The Global Financial Crisis

Module 3 Housing and Mortgages

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Outline

Module 3

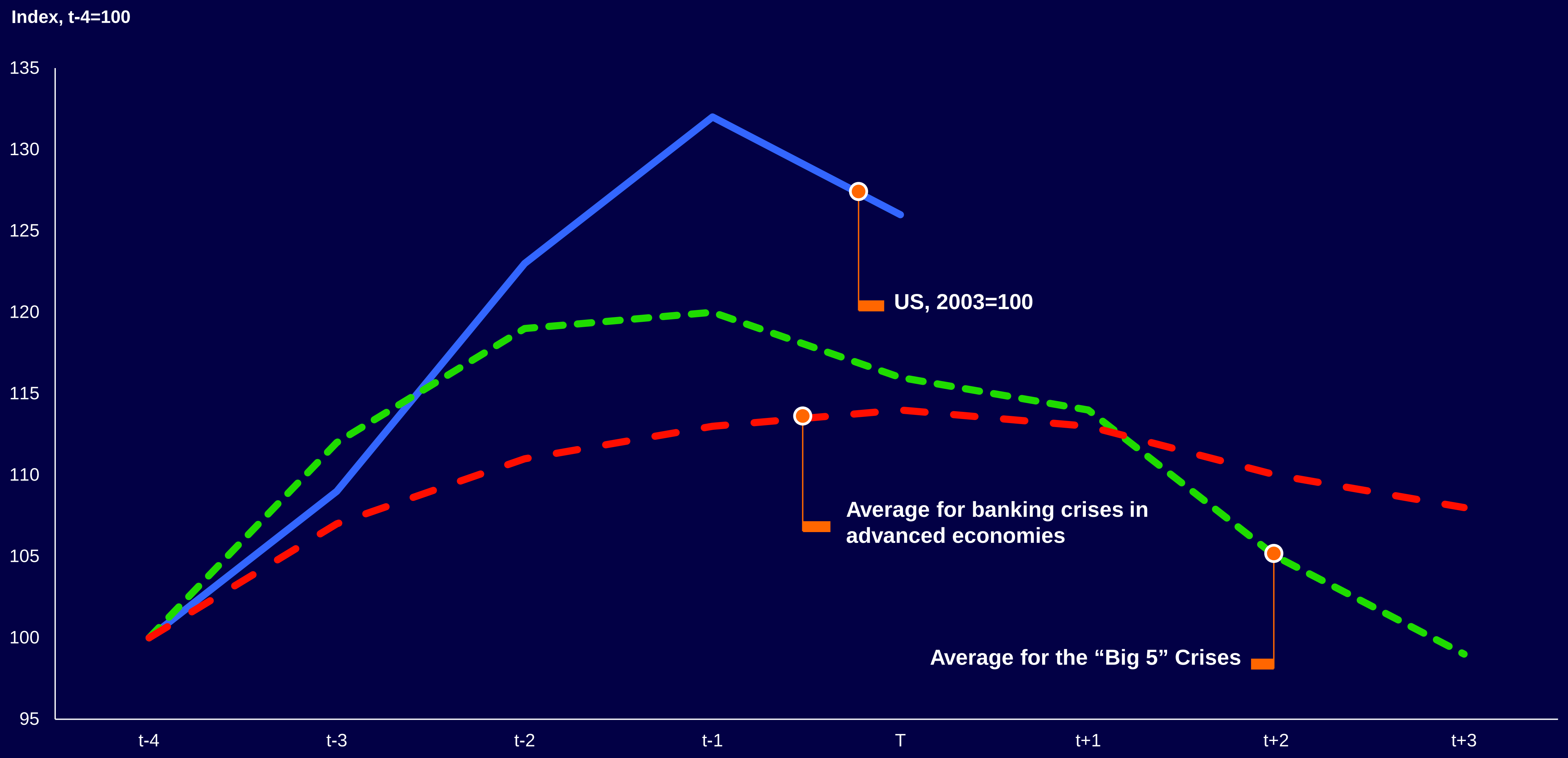
01 Housing Bubbles and Financial Crises

Housing Bubbles and Financial Crises

Reinhart and Rogoff (2008) identify the “big five” crises since WWII – Spain (1977), Norway (1987), Finland (1991), Sweden (1991), and Japan (1992) – plus 13 other bank-centered crises in developed countries.

