

Demand for Forest Products Under a Background of Foreclosures and Deficit Spending

TIMBER MEASUREMENT SOCIETY

Central Meeting

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Coeur d'Alene, Idaho

Delton Alderman

USDA Forest Service – NRS 01

Forestry Sciences Laboratory

Princeton, WV

304.431.2734

dalderman@fs.fed.us



Demand for Forest Products a Background of Foreclosures and Deficit Spending

Overview

World wood markets

DEBT

Eurozone

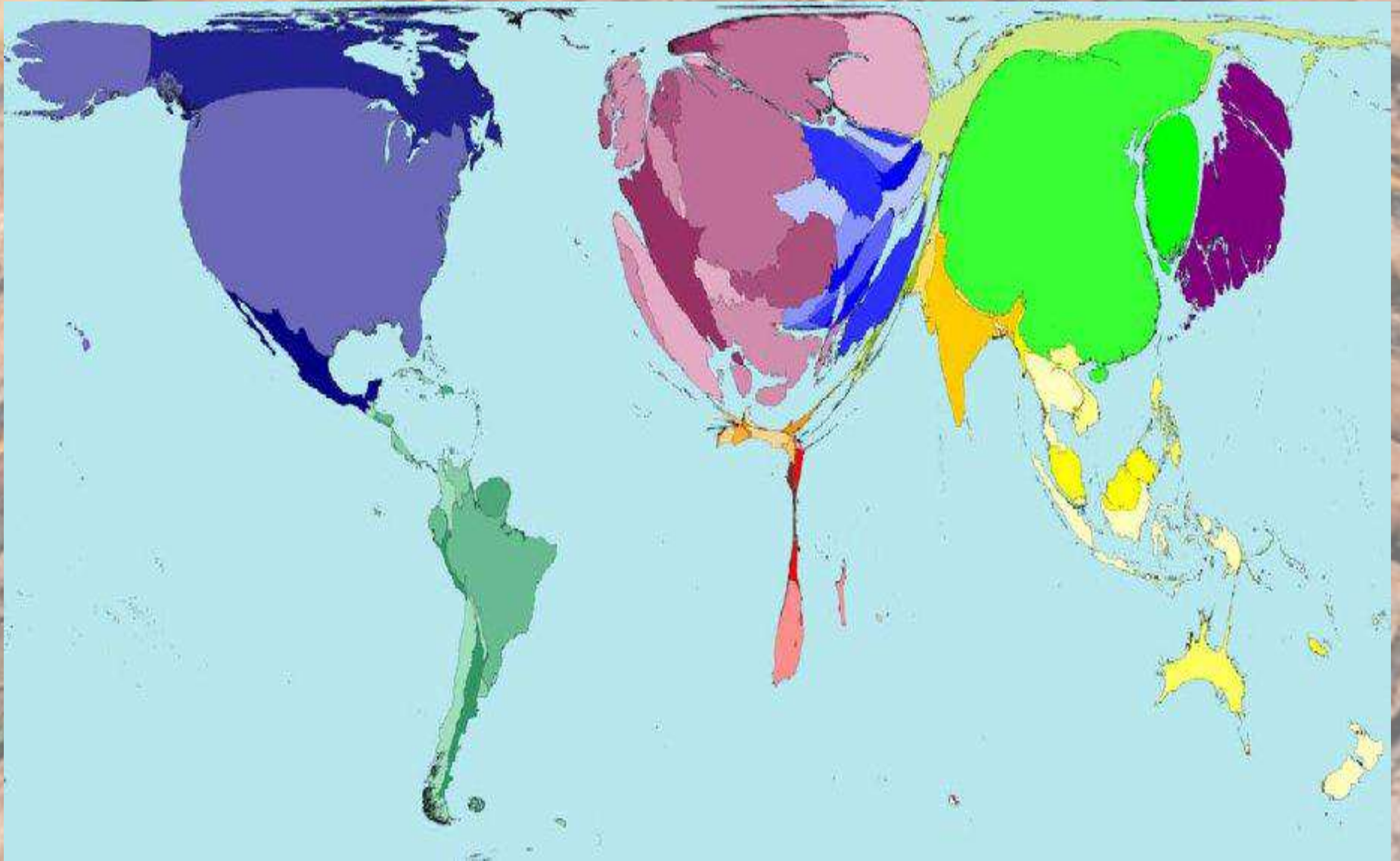
United States

Japan

Distress in the Housing Market

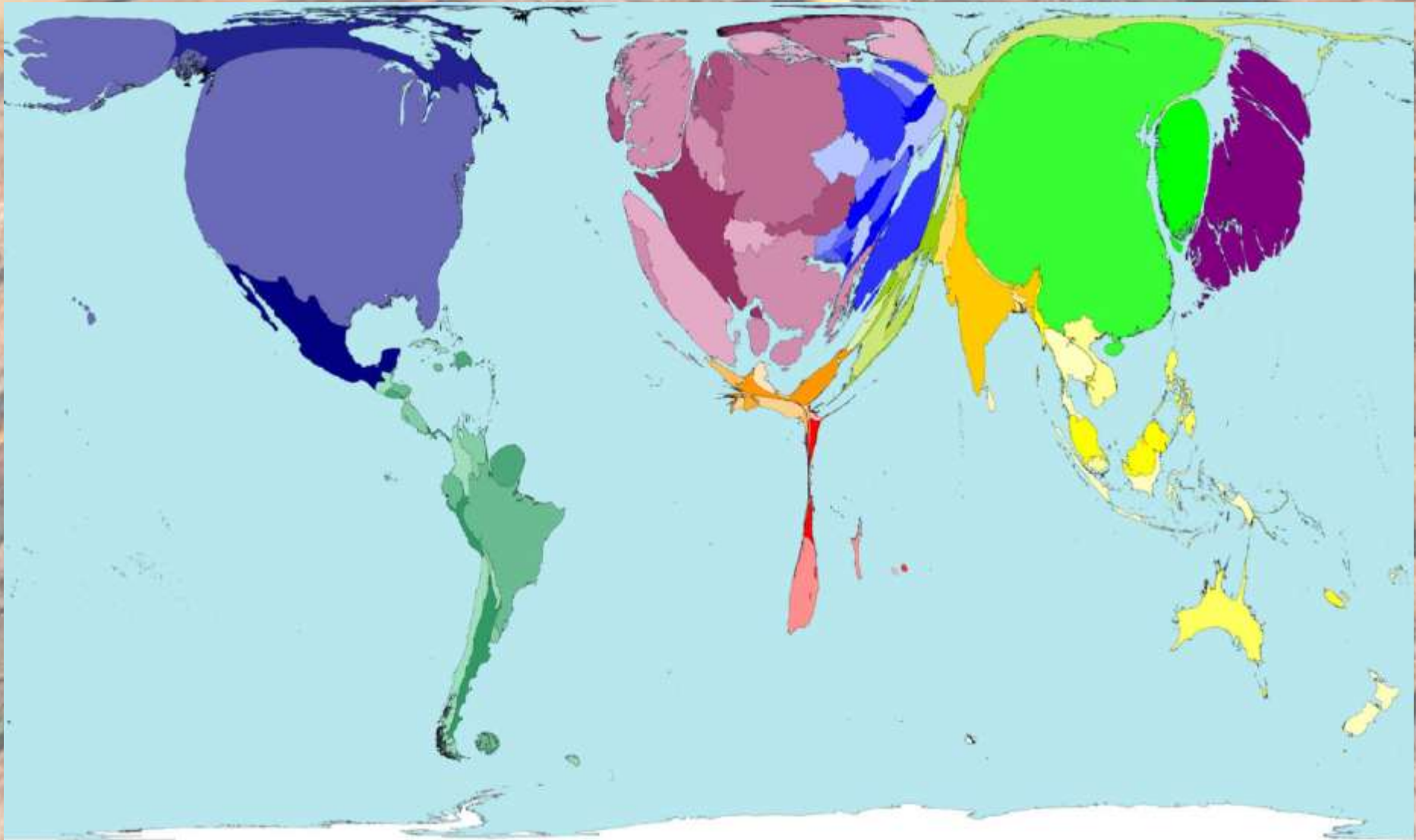
China

World-Wide Wood Production: 2009



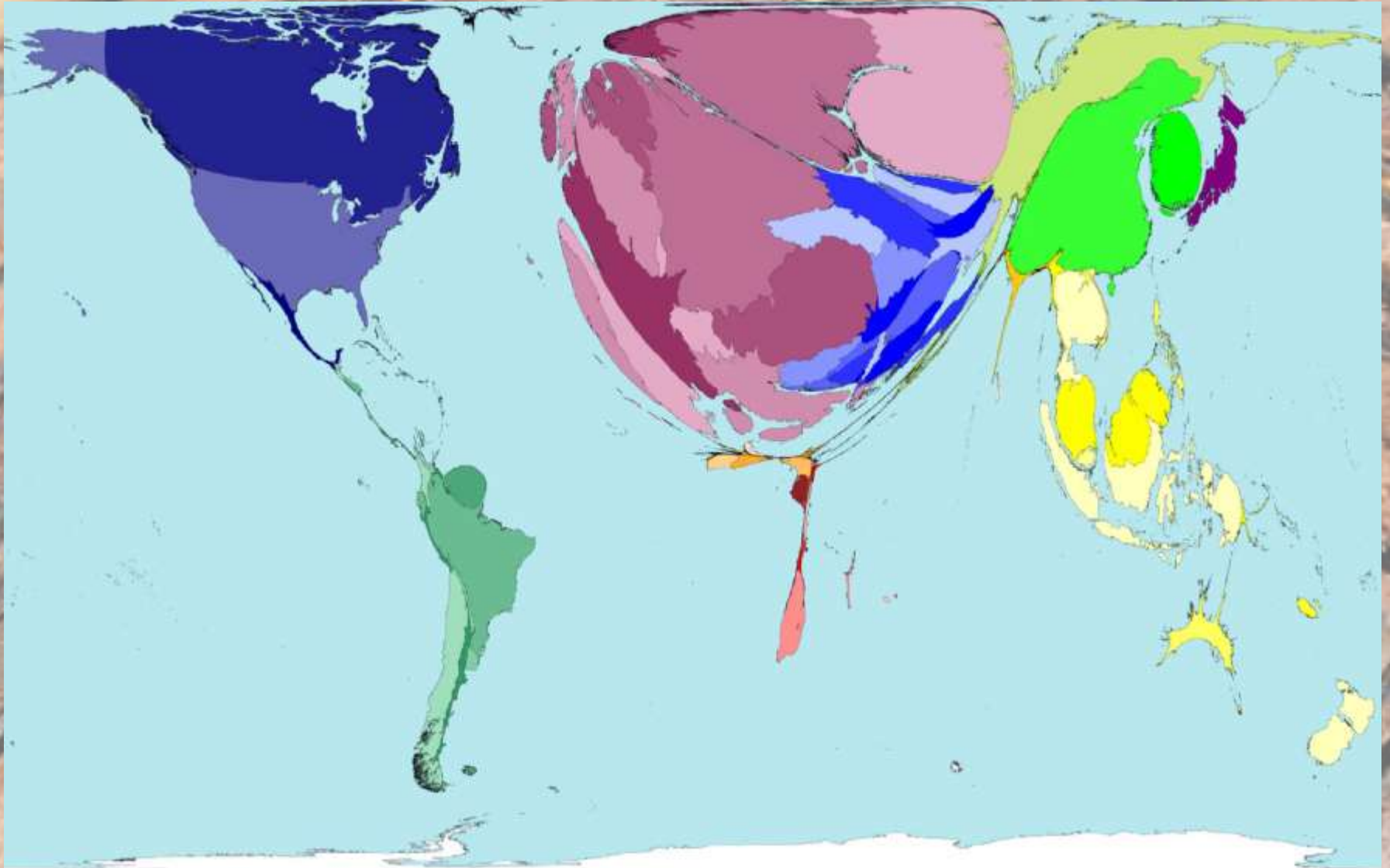
Source: FAOStat, Worldmapper 2009

World-Wide Wood Consumption: 2009

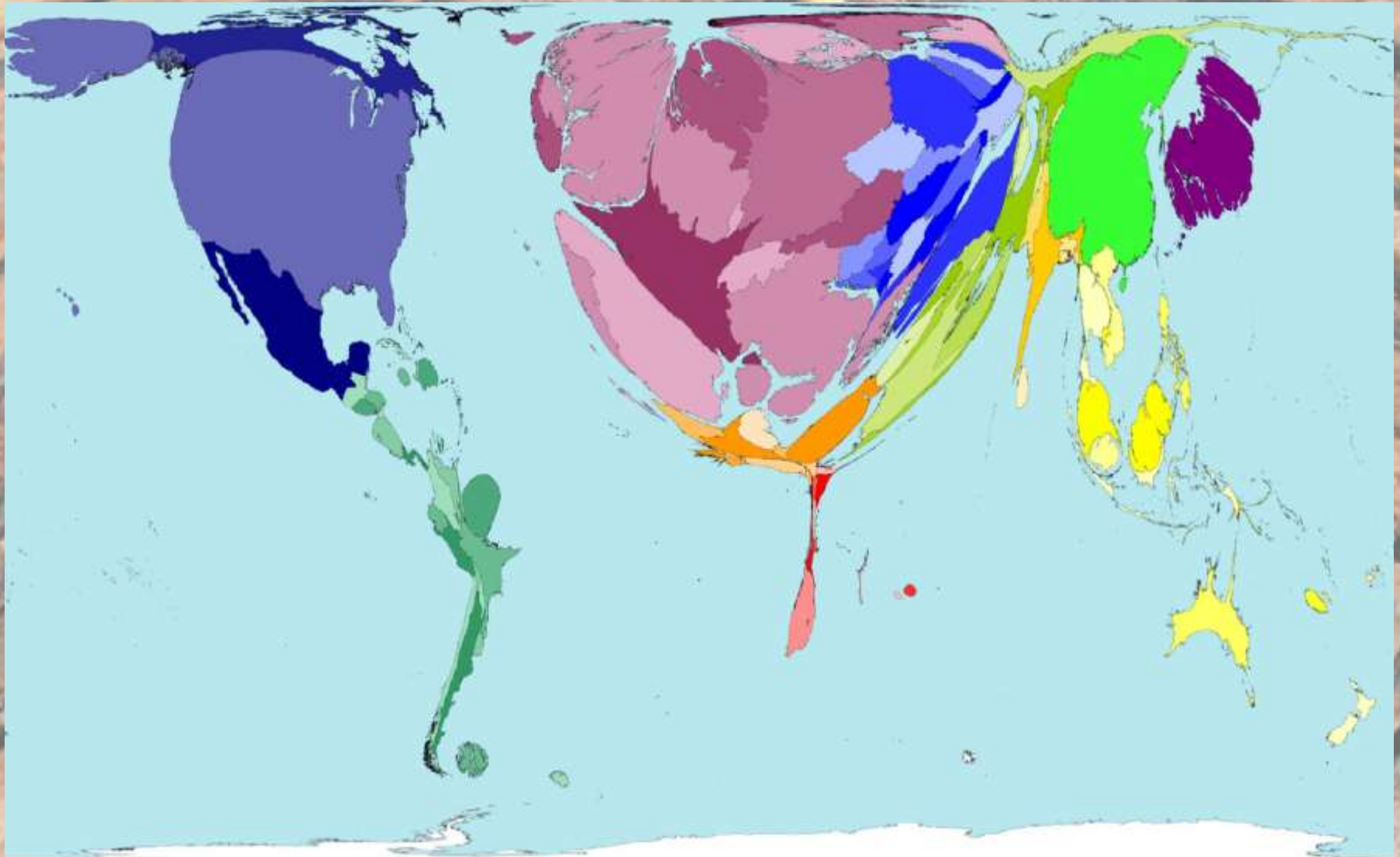


Source: FAOStat, Worldmapper 2009

World-Wide Forest Products Exports: 2009



World-Wide Forest Products Imports: 2009



Trillions

In the upcoming slides – I will be speaking about a lot of debt...

Trillions of dollars of debt – we need to place that in context

Median salary of an American worker: \$41,673 (October 2011)

How many years will it take the median American to pay off
\$1,000,000,000,000?

23.99 million years

Or if you had spent \$1,000,000 per day for 2,012 years –
