

# Restructuring the U.S. Housing Market

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Markets

Restructuring Financial Infrastructure to Speed  
Recovery

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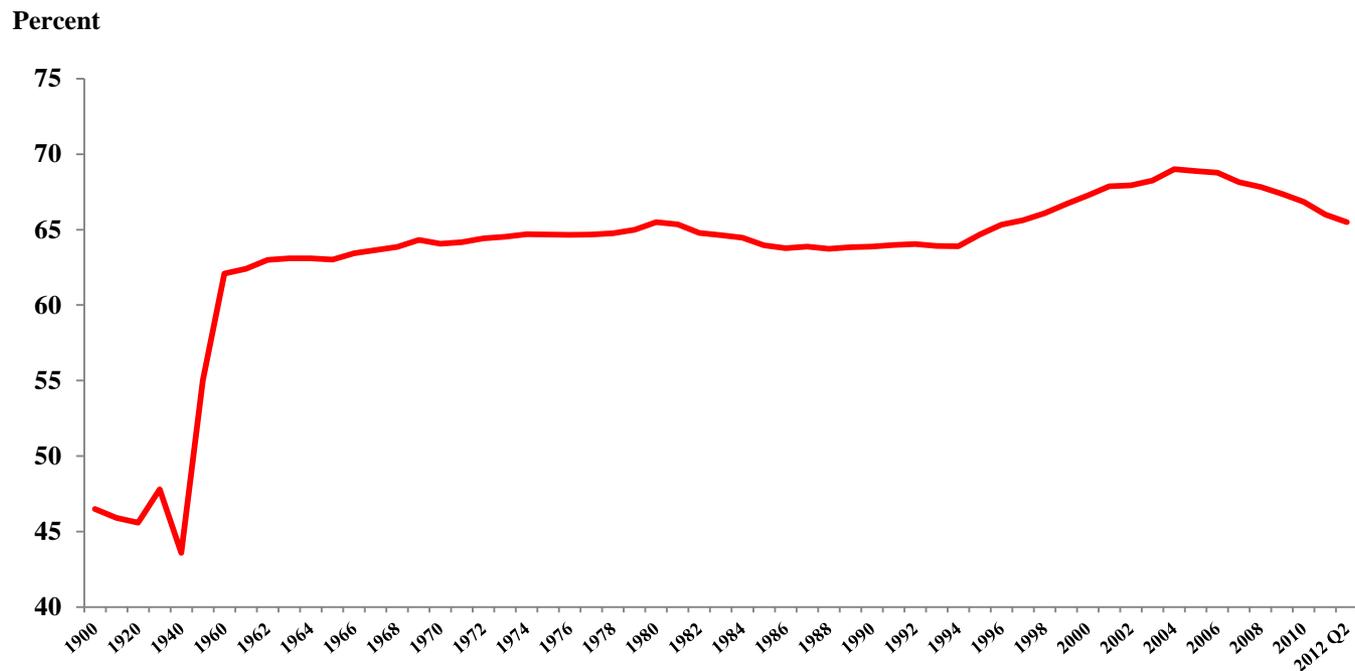
# I. Introduction

- Housing is one of the most important sectors in the US with residential investment averaging about 5% of GDP and housing services at 12-13% of GDP
- The recent boom and bust cycle in the US housing market has caused a global financial crisis and the worst US recession since the Great Depression
- What went wrong and how can the system be fixed?

## II-III. Early History in the UK and US

- John Wood and son in Bath, England: model for urban real estate development
- In the US home ownership accompanied reform and expansion of land ownership for farming
- By 1890 2/3 of all farm housing was owner occupied

Figure 1:  
U.S. homeownership rate, 1900-2012 Q2

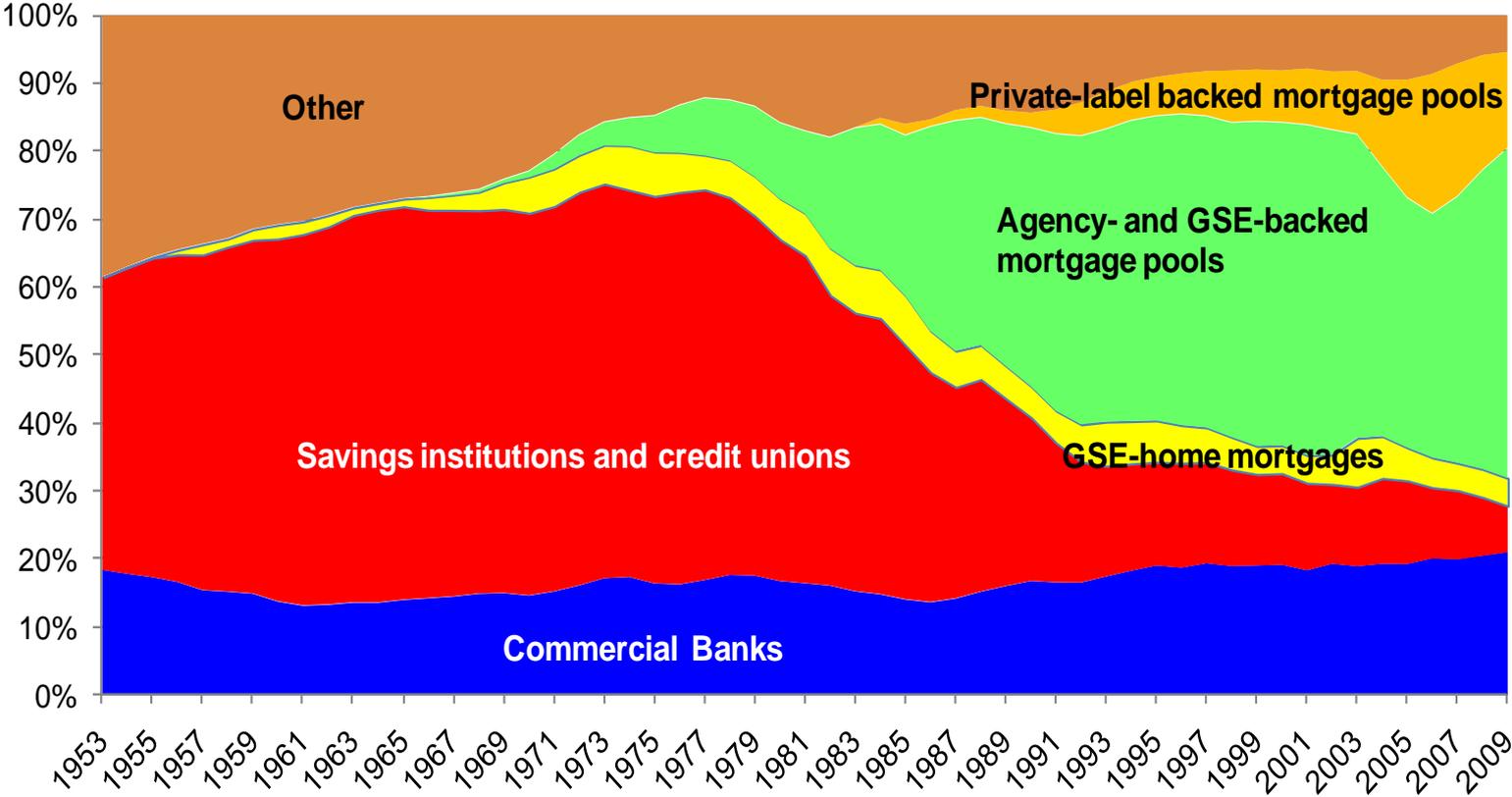


## IV. Development of Modern US Housing Finance

- First Savings and Loan organized in 1831 and gradually spread around the country
- Granted tax advantages and developed separately from banking system
- In the 1930s did not suffer runs because they did not take demand deposits but they did suffer withdrawals to maintain consumption and this caused failures
- In 1932 Federal Home Loan Bank System set up and in 1934 FSLIC

