors and filled unique consumer niches. During the boom, these firms were also more likely to be early adopters of new technology. The move by small builders into single-family remodeling during the downturn, while typical, has been larger than in prior downturns; with half of small builders making that leap by some estimates, this may be a sign of growing nimbleness in this sector as well.

In short, there is strong evidence that the industry's structural changes during the boom years – and the ability to hold onto many of these gains – are an indicator of its capacity for transformation. Increasingly sophisticated internal operations, housing and green building advocacy groups, and public-private research and development programs all played a critical role in changing the single-family building industry's products during the boom years. ***Funding technological R&D programs in others sectors such as multifamily and remodeling could reap similar rewards***. National research programs could focus on disseminating research findings and benefits to the wider building community. This is particularly true for the mid-sized builders that either lack resources to participate in research or are reluctant to experiment.

National efforts can support industry effectiveness in meeting local housing and economic development needs.

Residential construction industry activity fell across the nation during the recession, but particularly in key states and metropolitan areas. Smaller builders and remodelers that tend to know local markets best were hit especially hard. All past market downturns have reduced competition by weeding out firms, but this downturn's size and duration may give the larger players a wider competitive advantage. The production builders' longevity may lead to the institutionalization of efficiency and product quality gains, but could potentially hurt local, smaller businesses – the traditional mainstay of the U.S. homebuilding industry that has historically been able to move nimbly between construction and remodeling sectors.

Future housing demand will require a diversity of housing types and qualities as determined by local markets. Current trends, such as the growth in multifamily housing demand, the push for energy-efficient design, and aging-in-place construction, as well as population and demographic projections (for smaller households in more densely populated areas, for example) will invariably help shape local housing markets. Yet, ***affordability will continue to be the most important national concern***.

Despite stereotypes, the industry has typically been quick to respond to changes in consumer preferences and is highly competitive, particularly around cost. Policymakers could promote structural changes in the industry that allow for flexibility in meeting regional housing needs while helping the local housing industry to be profitable. In turn, these needs can be aligned with local transportation, energy and water infrastructure in ways that reduce household expenses. National policies could, for instance, allow more balanced building and land regulations and the coordination of housing with infrastructure in economically beneficial ways. Potential national policy tools include additional studies, data collection, direct local funding and the dissemination of best practices like alternative zoning and streamlined permitting. Locally, these strategies should be carefully implemented with appropriate consideration to affordability and the local construction industry's capacity.

Housing policies should acknowledge that the building industry supply chain is increasingly global.

U.S. housing markets are local and with virtually no exception, homebuilders, remodelers and developers are based and work only in the U.S. Yet, many of the key physical inputs used for housing construction and remodeling during the housing boom – materials and products – increasingly came from foreign sources and suppliers. In addition, large numbers of immigrants make up the industry's workforce. For materials and products, ***international trade regulations and support for competitive, domestic residential construction materials and manufacturing*** through export promotion and manufacturing R&D may play a critical, though overlooked, role in strengthening the domestic supply chain and stabilizing the costs of producing homes. Studying the distribution and retail networks for these inputs may uncover other policy challenges with global implications, too.

For labor, ***re-skilling and workforce re-training*** are necessary for firms that are adopting more complex operations, and essential when moving into new sectors. National efforts to promote new workforce training can promote both a steady supply of domestic labor as well as upgrade the skills of the recent immigrant workforce. Reduced opportunities for formal and on-the-job training of future workers (especially for those moving from one construction sector to another) will limit any possible industry transformation.

Key Trends in the Past, Present and Future of the Residential Construction Industry

INDUSTRY SIZE

BOOM	Significant portion of US GDP, averaging about 4-5%, rising to over 6% in 2005
BUST	Drop in contribution to national economy (down to 2%)
FUTURE?	A return to normal activity and economic contribution

BOOM	Major employer of manual labor up to skilled professionals
BUST	Industry with persistently high unemployment
FUTURE?	Return to pre-boom employment rates

BOOM	Major source of local economic growth in some regions and cities, up to 10% of local GDP at the peak
BUST	Devastating drag on local economies
FUTURE?	Return to prevalence as an economic force and employment source in key regions and cities of growth during the boom

APPROXIMATE TIME FRAMES

BOOM	2000-2007
BUST	2008-2012
FUTURE?	2013-2020

INDUSTRY COMPOSITION

BOOM	Consolidation among the larger firms within the new single-family sector and, to a lesser extent, remodelers
BUST	Continued hold of market share among consolidated production firms and mild hold of large remodelers
FUTURE?	Continued if not growing role of larger builders and, possibly larger remodelers

BOOM	Growing technological innovation and operational enhancements
BUST	Suspended investments in R&D
FUTURE?	Expansion of previous R&D to other sectors (especially regarding energy remodeling)

BOOM	Little to no transitioning between sectors
BUST	Transitioning to remodeling among other small firms and to multifamily among some large firms
FUTURE?	New business models at either end (large and small sized) in each sector that allows for more sector agility, more market responsiveness, and harnessed operational efficiencies

BOOM	Consolidation and specialization among building material suppliers and retailers
BUST	Continued market share among consolidated material suppliers and retailers
FUTURE?	Similar split-model between suppliers of large enterprises and niche firms

BOOM	Volatile material prices due to international trade regulations and competition for material demand; stable labor costs from increased reliance on foreign-born, Hispanic labor with little to no organized labor
BUST	Stagnant material prices and reduced labor pool because of downturn
FUTURE?	Ongoing global competition for building materials and increased need for skilled workforce

INDUSTRY PRODUCTS

BOOM	Large single-family homes at all price points were the largest product type
BUST	Smaller single-family homes dominating
FUTURE?	Diverse housing types to match the income and cultural demographic shifts

BOOM	Remodeling (especially DIY remodeling) and new single family growing but new multifamily remaining steady
BUST	Remodeling increase share of overall activity and multifamily increases as share of new starts (though all sectors are in a slump)
FUTURE?	More even share of activity between new single family and multifamily, and new and remodeling sectors

BOOM	Increased interest in green homes, aging-in-place, and walkable communities
BUST	Continued interest in new housing design and community types
FUTURE?	Advances in designs for alternative, more flexible housing, though continued building of traditional suburban single-family homes as well as denser urban multifamily rentals

BOOM	More stringent codes, particularly in energy and green building, and land use regulations
BUST	Proliferation of stricter building & land regulations
FUTURE?	Land and building regulation that accounts for housing costs (such as TOD incentives and density bonuses

BOOM	Emerging demographic shift to a majority of smaller households (singles and married couples with no children who demand urban, smaller possibly multifamily housing for homeownership and rental) and a growing immigrant population (requiring larger homes)
BUST	No major change alteration in ongoing demographic trends (with possible exception of decreased immigration)
FUTURE?	Increased options to meet multiple demographic needs

Introduction

Scholars and industry analysts often point to the post-World War II period as the birth of the modern American homebuilding industry; this generalization applies as much to the means and methods of construction as to the land regulations, financial products and population growth of the time. Many of the construction methods for building homes that are used today were actually introduced over a century ago. Yet, the combination of increased demand, streamlined construction operations, and changing building regulations during the post-War years certainly helped to determine the size, composition and operations of local and regional homebuilding and remodeling firms. National housing finance policies and local land use regulations enacted at this time also secured a significant, long-term place for the industry in the national economy for years to come.

In both qualitative and quantitative ways, the housing boom of the early 2000s mirrored the explosive growth of that earlier period. Extensive cultural interest in the physical qualities of new and remodeled homes, hyperactivity in home purchases and remodeling, technological experimentation, increased specialization among residential construction trades, as well as overt consolidation – and competition – among residential builders were all key attributes of the industry's recent past that built upon the previous half-century's growth and knowledge base. Within a policy environment focused on expanding homeownership, the recent industry produced and remodeled record quantities of single-family homes while producing a fairly stable supply of multifamily units – also increasingly for homeowners.

The recession put the brakes on much of this growth. The diminishing number of housing starts is the most obvious sign of the industrial contraction that has, in turn, reduced the financial and organizational resources available to firms. The overall impact of the downturn on the industry itself *beyond* a temporary contraction, however, is still unclear.

Visions of how the market downturn will lead to a transformation of the industry abound; a "rethinking" has been proposed of the current industrial processes that produce American homes based on recently acquired efficiencies and technological innovations, ongoing land regulation trends, and future, more profound demographic change.[1] In particular, much attention has been paid to prefabrication and "green" building as developments that will dramatically alter the processes and, ultimately, organization of industry players. Regional "smart growth" policies focused on infill, transit-oriented and higher density development will shift cost structures and regulatory compliance. In addition, changing national household composition and economic

conditions are said to reduce the desirability of future single-family homeownership and increase the demand for multifamily rental housing.

There is evidence for both revolution and evolution in the future industry. However, existing housing production (including small, single-family builders) and product demand (especially single-family homes) will not disappear anytime soon. Ultimately, national policy directed at industrial change – in addition to the consumer economic and social policies that will shape housing demand – will determine the pace of any change. This paper details fundamental characteristics of the contemporary U.S. homebuilding and remodeling industry. It is structured around three key themes: 1) the industry's economic importance; 2) its composition and organization; and 3) the impact of changing demographics and preferences on the demand for its products.

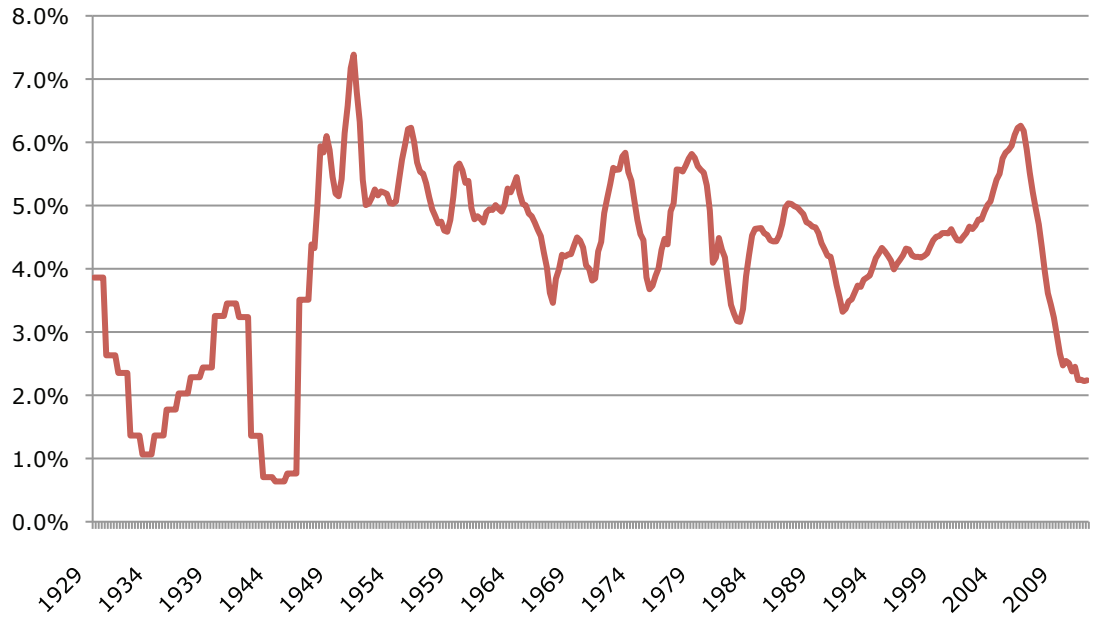
The Industry's Size and Economic Importance

The housing industry (including sectors beyond construction, like housing finance and services) was widely viewed as a primary contributor to keeping the national economy afloat after the "tech bubble" burst at the beginning of the century. In fact, increased investment in housing led to what is now often called the "housing bubble." The significance of the residential construction industry to the overall economy particularly peaked during the "bubble" years, but this industry has historically played a key and stabilizing role even during housing downturns. Two key indicators are reviewed to describe the importance of the homebuilding industry to the broader economy: its share of overall economic production and its overall levels of employment.

National Importance

As a share of the national economy, the residential construction industry has historically played an immensely significant role. Since the Great Depression, residential construction (including all fixed investment but excluding residential services and finance) has averaged almost five percent of national gross domestic product (GDP) while exceeding six percent immediately prior to the recession for the first time since the immediate post-War years (Exhibit 1). The precipitous drop during the recession is notable not just because of the highs that immediately preceded it, but also because of the extent of the lows it has reached. For the first time in the last half-century, the residential construction industry's share of U.S. GDP fell below three percent in late 2008. There has been some leveling off around 2.2 percent for the past year, but with no sign of immediate change as both the overall economy and the housing market in particular slowly recover.

Exhibit 1. Residential Fixed Investment as Percent of GDP



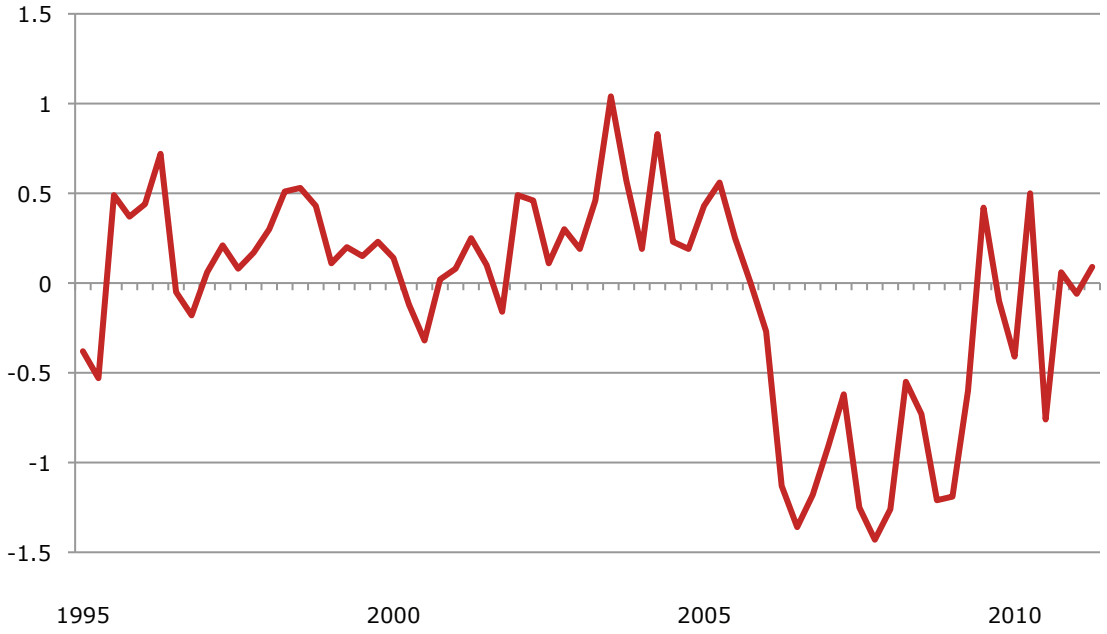
Source: U.S. Department of Commerce, Bureau of Economic Analysis
Note: Seasonally adjusted annual rates from 1929-1939 and quarterly rates from 1939-2011. Residential fixed investment includes new single-family and multifamily construction, residential remodeling, manufactured housing production, and related brokers' and sales fees.

Residential investments (new construction, remodeling and equipment installation) also lay the groundwork for numerous other economic activities well beyond the construction trades; housing finance and mortgage transactions, rents, utilities, appliances and furniture purchases – all of these account for an historical estimate of 15 to 20 percent of U.S. GDP. With up to one quarter of consumer spending being related to household wealth during the boom years and with homeownership being the most critical historical component of household wealth for most Americans, the bricks and mortar of homes have great economic significance.[2]

ECONOMIC GROWTH

In turn, the housing downturn has had an impact on the overall economy beyond its own contraction. Just as expanding housing production contributed positively to increasing GDP during the boom, the bust has also weighed heavily on it (Exhibit 2). From 2002 to 2006, the housing construction industry consistently contributed to national economic growth; from 2006 through 2009, however, the situation reversed and the industry became an increasing drag on the nation's economy. The past two years have been volatile, with the industry alternately contributing to and detracting from changes in the overall economy. Most recently, though, these variations have been more muted and suggest a holding pattern.