you would not have spent \$1 trillion dollars

How about 130 million working median Americans?

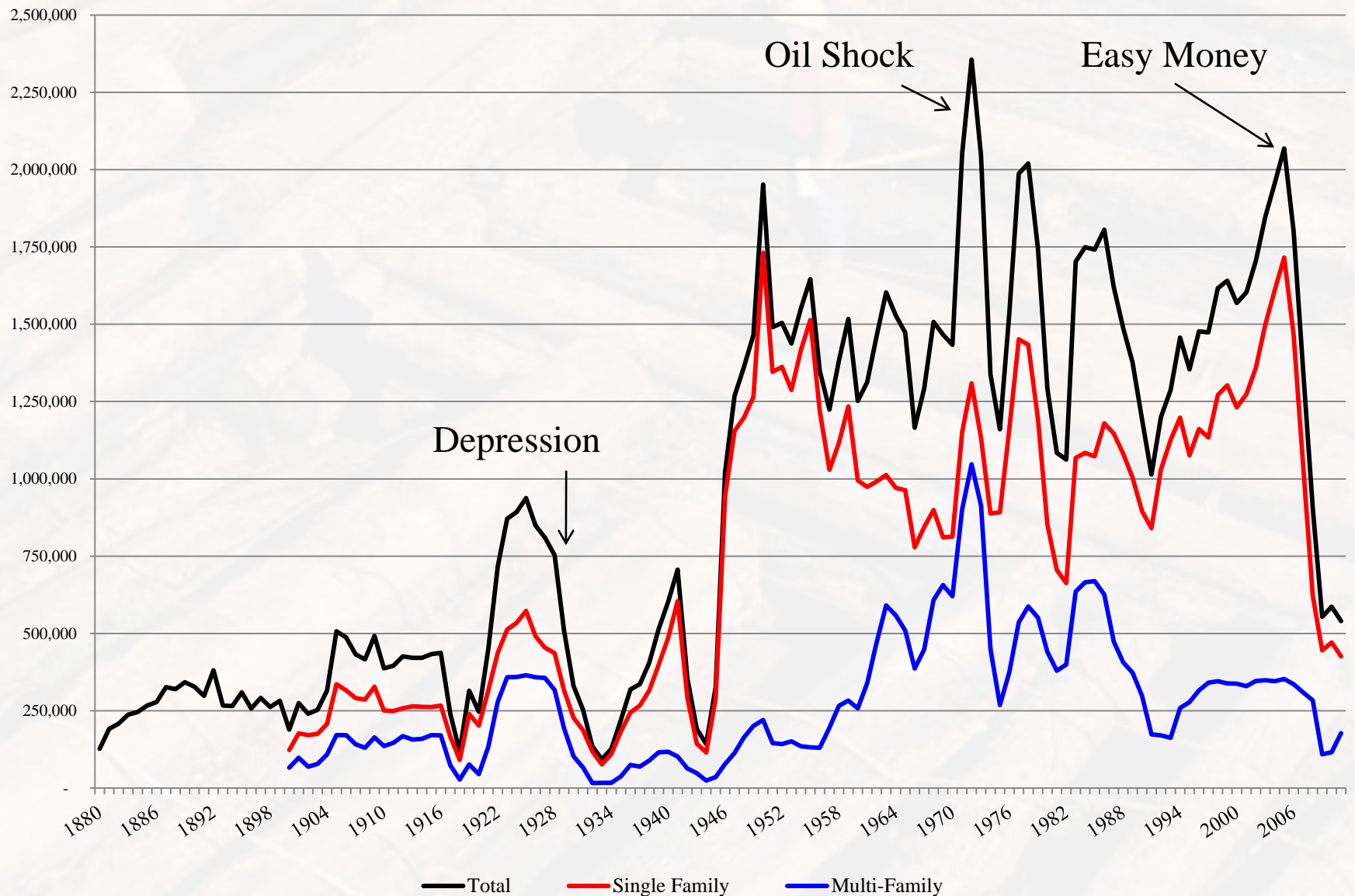
2.6 years: official debt

13.7 – 17.4 years: official debt + unfunded liabilities

An aerial photograph of a logging operation. A large, rectangular log boom is filled with cut logs, floating on a body of water. A worker wearing a yellow hard hat and a red shirt is visible on the boom. The surrounding water is dark, and the sky is overcast.

World Debt
or the Sexier Term –
World Leverage

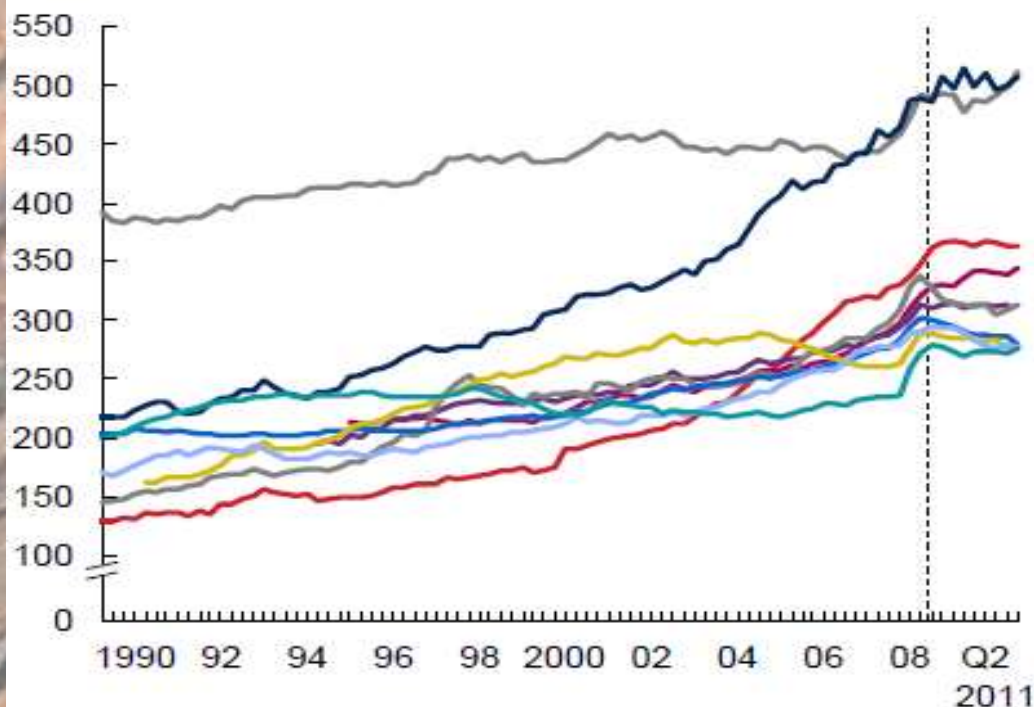
U.S. Housing Units & Starts: 1880 – 2011



Total Debt in 10 Largest OECD Countries

Deleveraging has only just begun in the ten largest developed economies

Total debt,¹ 1990–Q2 2011
% of GDP



Japan	37	39 ▲
United Kingdom	177	20
Spain	145	26 ▲
France	89	35 ▲
Italy	68	12
South Korea	91	-16 ▼
United States	75	-16 ▼
Germany	7	1
Australia	77	-14 ▼
Canada	39	17

▲ Significant increase in leverage²
▼ Deleveraging

Change
Percentage points

2000–08	2008–Q2 2011 ³
---------	---------------------------

¹ Includes all loans and fixed-income securities of households, corporations, financial institutions, and government.
² Defined as an increase of 25 percentage points or more.
³ Or latest available.