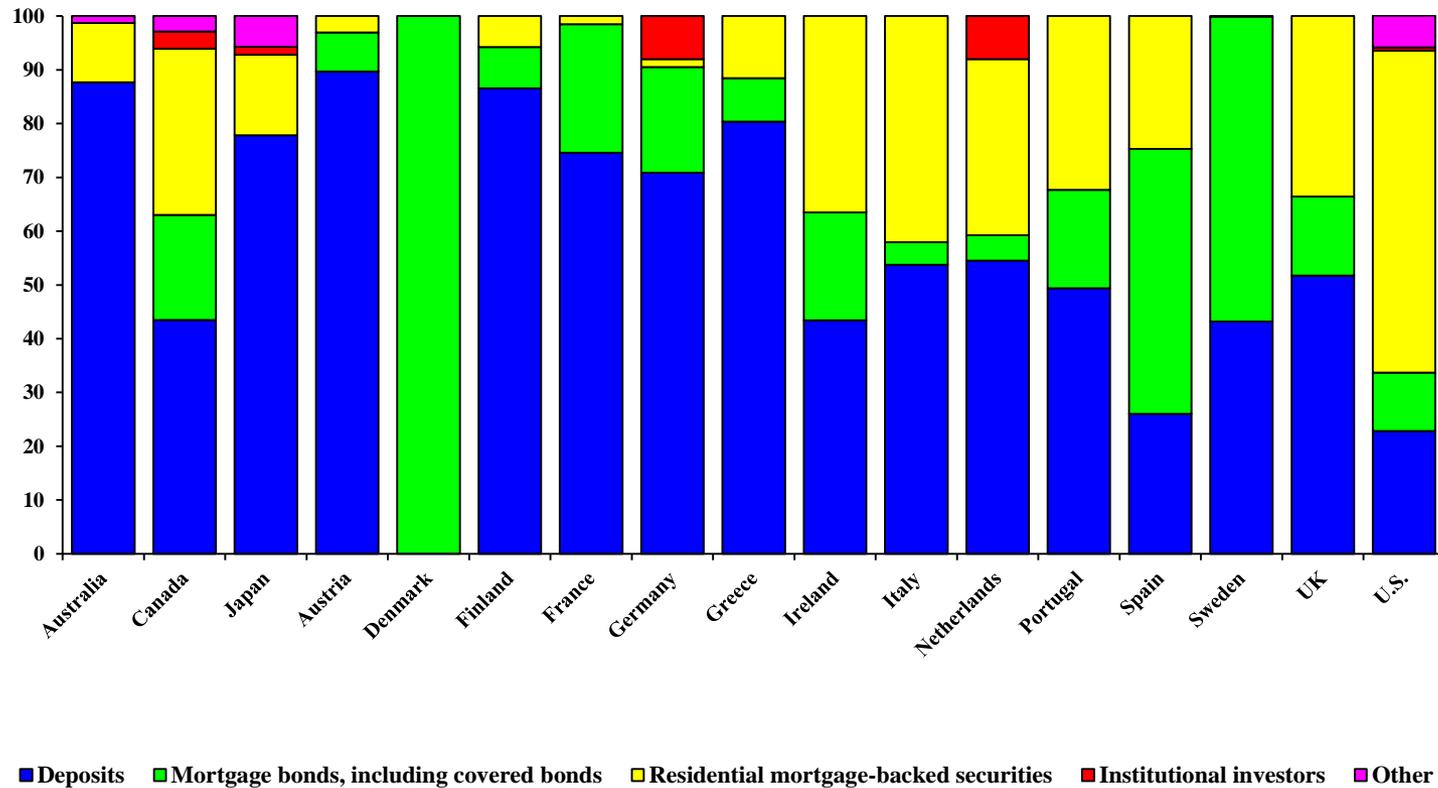
- After World War II the Savings and Loan Sector prospered growing from 3% of private financial assets in 1945 to 16% in 1975
- As interest rates fluctuated wildly in the late 1970s and early 1990s the Saving and Loan sector was put under severe strain
- Many failed and regulation was changed so they were able to become much more similar to commercial banks

# V. Sources of Funding for Home Purchases and Homeownership Rates



# Figure 2: Sources of funding for home mortgages in selected countries, 2009

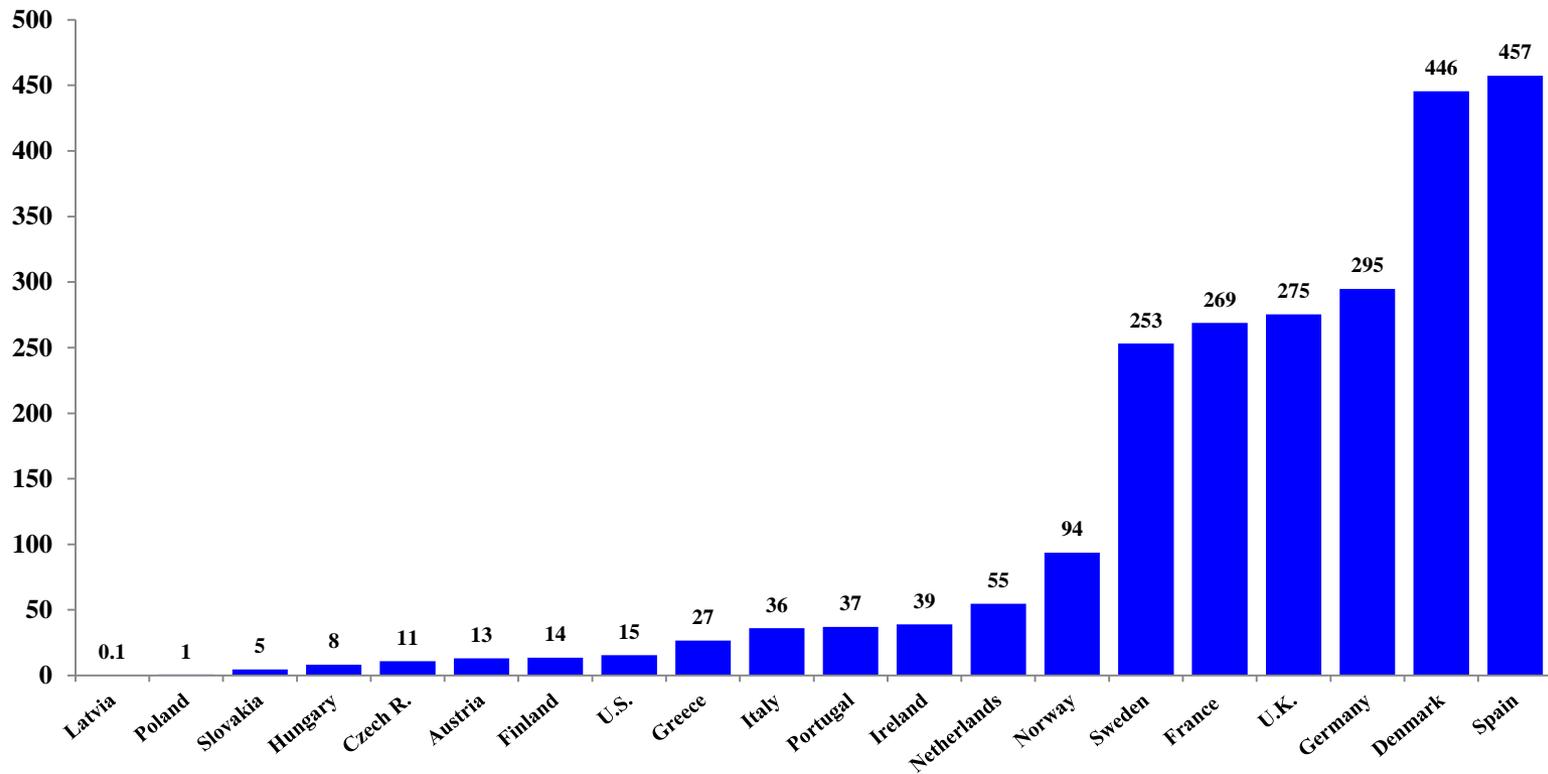
Percent



# Figure 3: Covered bonds in selected countries, 2010

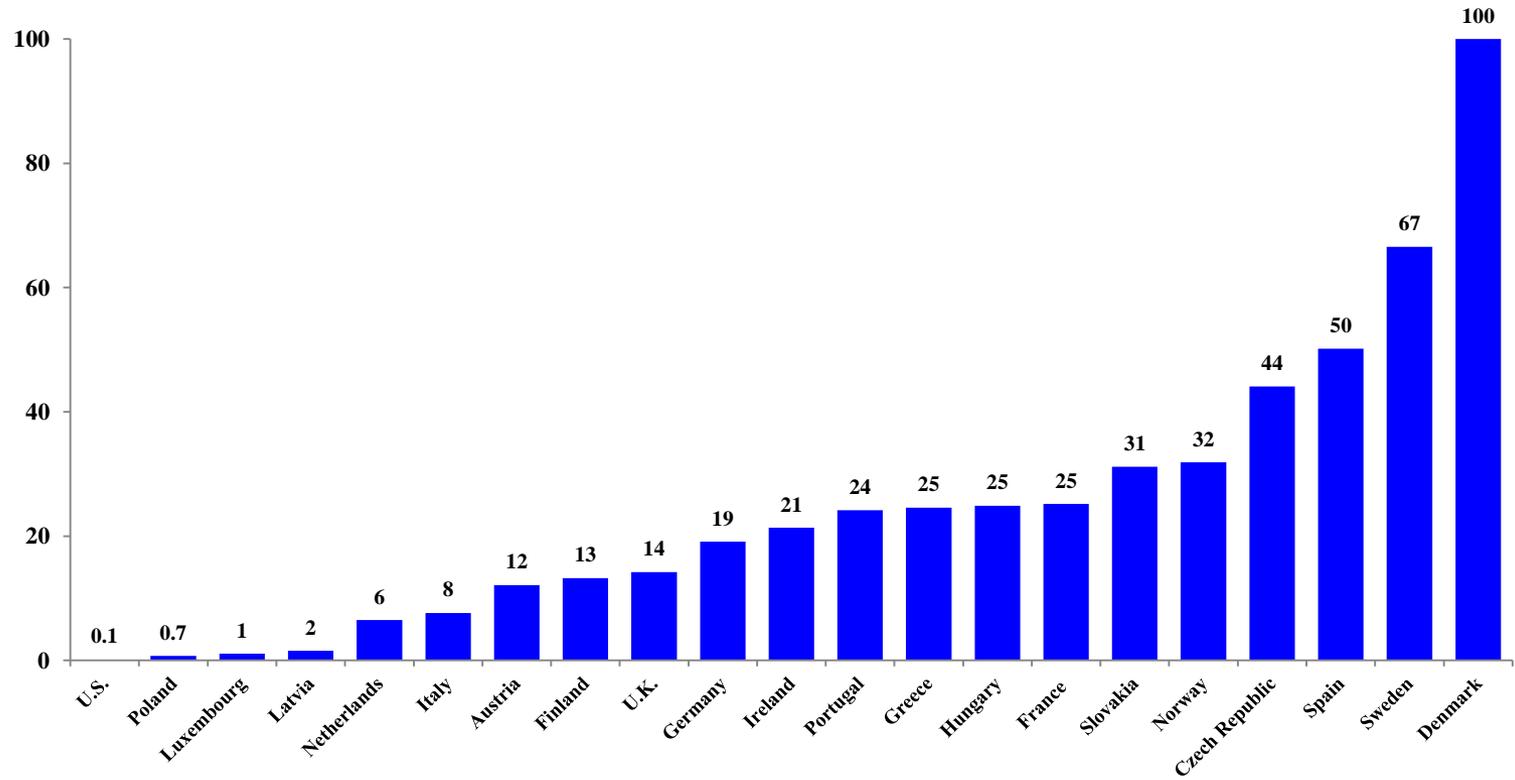
## Mortgage-backed covered bonds outstanding