Exhibit 2. Residential Fixed Investment's Contribution to Percent Change in Real GDP

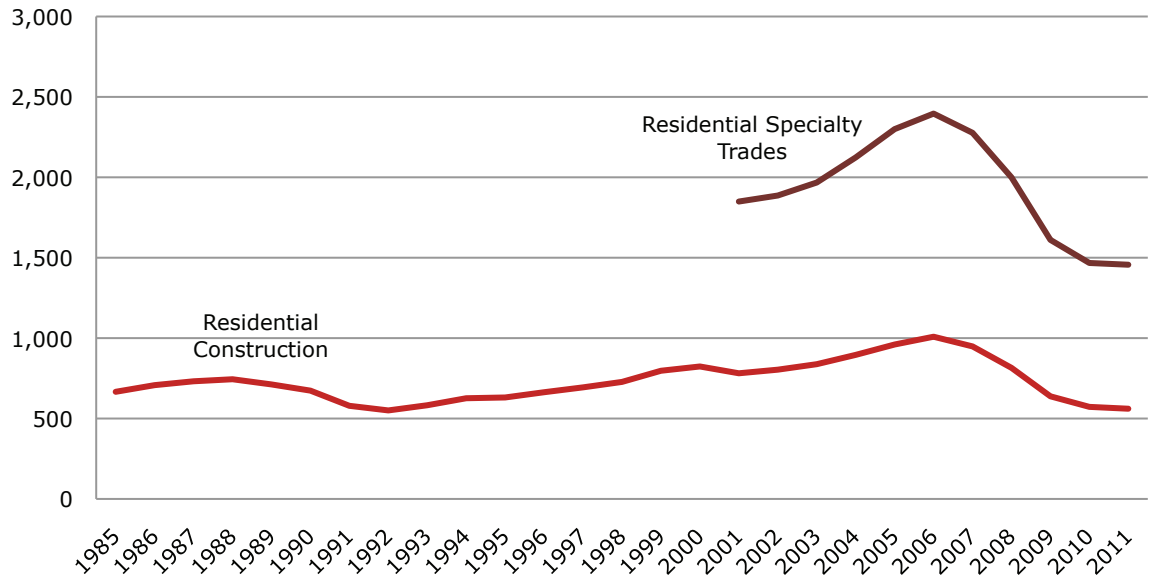


Source: U.S. Department of Commerce, Bureau of Economic Analysis

EMPLOYMENT

Changes in the number of individuals working in the residential construction industry tell a similar story about the industry's evolving importance and impact on the overall economy. At the industry's 2006 peak, over one million individuals were employed by residential construction firms and almost two-and-a-half million were employed by residential specialty trades (Exhibit 3).[3] Combined, these employees made up 2.5 percent of all non-farm employment in the country. By 2011, this number has been reduced by over 40 percent. Today, residential construction employees make up only about 1.5 percent of the total non-farm employment base in the U.S.

Exhibit 3. Employment in Residential Construction and Specialty Trade Firms (1000s).



Source: U.S. Department of Labor, Bureau of Labor Statistics
Note: Residential Specialty Trade employee data is available from 2001 only.

INTERNATIONAL COMPARISONS

In both overall economic activity and employment, the downturn has had two key traits that have consequences for the future of the housing industry. The first is the magnitude of the downturn itself – that is, the amount of the drop. The consequences of going from record highs to record lows within a three-year time span are having, and will certainly continue to have, an effect on the industry's individual firms and composition in ways that are explored later in this paper.

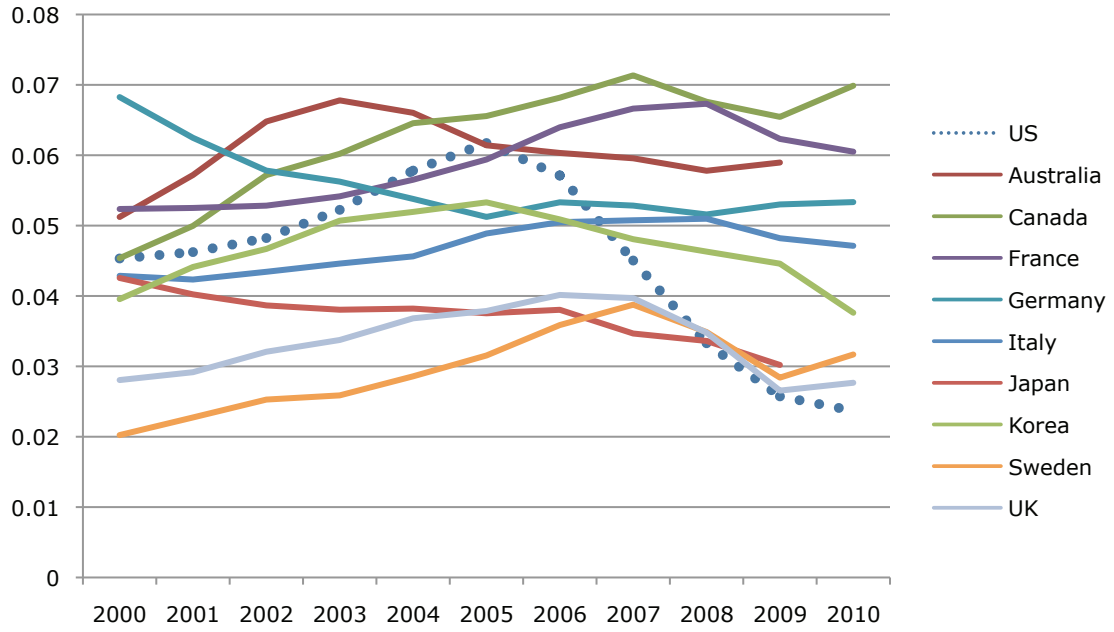
The second trait of the downturn is the specific "low" to which the industry has recently stabilized in both output and employment terms – or, the point to where the industry has dropped and whether it could stay there. Though possibly a temporary correction to the exuberance of the previous years, the dramatic downturn in the industry's production could prove to be longer lived given other economic conditions and how likely policy changes in housing finance and homeownership tax subsidies affect demand.

In other developed nations with mature economies and entirely different housing finance and production conditions, the residential construction industry still plays a stable and often sizeable role though the nature of housing market cycles varies by country.[4] In Germany, for example, residential construction has averaged six percent of GDP from 1970 to the present, though over half of German housing units are multifamily.[5] Canada's residential construction investments have averaged slightly less than six percent since the 1980s and hover near the seven percent mark currently.[6] Some countries with housing "bubbles" similar to the U.S. like Ireland and Spain saw

residential construction reach peak shares of national GDP at 14.0 percent and 9.3 percent, respectively, in 2006, and then drop precipitously to 3.0 percent and 4.7 percent. A notable exception to this has been the Japanese housing industry, whose share of GDP has steadily decreased from about seven percent in the late 1970s to its most recent three percent, due partially to population decline.

On the whole, though, residential construction plays a stabilizing role in national economies regardless of national housing policy, especially those with expanding populations (Exhibit 4). The U.S. housing industry is not expected to differ from this long-term pattern. Most analysts project a continued significant role in the overall economy for the industry during and after its expected, eventual recovery similar to that of other nations. What is not yet clear is how the industry's products (single-family versus multifamily) and activities (new construction versus remodeling) will evolve and realign during this transition.

Exhibit 4. Residential Construction as Percent of GDP in Select Developed Nations



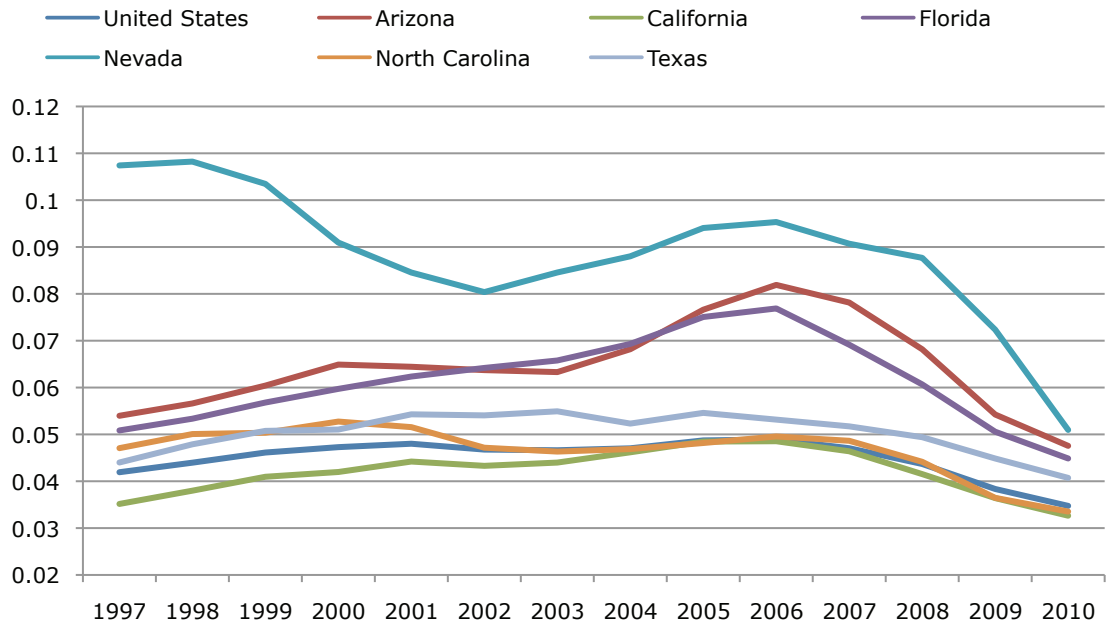
Source: OECD Statistical Extracts (http://stats.oecd.org/Index.aspx).
Note: Calculated in current U.S. $ with OECD base year.

Local Importance

Both qualitatively and quantitatively, however, housing markets are local. While many of the national indicators of the housing industry's activity and economic importance are mirrored in state and metropolitan area indicators, a closer glance at some of these local areas suggest that housing played a more significant role in the local economy than the national average. Further, the downturn wreaked havoc not just on the local housing

industry but also on the region's overall economy. States that experienced the highest number of housing starts during the housing boom and also relied heavily on the housing industry as a basis for their regional economies – like Nevada, Arizona and Florida – are particularly noteworthy (Exhibit 5). They were among the five states with the highest rates of decline in construction employment in 2009, each seeing declines greater than 20 percent.[7] While other states have struggled in the recession, they have not seen drops in housing prices and construction employment on the scale of what has been seen in Arizona, Florida and Nevada.[8]

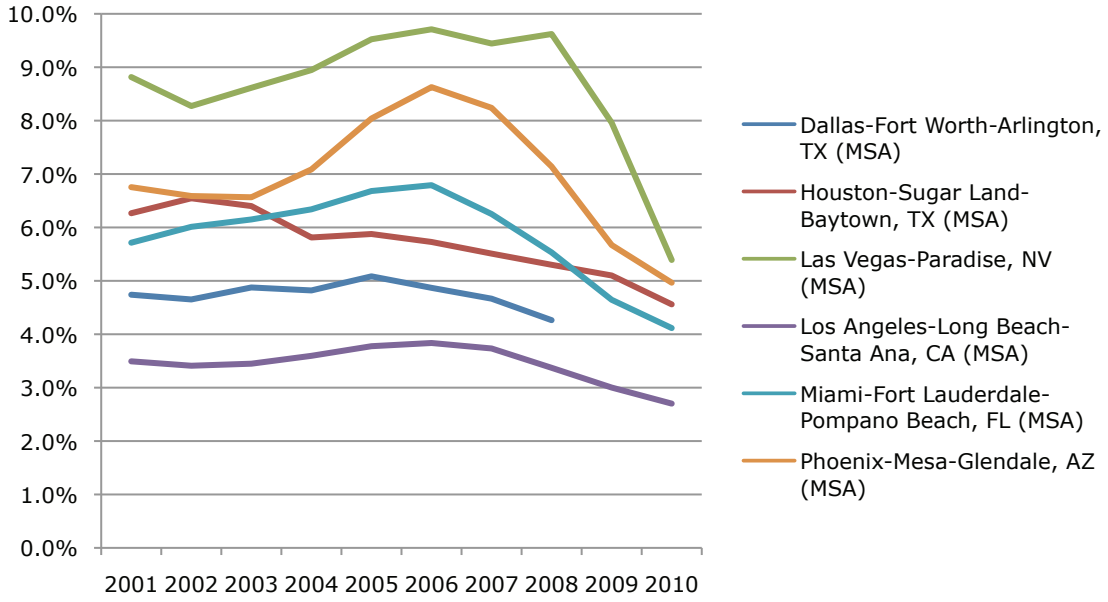
Exhibit 5. Total Construction Activity as Percent of GDP in U.S. and Select States



Source: U.S. Department of Commerce, Bureau of Economic Analysis
Note: Includes all private non-residential construction activity as well as residential, but excludes public capital expenditures. The U.S. percentage is based on the sum of domestic state construction activity within this definition

The impact has been felt just as deeply at the city level. Two metro areas in particular, Las Vegas and Phoenix, saw rates of construction as a percentage of GDP far higher than the average of all U.S. metros from 2001 through the boom years (Exhibit 6). The share of Las Vegas' 2006 metropolitan GDP from its construction industry was roughly twice that of the U.S. metro average, with the share of Phoenix's industry slightly lower but significantly high. By 2010, both Las Vegas and Phoenix would see the construction industry's contribution to their economy reduced by over 50 percent. From 2007 to 2011, Las Vegas lost nearly 62,000 construction jobs, second to Phoenix, which lost over 91,000.[9] Other fast-growing metro regions like Miami, Raleigh and Houston also had higher than average shares of construction activity as components of their economies in 2006, but saw less severe reductions from those peaks.

Exhibit 6. Residential Construction Activity as Percent of Total GDP of Select Metro Regions



Source: U.S. Department of Commerce, Bureau of Economic Analysis

The exuberance of the housing boom and the despair of the housing bust for local communities have been detailed in countless news articles and trade papers, providing context to the raw economic data and detailing the effects of the industry's rise and fall on local economies. In both scenarios, the residential construction industry is depicted as critical to the local economy and a major local employment base. According to the National Association of Home Builders (NAHB), the construction of 1,000 typical single-family homes yields an average 3,050 construction-related jobs, approximately $145.4 million in wages, and $89.2 million in revenues from taxes and fees for local, state and federal public coffers.[10] The local impacts of the housing downturn are just as significant as the national – and more visible. In the future, many of the hard-hit communities are likely to still see construction playing a vital role in their local economies.

The Industry's Composition

While a formidable economic force prior to the recession, the housing industry was stereotyped as one without a particularly complex array of highly sophisticated players. The homebuilding industry's geographic and operational fragmentation and locally competitive nature have been noted repeatedly. During the housing boom, though, much attention was paid to the increasing size of publicly traded homebuilders, their expanding geographic coverage, and their capacity to acquire smaller, regional, medium-sized builders. In many respects, the growth of the "production builders" was viewed as a clear sign of the industry's coming of age. Access to capital allowed these firms to expand nationally, command reduced labor and material costs, and weather the usual production cycles.

The rise of the production builders, in short, was one of, if not the most, noted industry stories of the housing boom. Yet, there were many other important developments during that time both for homebuilders and remodelers (including regulatory changes and technological diffusion), as well as for other players in the housing industry (such as multifamily developers, material suppliers and product manufacturers) who were just as central to the industry's broader growth. More importantly, the recession has demonstrated the potential of perpetuating, offsetting or redirecting many, if not all, of these changes. The following analysis reviews the trends in each sector's composition and operations from the boom through the recession.

- **Builders of new single-family homes.** With production builders holding onto market shares and expanding into new sectors (like multifamily), and small builders venturing into remodeling (though this is often a trait of housing downturns), the sector is expected to undergo significant change.
- **Remodelers of single-family homes.** A traditionally more stable sector, remodelers are experiencing some consolidation similar to the new homebuilders. Yet, the sector is likely to be transformed further by likely long-term growth as the older existing home stock ages.
- **Builders and developers of new multifamily homes.** Facing the largest short-term growth among all the sectors, multifamily construction is expected to continue to grow. The concentrated number of players in this sector will likely compete more for land and financing.
- **Building material and product suppliers.** Unlike the construction sectors whose products must be "manufactured" locally, building material and product

can be made anywhere. This sector is increasingly subjected to global trade patterns and constraints.