SOURCE: Haver Analytics; national central banks; McKinsey Global Institute

Select Countries Debt Composition

The composition of debt varies widely across countries

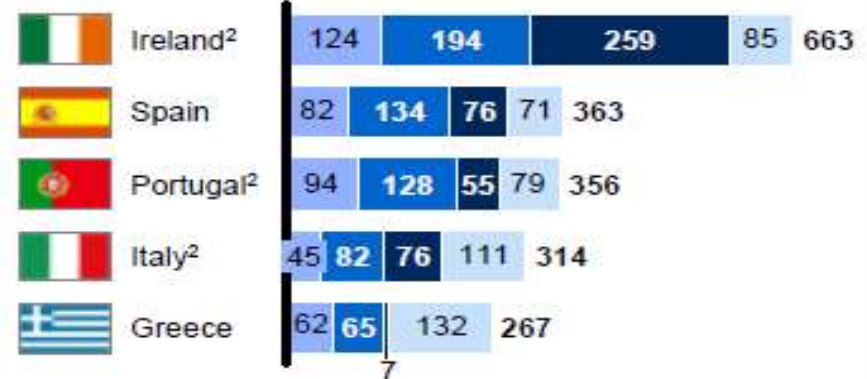
Total debt,¹ Q2 2011
% of GDP



10 largest mature economies



Eurozone-crisis countries



¹ Includes all loans and fixed-income securities of households, corporations, financial institutions, and government.

² Q1 2011 data.

NOTE: Numbers may not sum due to rounding.

SOURCE: Haver Analytics; Bank for International Settlements; national central banks; McKinsey Global Institute

Select Debt Due Within the Next Ten Years

EU-17	\$8.386 trn	Japan	\$11.699 trn
USA	\$10.247 trn	UK	\$1.833 trn
China	\$1.095 trn	Brazil	\$638 bln
Canada	\$632 bln	India	\$623 bln
Korea	\$367 bln	Mexico	\$497 bln
Turkey	\$282 bln	Poland	\$282 bln
Australia	\$204 bln		

SOURCE: GREG WELDON

Greece

Greece's Debt as a Percentage of GDP

Percent

Household	62	\$US 191.15 billion
Nonfinancial COs	65	\$US 200.39 billion
Government	132	\$US 406.96 billion
Total	267	

GDP: \$US 308.3 billion (41st)

Greece

Greece is in arrears 1.25 billion per month; 5.2 billion Euros of Treasury bills due in April and May

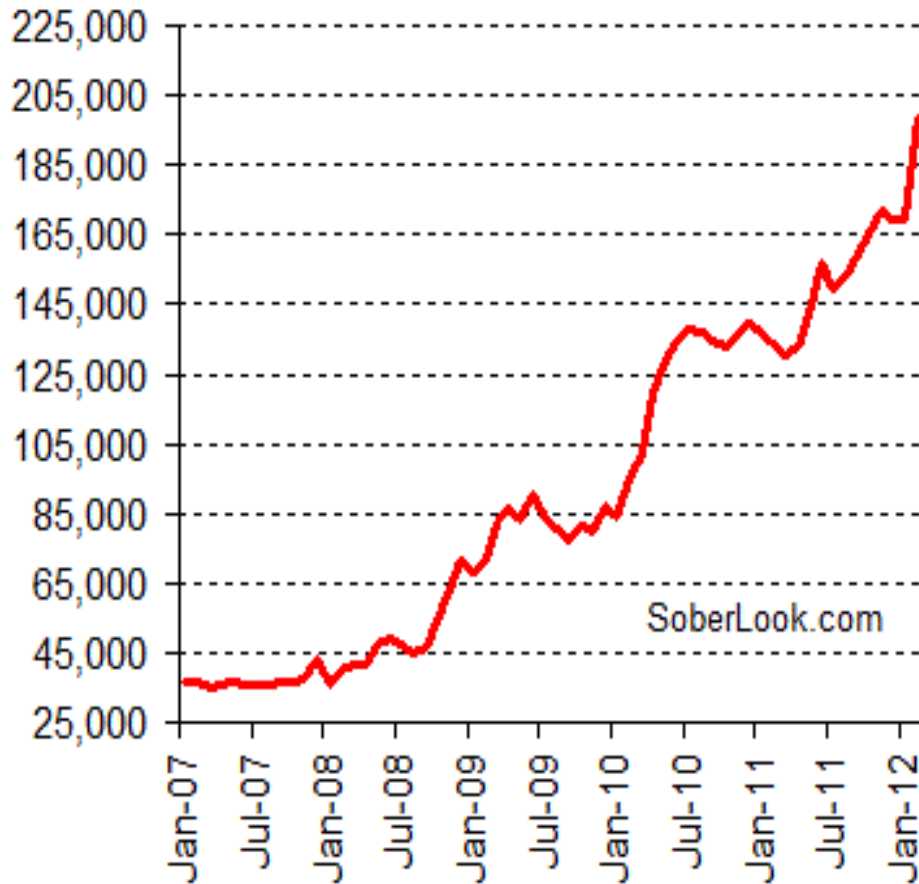
Holder of a 450 million-euro floating-rate bond note due on May 15, rejected a restructuring deal...

Greece has a 30-day grace period to make the payment -
Bloomberg

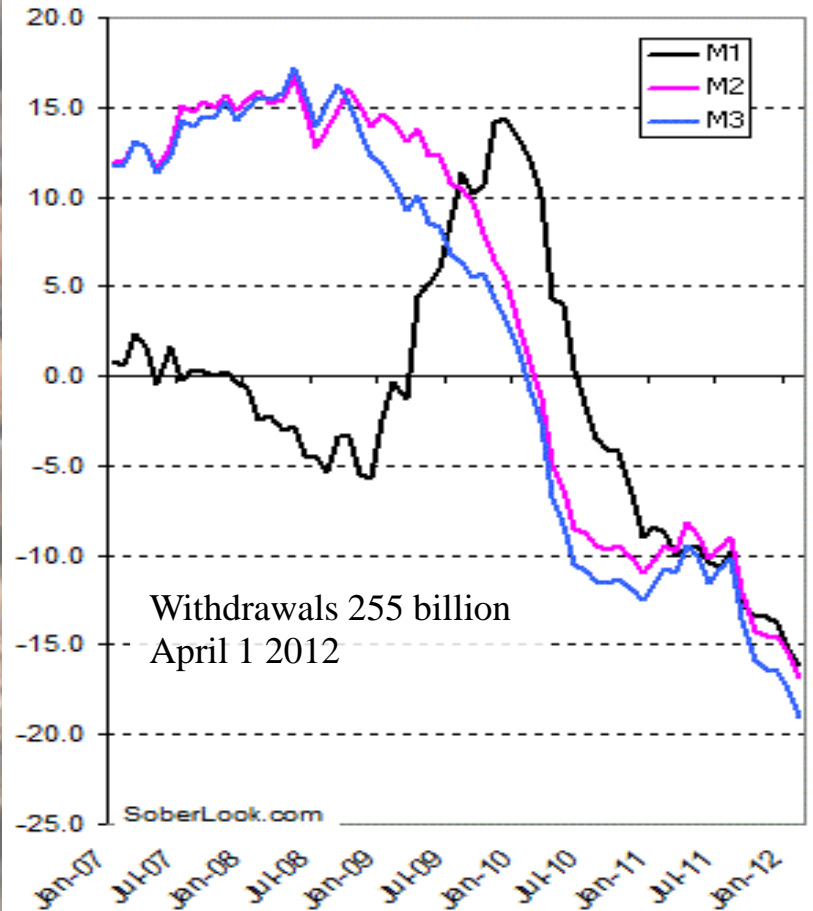
And a \$11.5 billion bond restructure has to be ruled on in court

Greece's unemployment rate is roughly 21%

Greece



Greek Central Bank Deposits: January 2012



Withdrawals from Greek Banks:
January 2012

Spain

Spain's Debt as a Percentage of GDP

Percent

Household	82	\$US 1.16 trillion
Nonfinancial COs	134	\$US 1.89 trillion
Financial COs	76	\$US 1.07 trillion
Government	71	\$US 1.00 trillion
Total	363	

GDP: \$US 1.411 trillion (14th)

Spain

Spain is a big country

Spain matters

Spain has the 14th largest economy in the world

Spain is in trouble – big trouble:

- Spanish sovereign debt

- Spanish regional government debt

- Spanish city debt

- Spanish bank debt

- Spanish corporate debt

- Spanish personal debt

- Spanish housing crash: greater than the U.S.

Spain

Spain's big problem – housing and structural employment

Wall Street Journal: “Some 1.5 million unfinished, unsold or unwanted residential units...”

Bank of Spain: construction debt to banks -- €400 (\$523) billion; repayment of €176 billion is doubtful (only €50 billion of backstops); €31.6 (\$41.3) billion of those considered nonperforming

S&P: Underwater homes -- may rise to 25% from 8% (2010)

Nearly 20% of Europe's home construction was in Spain during the housing boom

Spain is in a recession

Unemployment is 23%; 53% for under 25 year olds

Spain

“The European Union cannot handle a Spanish default...

As Spain goes, so goes the rest of Europe.

As Europe goes, so goes the United States and the rest of the world.

U.S. investors who fail to heed this lesson do so at their own risk.

The Euro crisis is still far from over.” - - Michael Lewitt

Italy

Italy's Debt as a Percentage of GDP

	<u>Percent</u>	
Household	45	\$US 820 billion
Nonfinancial Cos	82	\$US 1.49 trillion
Financial COs	76	\$US 1.38 trillion
Government	111	\$US 2.02 trillion
Total	314	

GDP: \$US 1.822 trillion (11th)

Italy

February unemployment – rising: 9.3% from 9.1%

Secured less than one-quarter of funding needs; expected to be Euro zone's largest issuer of sovereign debt in Q2

Bond yields are rising: 10-year 4.83% on March 19th, now near 5.15% - - Marc Chandler, April 3

Italy's public debt is rapidly becoming unsustainable. If Italy balances its budget by 2013, EU demands that Italy must begin to reduce their large public debt...

Debt > 60% of GDP; must reduce debt... an impossible 3% of GDP per year - - Nouriel Roubini

Portugal

Portugal's Debt as a Percentage of GDP

Percent

Household	94	\$US 232.1 billion
Nonfinancial Cos	128	\$US 316.0 billion
Financial COs	55	\$US 135.8 billion
Government	79	\$US 195.0 billion
Total	356	

GDP: \$US 246.9 billion (51st)

Portugal

“Portugal is unraveling. .. may be the second shoe to drop in the European sovereign debt saga.

