

Research on the Subprime Crisis Based on Regional and Housing Type Perspectives

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Abstract. This study discusses the 2008 subprime mortgage crisis's causes, housing and financial sector changes, and long-term effects. It forms the basis for real estate market regulation and risk mitigation. The research analyzes the causes of the crisis, including subprime loans, complicated financial derivatives, and lax regulatory monitoring. The problem is also linked to an overheated real estate market and loose credit policies. The crisis period is then examined, including housing price declines, sales volume declines, mortgage default increases, and foreclosure increases. It compares impacts across geographies and housing types, including apartments and single-family homes. Financial institution responses and policy changes are then examined. The study finishes with city or community case studies showing market dynamics post-crisis. The findings can help policymakers and financial institutions navigate the housing market and avoid future catastrophes.

Keywords: Subprime mortgage crisis, Real estate market, Region, Housing type.

1. Introduction

This extensive analysis meticulously investigates the subprime mortgage crisis of 2008 and its lasting ramifications on the United States housing market. The investigation is predicated on the examination of multiple data sources in order to comprehend the intricate web of components that contribute to a particular phenomenon [1]. The primary emphasis of this analysis is the exponential growth of subprime lending and the subsequent transformation of these precarious loans into securities. This research investigates the historical determinants that precipitated a deregulated environment, which subsequently permitted financial institutions in the United States to engage in lending practices that entailed greater risk. In an effort to stimulate the economy following the recession, the Federal Reserve reduced interest rates in the early 2000s, a strategy that is also examined in the article. Nevertheless, this led to an unintended consequence of diminished financing expenses and an exorbitantly inflated housing market.

This study investigates how financial institutions exploited these conditions in order to extend loans to affluent borrowers, often at exorbitant interest rates. Additionally, the transformation of these subprime mortgages into complex financial instruments, including Collateralized Debt Obligations (CDOs) and Mortgage-Backed Securities (MBS), (finance and development) is examined. These securities were distributed extensively to investors who possessed high credit ratings, which obscured their true risk and consequently contributed to an untenable property market bubble [2-4]. The paper investigates the collapse of the housing bubble, an event that resulted in a substantial decline in property values and affected subprime borrowers disproportionately. Numerous debtors were consequently unable to meet their mortgage obligations, which precipitated an increase in defaults.

The events in question had substantial repercussions, including the devaluation of MBS and CDOs and substantial financial losses for institutions across the globe. The research provides a comprehensive account of the subsequent global economic recession, the extensive reorganization of banking regulations, and the modifications made to housing policy and mortgage lending practices in response to the crisis [5]. This underscores the enduring ramifications of the crisis on various facets of the housing sector, encompassing homeownership rates, lending practices, foreclosure procedures, and pricing. The events in question had substantial repercussions, including the devaluation of MBS and CDOs and substantial financial losses for institutions across the globe [6]. The research provides a comprehensive account of the subsequent global economic recession, the extensive reorganization

of banking regulations, and the modifications made to housing policy and mortgage lending practices in response to the crisis. This underscores the enduring ramifications of the crisis on various facets of the housing sector, encompassing homeownership rates, lending practices, foreclosure procedures, and pricing.

Further analysis of the broader economic ramifications is provided, with particular emphasis on how the crisis catalyzed comprehensive fiscal policies and financial reforms that aim to avert future occurrences of this nature. The study offers valuable insights for policymakers and financial institutions, emphasizing the criticality of maintaining vigilance, transparency, and regulatory oversight within the mortgage lending sector. The lessons learned from this crisis underscore the importance of a robust and adaptable financial sector capable of withstanding economic disruptions and protecting clients against deceptive lending practices.

This article will conduct an exhaustive analysis of the occurrences and repercussions that transpired during the subprime mortgage crisis of 2008. Moreover, it functions as a crucial resource for understanding the elements that have the potential to cause economic disruptions. The research offers a comprehensive analysis of the subsequent occurrences following a failure and can be utilized to formulate forthcoming strategies for safeguarding against the intrinsic dangers of the financial industry.