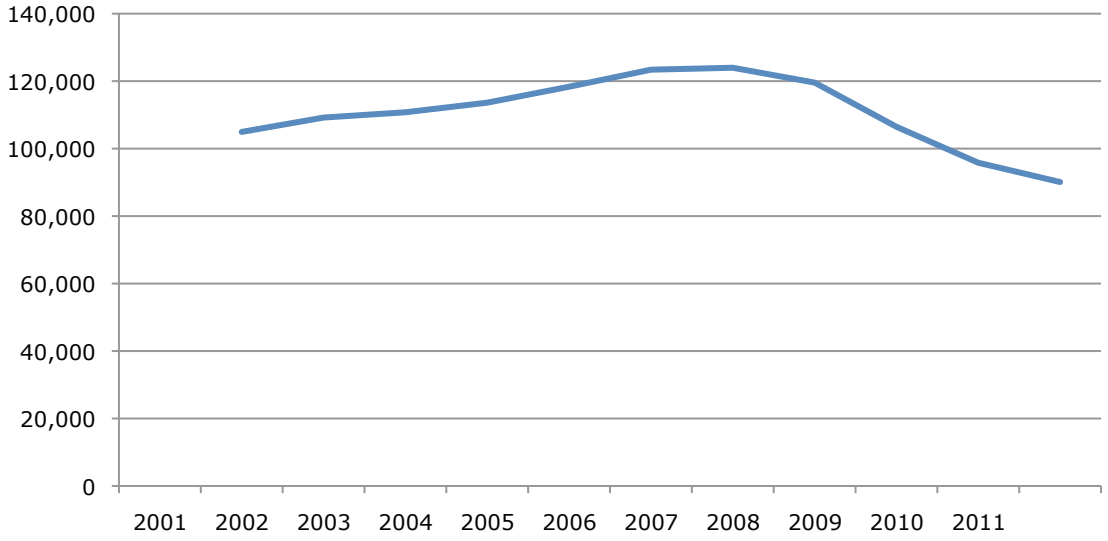
- **Labor.** Like material inputs, labor markets have also globalized. In addition, the labor force must be prepared to more readily respond to changing demands for skills in support of the builders and remodelers.

Each of these groups must transform or, at the very least, be flexible enough to withstand the housing downturn and respond to long-term housing market needs.

Single-Family Homebuilders

Homebuilders, the industry sector that builds new single-family homes for the most part, have suffered tremendous losses from the housing downturn; at best, homebuilding firms have either seen dramatically reduced revenue or have had to lay off significant numbers of employees. At worst, these firms have declared bankruptcy or no longer exist. Between 2007 and the present, the number of new single-family homebuilders dropped by over a quarter (Exhibit 7). This includes all firms that had employees on payroll.

Exhibit 7. Number of New Single-Family Builder Establishments, 2001-2011



Source: U.S. Census Quarterly Census of Employment and Wages
Note: Includes both new single-family general contractors and operative builders.

Various factors are determining how the recession and its aftermath will shake out with regard to the industry's composition, including the ongoing reactions to previous lending practices and the possibilities of future financial regulations. In one scenario, the smaller firms with low overhead dominating the industry may be able to bounce back more quickly later. In another, many of the smaller firms may lack the resources and access

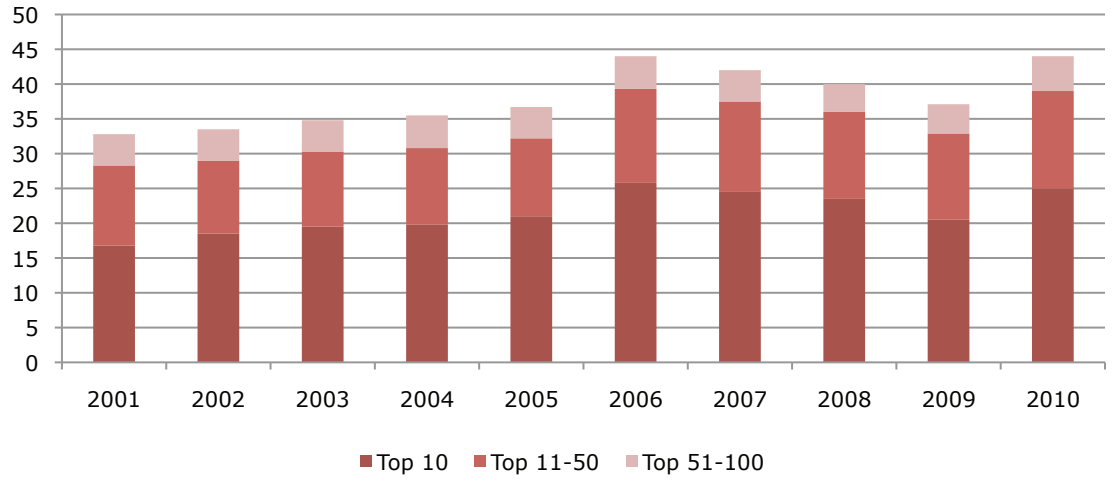
to capital in the future, and the larger firms could then be better positioned if and when local housing markets expand. However, the "if and when" remain ambiguous for either case.

PRODUCTION BUILDERS

One of the biggest stories to come out of the housing boom was the growth and continued consolidation of the large, publicly traded production builders fueled almost entirely by acquisitions of medium-sized regional firms with local landholdings.[11] Though a somewhat diverse group, these firms have numerous comparative advantages because of their extensive ability to access capital through shareholders and lending institutions, their command of price reductions for materials from bulk purchases and sheer buying power, their land inventories, and internal efficiencies and operational economies of scale.[12] These advantages were put into use throughout the boom years through targeted divisions or acquired smaller firms, and particularly in the high growth areas (like Phoenix, Las Vegas and Orlando) where these builders' production capacity more readily satisfied housing demands.

While the market share of the 10 largest homebuilders rarely exceeded 10 percent before the mid-1990s, it exceeded 25 percent by 2006 (Exhibit 8). The top 100 builders completed almost 43 percent of all homes in the same year. Rather than transplanting all local contractors, though, the consolidation of the single-family builders primarily involved the purchase and merging of medium- to large-sized regional builders in order to acquire land holdings, assets, and local knowledge and branding.[13]

Exhibit 8. Market Share of the Top 10, 50, and 100 Home Builders (%), 2001-2010



Source: Builder Magazine.

Early in the recession, there was some speculation regarding how it would disproportionately impact the production builders or smaller builders. Further, it was predicted, the capital and incentive to continue the consolidation trend would cease.

While there was a drop in market share during the recession, neither prediction has come true. In 2010, the overall share of the top 100 builders matched that of the housing boom peak in 2006. The 2009 merger of perennially large builders Pulte and Centex was a closely watched sign of the continuing trend as well.[14] Large builders continue to exert operational strategies such as optioning land rather than full purchases for possible future expansion.[15]

Aside from the advantages of capital, land and material access that come with their size, production builders also helped mainstream many energy-efficient and prefabrication technologies that were tested by smaller builders.[16] Their adoption rates played a significant role in the diffusion of tested but not widely utilized techniques and practices that are likely to shape consumer preferences for years to come. Current activity appears to still reflect many of these adoption efforts.[17] For example, Leading Builders of America, the association established in 2009 to represent many of the largest builders, has taken energy efficiency as one of its central advocacy platforms in addition to broader mortgage finance reform. Others, such as pre-assembly efforts, have not fared as well.[18] Overall, production builders harnessed numerous strategies to benefit their revenue goals as well as potentially overcome the effects of the traditional boom-bust cycle of the industry (such as access to capital, land and marketing).[19]

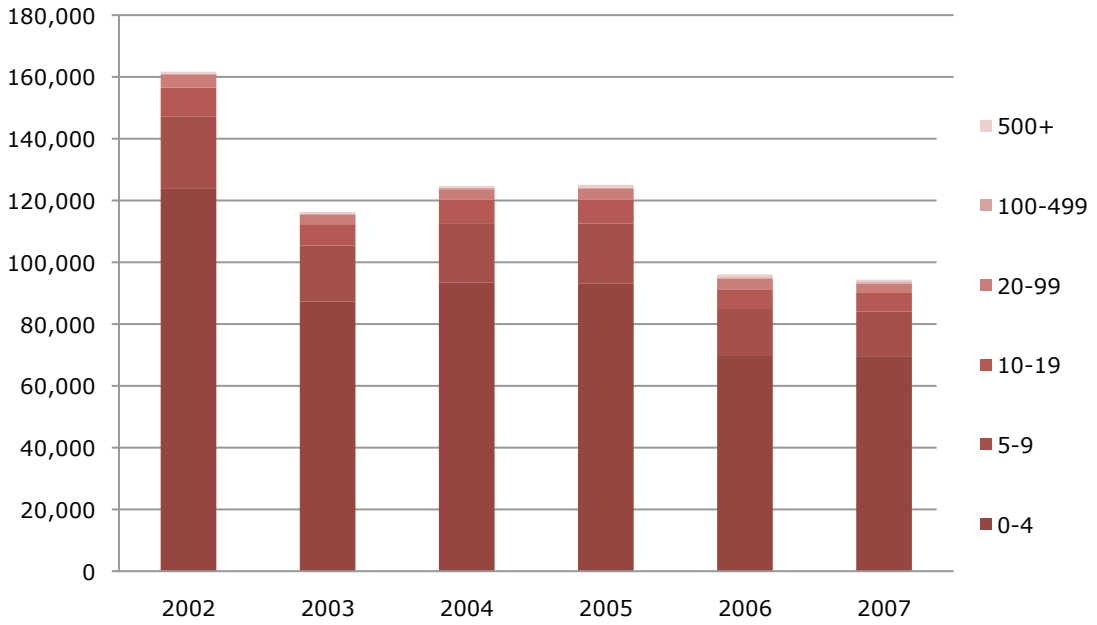
Finally, most production builders still focus on the single-family sector; 75 percent of the units produced by the top 100 builders are still new single-family housing.[20] By varying the product type to include smaller, value-engineered homes that are more affordable and focusing on markets that have been less affected by the downturn, large builders have been able to continue to generate revenues in this sector. There are, however, a growing number of the larger builders that have ventured into single-family attached townhouses. A few have even successfully crossed into denser multifamily (particularly for-sale condominium) production; while still a fraction of its overall units, Lennar has increasingly built multifamily properties followed by production stalwarts Toll Brothers, K. Hovnanian and Weyerhaeuser. Though not pervasive enough to be a trend, these forays into new markets demonstrate a capacity for operational shifts and product diversification.

SMALL BUILDERS

Currently as well as historically, smaller builders have made up the majority of the homebuilding industry. For example, firms outside of the top 100 builders accounted for 56 percent of all the homes built in 2010 (Exhibit 9). However, smaller builders (including the self-employed) were also proportionately affected by the recession.[21] Among all single-family builders with employees, the total number of establishments with four or fewer employees first took a significant hit as a consequence of the recession (Exhibit 9), with one quarter fewer firms of this type in business from 2005 to 2008. This proportion was mirrored in all other groups except those establishments with over 100 employees (that saw only a five percent decline in overall numbers). The exit rate from 2008 to 2009 of construction firms with one to four employees was 30.4

percent, a rate far outstripping that of firms of other sizes, overall rates in other industries, and previous exit rates for these firms.[22] We see a similar trend when we compare the number of establishments by the value of the business they have done (Exhibit 10), and when looking at the additional numbers of residential building establishments that are sole proprietorships with no payroll employees (Exhibit 11). Both the move by many smaller builders into remodeling, and the transition of firms to non-employing sole proprietorships are likely to be temporary. Yet, they also demonstrate many of the advantages that small builders bring to the marketplace.

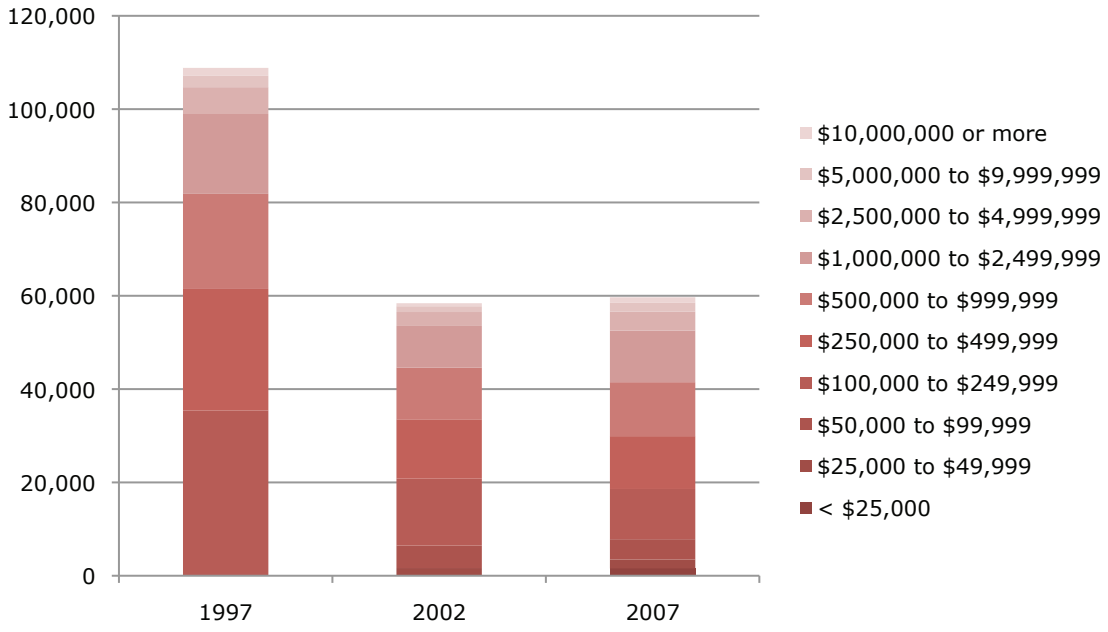
Exhibit 9. Number of Single-Family Builder Establishments by Number of Employees



Source: U.S. Census Bureau Statistics of U.S. Businesses (SU.S.B) Data
Note: Includes new single-family construction builders and operative builders.

Knowledge of local housing markets, agility in meeting changes in market demand, and the ability to integrate new technologies were all characteristics of smaller builders during the boom – and likely to set the stage for the demand for their services in the future. Smaller firms were more likely to be "early adopters" of technologies, in particular. Federal programs like EPA's ENERGY STAR, the U.S. Department of Energy's Building America, and the U.S. Department of Housing and Urban Development's (HUD's) Partnership for Advancing Technology in Housing – along with national industry programs like the NAHB National Green Building Program, the NAHB Research Center EnergyValue Housing awards, and the U.S. Green Building Council – helped foster this development among innovative, small builders. Many of these efforts were curtailed by the downturn but, if past downturns are any indication, would suggest that the smaller builders are the most likely to maintain this knowledge base for future building generations.

Exhibit 10. Number of New Single-Family Contracting Establishments by Value of Business Done, 1997, 2002 and 2007



Source: U.S. Census Bureau Economic Census (Census of Construction Industries)

Turnover of firms, particularly the smallest of firms, is not new to the industry; many of these firms are likely to reemerge in better conditions. Yet, the magnitude of the churning from the recession has not only had significant effects on the size and revenue of individual small firms, it also has affected their current activities. Many of these smaller firms are choosing to focus on alternative business models to survive, as they had done in other recessions. In recent surveys, the NAHB noted that, by 2009, 45 percent of its members had engaged in residential remodeling – a number vastly exceeding other possible secondary operations like land development (with 15 percent of members reporting this activity) and multifamily building (four percent for ownerships and two percent for rental).[23] Only eight percent reported no secondary activity at all, a trend that continued into 2010. Combined with a capacity to be early adopters of technology and compete on cost, though, this overall trend towards alternative revenue from the remodeling sector suggests an ability to change business models as new opportunities arise.[24]

TRANSITIONS TO OTHER PRODUCT SECTORS

Today, traditional new single-family homebuilders are increasingly exploring two alternative business models: the multifamily product sector among larger builders and the remodeling sector among smaller ones. These developments suggest that builders are learning how to coordinate different regulatory and financing mechanisms, seek out and satisfy different clients, and physically perform new types of work. Once firms have

moved up the learning curve, there appears to be easier movement into these alternative areas of work.