US\$ Billions



### Mortgage-backed covered bonds as percent of residential loans outstanding

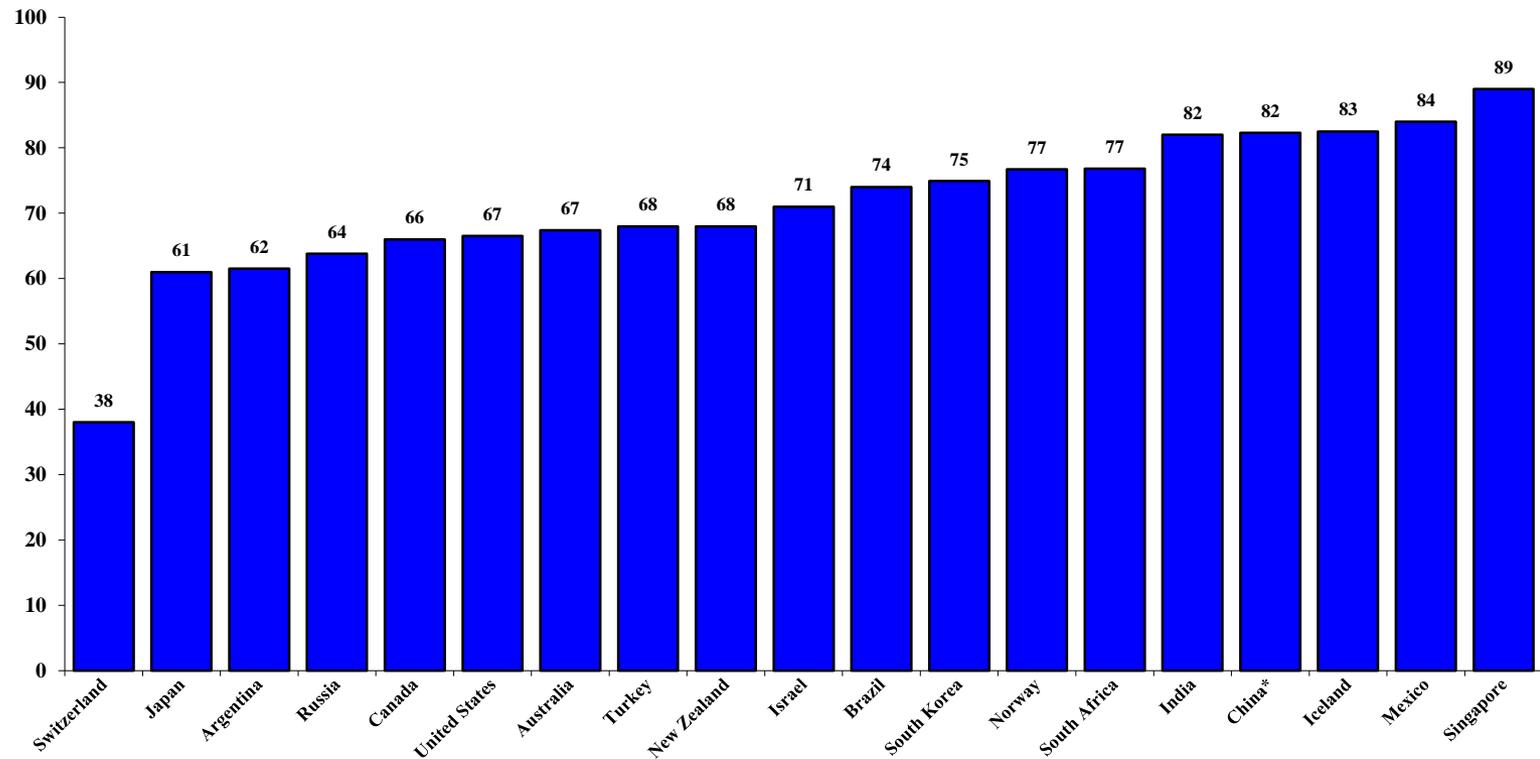
Percent



# Figure 4: Homeownership rates in various countries around the world

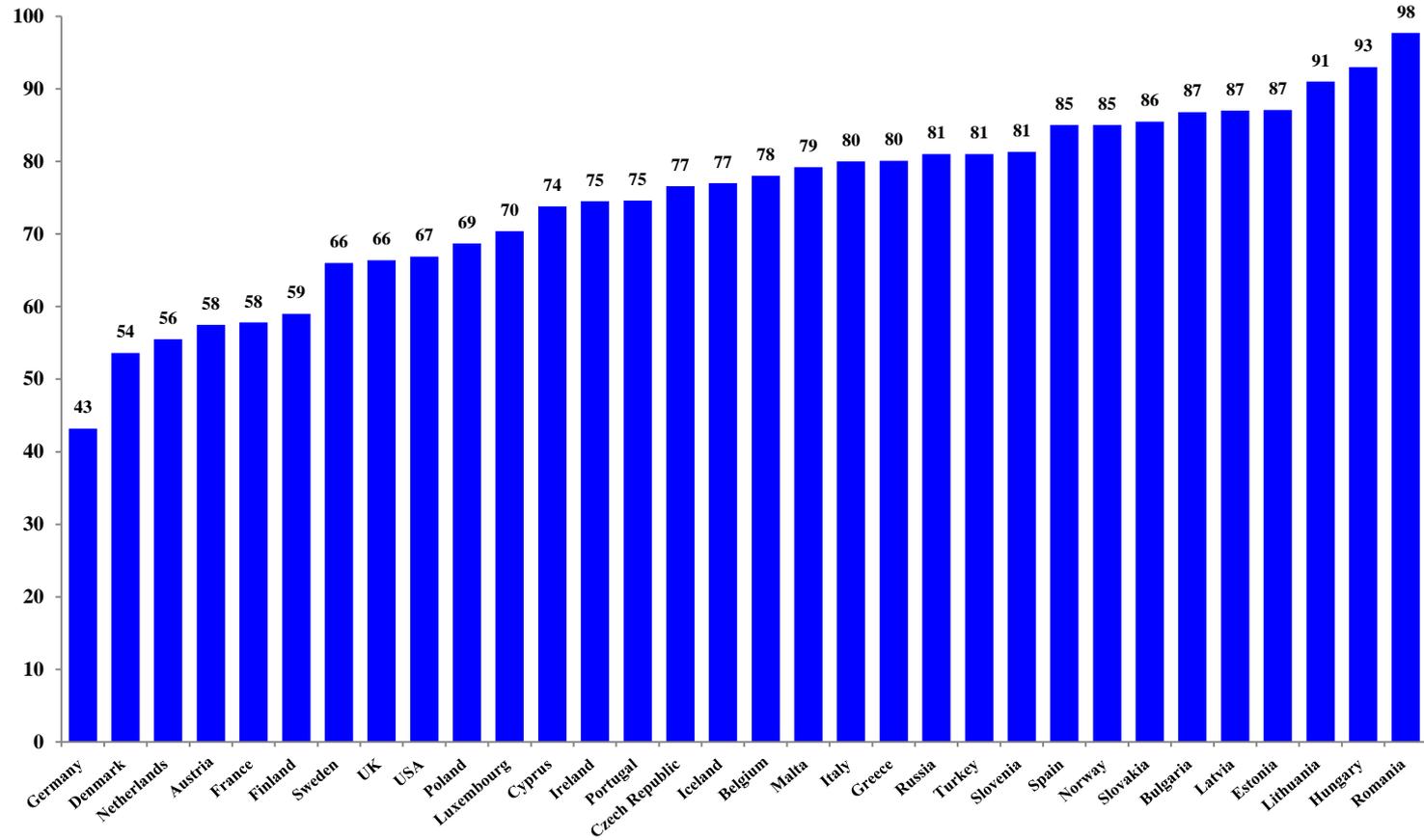
Selected countries, 2009

Percent

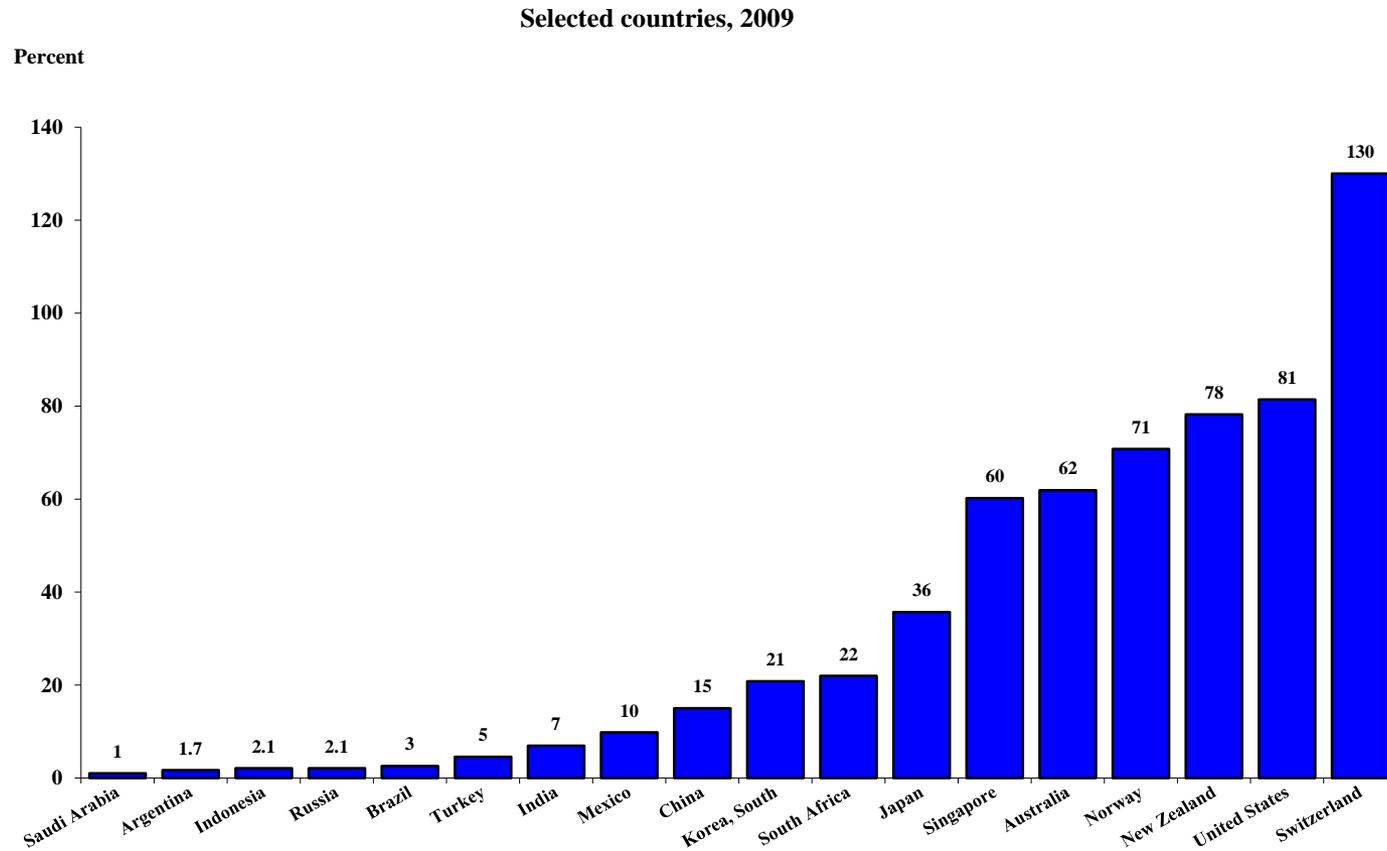


## European Union and other selected countries, 2010

Percent

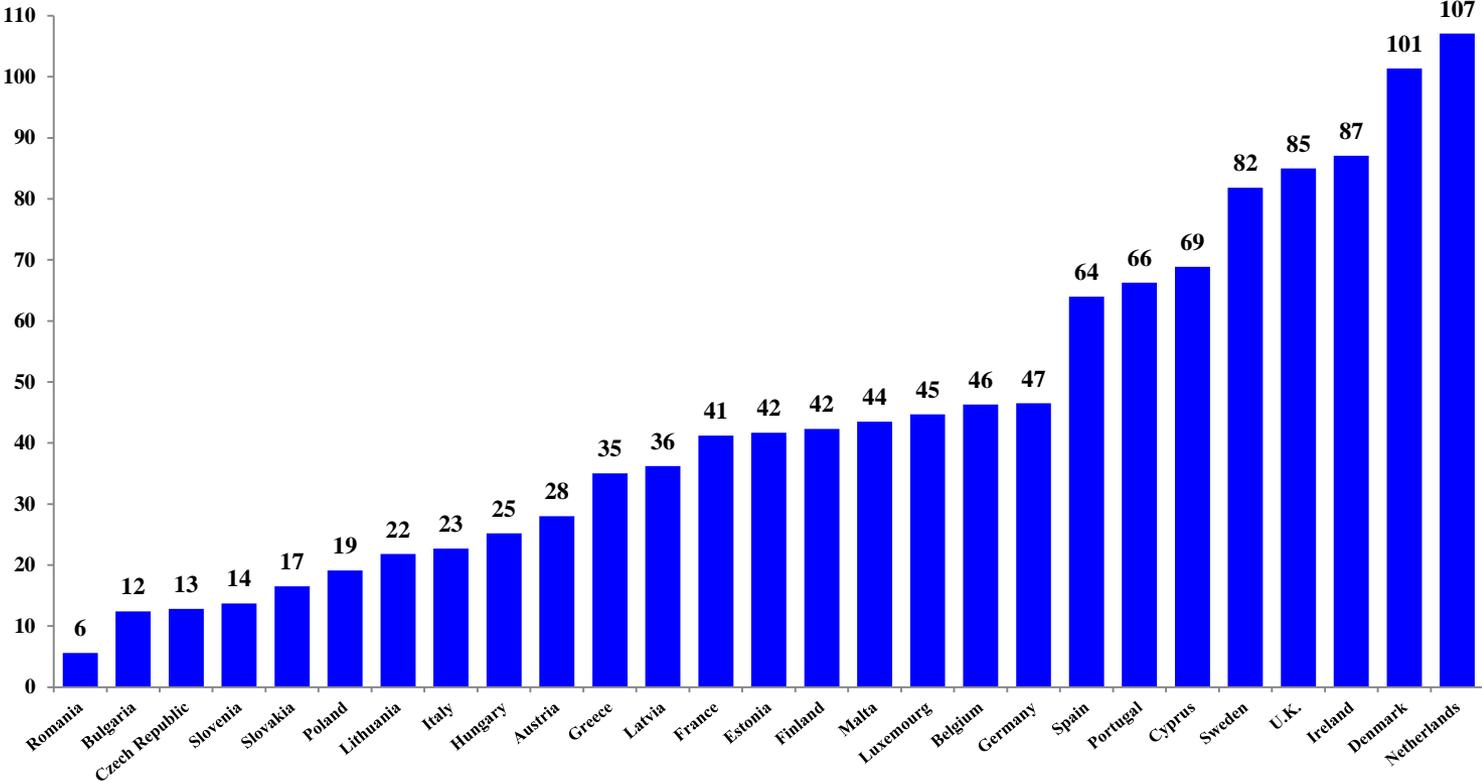


# Figure 5: Home mortgage debt to GDP in various countries around the world



European Union countries, 2010

Percent



## VI. Federal Government Involvement in Mortgage Markets

- Since the 1930s the federal government has played an increasingly important role in the allocation of mortgage credit
- Loan insurance and guarantees: Fannie Mae, Freddie Mac, Ginnie Mae
- US is one of relatively few countries in which the government provides support to residential mortgage markets