2. The Causes of the Subprime Crisis

The surge in subprime lending significantly contributed to the rise in homeownership rates and the heightened demand for housing during the period of an economic bubble. The homeownership rate in the United States rose from 64 percent in 1994 to a record high of 69.2 percent in 2004. (Pew Research Center) The demand contributed to the surge in property prices and consumer expenditure, resulting in an astounding 124% home value growth from 1997 to 2006. Some homeowners took advantage of rising property values by refinancing at lower interest rates and getting second mortgages to spend the extra money. The US household debt-to-income ratio rose to 130 percent in 2007, 30 percent more than the preceding decade. The collapse of the housing bubble raised default rates on a subprime, adjustable rate, "Alt-A," and other mortgage loans to borrowers with higher risk profiles, lower income, or weaker credit histories than "prime" borrowers. Alt-A mortgages are between prime and subprime in risk. The mortgages have risky issues, but the borrowers have good credit. These issues include high loan-to-value and debt-to-income ratios and insufficient income proof. In 2006, Forbes reported that 20% of mortgages were subprime, up from 9% in 1996. About 20% of U.S. house financing was subprime mortgages, worth \$600 billion in 2006. About \$1.3 trillion in subprime loans remain due.

Real estate values rose, causing lenders to take more risks and make more subprime loans. Some experts believe Wall Street helped this by aggregating loans into securities, which were then sold to pension funds and other institutional investors seeking higher profits, as shown in Fig.1.

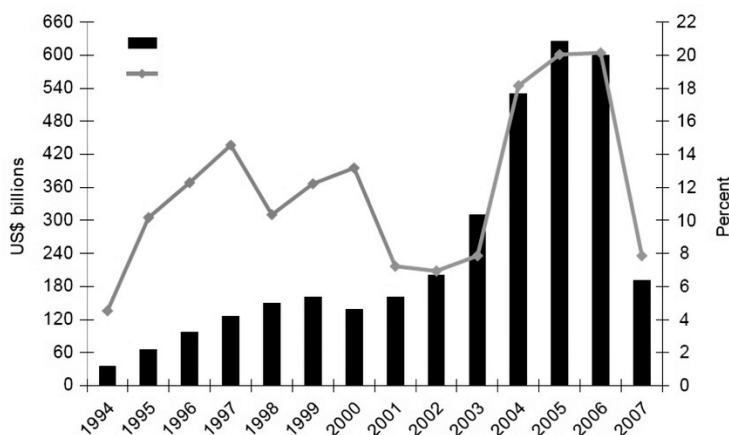


Figure 1. The surge in subprime

Additionally, the securitization process entailed the amalgamation of high-risk subprime mortgages into Mortgage-Backed Securities (MBS) and Collateralized Debt Obligations (CDOs), which were subsequently marketed to investors globally [7].

The easy accessibility of financing resulted in a housing bubble, causing a surge in home values. This occurred due to an increase in the number of individuals who had access to credit and were able to secure loans to buy homes. Consequently, a housing bubble emerged [8].

Financial institutions and credit rating bodies underestimated the peril associated with subprime mortgages, so contributing to the inaccurate evaluation of risk [9]. Some of these assets with significant levels of risk were assigned high credit ratings, creating the perception among investors that they were completely devoid of danger.

Financial institutions worldwide made substantial investments in these mortgage-backed securities, so facilitating the globalization of the financial markets. The global ramifications of the property market's collapse were extensive.

Declining Underwriting Standards: Before the financial crisis, there was a significant deterioration in the quality of underwriting, which is the process by which financial institutions evaluate the risk of lending.

The inadequate oversight of the financial markets during that period constitutes the eighth factor contributing to the absence of regulation. The dangers associated with securitization and subprime lending were inadequately regulated and not well comprehended.

