

The Housing Crash and Smart Growth

Policy Report No. 335

by Wendell Cox

June 2011

There is general agreement the financial crisis that began with the failure of Lehman Brothers on September 15, 2008, was worsened by the bursting of the U.S. housing price bubble. It is also generally acknowledged that some of the fuel for the housing bubble came from a relaxation of mortgage loan standards that allowed many families to purchase homes they could not afford with loans on which they subsequently defaulted.

Executive Summary

There is general agreement the financial crisis that began with the failure of Lehman Brothers on September 15, 2008, was worsened by the bursting of the U.S. housing price bubble. It is also generally acknowledged that some of the fuel for the housing bubble came from a relaxation of mortgage loan standards that allowed many families to purchase homes they could not afford with loans on which they subsequently defaulted. New and excessive demand from mortgagees drove up home prices faster than the increase in the housing supply.

It is less well understood that the U.S. housing bubble was not a monolithic event. It varied substantially by geography. Gross national house value increases and losses were overwhelmingly concentrated in metropolitan areas with more restrictive land use regulations — known by a variety of names, such as compact city policy, growth management or smart growth. Many metropolitan areas with these land use restrictions were not able to respond to the increased demand for homeownership caused by the greater availability of mortgage credit. The inevitable result was higher prices, which encouraged speculation and increased house prices even more. Thus, from 2000 to 2007, among the nation's 50 largest metropolitan markets:

- In the 10 markets with the greatest rise in prices compared to income, the cost of a house rose by an average of \$275,000, relative to incomes.
- Among the second 10 markets with the greatest price escalation, house prices rose \$135,000.
- By contrast, in the major markets with the least rise in prices, houses increased only \$5,000.



Dallas Headquarters:
12770 Coit Road, Suite 800
Dallas, TX 75251
972.386.6272
Fax: 972.386.0924

www.ncpa.org

Washington Office:
601 Pennsylvania Avenue NW,
Suite 900, South Building
Washington, DC 20004
202.220.3082
Fax: 202.220.3096

ISBN #1-56808-213-4
www.ncpa.org/pub/st335

The Housing Crash and Smart Growth

Furthermore, from 2000 to 2007, the gross value of the U.S. housing stock rose \$5.3 trillion relative to household incomes. It is estimated that \$4.4 trillion of this increase occurred in the 20 major markets with the greatest escalation in housing prices.

For the nation as a whole, house values more than doubled from 1999 to the peak of the bubble. From the peak in the fourth quarter of 2006 until the end of 2010, homes values fell more than \$6 trillion. Losses after the bubble burst were even more concentrated than house price gains. Consider:

- From the peak of the bubble in 2006 to the Lehman Brothers' collapse on September 15, 2008, more heavily regulated metropolitan markets accounted for 73 percent of aggregate value losses.
- The average loss from 2007 to the Lehman Brothers' collapse was \$175,000 per house in the 11 markets with the greatest run-up in prices and the greatest fall.
- All prescriptively regulated markets (more heavily regulated markets) accounted for 94 percent of losses, or an average of \$97,000 per house.

- Responsively regulated markets (less restrictively regulated markets) lost just 6 percent of their value, or an average of \$12,000 per house.

With prices falling and mortgage interest rates rising, households were no longer able to refinance, causing many new homeowners to fall into delinquency and foreclosure.

If the prescriptively regulated metropolitan areas had instead had responsive land use regulations, prices likely would have escalated at a much lower rate during the housing bubble. This is because the land price premiums that grew during the bubble would have been less likely to develop, at least to the same degree. If the housing markets in the prescriptively regulated markets had replicated the performance of the responsive markets, it is estimated that the house value losses from the peak of the bubble to the start of the financial crisis would have been \$0.62 trillion, one-fourth of the actual loss of \$2.44 trillion. The average loss per house would have been \$17,000 instead of \$67,000. These more modest losses might not have set off the financial crisis, or it might have been less severe.

About the Author

Wendell Cox, principal of the Wendell Cox Consultancy in metropolitan St. Louis, Missouri, is an adjunct scholar with the National Center for Policy Analysis, a senior fellow with the Heartland Institute and a visiting fellow in the Thomas A. Roe Institute for Economic Policy Studies at The Heritage Foundation. He was appointed to three terms on the Los Angeles County Transportation Commission by Mayor Tom Bradley and was appointed by Speaker of the House Newt Gingrich to the Amtrak Reform Council, to complete the unexpired term of New Jersey Governor Christine Todd Whitman. He is a visiting professor at the Conservatoire National des Arts et Metiers, a national university in France.

Mr. Cox holds a bachelor of arts degree in government from California State University, Los Angeles and a master of business administration degree from Pepperdine University.

Introduction

There is general agreement the financial crisis that began with the failure of Lehman Brothers on September 15, 2008, was worsened by the bursting of the U.S. housing price bubble. It is also generally acknowledged that some of the fuel for the housing bubble came from a relaxation of mortgage loan standards that allowed many families to purchase homes they could not afford with loans on which they subsequently defaulted. New and excessive demand from mortgagees drove up home prices faster than the increase in the housing supply.

After the run-up from 1999 to 2006, house prices began falling and mortgage interest rates began rising. Households were no longer able to refinance, causing many new homeowners to fall into delinquency and foreclosure. Lenders began calling these mortgages “toxic” assets because they yielded no return. Institutions holding the loans resisted revaluating their assets because doing so would force them to admit their insolvency. But with no other institutions to purchase these loans, the market froze, causing mounting losses that could not be absorbed by lenders.

Bear Stearns, one of the firms that collapsed, announced in July 2007 that its subprime hedge fund had lost nearly all of its value, causing a 61 percent drop in overall net profits and forcing a merger with J.P. Morgan Chase eight months later. Lehman Brothers, a rival investment bank, similarly filed for bankruptcy in late 2008, citing bank and bond debt of \$768 billion with assets worth \$639 billion. The bankruptcy of these firms led to the

well known collapse of the U.S. mortgage finance industry generally.

It is less well understood that the U.S. housing bubble was not uniform across the country. It varied substantially by geography, largely mirroring differences in the stringency of land use regulation. The crash in house values that followed was also concentrated in the markets with the most restrictive land use policies.

“The housing price bubble was concentrated in areas with restrictive land use policies.”

The Housing Bubble

The U.S. housing bubble that developed from 1999 to 2006 was the result of actions by both potential homeowners and lenders. Potential buyers perceived homeownership as an investment that had little risk. Economic incentives offered to lending institutions resulted in the issuing of subprime loans with variable interest rates to households with poor (or no) credit histories. Increased demand for homes raised prices and, as a result, the supply increased: more new homes were built and more existing homes were put on the market.