Housing price appreciations are a standard feature of financial crises, and as of 2007 the United States appeared to be in great danger.

Real Housing Prices and Financial Crises



02 Mortgages: Fixed and Adjustable

Mortgages

The standard mortgage in the United States has a 30-year term, with fixed interest rates. Every year you pay interest and an amortization of the loan.

Alternative structures have adjustable interest rates for all or part of the term (“ARMs”, 2/28, 5/25 or 5/1, 7/23 or 7/1 etc.), with the adjustable rate set to some spread above a reference rate.

- Initial fixed rate will typically be lower than for 30-year fixed mortgage, sometimes called a “teaser”.

- These alternative structures are more popular outside the United States.

More complex structures allow for flexible payment sizes: negative amortization, balloon payments, pre-payment penalties, and other elements that can reduce payment sizes in early years.

03 Mortgages: Prime

Prime Mortgages

Conforming/Prime/Agency

This is the core category of mortgages in the United States, used for loans that “conform” to Government Sponsored Enterprise (“GSE”, or just “agency”) standards for:

- loan-to-value (LTV)
- credit score
- maximum loan size
- occupancy rules
- income limits and documentation

Such loans are eligible to be purchased, guaranteed, and combined into agency Mortgage Backed Securities.

Loans that would satisfy these criteria except for being too large are called “jumbo” or “super-jumbo” mortgages, and cannot be guaranteed by the GSEs.