During the years 2006 and 2007, as the property market started to decline, a substantial proportion of homeowners defaulted on their mortgages, especially those who had borrowed subprime loans. Consequently, the value of mortgage-backed securities underwent a sudden and significant decrease, leading to substantial financial losses for financial institutions worldwide and triggering a crisis in the global financial system [8].

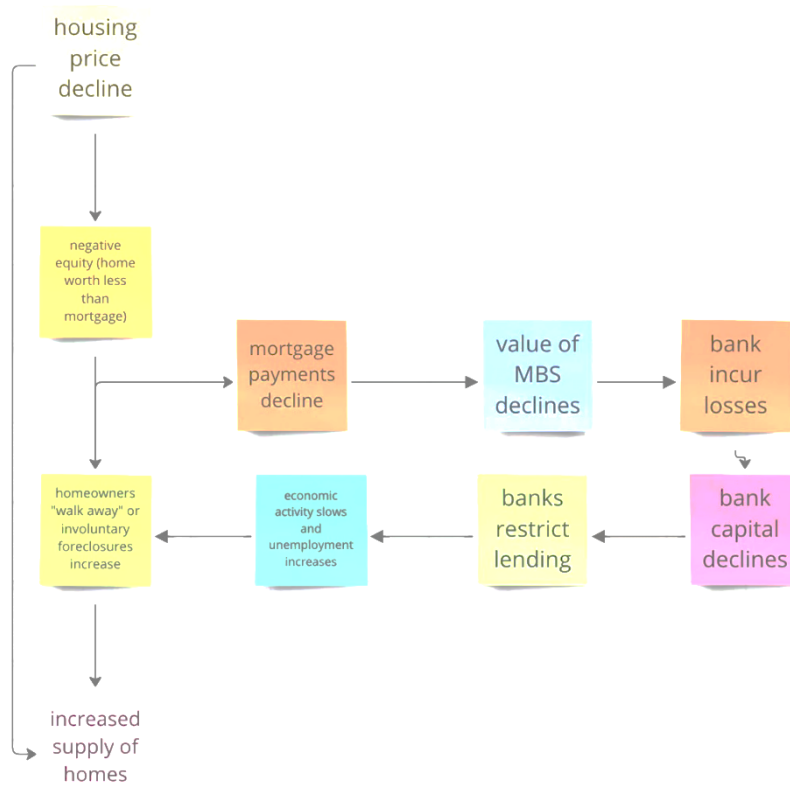


Figure 2. Concept Map

Fig.2 depicts the detrimental feedback loops that are driving the subprime mortgage crisis. At first, the decrease in house prices resulted in homeowners having mortgage debts that exceeded the value of their homes, causing some to default or be at risk of foreclosure. The number of foreclosures

dramatically increased, resulting in a large number of properties becoming available for sale. This surplus of houses caused property prices to decrease even more and worsened the problem of homeowners owing more on their mortgages than their homes were worth. Concurrently, when mortgage payments started to decline, the worth of mortgage-backed securities (MBS) sharply dropped, causing significant financial losses for banks [10]. These losses diminished the bank's capital, so limiting its capacity to provide loans. The resulting credit crunch decelerated economic growth and exacerbated unemployment, thus increasing foreclosures. The interdependent pattern of foreclosures and bank instability resulted in a detrimental feedback loop: diminishing asset worth resulted in financial deficits, decreased lending, and economic decline, which in turn contributed to further depreciation of assets. The figure depicts the fundamental nature of the crisis, in which the bursting of the housing bubble initiated a series of financial difficulties, ultimately spreading throughout the entire economy and resulting in a profound recession.

3. An In-Depth Analysis of the Subprime Mortgage Crisis: The Interplay of Home Prices, Sales, and Defaults

3.1. Housing Prices

As shown in Figure 3, the S&P/Case-Shiller U.S. National Home Price Index data offers a precise depiction of the decrease in residential property values. In 2006, during the height of the housing bubble, the index reached its highest point ever recorded. Nevertheless, as the crisis unraveled, residential property values initiated a significant downturn, plummeting by nearly 30% by 2009. The sharp decline in property values resulted in many homeowners having negative equity, which means that they owed more on their mortgages than the value of their properties [11].