The American Dream of Homeownership. Following World War II, Americans began to realize the dream of home ownership with the development of low-priced

suburbs on the fringe of urban areas, such as Levittown, New York. As average (median) family incomes rose in the post-war era, homeownership grew significantly. Consider:

- Homeownership rose from 44 percent of households in 1940 to 62 percent by 1960.
- Sixty-five percent of households were homeowners in 1995.
- Homeownership peaked in 2006 at 69 percent.

House sizes also increased:¹

- In 1973, the average single-family home was 1,525 square feet.
- By 2006, the average home size rose to 2,248 square feet, an increase of 47 percent.

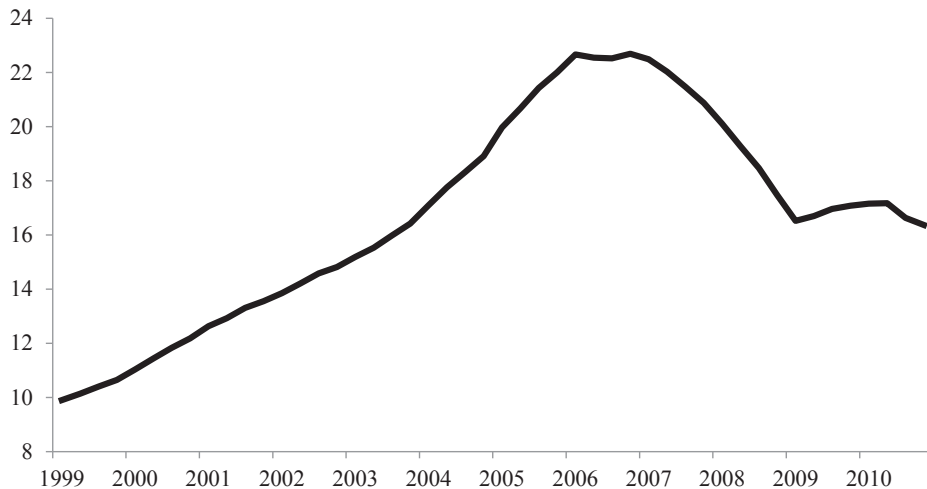
The quality of housing also increased, with amenities like air conditioning becoming standard features in new homes.

House Prices and Income: The Multiple Median. From the late 1940s until 1970, there was a general equilibrium between house prices and household incomes in the United States: The median sale price of detached housing was generally less than or equal to three times the median household income in a particular home market, a measure called the median multiple. As the housing bubble began to develop, house prices and the value of existing houses began to rise faster than incomes. For example:²

- The sales price of the median single-family home more than doubled from \$104,500 in 1987 to nearly \$241,000 at the peak of housing prices in 2006.

The Housing Crash and Smart Growth

Figure I
Market Value of U.S. Homes, 1999-2010*
 (trillions of dollars)



*Note: All types of owner-occupied housing, including farm houses and mobile homes, un-rented second homes, vacant homes for sale and vacant land.

Source: Federal Reserve Board, "Flow of Funds Report."

- The gross value of the U.S. housing stock rose \$5.3 trillion more than household incomes from 2000 to 2007.
- In fact, *the value of existing houses more than doubled in less than eight years*, rising from \$10.4 trillion in 1999 to a peak of \$22.7 trillion in 2006.³ [See Figure I.]

Geography of the Housing Bubble. In 2005, economist Paul Krugman, a *New York Times* columnist and Nobel Laureate, pointed out that the rise in house prices was not uniform across the nation. House prices rose much more on the East and West coasts than in the middle of the country:⁴

- From the first quarter of 2000 to the first quarter of 2005, average housing prices nationwide rose about 50 percent.

- Over this period, house prices rose less than the national average in responsively regulated (less restrictively regulated) metropolitan areas like Houston and Atlanta, where prices rose 26 percent and 29 percent, respectively.
- However, house prices rose much higher than average in more heavily (or "prescriptively") regulated metropolitan areas like New York, Miami and San Diego — by 77 percent, 96 percent and 118 percent, respectively.

As Krugman noted, the increase in house prices was concentrated in particular markets. This has been confirmed by more recent figures since the market downturn. From 2000 to 2007, among the nation's 50 largest metropolitan markets:

- In the 10 markets with the greatest rise in prices compared to income, the cost of a house rose by an average of \$275,000, relative to incomes.
- Among the second 10 markets with the greatest price escalation, house prices rose \$135,000.
- By contrast, in the major markets with the least rise in prices, houses increased only \$5,000.

Furthermore, from 2000 to 2007, the gross value of the U.S. housing stock rose \$5.3 trillion relative to household incomes. It is estimated that \$4.4 trillion of this increase occurred in the 20 major markets with the greatest escalation in housing prices.

Mortgage Debt. To purchase houses at higher prices, Americans took on more mortgage debt over this period:

- From 2000 to 2007, the value of gross residential mortgages in the United States rose \$4.8 trillion more than household incomes.
- Assuming that the distribution of mortgages tracked escalating prices, 83 percent of the rise in house values occurred in the 20 markets with the greatest escalation in housing costs relative to income.
- However, these markets account for only 26 percent of the nation's owner-occupied housing stock.

These numbers suggest that more liberal lending policies were not the sole cause of the housing bubble and subsequent bust.

The Cost of Excessive Land Use Regulation

What accounts for the geographic concentration of the bubble in house prices and subsequent crash? Numerous studies have found an association between land use policies and house prices. Scarcity tends to raise prices (other things being equal). However, natural limits on the availability of land, such as the presence of a seacoast or mountains, is secondary to the scarcity caused by regulatory barriers that stand between the natural barriers and urbanization.⁵ A reduction of land available for housing due to regulatory restrictions can increase house prices. Land prices, not construction costs, account for the largest differences in median house prices among metropolitan areas. Areas with less restrictive policies have lower housing prices. For example, while the nine largest metropolises with prescriptive regulation in the nation averaged a median house price of \$417,800 before the crash, houses in the less regulated Houston, Atlanta and Dallas-Fort Worth markets averaged \$159,300.⁶

Research by Edward Glaeser and Joseph Gyourko has shown a strong relationship between prescriptive land use policies and higher housing prices.⁷ Other distinguished academics have come to similar conclusions.⁸

A Typology of Land Use Policies. A Brookings Institution study divides local and state land use regulations into four broad families by county. These classifications are the foundation of the typology used in this report, which divides land use regulation into “prescriptive” and “responsive.”

Prescriptive land use regulation markets include those classified as “growth management,” “growth control,” “containment” and “containment-light” in the Brookings study, as well as markets Demographia has determined to have significant rural zoning (large lot zoning) and substantial geographical development prohibitions (New York, Chicago, Milwaukee, Minneapolis-St. Paul, Virginia Beach and Washington).⁹ All other markets are classified as responsive land use regulation markets (development is allowed to occur based upon market preferences consistent with fundamental environmental regulation.)