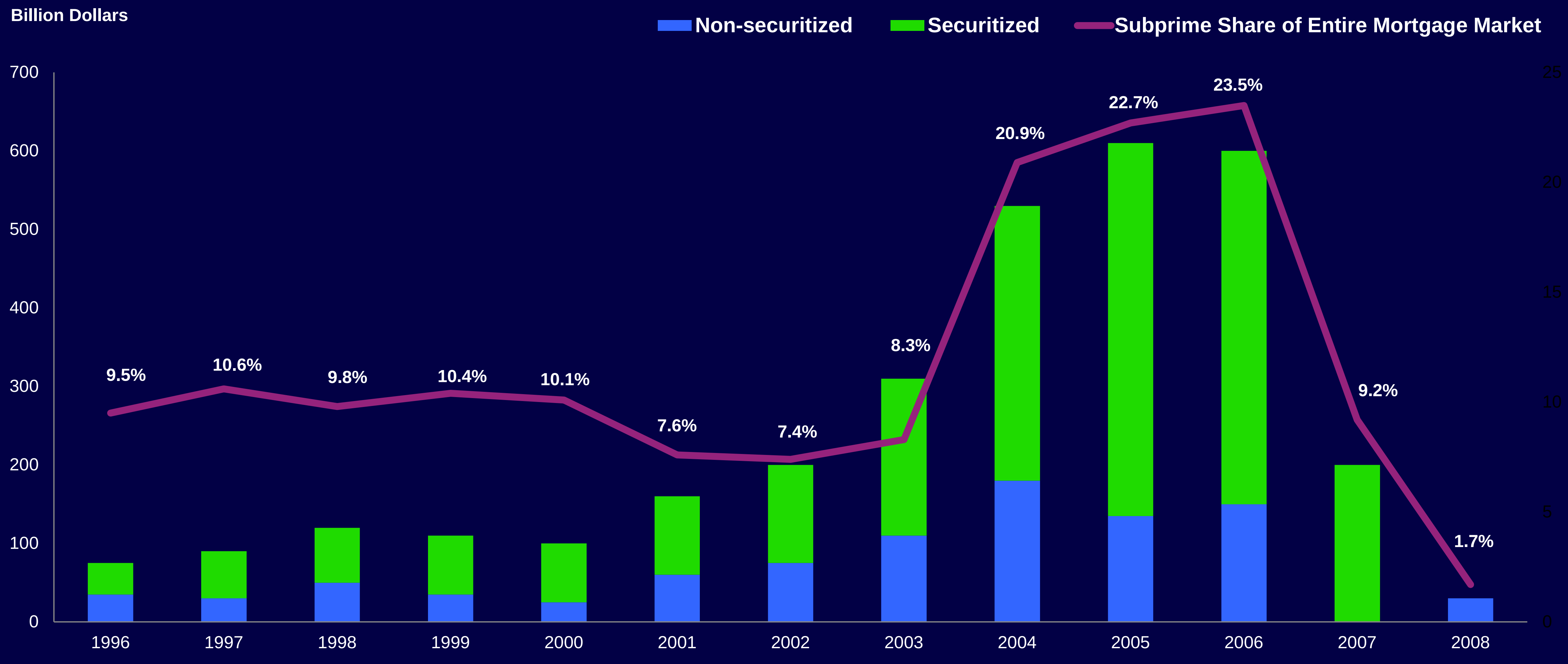
04 Mortgages: Nonprime

Nonprime Mortgages

Subprime	"Although categories are not rigidly defined, subprime loans are generally targeted to borrowers who have tarnished credit histories and little savings available for down payments." (Mayer, Pence, and Sherlund, 2009)
Near-prime or "Alt-A"	"Near prime mortgages are made to borrowers with more minor credit quality issues or borrowers who are unable or unwilling to provide full documentation of assets or income …" (Ibid)

Together, subprime and Alt-A are known as "nonprime". Nonprime mortgages are not new products, but their use in the United States increased dramatically in the 2000s.

Subprime Mortgage Originations



Note: Percent securitized is defined as subprime securities issued divided by originations in a given year. In 2007, securities issued exceeded originations.
Source: Inside Mortgage Finance.

05 Are Subprime Mortgages “Designed to Fail”?

Are Subprime Mortgages “Designed to Fail”?

In a typical subprime mortgage, an initial “teaser” rate will be set to adjust after two or three years, usually to be much higher than the original rate.

A borrower can get out of this higher rate by refinancing, but this action may incur a pre-payment penalty.

This sounds like a horrible trap, like a financial product that is “designed to fail”.

Are Subprime Mortgages "Designed to Fail"?

A subprime mortgage only makes sense if everyone expects housing prices to rise.

In this case, it can be a useful financial innovation, allowing borrowers to share the potential upside of their housing investment to get a lower overall rate.

Are Subprime Mortgages "Designed to Fail"?

Initial Year

Homeowner takes out teaser-rate, adjustable mortgage with pre-payment penalty

Home Value	**$300,000**
Homeowners' Equity	**$15,000 (5% down payment)**

Are Subprime Mortgages “Designed to Fail”?

Initial Year

Homeowner takes out teaser-rate, adjustable mortgage with pre-payment penalty → **Home prices appreciate 10%**

Home Value	**$300,000**
Homeowners’ Equity	**$15,000 (5% down payment)**

Are Subprime Mortgages “Designed to Fail”?

Initial Year		3 years later, as teaser rate expires
Homeowner takes out teaser-rate, adjustable mortgage with pre-payment penalty →	Home prices appreciate 10% →	Homeowner sells house or refinances at lower rate

Home Value	$300,000	$330,000
Homeowners’ Equity	$15,000 (5% down payment)	$45,000 – Pre-payment Penalty

