



The Global Economy, Rising Risk and Insurance Markets

Risk and Reward in a Troubled World

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- **Modest growth will continue in 2016 (~ 3% DPW in US)**
 - ◆ Exposure growth tied primarily to overall GDP growth/key sector drivers
 - ◆ Rates remain flat to marginally negative for commercial lines in 2016
 - ◆ Reinsurance pricing under pressure—more so for property risks
- **Underlying loss cost trends remain manageable**
- **Industry is very well capitalized on a global scale**
- **Continued pressure from alternative capital**
- **Anti-trade, nationalistic sentiments bad for marine ins.**
- **Sluggish growth abroad impacts trade flows**
- **Strong dollar has hurt US manufacturing, exports**
- **Commodity prices remain weak but have likely bottomed**

Risk & Insurance

U.S. and Global Perspective

**Marine Insurance Is Very Sensitive to
the Global Economic and Political
Environment**

5 Major Categories for External Global Risks, Uncertainties and Fears: Insurance Solutions

1. Economic Risks
2. Geopolitical Risks
3. Environmental Risks
4. Technological Risks
5. Societal Risks

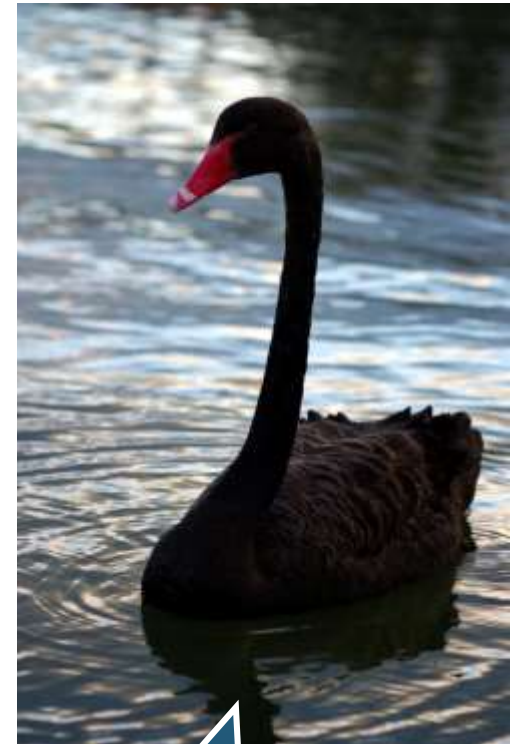


While risks can be broadly categorized, none are mutually exclusive



Multitude of Exogenous Factors Influence Growth, Performance & Cyclicality

- Tepid growth in US, Europe
- Weakness in China/Emerging Economies
- Political uncertainty in the US, Brazil, Argentina
- UK “Brexit”
- Low/Negative Interest Rates
- Resurgent Terrorism Risk: ISIS & Other Groups
- Cyber Attacks
- Sabre Rattling (e.g., US-China, Russia)
- Severe Natural Disaster Losses→Supply Chain
- Nationalism
- International trade deals under siege
- (Over)Regulation: Systemic Risk?
- Strong dollar has impacted manufacturing



Are “Black Swans”
everywhere or
does it just seem
that way?

Top 5 Global Risks in Terms of *Likelihood*, 2007—2016: Insurance Can Help With Most

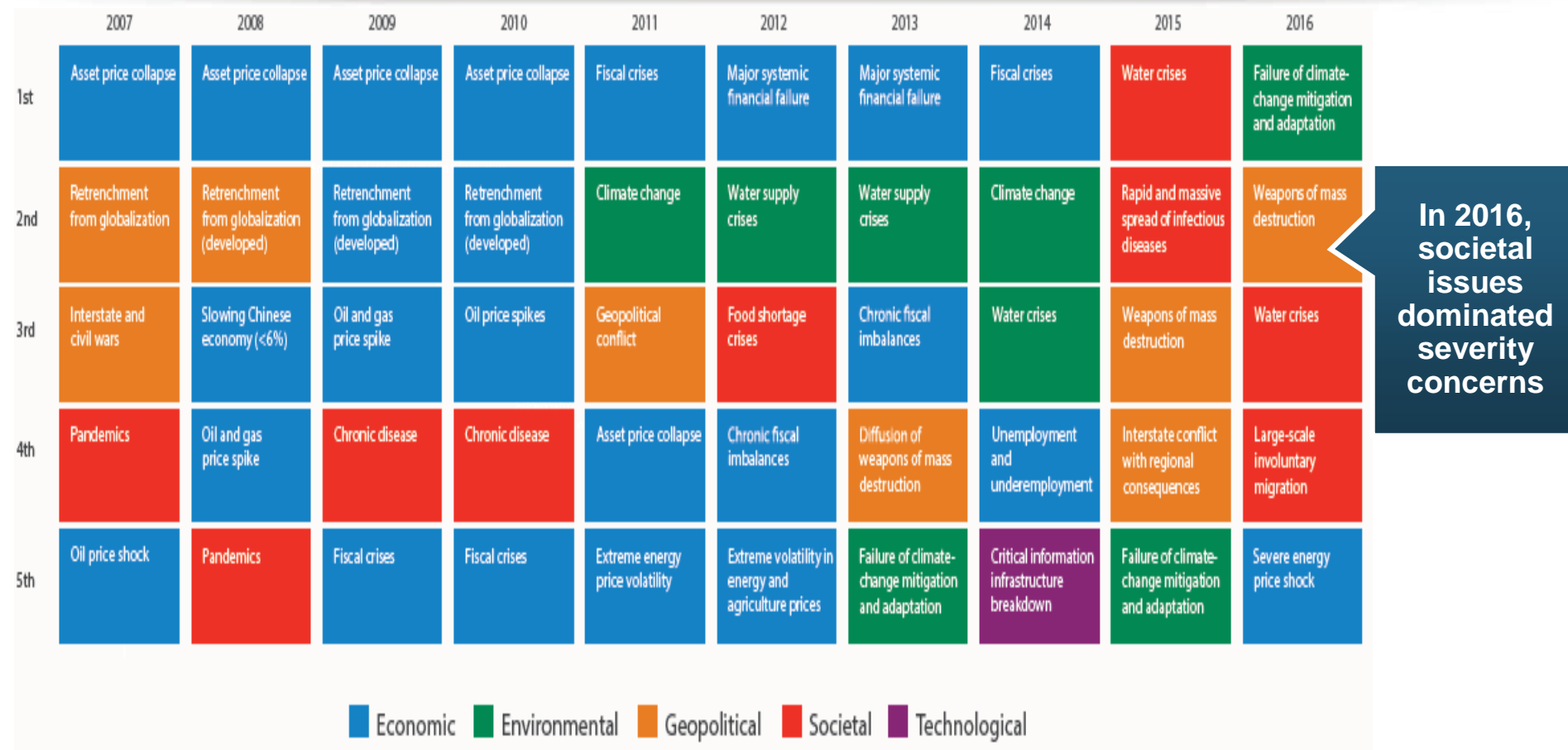
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1st	Breakdown of critical information infrastructure	Asset price collapse	Asset price collapse	Asset price collapse	Storms and cyclones	Severe income disparity	Severe income disparity	Income disparity	Interstate conflict with regional consequences	Large-scale involuntary migration
2nd	Chronic disease in developed countries	Middle East instability	Slowing Chinese economy (<6%)	Slowing Chinese economy (<6%)	Flooding	Chronic fiscal imbalances	Chronic fiscal imbalances	Extreme weather events	Extreme weather events	Extreme weather events
3rd	Oil price shock	Failed and failing states	Chronic disease	Chronic disease	Corruption	Rising greenhouse gas emissions	Rising greenhouse gas emissions	Unemployment and underemployment	Failure of national governance	Failure of climate-change mitigation and adaptation
4th	China economic hard landing	Oil and gas price spike	Global governance gaps	Fiscal crises	Biodiversity loss	Cyber attacks	Water supply crises	Climate change	State collapse or crisis	Interstate conflict with regional consequences
5th	Asset price collapse	Chronic disease, developed world	Retrenchment from globalization (emerging)	Global governance gaps	Climate change	Water supply crises	Mismanagement of population ageing	Cyber attacks	High structural unemployment or underemployment	Major natural catastrophes

In 2016, societal and environmental issues dominated frequency concerns

■ Economic
 ■ Environmental
 ■ Geopolitical
 ■ Societal
 ■ Technological

Concerns Shift Considerably Over Short Spans of Time. 2016 Includes a Mix of Environmental Economic, Social and Environmental Risks

Top 5 Global Risks in Terms of *Impact*, 2007—2016: Insurance Can Help With Most



Concerns Over the Impacts of Societal Risks Remained High in 2016, but Economic, Environment and Geopolitical Risks Also Loom Large

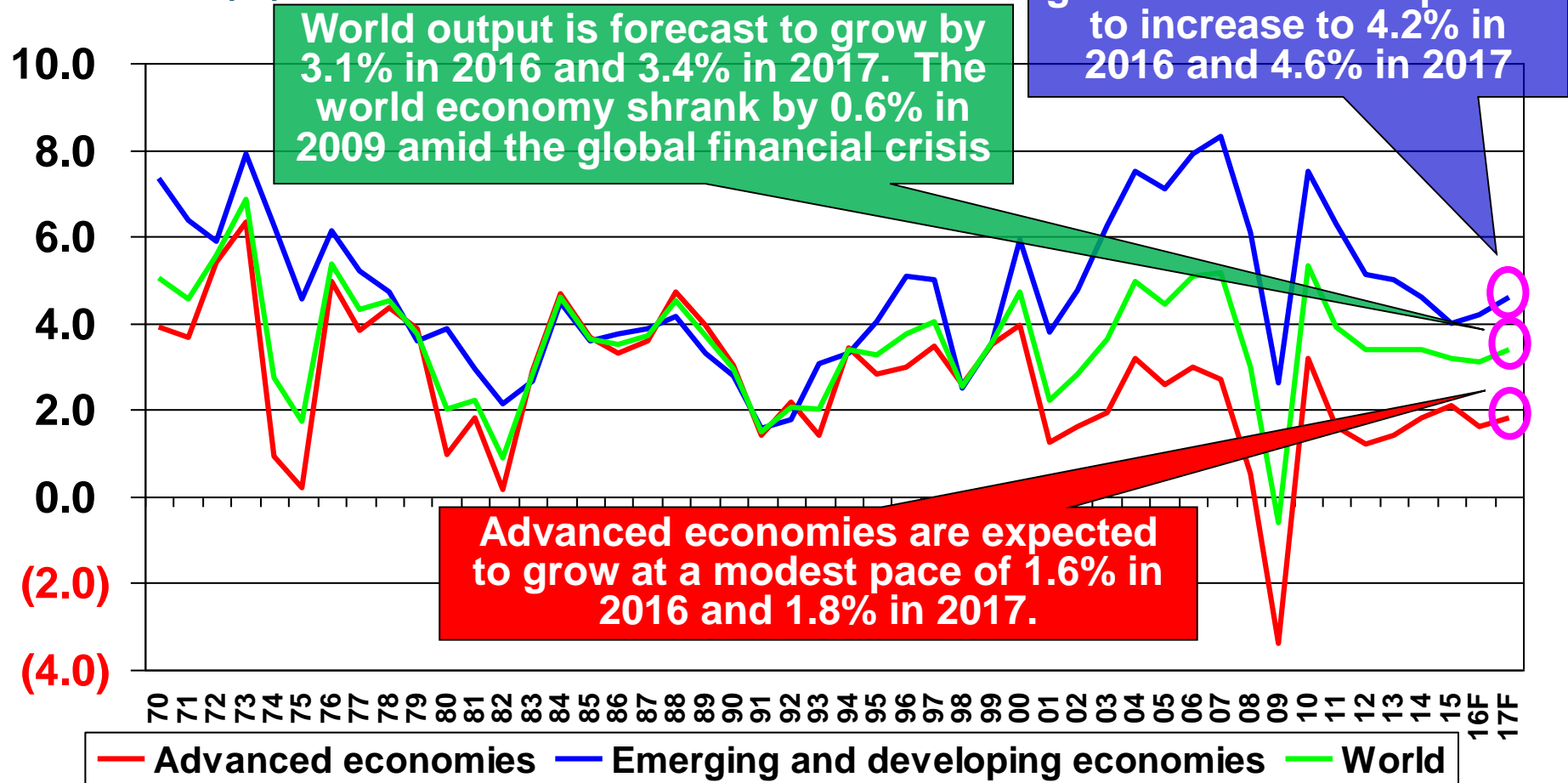
Globalization: The Global Economy Creates and Transmits Cycles & Risks

**Globalization Is a Double Edged Sword—
Creating Opportunity and Wealth But
Potentially Creating and Amplifying Risk**

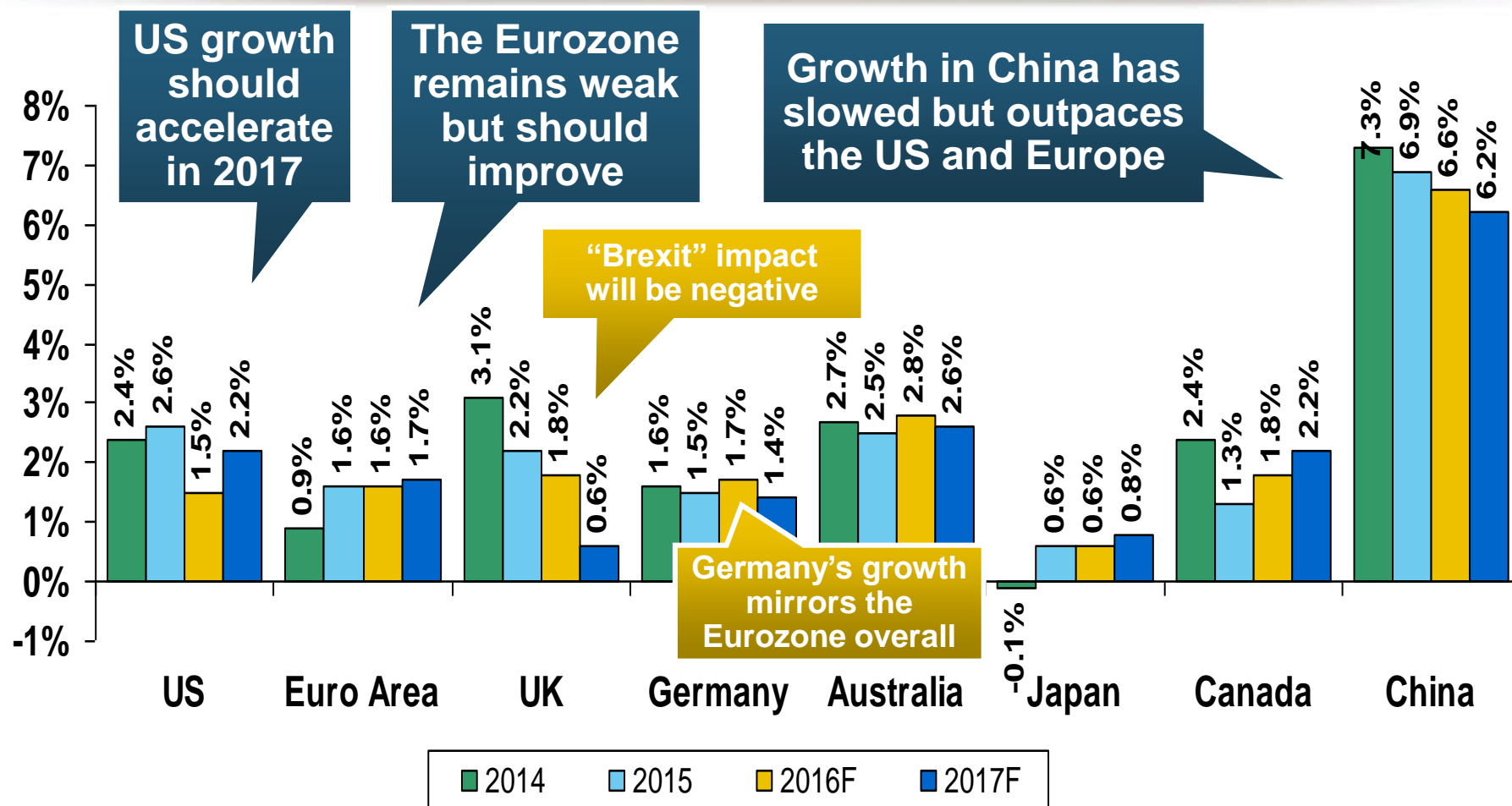
Emerging vs. “Advanced” Economies

GDP Growth: Advanced & Emerging Economies vs. World, 1970-2016F

GDP Growth (%)



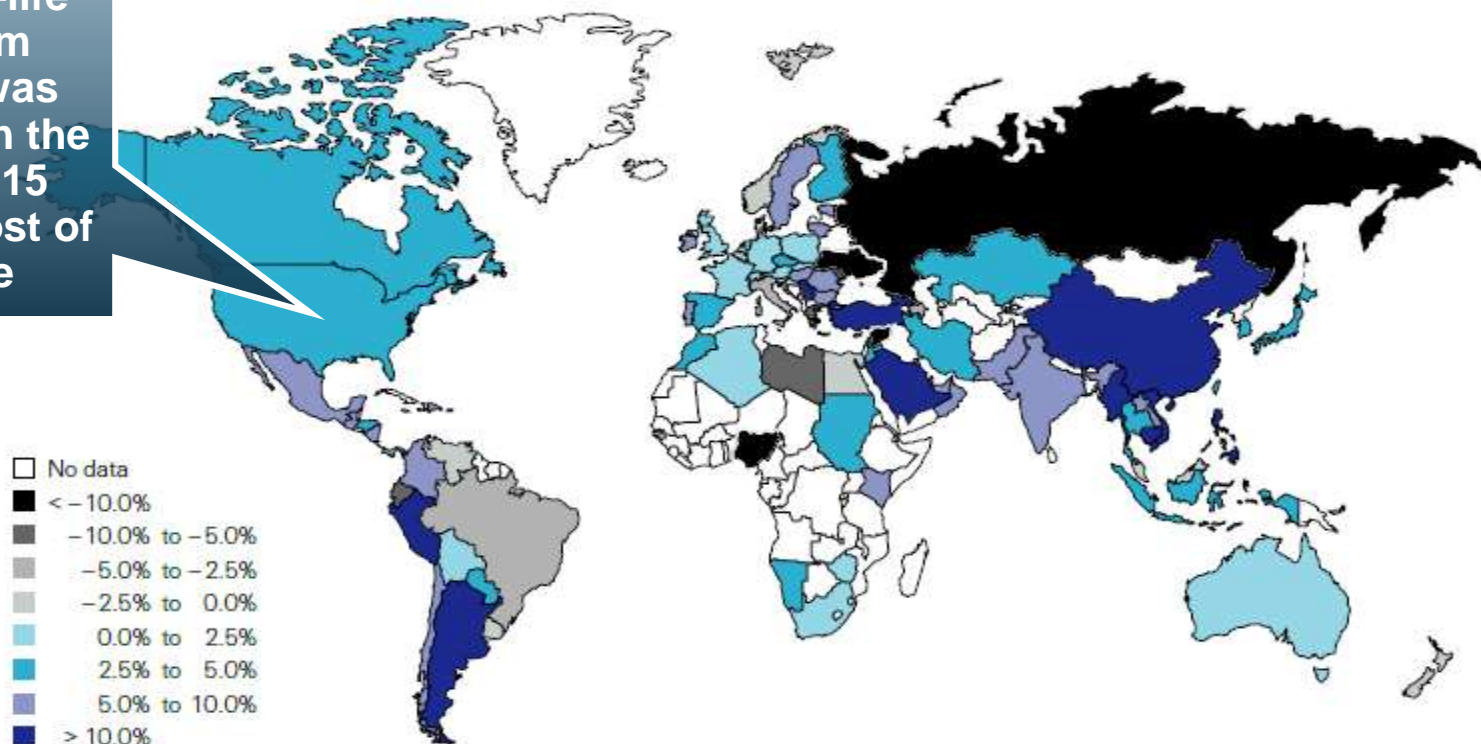
Real GDP Growth Forecasts: Major Economies: 2014 – 2017F



Growth Prospects Vary Widely by Region; US and the UK Lead the Advanced Economies; Germany Leads in the Euro Area; China Has Slowed

Non-Life Insurance: Global Real (Inflation Adjusted) Premium Growth, 2015

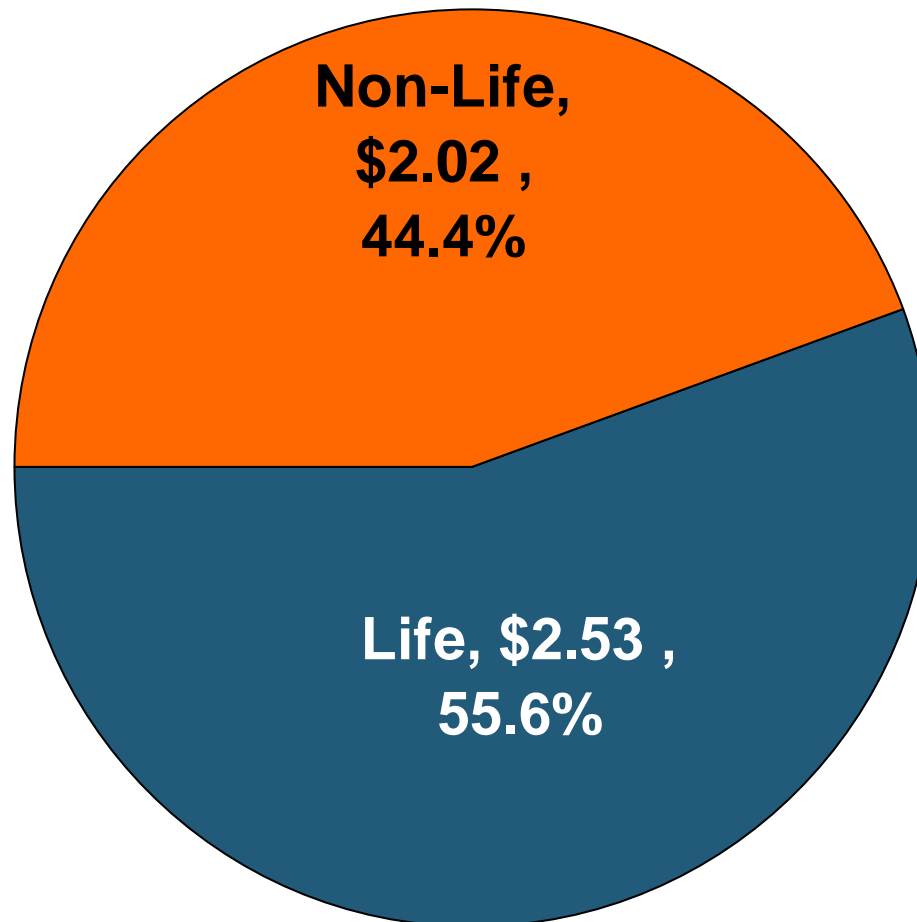
Real non-life premium growth was stronger in the US in 2015 than in most of Europe



Market	Life	Non-Life	Total
Advanced	2.5	2.6	2.5
Emerging	12.0	7.8	9.8
World	4.0	3.6	3.8

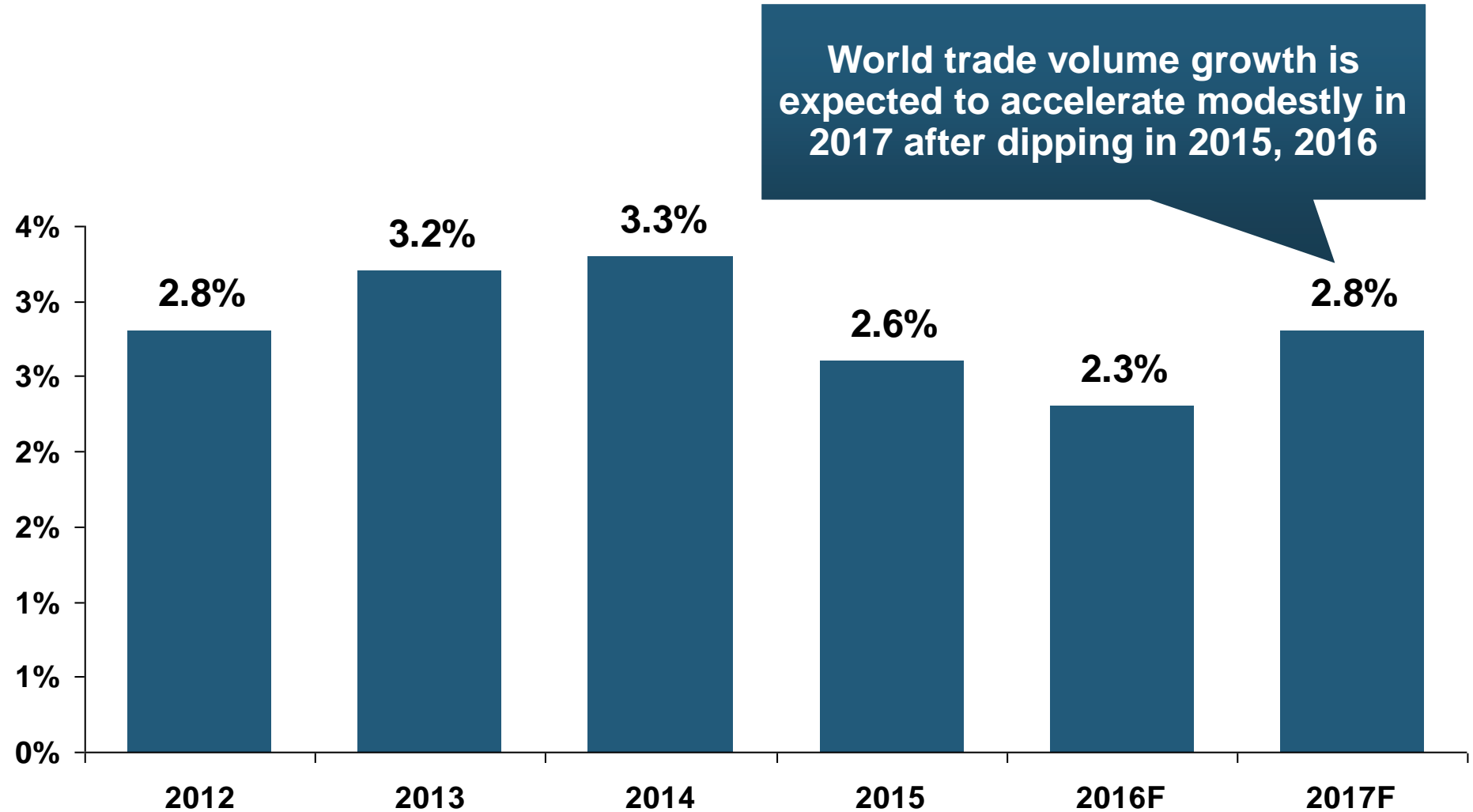
Distribution of Global Insurance Premiums, 2015 (\$ Trillions)

Total Premium Volume = \$4.534 Trillion*



Life insurance accounted for nearly 56% of global premium volume in 2015 vs. 44% for Non-Life

World Trade Volume Growth*, 2012 – 2017F



*Goods and services.

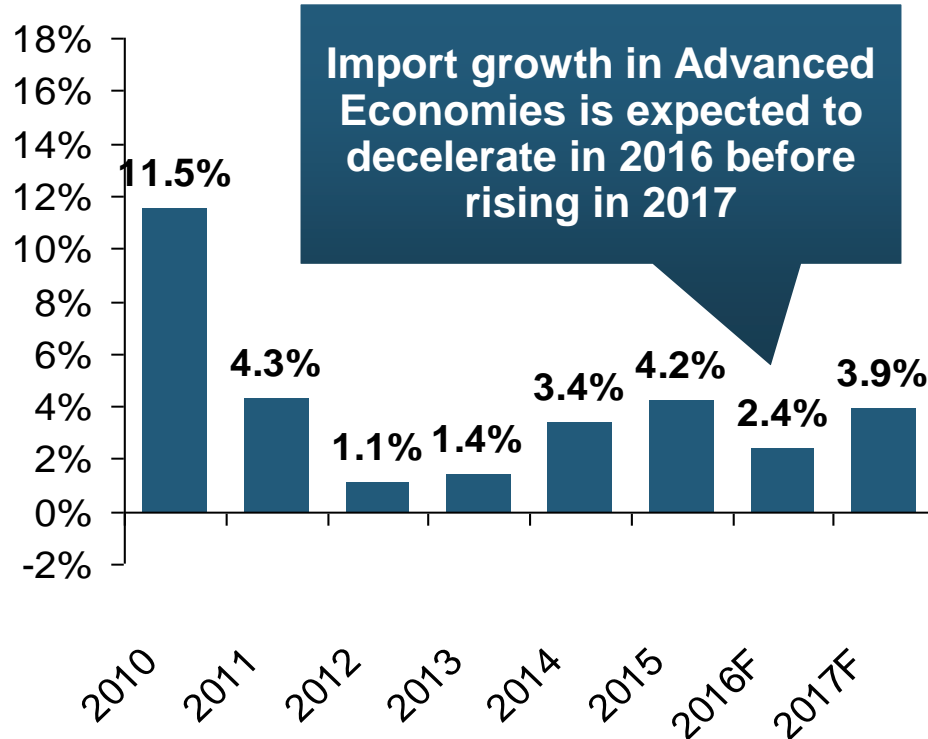
Source: International Monetary Fund, *World Economic Outlook*, October 2016; Insurance Information Institute.