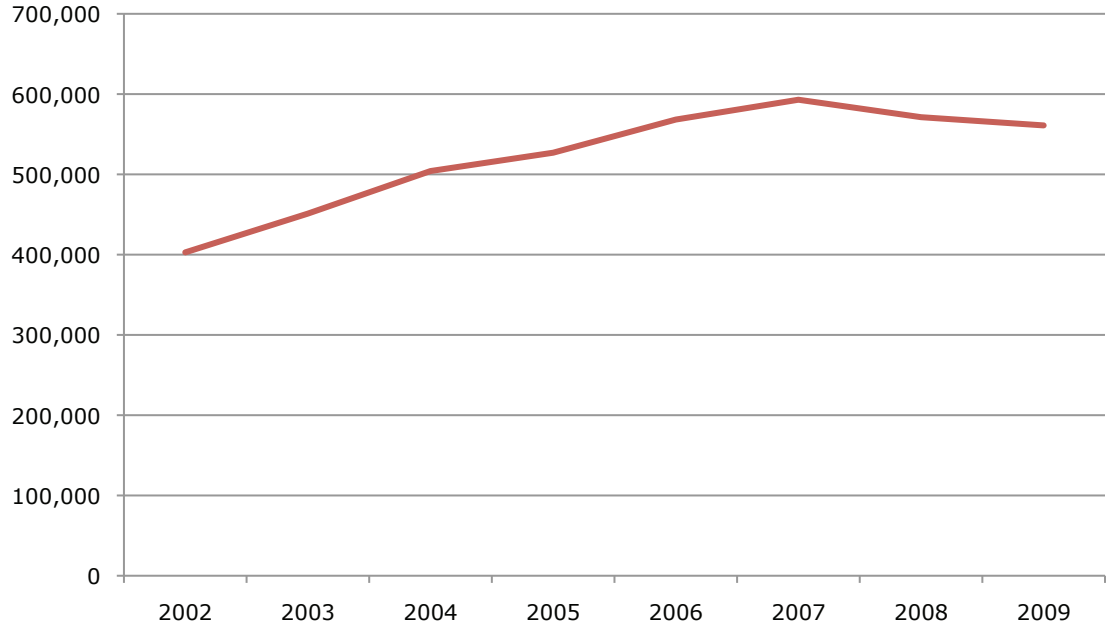
Yet, all of these post-recession developments must still be viewed as much as signs of current economic conditions – and typical of any housing cycle's downturn – as they are possible harbingers of things to come. The numbers of new single-family homebuilders entering the multifamily sector or crossing into remodeling are still relatively modest. Even among those that have successfully entered, work in the new sector makes up only a fraction of their production (with the exception of builders in certain markets who currently only have remodeling work).

In times of market downturn, builders have historically sought out alternative sources of revenue. This is particularly true of the smaller builders who work in remodeling, and who often worked in remodeling even during market highs. Broader economic conditions, pending housing policy (including housing finance, homeownership and public assistance programs), and changing American demographics will all determine whether these are only temporary. What is likely permanent, though, is a sector structure that will continue to include both large national or regional production builders and small local homebuilders.

Remodelers

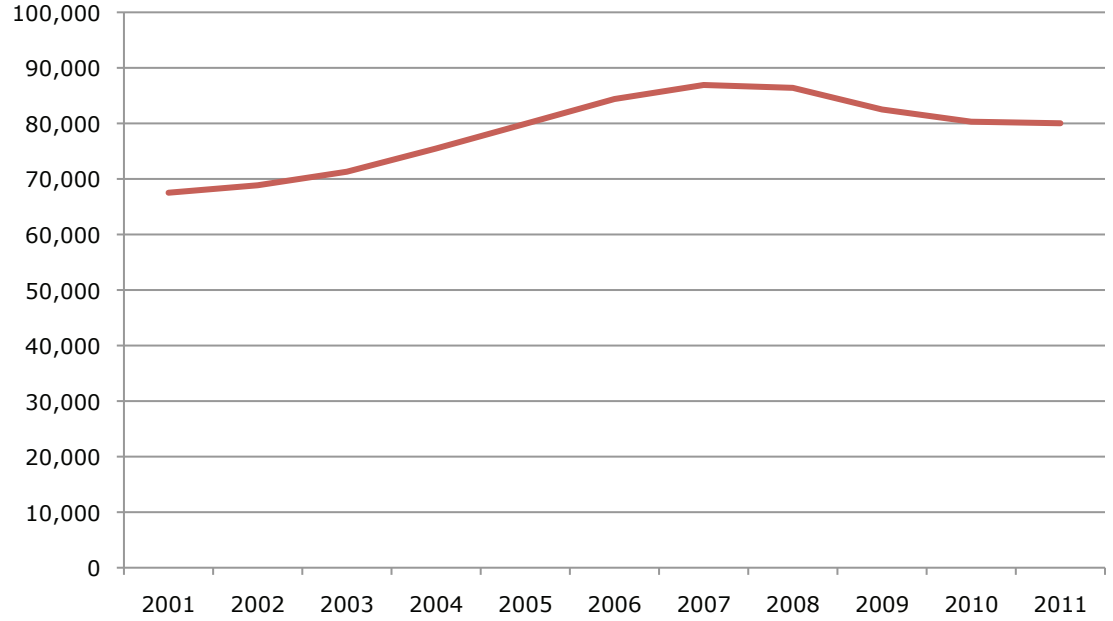
Given the extensive movement of single-family builders into remodeling – and the remodeling sector's own significance – the effects and possible outcomes of the recession on this sector are especially important to track as well. Just like smaller builders, smaller and younger remodeling establishments are more likely to reduce their number of employees, wait out or simply die out.[25] Further, as the demand for construction has waned during the recession, the number of remodeling establishments with payrolls has decreased by about eight percent from a 2007 peak of almost 87,000 establishments to 80,000 currently (Exhibit 12). This modest decrease can be partially explained both by the less significant reduction in remodeling compared to new single-family construction, and by the entrants of some of the smaller builders into the remodeling sector. However, it does not include the establishments without payroll employees (included in Exhibit 11) or specialty contractors that may be working for both builders and remodelers (and that likely faced proportionally similar downturns).

Exhibit 11. Number of Individual Proprietorship, Non-Employer Establishments in Residential Construction, 2002-2009



Source: U.S. Census Bureau Non-Employer Statistics
Note: Non-employer methodologies were revised in 2009.

Exhibit 12. Number of Remodeling Establishments, 2001-2011

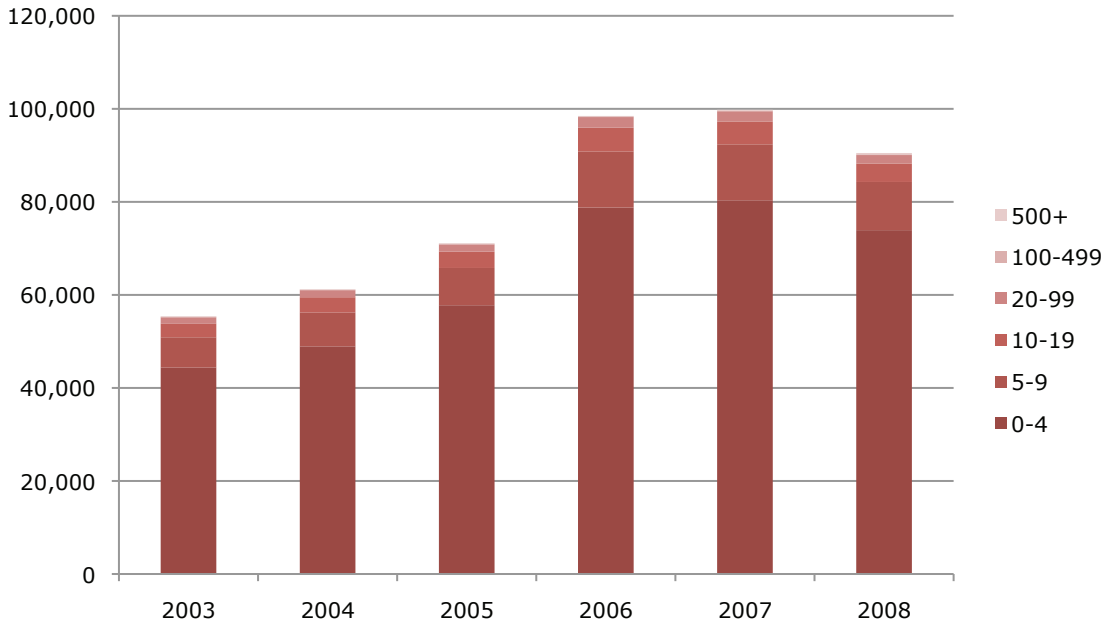


Source: U.S. Census Quarterly Census of Employment and Wages

PRODUCTION REMODELERS

Also unlike the single-family industry, firms of different size as measured by numbers of employees also retained the same overall spread; that is, their numbers reduced fairly equally at all sizes (Exhibit 13). A notable exception (though small) was the category of remodelers with over 500 employees, whose establishments have more than tripled in number since 2006 while the number of firms has remained fairly constant. This suggests growth along with longevity.

Exhibit 13. Number of Remodeler Establishments by Number of Employees, 2003-2008



Source: U.S. Census Bureau Statistics of U.S. Businesses (SU.S.B) Data

These large national remodelers benefit both from key contract clients (such as U.S. Home Systems and Home Depot, or Belfor Holdings and its insurance clients) or by branding of either a specific remodeling and replacement service (such as that offered by Window World) or a full set of design and remodeling services (like the Phoenix area's Aspire Design or Washington, D.C.'s Case Design/Remodeling).[26] Though only about 15 percent of all firms, remodelers with over $1 million in annual revenue made up over 55 percent of total remodeling employment, 65 percent of remodeling material purchases, and 66 percent of remodeling and repair receipts.[27]

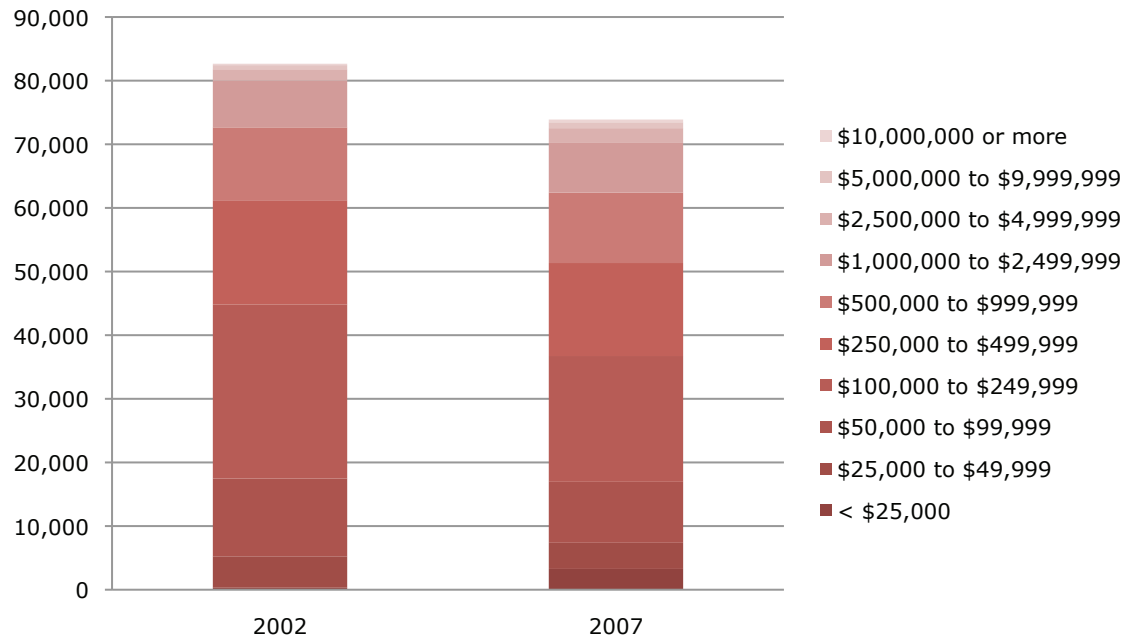
Like larger single-family production builders, these firms have been able to gain significant leverage in material purchases, access additional capital, and harness new sales and operational technologies. In certain activities (like energy auditing and remodeling), they have been able to incorporate new housing technologies into the existing stock, occasionally at scale. Unlike the larger builders, however, these firms

have grown and acquired these resources from expanded service to existing and new clients, not from mergers and consolidation. With the exception of a few franchised remodeling entities and a handful of firms with national clients, the largest firms are still regional and focused on a specific remodeling activity.

SMALL AND SPECIALTY REMODELERS

The vast majority of remodelers, though, are still small and/or self-employed; two-thirds of remodeling establishments were solely self-employed proprietorships in 2007. As expected, the numbers of these firms – along with their revenue – has decreased from the boom years (Exhibit 14).

Exhibit 14. Number of Remodeler Establishments by Value of Business Done, 2002 & 2007



Source: U.S. Census Bureau Economic Census, 2002 and 2007

Remodeling has experienced a more modest decrease in industry-wide revenue than single-family homebuilding, but a real one nonetheless. Despite the overall effects of decreased revenue on remodeling firms' size and operations, specific remodeling activities have received more attention and, consequently, fared better in actual starts. For example, the Harvard Joint Center for Housing Studies' tabulation of *Qualified Remodeler* magazine's 500 largest remodelers of 2010 pointed to a less severe reduction in exterior replacements, while *Remodeler* magazine's 2011 550 largest remodelers also points to increases in window, door and siding replacements.[28]

Even more interesting has been the push towards single-family home energy retrofits. The federal energy-efficiency homeowner tax credits enacted in 2005, expanded in 2009 and 2012, and extended through 2011 (with the tax credit for renewable energy

installations extended through 2016) have seen particular traction. Though limited to specific and somewhat less costly energy-efficient equipment replacements, the additional remodeling spending from the tax credit has been estimated at over $25.6 billion in remodeling expenditures in 2009 alone.[29] Though extensive, it is unclear how this demand will be sustained with the tax credits' expiration. For example, one study noted that a highly lauded energy efficiency program that offered free audits still yielded only a five percent participation rate among eligible households.[30] Households that chose to have energy audits are already a small proportion of all households yet, even in this group, many often choose not to proceed with retrofit actions that are identified in audits; a survey of energy auditors found that 71 percent of homeowners often or always make a single energy improvement after an audit while only 21 percent make all recommended improvements often or always.[31] Factors such as incomplete consumer information, high energy remodeling costs, and persistently low energy costs all play a role in this activity – along with currently reduced homeowner spending capacity.

REMODELERS' OPTIONS

As with single-family homebuilders, the remodeling industry has seen increased growth among the largest firms, increased turnover among the smaller firms and the self-employed, and some signs of limited growth into new activities. In contrast to the builders, though, remodelers do not necessarily have a fallback option. Smaller builders with decreased new construction work have chosen to enter remodeling (if they were not already involved in both sectors), possibly to stay only until new construction work recovers. Conceivably, remodelers' fallback option is to enter into employment with other remodelers or construction entities rather than remain independent enterprises – a possibility that could serve to increase the expansion of larger remodelers. Few, if any, single-family remodelers have transitioned into multifamily remodeling, though, most likely due to the different skill sets and scale required.