“The supply of housing was not able to rise to meet the increased demand.”

Prescriptive land use policies are designed to stop or contain the geographic expansion of urban areas — also called suburbanization or, pejoratively, urban sprawl — and force more travel by public transit and walking, instead of by car. These policies are assigned various labels such as compact city policy, growth management and smart growth.¹⁰ Principal smart growth policies include urban containment (such as growth boundaries and restrictions on physically developable land), large-lot zoning in urban fringe and rural areas, state aid contingent on local growth zones, house building

moratoria or limits, high development fees and exactions, and mandatory regional or county planning.¹¹

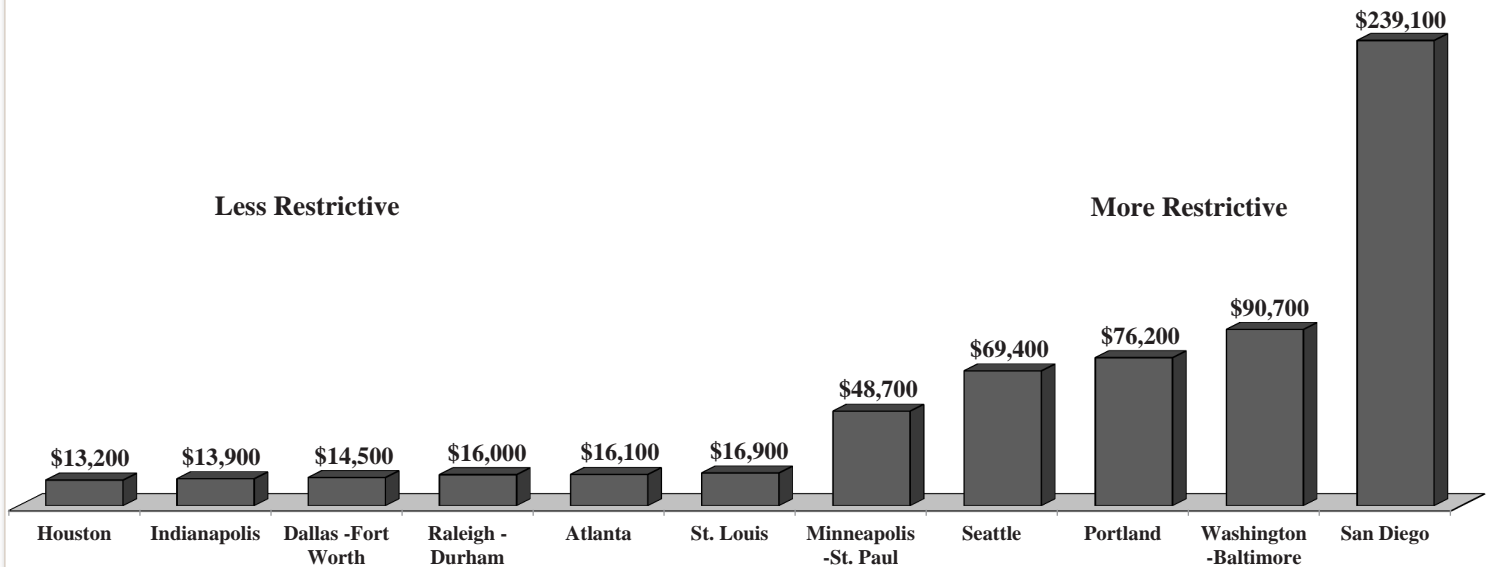
Creating an Index of Regulatory Costs. Generally, land and regulatory costs are 25 percent of the net cost of constructing a house, after subtracting the cost of infrastructure (streets, water and sewer lines) for a site. This means that, in a metropolitan region with normal land and regulation costs, the cost of the house will be 80 percent of the total price, while the cost of the land and regulation will be 20 percent.

The “2010 Demographia Residential Land Use & Regulation Cost Index” compares estimated land and regulatory costs for new entry level houses in 11 representative metropolitan regions selected for geographical and regulatory balance, and because there was sufficient data available from which to develop the index. The 11 markets are Atlanta, Dallas-Fort Worth, Houston, Indianapolis, Minneapolis-St. Paul, Portland, Raleigh-Durham, San Diego, Seattle, St. Louis and Washington-Baltimore.

As Figure II and Table I show, land and infrastructure costs for six of the metropolitan markets are within historic norms (Atlanta, Dallas-Fort Worth, Houston, Indianapolis, Raleigh-Durham and St. Louis). Each of these markets has less restrictive land use regulations.

The other five metropolitan areas (Minneapolis-St. Paul, Portland, San Diego, Seattle and Washington-Baltimore) have more restrictive land use regulations. Nonconstruction costs in these markets jumped two to 13 times the historic norm, adding from nearly \$30,000 (Minneapolis-

Figure II
Land & Regulation Cost Index: New 2,150 Square Foot Detached House*



*Note: Represents gross actual land and regulation cost.

Source: Demographia Land & Regulation Cost Index: New 2,150 Square Foot Detached House, Table 2. Available at <http://www.demographia.com/dri-full.pdf>.

St. Paul) to more than \$220,000 (San Diego) to the price of a new home.¹² [See Figure II and Table I.]

The Index numbers are calculated by dividing the estimated land and regulatory cost in a metropolitan region by this “normal” cost. Conservatively, the index assumes that any house price above 125 percent of its construction cost is due to excess land and regulation costs. Thus, the index illustrates the extent to which more restrictive regulation in metropolitan areas add to the cost of new housing.

Loss of Housing Affordability in Prescriptively Regulated Markets.

The broad, stable ratio of housing prices to rising incomes during the post-World War II era began to break down in the 1970s in certain states.

For example, Hawaii and California imposed real estate regulations in the 1960s, followed in the 1970s by Oregon and Vermont. William Fischel of Dartmouth University found housing price increases in California were associated with the stronger regulations adopted after 1970.¹³

Oregon adopted urban growth boundaries in the mid-1970s. Urban growth boundaries allow higher density development within the boundary area and restrict residential development outside the boundary. As development expanded within the urban growth boundary of Oregon’s largest metropolitan area, Portland, house prices rose substantially. The area experienced the greatest loss in housing affordability in the nation during the 1990s.¹⁴ Other states, such as Florida and Washington, and many

other metropolitan areas also adopted prescriptive land use regulations.

Housing affordability, as measured by the median multiple, deteriorated markedly in the prescriptively regulated markets, while generally remaining within the historic norm of 3.0 in responsively regulated markets [see Figure III].