Bank runs affecting Portuguese banks...deposits are shifting to safer countries and banks in those countries.” - - David Kotok

“A bail-out of Portugal now looks virtually inevitable” - - Raoul Ruparel, Open Europe

Portugal’s unemployment rate is about 15%

Ireland

Ireland's Debt as a Percentage of GDP

	<u>Percent</u>	
Household	124	\$US 225.6 billion
Nonfinancial Cos	194	\$US 352.9 billion
Financial COs	259	\$US 471.1 billion
Government	85	\$US 154.6 billion
Total	663	

GDP: \$US 181.9 billion (57th)

Ireland

Ireland's economic growth: weak in Q2 2011 and expected to return to the bond markets in early 2014...

Ireland will still face unsustainably high-borrowing costs in late 2013 and early 2014.

Ireland will need funding...it may try to access IMF funding if it is cut off from the ESM (if Irish voters reject austerity) - - Nouriel Roubini, March 27

Ireland's unemployment rate is at almost 15%

Ireland's housing crash is on par with Spain and the U.S.

United Kingdom

United Kingdom's Debt as a Percentage of GDP

	<u>Percent</u>	
Household	98	\$US 2.21 trillion
Nonfinancial Cos	109	\$US 2.45 trillion
Financial COs	219	\$US 4.93 trillion
Government	81	\$US 1.82 trillion
Total	507	
GDP: \$US 2.25 trillion (9 th)		

United Kingdom

UK is in trouble and has not controlled its debt crisis.

Debt has escalated since 2008...one of the most indebted countries in the world

Combining debt from the three main sectors – households, corporate, and the public sector – only Japan is now more indebted

Bank of England: 14% of all UK home loans are either delinquent or in forbearance

Financial institutions may have a derivatives problem in the future- -
Niels Jensen

Japan

Japan's Debt as a Percentage of GDP

	<u>Percent</u>	
Household	67	\$US 2.94 trillion
Nonfinancial COs	99	\$US 4.35 trillion
Financial COs	120	\$US 5.27 trillion
Government	226	\$US 9.92 trillion
Total	512	
GDP: \$US 4.39 trillion (5 th)		

Japan

Japan shutdown 52 of 54 nuclear plants -- imports of natural gas up 74% (January) from 1-year ago; imports of petroleum up nearly 13%

Result: energy costs are a huge drag on the economy

Japan has the worlds largest debt as a percentage of GDP: +500%

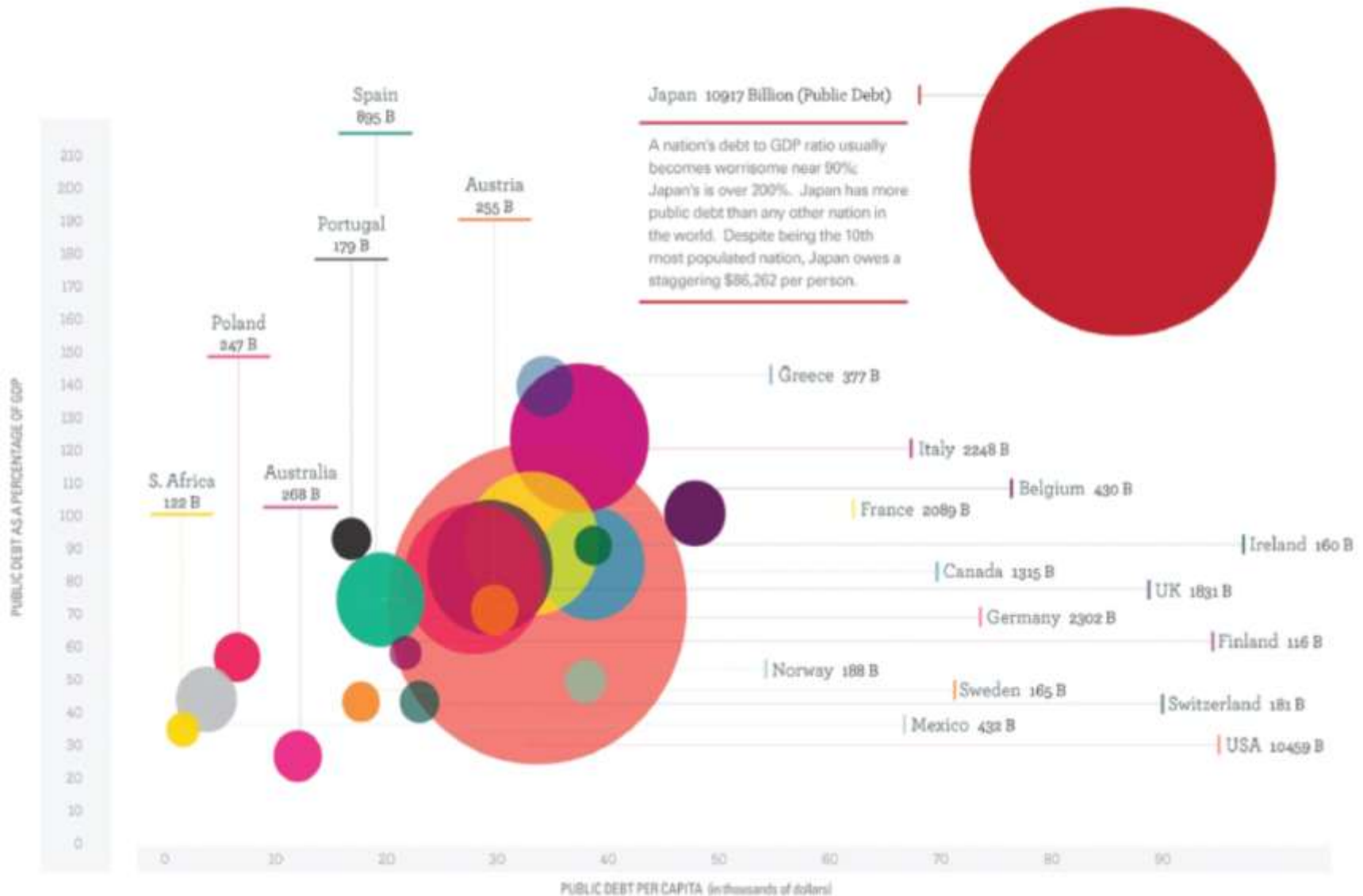
By March 2013, the end of the next fiscal year, national debt will surpass \$14 trillion - - Japan Ministry of Finance

Japan now has the worlds oldest population

DEBT CRISIS: JAPAN

Forget Greece, when you look at the numbers

Japan poses the greatest worry.



United States

United States' Debt as a Percentage of GDP

	<u>Percent</u>	
Household	87	\$ 13.08 trillion
Nonfinancial Cos	72	\$ 10.83 trillion
Financial COs	40	\$ 6.02 trillion
Government	80	\$ 12.03 trillion
Total	279	
GDP: \$15.04 trillion (2 nd)		



US Debt Clock.org

State Debt Clocks

World Debt Clocks



Debt Clock Time Machine



US NATIONAL DEBT

\$ 15,633,936,202,882

DEBT PER CITIZEN

\$ 49,896

DEBT PER TAXPAYER

\$ 137,900

US FEDERAL SPENDING

\$ 3,580,860,397,114

US FEDERAL BUDGET DEFICIT

\$ 1,320,890,631,262

US FEDERAL TAX REVENUE

\$ 2,259,969,775,294

INCOME TAX

\$ 1,095,668,943,673

PAYROLL TAX

\$ 803,982,929,714

CORPORATE TAX

\$ 177,723,547,587

STATE REVENUE

\$ 1,465,811,670,036

STATE DEBT

\$ 1,103,274,262,229

LOCAL REVENUE

\$ 1,102,282,255,004

LOCAL DEBT

\$ 1,743,917,192,810

Largest Budget Items

MEDICARE/MEDICAID

\$ 831,487,640,099

SOCIAL SECURITY

\$ 737,158,166,524

DEFENSE/WARS

\$ 694,596,373,041

INCOME SECURITY

\$ 388,789,110,884

NET INTEREST ON DEBT

\$ 226,189,455,229

FEDERAL PENSIONS

\$ 214,189,455,158

US GROSS DOMESTIC PRODUCT

\$ 15,103,680,528,125

TOTAL FEDERAL/STATE/LOCAL SPENDING

\$ 6,585,533,892,901

GROSS DEBT TO GDP RATIO

103.5006554 %

REVENUE TO GDP RATIO

31.9640052 %

SPENDING TO GDP RATIO

43.5975952 %

US POPULATION

313,325,173

US INCOME TAXPAYERS

113,365,960

OFFICIAL UNEMPLOYED

12,876,578

ACTUAL UNEMPLOYED

22,792,493

STATE/LOCAL EMPLOYEES

15,416,812

FEDERAL EMPLOYEES

4,336,663

US TOTAL INTEREST • 2012

\$ 3,787,871,989,434

INTEREST PER CITIZEN

\$ 12,091

US TOTAL DEBT

\$ 57,269,216,126,225

TOTAL DEBT PER CITIZEN

\$ 182,778

TOTAL DEBT PER FAMILY

\$ 690,983

SAVINGS PER FAMILY

\$ 6,080

TOTAL PERSONAL DEBT

\$ 15,962,190,317,405

MORTGAGE DEBT

\$ 13,428,792,945,809

STUDENT LOAN DEBT

\$ 869,165,570,297

CREDIT CARD DEBT

\$ 795,856,537,091

PERSONAL DEBT PER CIT.