Major industry associations for both builders and remodelers are conscious of both the exchange between their constituents' businesses and the economic forces at work in remodeling's current share of work. This includes both the NAHB and the National Association for the Remodeling Industry (NARI); separately, both organizations have lobbied nationally for small business interests given their historical membership while maintaining distinct outlooks on whether this transformation of business models is temporary.[32] Despite expectations for remodeling activity to remain soft into 2012, though, incentives for builders transitioning into remodeling still exist.[33]

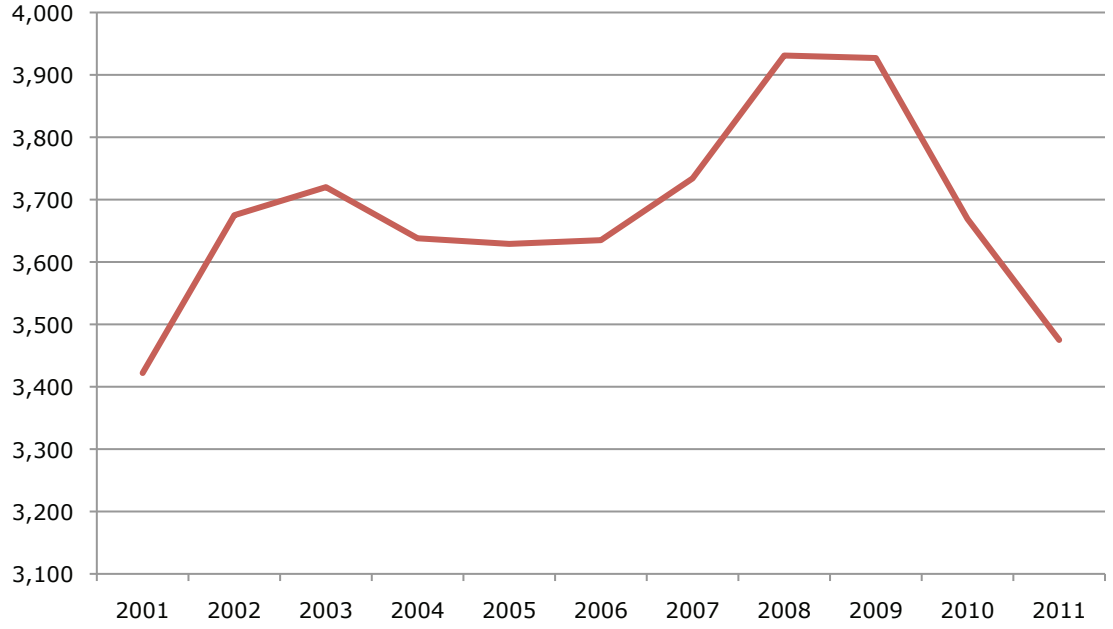
Multifamily Builders and Developers

The forays of single-family production builders into multifamily housing (that is, housing with more than five units per structure) are exceptional but do not overshadow the significant presence of long-standing entities in both the condominium and rental multifamily building sector. With extensive experience in urban land acquisition, a

different construction technology base, and entirely distinct financing channels, the multifamily development community has focused on longer-term opportunities that require extensive financial and land planning. Through the boom years of the early 2000s, the multifamily sector produced a fairly stable supply of units (on the order of 340,000 per year). On average, about a quarter of these units were intended as for-sale condominiums, another quarter were assisted rentals, and half were market-rate rental apartments.[34]

The recession has taken its toll on this sector as much as others; the number of multifamily starts has plummeted in 2010 to 155,000.[35] Yet, the increased demand for rental housing – and increasing rents – has softened the blow. The number of builders of new multifamily housing has dropped by over 12 percent only, compared to the drop of over a quarter of the new single-family homebuilders over the same time (Exhibit 15).

Exhibit 15. Number of New Multifamily Housing Construction Establishments, 2001-2011

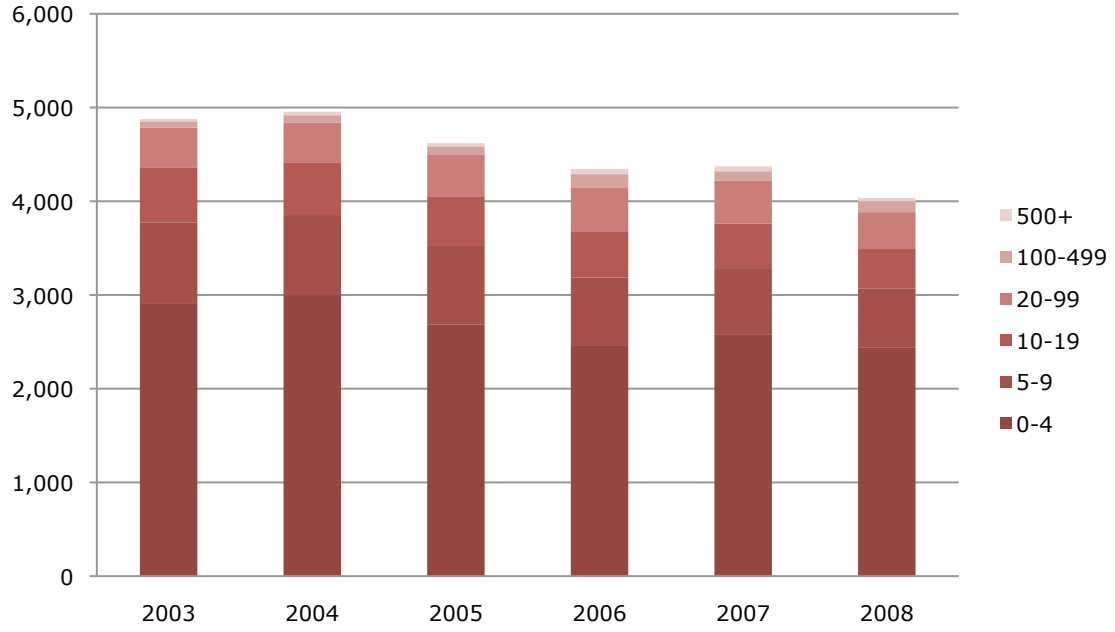


Source: U.S. Census Quarterly Census of Employment and Wages

COMPETITION

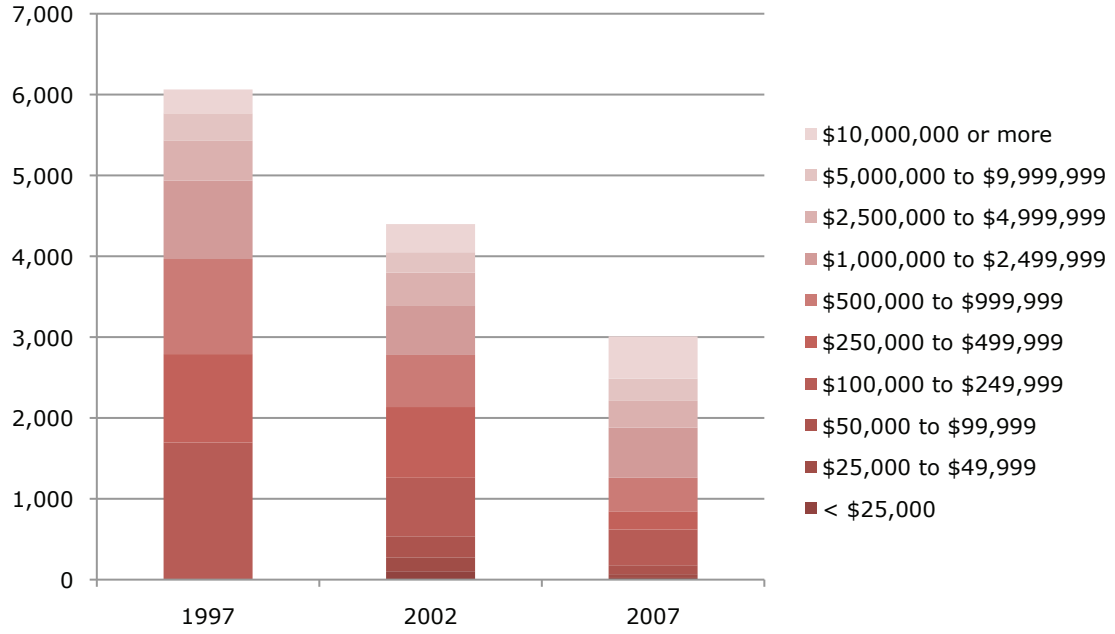
However, there were certainly fewer multifamily builders to begin with, given the costs and resources required for multifamily construction compared to single-family construction. Not surprisingly, these firms tended to have a wider diversity of number of employees and revenue than their single-family counterparts, too (Exhibits 16 and 17).

Exhibit 16. Number of New Multifamily Housing Construction Establishments by Number of Employees, 2003-2008



Source: U.S. Census Bureau Statistics of U.S. Businesses (SU.S.B) Data

Exhibit 17. Number of New Multifamily Construction Establishments by Value of Business Done, 1997, 2002 and 2007



Source: U.S. Census Bureau Economic Census, 1997, 2002 and 2007

Because of their capacity to structure land acquisition and pull in financing and appropriate contractors, there are numerous firms that span multiple sectors of the housing industry. Yet, on the whole, multifamily developers tend to focus either on specific regions or occupant types, such as assisted rental or urban condominium. Among condominium builders, for example, Florida-based The Related Group produces luxury developments in the South, while Epcon Communities and WCI produce senior "active living" ownership properties. Novare, Wood Partners, Clark and Trammell Crow are also well-known developers in the East and South, like MCZ and Centrum in the Midwest and Pacific West. Many of these firms (including Related Group and Wood) have either transitioned into multifamily rental or have historically functioned in both. The same is true of more local multifamily developers, like Bozzuto in the D.C. area and Irvine in California.

Among market-rate multifamily rental developers, some of the larger players include Alliance, Post, Related Companies, Pinnacle, Avalon Bay and Western National. Low- and mixed-income rental developers include Michaels Development, Carlisle, Enterprise, Volunteers of America and McCormack Baron Salazar (these firms also often manage properties). Many multifamily builders like McShane Construction, Harkins Builders and A. G. Spanos frequently do commercial construction industry as well. Their ability to work flexibly in various sectors and alter their product types has allowed many multifamily builders and developers to respond to fluctuations in the broader economy through complex financing and planning – and proportionally larger returns.[36]

MULTIFAMILY'S UNIQUE TRAITS

The scale and complexity of projects undertaken in the multifamily sector distinguish it from other sectors in the residential construction industry. Combined with a smaller historic demand for multifamily housing compared to single-family housing, it is a trait that has propagated a relatively limited and specialized circle of competitors. Operationally, multifamily builders and developers rely much more heavily on subcontracting with general contractors and specialty trades including those who work primarily in commercial construction, given their many physical similarities; in turn, many of the advances in commercial construction efficiencies and technologies have made their way into housing through the multifamily sector. The materials that are predominant in multifamily – not single-family (specifically, steel and concrete) – have recently been subject to price volatility. Labor costs for multifamily construction are often higher both because of the increased skill-level of the workers required as well as the consequent reliance on unionized labor, particularly on publicly assisted projects subject to Davis-Bacon requirements.

An additional area of complexity for multifamily construction, of course, is land acquisition. The density of multifamily units and their location subject larger multifamily developments to significant local political scrutiny. Zoning, permitting and impact fees raise land and development costs, as do delays in their processing. As a possible consequence of the amount of effort and resources required, more developments are

tending to be larger in order to compensate for these costs. The increasing trend of infill developments is also transforming the stock that was traditionally comprised primarily of low-rise garden-style apartments. As noted in Harvard's recent study of rental housing, while 13 percent of new rental apartments were in buildings with 50 or more units in 1999, 39 percent were in these larger developments by 2009.[37]

MULTIFAMILY FINANCE AND SUBSIDIES

Finally, the scale of returns from multifamily development also requires significant private investment and often, though to a lesser extent, public assistance. Though beyond the subject of this paper, it is critical to note that private and public financing of multifamily housing are critical components of the sector that help determine production levels. Real estate investment trusts (REITs), in particular, have played a major role in pooling funds for multifamily housing development that are later secured by federal housing finance entities like the Federal Housing Administration (FHA) and Fannie Mae/Freddie Mac, or commercial mortgage-backed securities (CMBS).[38] Many of the largest builders and developers are also associated with REITs, including Avalon and Camden. The gap financing and subsidies provided with public resources have played a critical role in the low-income multifamily market either through development funding, Low-Income Housing Tax Credits, or direct tenant subsidy. This total assistance is estimated to have affected 16 percent of all rental units, though the recession has also disrupted tax credits as a funding source.[39]

Funding of new multifamily housing is also complicated by possible delinquencies and defaults on existing multifamily properties; many of these loans were subject to similar lender exuberance in the early 2000s as was seen in the single-family consumer mortgage market.[40] This poses a dilemma especially for current owners and developers of lower-grade properties that typically house lower-income households, who could reduce maintenance of existing properties and focus on their higher-grade development only. While the sector is currently faring better than other sectors due to increased demand for rental housing, there is significant concern about future financing streams as well as impacts on multifamily affordability.[41] Public interventions, including the FHA's Multifamily Accelerated Processing guidelines designed to reduce loan processing and approval times in multifamily rental housing are expected to further incentivize the industry.[42] According to the new guidelines, HUD will take 45 days from the time it receives a completed pre-application to issuing a letter asking the lender to apply for commitment. When HUD receives the commitment applications, the agency will then take no more than 60 days to approve loans.

Despite this uncertainty, sector organizations like the National Multi Housing Council and the National Apartment Association have documented the increased short-term demand for rental housing, midterm consumer preferences for smaller and more centrally located housing, and long-term demographic changes expected to solidify both.[43] In addition to multifamily development assistance and finance reform, these organizations have also focused on critical policy issues related to the physical construction and location of

multifamily housing: building codes (especially, accessibility, energy efficiency, "green" and disaster resistance regulations) and land use (particularly, environmental requirements).

Regulations for all sectors in the housing industry are discussed later, but the issue of energy efficiency is a particularly unique one for multifamily remodeling. Because of the "split incentives" between landlords who own the building's equipment and systems and tenants who usually pay their individual utility bills, there is little motivation to pay the initial costs of energy retrofits. For low-income households that face a disproportionate burden from both rent and utility bills, this condition poses a unique challenge and one that current policy efforts and public resources have yet to resolve satisfactorily.

Material and Product Supply Chain

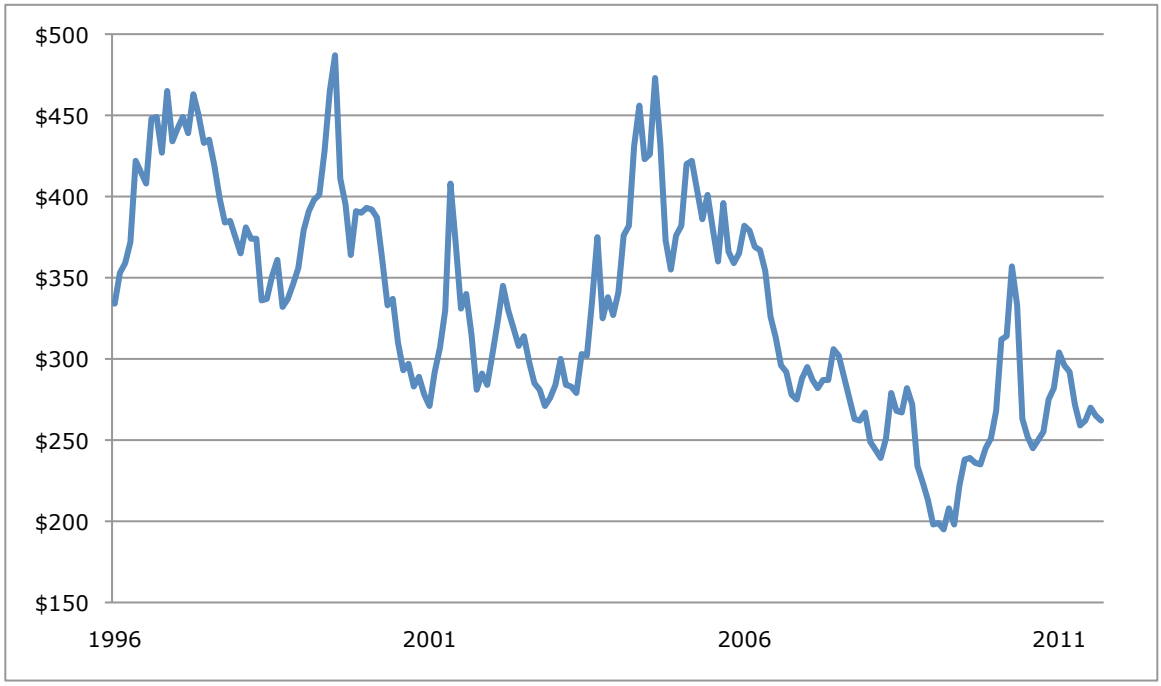
Often overlooked parties in the housing industry are the manufacturers, refineries and mills that provide the physical materials and products necessary to construct, as well as the suppliers, distributors and retailers through which those materials make it to construction sites. Two significant trends in this sector are most relevant for this paper: the cost of materials and the structure of the distribution sector.

MATERIAL PRICE VOLATILITY

During the housing boom, rising prices and increased price volatility played a significant role in overall construction costs. This was especially true of lumber and drywall, with 90 percent of lumber demand and slightly more than 67 percent of drywall demand coming from the residential construction industry.[44] Prices for lumber and drywall have significantly dropped due to decreased global demand (Exhibit 18). Should demand increase for new housing starts and significant remodeling projects, though, price volatility will be a concern again.

Central causes of this volatility are overall natural resource supplies, processing and manufacturing capacity, and most critically, overall global demand. International trade policies associated with these materials have played a significantly increasing role as global demand increases. For example, the Canadian lumber industry's ability to provide product to the U.S. played out heatedly during the housing boom years with tariffs imposed on Canadian lumber until 2006. These tariffs were passed along to homebuilders and remodelers in the form of higher prices.