World Trade Volume: IMPORTS

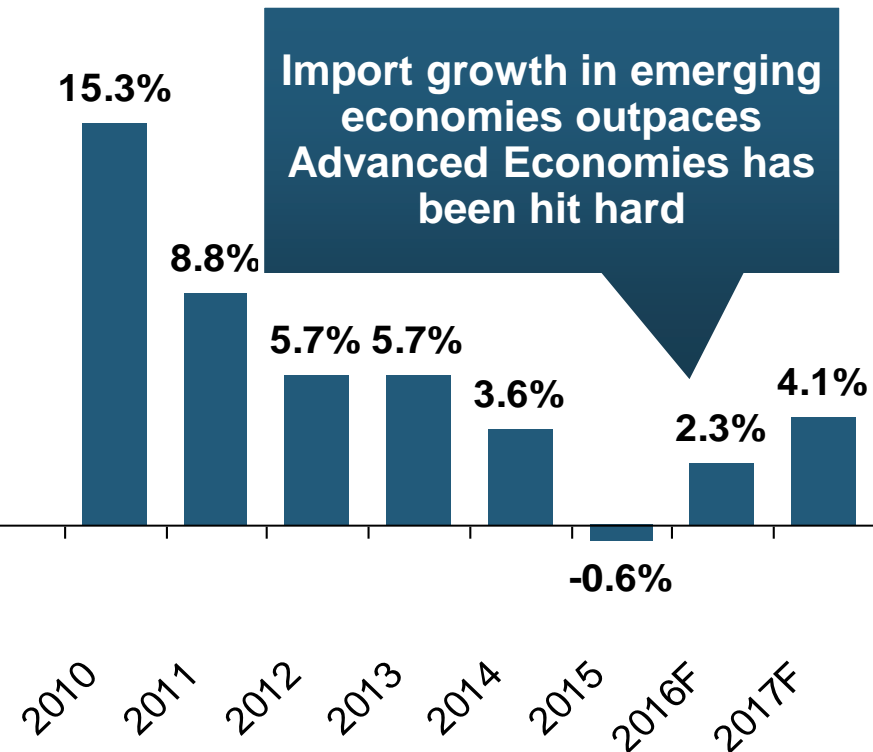
2010 – 2017F

Growth (%)

Advanced Economies



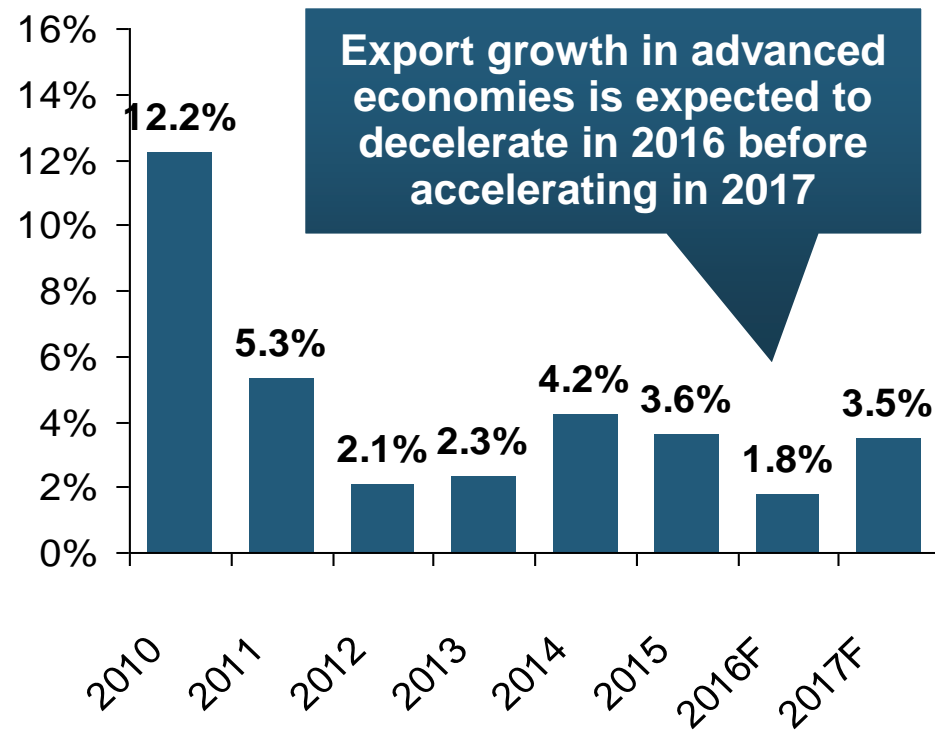
Emerging Economies



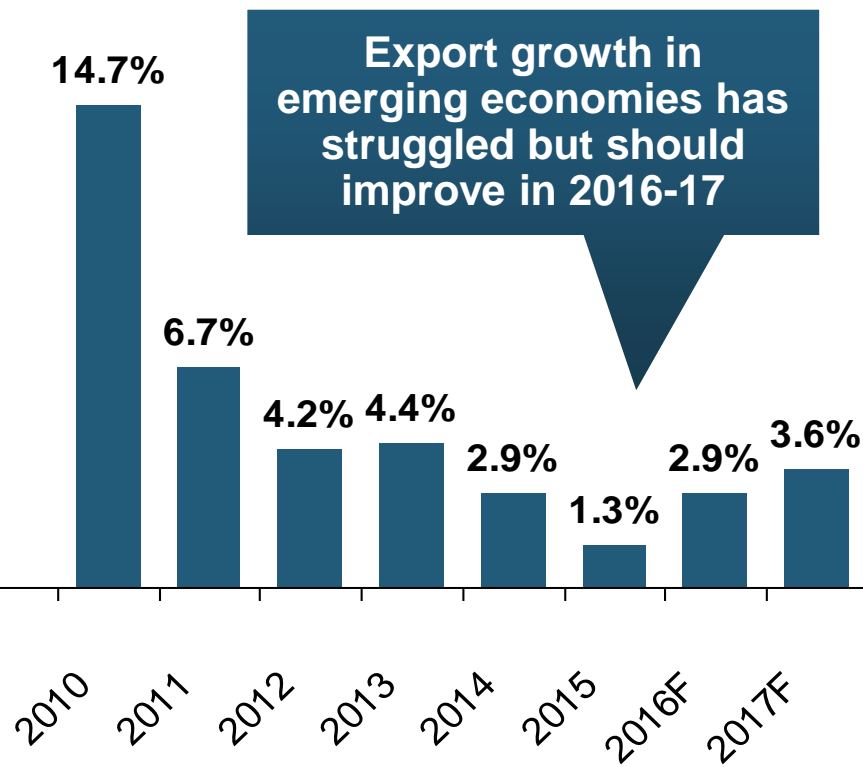
World Trade Volume: EXPORTS 2010 – 2017F

Growth (%)

Advanced Economies



Emerging Economies



World Trade is an Increasingly Important Part of Global Economic Output

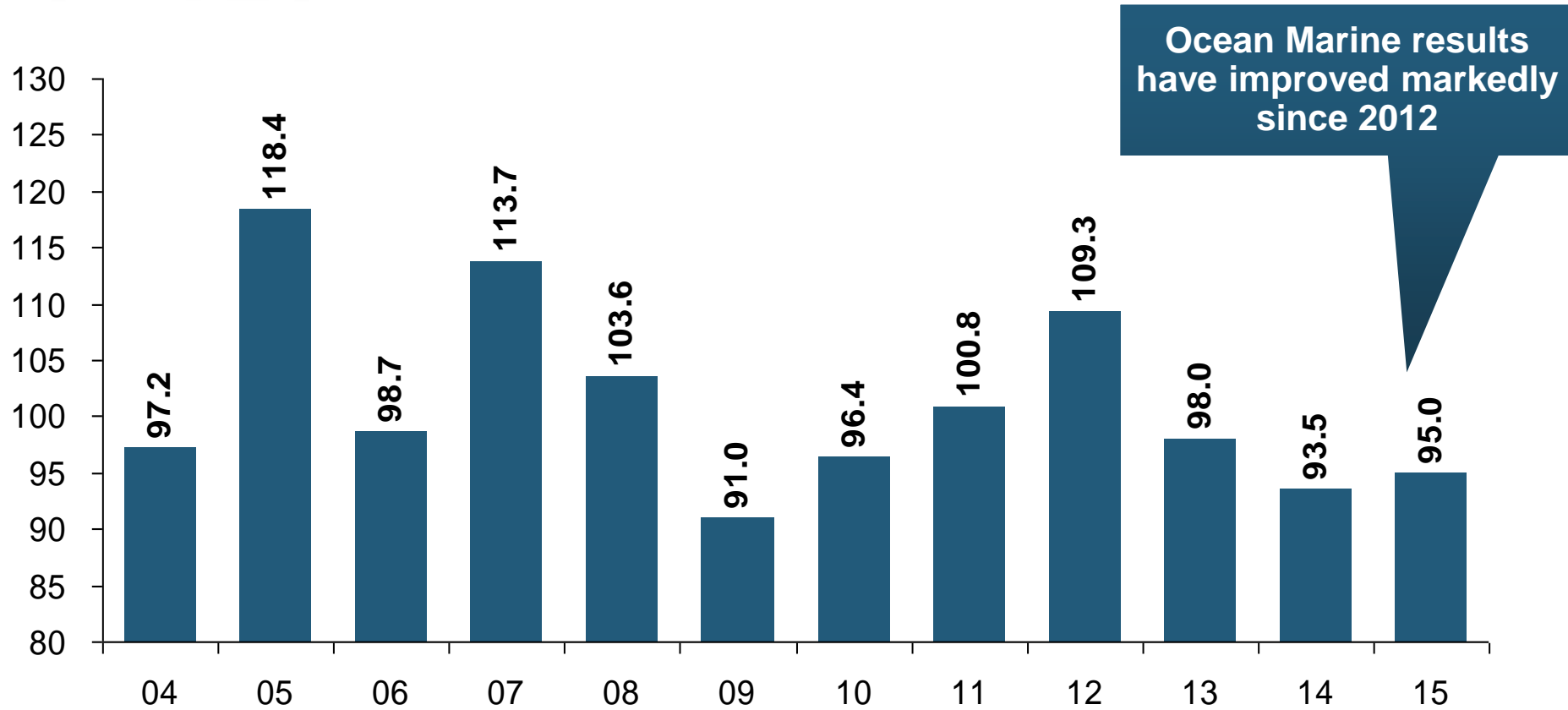
Trade as a % of Global GDP



Ocean Marine Overview

**Underwriting is Historically Volatile But
Improved in Recent Years**

U.S. Ocean Marine Combined Ratio: 2004–2015

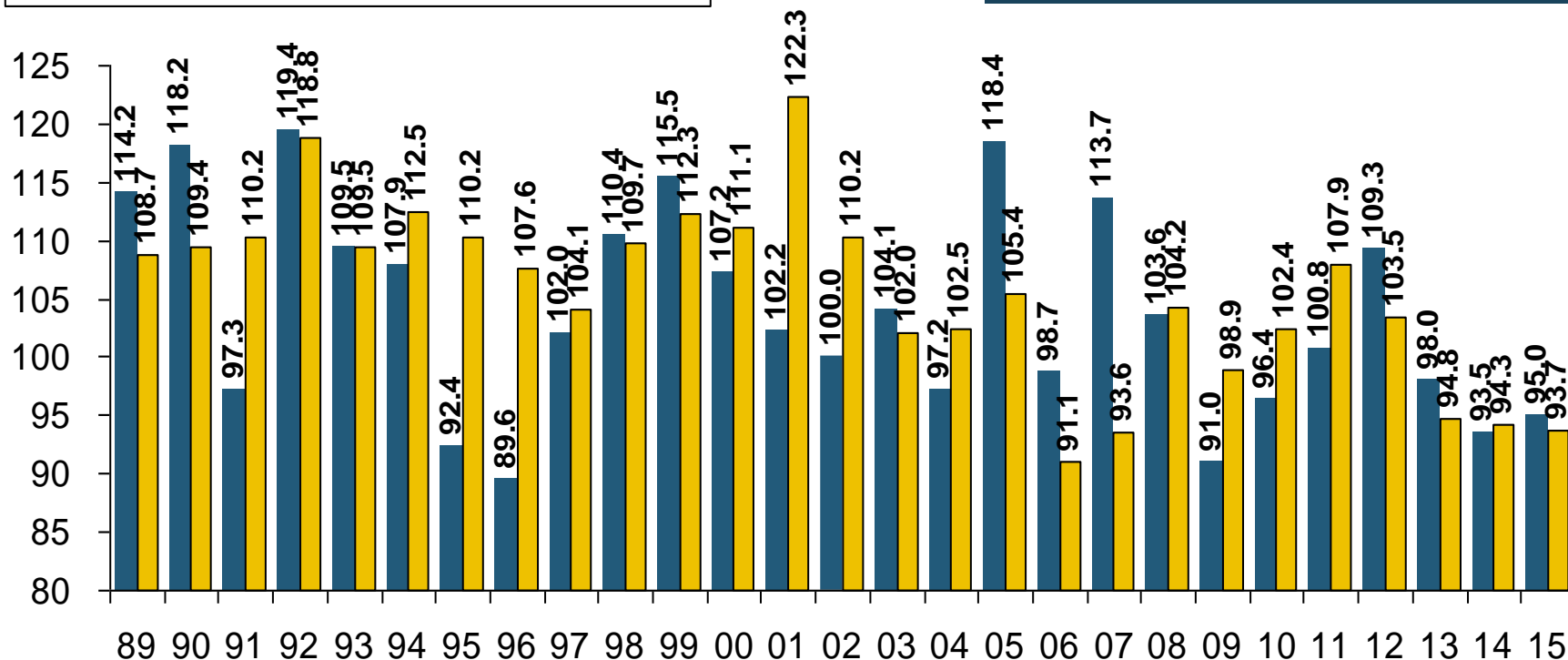


Ocean Marine Results Have Been Quite Volatile Over the Past Decade, with the Combined Ratio Ranging by More than 20 Points

Ocean Marine vs. Commercial Lines Combined Ratio: 1989–2015

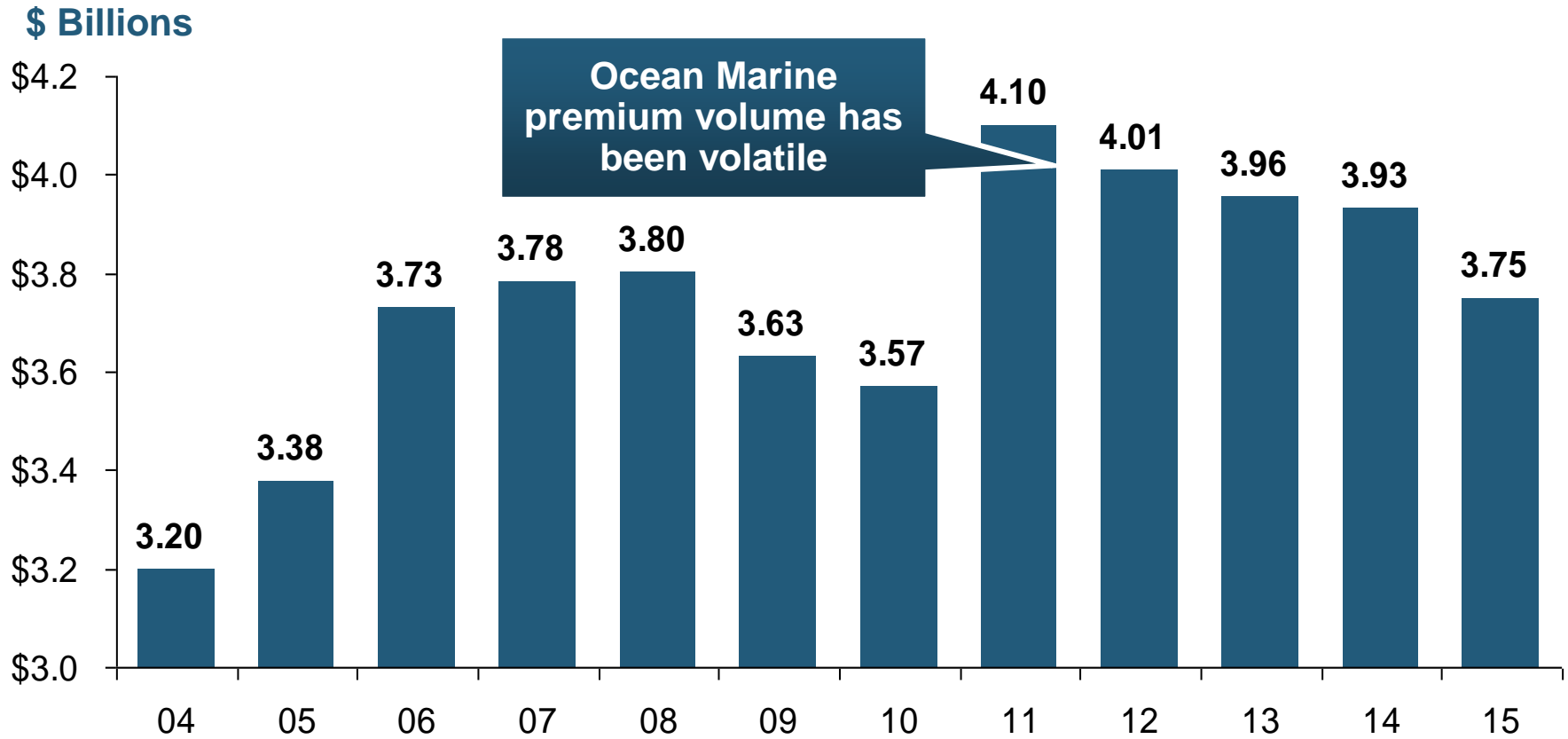
■ Ocean Marine ■ All Commercial Lines

Average: 1989-2014
Ocean Marine: 103.9
All Commercial Lines: 105.6



**Ocean Marine has marginally outperformed Commercial Lines
overall over the period from 1989 – 2015**

U.S. Ocean Marine Direct Written Premiums: 2004–2015



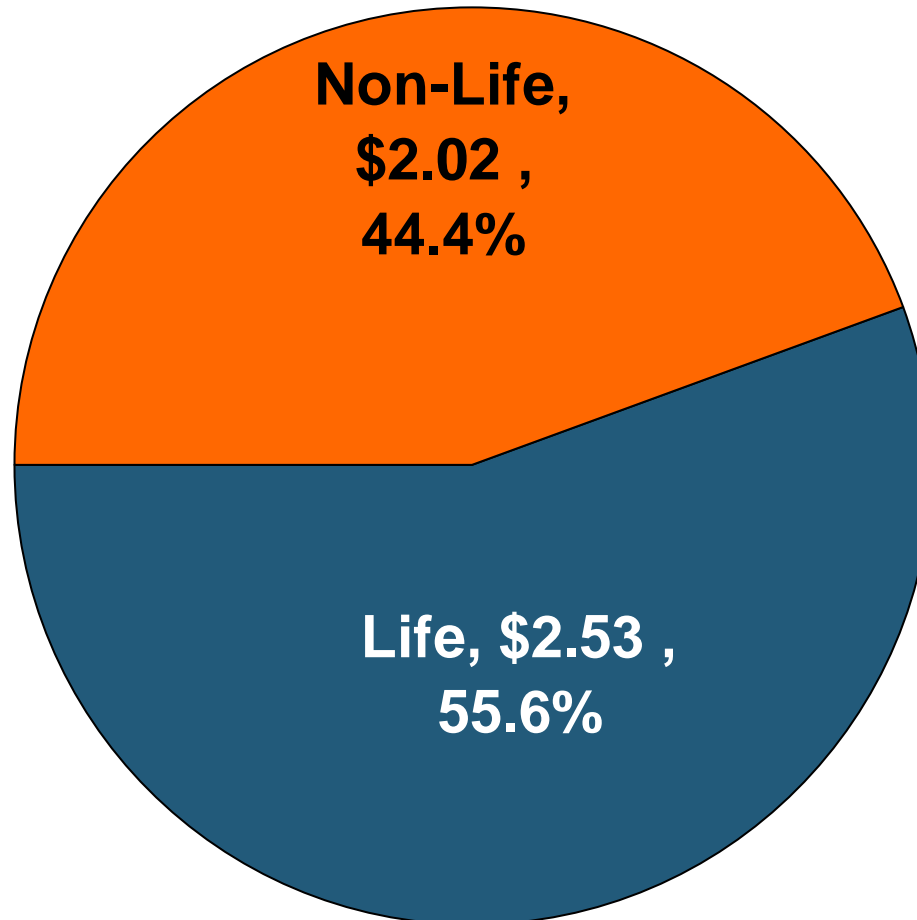
Ocean Marine Premium Volume Fell During the Global Financial Crisis, Increased but Is Now Falling Again

Global Insurance Premium Growth Trends

**Growth Is Uneven Across Regions
and Market Segments**

Distribution of Global Insurance Premiums, 2015 (\$ Trillions)

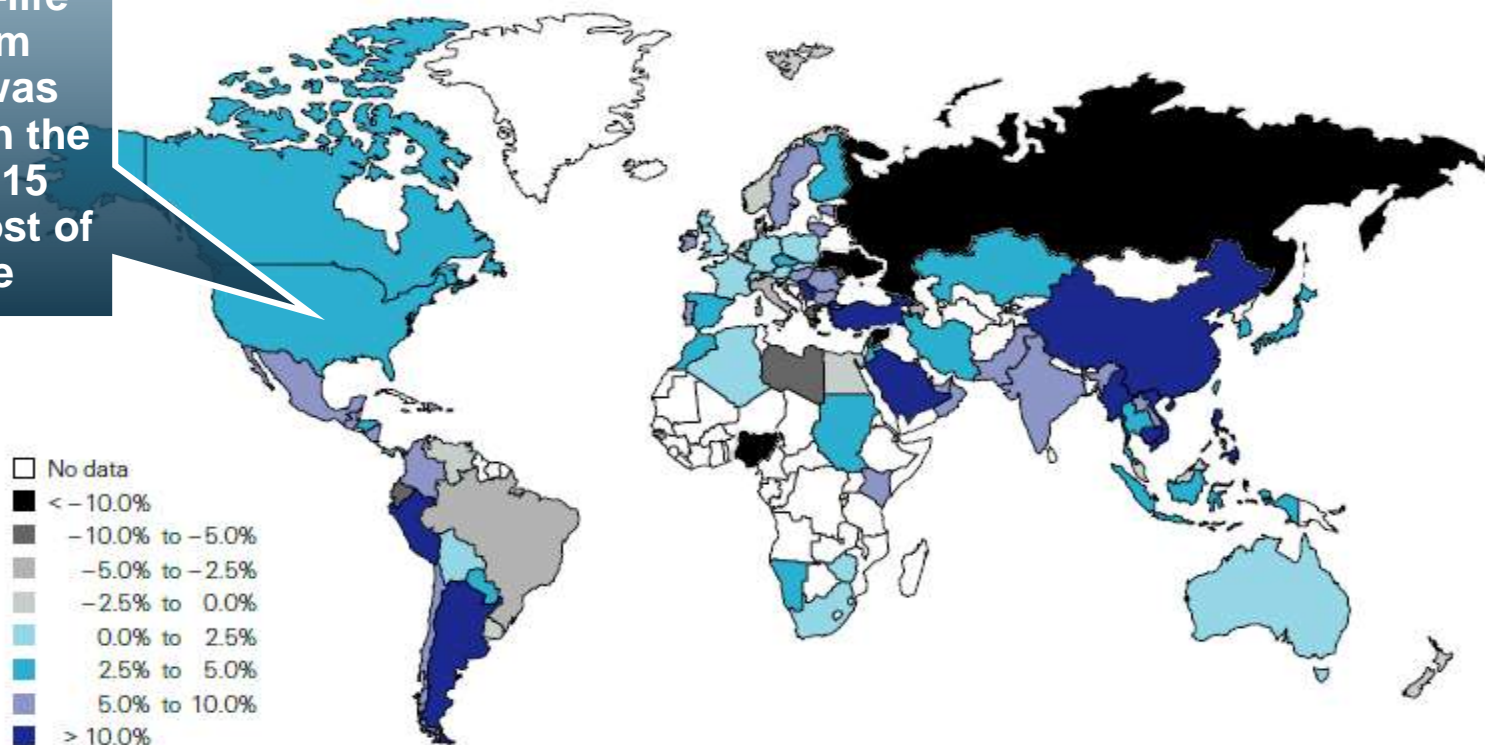
Total Premium Volume = \$4.534 Trillion*



Life insurance accounted for nearly 56% of global premium volume in 2015 vs. 44% for Non-Life

Non-Life Insurance: Global Real (Inflation Adjusted) Premium Growth, 2015

Real non-life premium growth was stronger in the US in 2015 than in most of Europe

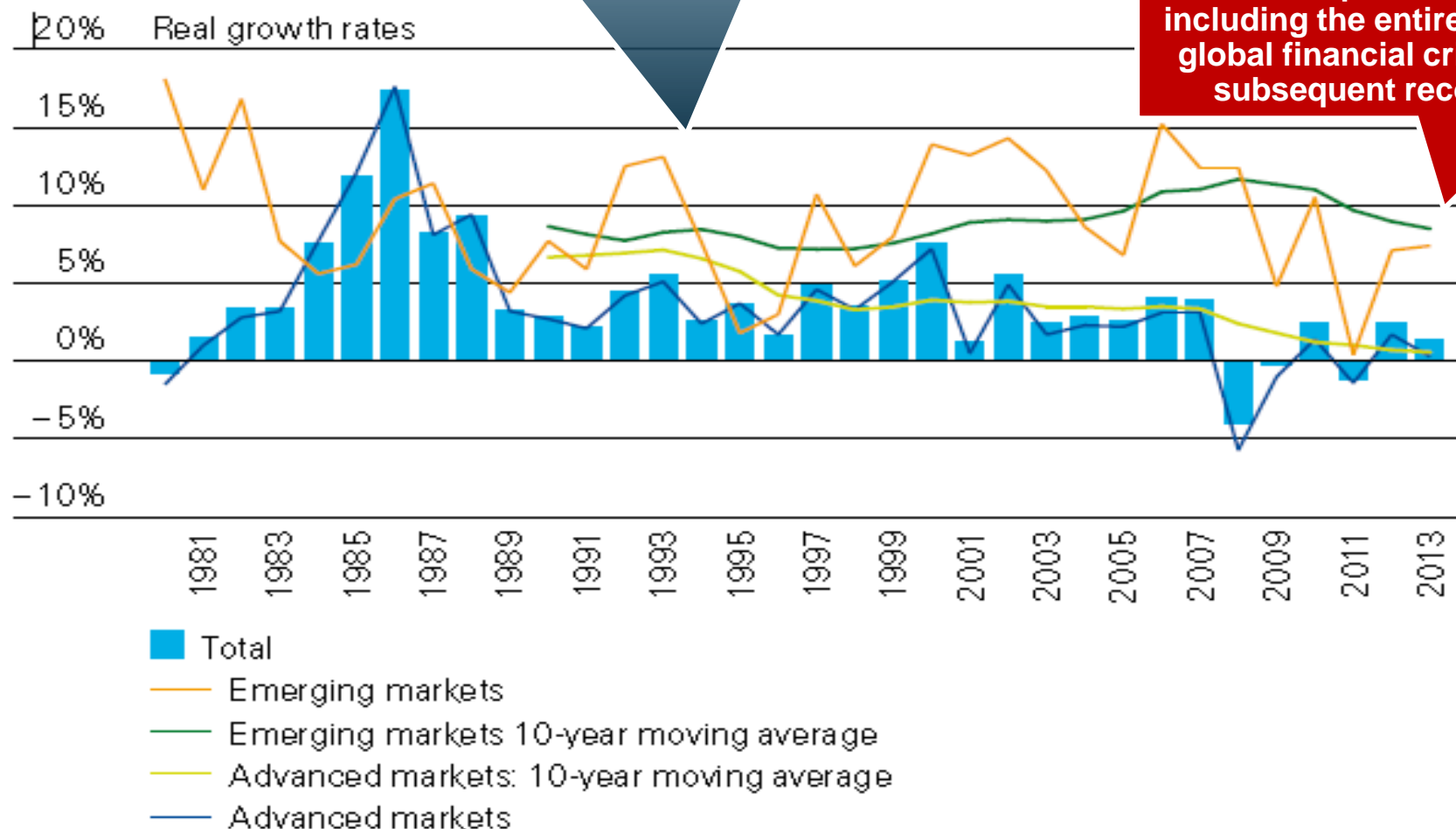


Market	Life	Non-Life	Total
Advanced	2.5	2.6	2.5
Emerging	12.0	7.8	9.8
World	4.0	3.6	3.8