\$ 50,945

Money Creation

FEDERAL RESERVE MONETARY BASE

\$ 2,625,960,789,048

M2 MONEY SUPPLY

\$ 9,780,594,744,220

TREASURY SECURITIES

\$ 1,277,860,971,549

CURRENCY AND CREDIT DERIVATIVES

\$ 804,288,794,943,350

Trade Numbers

US DEBT HELD BY FOREIGN COUNTRIES

\$ 5,150,100,933,902

US TRADE DEFICIT

\$ 785,190,817,462

US TRADE DEFICIT • CHINA

\$ 310,654,827,211

US IMPORTED OIL

\$ 495,201,480,283

IMPORTED OIL • OPEC

\$ 196,492,619,445

SMALL BUSINESS ASSETS

\$ 7,044,015,418,195

CORPORATION ASSETS

\$ 16,460,388,934,303

HOUSEHOLD ASSETS

\$ 59,744,372,415,562

TOTAL NATIONAL ASSETS

\$ 83,248,776,530,953

ASSETS PER CITIZEN

\$ 265,693

SOCIAL SECURITY LIABILITY

\$ 15,603,278,298,273

PRESCRIPTION DRUG LIABILITY

\$ 20,580,626,793,020

MEDICARE LIABILITY

\$ 82,097,248,797,826

US UNFUNDED LIABILITIES

\$ 118,358,911,877,944

LIABILITY PER TAXPAYER

\$ 1,044,122

US WORK FORCE

141,470,114

US RETIREES & SSI

66,990,342

US FAMILIES

82,881,164

FOOD STAMP RECIPIENTS

46,780,599

BANKRUPTCIES

1,399,368

FORECLOSURES

841,853

United States

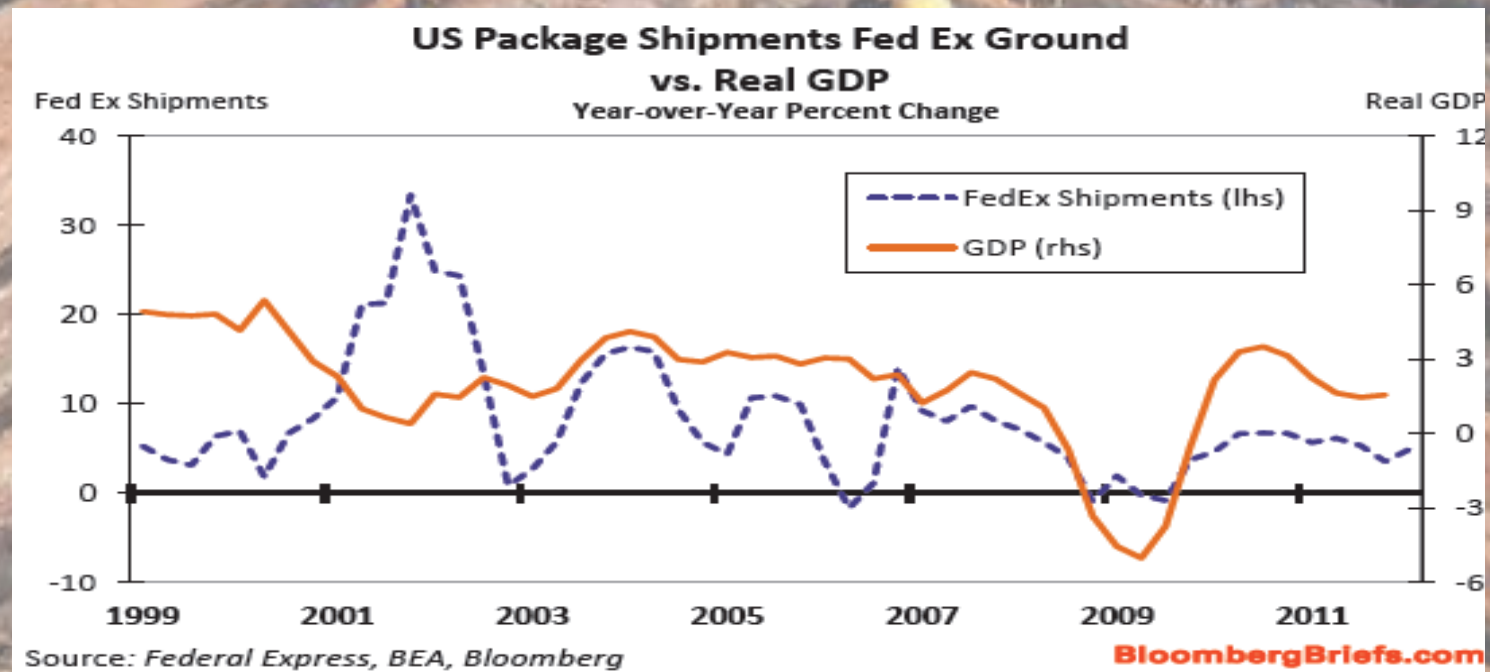
“By the end of 2011, gross public debt was at 68% of GDP – with no changes in fiscal policies, debt would rise to 90% of GDP by 2022 (this does not include unfunded liabilities)

...current path of U.S. fiscal policy is clearly unsustainable over time...

revenues remain at a level that is structurally low due to unsustainable tax cuts, and over the next few decades, the rise in entitlement spending will be a serious burden on the U.S. fiscal balance.

Fiscal consolidation is thus necessary to deal with the large structural deficit” - - Nouriel Roubini

FedEx: A Short-Term U.S. Economic Indicator?



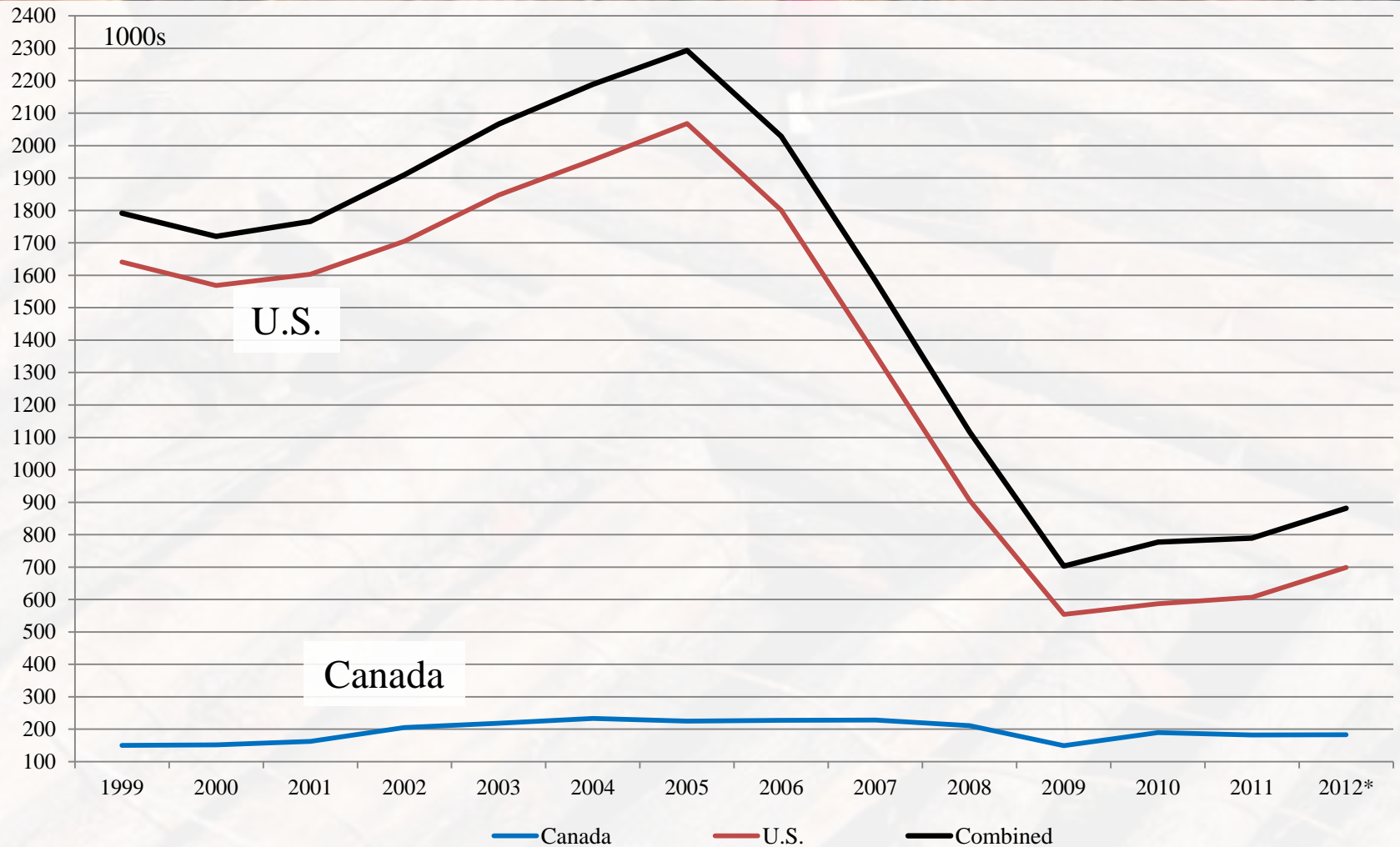
FedEx -- 3rd quarter ended on February 29 – reduced forecast, “...we just don’t have a strong economy as we have hoped....”

FedEx GDP Projections:	2012 - U.S. GDP	2.1%
	2013 - U.S. GDP	2.4%
	World GDP	2.3%
	Developed countries	1.1%
	Emerging markets	5.2%

Canada and U.S. Housing

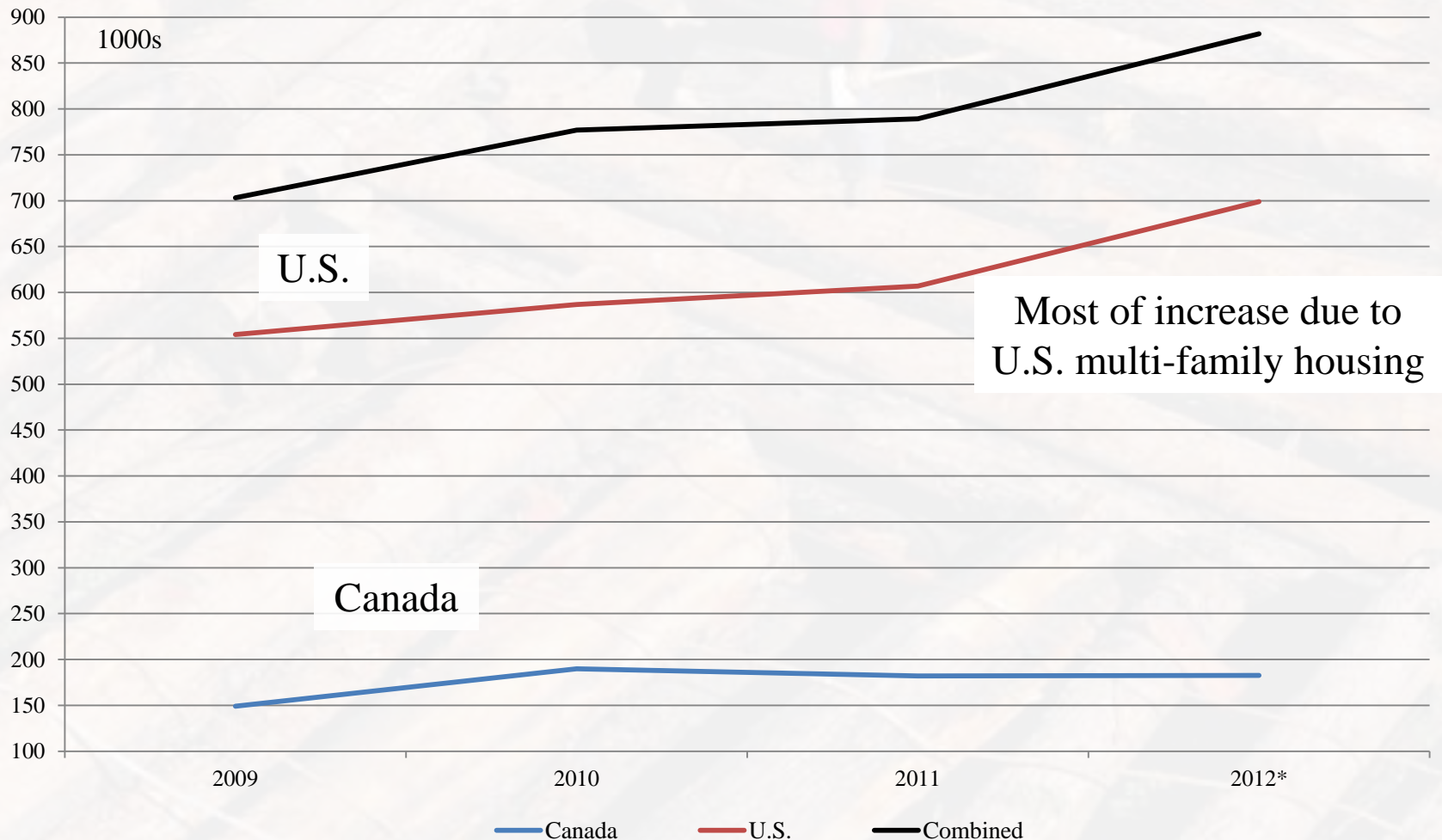
An aerial photograph of a log boom, showing numerous large logs floating in a body of water. Several workers are visible on the logs, and the scene is brightly lit, suggesting a sunny day. The logs are arranged in parallel lines, creating a grid-like pattern across the water's surface.