The Global Financial Crisis

Module 3 Housing and Mortgages

06 Some Foreclosure Facts

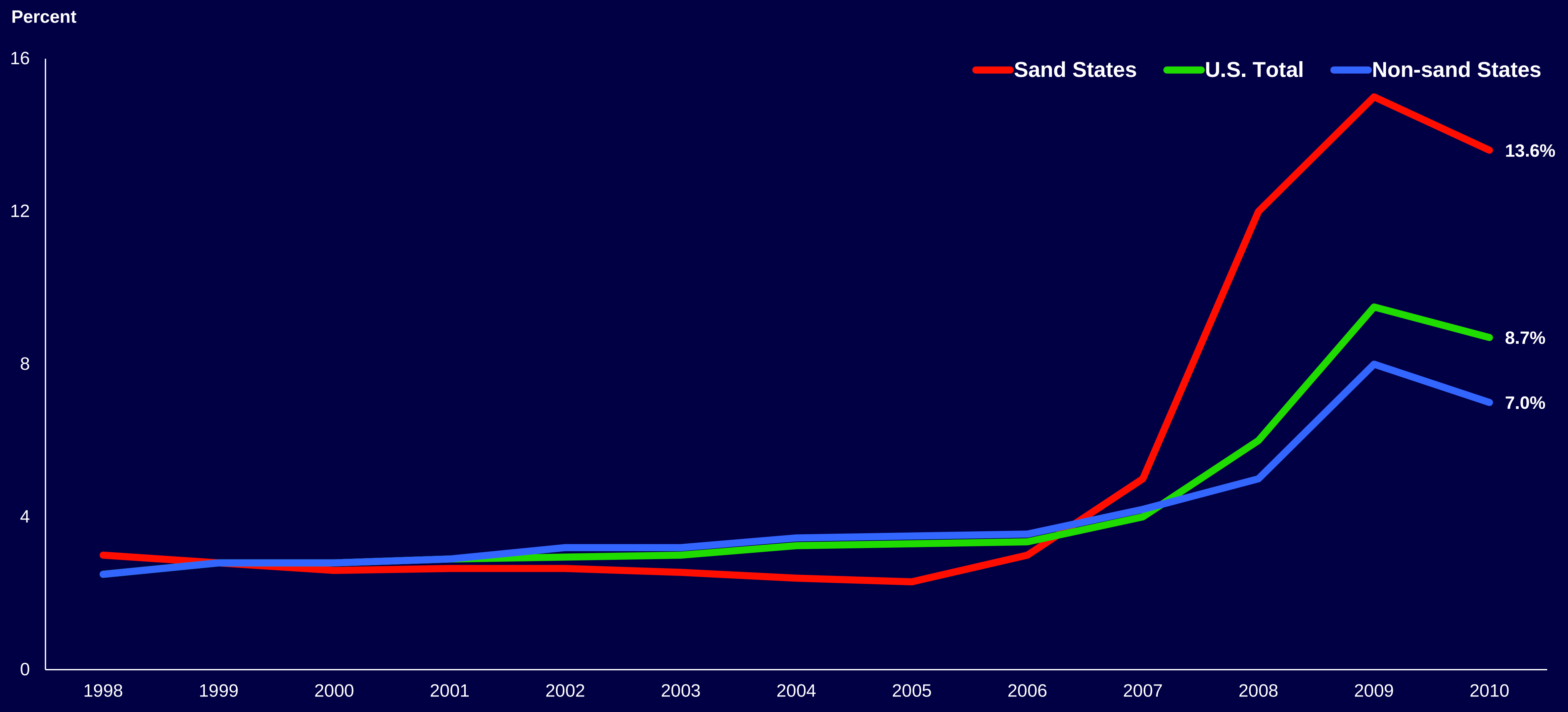
Foreclosure: Localized But Global

In the United States, foreclosure was a national phenomenon, but was worst in the “sand states” of:

Arizona
California
Florida
Nevada

Mortgage Delinquencies by Region

Arizona, California, Florida and Nevada – the “sand states” – had the most problem loans



Note: Serious delinquencies include mortgages 90 days or more past due and those in foreclosure.
Source: Mortgage Bankers Association National Delinquency Survey.