Global Real (Inflation Adjusted) Premium Growth: 1980-2013

Premium growth is very erratic in part to inflation volatility in emerging markets as well as a lack of consistent cyclicality

Emerging market growth has exceeded that of industrialized countries in 30 of the past 34 years, including the entirety of the global financial crisis and subsequent recovery

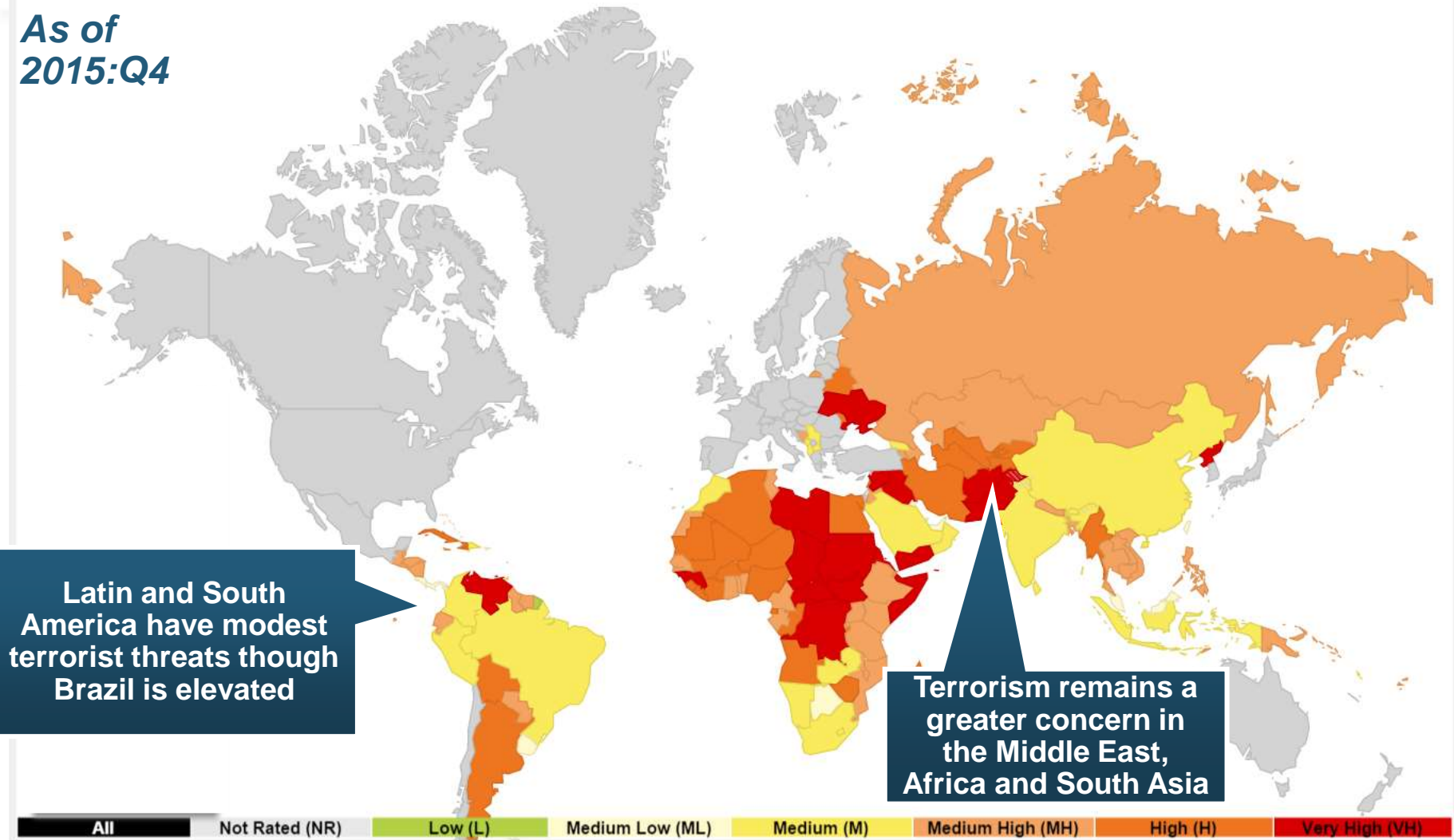


The Unfortunate Nexus: Opportunity, Risk & Instability

**Most of the Global Economy's Future
Gains Will be Fraught with Much
Greater Risk and Uncertainty than in
the Past**

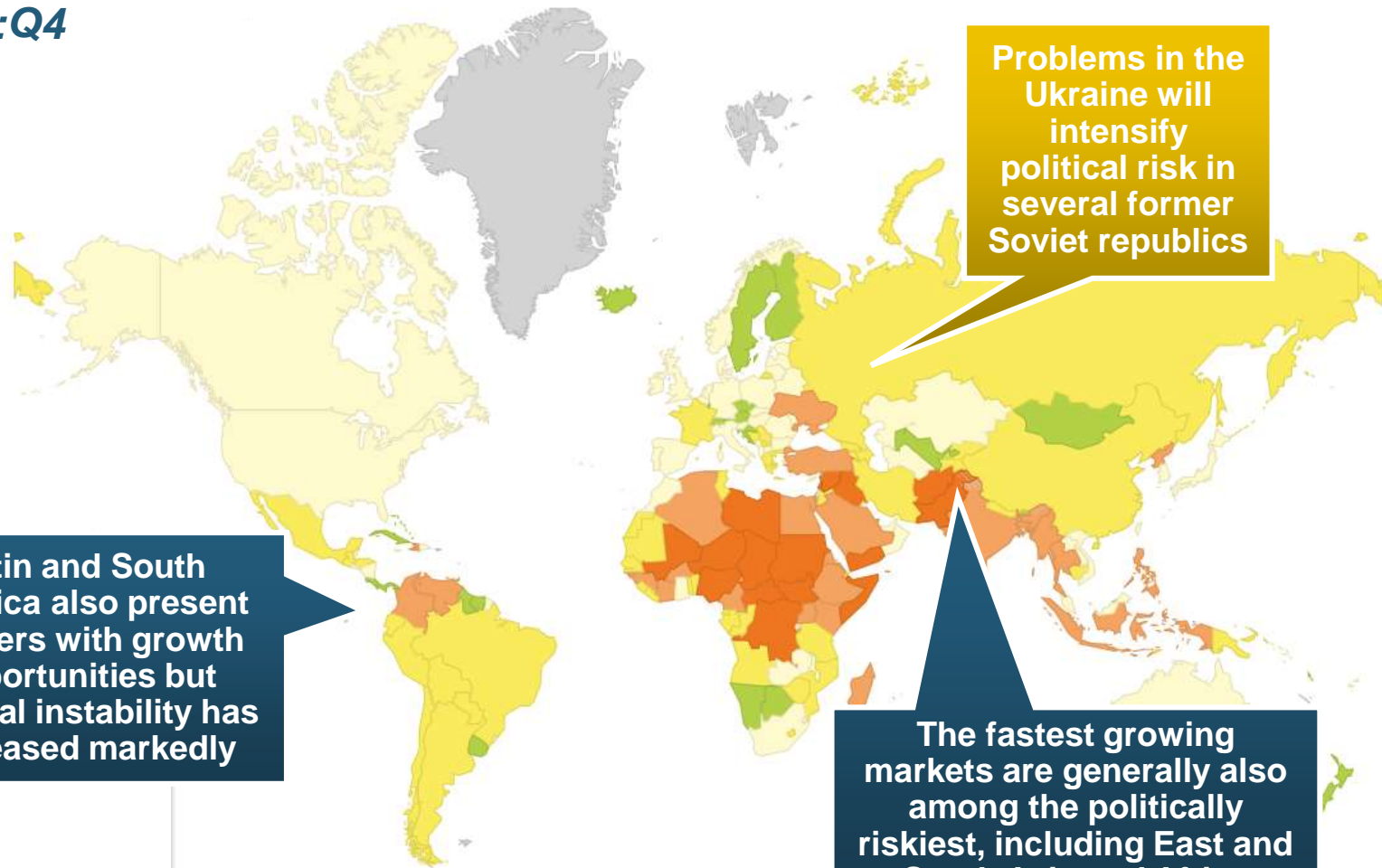
Political Risk: Greatest Opportunities Often in Risky Nations

As of
2015:Q4



Terrorism Risk: Greatest Opportunities Are Often in Risky Nations

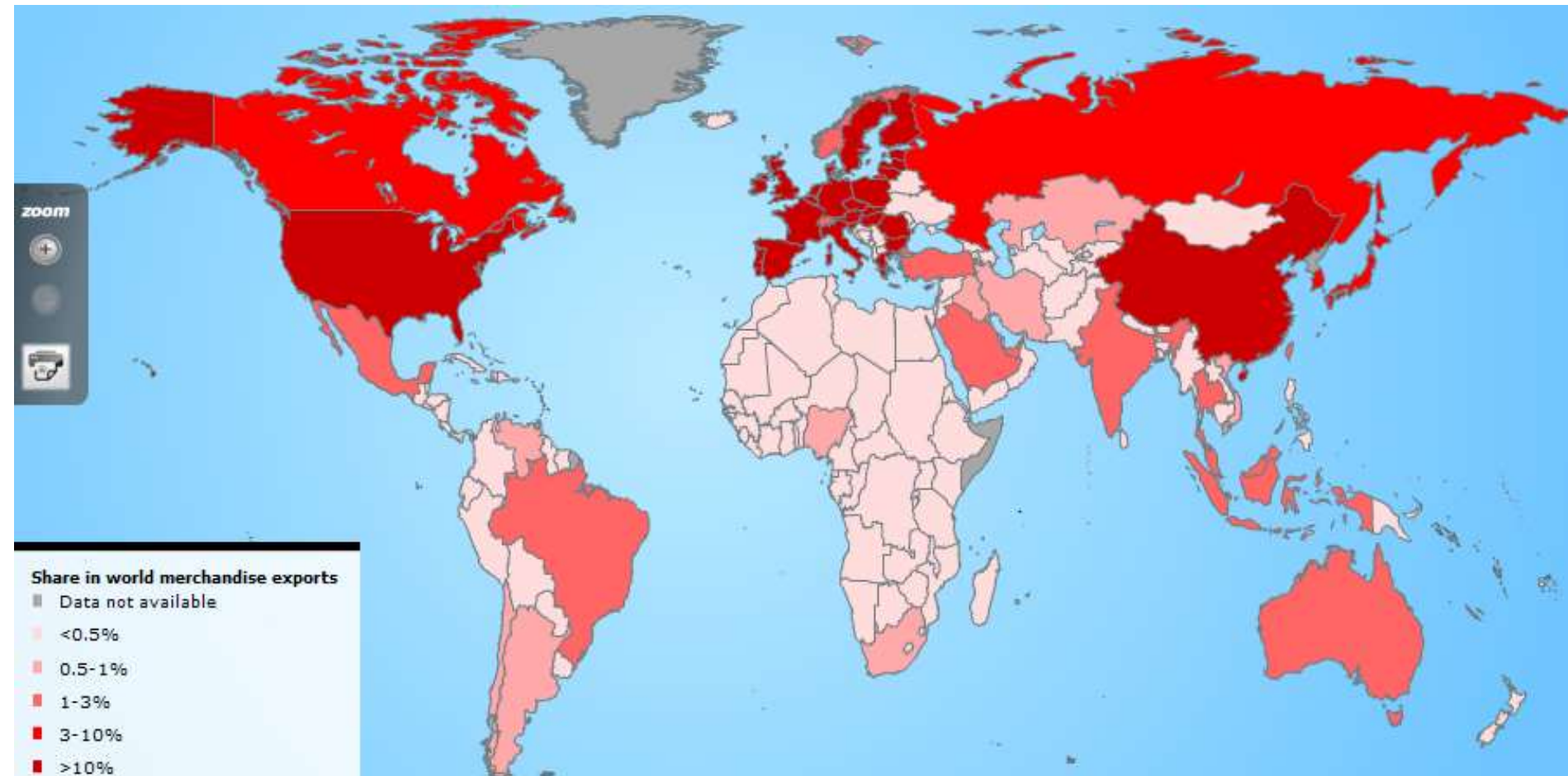
*As of
2015:Q4*



All No Risk (NR) Negligible (N) Low (L) Medium (M) High (H) Severe (S)

Country Shares of World Merchandise Exports

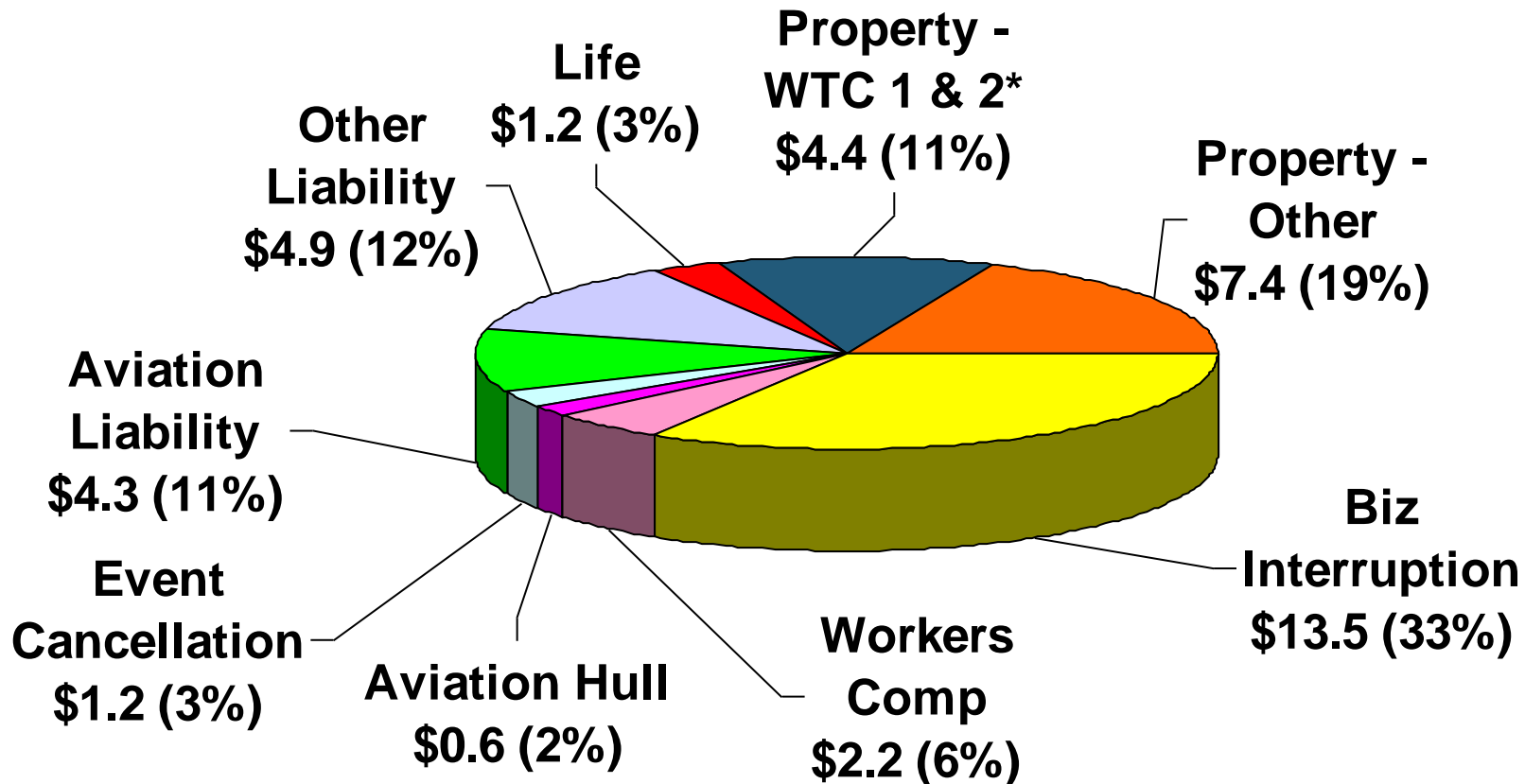
The US, China, Japan and Western Europe lead the world in merchandise exports



Source: World Trade Organization accessed 4/30/14 at: http://www.wto.org/english/res_e/statistics_e/statistics_e.htm ; Insurance Information Institute.

Loss Distribution by Type of Insurance from Sept. 11 Terrorist Attack (\$ 2015)

(\$ Billions)



Total Insured Losses Estimate: \$43.7B**

*Loss total does not include March 2010 New York City settlement of up to \$657.5 million to compensate approximately 10,000 Ground Zero workers or any subsequent settlements.

**\$32.5 billion in 2001 dollars.

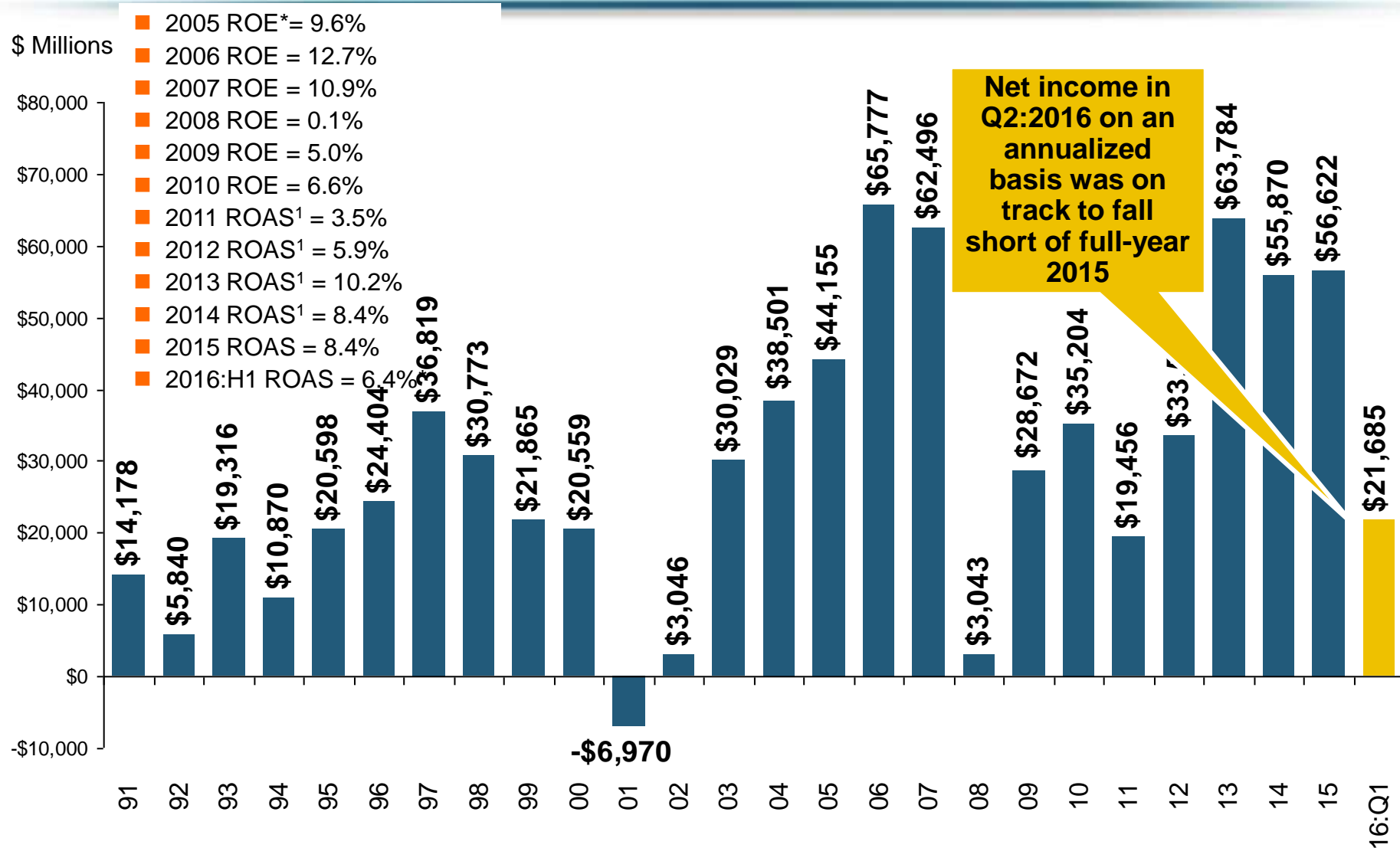
Source: Insurance Information Institute.

P/C (Re)Insurance Industry Financial Overview

**The Past Few Years Have Been
Very Similar and Reasonably
Good**

- **Flat to modest deceleration in premium growth in 2017**
- **Rate environment suggests flat-to-slightly negative renewals in 2017**
- **Economic growth continues at a very modest pace but unevenly across industries and regions; Nearly full employment and tighter labor market conditions are pluses and should drive new exposures**
- **Service sector is a positives but manufacturing, energy, commodities, trade, agriculture all face headwinds**
- **Loss costs driven by modest frequency and severity trends, but helped by reserve releases, modest cats**
- **Property cat reinsurance costs continue to fall**
- **Investment income still under pressure from low yields**

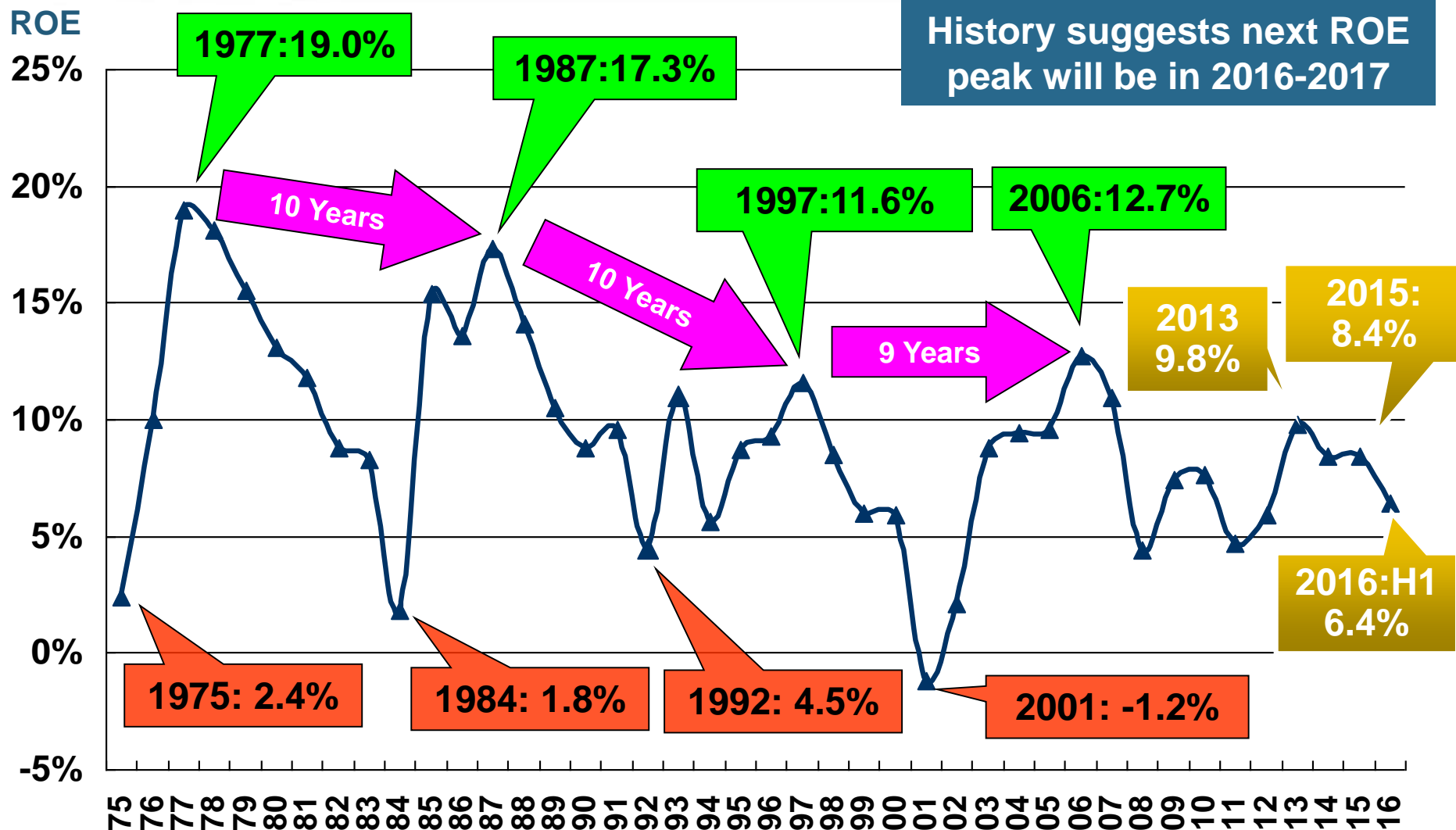
P/C Industry Net Income After Taxes 1991–2016:Q2



*ROE figures are GAAP; ¹Return on avg. surplus. Excluding Mortgage & Financial Guaranty insurers yields a 8.2% ROAS in 2014, 9.8% ROAS in 2013, 6.2% ROAS in 2012, 4.7% ROAS for 2011, 7.6% for 2010 and 7.4% for 2009; 2015E is annualized figure based actual figure through Q3 of \$44.0

Sources: A.M. Best, ISO; Insurance Information Institute

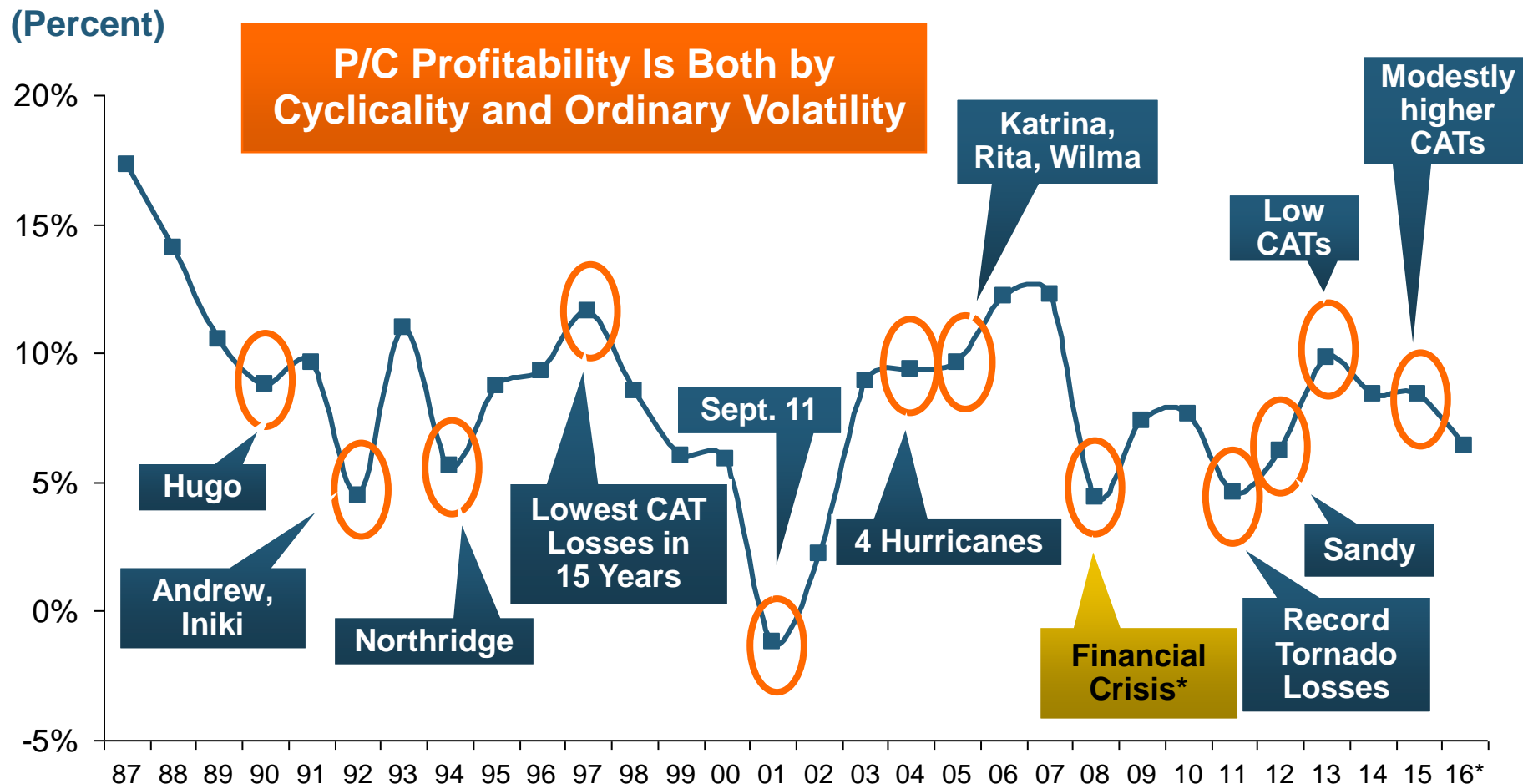
Profitability Peaks & Troughs in the P/C Insurance Industry, 1975 – 2016:H1



*Profitability = P/C insurer ROEs. 2011-15 figures are estimates based on ROAS data. Note: Data for 2008-2014 exclude mortgage and financial guaranty insurers.