Environmental Issues and Smart Growth. Land use in areas with market-responsive policies is regulated by basic federal, state and local environmental regulations and statutes (such as the Clean Water Act). Proponents of more restrictive policies, however, appeal to environmental concerns about inefficient land use, reliance on automobiles, preservation of farmland and attempts to restore inner cities to more livable conditions. In fact, less

than 3 percent of the nation is urbanized, and far more land has been taken out of agricultural production than has been converted to urban use.

More recently, proponents have seized upon unease about greenhouse gas emissions to advance smart growth policies, based on the assumption that denser housing will materially reduce automobile use and thus reduce greenhouse gas emissions. [See the sidebar, “The Smart Growth Greenhouse Gas Emissions Dead-End.”]

House Values in Prescriptive and Responsive Markets.

As the housing bubble developed, prescriptively regulated markets, including those in non-major metropolitan markets, accounted for 89 percent of the aggregate increase in house values. Conversely, 25 percent of homeowners lived in the responsively regulated major markets, which accounted for just 11 percent of the aggregate value increases [see Appendix Table A, Section 1].

Concentrated Losses. From the peak in the fourth quarter of 2006 until the end of 2010, homes values fell more than \$6 trillion.¹⁶ Losses after the bubble burst were even more concentrated than house price gains. Consider:

- From the peak of the bubble in 2006 to the Lehman Brothers’ collapse on September 15, 2008, more restrictively regulated

TABLE I
Demographia Land & Regulation Cost Index

<u>Metropolitan Market</u>	<u>Expected Raw Land & Regulation Cost</u>	<u>Gross Actual Land & Regulation Cost</u>	<u>Excess Land & Regulation Cost</u>
Traditional			
Atlanta	\$16,100	\$ 16,100	\$ 0
Indianapolis	\$13,900	\$ 13,900	\$ 0
Raleigh-Durham	\$16,000	\$ 16,000	\$ 0
St. Louis	\$16,900	\$ 16,900	\$ 0
Texas			
Dallas-Fort Worth	\$14,500	\$ 14,500	\$ 0
Houston	\$13,200	\$ 13,200	\$ 0
Exclusionary			
Minneapolis-St. Paul	\$20,000	\$ 48,700	\$ 28,700
Reform			
Seattle	\$18,000	\$ 69,400	\$ 51,400
Portland	\$16,900	\$ 76,200	\$ 59,300
Washington-Baltimore	\$16,000	\$ 90,700	\$ 74,700
San Diego	\$18,100	\$239,100	\$221,000

Source: New 2,150 Square Foot Detached House, Table 2. Available at <http://www.demographia.com/dri-full.pdf>

metropolitan markets accounted for 73 percent of aggregate value losses.

- The average loss from 2007 to the Lehman Brothers’ collapse was \$175,000 per house in the 11 markets with the greatest run-up in prices and the greatest fall.
- All prescriptively regulated markets accounted for 94 percent of losses, or an average of \$97,000 per house.
- Responsively regulated markets lost just 6 percent of their value, or an average of \$12,000 per house. [See Appendix Table A, Section 2.]

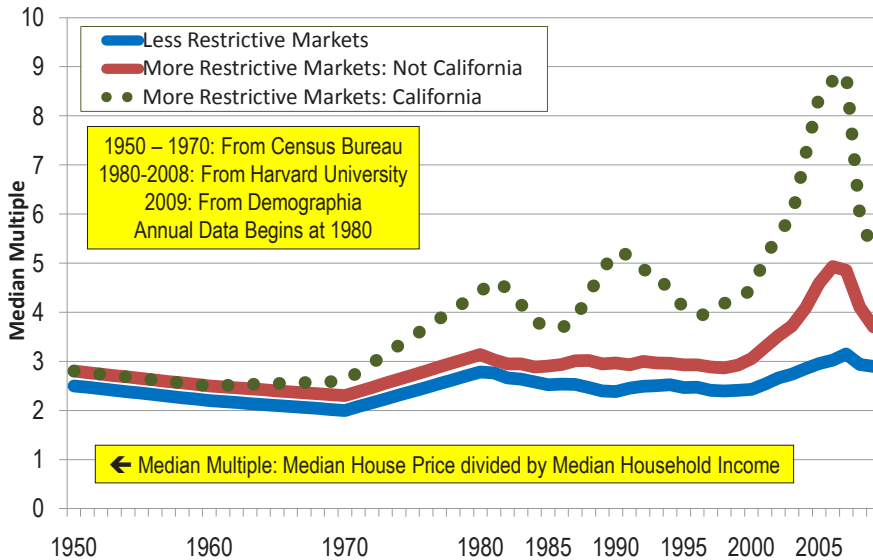
If the prescriptively regulated metropolitan areas had instead had responsive land use regulations,

prices likely would have escalated at a much lower rate during the housing bubble. This is because the land price premiums that grew during the bubble would have been less likely to develop, at least to the same degree. If the housing markets in the prescriptively regulated markets had replicated the performance of the responsive markets, it is estimated that the house value losses from the peak of the bubble to the start of the financial crisis would have been \$0.62 trillion, one-fourth of the actual loss of \$2.44 trillion. The average loss per house would have been \$17,000 instead of \$67,000. [see Appendix Table A, Section 3].

Markets Most Affected by Bubble. Over the period 2000 to 2007, the largest house value in-

The Housing Crash and Smart Growth

Figure III
Housing Affordability Since 1950
Major Metropolitan Areas: Median Multiple



Source: Census Bureau, Harvard University and Demographia.

creases were concentrated in 11 major markets: Los Angeles, San Francisco, San Diego, San Jose, Riverside-San Bernardino, Sacramento, Las Vegas, Phoenix, Miami, Tampa-St. Petersburg and Washington, D.C.¹⁷ These markets are so heavily regulated that even with the expansion of demand induced by loose credit, the housing market was not able to respond with a supply of new affordable housing and there was a rush to purchase existing stock, which drove prices up.

- These markets accounted for 56 percent of the increase in aggregate house values nationwide, although they have only 28 percent of homeowners.¹⁸
- Average house values in these markets dropped 25 percent from the peak in 2006 to the September 15, 2008, bust.

Subsequent Losses. After the September 15, 2008, crash, housing

demand fell sharply and house price losses accelerated across the country, in both prescriptive and responsive markets:

- Approximately 44 percent of the losses from the September 15, 2008, crash to the end of the first quarter of 2009 were in highly regulated major metropolitan markets.
- The prescriptive markets as a whole accounted for 82 percent of the losses.
- The responsive markets accounted for just 18 percent.¹⁹

There is general agreement that the U.S. housing bubble contributed to the current financial crisis, which has been the most severe since the Great Depression. The crisis quickly spread internationally, due to the size of the American economy and the intensity of the mortgage losses. If the prescriptively regulated housing

markets in the United States had not been constrained by excessive land use regulation, mortgage losses would likely have been more manageable, and the financial crisis might have been less severe.