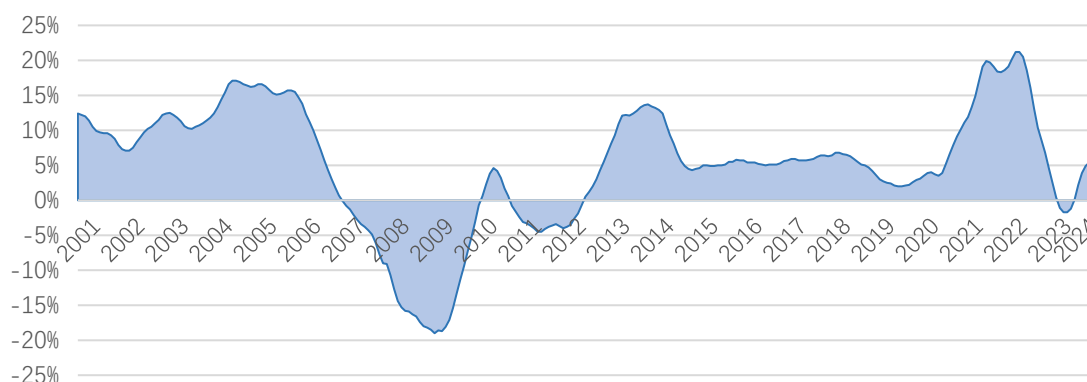


Figure 3. New One Family Homes for Sale in the United States

3.2. Real Estate Transactions

Simultaneously, the quantity of residential property transactions drastically declined. As per the National Association of Realtors, the number of existing house sales reached its highest point in 2005, with over 7.1 million transactions [12]. However, by 2008, there was a significant decrease to roughly 5 million sales, suggesting a decline of nearly 30%. The decrease in demand was primarily caused by stricter loan conditions, increasing economic uncertainty, and diminishing consumer confidence.

3.3. Instances of Mortgage Defaults

The number of mortgage defaults surged as some borrowers, who had been granted loans with small or no initial payment and limited credit assessments, discovered themselves incapable of fulfilling their monthly payments, particularly as adjustable-rate mortgages adjusted to higher interest rates. According to the Mortgage Bankers Association, the rate of mortgage loans on residential properties with one to four units that were not being paid on time grew to a rate of over 10% of all outstanding loans by the end of 2009. This was the highest level ever recorded in the survey's history.

3.4. Property Repossessions and Residential Property Sales Through Public Bidding

The surge in mortgage defaults inevitably resulted in an escalation of foreclosures and home auctions. As shown in Figure 4, according to RealtyTrac, the number of foreclosure filings, which include default letters, scheduled auctions, and bank repossessions, exceeded 2.3 million in 2008. This represents an 81% increase compared to 2007 and a 225% increase compared to 2006 [13]. The influx of foreclosure sales inundated the market with affordably priced properties, exacerbating the downturn in the housing market, as shown in Fig.4.