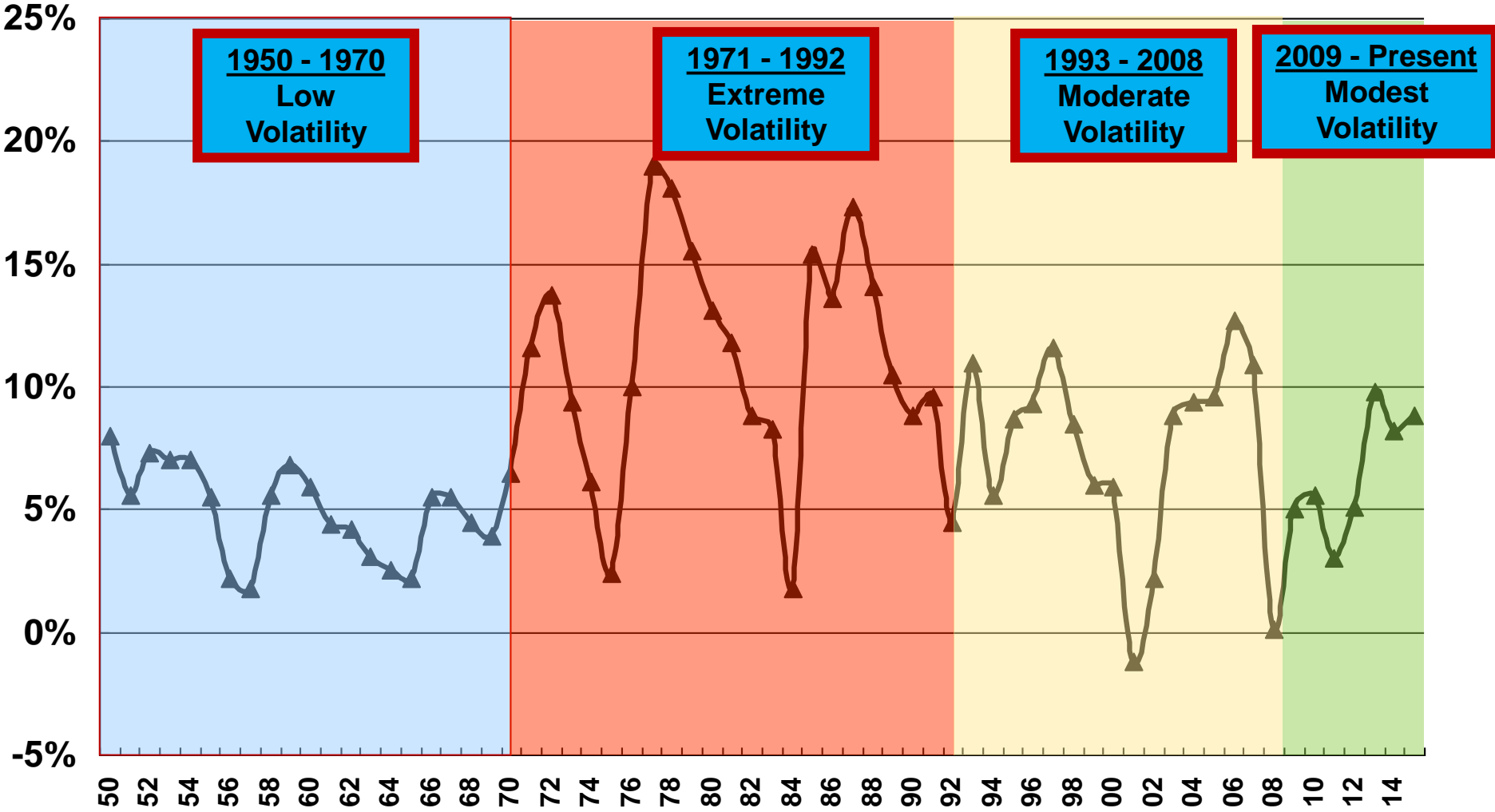
Source: Insurance Information Institute; NAIC, ISO, A.M. Best, Conning

ROE: Property/Casualty Insurance by Major Event, 1987–2016:H1

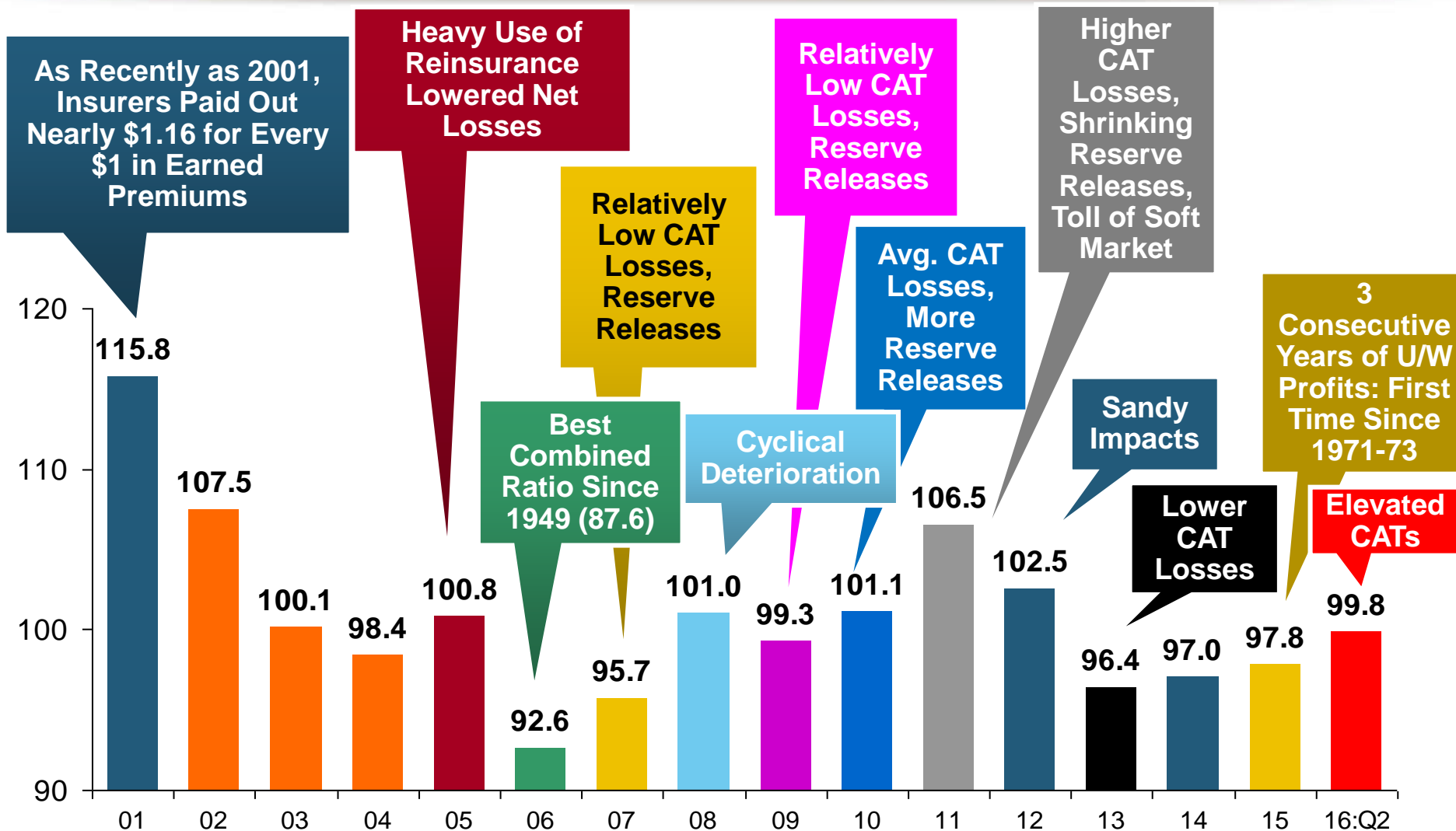


* Through 2016:H1. Excludes Mortgage & Financial Guarantee in 2008 – 2014.
Sources: ISO, *Fortune*; Insurance Information Institute.

P/C Insurance Industry ROE: Magnitude of Cyclical, Volatility Changes Over Time, 1950-2015



P/C Insurance Industry Combined Ratio, 2001–2016:Q2*

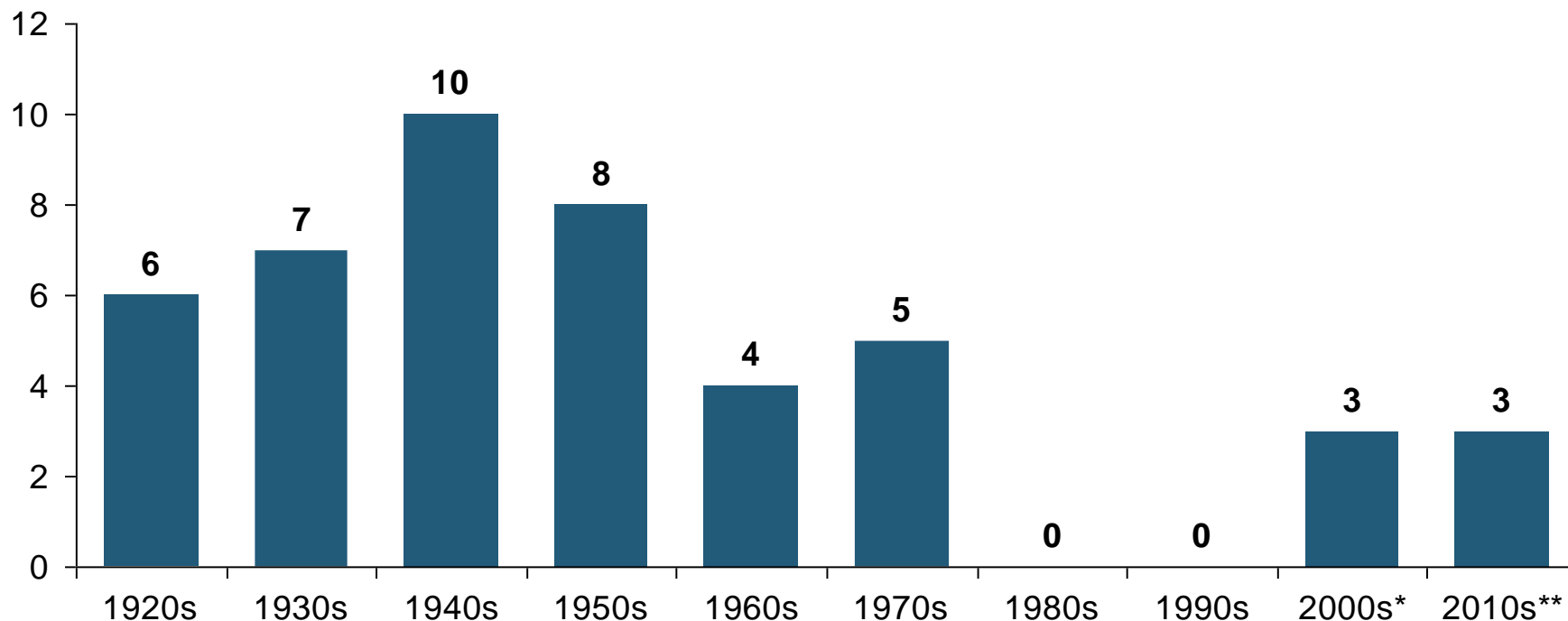


* Excludes Mortgage & Financial Guaranty insurers 2008--2014. Including M&FG, 2008=105.1, 2009=100.7, 2010=102.4, 2011=108.1; 2012:=103.2; 2013: = 96.1; 2014: = 97.0.

Sources: A.M. Best, ISO (2014-2015); Figure for 2010-2013 is from A.M. Best P&C Review and Preview, Feb. 16, 2016.

Number of Years with Underwriting Profits by Decade, 1920s–2010s

Number of Years with Underwriting Profits



Underwriting Profits Were Common Before the 1980s (40 of the 60 Years Before 1980 Had Combined Ratios Below 100) – But Then They Vanished. Not a Single Underwriting Profit Was Recorded in the 25 Years from 1979 Through 2003

* 2009 combined ratio excl. mort. and finl. guaranty insurers was 99.3, which would bring the 2000s total to 4 years with an u/w profit.

**Data for the 2010s is for the period 2010 through 2015.

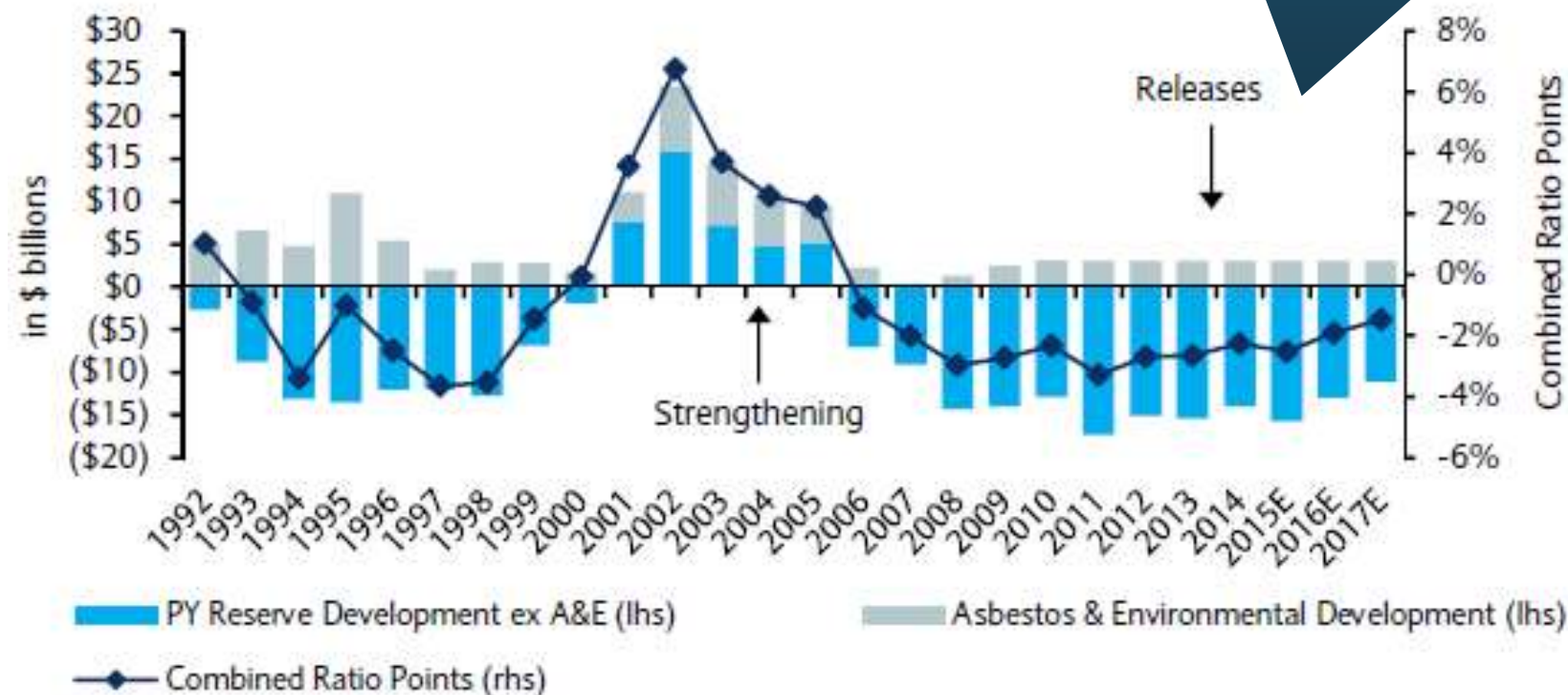
Note: Data for 1920–1934 based on stock companies only.

Sources: Insurance Information Institute research from A.M. Best Data.

P/C Insurance Loss Reserve Development, 1992 – 2017E*

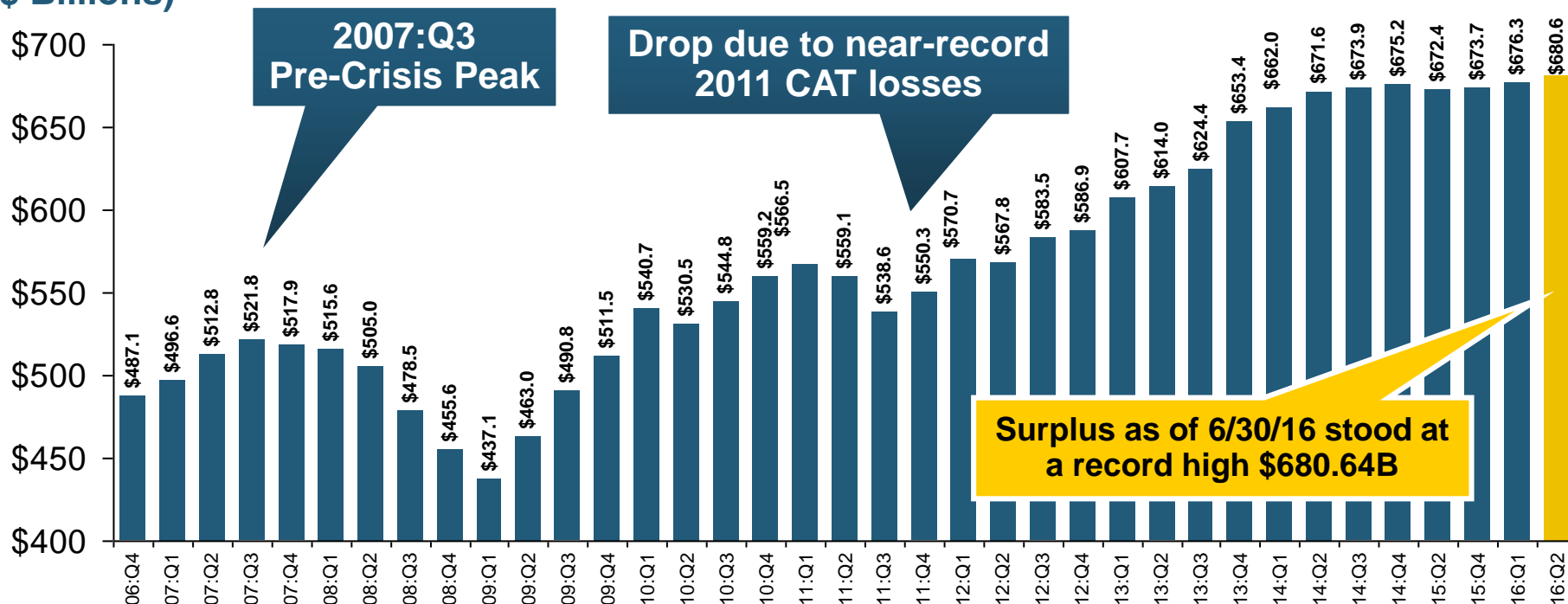
Reserve Change

Reserve releases are expected to gradually taper off slowly, but will continue to benefit the bottom line and combined ratio through at least 2017



Policyholder Surplus, 2006:Q4–2016:Q2

(\$ Billions)



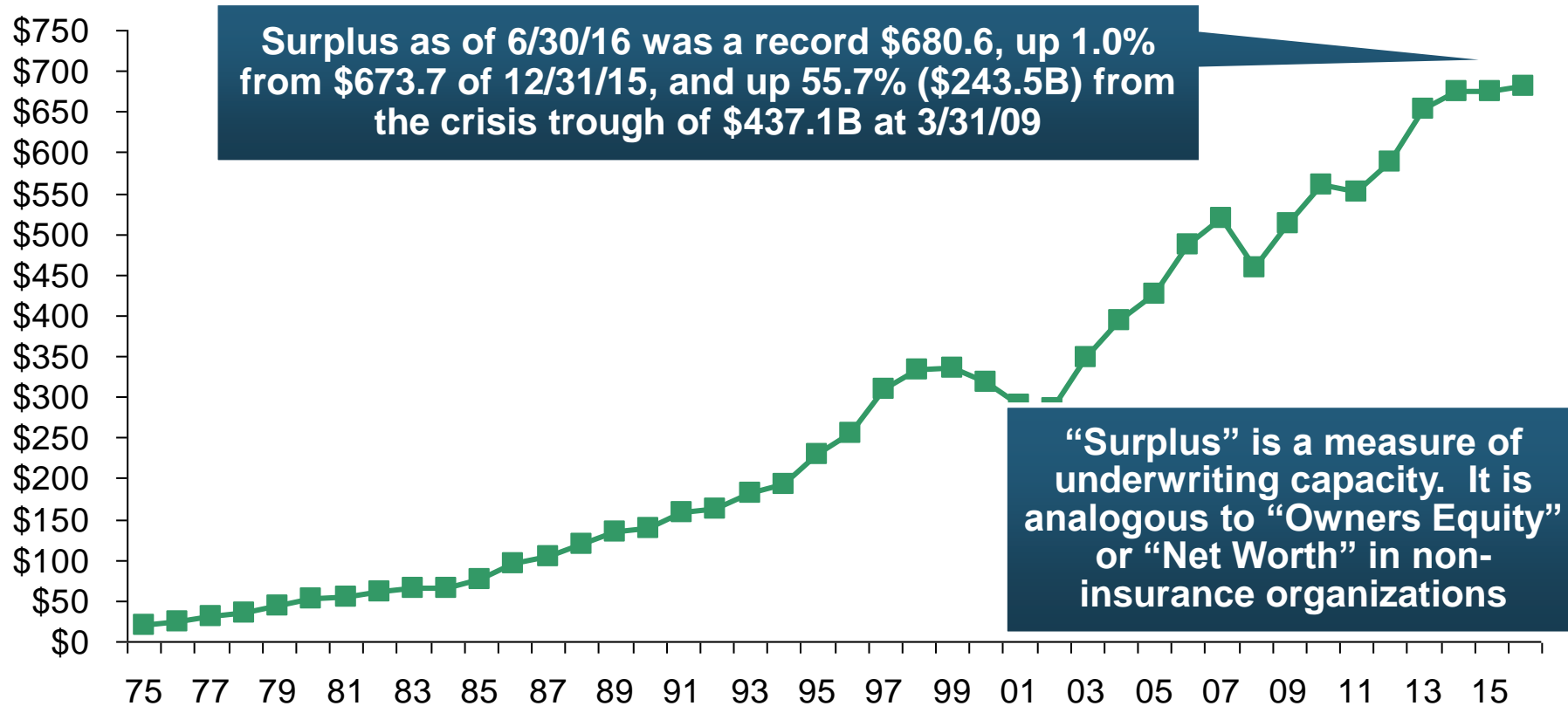
The industry now has \$1 of surplus for every \$0.76 of NPW, close to the strongest claims-paying status in its history.

2010:Q1 data includes \$22.5B of paid-in capital from a holding company parent for one insurer's investment in a non-insurance business.

The P/C insurance industry entered 2016 in very strong financial condition.

US Policyholder Surplus: 1975–2016*

(\$ Billions)



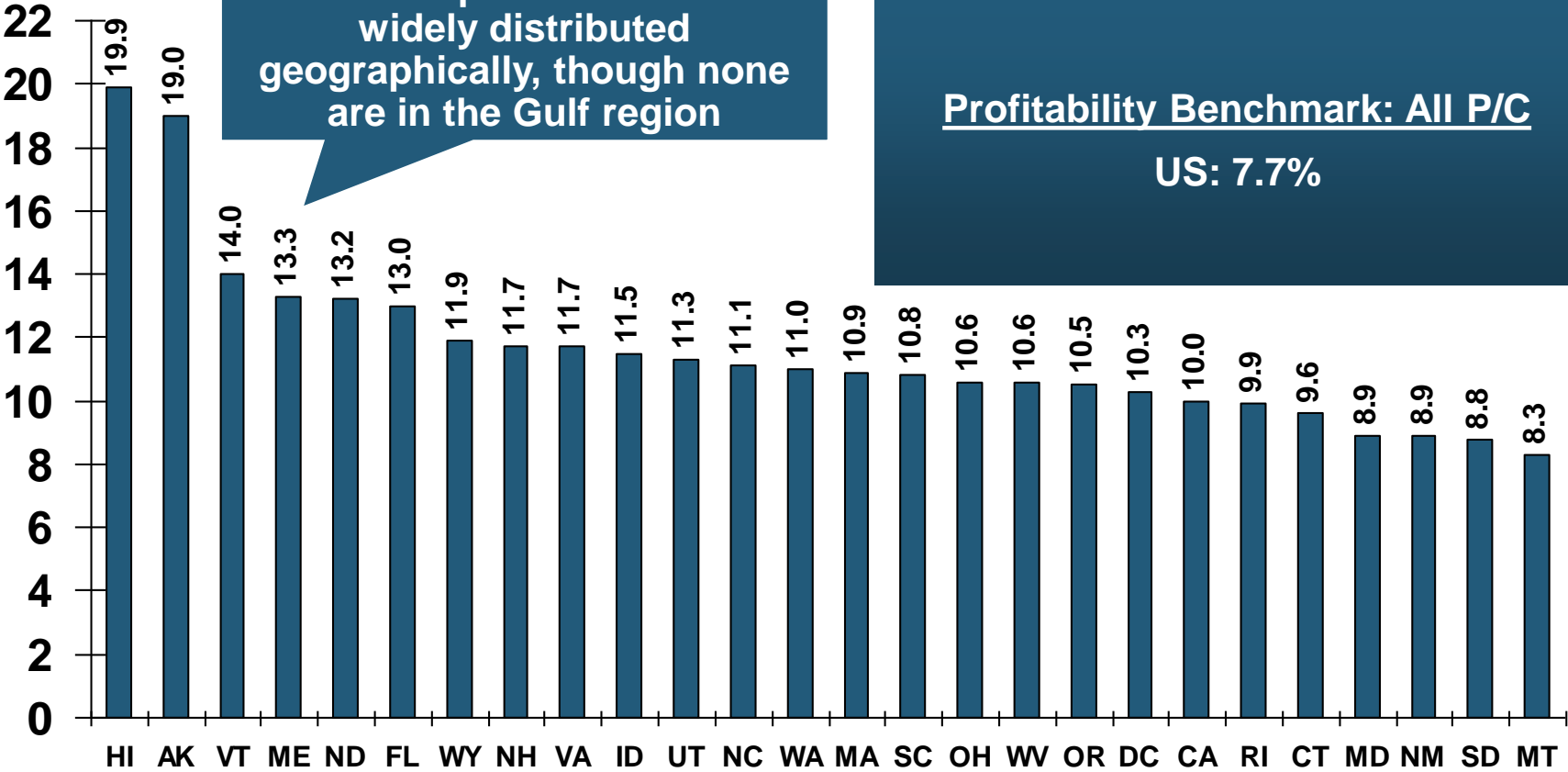
The Premium-to-Surplus Ratio Stood at \$0.76:\$1 as of 12/31/15, a Near Record Low (at Least in Recent History)

* As of 6/30/16.

Source: A.M. Best, ISO, Insurance Information Institute.