Exhibit 18. Composite Price for U.S. Framing Lumber ($ per 1000 board feet), 1996-2011



Source: Random Lenghts Monthly Composite Prices: www.randomlengths.com/base.asp?s1=In_Depth&s2=Useful_Data&s3=Monthly_Composite_Prices

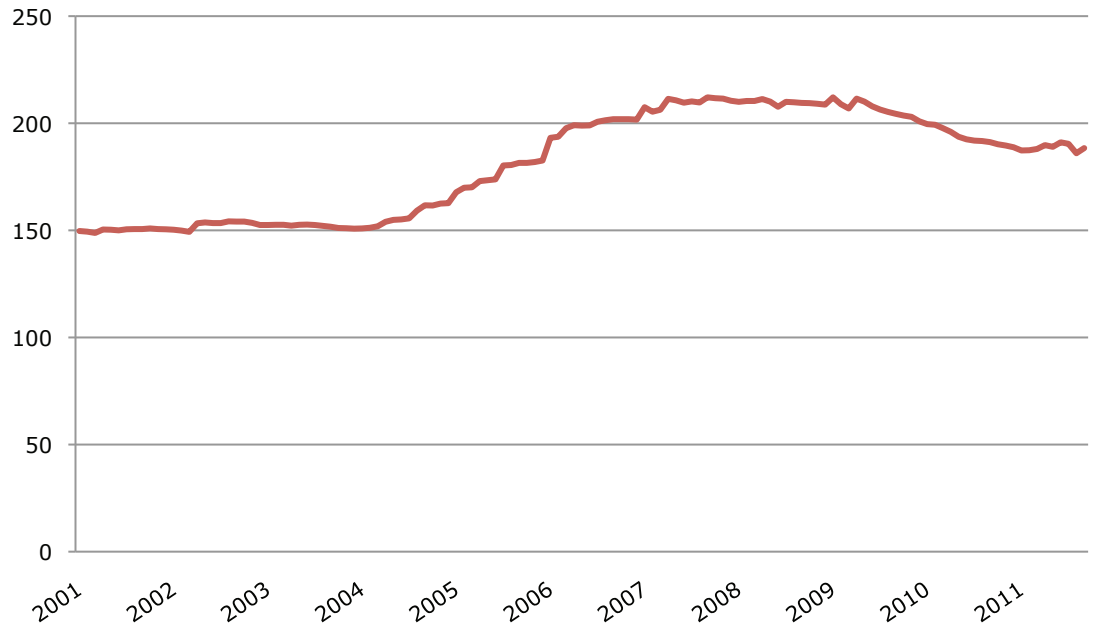
A survey of current material sources gives a glimpse of how the international trade of building materials could play an increasing role in the future domestic housing industry. For example, the majority of the gypsum used for drywall manufacturing is now produced in Canada and Mexico. Similarly, only 7.5 percent of copper – a metal with extensive housing uses – is sourced from the U.S. Despite pushback from public scandals like the 2009 lawsuits for off-gassing from Chinese drywall imported three years earlier and recovery-related "Buy American" policies, the supply of construction materials from foreign sources will likely increase with the greater liberalization of U.S. trade.[45]

The price and quantity of building materials is also shaped by another international trend: purchase competition, particularly from rapidly expanding middle-income nations whose housing and commercial industries rely on the same materials as American multifamily building, such as steel and concrete. Concrete is a significant material for both single-family and multifamily construction, with about 25 percent of concrete used in the U.S. being poured into residential construction. Prices for the cement used to make concrete peaked during the housing boom and have since moderated because of reduced recessionary demand, but not at the range seen in lumber (Exhibit 19).

Compared to mature economies, the share of economic activity devoted to construction (and residential construction, in particular) in developing nations is usually several times larger. Given the economic growth and housing needs of developing middle-income

nations like China, India and Brazil, the global demand for building materials could have significant impact on the cost to produce housing in the U.S.

Exhibit 19. Cement Producer Price Index, 2001-2011



Source: U.S. Bureau of Labor Statistics
Note: Not seasonally adjusted.

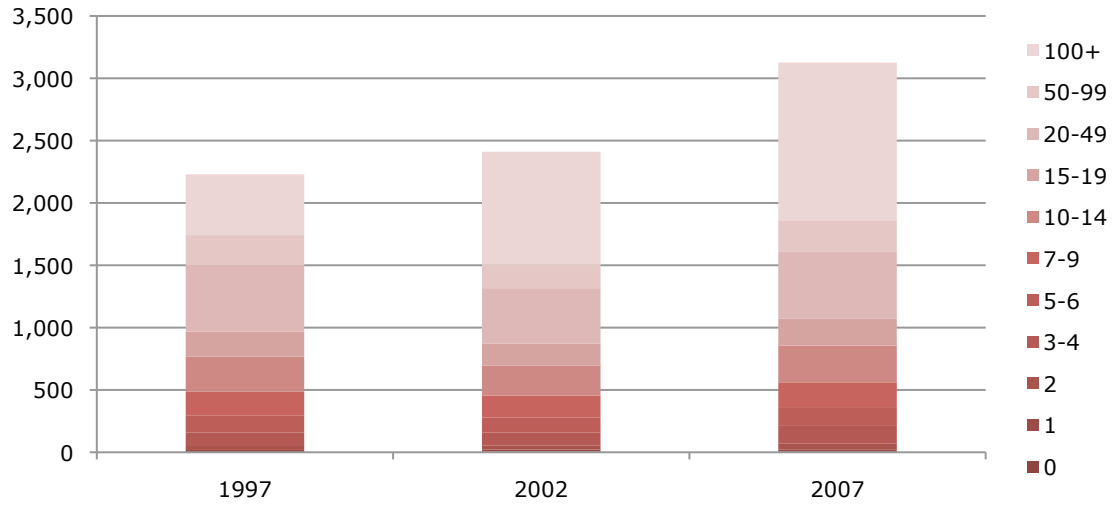
CONSOLIDATION IN THE MATERIAL SUPPLY CHAIN

The second critical story that foretells likely change for the future of the housing industry is the changing nature of the material delivery network. Historically, the professional supply firms (including dealers, "exchanges" and distributors) that provided materials from suppliers and manufacturers to building firms operated separately from the home improvement retailers and hardware stores that supplied households. Among the latter retailers, the consolidation of Home Depot and Lowe's as the central retail fixtures over the last 20-25 years has transformed an industry previously known for its local nature; the proportional share of retail sales among the largest retailers by number of employees doubled in 10 years (Exhibit 20).

The boom years witnessed a similar, though less severe, consolidation among the former professional suppliers spurred both by national mergers and the commanding demand of bulk buyers like production builders; in contrast to the largest retailers, the largest wholesale distributors' share of the sales increased only five percent (Exhibit 21). The larger professional dealers, however, dramatically restructured their business models and operations over the course of the housing upturn. Product and inventory advances in all supply and retail sectors in the 1980s and 1990s, the efficiencies needed to meet increasingly tight price competition, and the sheer demand for materials during the 2000s all conspired to transform this sector.[46] The professional dealers added

specialty trade contractors to their offerings and included pre-assembled components in their stock to cater to their production builder clients. They also streamlined the varieties of products to match production builder specifications, including minimizing the breadth of product brands and narrowing the supplier base.[47]

Exhibit 20. Sales of Retail Building Material & Garden Equipment Establishments by Number of Employees ($10M), 1997, 2002, and 2007



Source: U.S. Census Bureau, Economic Census

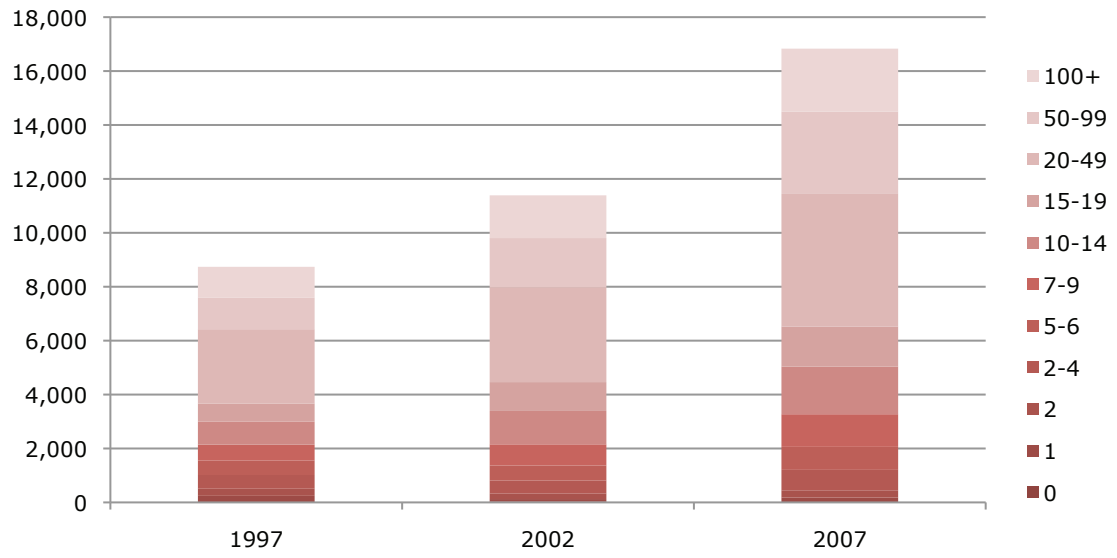
As a consequence, many dealers have focused exclusively on, or set up alternative channels for, smaller builders and remodelers from whom margins are higher but operating costs (including maintaining a wider range of products, special ordering of boutique products, and holding products stock for longer periods of time) are also higher. To a much lesser degree, many product manufacturers themselves, including window assemblers, began offering sales and product installation training directly to larger builders as well during the boom.[48]

This move for larger accounts also shifted resources away from smaller builders and remodelers among the professional dealers and brought those buyers to the consumer retailers. Taking their cue from the professional dealers, retailers also began teaming with regional remodelers to offer direct services to homeowners (in competition with smaller builders and remodelers), and additional customer service, design assistance, and job site delivery to their small builder/remodeler clients. In all distribution scenarios during the housing boom, smaller builders and remodelers feared a reduced level of service as well as a loss of the traditional information networks, which were lifelines for their businesses.

The housing downturn has had an effect on all of these distribution channels, including retail.[49] While significant turnover occurs among the smaller professional dealers focused

on the builders and remodelers, decreased revenue among the larger dealers has left a significant amount of ambiguity as to the future of their operational models.[50] Anecdotal evidence, however, suggests that many of the mid- to large-sized dealers are expanding installation services to capitalize on the remodeling opportunities that dominate the current industry, also suggesting consolidation across the supply chain and possibly within the sector.[51]

Exhibit 21. Sales of Wholesale Building Material & Garden Equipment Establishments by Number of Employees ($10M), 1997, 2002, and 2007



Source: U.S. Census Bureau, Economic Census

Labor

A final, significant stakeholder group for the future of the housing industry is the construction labor force that supported the construction boom and was left unemployed by the bust. A sizeable portion of the housing industry workforce includes "back office" workers, sales and marketing professionals, and operations planning staff (including land acquisition and financing specialists); as existing inventories continue to be on the market and firms plan out their futures, this group as a whole has been downsized. Yet, the labor group that made up the largest occupational share of industry employees and has taken the largest hit are those workers involved in the physical construction and remodeling of homes.[52]

SELF-EMPLOYMENT

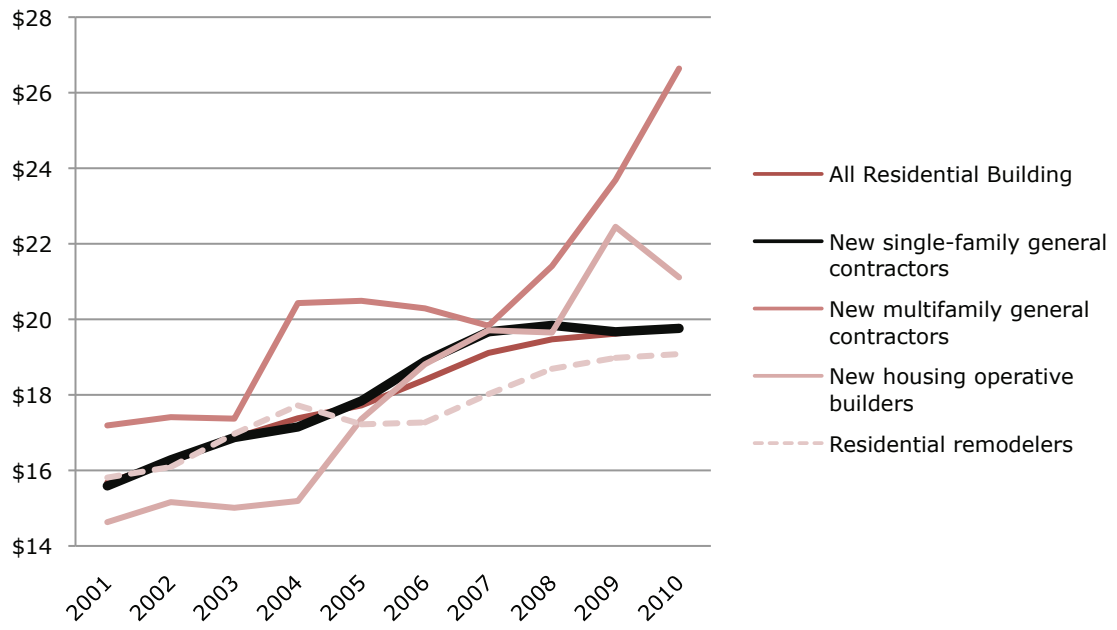
In many instances, this group included the proprietors as well as hired wage earners. This was especially true of the self-employed builders and remodelers who made up significant portions of the manual labor pool in certain U.S. regions. For example, 41

percent of construction workers were self-employed in Vermont and Maine in 2005 near the height of the housing boom. In other areas, particularly those of high growth dominated by production builders such as Nevada and Arizona, the self-employed construction worker made up nine percent and 15.5 percent of the workforce, respectively.[53] In all cases, changes in the demographic composition, earnings, affiliations and skills of these workers will undoubtedly play a role in the future housing industry.

WAGES

With regard to earnings, construction work has historically provided stable wages comparable to those in manufacturing and higher than many service sector jobs, though not comparable to earnings in professional occupations. Recently, almost all residential construction workers' wages have stabilized nationally after declining during the downturn (Exhibit 22). The single exception to the decline has been multifamily construction workers whose rising wages pose significant costs for the multifamily sector in the near- and possibly long-term future.

Exhibit 22. Average Hourly Earnings of Production and Nonsupervisory Employees in the Residential Building Industry ($), 2001-2010



Source: U.S. Bureau of Labor Statistics.
Note: Not seasonally adjusted

The multifamily sector's higher wages can be attributed to many factors. Traditionally, these workers require qualitatively higher skill levels because of the more complex installation and equipment handling associated with multifamily materials and assemblies (such as concrete pouring, steel rebar tying, and extensive HVAC and

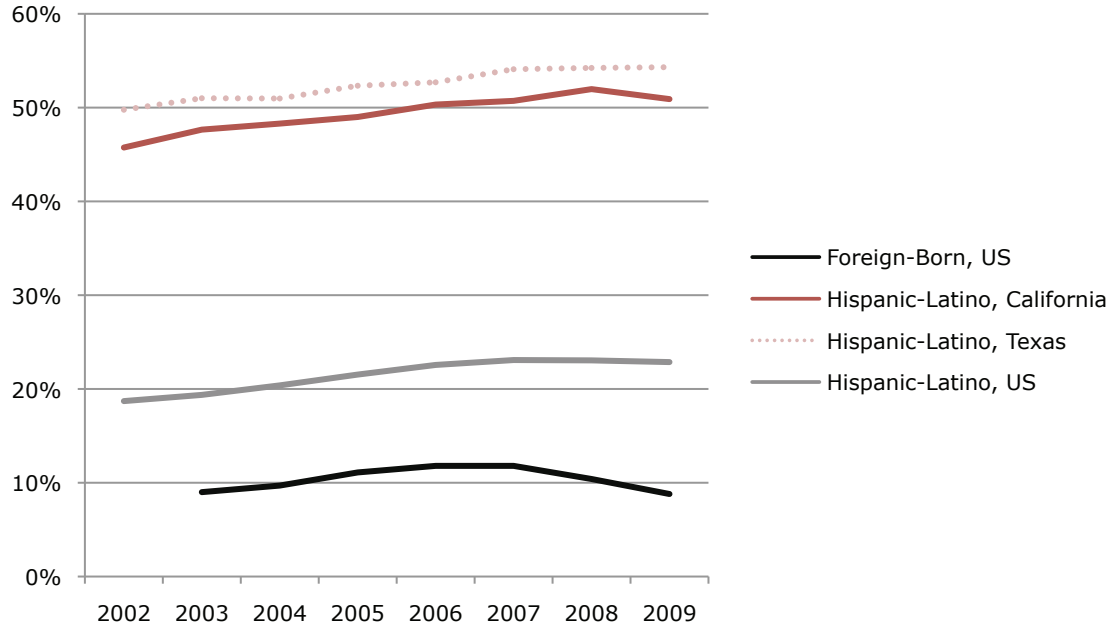
mechanical distribution systems). Because of this, they also tend to have more extensive training that has often been provided through union apprenticeships. Higher skilled workers are more likely to be found in the larger, denser cities that often have greater demand for more multifamily construction.