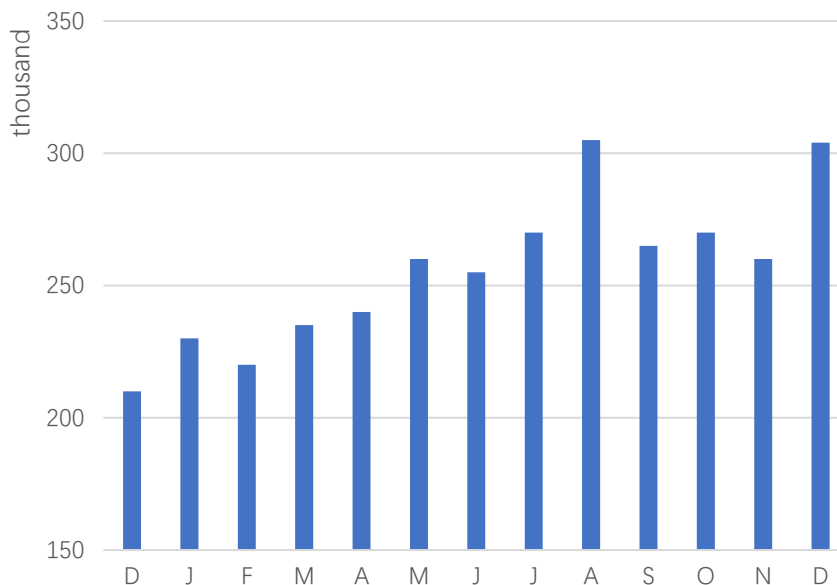


Figure 4. Foreclosure Filings (2008)

The correlation among these data points is crucial for comprehending the crisis. Due to the decline in property prices, homeowners experienced negative equity on their mortgages, which discouraged them from maintaining regular payments, especially in cases of financial distress. Consequently, there was an increase in defaults and foreclosures, resulting in a larger supply of homes available for sale. Consequently, this further contributed to the decline in prices. The feedback loop persisted as the financial entities that possessed the devalued mortgages suffered substantial losses. This resulted in a depletion of bank capital, which caused a credit constraint that exacerbated the decline in the property market and the overall economy.

The crisis exhibited regional disparities within the United States, with specific areas witnessing more pronounced decreases in housing values and elevated foreclosure rates. Home prices in states such as Nevada, Florida, Arizona, and California, where there was excessive speculation and overbuilding, experienced a decline of up to 50%. The regionalized nature of the housing market resulted in varying degrees of impact, with certain areas experiencing devastation while others were relatively less affected.

To summarize, the subprime mortgage crisis was marked by a convergence of falling home prices, diminished sales, heightened mortgage defaults, and a sharp rise in foreclosures and home auctions. The data from this period demonstrates a property market experiencing significant difficulties, which had a widespread impact on financial markets and the global economy. The crisis highlighted the necessity for stricter lending criteria and enhanced risk management protocols within the banking industry to avert a potential recurrence of such a collapse in the future.

4. The Varied Impact of the Subprime Mortgage Crisis: Regional Differences and Housing Types

The subprime mortgage crisis, which sent shockwaves through the global economy, did not strike all regions or home types equitably. The impact of the crisis exhibited substantial variation throughout

distinct regions of the United States and among different categories of housing, including apartments and single-family homes.

4.1. Regional Disparities

The crisis had a conspicuous effect on regions that had undergone the most substantial housing booms. States such as Nevada, Florida, Arizona, and California experienced significant decreases in property prices. These regions frequently became targets of speculative investment and excessive construction, rendering them more susceptible to the consequences of the housing bubble's collapse. Conversely, states in the Midwest, which had witnessed more restrained expansion during the prosperous years, encountered less severe economic declines.

For example, data from the Federal Housing Finance Agency (FHFA) indicated that although states like Nevada experienced a significant drop of more than 50% in home values, other regions like Texas and North Dakota had comparatively lesser reductions or even maintained minor growth in home prices. The crisis's impact was unequal due to the regional structure of the housing market, resulting in certain towns seeing a disproportionate number of foreclosures and economic dislocation.

4.2. Effects on Various Housing Categories

The home type also influenced how the crisis developed. The problem mostly revolved around single-family houses, typically acquired by owner-occupiers. A significant number of these residences were purchased using subprime mortgages, which offered low introductory interest rates but subsequently adjusted to higher rates following a few years. Consequently, after the introductory interest rates ended, some homeowners found themselves unable to meet the increased mortgage payments, resulting in defaults and foreclosures.