Housing Still Expensive in Prescriptive Markets. Even after the decline in prices, housing remains considerably more expensive than historic norms in a number of prescriptive metropolitan areas, such as San Francisco, San Diego, Los Angeles, New York, Boston, Portland and Seattle. For example, compare housing costs in San Diego, which is highly regulated, to Dallas-Fort Worth, which is less regulated:

- As of the first quarter of 2010, the median house price in San Diego was about \$380,000 and in Dallas-Fort Worth approximately \$140,000 [see Figure IV].
- A San Diego household with a median income would require 35 percent of its income to pay the mortgage on a median priced house.
- In Dallas-Fort Worth, a median income household would pay 15 percent of its income for the mortgage on a median priced house.²⁰

After adjusting for differences in income, the San Diego household would pay \$325,000 more than the Dallas-Fort Worth household over the period of the loan (mortgage and down payment).

The Role of Speculation. Speculation is often blamed for contributing to the higher house prices that developed in the more highly regulated markets. Research

by Harvard University’s Edward Glaeser and the University of Pennsylvania’s Joseph Gyourko indicates that speculative behavior can be expected in a market with limited supply.²¹ Speculators and “flippers” are naturally drawn to markets where prices are rising in anticipation of extraordinary profits. Speculation was not a significant factor in the responsively regulated markets, principally because the prospect of modest price growth does not yield the short-term profits that speculators seek.

Other Effects of Prescriptive Land Use Regulation

Smart growth leaves both households and society less well off.

Urban growth boundaries, which mandate high-density development within the boundary and low density development outside the boundary, are perhaps the most draconian policy. They substantially raise land prices, and thus housing, by severely restricting where new housing can be built. Urban growth boundaries also increase traffic congestion and the intensity of local air pollution.²²

Further, Raven Saks of the Federal Reserve Board found that compact development policies were associated with lower employment growth.²³ It is also notable that metropolitan areas in Texas — the state with the most liberal land use regulation in the nation — have generally performed better than their principal metropolitan competitors in Florida and California, where land use is more restricted.²⁴

Effect on Minority Households.

The loss of housing affordability disproportionately affects minority households due to their generally lower incomes. The white non-Hispanic home ownership rate is 50 percent above the rates for Hispanic and African-American households.²⁵ California’s Tomas Rivera Policy Institute, a Latino research organization, raised concerns about the impact of compact development on housing affordability, stating:

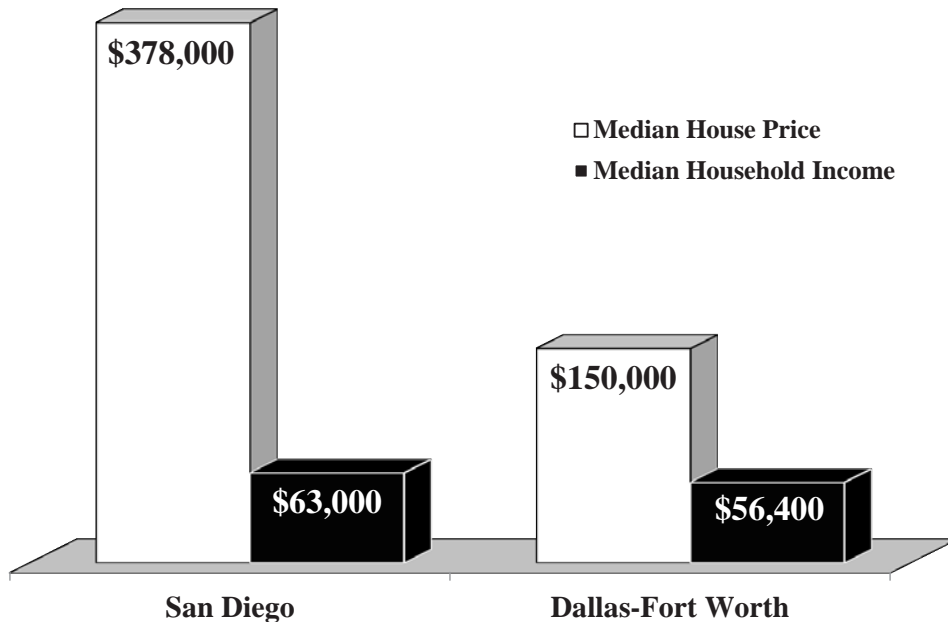
Whether the Latino homeownership gap can be closed, or projected demand for homeownership in 2020 be met, will depend not only on the growth of incomes and availability of mortgage money, but also on how decisively California moves to dismantle regulatory barriers

The Smart Growth Greenhouse Gas Emissions Dead-End

Proponents have enlisted concerns about greenhouse gas emissions to justify expansion of smart growth policies. The first assumption is that densification will reduce driving and thus reduce greenhouse gases. The second assumption is that higher density residences, such as high-rise apartments, will also reduce greenhouse gas emissions. There is a plethora of difficulties with these assumptions. The first problem is that research, even by smart growth advocates, indicates that smart growth policies have little potential to reduce vehicle travel. The second is that, even if there were some reduction in vehicle travel, increased traffic congestion and slower speeds in denser areas would increase greenhouse gas emissions per mile traveled, perhaps even nullifying any gain. There is far greater potential to reduce greenhouse gas emissions using technological strategies, such as more fuel efficient cars. Moreover, these gains do not require straight-jacketing lifestyles to conform to the latest trends in urban planning.

Finally, it is by no means settled that higher density residences reduce greenhouse gas emissions. Studies show differing results, and there is no comprehensive U.S. database from which such conclusions can be drawn. For example, the U.S. Department of Energy’s Residential Energy Consumption Survey does not include commonly provided energy in high-rise condominium and apartment buildings for functions such as lighting, heating, air conditioning, water heating and swimming pool heating. In addition, greenhouse gas emissions associated with the building of such dwellings (materials and construction activity) are higher per square foot than for detached housing in suburban locations.¹⁵

Figure IV
Housing Affordability: 2010
Comparing San Diego and Dallas-Fort Worth



Source: Author's calculations based on Edward Glaeser and Joseph Gyourko, *Rethinking Federal Housing Policy* (Washington, D.C.: American Enterprise Institute, 2008), and median house price and median household income for third quarter 2008. See Demographia, "Sixth Annual Housing Affordability Survey," 2010. Available at <http://www.demographia.com/dhi-ix2005q3.pdf>.

that hinder the production of affordable housing. Far from helping, they are making it particularly difficult for Latino and African American households to own a home.²⁶

Moreover, rising house prices also affect rental prices, with a time lag.²⁷ Thus, higher house prices are likely to lead to higher rental costs for the approximately one-third of households that do not own a home. This is illustrated by U.S. Department of Housing and Urban Development "fair market rents," which are estimated at the 40th percentile of the rental market (including utilities). For households in the bottom 25 percent of the income distribution, fair market

rent for a two bedroom apartment in 2008 was 24 percent higher in prescriptively regulated markets than in responsively regulated markets.²⁸

Effect on Domestic Migration.