RNW All Lines, 2005-2014 Average: Highest 25 States

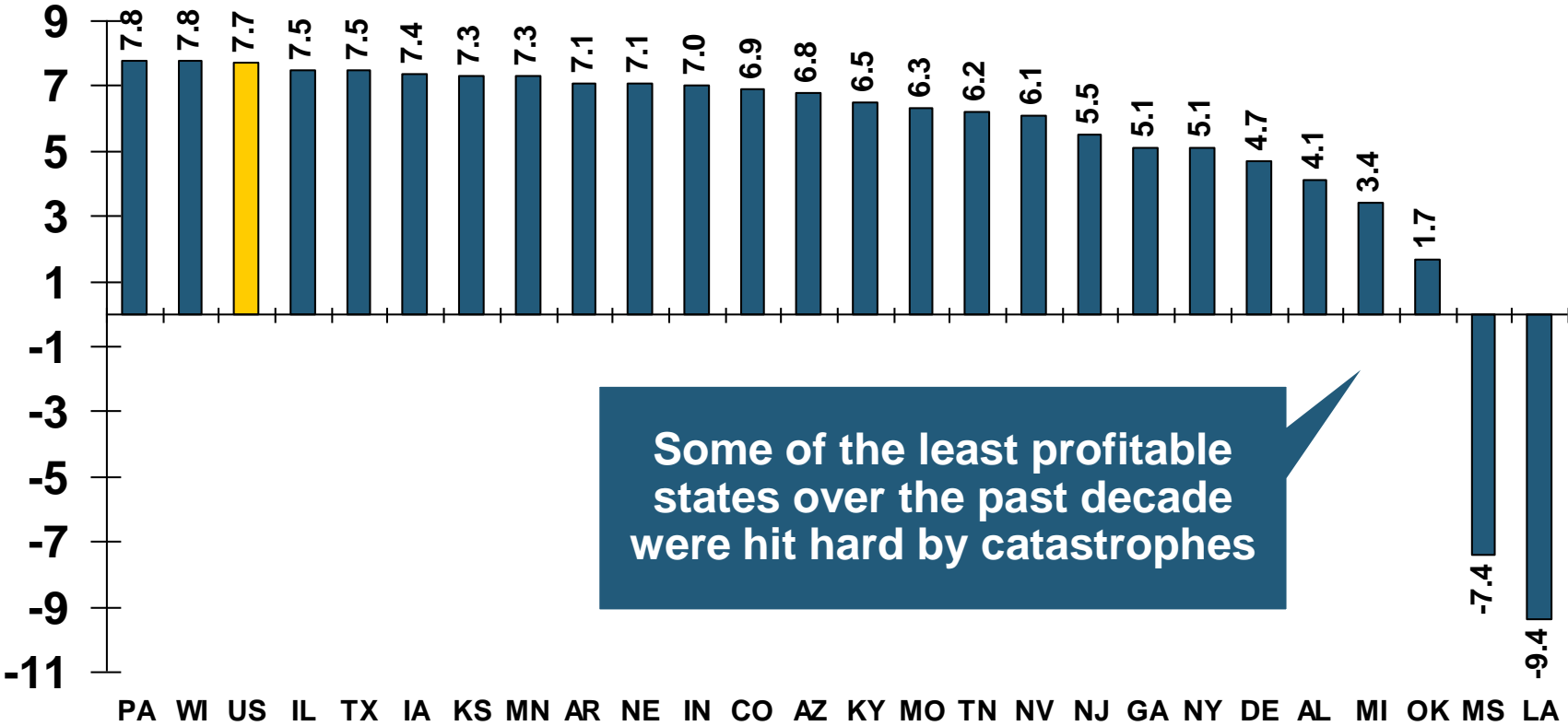
(Percent)



Source: NAIC; Insurance Information Institute.

RNW All Lines, 2005-2014 Average: Lowest 25 States

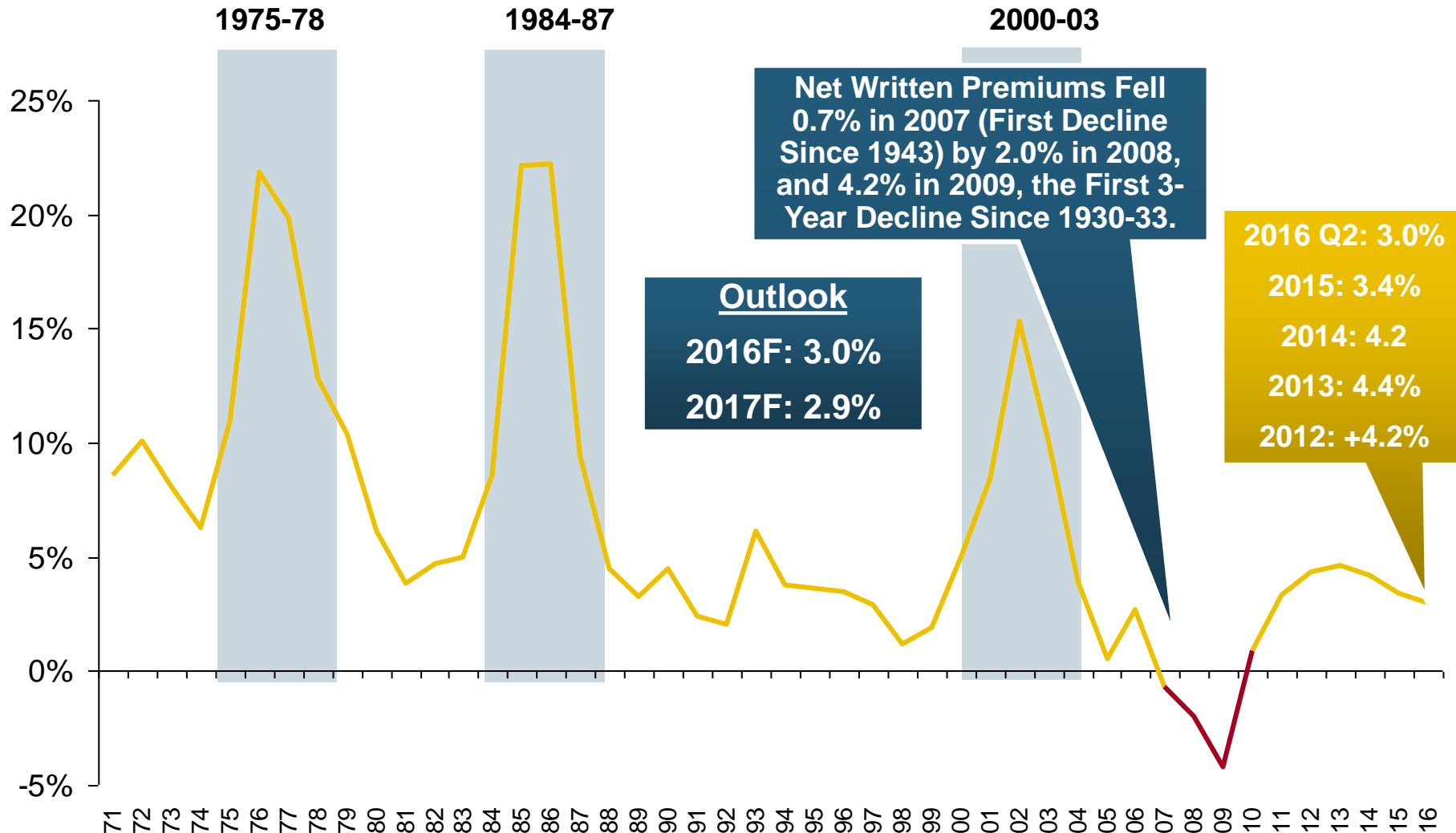
(Percent)



Source: NAIC; Insurance Information Institute.

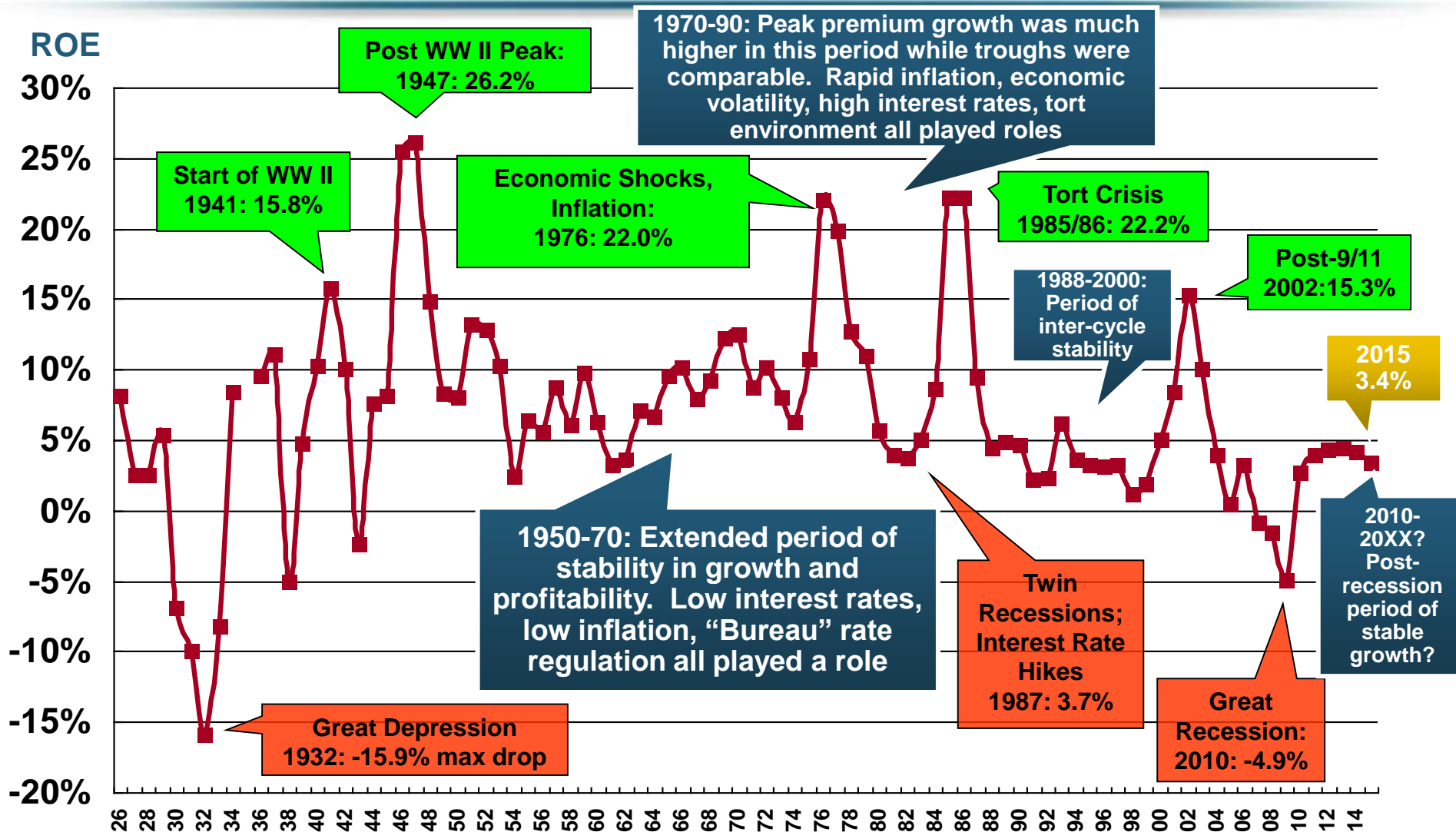
Net Premium Growth (All P/C Lines): Annual Change, 1971—2016:Q2

(Percent)



Shaded areas denote "hard market" periods
Sources: A.M. Best (1971-2013), ISO (2014-16).

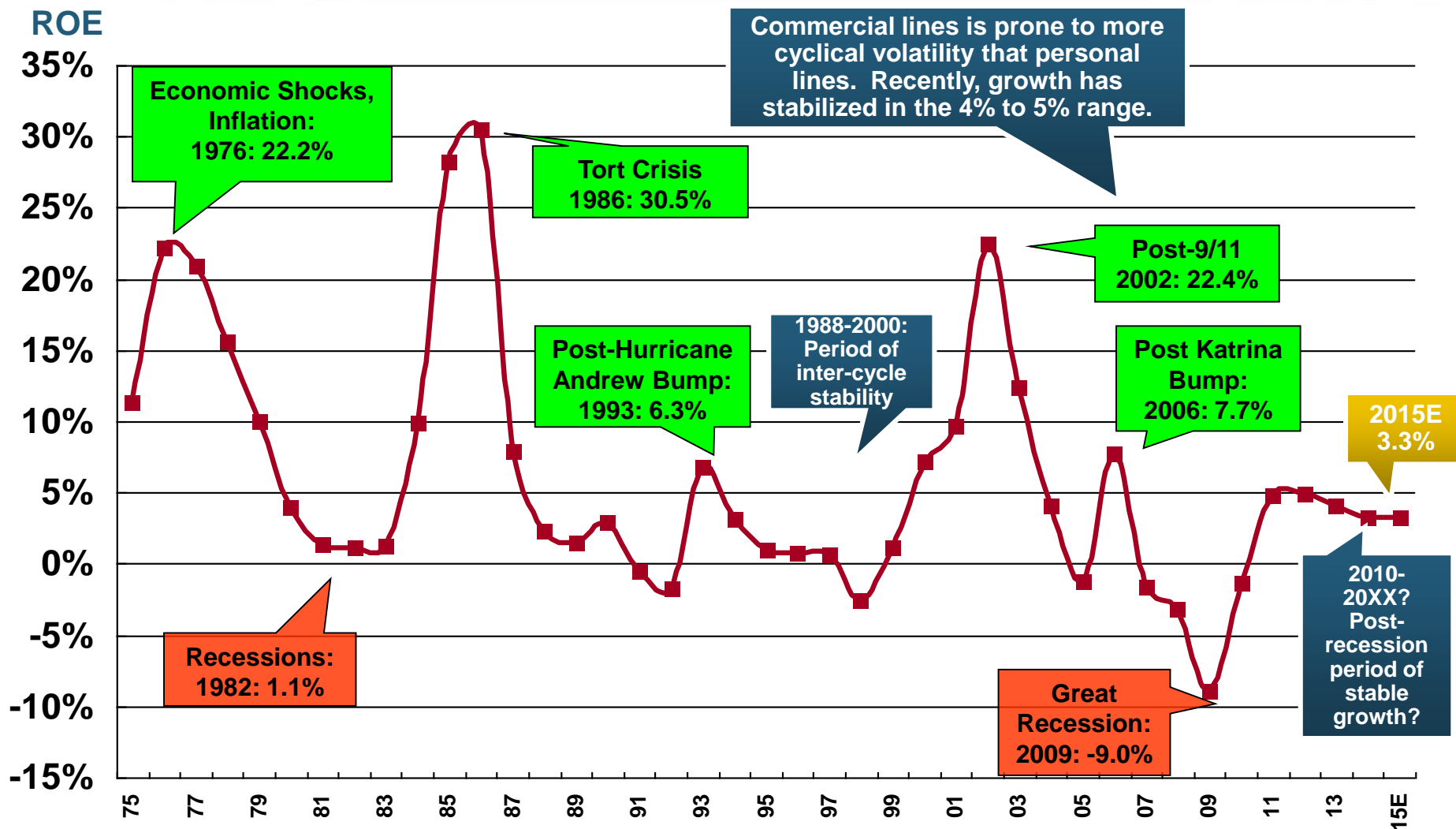
NPW Premium Growth: Peaks & Troughs in the P/C Insurance Industry, 1926 – 2015



Note: Data through 1934 are based on stock companies only. Data include state funds beginning in 1998.

Source: A.M. Best; Insurance Information Institute.

Commercial Lines NPW Premium Growth: 1975 – 2015E

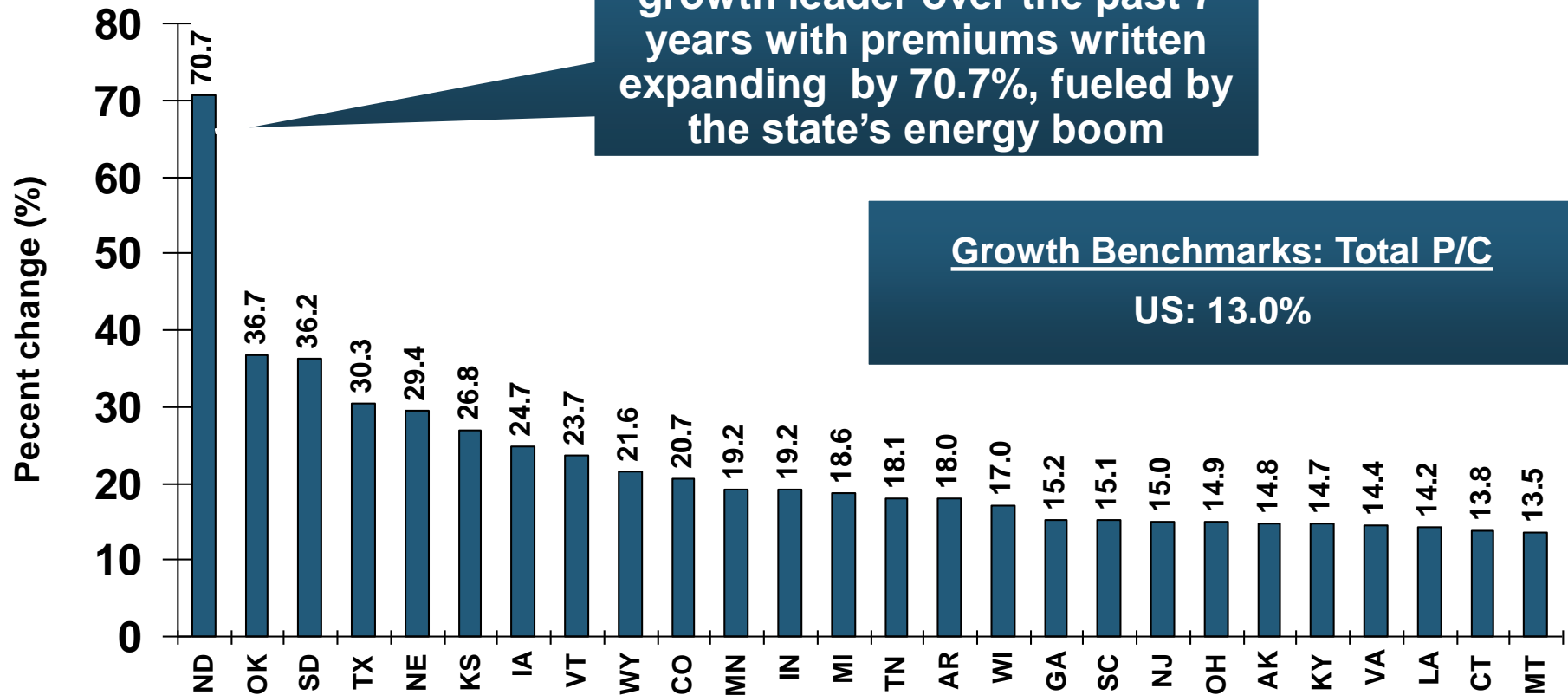


Note: Data include state funds beginning in 1998.
Source: A.M. Best; Insurance Information Institute.

Direct Premiums Written: Total P/C Percent Change by State, 2007-2014

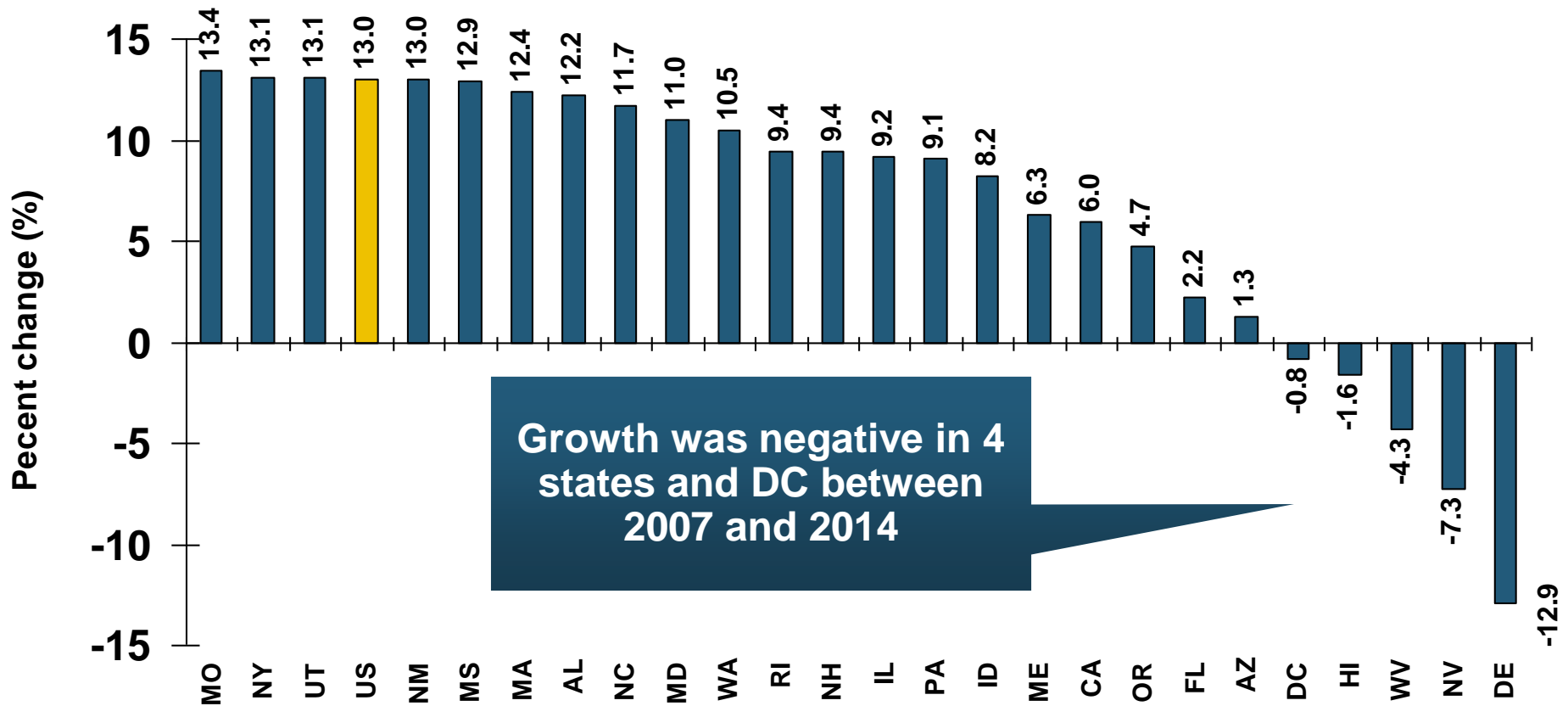
Top 25 States

North Dakota was the country's growth leader over the past 7 years with premiums written expanding by 70.7%, fueled by the state's energy boom



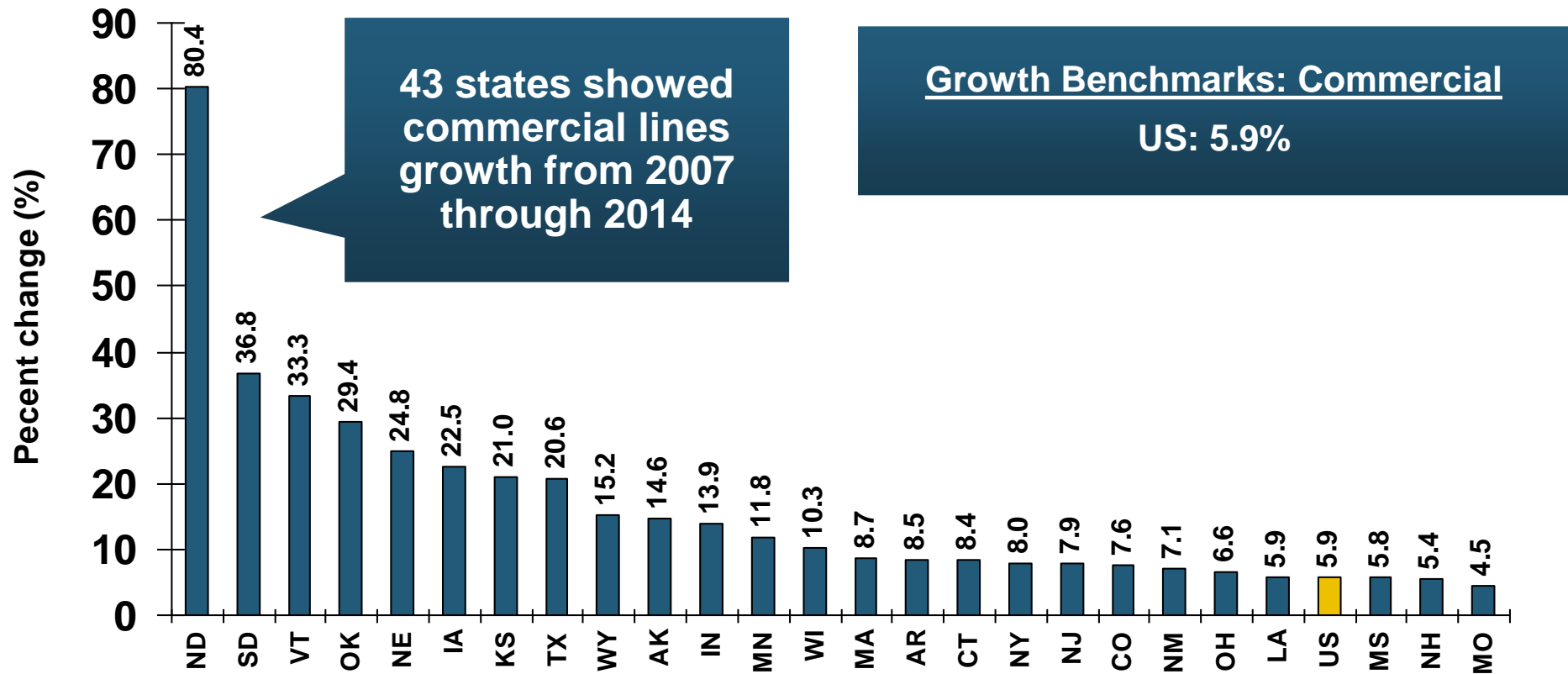
Direct Premiums Written: Total P/C Percent Change by State, 2007-2014

Bottom 25 States



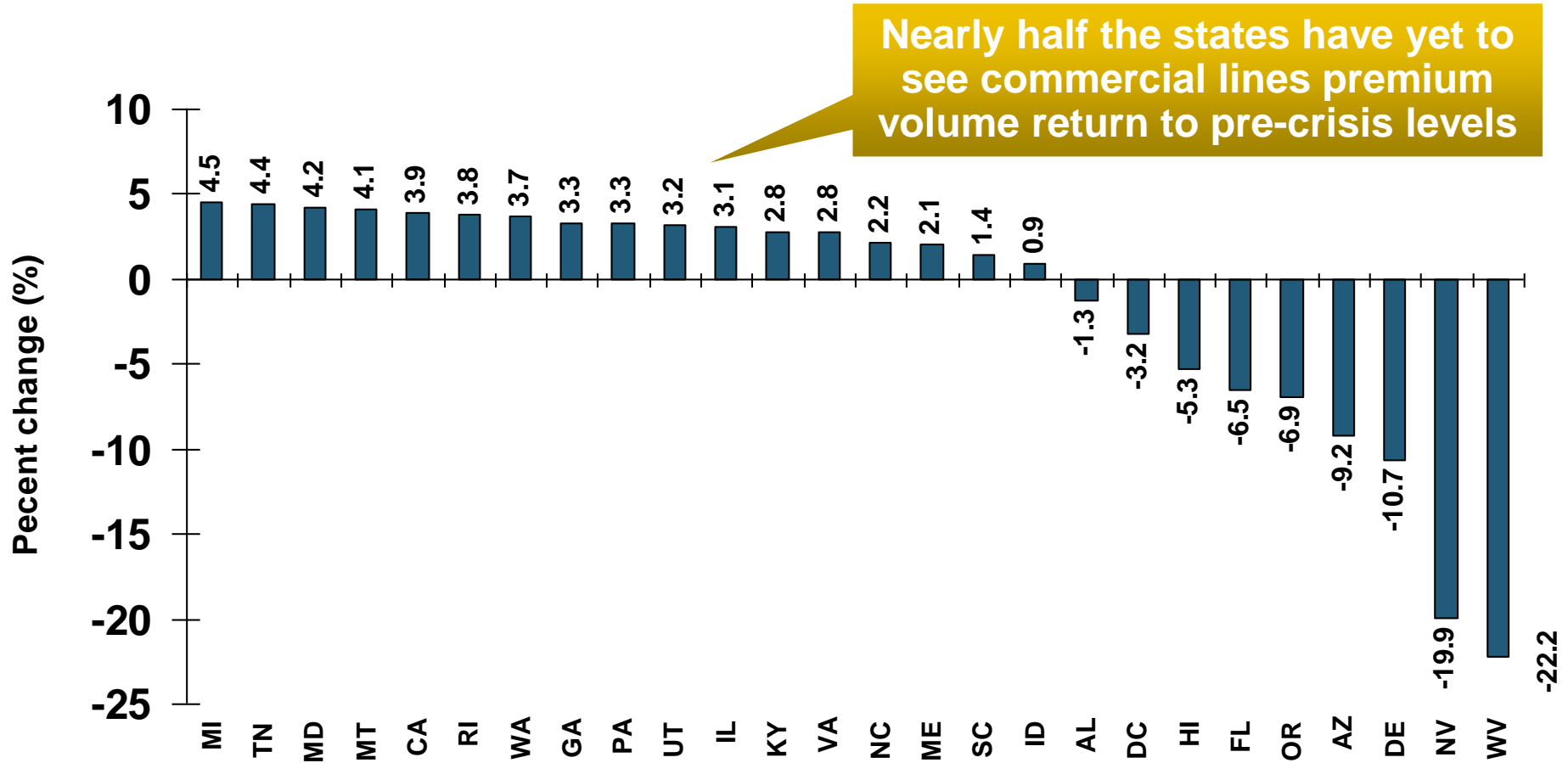
Direct Premiums Written: Comm. Lines Percent Change by State, 2007-2014