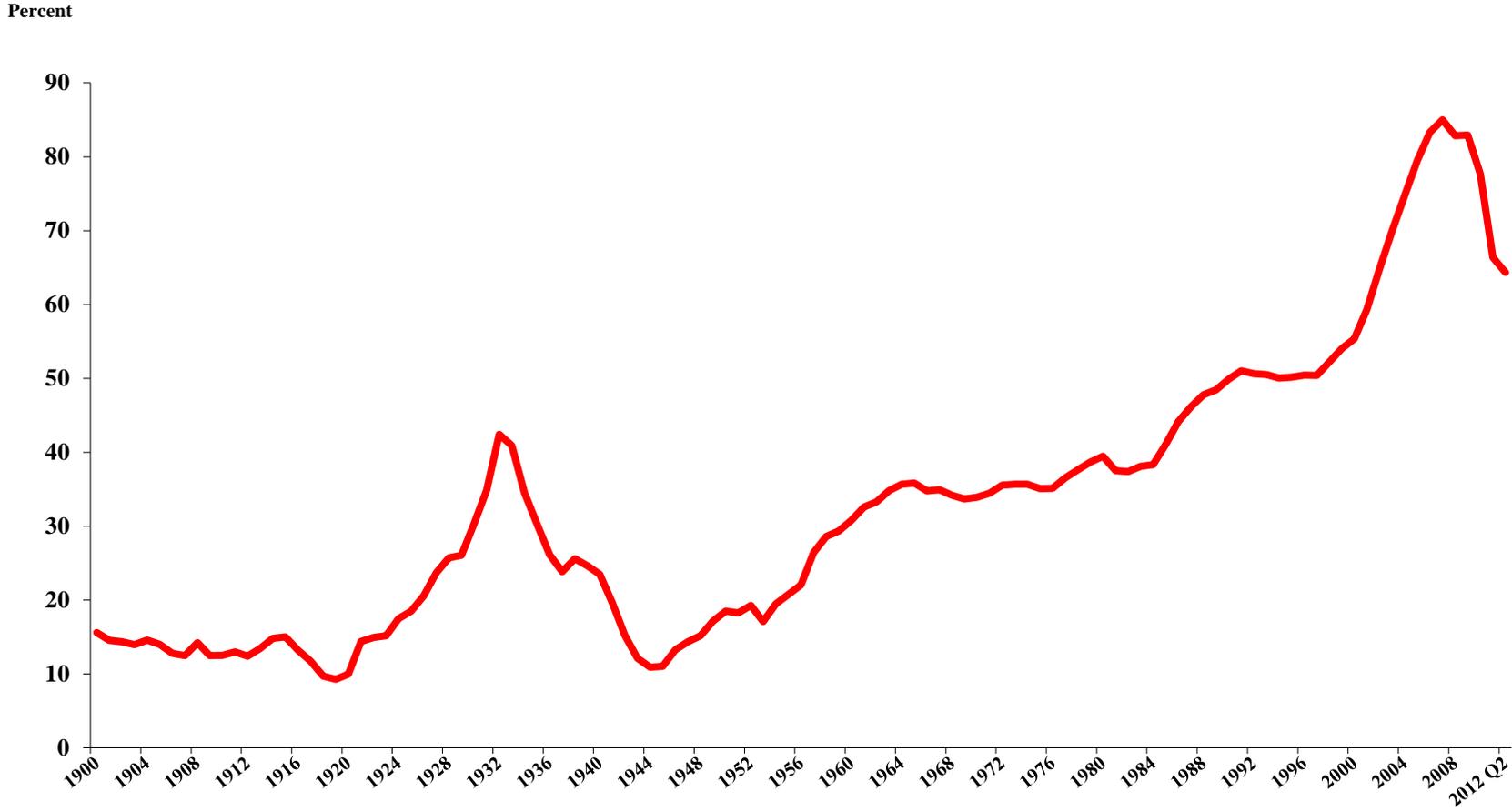
# Table 2: Government support for mortgage markets

Country	Government mortgage insurance	Government security guarantees	Government sponsored enterprises
Denmark	No	No	No
Germany	No	No	No
Ireland	No	No	No
Netherlands	NHG	No	No
Spain	No	No	No
United Kingdom	No	No	No
Australia	No	No	No
Canada	Canada Mortgage Housing Corporation	Canada Mortgage Housing Corporation	No
Japan	No	Japan Housing Finance Agency	Possible
South Korea	No	No	Korean Housing Finance Corporation
Switzerland	No	No	No
United States	FHA	GNMA	Fannie Mae, Freddie Mac, FHLBs

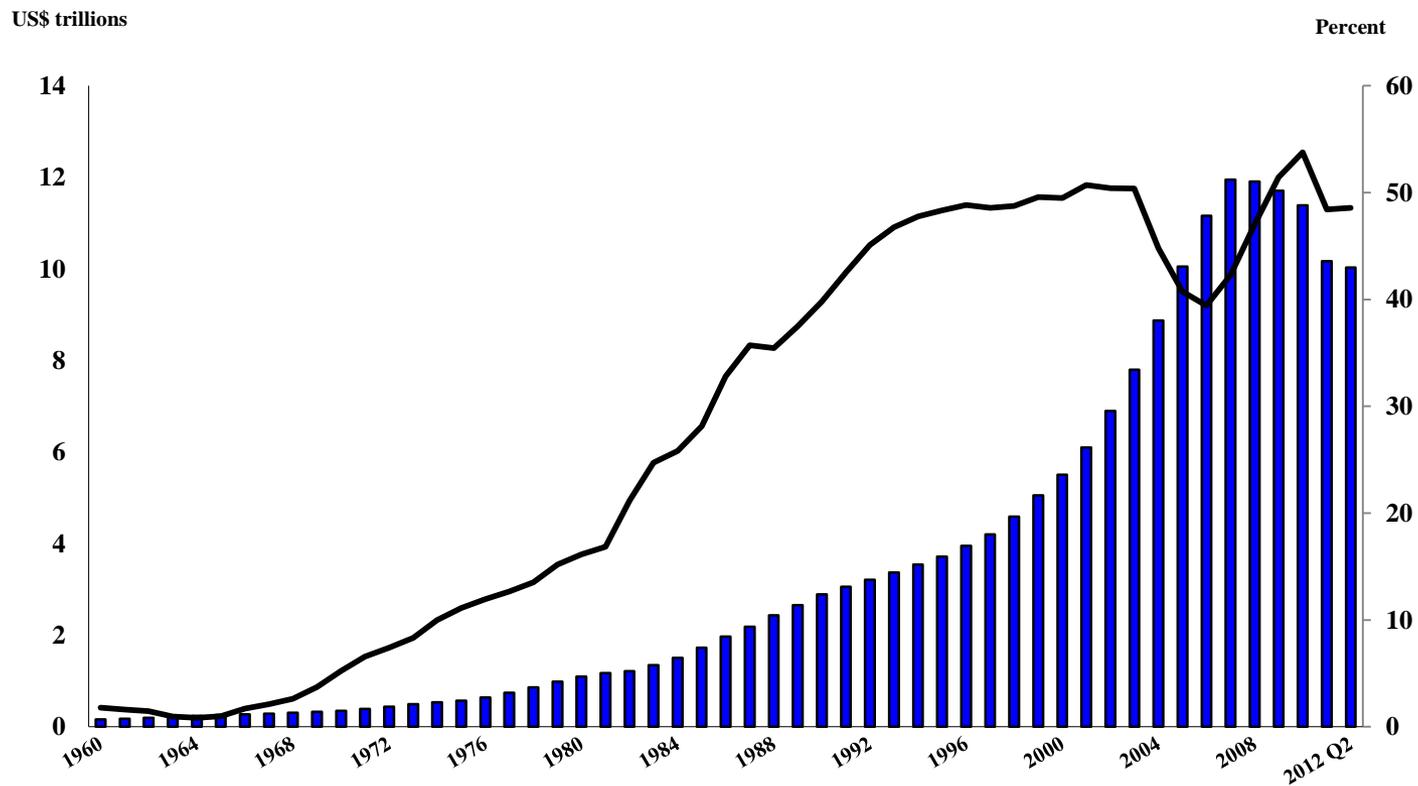
# Table 3: Housing goals set for Fannie Mae and Freddie Mac

	1997-2000 housing goals	2001-2004 housing goals	2005-2008 housing goals				2009 housing goals	2010 redefined benchmarks	2010-2011 housing goals	2012-2014 housing goals
			_____							
			2005	2006	2007	2008				
<b>Low and moderate income families</b>	42	50	52	53	55	56	43	<b>Low-income families</b>	27	20
<b>Underserved areas</b>	24	31	37	38	38	39	32	<b>Very low-income families</b>	8	7
<b>Special affordable</b>	14	20	22	23	25	27	27	<b>Low-income areas</b>	13	11
								<b>Refinancing Mortgages</b>	21	21