Over the past decade, population has increased faster in responsively regulated markets than in prescriptively regulated markets.²⁹ The major responsively regulated markets gained nearly a net 1 million domestic migrants from 2000 to 2008, while the prescriptively regulated markets lost a net 2.8 million to domestic migration.³⁰ In responsively regulated Atlanta, Dallas-Fort Worth and Houston, house prices remained within historic norms during the housing

bubble. These urban areas are now among the fastest growing in the developed world.³¹

Conclusion

Housing affordability could be lost even in markets that are responsively regulated as a result of new state laws and regulations, but most importantly, requirements and incentives that are proposed at the federal level to encourage compact city policies. There are a number of initiatives that seek to spread smart growth policies throughout the nation, including proposed bills in Congress — such as surface transportation bills and the "cap and trade" bill, which contains potentially costly compact city transportation and housing provisions. If families are forced to spend more on housing, they will necessarily experience a lower standard of living.

Moreover, house price escalation is likely to resume in prescriptive markets when the economy returns to normal, because the excess of demand for residential land relative to supply will remain. California will be at particular risk of further affordability losses because of its greenhouse-gas-related planning requirements and its already overly restrictive regulations.³² Eventually these initiatives are likely to increase the cost of housing and decrease discretionary household incomes.

Prescriptive land use regulations should be rolled back. This would increase housing affordability. House prices have fallen in virtually all prescriptively regulated markets and could begin rising inordinately again as housing demand increases. Metropolitan areas that are responsively regulated already enjoy the benefit of lower cost housing for their citizens.

APPENDIX TABLE A
The Housing Bubble by Land Regulation Category
(to the Great Financial Crisis, in 2007 dollars)

Section 1

GROSS VALUE: HOUSING STOCK (Trillions)

	Prescriptive		Total	Responsive	Total
	Prescriptive: Concentrated	Prescriptive: Other			
Owned Homes: 2007	28.1%	36.6%	64.8%	35.2%	100.0%
National Value at 2000 Ratio to Income	\$2.59	\$3.44	\$6.03	\$2.02	\$8.05
Share of National Value	32.2%	42.7%	74.9%	25.1%	100.0%
Value Increase Relative to Income	\$2.89	\$1.76	\$4.65	\$0.56	\$5.21
Share of Increase	55.5%	33.8%	89.3%	10.7%	100.0%
Peak Value	\$5.48	\$5.20	\$10.68	\$2.58	\$13.26
Loss to Start of Great Financial Crisis	-\$1.79	-\$0.50	-\$2.28	-\$0.16	-\$2.44
Share of Loss	73.2%	20.4%	93.6%	6.4%	100.0%

Section 2

AVERAGE HOUSE VALUE: Actual

	Prescriptive		Total	Responsive	Total
	Prescriptive: Concentrated	Prescriptive: Other			
Average House Value if No Inflation from 2000	\$254,000	\$259,000	\$257,000	\$158,000	\$222,000
Value Increase Relative to Income	\$283,000	\$133,000	\$198,000	\$44,000	\$144,000
% Change	111.4%	51.4%	77.0%	27.8%	64.9%
Peak House Value	\$537,000	\$392,000	\$455,000	\$202,000	\$366,000
Average House Value at Start of Great Financial Crisis	\$362,000	\$355,000	\$358,000	\$190,000	\$299,000
Loss to Start of Great Financial Crisis	-\$175,000	-\$37,000	-\$97,000	-\$12,000	-\$67,000
% Change	-32.6%	-9.4%	-21.3%	-5.9%	-18.3%

(chart continues on next page)

APPENDIX TABLE A (continued)

The Housing Bubble by Land Regulation Category (to the Great Financial Crisis, in 2007 dollars)

Section 3

WHAT IF NO SMART GROWTH*

	Prescriptive		Total	Responsive	Total
	Prescriptive: Concentrated	Prescriptive: Other			
GROSS VALUE: HOUSING STOCK (Trillions)					
Value Increase to Start of Great Financial Crisis	\$0.72	\$0.95	\$1.67	\$0.56	\$2.23
Value at Start of Great Financial Crisis	\$3.31	\$4.39	\$7.70	\$2.58	\$10.28
Loss Peak to Start of Great Financial Crisis	-\$0.20	-\$0.27	-\$0.47	-\$0.16	-\$0.62
AVERAGE HOUSE VALUE: Actual					
Average House Value: If No Inflation from 2000	\$254,000	\$259,000	\$257,000	\$158,000	\$222,000
Average House Value: 2007	\$324,000	\$331,000	\$328,000	\$202,000	\$284,000
Average House Value: Start of Great Financial Crisis	\$305,000	\$311,000	\$308,000	\$190,000	\$267,000
Loss to Start of Great Financial Crisis	-\$19,000	-\$20,000	-\$20,000	-\$12,000	-\$17,000
Intensity of Loss Compared to Actual	11%	54%	21%	100%	25%

*Note: "What if" analysis assumes percentage changes that occurred in responsive land regulation markets.
Source: American Community Survey and National Association of Realtors data, and author's calculations.