Top 25 States



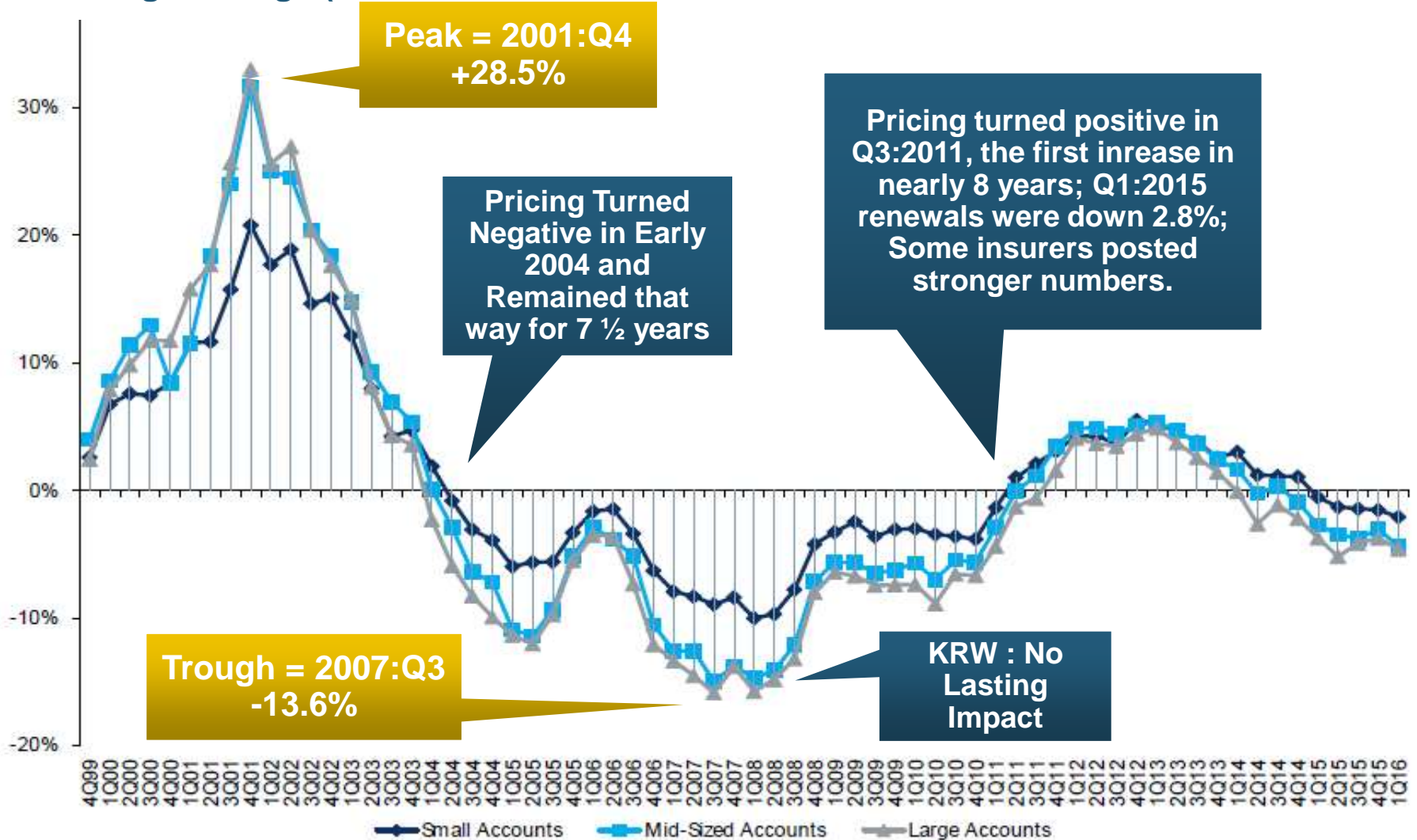
Direct Premiums Written: Comm. Lines Percent Change by State, 2007-2014

Bottom 25 States



Change in Commercial Rate Renewals, by Account Size: 1999:Q4 to 2016:Q1

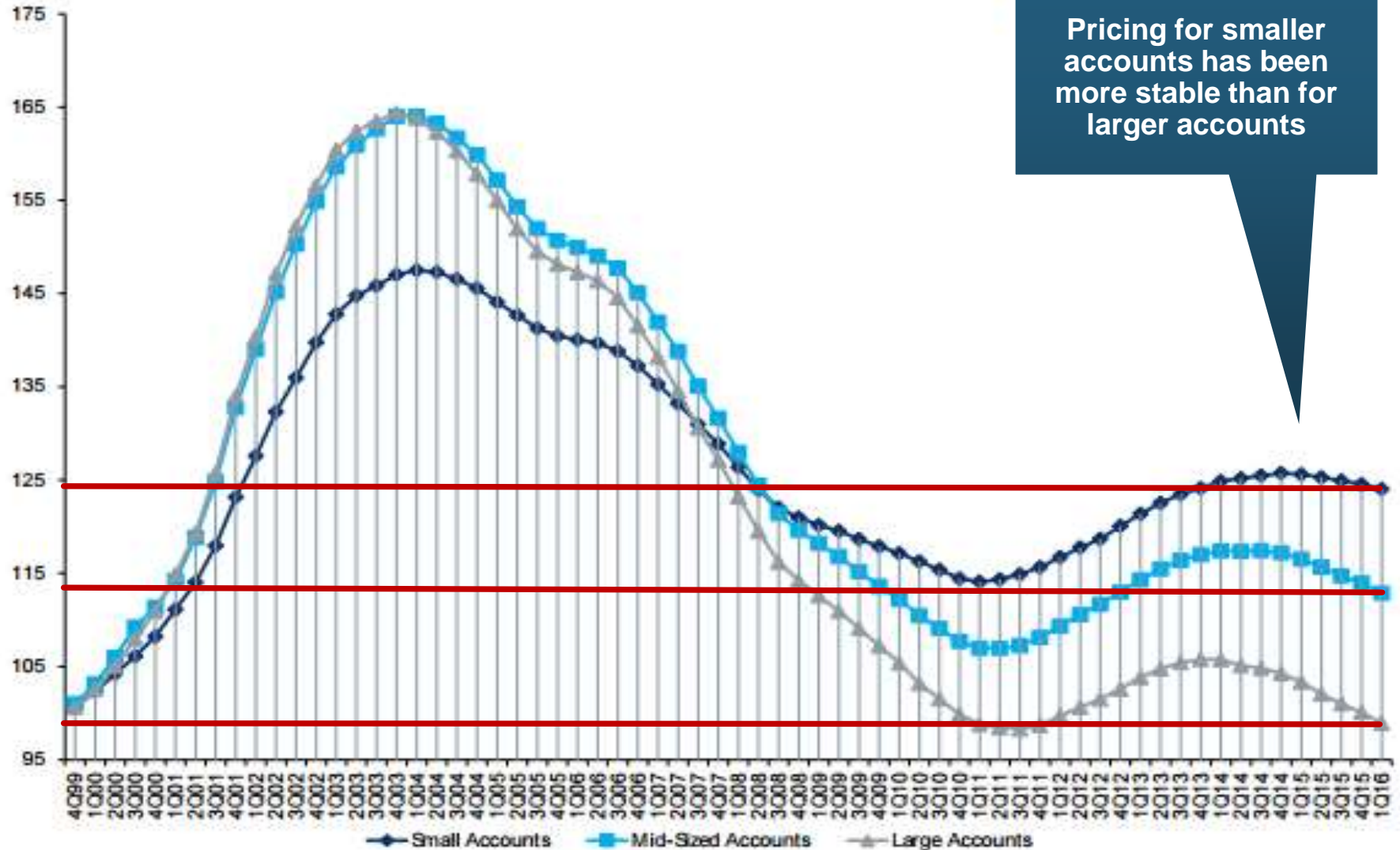
Percentage Change (%)



Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially.
Source: Council of Insurance Agents and Brokers; Barclay's Capital; Insurance Information Institute.

Cumulative Qtrly. Commercial Rate Changes, by Account Size: 1999:Q4 to 2016:Q1

1999:Q4 = 100

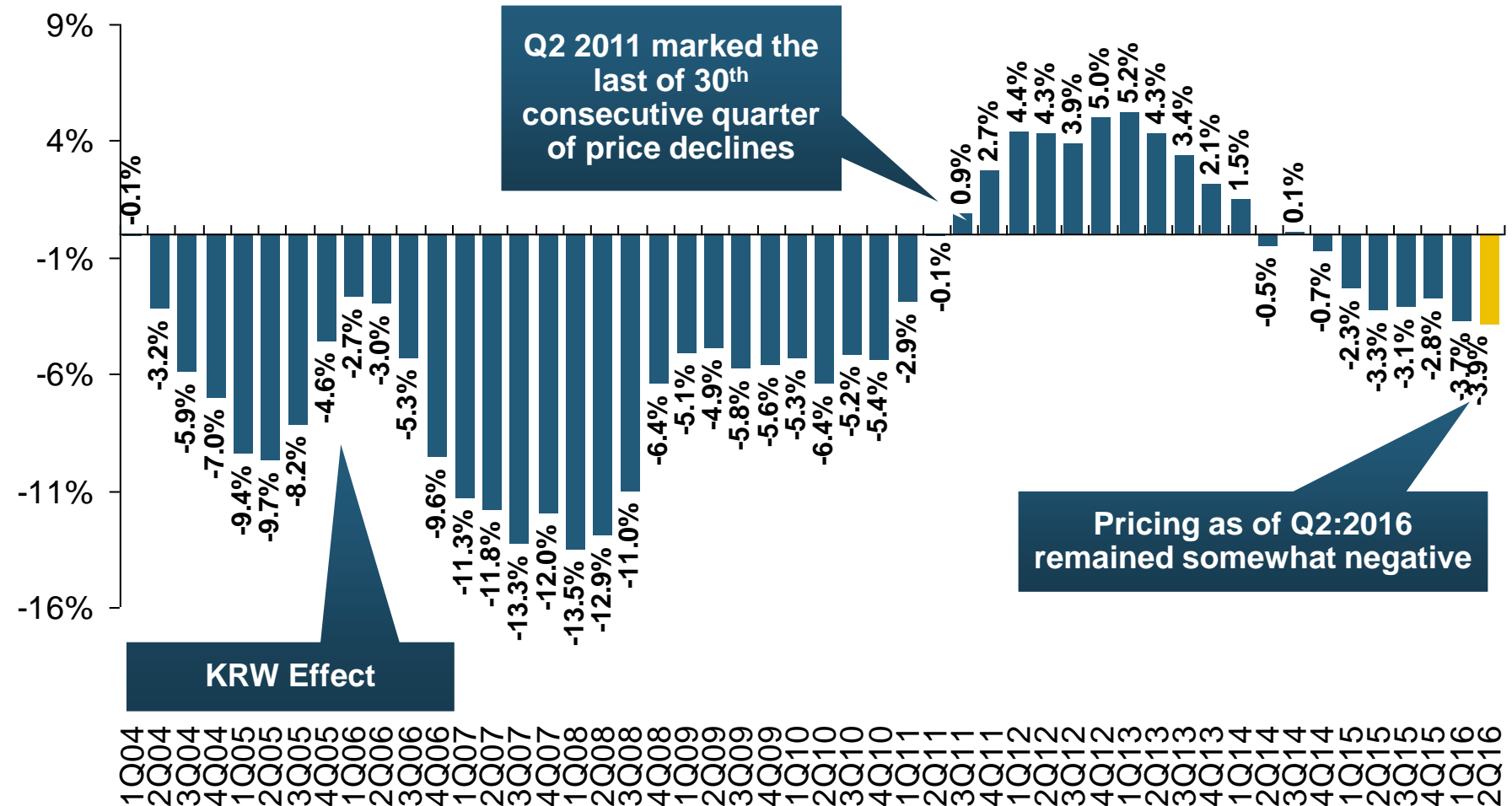


Pricing for smaller accounts has been more stable than for larger accounts

Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially.
Source: Council of Insurance Agents and Brokers; Barclay's Capital; Insurance Information Institute.

CIAB: Average Commercial Rate Change, All Lines, (1Q:2004–2Q:2016)

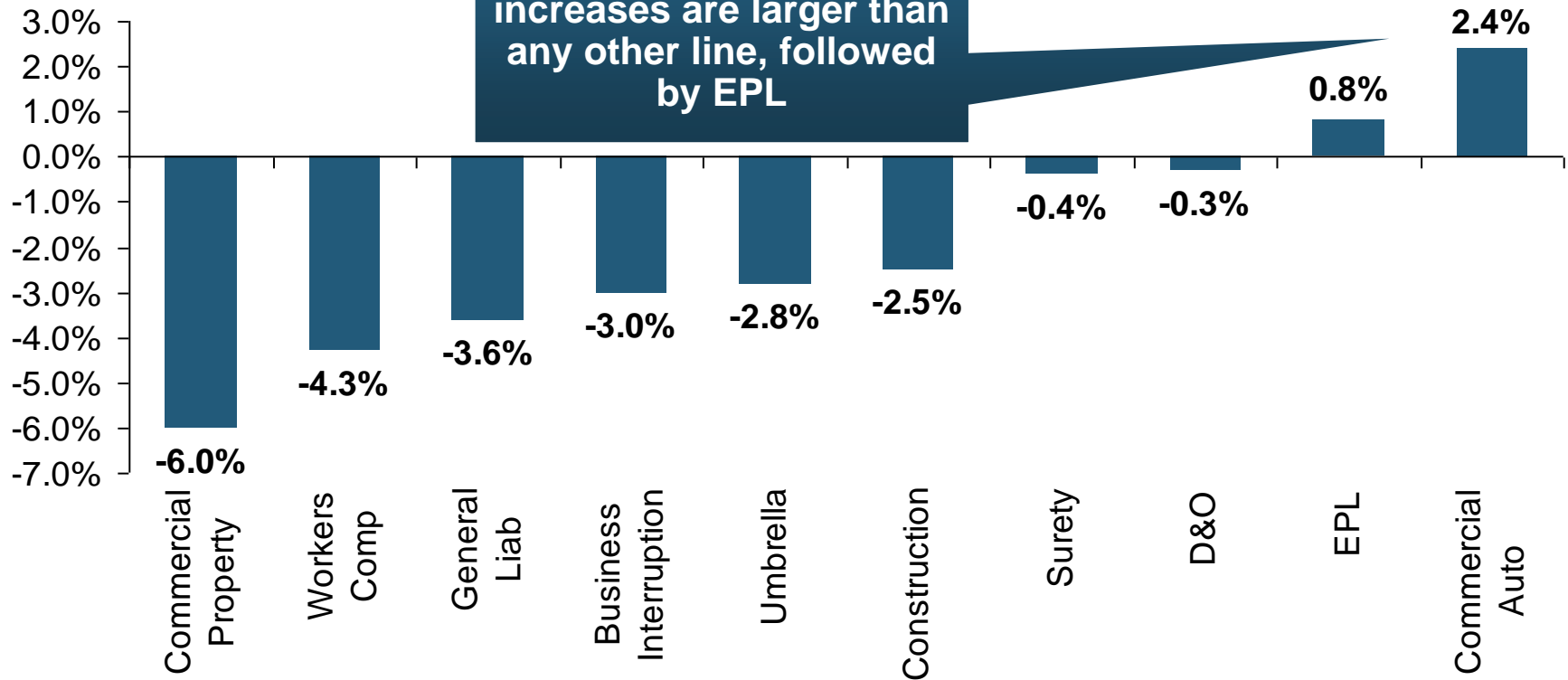
(Percent)



Note: CIAB data cited here are based on a survey. Rate changes earned by individual insurers can and do vary, potentially substantially.
Source: Council of Insurance Agents & Brokers; Insurance Information Institute

Change in Commercial Rate Renewals, by Line: 2016:Q2

Percentage Change (%)



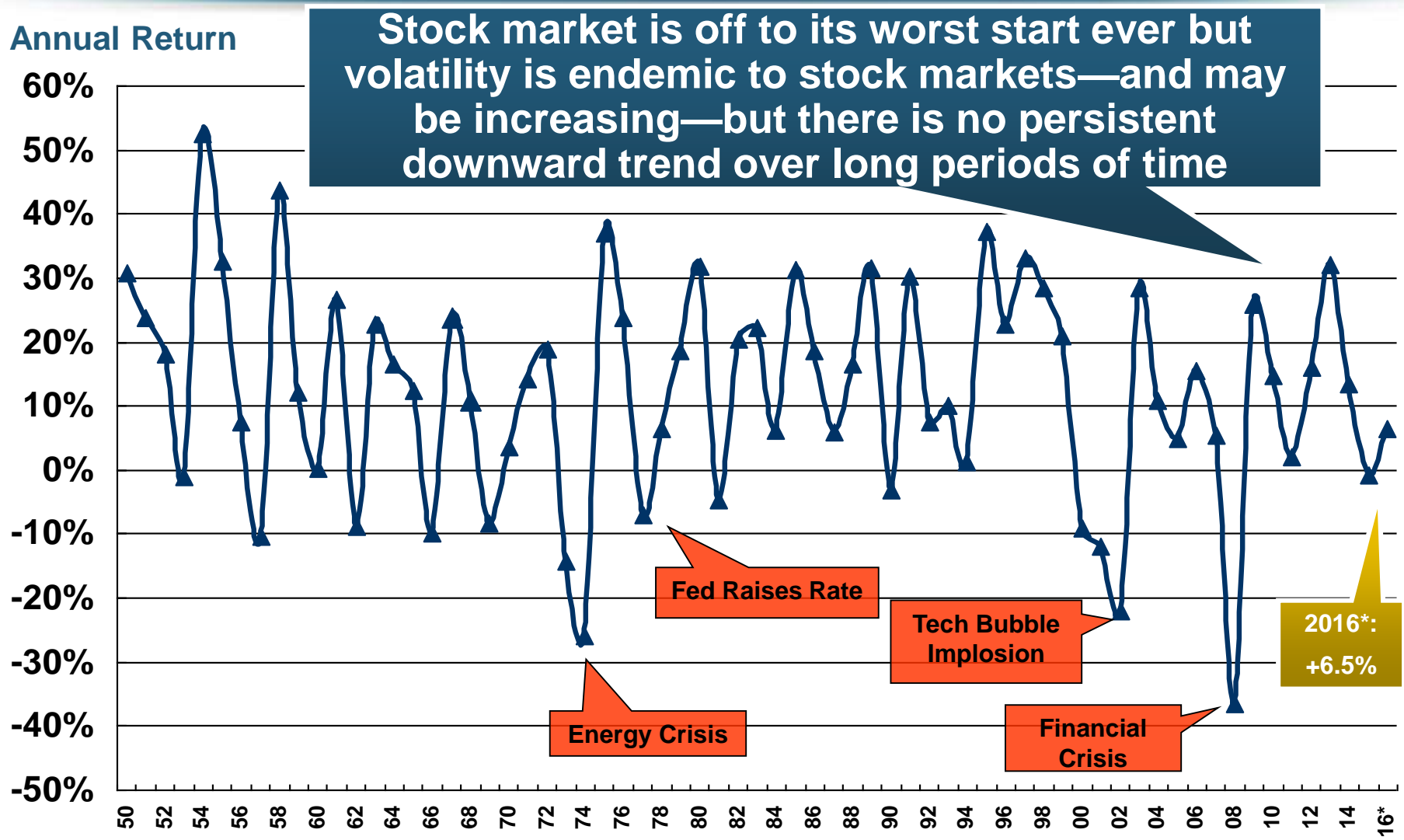
Major Commercial Lines Renewals Were Mixed to Down in Q2:2016; EPL and Commercial Auto Saw Gains

INVESTMENTS: THE NEW REALITY

**Investment Performance is a Key
Driver of Profitability**

***Depressed Yields Will Necessarily
Influence Underwriting & Pricing***

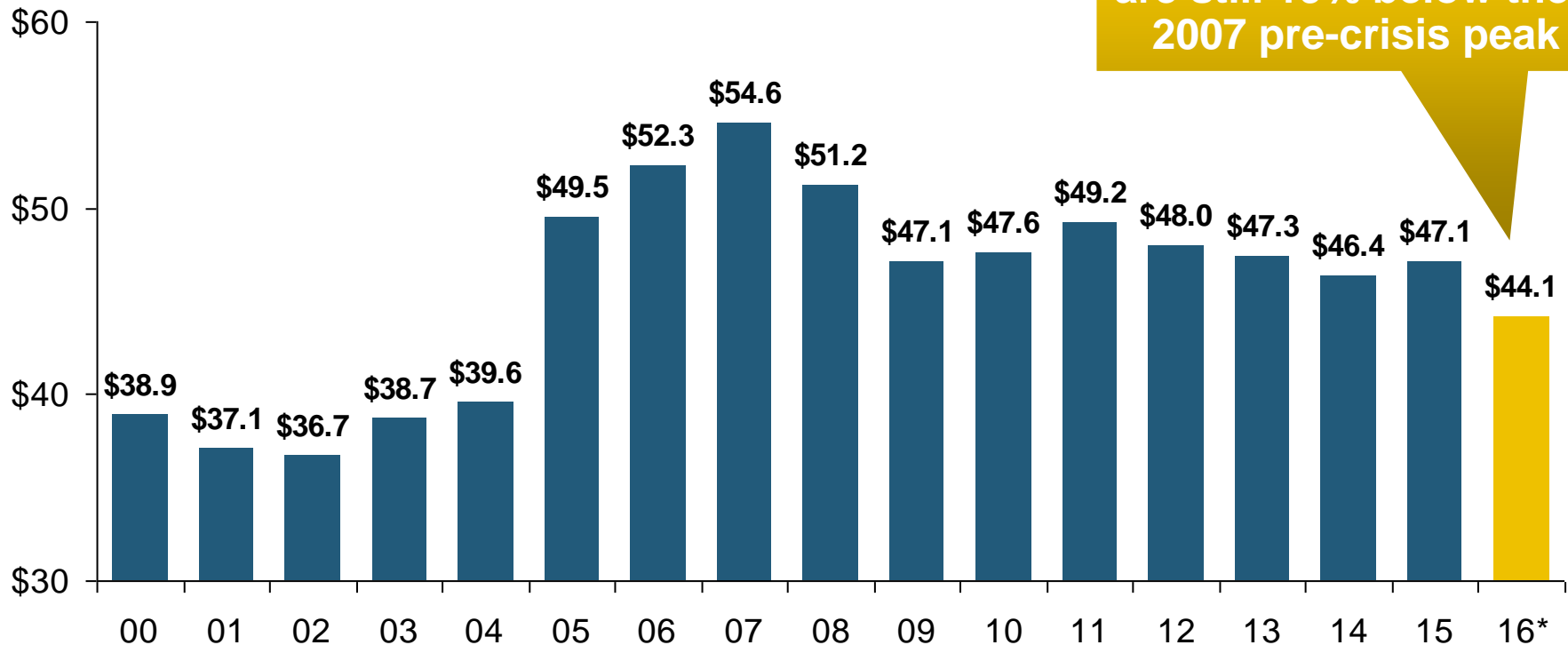
S&P 500 Index Returns, 1950 – 2016*



*Through Oct. 12 2016.
Source: NYU Stern School of Business: http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/histretSP.html Ins. Info. Inst.

Property/Casualty Insurance Industry Investment Income: 2000–2016:Q2¹

(\$ Billions)

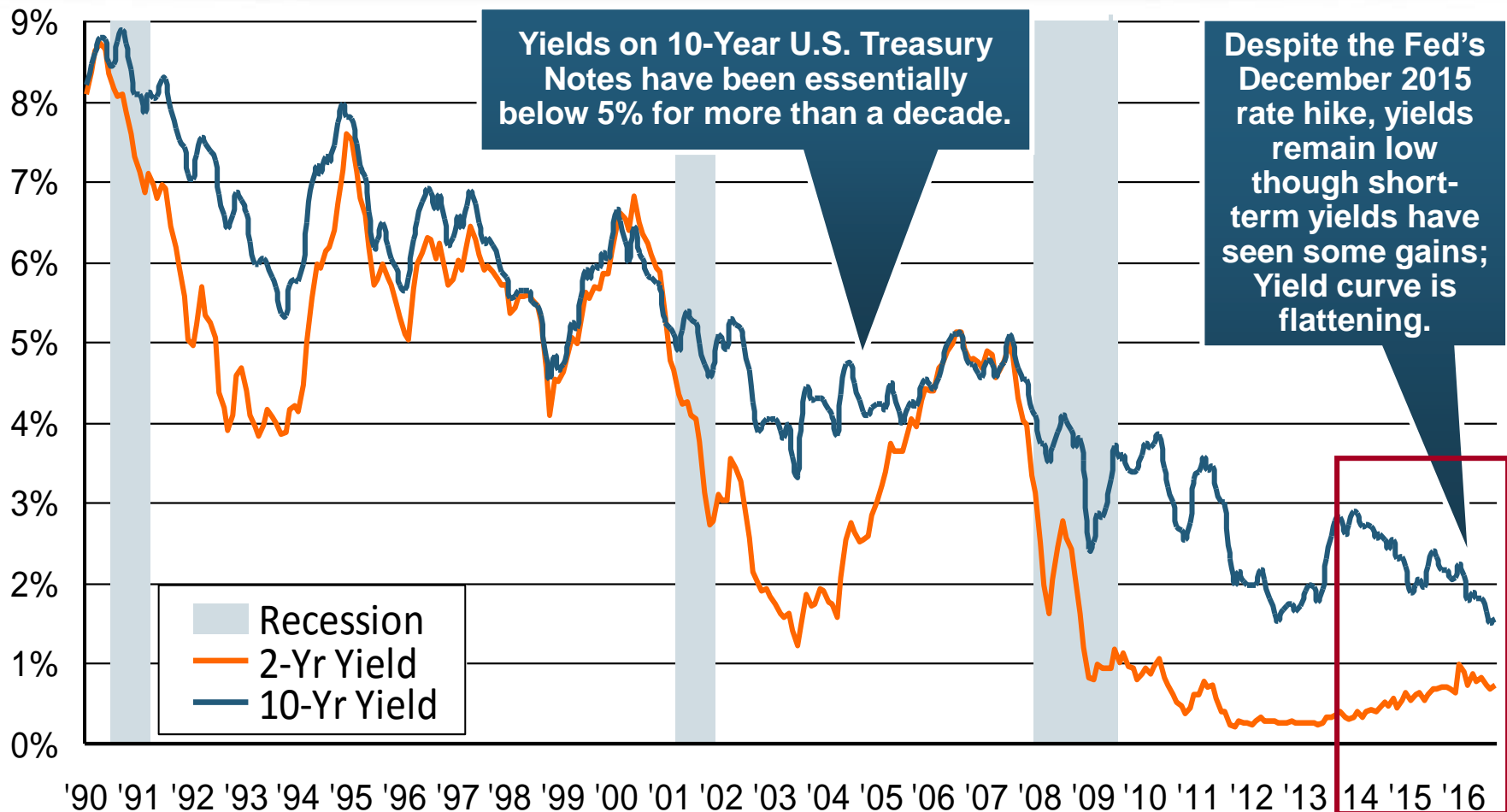


Due to persistently low interest rates, investment income fell in 2012, 2013 and 2014 but showed a small (1.9%) increase in 2015—another drop in 2016 seems likely.

*Annualized figure based on actual Q2:2016 net investment income earned of \$22.067B.

¹ Investment gains consist primarily of interest and stock dividends. Sources: ISO; Insurance Information Institute.