Nevertheless, apartments and multifamily dwelling units experienced a certain degree of protection. While the value of these properties also decreased, the impact was less significant. The rental demand exhibited a state of relative stability or even saw growth, as those who faced home foreclosure sought alternative housing options. Furthermore, investors who possessed multifamily properties frequently held greater amounts of capital and enjoyed more favorable loan conditions, rendering them less susceptible to market volatility.

The rental market's durability was partially attributed to the heightened demand for housing from individuals who were no longer able to afford purchasing homes. This phenomenon was especially evident in metropolitan regions, characterized by a greater variety of housing options and a higher prevalence of rental houses. The demand for rental units contributed to the stabilization of apartment values and even resulted in rent hikes in certain regions.

The impact of the subprime mortgage crisis was intricate and diverse, with notable disparities among various areas and housing categories. Regions characterized by excessive speculation and overdevelopment experienced the greatest negative impact, whereas areas with more resilient housing markets endured the crisis with less harm. During the crisis, single-family homes experienced the most severe impact, although multifamily units and apartments were well protected due to a consistent or increasing demand for rental properties. The crisis emphasized the significance of diversification in real estate investments and the necessity of cautious lending policies to reduce the dangers of future housing market downturns.

4.3. The Impact of the Subprime Mortgage Crisis on Las Vegas' Housing Market

The Las Vegas housing market was severely impacted by the subprime mortgage crisis, serving as a prominent example of the crisis's detrimental effects on a single urban area. Las Vegas underwent a notable surge in real estate activity followed by a sharp decline during the subprime mortgage crisis, which was one of the most significant in the nation.

4.3.1 Prior to the Crisis, There Was a Significant Economic Expansion

During the early 2000s, Las Vegas experienced rapid growth and emerged as one of the swiftest expanding cities in the United States. This growth was mostly driven by a combination of speculative investment, an influx of new inhabitants, and the easy accessibility of subprime loans, which contributed to the thriving housing market. The prices of residential properties experienced a significant increase, leading to a corresponding rise in the construction of new houses and real estate projects to cater to the growing demand.

4.3.2 The Phenomenon of the Bursting Bubble

Nevertheless, when the housing bubble collapsed, the consequences were striking and rapid. The median home price in Las Vegas started to sharply decline from its peak in 2006 by late 2007. The S&P/Case-Shiller Home Price Index for the Las Vegas metropolitan area experienced a significant decrease of more than 60% in home values from the highest point to the lowest point, making it one of the most severe corrections in the country.

4.3.3 Home Repossessions and a Situation When the Value of a Property Is Less Than the Outstanding Mortgage Debt

The foreclosure rates in Las Vegas experienced a significant and rapid increase. RealtyTrac data reveals that by 2008, the foreclosure filing rate in Las Vegas reached one in every 10 residences, making it the highest rate in the nation. Many homeowners found themselves in a situation of negative equity due to the quick decline in home values. The situation was worsened by the widespread occurrence of subprime mortgages, which frequently included adjustable rates that would increase after an initial period of low interest [14].

4.3.4 Effects on Detached Dwellings and Multi-Family Residences

The effect on single-family dwellings was particularly severe. A multitude of residential areas experienced a substantial quantity of vacant residences and a sharp decline in real estate prices. The building industry, previously a significant catalyst for economic growth, came to a standstill, resulting in job cuts and exacerbating the economic downturn.

Conversely, the housing market in Las Vegas performed marginally superior. The foreclosure of homeowners' residences led to an upsurge in the demand for rental properties. While the change did not completely counterbalance the decrease in property values, it did offer some protection against the full impact of the crisis. Occupancy rates in apartment complexes had a notable increase, while rental prices remained reasonably steady. However, the rate of growth in rental prices significantly decelerated in comparison to the years before the crisis.

4.3.5 Rehabilitation and Insights Gained

The recuperation in Las Vegas has been sluggish. It took several years for prices to stabilize and gradually increase back to the levels seen before the crisis. The market's excessive dependence on speculative ventures and subprime lending had become glaringly evident. The crisis prompted demands for more rigorous lending criteria and improved risk evaluation in the real estate sector.