Endnotes

1. "Single-Family Square Footage by Location," National Association of Home Builders. Available at http://www.nahb.com/fileUpload_details.aspx?contentID=80051.
2. "Housing Market Statistics," HousingEconomics.com. Available at http://www.nahb.org/fileUpload_details.aspx?contentID=58231.
3. Federal Reserve Board, "Flow of Funds Accounts of the United States." Available at <http://www.federalreserve.gov/releases/z1/>.
4. Paul Krugman, "That Hissing Sound," *New York Times*, August 8, 2005. Available at <http://www.nytimes.com/2005/08/08/opinion/08krugman.html>.
5. Wendell Cox, "Constraints on Housing Supply: Natural and Regulatory," *Economic Journal Watch*, Vol. 8, No. 1, January 2011, pages 13-27. Available at <http://econjwatch.org/articles/constraints-on-housing-supply-natural-and-regulatory>.
6. Calculated from data in Federal Reserve Bank of Dallas, Houston Branch, "Neither Boom nor Bust, How Houston's Housing Market Differs from Nation's," *Houston Business*, January 2008. Available at <http://www.dallasfed.org/research/houston/2008/hb0801.pdf>.
7. Edward Glaeser and Joseph Gyourko, *The Impact of Zoning on Housing Affordability*, Harvard Institute of Economic Research, Discussion Paper No. 1948, March 2002.
8. Paul Krugman, "That Hissing Sound." Also Paul Krugman, "No Bubble Trouble?" *New York Times*, January 2, 2006. Available at <http://select.nytimes.com/2006/01/02/opinion/02krugman.html>. See also Thomas Sowell, "Subprime Pols," *National Review*, August 8, 2007. Available at <http://article.nationalreview.com/print/?q=YjgwYzI4Njg3OWMxOGUzYmY0ZDMwYzYwNzkzYjc1NDI>; and Theo S. Eicher, "Municipal and Statewide Land Use Regulations and Housing Prices across 250 Major U.S. Cities," University of Washington, 2008. Available at http://depts.washington.edu/teclass/landuse/housing_020408.pdf.
9. Jonathan Martin, Robert Puentes and Rolf Pendall, "From Traditional to Reformed: A Review of the Land Use Regulations in the Nation's 50 Largest Metropolitan Areas," Brookings Institution, August 2006. Available at http://www.brookings.edu/reports/2006/08metropolitanpolicy_pendall.aspx.
10. For critiques of smart growth policy see Robert Bruegmann, *Sprawl: A Compact History* (Chicago: University of Chicago Press, 2005); William T. Bogart, *Don't Call It Sprawl: Metropolitan Structure in the 21st Century* (Cambridge, U.K.: Cambridge University Press 2006); Randal O'Toole, *The Best-Laid Plans: How Government Planning Harms Your Quality of Life, Your Pocketbook, and Your Future* (Washington, D.C.: Cato Institute 2007); Wendell Cox, *War on the Dream: How Anti-Sprawl Policy Threatens the Quality of Life* (Bloomington, Ind.: iUniverse Publishing, 2006).
11. Transportation Research Board, "Costs of Sprawl, 2010," Table 15.4, September 8, 2009. Available at http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_74-c.pdf.
12. Demographia, "Demographia Residential Land Regulation Cost Index: 2010." Available at <http://www.demographia.com/dri-full.pdf>.
13. Fischel found no effect from alternative causes, such as differences in construction cost increases, population growth, quality of life, amenities, adoption of Prop 13 (the state's property tax reform initiative), land supply or water issues. See William Fischel, *Regulatory Takings, Law, Economics and Politics* (Cambridge, Mass.: Harvard University Press, 1995), pages 218-252.
14. Wendell Cox, "Smart Growth and Housing Affordability," Millennial Housing Commission, 2002. Available at <http://govinfo.library.unt.edu/mhc/papers/coxsg.doc>.
15. Wendell Cox, "Reducing Greenhouse Gas Emissions from Personal Mobility," Reason Foundation (forthcoming).
16. Federal Reserve Board, "Flow of Funds Accounts of the United States." Available at <http://www.federalreserve.gov/releases/z1/>.
17. Wendell Cox, "The Fed and Asset Bubbles: Beyond Superficiality," *NewGeography*, December 5, 2009. Available at <http://www.newgeography.com/content/001249-the-fed-and-asset-bubbles-beyond-superficiality>. Las Vegas and Phoenix have been wrongly characterized as having responsive land use regulation. In fact both metropolitan areas are prescriptively regulated and, in addition, are surrounded by government-owned land that forms virtual urban growth boundaries. See Demographia, "Las Vegas Land Market Analysis," 2010. Available at <http://www.demographia.com/db-lvland.pdf>. And Demographia, "Phoenix Land Market Analysis," 2010. Available at <http://www.demographia.com/db-phxland.pdf>.
18. Inflation adjusted increase in value to 2007 in comparison to the value for the same stock without inflation from 2000.
19. Demographia, "The Housing Downturn in the United States: 2009 First Quarter Update," 2009. Available at <http://demographia.com/db-ushsg2009q1.pdf>.

The Housing Crash and Smart Growth

20. Assumes a 10 percent down payment and a 30-year, fixed rate mortgage at 5 percent. Author's calculations based on Edward Glaeser and Joseph Gyourko, *Rethinking Federal Housing Policy* (Washington, D.C.: American Enterprise Institute, 2008), and median house price and median household income for third quarter 2008. See Demographia, "Sixth Annual Housing Affordability Survey," 2010. Available at <http://www.demographia.com/dhi-ix2005q3.pdf>.
21. Edward Glaeser and Joseph Gyourko, *Rethinking Federal Housing Policy* (Washington, D.C.: American Enterprise Institute, 2008).
22. Wendell Cox, "How Densification Will Intensify Traffic Congestion, Air Pollution and the Housing Affordability Crisis," Apartment Association of Metro Denver Economic Conference, January 23, 2001. Available at <http://www.demographia.com/db-denapt010123.htm>.
23. R.E. Saks, "Job Creation and Housing Construction: Constraints on Metropolitan Area Employment Growth," September 22, 2005. Available at <http://www.federalreserve.gov/pubs/feds/2005/200549/200549pap.pdf>.
24. Wendell Cox, "How Texas Averted the Great Recession," Houstonians for Responsible Growth, 2009. Available at <http://www.houstongrowth.org/node/63>.
25. Calculated from U.S. Bureau of the Census data.
26. Waldo Lopez-Aqueres, Joelle Skaga and Tadeusz Kugler, *Housing California's Latino Population in the 21st Century: The Challenge Ahead* (Los Angeles, Calif.: The Tomas Rivera Policy Institute, 2002). Available at http://www.trpi.org/PDFs/housing_ca_latinos.pdf. "Growth controls" are compact development policies.
27. See, for example, Morris A. Davis, Andreas Lehnert and Robert F. Martin, "The Rent-Price Ratio for the Aggregate Stock of Owner-Occupied Housing," Department of Real Estate and Urban Land Economics, University of Wisconsin-Madison and the Federal Reserve Board of Governors, 2007. Available at http://morris.marginalq.com/dlm_data_files/2007-12.DLM_fullpaper.pdf.
28. Demographia, "Low Income Rental Affordability: HUD Fair Market Rent/Low Quartile (25 percent) Household Income: 2008: Metropolitan Areas over 1,000,000," August 20, 2010. Available at <http://demographia.com/db-fmr-mult.pdf>.
29. Demographia, "Net Domestic Migration by Land Use Category: 2000-2008: Metropolitan Areas Over 1,000,000 Population," 2009. Available at <http://demographia.com/db-2008mighaffcat.pdf>.
30. People who move from one county to another within the United States.
31. Texas experienced a real estate "bust" (including residential) in the 1980s. However, there was no "bubble." House prices had been near or below a median multiple of 3.0 and fell from that point. Excessive lending (which ended in the savings and loan crisis) and a precipitous decline in oil prices contributed to the problem. The excessive lending failed to drive house prices up, because land use regulations allowed a sufficient supply response. As a Texas A&M University Real Estate Center publication indicated, "The Texas residential market's ability to produce new housing units at a rate commensurate with demand and without escalating costs is a prime factor in balancing the market and keeping price changes modest." See James P. Gaines, "Texas Housing Bubble: Truth or Scare?" April 2006. Available at <http://recenter.tamu.edu/pdf/1769.pdf>.
32. California Senate Bill 375 implements programs to reduce greenhouse gas emissions through land use planning. As the research cited above indicates, land use planning is a particularly ineffective means for reducing greenhouse gas emissions. Administration of California environmental legislation, such as Assembly Bill 32 (the "Global Warming Solutions Act"), has been skewed toward smart growth approaches with little critical analysis. The result is likely to be a failure to achieve the emissions reduction objectives, while substantially increasing the cost of living and making traffic congestion even more severe.