These characteristics, however, are not necessarily prevalent in the majority of recent residential construction workers who worked or continue to work in new single-family construction and single-family remodeling. While detailed information on the characteristics of construction workers is not available at the industry or sector level (that is, for residential workers or residential workers in single-family or multifamily, for example), a review of some of the key characteristics of all construction workers provides some support for anecdotal evidence about residential construction workers during the boom years. Three specific traits are worthy of mention: 1) immigration status of workers; 2) their ethnicity, particularly Hispanic-Latino ethnicity; and 3) their level of union organization.

IMMIGRATION

During the housing boom, the popular press paid significant attention to the immigrant-born labor pool; by various counts, the percentage of construction workers that were foreign-born ranged from about 20 percent in 2004 to 30 percent in 2009.[54] In certain communities, that proportion rose to clear majorities (Exhibit 23). The more restrictive nature of immigration policy of the last 30 years, combined with the unclear legal status of many immigrant workers, has fueled a significant level of scrutiny on the industry, though the residential construction sector has traditionally been a key gateway industry for immigrant laborers throughout American history. Current federal and state restrictions on hiring undocumented workers, as well as decreased overall immigration, would likely impact the industry in any long-term recovery.

Exhibit 23. Percent Foreign-Born Construction Employees of Total in the U.S. and Select States



Source: U.S. Bureau of Labor Statistics
Note: Includes employment in all construction sectors, not solely residential

ETHNICITY

Though often conflated with immigration status, Hispanic/Latino ethnicity – particularly in relation to English language proficiency – also played a key role in the operations of residential builders and remodelers and could continue to do so in the future. Hispanics made up, on average, about one-fifth of the overall number of construction workers nationally (including non-residential construction workers), while in some high-growth markets like Texas and California they cleared over half of payroll lists. Their proportions exceeded the overall Hispanic composition of the population in all cases. Spanish-speaking workers have noted productivity barriers that include lack of training and unfair compensation equity along with basic communication concerns.[55] Increasingly, manufacturer installation instructions and safety guidelines have been provided in Spanish.

LABOR ORGANIZING AND TRAINING

The issue of labor skill, however, is as critical for the future products of the housing industry as labor demographics, employment and immigration status, and earnings. By some accounts, productivity in the construction industry has decreased since the 1970s.[56] Given the increased use of information and communications technology for construction planning and material management, skill levels among construction workers have been proposed as possible causes for its decline. Traditionally, local builder

associations and union apprenticeship programs provided much of the necessary training to acquire these skills. Yet, builder associations no longer focus on worker skill development, and union membership and representation have been on the decline in the U.S. construction industry (and especially in the residential industry) during the same time frame (Exhibit 24). Today, a limited number of vocational schools and non-profit training programs offer skills training in residential construction. Given the historical size of this sector, any attempt to expand or alter the materials and means of construction will require significant amounts of training and re-training investment.

Exhibit 24. Percent Union-Member or Union-Represented Construction Employees of Total

Source: U.S. Bureau of Labor Statistics
Note: Includes employment in all construction sectors, not solely residential

Other Participants

Though less involved in the overall production of housing, other occupations and industries play major roles at key steps in the housing production process. Though beyond the scope of this analysis, these groups will likely influence the future of the housing industry in critical, albeit finite, ways.

ARCHITECTS

Historically, designers have had little involvement in residential construction because of the dominance of single-family housing that rarely requires architectural licensing or engineering review; the number of homes in which architects were involved in a significant way had been estimated at about seven percent; in turn, historical billings among architects according to surveys by the American Institute of Architects suggest that about 18 percent of the revenue generated at architect firms was from the

residential sector in the boom year of 2004, a peak compared to the previous decade's 10 percent and the return to 11 percent in 2009 after the boom.[57] Architects' work in housing has tended to focus on either high-end custom single-family design (including design/build and design/remodel) or on multifamily housing. The low-income multifamily housing market, in particular, witnessed a significant involvement of designers during the boom years due to both increased attention on low-income developments' design in response to local political opposition, and widely publicized efforts to document it.[58] Greater demand for multifamily housing in the short term could alter this profession's involvement significantly.

REALTORS

According to the National Association of Realtors®, there were almost 2.5 million real estate state-licensed professionals working in over 200,000 establishments in the peak year of 2005.[59] The top 100 largest firms comprise 17 percent of market share; by and large, most real estate agents and brokers are self-employed independent contractors. Despite their fragmentation, licensing and trade association membership produce fairly uniform realtor protocols and processes.

As the key information channels for consumers with regard to existing housing, realtors can often promote certain characteristics that could shape remodeling expenditures given that significant remodeling activity occurs immediately after home purchase. The increased reliance on Internet and social media vehicles to disseminate information about listed properties also suggest further transformation of the industry and its professionals. This includes the transformation of multiple listing services (MLS) to provide more detail about properties, including historical energy use, directly to prospective homebuyers. Sites like Zillow.com are also increasingly used for potential home pricing. Further, if future homeownership incentives are reduced, realtors could play less of a critical role in the future housing industry than they have in the past, particularly in the boom years.

APPRAISERS

As realtors are the face of the housing industry to the consumer, appraisers are the industry's translators to the housing finance system. Because of this critical role, however, appraisers have been criticized for not appropriately valuating properties based on all of their physical qualities or on appropriate comparable homes ("comps"), and due to purported pressure from lenders and realtors to meet desired loan-to-value ratios during the boom years.[60] Professional appraisal standards and qualifications have been the subject of recent public press.[61] Appraisers' historical lack of technical, construction expertise has also led to calls for increased information sharing and training, with a focus on energy-efficient systems and equipment.[62]

These post-recession calls for greater scrutiny and rigor related to home valuations and ethical conduct around appraisers have been heavily debated by industry regulators and trade associations. The primarily regulator, the Appraisal Foundation, is the

congressionally authorized appraisal standards entity that was originally charged with establishing the Uniform Standards of Professional Appraisal Practice and Real Property Appraiser Qualification Criteria used by many state licensing agencies since the late 1980s. In response to appraisal quality concerns, the Appraisal Foundation also created the Appraisal Practices Board in July 2010 to develop voluntary guidance for "Recognized Valuation Methods & Techniques." The Appraisal Institute, the largest appraisal trade association, resigned in protest from the Foundation's sponsorship board in 2010.[63]

Current scrutiny may also, in the long term, likely lead to an increased preference for appraisers working for larger appraisal management companies over independent appraisers.[64] For the future residential building and remodeling industry, this industrial transformation could perhaps assist in securing more professional and technically accurate valuations. Since 2007, the number of appraisers has dropped by less than 10 percent. Yet, if consolidation in the industry occurs as a consequence of the increased calls for more resource-intensive appraiser qualifications and practices, the number of association-qualified and state-regulated appraisers may continue to drop. This combination of increased skill requirements with decreased supply will certainly shape home buying practices in the future.

INSPECTORS AND AUDITORS

Though often absent during home purchasing in the housing boom, inspectors also play a critical link between consumers and the housing industry by providing needed information on the technical qualities and physical performance of homes. Home inspectors, in contrast to the permitting and inspection officials of a city government, provide assurances to the homebuyer and her lender on the physical state of the home. Inspections have historically been qualitative, and inspectors are often unregulated small business owners. Organizations like the American Society of Home Inspectors and the National Association of Home Inspectors have focused on state licensing restrictions as well as promoting general standards of professional practice for the industry. With more consumer attention placed on all aspects of the home purchase (including more concern about their physical qualities), home inspections are expected to play an expanded role in future homeownership. Like other related housing industry groups, home inspectors tend to be smaller, self-employed individuals who have suffered in the recession.

One offshoot of the inspection industry that is growing, however, are energy auditors – professionals charged with performing building performance checks on single-family and multifamily properties, both existing and new. For new building construction, energy auditors are often used to either confirm performance for building code officials or to provide supportive evidence for voluntary programs like ENERGY STAR and the U.S. Department of Energy's pilot Home Energy Score labeling program, national and regional green building programs (like LEED for Homes or the NAHB National Green Building Certification), or local utility incentive programs. Energy audits are usually more quantitative than qualitative and involve physical performance checks, though there is no national standard.

For existing housing, energy audits are an increasing though still small portion of the market. This situation will likely change as more jurisdictions adopt mandatory energy disclosure requirements. For example, New York City passed legislation in 2009 requiring annual energy benchmarking and public reporting among multifamily property owners, particularly for current and potential tenants. The City of Berkeley, California, now requires both energy audits and retrofits (if the audit demonstrates non-compliance performance) of existing homes at the time of sale or extensive remodeling. Most famously, legislation was proposed in 2008 in the State of California to make the Berkeley policy a statewide requirement for all residential and commercial properties. The bill died in committee after heated opposition from realtors. Nevertheless, this sector is expected to grow due to both market demand and continued regulatory pressure. In some markets (namely California), there are growing energy audit specialty firms that also perform remodeling work. Organizations like the Residential Energy Services Network (RESNET, which developed the HERS Index rating for homes as well as accredits professionals) and Building Performance Institute (BPI, which develops professional training and certification) have filled in gaps in this industry's growth.

The Industry's Products

As the housing industry's stakeholders reconsider their separate roles in producing and altering housing products, the consumer demand for these products has changed in the short term because of the housing downturn. More importantly, the demand and preference for different products is expected to change in the long term because of fundamental demographic transformation. Past trends, current restructuring of demand, and expected population changes are as critical to the future of the housing industry as the industry's capacity to supply them.

Market Share of Sectors

SINGLE-FAMILY VERSUS MULTIFAMILY

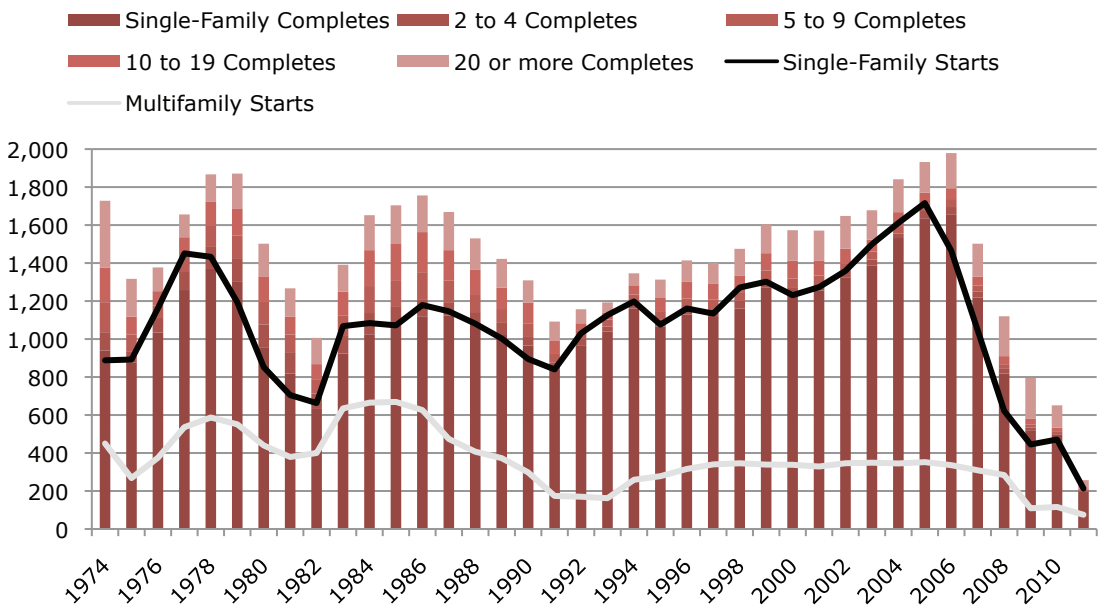
An overarching characteristic of American housing activity has been the separation of product types – that is, single-family versus multifamily, and their respective industry sectors. Even a cursory look at the historical composition of new housing reveals the dominance of single-family production in the U.S. housing industry (Exhibit 25). Though the recession severely hampered production in all markets, the proportion of new single-family homes continues to be high. Among multifamily properties, the rising share of larger buildings (with 20 or more units) is also a clear trend, though the number of all multifamily housing starts remains smaller than single-family starts. Simultaneously, households that rent are increasingly favoring single-family homes over multifamily properties. Both the desire to have the amenities of single-family homes and the rising multifamily rents, particularly in denser urban areas, are factoring into this trend.

Rental units of all kinds are owned and managed by a variety of entities, with 80 percent of single-family rental units being owned by individual landlords and multifamily property managers (often, affiliated with multifamily builders and developers), condominium associations, and other legal entities (including public housing authorities) owning higher shares of the larger properties. If the trend for more rental demand continues, then there may be a wide variety of both units and unit owners depending on the local market. Questions of affordability, however, have limited that variety for households, particularly those that are most likely to rent.

Unfortunately, there was an insufficient amount of actual construction activity overall during the recent downturn to suggest that any one activity will grow in significance or value in the mid-to-long term. The number of new multifamily rental units is expected to increase, but many production builders are sticking to single-family models as renters turn to single-family rental units. Expiring energy improvement tax credits are projected to further damage the remodeling sector. The effects from pending national

homeownership policies and local land use regulations will help determine the future of the housing industry's products.

Exhibit 25. Number of New Privately-Owned Housing Units Completed and Started by Type (1000s)



Source: U.S. Census
Note: 2011 includes Q1 and Q2 only, and should not be compared to previous years.

NEW CONSTRUCTION VERSUS REMODELING

The shares of work in new housing construction (of both single-family and multifamily) and remodeling have typically been inversely cyclical; when new housing starts are up, remodeling activity is a diminishing share of overall activity. The housing boom and subsequent bust followed this pattern. During the peak new housing production years of 2000-2006, remodeling averaged slightly more than 40 percent of total residential construction activity. By 2010, however, remodeling made up almost 70 percent.[65] Despite its growth in proportional share, the total value of remodeling activity has been on the decline; beginning in late 2007, the value of remodeling expenditures has consistently decreased over time like new housing construction.

Numerous factors influence remodeling rates, including home sales (since new homebuyers tend to remodel at high rates) and time (since long-term homeownership requires home maintenance and often brings the desire for aesthetic and functional changes). However, some incentives for remodeling, such as enhancing property values, are no longer present. The inability of many current homeowners to sell their properties (which subsequently leads to fewer buyers) may spur long-term homeowners to remodel. This assumes that homeowners have the financial resources to pay for it, but current lowered expectations for remodeling suggest that this may not be the case.

PROFESSIONAL REMODELING VERSUS DO-IT-YOURSELF (DIY)

One surprising sector trend has been the level of DIY remodeling activity – or, rather, the lower than expected share of DIY activity in the downturn. Reduced consumer spending capacity would generally favor DIY remodeling rather than hiring a professional remodeler. Yet, the opposite has been the case to date in the current economy: DIY's share of remodeling expenditures in 2008-2009 was lower than at any time in the past 15 years.[66] Explanations for this trend have been the greater share of higher-income households who have undertaken remodeling during the recession (and are less likely to want to do DIY work) and the need for professional contractors because of the technical complexity of the most common projects during this time (especially, energy-efficient equipment installations and building envelope upgrades).

Product Requirements

The products of each sector are directly influenced by: 1) regulations such as building codes and land use restrictions; 2) current consumer preferences as depicted in both actual purchases and consumer preference surveys; and 3) long-term demographic changes.