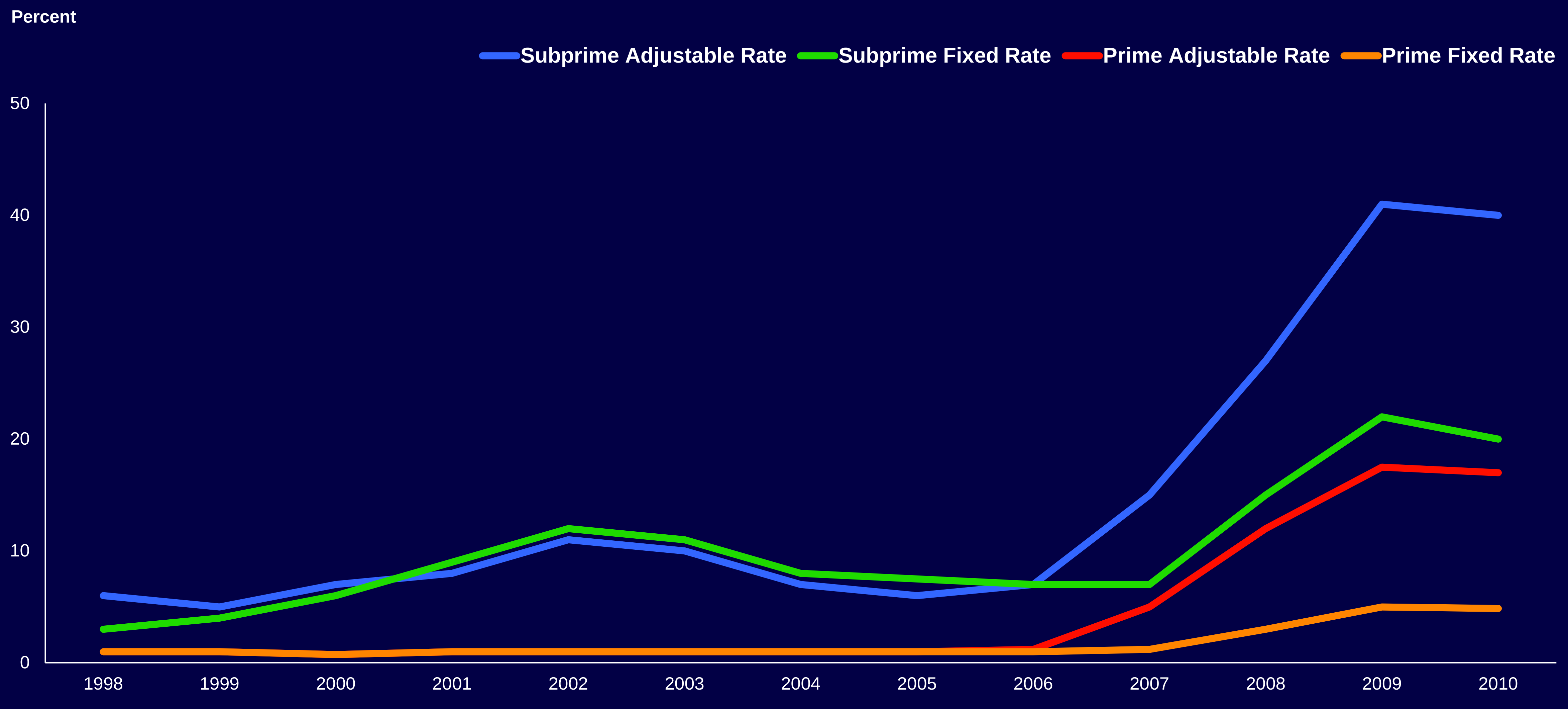
Foreclosure: Localized But Global

In the United States, foreclosure was a national phenomenon, but was worst in the “sand states” of Arizona, California, Florida, and Nevada.

All types of loans had elevated foreclosure rates in the crisis, with subprime loans and ARMs performing worse.

Mortgage Delinquencies by Loan Type

Serious delinquencies started earlier and were substantially higher among subprime adjustable-rate loans, compared with other loan types