The NCPA is a nonprofit, nonpartisan organization established in 1983. Its aim is to examine public policies in areas that have a significant impact on the lives of all Americans — retirement, health care, education, taxes, the economy, the environment — and to propose innovative, market-driven solutions. The NCPA seeks to unleash the power of ideas for positive change by identifying, encouraging and aggressively marketing the best scholarly research.

Health Care Policy.

The NCPA is probably best known for developing the concept of Health Savings Accounts (HSAs), previously known as Medical Savings Accounts (MSAs). NCPA President John C. Goodman is widely acknowledged (*Wall Street Journal*, WebMD and the *National Journal*) as the “Father of HSAs.” NCPA research, public education and briefings for members of Congress and the White House staff helped lead Congress to approve a pilot MSA program for small businesses and the self-employed in 1996 and to vote in 1997 to allow Medicare beneficiaries to have MSAs. In 2003, as part of Medicare reform, Congress and the President made HSAs available to all nonseniors, potentially revolutionizing the entire health care industry. HSAs now are potentially available to 250 million nonelderly Americans.

The NCPA outlined the concept of using federal tax credits to encourage private health insurance and helped formulate bipartisan proposals in both the Senate and the House. The NCPA and BlueCross BlueShield of Texas developed a plan to use money that federal, state and local governments now spend on indigent health care to help the poor purchase health insurance. The SPN Medicaid Exchange, an initiative of the NCPA for the State Policy Network, is identifying and sharing the best ideas for health care reform with researchers and policymakers in every state.

**NCPA President
John C. Goodman is called
the “Father of HSAs” by
The Wall Street Journal, WebMD
and the *National Journal*.**

Taxes & Economic Growth.

The NCPA helped shape the pro-growth approach to tax policy during the 1990s. A package of tax cuts designed by the NCPA and the U.S. Chamber of Commerce in 1991 became the core of the Contract with America in 1994. Three of the five proposals (capital gains tax cut, Roth IRA and eliminating the Social Security earnings penalty) became law. A fourth proposal — rolling back the tax on Social Security benefits — passed the House of Representatives in summer 2002. The NCPA’s proposal for an across-the-board tax cut became the centerpiece of President Bush’s tax cut proposals.

NCPA research demonstrates the benefits of shifting the tax burden on work and productive investment to consumption. An NCPA study by Boston University economist Laurence Kotlikoff analyzed three versions of a consumption tax: a flat tax, a value-added tax and a national sales tax. Based on this work, Dr. Goodman wrote a full-page editorial for *Forbes* (“A Kinder, Gentler Flat Tax”) advocating a version of the flat tax that is both progressive and fair.

A major NCPA study, “Wealth, Inheritance and the Estate Tax,” completely undermines the claim by proponents of the estate tax that it prevents the concentration of wealth in the hands of financial dynasties. Actually, the contribution of inheritances to the distribution of wealth in the United States is surprisingly small. Senate Majority Leader Bill Frist (R-TN) and Senator Jon Kyl (R-AZ) distributed a letter to their colleagues about the study. In his letter, Sen. Frist said, “I hope this report will offer you a fresh perspective on the merits of this issue. Now is the time for us to do something about the death tax.”

Retirement Reform.

With a grant from the NCPA, economists at Texas A&M University developed a model to evaluate the future of Social Security and Medicare, working under the direction of Thomas R. Saving, who for years was one of two private-sector trustees of Social Security and Medicare.

The NCPA study, “Ten Steps to Baby Boomer Retirement,” shows that as 77 million baby boomers begin to retire, the nation’s institutions are totally unprepared. Promises made under Social Security, Medicare and Medicaid are inadequately funded. State and local institutions are not doing better — millions of government workers are discovering that their pensions are under-funded and local governments are retrenching on post-retirement health care promises.

Pension Reform.

Pension reforms signed into law include ideas to improve 401(k)s developed and proposed by the NCPA and the Brookings Institution. Among the NCPA/Brookings 401(k) reforms are automatic enrollment of employees into companies’ 401(k) plans, automatic contribution rate increases so that workers’ contributions grow with their wages, and better default investment options for workers who do not make an investment choice.

The NCPA's online Social Security calculator allows visitors to discover their expected taxes and benefits and how much they would have accumulated had their taxes been invested privately.

Environment & Energy.

The NCPA's E-Team is one of the largest collections of energy and environmental policy experts and scientists who believe that sound science, economic prosperity and protecting the environment are compatible. The team seeks to correct misinformation and promote sensible solutions to energy and environment problems. A pathbreaking 2001 NCPA study showed that the costs of the Kyoto agreement to reduce carbon emissions in developed countries would far exceed any benefits.

Educating the next generation.

The NCPA's Debate Central is the most comprehensive online site for free information for 400,000 U.S. high school debaters. In 2006, the site drew more than one million hits per month. Debate Central received the prestigious Templeton Freedom Prize for Student Outreach.

Promoting Ideas.

NCPA studies, ideas and experts are quoted frequently in news stories nationwide. Columns written by NCPA scholars appear regularly in national publications such as the *Wall Street Journal*, the *Washington Times*, *USA Today* and many other major-market daily newspapers, as well as on radio talk shows, on television public affairs programs, and in public policy newsletters. According to media figures from *BurrellesLuce*, more than 900,000 people daily read or hear about NCPA ideas and activities somewhere in the United States.

What Others Say About the NCPA



"The NCPA generates more analysis per dollar than any think tank in the country. It does an amazingly good job of going out and finding the right things and talking about them in intelligent ways."

Newt Gingrich, former Speaker of the U.S. House of Representatives



"We know what works. It's what the NCPA talks about: limited government, economic freedom; things like Health Savings Accounts. These things work, allowing people choices. We've seen how this created America."

John Stossel, former co-anchor ABC-TV's *20/20*



"I don't know of any organization in America that produces better ideas with less money than the NCPA."

Phil Gramm, former U.S. Senator



"Thank you . . . for advocating such radical causes as balanced budgets, limited government and tax reform, and to be able to try and bring power back to the people."

Tommy Thompson, former Secretary of Health and Human Services