U.S. Treasury Security Yields: A Long Downward Trend, 1990–2016*



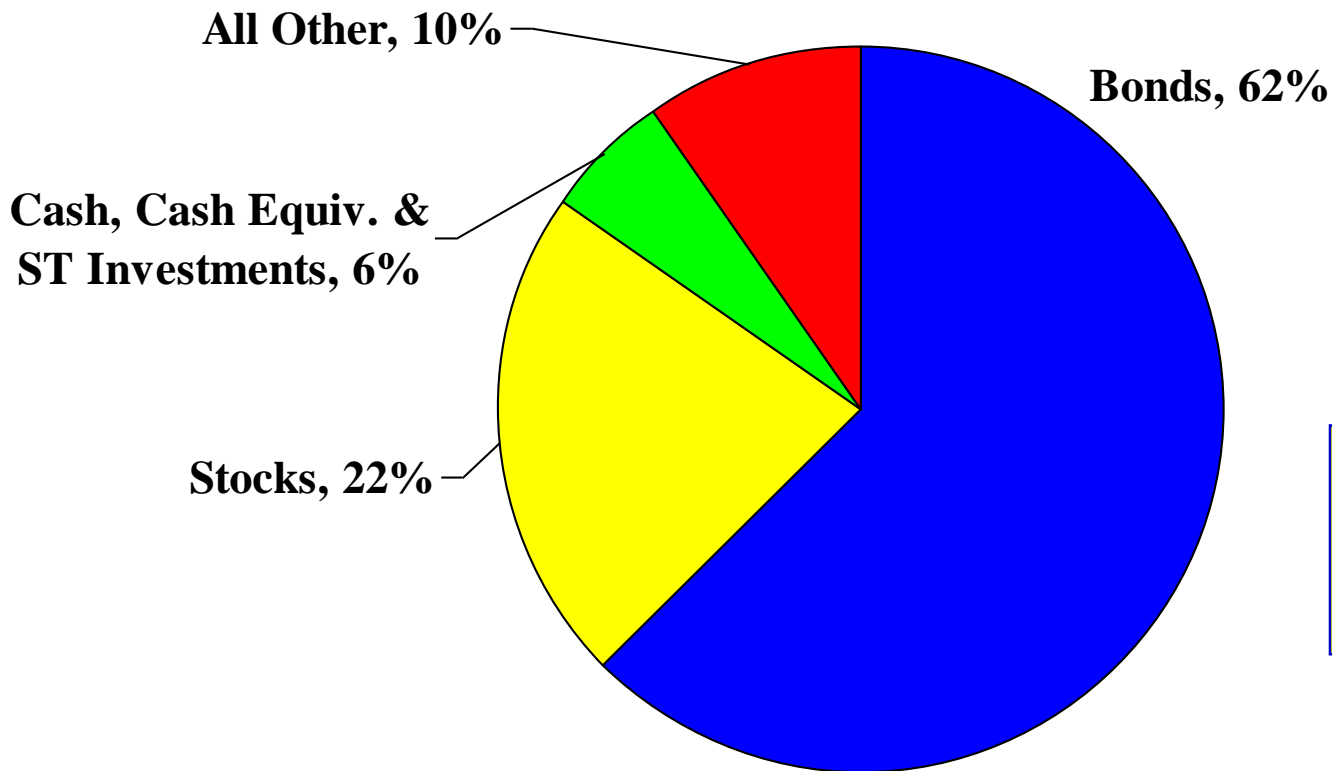
Since roughly 80% of P/C bond/cash investments are in 10-year or shorter durations, most P/C insurer portfolios will have low-yielding bonds for years to come.

*Monthly, constant maturity, nominal rates, through August 2016.

Sources: Federal Reserve Bank at <http://www.federalreserve.gov/releases/h15/data.htm>. National Bureau of Economic Research (recession dates); Insurance Information Institute.

Distribution of Invested Assets: P/C Insurance Industry, 2013

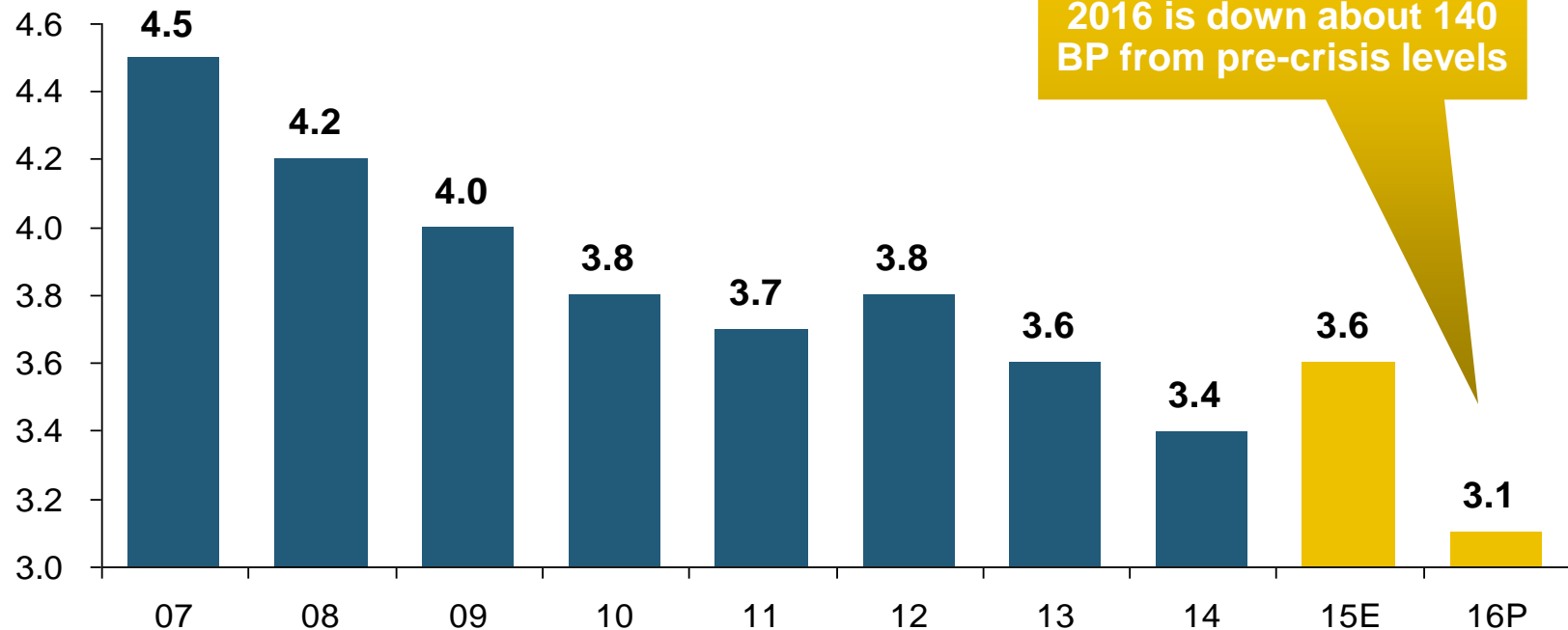
\$ Billions



Total Invested
Assets = \$1.5
Trillion

Net Investment Yield on Property/ Casualty Insurance Invested Assets, 2007–2016P*

(Percent)



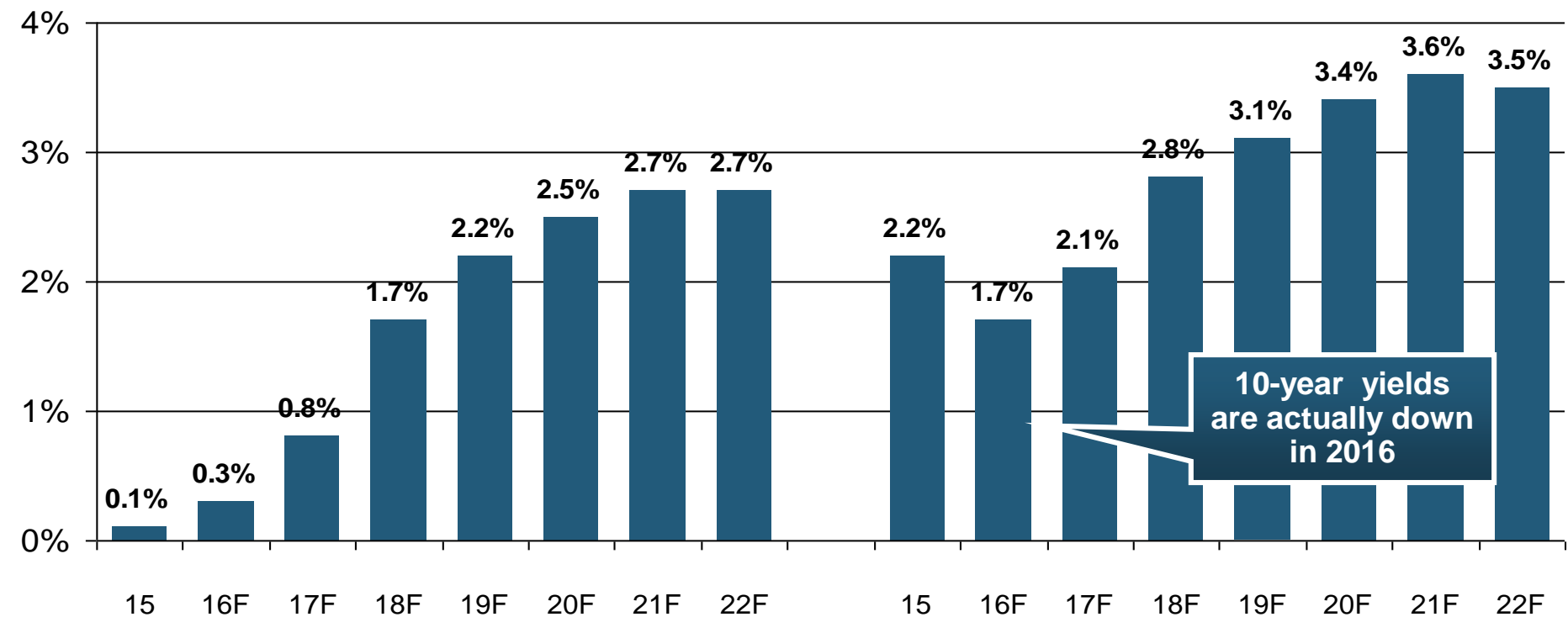
The yield on invested assets remains low relative to pre-crisis yields. The Fed's plan to raise interest rates in late 2015 has pushed up some yields, albeit quite modestly.

Interest Rate Forecasts: 2016 – 2021F

Yield (%)

3-Month Treasury

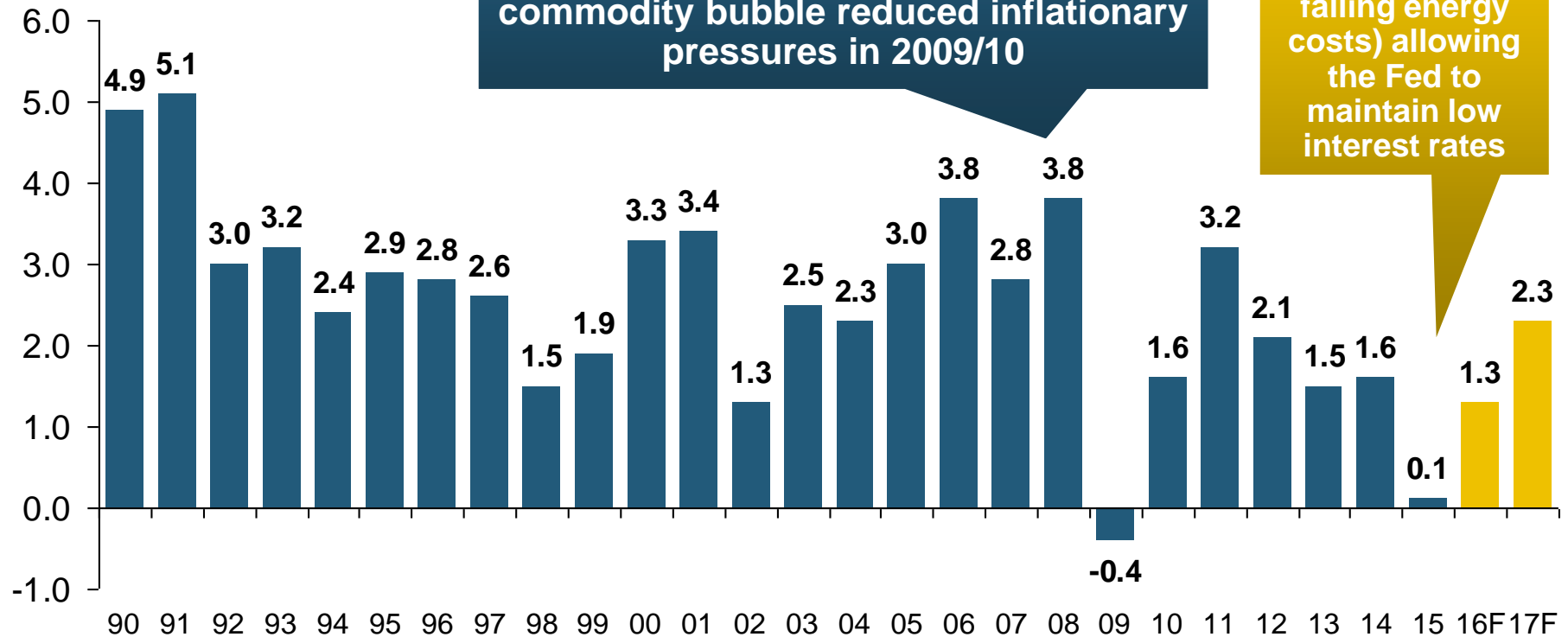
10-Year Treasury



A full normalization of interest rates is unlikely until 2019, more than a decade after the onset of the financial crisis.

Annual Inflation Rates, (CPI-U, %), 1990–2017F

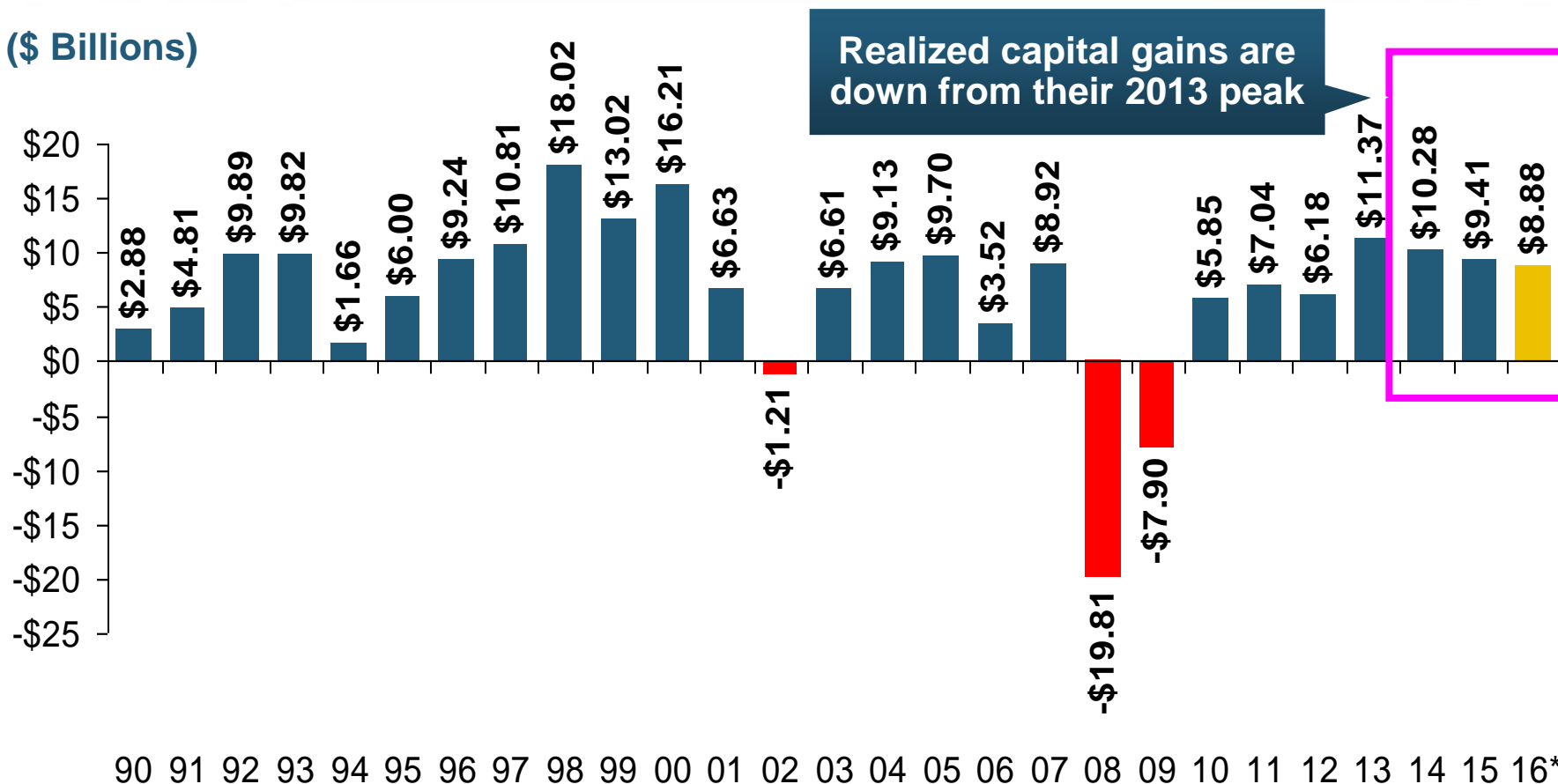
Annual Inflation Rates (%)



Slack in the U.S. economy and falling energy prices suggests that inflationary pressures should remain subdued for an extended period of times

P/C Insurer Net Realized Capital Gains/Losses, 1990-2016:Q2

(\$ Billions)

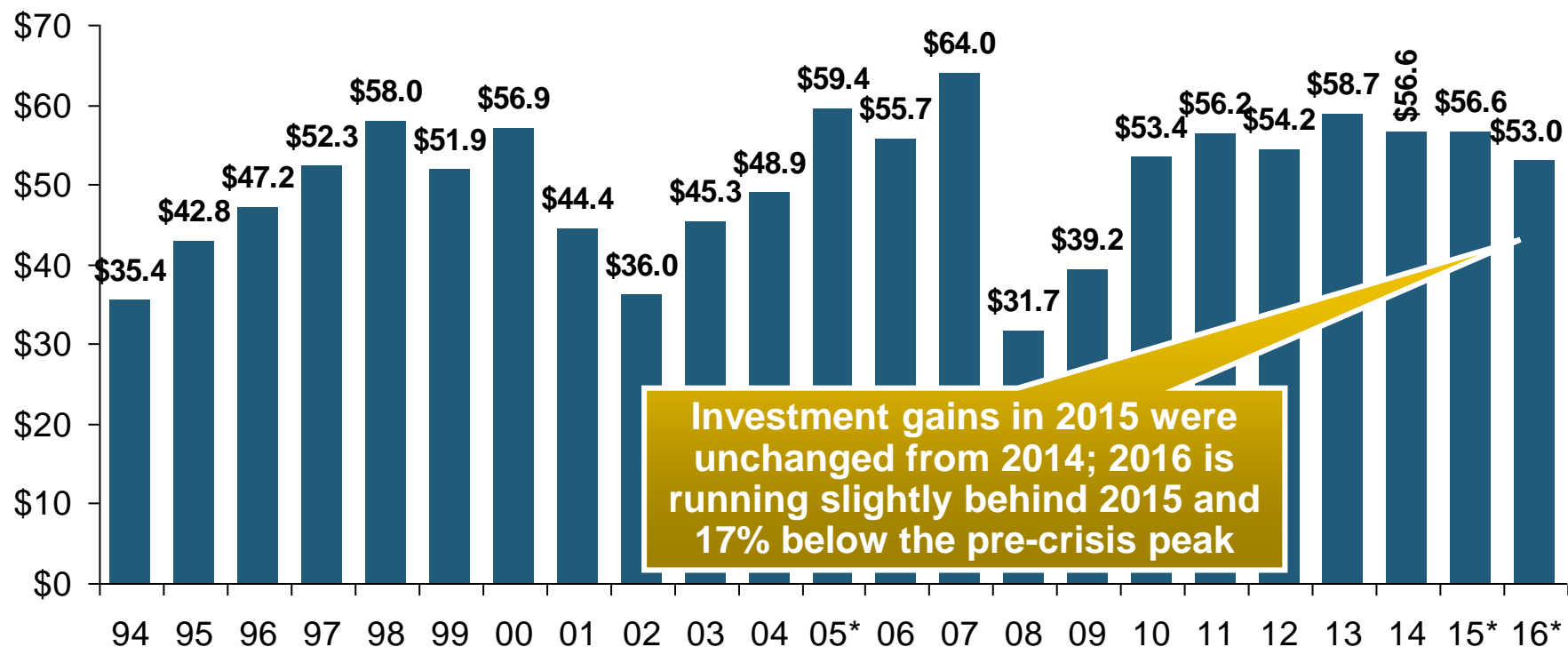


Insurers Posted Net Realized Capital Gains in 2010 - 2015 Following Two Years of Realized Losses During the Financial Crisis. Realized Capital Losses Were a Primary Cause of 2008/2009's Large Drop in Profits and ROE.

*Annualized based on actual of \$4.438B through Q2 2016
Sources: A.M. Best, ISO; Insurance Information Institute.

Property/Casualty Insurance Industry Investment Gain: 1994–2016:Q2¹

(\$ Billions)



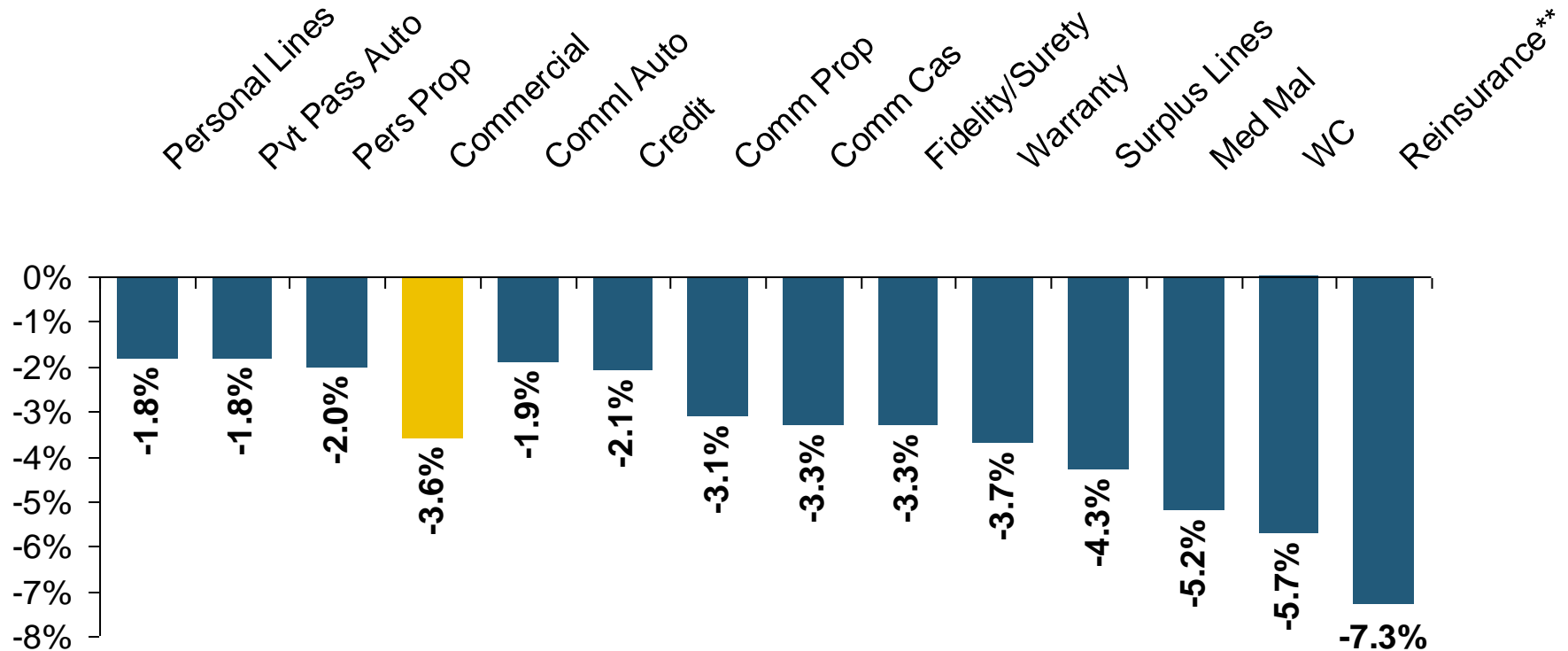
Total Investment Gains Were Flat in 2015 as Investment Income Rose Marginally and Realized Capital Gains Fell Slightly

¹ Investment gains consist primarily of interest, stock dividends and realized capital gains and losses.

* 2005 figure includes special one-time dividend of \$3.2B; 2016 figure is annualized based on actual Q2 2016 figure of \$26.505B.

Sources: ISO, SNL; Insurance Information Institute.

Reduction in Combined Ratio Necessary to Offset 1% Decline in Investment Yield to Maintain Constant ROE, by Line*



Lower Investment Earnings Place a Greater Burden on Underwriting and Pricing Discipline

*Based on 2008 Invested Assets and Earned Premiums

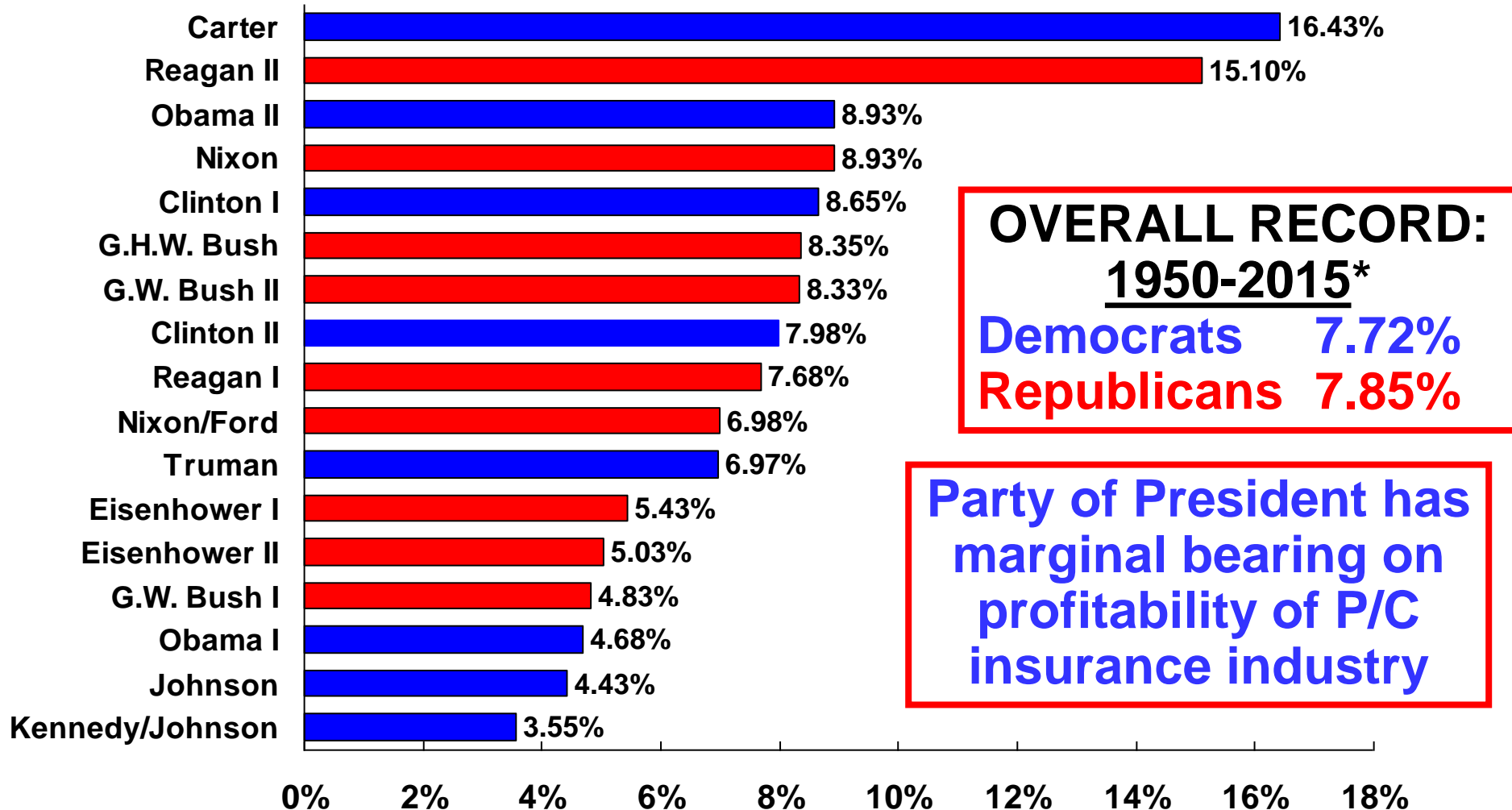
**US domestic reinsurance only

Source: A.M. Best; Insurance Information Institute.