# Figure 6a: Total mortgages outstanding as percentage of GDP



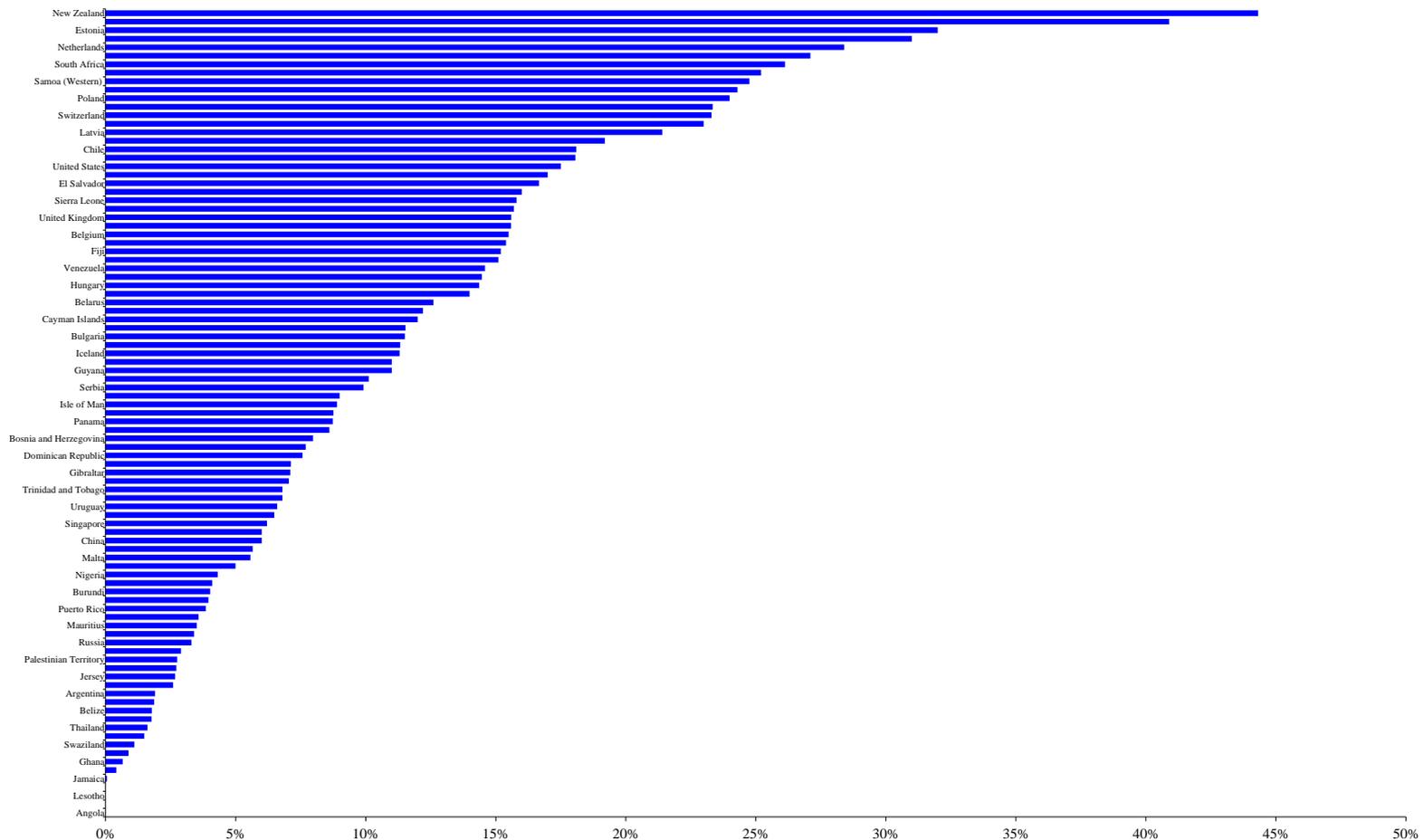
# Figure 6b: Total home mortgages outstanding and share of home financing provided by government-sponsored enterprises



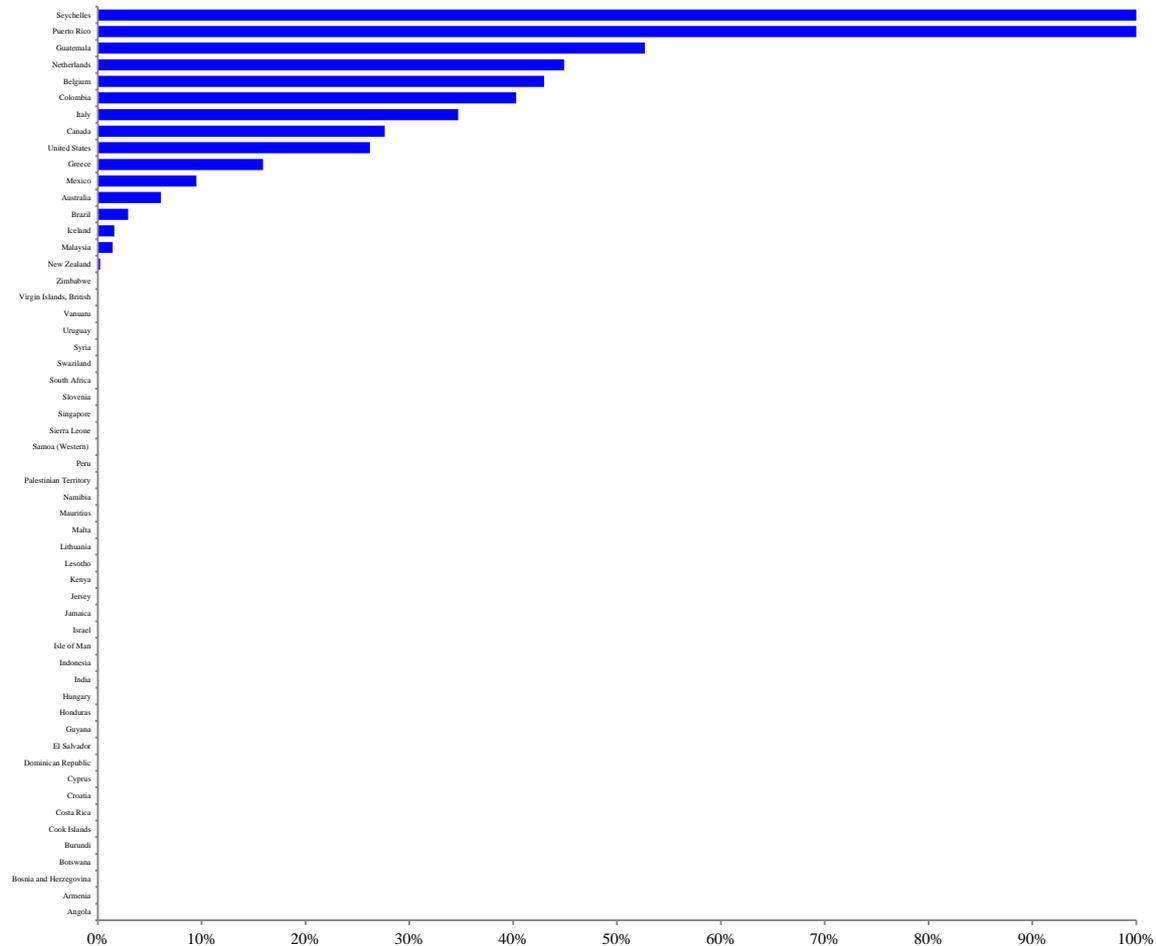
# Table 4: Date of first mortgage-backed securitization

Year	Country
1970	United States
1984	Australia and Canada
1985	United Kingdom
1988	France
1989	South Africa
1991	Spain
1995	Germany and Ireland
1996	Argentina
1999	Brazil, Japan, Italy and South Korea
2000	India
2003	Mexico
2004	Malaysia
2005	China
2006	Russia and Saudi Arabia