Canada and U.S. Housing Starts



Source: US DOC-Construction and CMHC

Canada and U.S. Housing Starts



U.S. Distressed Homes

Shadow Inventory, Delinquencies, and Foreclosures

Two-thirds of all U.S. houses have mortgages.

21 to 29% of the mortgages are underwater - - 16 million houses?

When prices do rise, several of these no-longer-underwater owners will put their houses up for sale.

If only 1 in 3 put their homes up for sale...

...another 5 million homes in inventory

Which possibly will place negative pressure on home prices

U.S. Distressed Homes

Shadow Inventory, Delinquencies, and Foreclosures

February 2012: \pm 65,000 completed foreclosures

8% decline from January: 71,000

66,000 in February 2011

Completed foreclosures year-over-year at February's end: 862,000

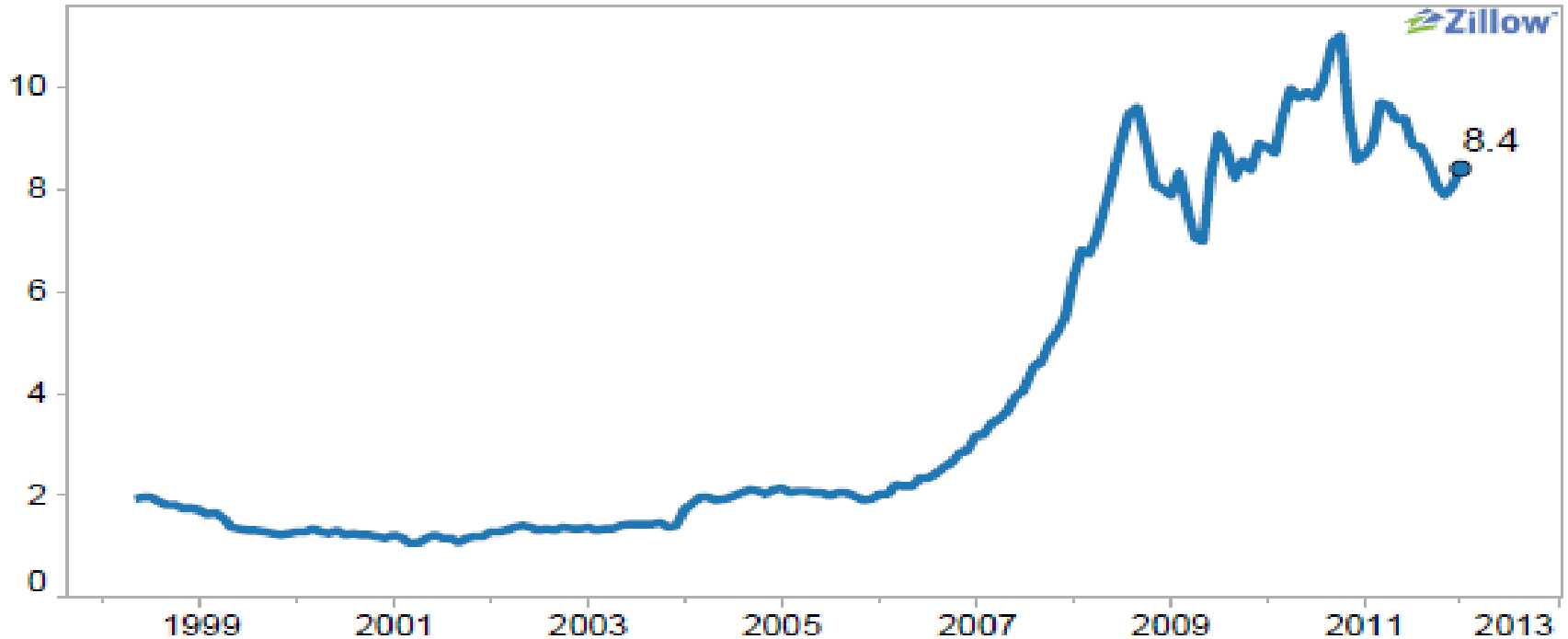
In January, 8.4 out of every 10,000 homes were being liquidated, up from 8.1 per 10,000 in December.

Why? Banks increasing foreclosures after the “Robo-signing” settlement.

U.S. Distressed Homes

Figure 4: U.S. Foreclosure Rate

Number of homes out of 10,000 that were liquidated in month
January 2012



Foreclosure rate increased in January: 146,200 homes liquidated

December: 146,900 homes liquidated

Source: Zillow Real Estate Market Report, January 2012

U.S. Distressed Homes

Shadow Inventory, Delinquencies, and Foreclosures

February - - 206,900 properties receiving some form of filing.

Foreclosure activity is expected to increase 15% in 2012 vs. 2011

Shadow inventory: January 2012 - 1.4 million units (6-mo's supply);

On a year-over-year basis, decreased from Jan 2011: 1.5 million units

New seriously delinquent loans (90 days or more) are going into

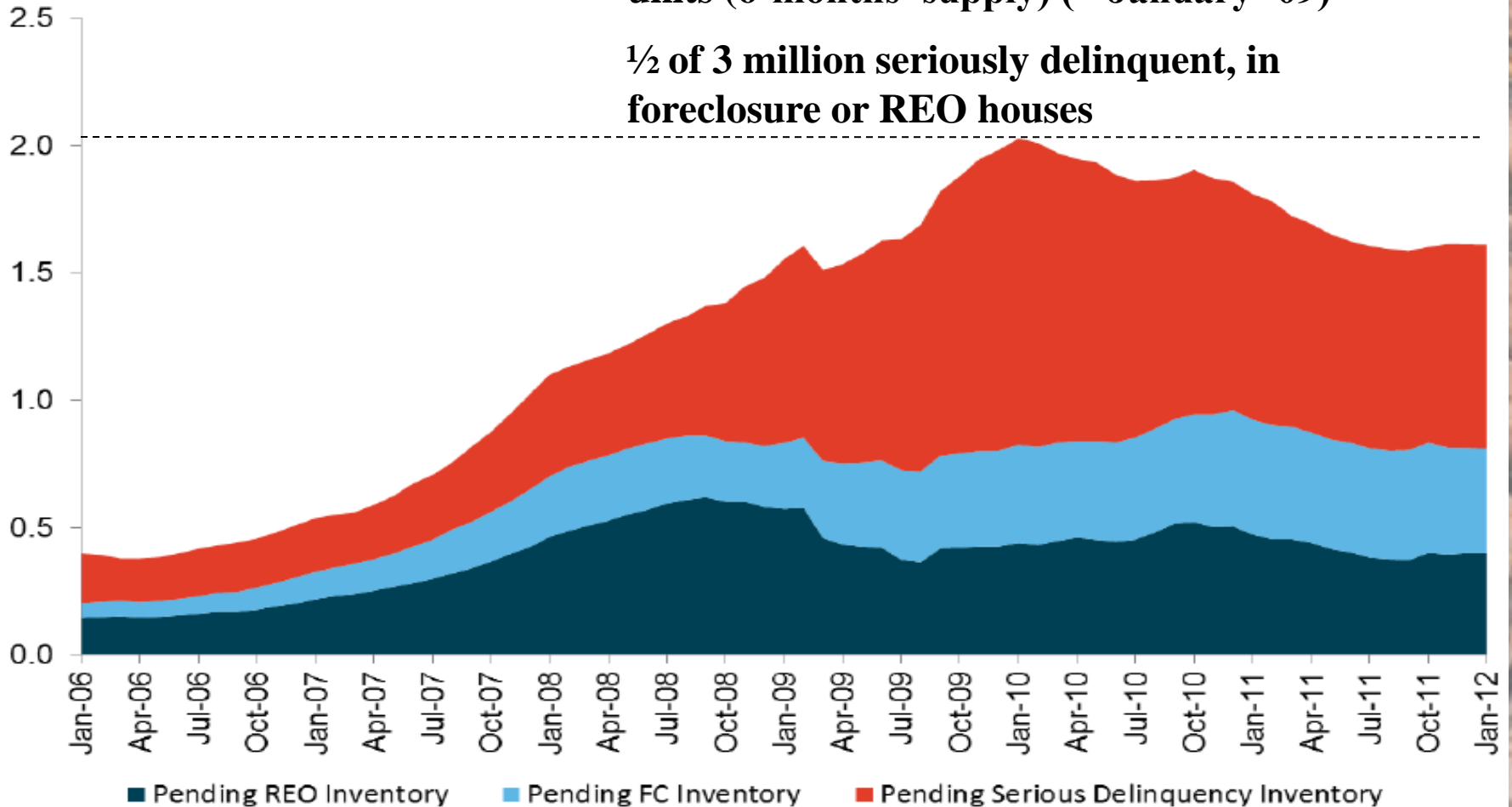
Shadow Inventory -- offset by an approximately equal flow of distressed sales (short-sales and REO sales (real estate owned)).