REGULATIONS

Building codes legally shape the physical means and methods of housing. While building codes were originally created to minimally protect occupant health and safety from fire and natural disasters, their purview has dramatically expanded. In new construction, the inclusion of significant energy efficiency and conservation requirements over the past two cycles of the International Code Council hearings (that resulted in the most recently adopted model national building codes) are likely to increase, with calls for even more reductions on the magnitude of 30 to 50 percent of additional energy savings beyond current code – a rate deemed technically impossible and economically unfeasible by most industry groups. More stringent energy code requirements for new buildings are supplemented with local (and in California, statewide) calls to comply with otherwise voluntary green building rating programs.

The multifamily sector, in particular, faces additional regulatory requirements with calls for additional structural requirements in the aftermath of the 9/11 attacks. Accessibility requirements on multifamily properties, though, are widespread and have been in place for several decades. The existing multifamily stock is also more likely to face calls for mandatory energy labels (similar to the requirement placed in New York), though both sectors face increased storm water management and wetlands protection regulations at the federal level. Recent EPA-issued regulations on lead protections (the Lead Renovation, Repair and Painting Rule) are also expected to dramatically affect remodeling costs; the rule implementation date was delayed after industry opposition.

Land use restrictions and development impact fees have arguably received more attention than many building code and environmental regulation changes, primarily

because of the perceived amenities or benefits they can provide in exchange for their possible added costs to builders.[67] Some of these benefits include increased open space, better air and water quality, improved access to services, more strategic growth, and increased municipal revenue. Like building codes, there is little evidence that the use of these restrictions has been on the decline during the housing downturn. The use of housing development restrictions has resulted in increased production costs for the industry while assuming consumer benefits like increased home values and performance.

Building and land-use regulations, traditionally adopted at the local level, are increasingly studied and advocated regionally and nationally. For example, many of the changes in local energy codes stem from adoption of the latest national model energy code in which the U.S. Department of Energy played a critical role. Likewise, a significant amount of technical assistance and funding from the Environmental Protection Agency (EPA) has aided the growth of smart growth initiatives among local jurisdictions. Advocating standards for building and land regulations and funding adoption directly (and attaching strings to other funding) are all national vehicles that are increasingly utilized for local intervention.

PREFERENCES AND CONSUMER SURVEYS

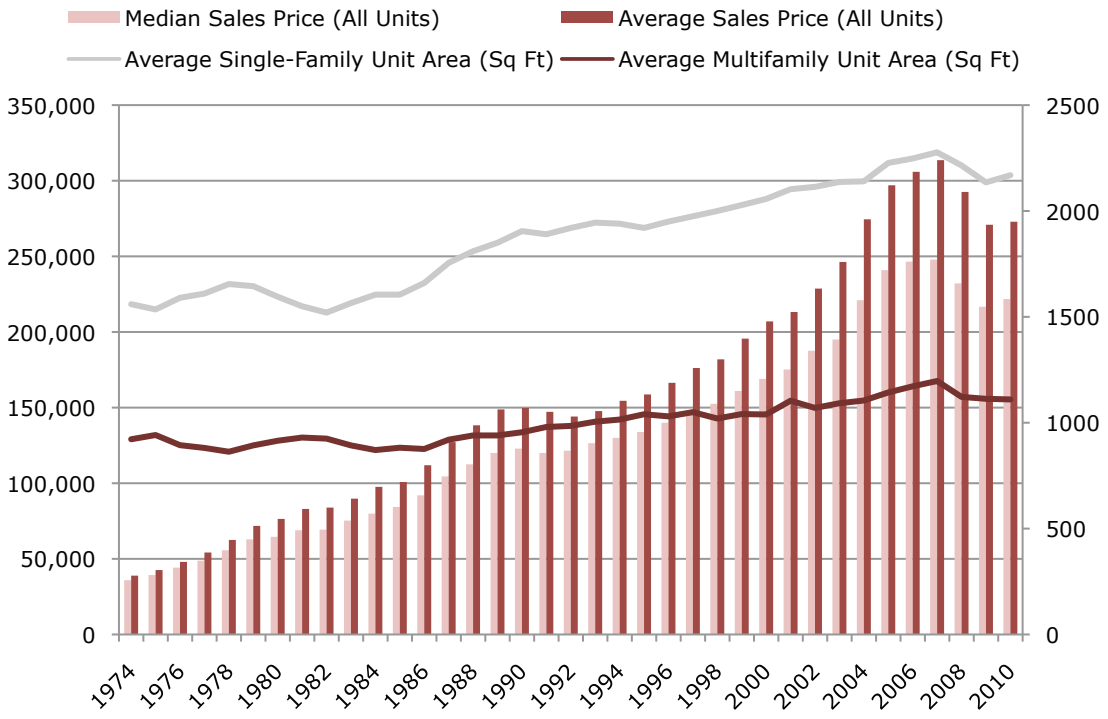
Cost and product mix within sectors aside, certain physical attributes of housing units also appear to strike a responsive chord among consumers. These attributes foretell how future housing products may be built in ways that past activity cannot describe.

HOME SIZE

Perhaps the most significant of recent consumer preference changes has been the challenge to the assumption that American households seek out physically large homes. For the first time since the 1970s, the average new housing unit size decreased significantly in total square footage beginning in 2008 (Exhibit 26). This has been true in both the new single-family and multifamily sectors.

The decrease has largely been attributed to homebuyers' recent need for more affordable products and increased competition from lower-priced existing homes.[68] This economic rationale corroborates the proposed reasons for the previous growth trend – that is, that bigger homes were more valuable.[69] Yet, it does contradict the assumption that deeper pyscho-social reasons exist for bigger homes. The advent of increased value engineering capacity among homebuilders, the decreasing number of homes with more than three bedrooms and bathrooms, and the consumer attention paid to efficient home layouts (including the "not-so-big house" design movement) bear this out. Data regarding current housing starts also confirm that home sizes will continue to decrease at least for the short term.

Exhibit 26. Median and Average Sales Price ($ for All Units) and Floor Area (Square Feet for both Single-Family and Multifamily Units) of New Privately-Owned Housing Units, 1974-2010



Source: U.S. Census, American Housing Survey

GREEN HOMES

Another clearly repeating preference has been the move towards more energy-efficient and "green" housing – a housing product once viewed as the provenance of boutique custom builders up to even five years ago. Registrations for ENERGY STAR for Homes, "LEED for Homes," and other green certifications continue to rise despite the housing crisis, and builders increasingly are retraining on techniques that account for construction's environmental impacts.[70] As reported in the NAHB's 2011 Consumer Preferences Survey, 68 percent of builders predict that homes will have more "green" features – or, those that use energy and water more efficiently, more products made with recycled-content materials, and design features that reduce potential occupant health hazards – in the near term, particularly those with lower initial costs and faster payback.[71] The American Institute of Architects' (AIA's) latest Home Design Trends Survey also notes this same trend as the top most-requested home design feature by owners to designers.[72] This trend holds true in both new construction and remodeling; recently propelled by the energy-efficiency improvement tax credits, preliminary evidence suggests that green remodeling is growing.[73] Though predicted to grow to between $12 and $17 billion in total revenue by 2010 – or about 10 percent of market

share – the green housing industry is believed to have surpassed the share mark (if not the dollar value) despite the recession.[74]

AGING-IN-PLACE, ACCESSIBLE AND UNIVERSAL DESIGN

Another dominant trend in the physical quality of homes noted in both new construction and remodeling has been the growth of elderly focused universal design and construction.[75] These include building products (such as gripping assistants like grab bars, ramps and accessible environmental controls) and design features (like zero-step entrances, ground floor master bedrooms and elevator-ready mechanical rooms). Fueled by the demand from a growing senior population and its proportionally higher household wealth, these features are becoming commonplace in all sectors, including new single-family homes with standard universal features, multifamily active living properties, and aging-in-place home retrofits. Twenty percent of homebuilders predict that future homes will feature these items despite the costs they add.

SMART GROWTH

A final market-driven characteristic of current housing centers on the location of housing units in relation to other amenities, public transportation and community conditions. Thanks to the "smart growth" and "new urbanism" movements in planning and design, much attention has been paid to the distances between employment and residential centers, in addition to other core social and economic functions like schools, healthcare, commercial retail and recreation. While actual selection during the boom and bust years demonstrates more traditional housing choices, rudimentary consumer surveys suggest an interest and desire for housing in more "walkable" urban environments.

According the National Association of Realtors' 2011 Community Preference survey results, for example, nearly half (47 percent) of the general public would prefer to live in a city or suburban neighborhood with city-like amenities, while 12 percent would prefer a residential-only suburban neighborhood.[76] The remaining 40 percent would prefer living in a rural area or small town. Accordingly, 58 percent would prefer to live in a neighborhood in which amenities are within an easy walk of housing, provided this "walkability" does not impede personal privacy. Sixty-one percent of respondents would choose larger lots and the necessity to drive over smaller lots and the ability to walk to schools, stores and restaurants. In fact, privacy outranked other factors including quality schools, commuting times and walkability; distance from neighbors is the top consideration tested for Americans in deciding where to live (45 percent, very important; 42 percent, somewhat). Other top priorities include: high quality public schools (44 percent; 31 percent); commute time (36 percent; 42 percent); and sidewalks and places to walk (31 percent; 46 percent). In the same survey, 80 percent of respondents reported preferring single-family homes over multifamily housing types as well, though there were differences noted in overall community preferences by current housing location (where the preference is to stay in similar communities), age (with younger respondents preferring more walkable communities compared to older

respondents), and income (with low- and high-income respondents noting a preference for "smart growth" communities in contrast to middle-income ones).

There is much debate as to the actual preferences of consumers and the interpretation of polls such as these.[77] Regardless of the split in preferences, the housing industry is taking note. In NAHB's builder survey, denser communities, walkways and open space were noted as "very likely" community characteristics of developments by 2015. Mixed-use, transit accessibility and infill were ranked as "somewhat likely." One common characteristic of single-family development in the boom years – gated communities – was viewed as being "unlikely" in the near future.

PREFERENCES AND DEMOGRAPHIC GROUPS

One final issue related to consumer preferences lies in determining the extent to which preferences vary across demographic groups, particularly between age groups, gender and nativity (immigration status). If Generation Y household formations are expected to compensate for the loss of Baby Boomer households, it is unclear whether the former's preferences will lead them to want the same homes (especially when these would be expected to be available). There is some evidence that these new households will be more mobile, made up of a greater share of renters than previous generations, and prefer urban environments.[78] While little is known yet about Generation Y's actual impact on housing, there has been some awareness of the preferences of both women (particularly, single woman-headed households) and immigrants for home size and features.[79]

FUTURE DEMOGRAPHIC CHANGE

Recent consumer polls and documented trends underscore future demographic changes, as well. Broader changes are expected to alter housing product demand and, in turn, the housing industry's supply capacity much more profoundly. These changes can be categorized into the following general groupings:

- The ongoing repercussions of the housing crisis (with its consequent high rates of foreclosure) and the economic recession on homeownership versus rental rates in the short to midterm;
- The decreasing household size and formation rates in the longer term;
- The changing preferences and financial capacity of the aging Baby Boomer population that was a source of much of the work in housing construction and remodeling during the boom years;
- The formation of households among immigrant populations as a result of both the recession and changes in immigration policy; and
- The continued growth of both suburban and urban employment centers.[80]

These changes interact in key ways, too. For example, much attention has been paid to the decreasing importance of the once traditional American household type – that is, two parents and children. Approximately half of all net household growth has been seen in married and partner couples without minor children in the household over the last several years due both to the increase in empty nesters and delayed childrearing among young adults. These households will likely decline as Baby Boomers widow or divorce, and younger (predominately ethnic minority and often immigrant) households with children increase. In all cases, the demographic changes occurring as a consequence of the recession will also likely affect the long-term household formations that determine housing demand.

INCREASED DEMAND FOR RENTALS

Rental demand has been affected by homeowners who have decided to rent (including foreclosed households), as well as by households who deferred buying during the economic crisis. In a complete reversal from previous trends, the number of renter households grew on average by 692,000 annually from 2006 to 2010 while the number of owner households fell.[81] For related reasons, the unoccupied single-family housing stock has increasingly been put out to rent; the single-family share of occupied rentals went from 31.0 percent in 2005 to 33.7 percent in 2009, and 22.6 percent of the 2009 single-family rental stock had been owner-occupied units just two years earlier. Yet, these households are believed to be only the harbingers of a longer-term demand for smaller houses, potentially multifamily and rental, in more urban areas.

Though Generation Y has yet to demonstrate any clear impact on the housing market, it is expected to form single-person households at a rate higher than any previous generation.[82] Simultaneously, aging Baby Boomer "empty nesters" are expected to substitute large, suburban single-family homes for urban, multifamily units (both rental and ownership).[83] Presumably, these households have an interest (and physical need) to be near amenities, in denser locations, and in smaller units that require less upkeep – likely a boon to the multifamily sector for several years as the recent uptick in multifamily construction starts confirms. Even when households are renters, significant attention is being paid by developers to ensure the appropriate amenity mix.[84] Given current economic scenarios and the low affordability associated with urban land development, the share of these units that are renter-occupied could then potentially be higher than in the past.[85]

THE PERSISTENCE OF HOMEOWNERSHIP

Despite the short-term push for rental units and the long-term demographic trend towards smaller households (that could be renters or multifamily owners), single-family homeownership will persist. There was, in fact, little evidence of a net shift of Baby Boomers moving to central cities.[86] This may be partially true because of current financial conditions; households that have held onto their homes will be less likely to move because of the economic crisis. Being "locked" into single-family homes either for financial or social reasons (such as returning children facing their own economic

constraints), many empty nesters may not be as ready to move into multifamily urban units or even traditional senior housing as quickly as previously anticipated.[87] Many of these households, instead, are choosing to invest in home remodeling and improvements with the expectation of staying put for at least the immediate term.[88]

In the long term, one critically growing demographic will likely seek out larger, potentially more suburban single-family units: the ongoing formation of immigrant households. Seeking the American dream for this segment of the future population may also mean living in its traditional trappings. The effect of current downturns in immigration may reduce the number of short to midterm new households. Previous economic recessions often resulted only in short-term drops in household formation with returns to longer-term trends.[89] Yet, this recession has been coupled with increasing legislative and political activity around immigration that may lead to more profound and sustained decreases in new household formations in the U.S.

Conclusion

The housing industry is one of the most notoriously cyclical segments of the economy. The recent housing boom and bust are evidence of this fact. Future building rates will depend largely on the formation of new households. Various demographic groups and their respective projected rates of growth will play central roles in determining future housing types, characteristics and uses, as well as what types of remodeling activities will be undertaken. Yet, it is unclear whether the immediate effects of the recession on these groups will be short lived or if the long-term trends in household formation predicted prior to the crisis will hold. Put more simply, we do not know to what extent the recession has left a permanent mark on Americans and how they conceive of their homes and homeownership more generally.

Current trends suggest that there will be demand for new and currently under-produced sectors like multifamily housing and single-family remodeling – especially for members of growing demographic groups such as single-person households and couples with no children. However, this demand will not necessarily be at the expense of the traditional industry mainstay: the new single-family home. To the extent that they continue to grow in numbers, immigrant households in particular are likely to prefer and need new and existing single-family houses.

Putting aside consumer preferences, there will still be a need for the development of new housing units and the ongoing maintenance and transformation of the existing stock. Including the pent up demand for new housing units estimated at between 500,000 and 1.5 million households, ten-year projections for new housing unit demand range from 16 to 18 million. Even with a current unsold inventory of housing units estimated at four million, there is still a gap between supply and projected need – not to mention physical repair and retrofitting needs. The sheer scale of these physical needs predict a massive future demand for housing. For this reason, the industry has and will continue to play a significant economic and social role for our country.

Factors such as lending rates and overall employment and income will undoubtedly affect the choices consumers make and the units that builders produce. National policies regarding homeownership and housing assistance, as well as local regulations and incentives for housing development, will also play a role. But the U.S. residential construction industry itself must be prepared to respond to the demand and offer a diversity of housing options.

The operational and structural capacity for the transformation of the homebuilding industry into a more flexible, efficient, technologically savvy and competitive industry is in place, rising from the rapid growth of the housing boom. That capacity, however, is in a very nascent stage, presently shackled by the lingering economic downturn. The full

realization of a transformed residential construction industry is within reach given forward-looking policies that recognize the dramatic changes that have occurred in the marketplace while acknowledging the industry's existing strengths in meeting America's housing needs.

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