# Figure 7: Percentage of bank assets in residential real estate loans (2010)



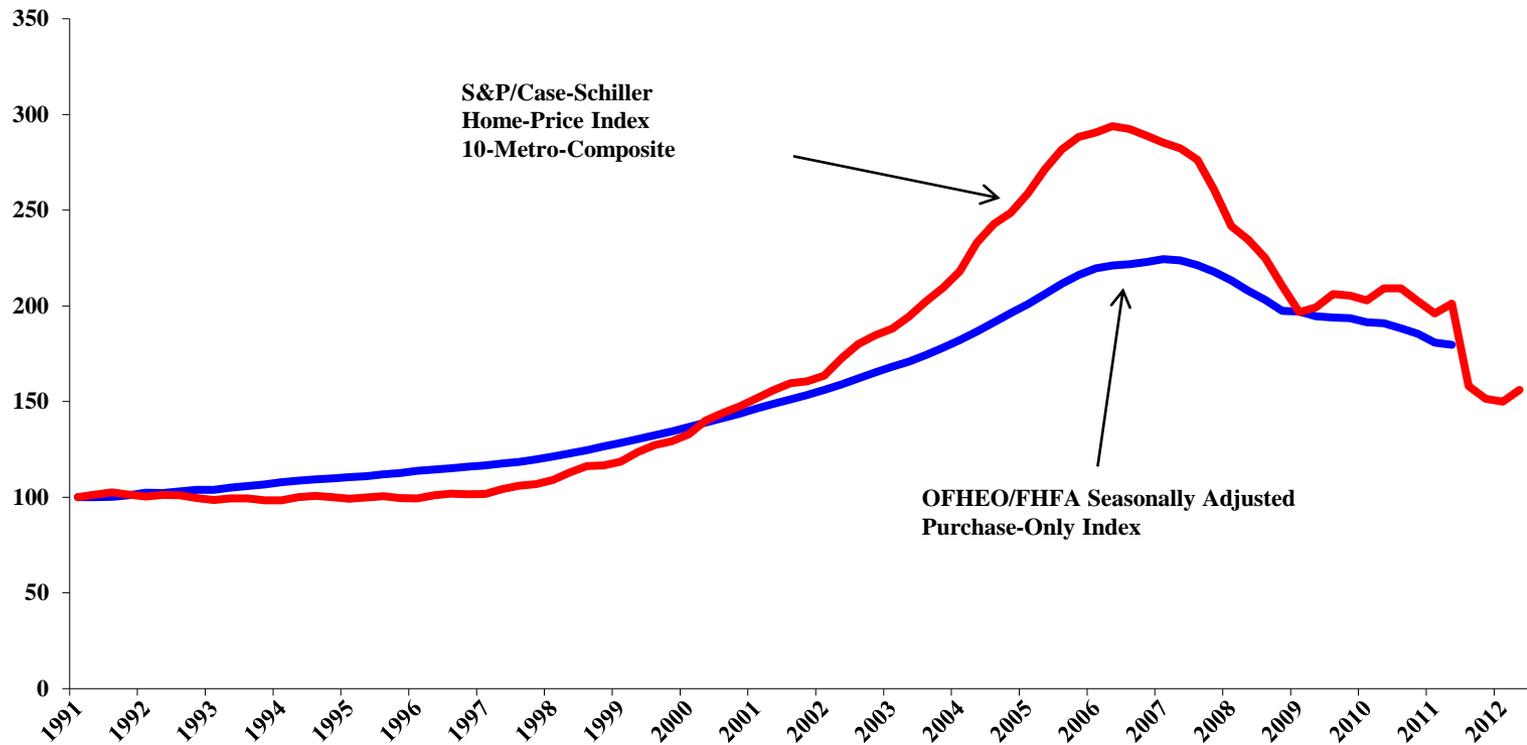
# Figure 8: Percentage of securitized residential real estate loans (2010)



## VII. Turmoil in global housing markets: Implications for the future of housing finance

- The residential mortgage market in the United States has worked extremely well over the past two centuries, enabling millions to achieve the dream of homeownership.
- But there have been periods of turmoil
  - The Great Depression
  - The late 1970s and early 1980s
  - The current period

Figure 9: Home prices peak in 2006 and subsequently decline  
(1991 Q1 – 2012 Q2; Index, 1991 Q1=100)



# Housing Problems in Other Countries

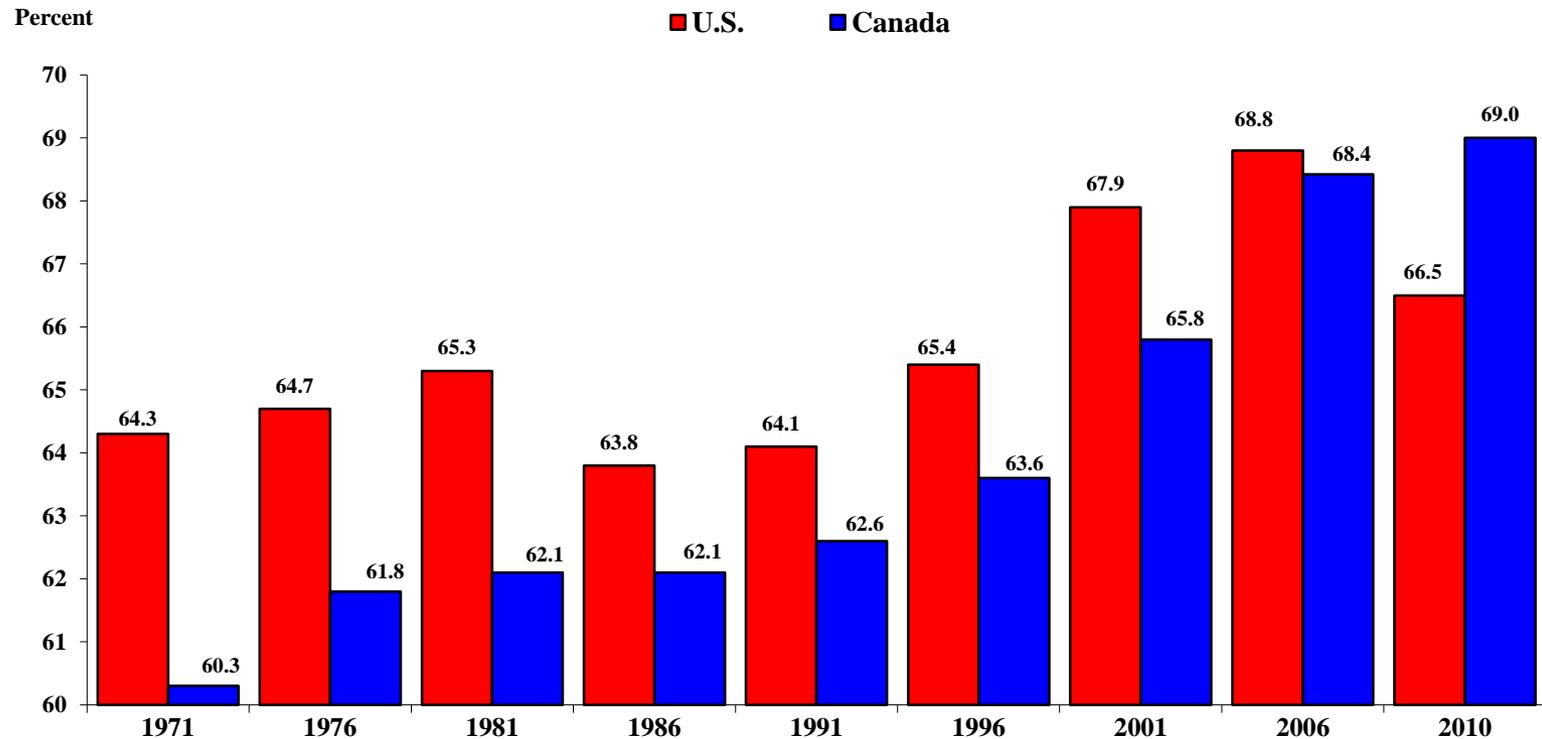
## Table 5: Average house price changes (Rankings of countries in parentheses)

Country	Boom (1998:Q1-2006:Q2)	Bust (2006:Q2-2011:Q3)	Overall (1998:Q1-2011:Q3)	Similar to the United States?
United States	49.9 (15)	-22.6 (2)	16.0 (16)	-
Australia	78.5 (7)	17.7 (17)	110.1 (3)	No
Belgium	55.2 (11)	12.4 (14)	74.4 (7)	No
Canada	53.3 (13)	28.5 (19)	96.9 (4)	No
Denmark	79.5 (6)	-19.5 (4)	44.6 (13)	Yes
Finland	68.4 (8)	2.7 (11)	72.9 (8)	No
France	102.2 (4)	5.1 (12)	112.6 (2)	No
Germany	-11.4 (18)	-5.7 (9)	-16.5 (18)	No
Ireland	131.4 (1)	-25.3 (1)	72.9 (9)	Yes
Italy	53.4 (12)	-7.9 (6)	41.2 (14)	Yes
Japan	-25.6 (19)	-8.3 (5)	-31.8 (19)	No
Netherlands	61.0 (10)	-6.9 (8)	49.8 (12)	Yes
New Zealand	64.2 (9)	-1.7 (10)	61.4 (11)	Yes
Norway	53.0 (14)	24.3 (18)	90.2 (6)	No
South Korea	4.4 (17)	6.5 (13)	11.1 (17)	No
Spain	108.6 (3)	-20.8 (3)	65.3 (10)	Yes
Sweden	83.4 (5)	16.0 (16)	112.9 (1)	No
Switzerland	10.7 (16)	14.2 (15)	26.4 (15)	No
United Kingdom	112.2 (2)	-7.3 (7)	96.6 (5)	Yes