U.S. Distressed Homes

Figure 1: Shadow Inventory Detail
Count in Millions, Not Seasonally Adjusted

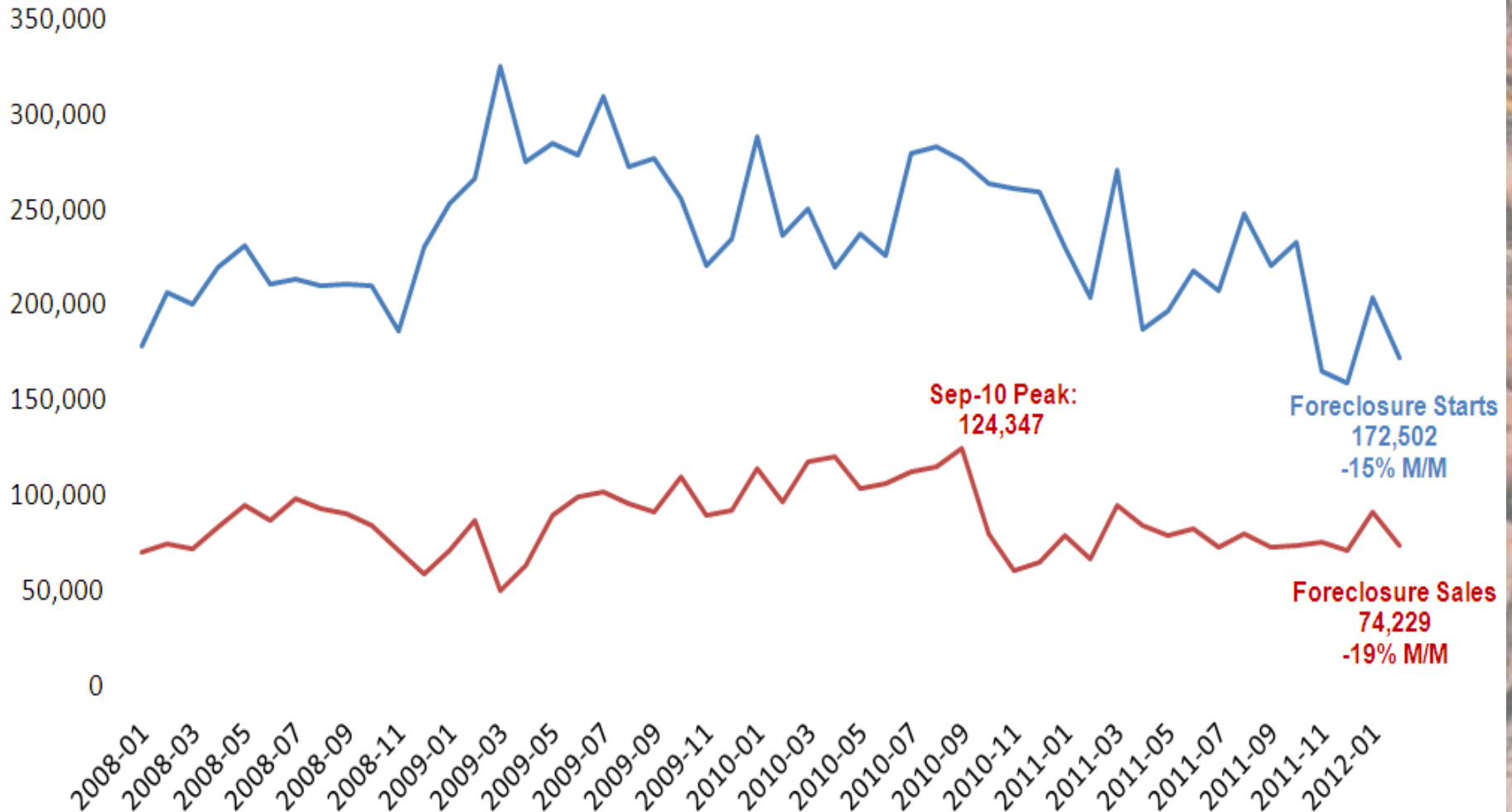
January 2012s Shadow Inventory -- 1.6 million units (6-months' supply) (= January '09)

1/2 of 3 million seriously delinquent, in foreclosure or REO houses



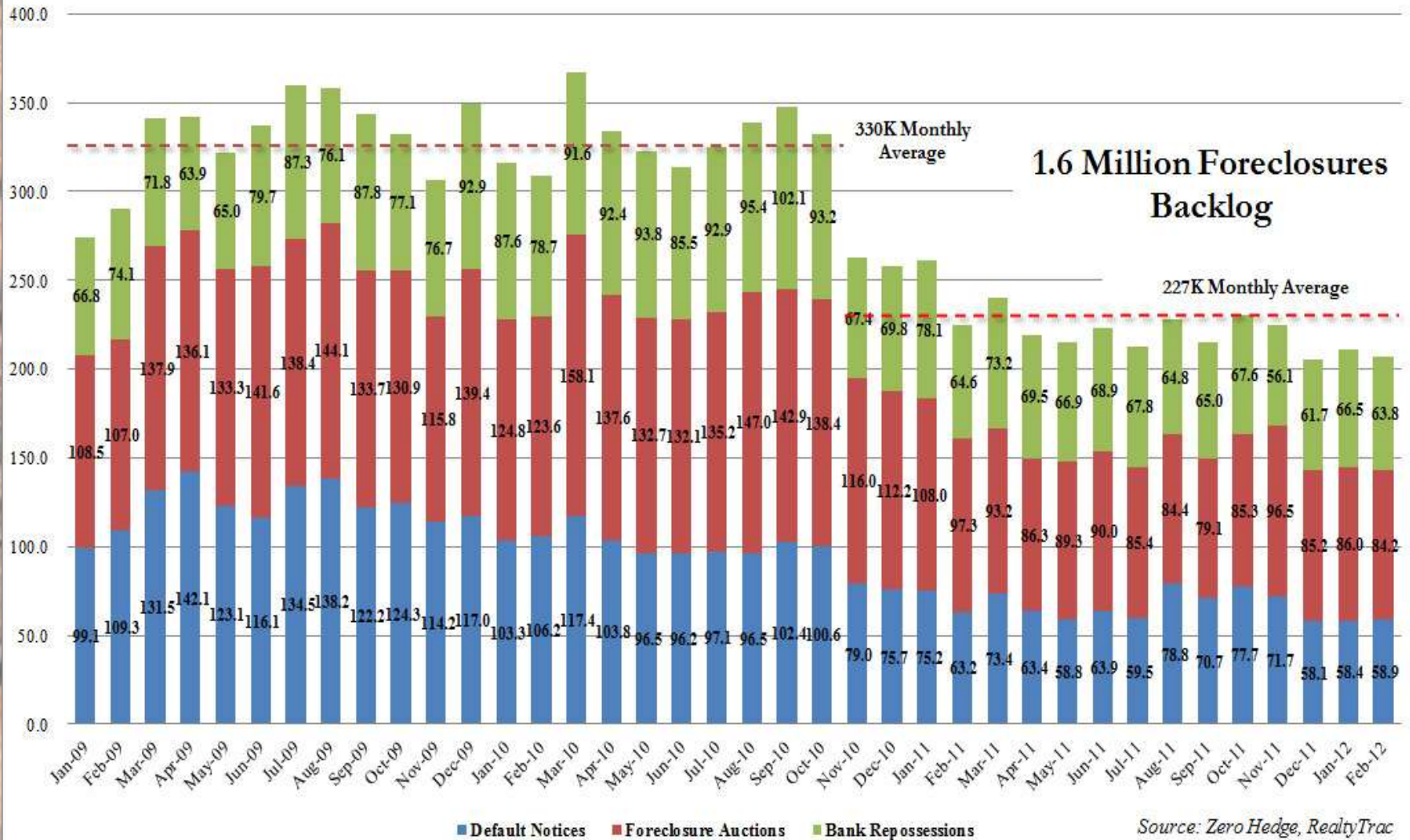
U.S. Distressed Homes

Foreclosure Starts vs. Foreclosure Sales



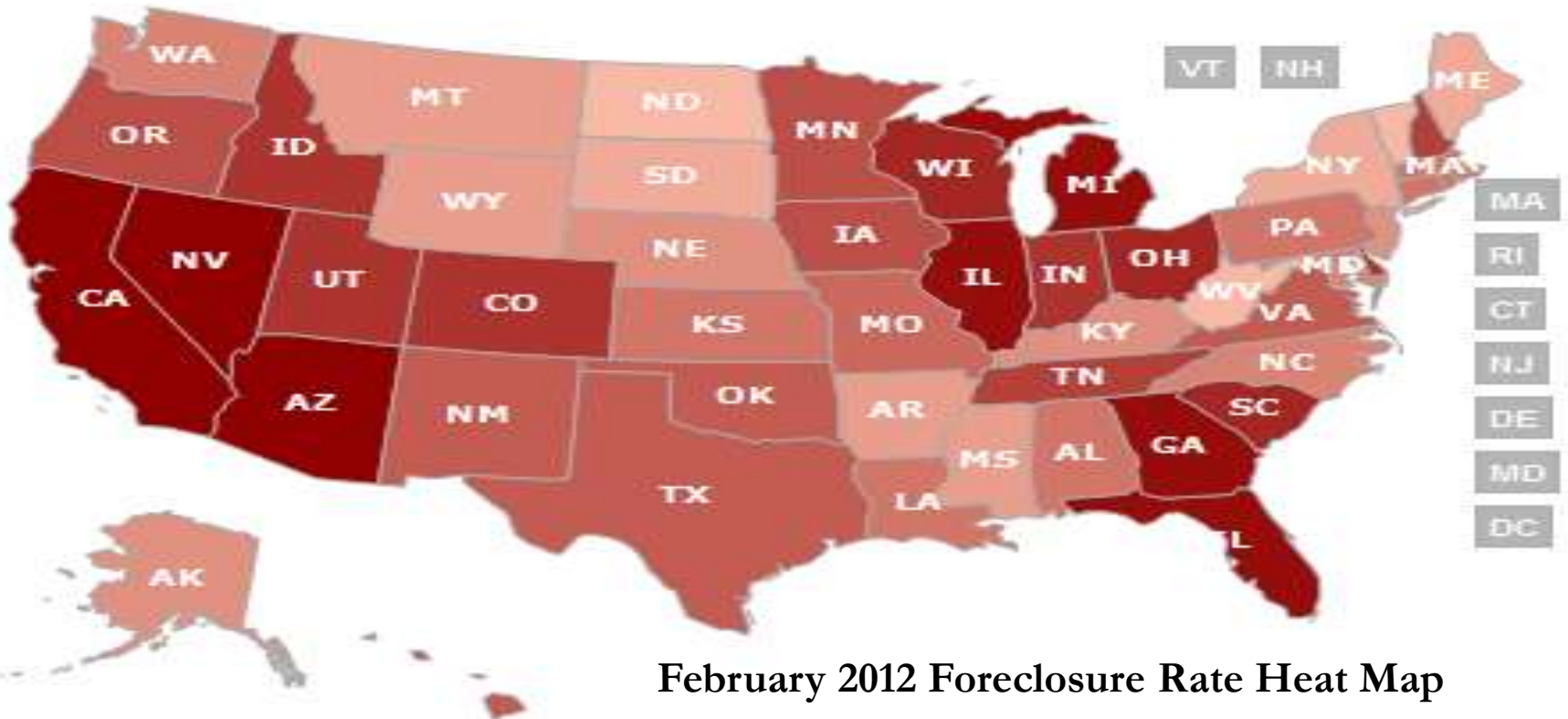
U.S. Distressed Homes

RealtyTrac Monthly Foreclosure Activity ('000)

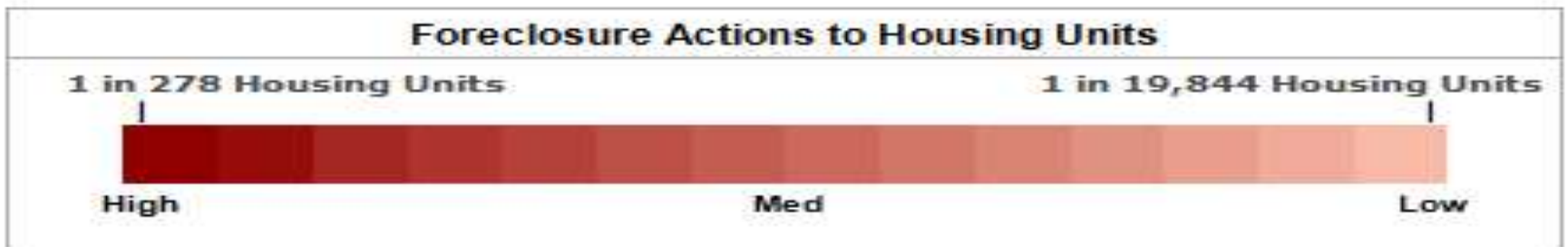


Source: Zero Hedge, RealtyTrac

U.S. Distressed Homes



1 in every 367 housing units received a foreclosure filing



U.S. Distressed Homes

Shadow Inventory, Delinquencies, and Foreclosures

“... since 2010, 65% of foreclosure starts have been associated with borrowers who took out 30-year fixed-rate amortizing mortgages (viewed by consumer advocates as the “safest” mortgage product) — up from 40% early in the crisis.