Las Vegas serves as a case study that demonstrates the profound consequences of the subprime mortgage crisis on a city that had seen a substantial housing boom. The housing market dynamics in the city throughout the crisis demonstrate the susceptibility of economies that significantly depend on real estate and emphasize the significance of adopting sustainable lending and borrowing policies.

5. Recommendations

5.1. Strategies for Stabilizing Regional Housing Markets Post-Subprime Mortgage Crisis

A multifaceted set of recommendations is necessary in response to the subprime mortgage crisis, which caused states including California, Nevada, Florida, and Arizona to experience precipitous declines in property values—in some areas, by more than 50 percent, as reported by the Federal

Housing Finance Agency (FHFA)]. Regulatory reforms ought to have the objective of mitigating the substantial impact of speculative investment on volatility. For instance, construction activities in these states surged by as much as 20% above historical averages during the expansion. Enhanced risk management tools may prove to be of utmost importance, given that prior to the crisis, more than 80% of the market was comprised of mortgage-backed securities rated AAA, which misled numerous investors regarding actual liability. Particularly because subprime loans comprised roughly 20% of all mortgages in 2005, with the proportion being disproportionately higher in the most severely impacted states, consumer protections must be strengthened. Additionally, economic diversification is of the utmost importance; it could mitigate the effects of the crisis, which caused foreclosures in these regions to increase by as much as 400%. In addition to stabilizing communities, foreclosure mitigation programs must be robust in order to counteract the 10 percent decrease in the value of surrounding properties that foreclosures can cause. The imperative for increased affordable housing initiatives becomes apparent when one considers that the median home price in the most impacted regions was around ten times the average annual income, which is significantly higher than the conventional threshold of three times the annual income. In contrast, certain regions such as North Dakota and Texas experienced a stabilization or slight decrease in property values—with some areas even witnessing an increase of 2%–3%—and thus should persist in enforcing prudent financial practices. The effectiveness of local investment strategies that prioritize community development is supported by the comparatively low unemployment rates observed in these regions, which are frequently several percentage points lower than the national average. Collaboration between the federal government and the states is essential to guarantee that these data-driven recommendations result in a resilient and well-balanced housing market recovery.

5.2. Data-Driven Recommendations for Enhancing Resilience in Housing Markets Post-Crisis

Critical vulnerabilities in the housing market were brought to light during the subprime mortgage crisis, specifically in the single-family home sector, which was adversely affected by the influx of subprime mortgages. According to the Federal Reserve, these mortgages comprised approximately 20% of all new loans in 2005 and had an astounding failure rate, with a foreclosure start rate of nearly 10% by 2008. This precipitated a precipitous decline in home prices, as measured by the S&P/Case-Shiller home price index, which fell by more than 30 percent between 2006 and 2009. On the contrary, multifamily properties demonstrated resiliency, supported by a consistent demand for rental accommodations that grew in magnitude during the crisis. Indeed, even during the years of the housing crisis, flat occupancy rates remained above 90%, according to the National Multi-Housing Council.

Future stability recommendations must take into account these disparities. It is imperative to implement more stringent regulations about mortgage lending, specifically targeting the requirement that borrowers allocate no more than 28% of their income towards housing expenses, as recommended by the U.S. Department of Housing and Urban Development as a standard guideline. There is a need for the expansion of financial literacy initiatives to educate prospective householders about the dangers associated with adjustable-rate mortgages, which the Mortgage Bankers Association identifies as a major contributor to the financial crisis. Moreover, it is advisable to provide incentives for investment in multifamily housing, given that the Freddie Mac Multifamily Apartment Investment Market Index (AIMI) demonstrated that multifamily investments remained a stable asset class throughout the crisis.