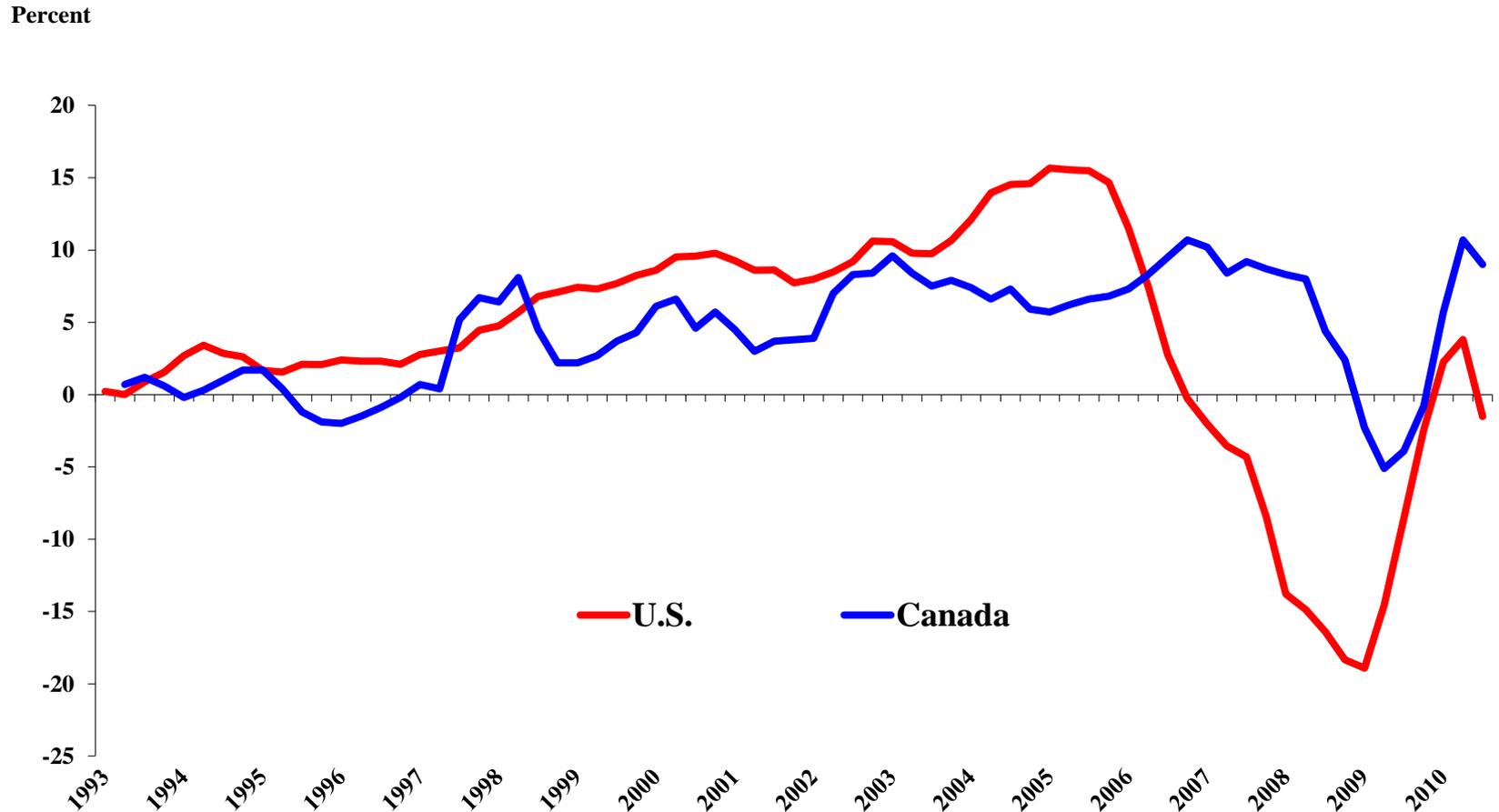
# Housing Problems in the US versus Canada

Figure 10:

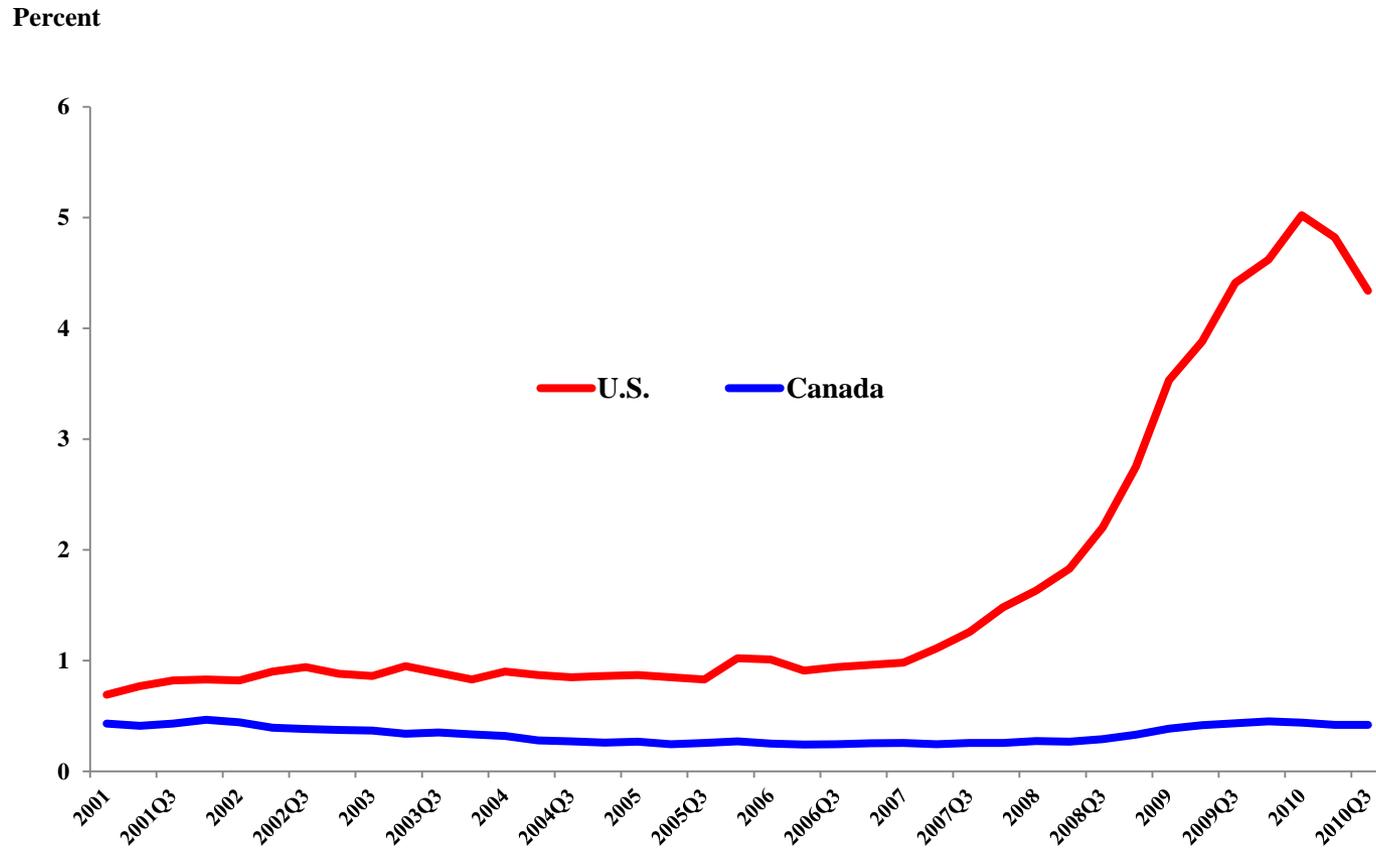
## Homeownership rates in Canada and the US



# Figure 11: Canada and U.S. home prices (year-over-year percentage change)



# Figure 12: Canada and U.S. residential delinquency rates



# Table 6: Key differences in mortgage finance: Canada vs. the United States

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Country	Mortgage interest deduction	Main product	Recourse	Pre-payment penalty	Funding model	2006 Peak subprime % outstanding
Canada	No	5-year FRM	Yes	Yes	On-balance-sheet	*Less than 5%
U.S.	Yes	30-year FRM	No	No	Originate-to-distribute	20%

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## VIII. Future Innovations in Housing Finance

- Diversifying sources of capital (debt *and* equity)
- Structuring financial products that will promote private capital investment to support residential real estate construction, maintenance, and sustainable improvement
- Diversifying types of housing products (single/multiple family)

- Higher density, sustainable buildings that increase housing consumers' cash flow and ability to service long-term debt
- Pooling savings and risk-management products
- Credit enhancement
- Using information technology to monitor and improve efficiency in housing finance

# Financing Housing: Back to the Future

- Aligning interests of private capital funders with policy incentives
- Create a diversified housing stock by eliminating the bias against subsidies for renters
- Pooling savings to create investment vehicles
- Using credit enhancement and guarantees to manage real estate risks

- Creating flexible capital structures for residential developments through structured finance
- Regulating land use to limit supply constraints.
- Restoring the role of private investors (domestic and international) as drivers of homeownership and financing.
- Restoring confidence in securitization through mortgage-backed securities and covered bonds.

# IX. Lessons Learned

- Lesson 1: Don't compromise on credit analysis
- Lesson 2: Flexible capital structure matters
- Lesson 3: Size matters
- Lesson 4: Structured products and secondary markets work