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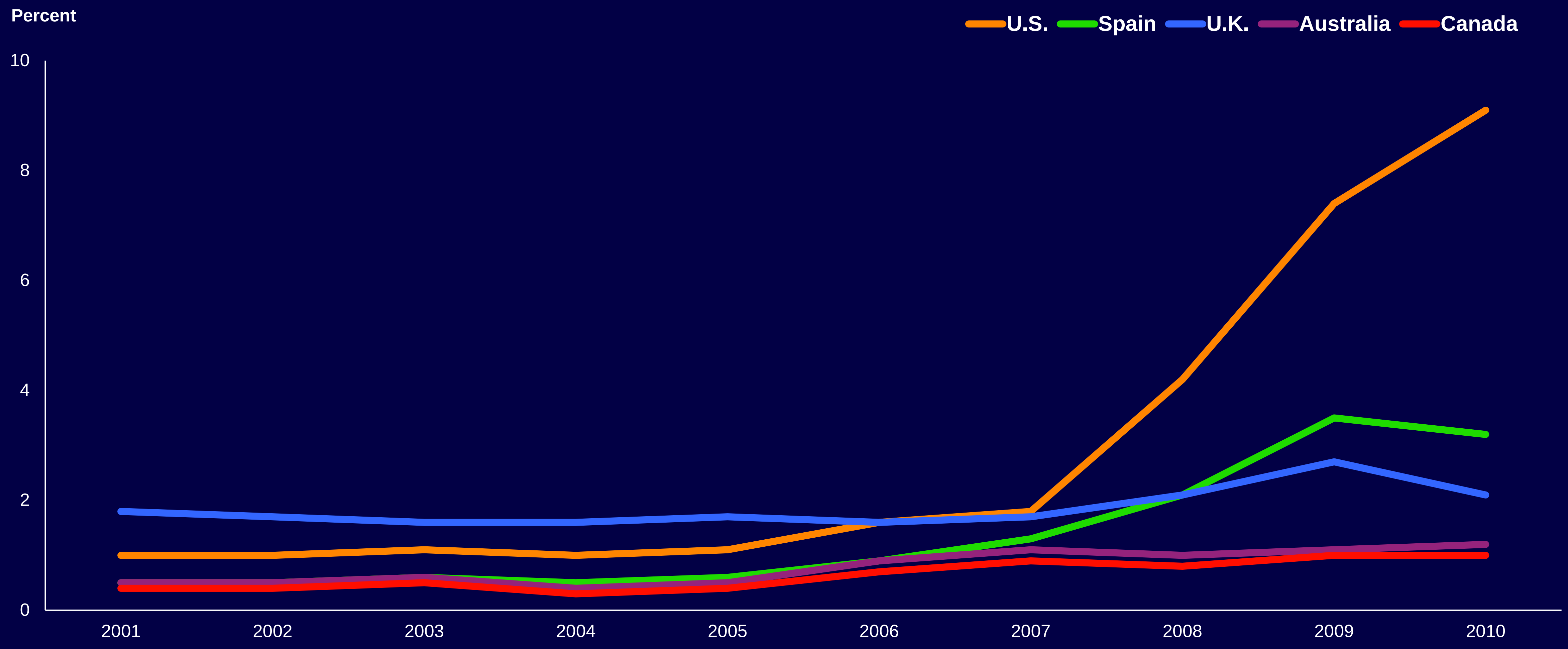
Foreclosure: Localized But Global

In the United States, foreclosure was a national phenomenon, but was worst in the “sand states” of Arizona, California, Florida, and Nevada.

All types of loans had elevated foreclosure rates in the crisis, with subprime loans and ARMs performing worse.

The United States had the worst foreclosure crisis, but some (not all) other developed countries also had problems.

Non-Performing Housing Loans by Country



Source: Research Institute for Housing (2010), ARPA, Bank of Spain, Canadian Bankers' Association, Council of Mortgage Lenders, FDIC, RBA.

07 Crisis Terminology

Crisis Terminology

Some sources will refer interchangeably to the “housing crisis”, the “financial crisis” and the “Great Recession”, especially in the United States.

To be more precise, we should say that the housing crisis was a primary driver of the financial crisis, and that both were major contributors to the Great Recession.

Crisis Terminology

To see how the housing crisis was a primary driver of the financial crisis, we must shift attention over to the "demand" side for mortgages, which we will do in the next module.

Together, the crises in housing and in the financial sector deepened the real economic effects of what would later be called "The Great Recession".

08 Summary

Summary

Housing crises and financial crises are intertwined, but are not exactly the same thing.

In the United States, foreclosure was a national phenomenon, but it was significantly worse in some regions and for some types of mortgages.