In order to mitigate the recurrence of the extensive foreclosures that RealtyTrac documented impacting more than 2.3 million properties in 2008 exclusively, mortgage assistance programs must exhibit resilience and effectiveness. Provisions for a mortgage rate freeze for eligible householders could have been incorporated into these programs, thereby potentially mitigating the foreclosure rate. Furthermore, it is imperative to prioritize assistance for the rental market, as the Joint Centre for Housing Studies of Harvard University observed that the crisis precipitated a surge in the number of renters, with renter households increasing by 5 million between 2007 and 2010. Policies mandating

rent stabilization may be required to safeguard occupants against rental price volatility that occurs during periods of increased demand.

Housing advocates, government agencies, and financial institutions will need to collaborate in order to implement these data-driven strategies. By implementing a comprehensive strategy that encompasses judicious lending practices, rental market assistance, and homeowner assistance programs, one can fortify the housing market to the point where it can withstand forthcoming economic challenges.

5.3. Revitalizing the Las Vegas Housing Market: Strategies for Post-Crisis Stability and Growth

In the wake of the subprime mortgage crisis, the Las Vegas housing market is in a delicate state of recovery. Data from the Greater Las Vegas Association of Realtors indicates a stabilization of home prices, although they have not rebounded to the pre-crisis peak. To ensure a sustainable recovery, a multi-faceted approach is necessary. Firstly, enforcing stringent lending practices is vital; the Center for Responsible Lending advises that mortgages should be no more than 28% of a borrower's income to prevent future defaults. Additionally, diversifying the housing stock is crucial. The National Association of Home Builders advocates for more multifamily units, which tend to be less susceptible to market fluctuations. Furthermore, enhancing foreclosure mitigation efforts is essential, given that during the crisis, Nevada experienced one of the highest foreclosure rates nationally, with RealtyTrac reporting one in every 76 homes being foreclosed. Strengthening support systems can help avert such scenarios. Lastly, bolstering economic diversification, as suggested by the Las Vegas Review-Journal, can create a robust economy less reliant on real estate, thereby supporting the housing market. These strategies, underpinned by solid data, are key to navigating the Las Vegas market toward a stable and prosperous future.

6. Conclusion

The trajectory of the Las Vegas housing market, from its peak during a real estate boom to its decline during the subprime mortgage crisis, offers a fascinating illustration of market dynamics and the significance of cautious economic planning. The market is currently undergoing a process of recuperation, nevertheless, it is crucial to approach this process cautiously, taking into account the insights gained from previous experiences and the current data available.

According to the Greater Las Vegas Association of Realtors, the fact that property prices have stabilized is a positive indication. However, it is important to note that the market still carries a risk of vulnerability. Implementing stringent lending criteria, as advised by the Centre for Responsible Lending, is crucial in order to mitigate the potential for future loan defaults. Mortgages should be easily manageable obligations, rather than volatile threats that could explode with even the slightest economic disturbance.

The equal importance lies in the diversification of the housing stock. The National Association of Home Builders' focus on multifamily apartments is not merely a suggestion, but rather a fundamental approach to creating a robust market. These units frequently maintain their popularity even in times of economic downturn, serving as a safeguard against the severe decreases observed during the crisis.

Furthermore, the significant foreclosure rates that previously afflicted Nevada, as emphasized by RealtyTrac, emphasize the necessity for strong foreclosure relief programs. These programs can stabilize not just individual homes but also entire communities, thereby preserving the integrity of neighborhoods and promoting the overall health of the market.

Finally, Las Vegas needs to seek economic stability beyond the real estate sector. The Las Vegas Review-Journal's recommendation to expand into industries such as technology and healthcare is wise counsel. An economy with diverse aspects can offer the job opportunities and stability necessary to sustain a robust home market.

Las Vegas should prioritize ethical financing, housing diversity, foreclosure prevention, and economic diversification as it undergoes the process of rebuilding. The research indicates that these initiatives are fundamental elements for ensuring a sustainable future for the city's housing sector. By implementing strategic measures, Las Vegas has the potential to turn previous challenges into a blueprint for a prosperous and resilient metropolitan environment capable of enduring fluctuations in the economy.

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