A large foreclosure pipeline hangs over U.S. housing markets, creating headwinds for housing market recovery. What began as a nonprime mortgage problem has evolved into a prime mortgage problem with the onset of the recession. ” - - Joshua Abel and Joseph Tracy, Federal Reserve Bank of New York

An aerial photograph of a large log raft on a river. The raft is composed of numerous logs stacked in neat rows. Several workers are visible on the raft, some standing and others working with tools. The water is visible between the logs, and the surrounding landscape is hilly and wooded. A white rectangular box is overlaid on the center of the image, containing the text 'EU 27 Housing'.

EU 27 Housing

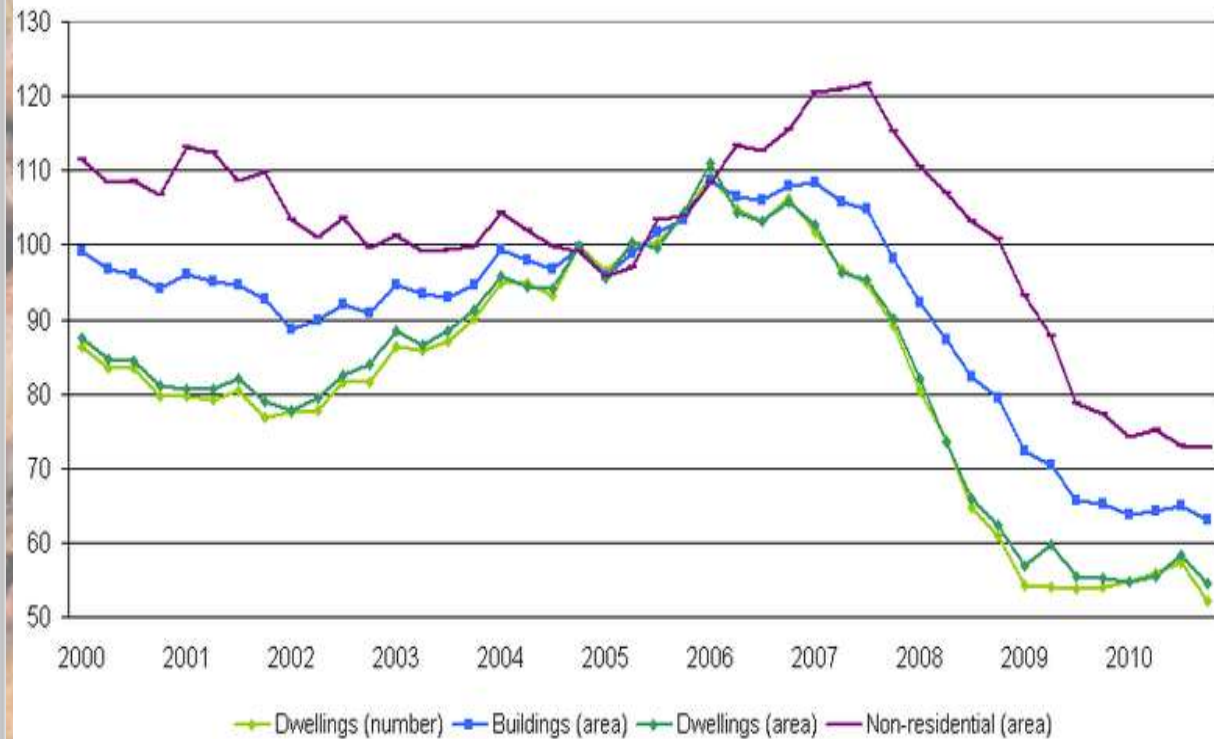
EU 27 Housing

1000s

Change in Residential Building Permits: 2007 - 2011

Countries	Percentage (%)
EU27	-44
Spain	-89
Ireland	-86
Greece	-75
Portugal	-71
Hungary	-68
Cyprus	-60
Denmark	-43
United Kingdom	-42
Netherlands	-35
Norway	-33
Poland	-28
Sweden	-18
France	-13
Germany	-7
Switzerland	36

EU 27: Building Permits 2000 –2010



Source: EuroStat

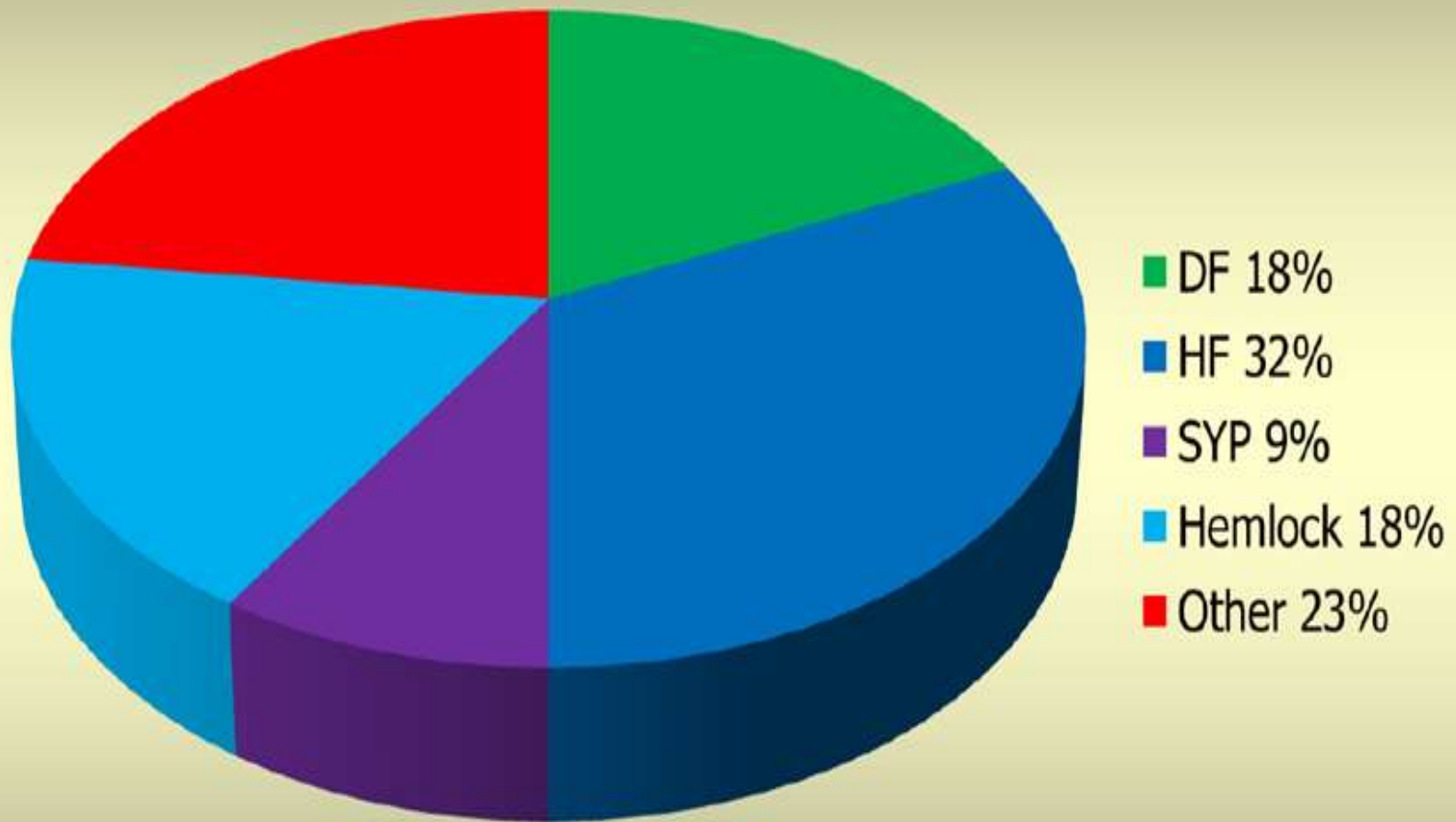
An aerial photograph showing a large raft of logs floating on a river. Several workers are visible on the raft, some standing and some crouching, managing the logs. The logs are stacked in neat rows, and the water is visible between the logs. The scene is brightly lit, suggesting a sunny day.

Demand for Forest Products

China

Demand for Forest Products

U.S. Exports to China by Species: 2011



U.S. Softwood Lumber Exports to China: 2011

Month	United States		Canada		North America	
	month	YTD	month	YTD	month	YTD
January	24.0		164.5		188.5	
February	38.3	62.3	220.0	384.5	258.3	446.8
March	32.4	94.7	270.3	655.0	302.7	749.7
April	25.3	120.0	212.7	867.7	238.0	987.7
May	45.5	165.5	318.8	1186.5	364.3	1352.0
June	38.4	203.9	356.1	1542.6	394.5	1746.5
July	36.1	240.0	253.3	1795.9	289.4	2035.9
August	41.6	281.6	263.8	2059.7	305.4	2341.3
September	34.9	316.5	311.1	2370.8	346.0	2687.3
October	37.6	354.1	265.4	2636.0	303.0	2990.1
November	27.5	381.6	259.0	2895.0	286.5	3276.6
December	29.9	411.5	217.7	3,112.7	247.6	3,524.2

U.S. Hardwood Lumber Exports to China: 2011
436 million board feet

Demand for Forest Products

U.S. Softwood Lumber Exports to China (US\$)

	2009	2010	2011
Douglas fir	12.7 mil	12.5 mil	38.1 mil
Hemlock	39.6 mil	16.9 mil	46.8 mil
Cedars	7.6 mil	7.4 mil	10.0 mil
Ponderosa	1.8 mil	15.0 mil	21.5 mil
SYP	8.9 mil	8.6 mil	24.9 mil
Total	102.1 mil	96.2 mil	243 mil
			2011 up 144%

Demand for Forest Products

Population and Economic Growth

Population changes are due to the country's past one-child policy.

What will emerge? In the next ± 20 years – even if the one-child policy is lifted...

First, by 2016 population growth 0.1% per year ...then starts decreasing.

Second, by 2016 the working age population (15 to 65 year-olds) declines by 5 million; by 2021 a decrease of 29 million.

2011: 84 million plus to a negative 34 million by 2025.

Third, since 2002, the number of retirees rose by 38 million (38%)

Will rise by 150 million -- 107% over the next 10 years.

Demand for Forest Products

Population and Economic Growth

Fourth, changing demographics impact **Trend Growth Rate**

(long-run average rate or how fast/slow an economy can be expected to increase/decrease during a period of years without creating inflationary pressure).

Projecting China's trend growth rate:

To 2016: 7.5%

2016 to 2021: slows to 5.1%

2021 and beyond: 3% a year.

These changes in China's potential for economic growth are recognized by the top policy advisors.

Demand for Forest Products

Population and Economic Growth

What happens with decreasing Chinese GDP?

Will their internal consumption of forest products increase?

If, so forest products importation might increase

If the population is decreasing – production costs possibly will increase with the result of their products becoming more expensive

-- thus a loss of competitive advantage

This could be good news for North American producers as manufacturing returns to the continent

Conclusions

Current Long-Term Refinancing Operations LTRO €740 billion euro (\$976 billion) firewall...

– not big enough to stop a Spanish default – much less the other Club Med countries plus Ireland

Japan – serious financial problems plus increasing energy costs

U.S. housing market – Distressed homes, jobs, and consumer psychology still are major headwinds confronting forest products manufacturing

China – soft-landing this year and projected decreasing GDP for the next 15-years

To early to project impact on forest products

Outlook: More muddling along