Profitability & Politics

***How Is Profitability Affected by
the President's Political Party?***

P/C Insurance Industry ROE by Presidential Administration, 1950-2015*



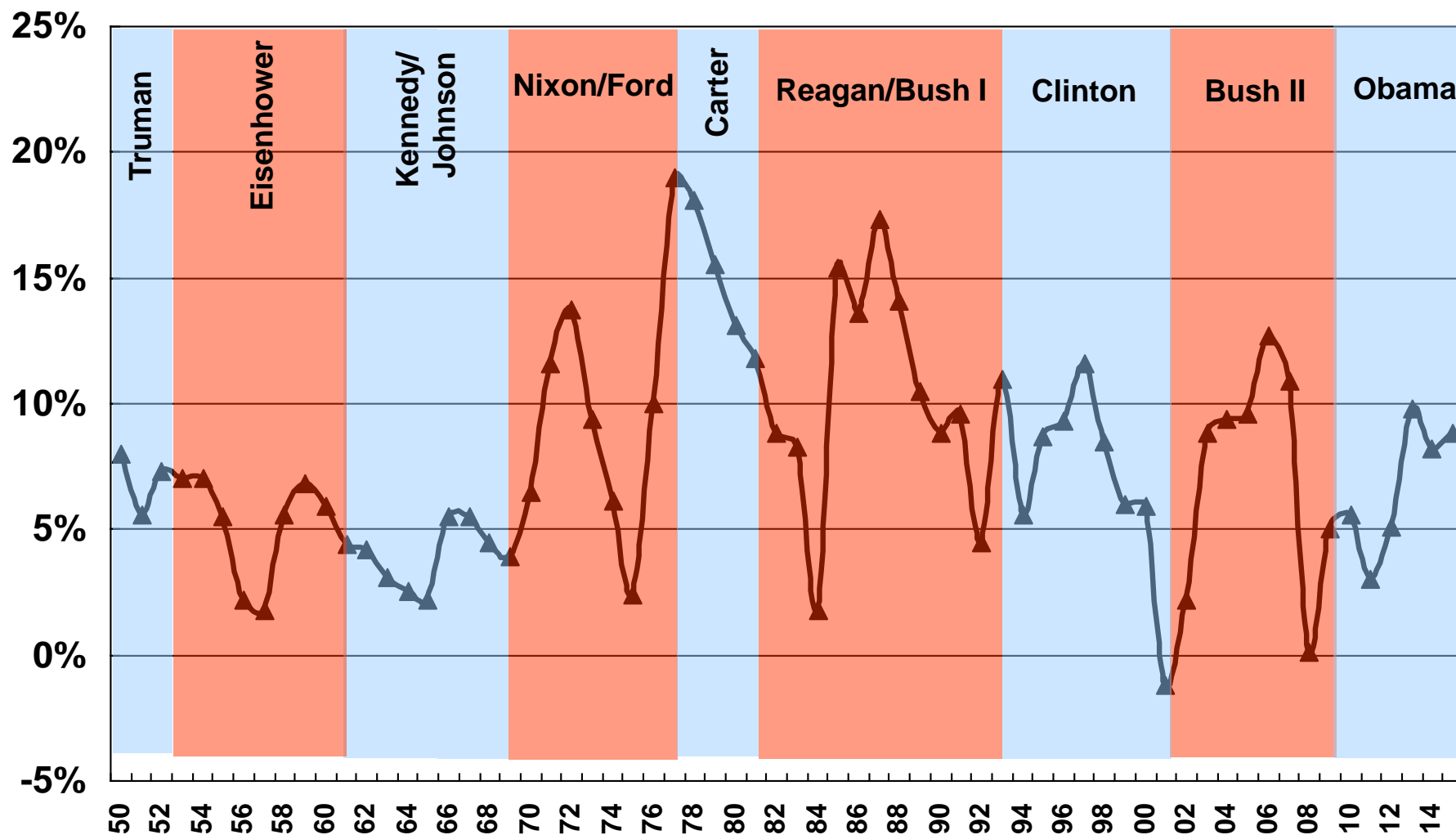
*Truman administration ROE of 6.97% based on 3 years only, 1950-52;.

Source: Insurance Information Institute

P/C insurance Industry ROE by Presidential Party Affiliation, 1950- 2015

BLUE = Democratic President

RED = Republican President



Trump vs. Clinton: Issues that Matter to P/C Insurers

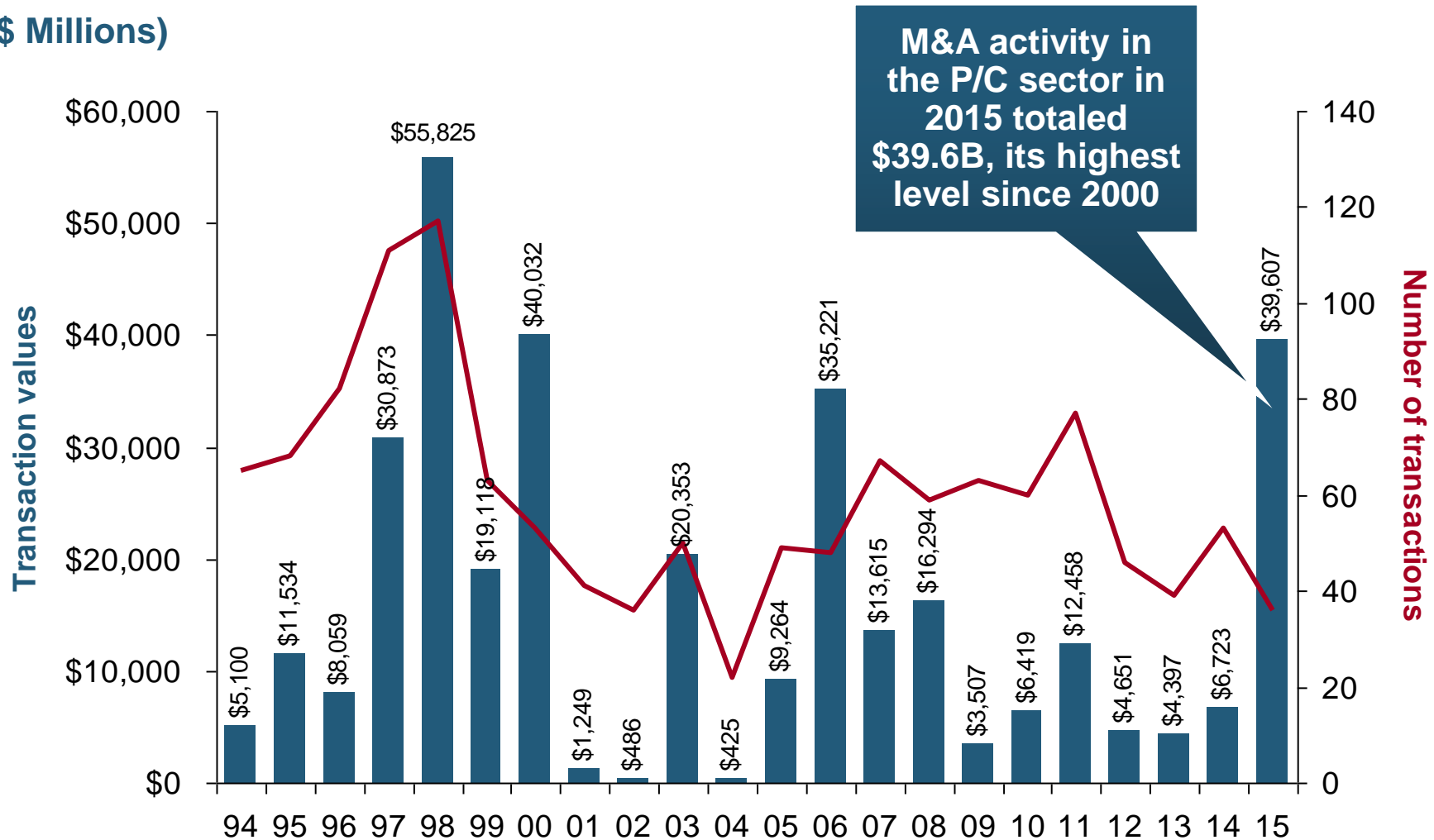
Issue	Trump	Clinton
Economy	<i>Supply Side-Like Philosophy:</i> Lower taxes→Faster real GDP growth; Deficits likely grow as tax cuts are combined with targeted increased spending on Homeland Security, Defense, etc.	<i>Keynesian Philosophy:</i> More government spending on infrastructure, education, social services; Deficits likely increase as tax increases likely difficult to pass
Interest Rates	May trend higher with larger deficits; Shift from monetary policy to fiscal focus (tax cuts, government spending)	Status quo at the Fed; Net impact on interest rates unclear
Taxes	Favors lower tax rates for corporate and personal income tax rates; Tax code overhaul?	Unlikely to reduce taxes or embark on major overhaul of tax code
International Trade	Protectionist Tendencies	Has criticized Trans-Pacific Partnership but is a realist on international matters
Tort System	Doesn't like trial lawyers but seems to like filing lawsuits	Status Quo

GLOBAL M&A UPDATE: *A PATH TO GROWTH?*

**Are Capital Accumulation, Drive
for Growth and Scale Stimulating
M&A Activity?**

U.S. INSURANCE MERGERS AND ACQUISITIONS, P/C SECTOR, 1994-2015 (1)

(\$ Millions)



(1) Includes transactions where a U.S. company was the acquirer and/or the target.

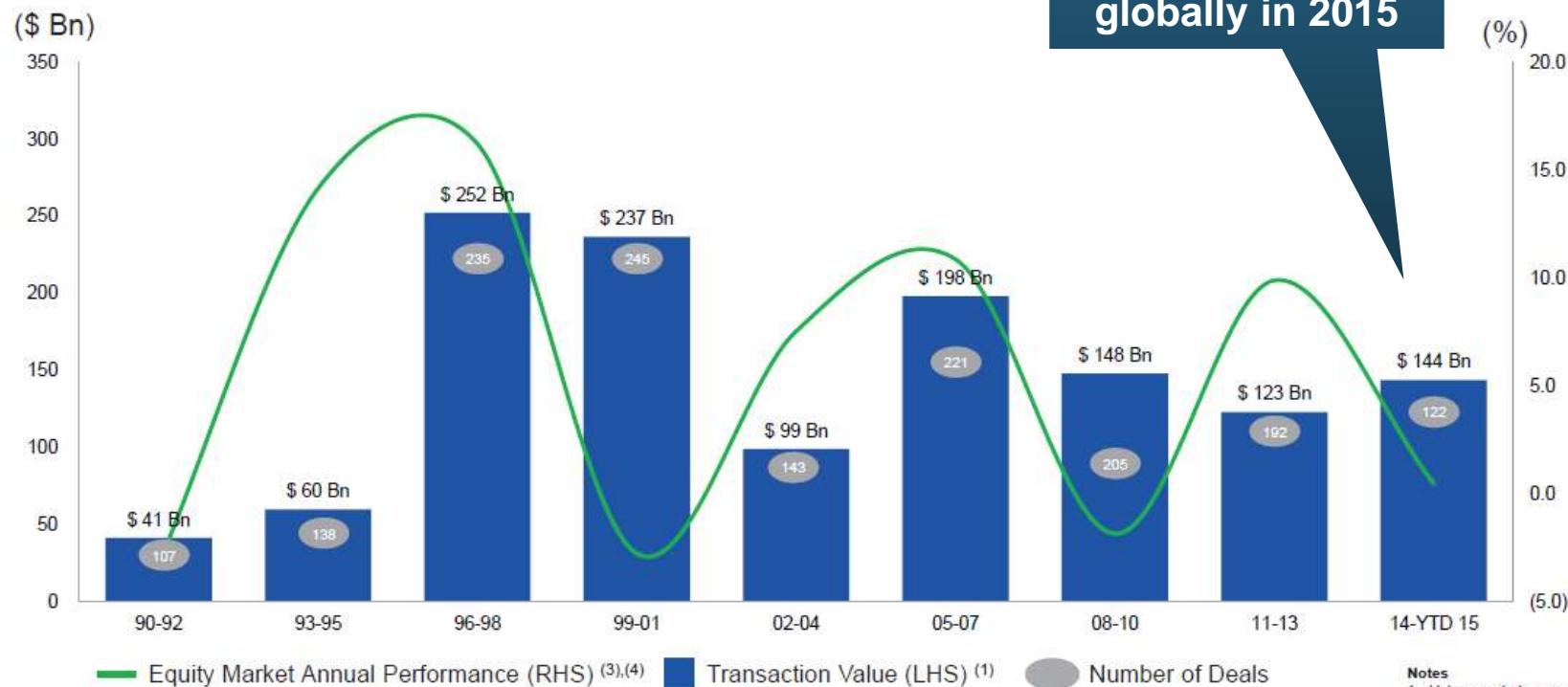
Source: Conning proprietary database.

Global M&A Activity Tends to Follow Equity Market Performance

Total Insurance M&A Volumes

Deals of value > \$100M - Since 1990

The number and volume of insurance M&A deals was up globally in 2015



Notes

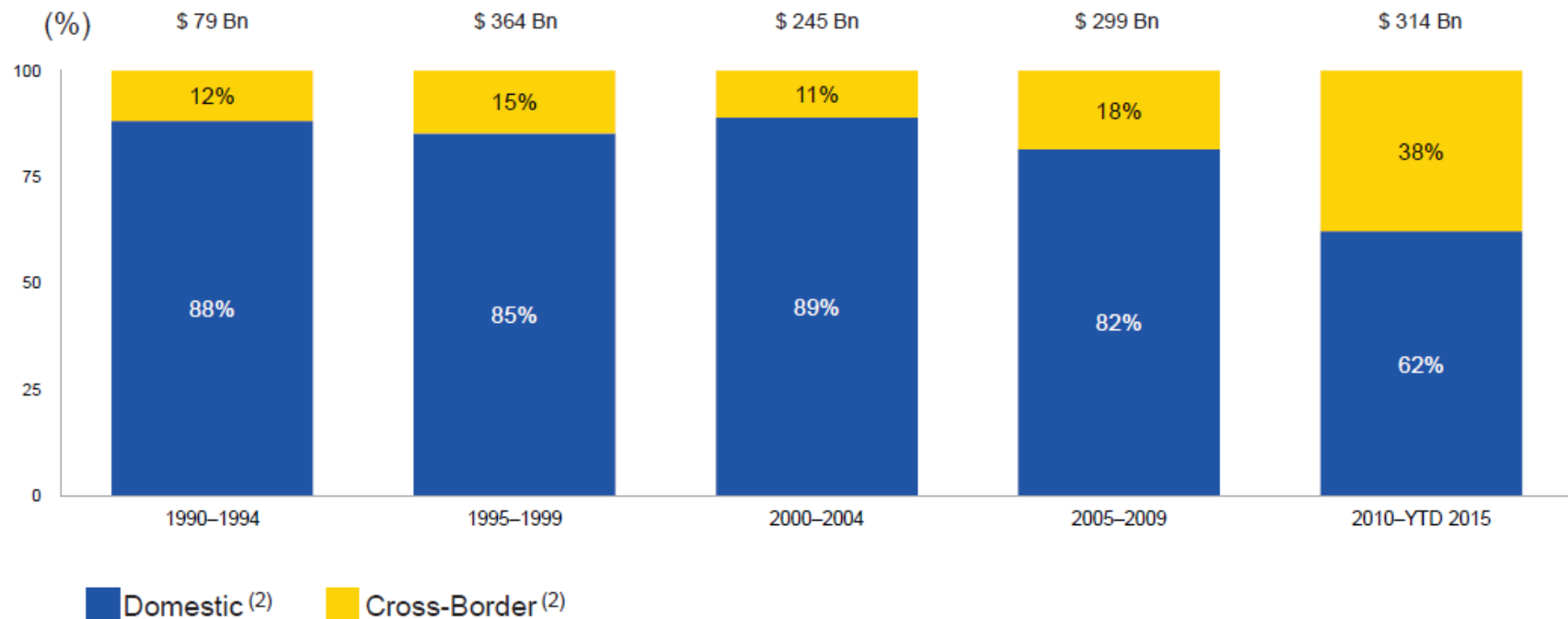
1. Values exclude assumed liabilities
2. IMF Aggregate for World
3. MSCI World Index
4. Period average figures

Source: Thomson Reuters, Capital IQ as of Oct. 2015 and IMF from Geneva Association Newsletter *Insurance and Finance*, Jan. 2016, presentation "Facts vs. Sentiment: Deals in the Insurance Sector," by Aviva CEO Mark Wilson.

Huge Shift from Domestic M&A Activity to Cross-Border

The share of M&A deal volume that was cross-border more than doubled in 2015

Insurance M&A Volumes
Deals of value > \$100M (Since 1990)



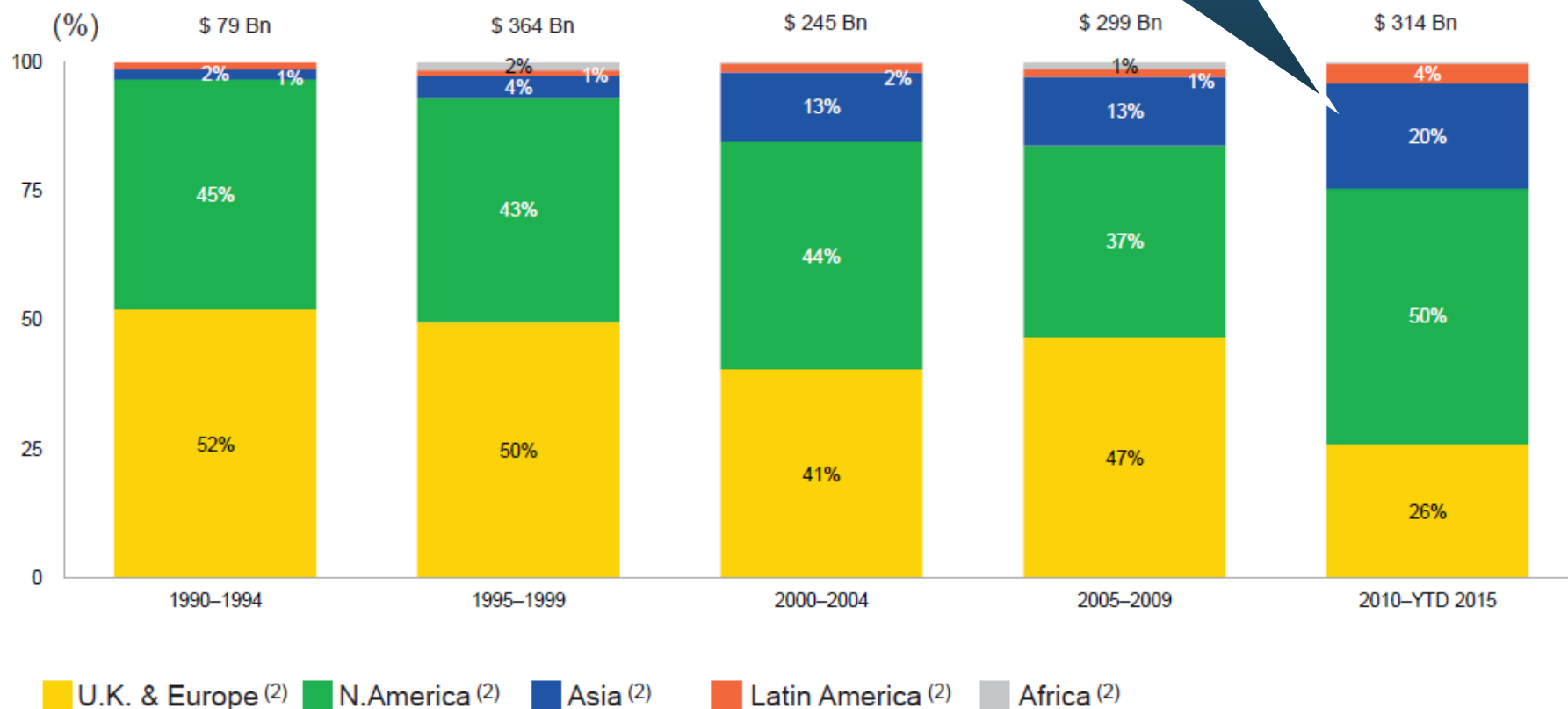
Notes

1. Split based on target's region
2. Values exclude assumed liabilities

Source: Thomson Reuters as of Oct. 2015 from Geneva Association Newsletter *Insurance and Finance*, Jan. 2016, presentation "*Facts vs. Sentiment: Deals in the Insurance Sector*," by Aviva CEO Mark Wilson.

M&A Activity Has Shifted Away from Europe and Towards Asia and N. America

Asian, N. American
deal volumes were up
sharply in 2015

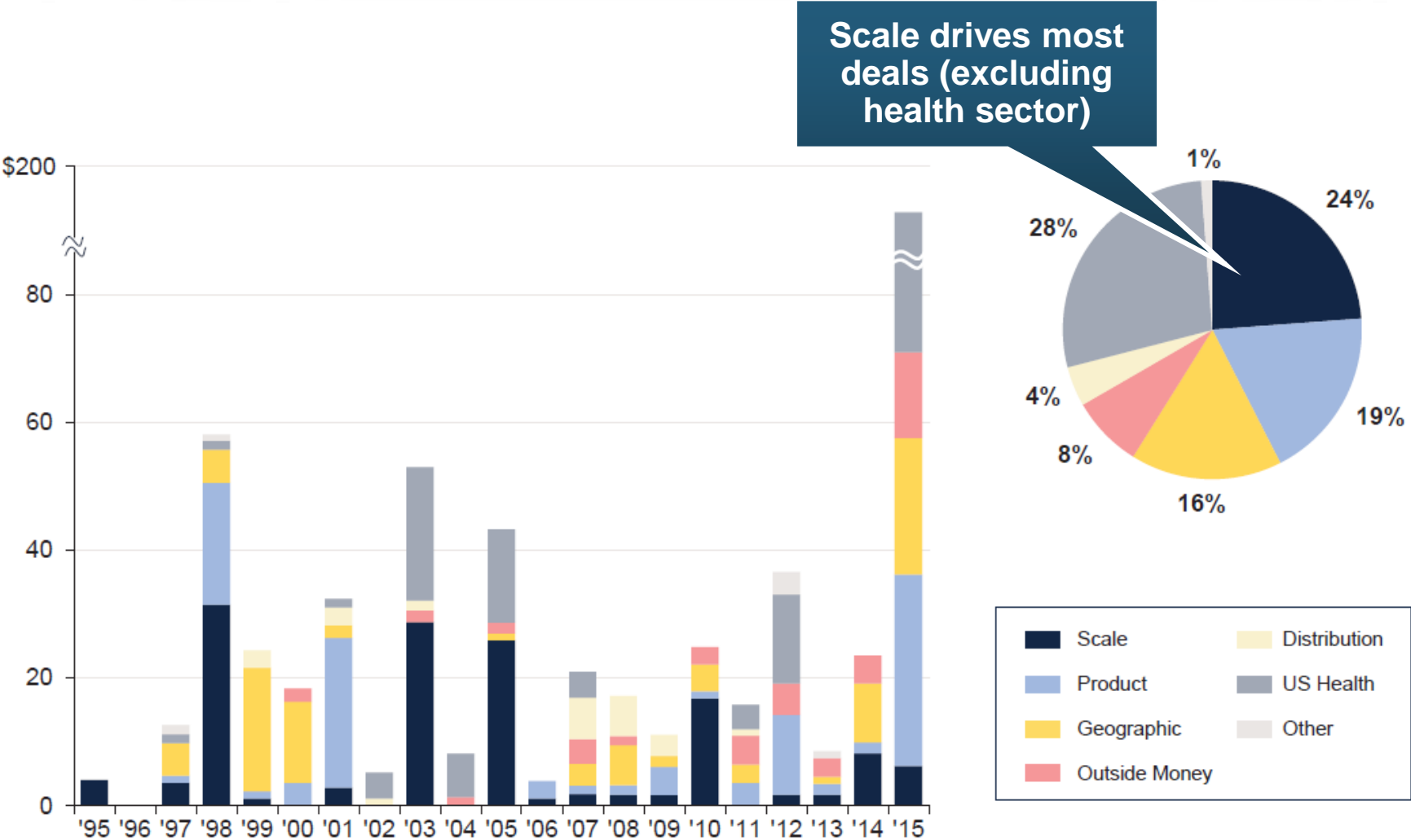


Notes

1. Split based on target's region
2. Values exclude assumed liabilities

Source: Thomson Reuters as of Oct. 2015 from Geneva Association Newsletter *Insurance and Finance*, Jan. 2016, presentation "*Facts vs. Sentiment: Deals in the Insurance Sector*," by Aviva CEO Mark Wilson.

M&A: Deal Rationale by Dollar Amount

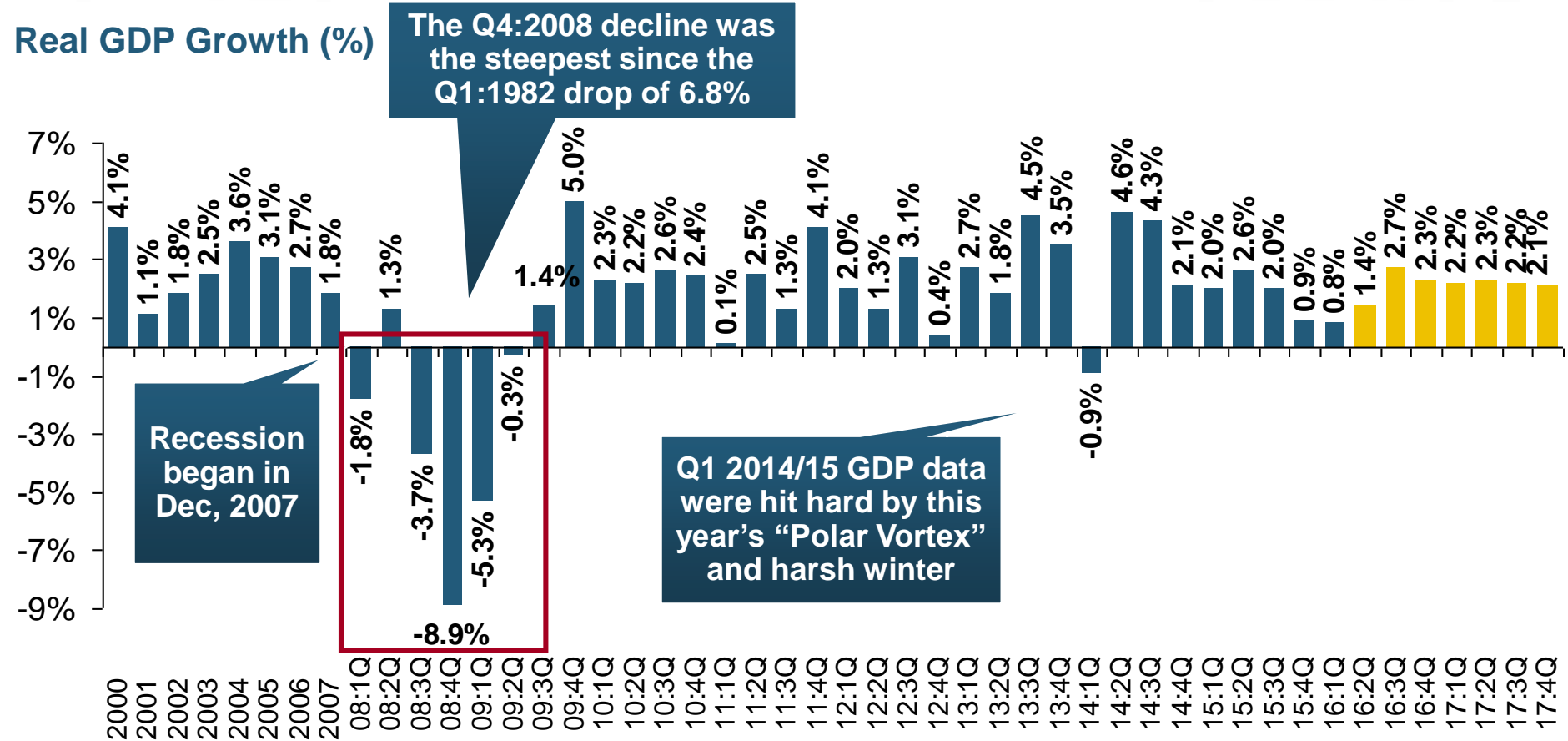


Source: SNL Financial and WCMA estimates from Geneva Association Newsletter *Insurance and Finance*, Jan. 2016, presentation “What is the Logic Behind Consolidation? And Does It Create Value? A View from Outside,” by Brian Shea, Head of Willis Capital Markets & Advisory Europe (WCMA).

Some Key Drivers in the US Economy

**Economic Factors Driving
Exposure Growth and
Insurer Performance**

US Real GDP Growth*



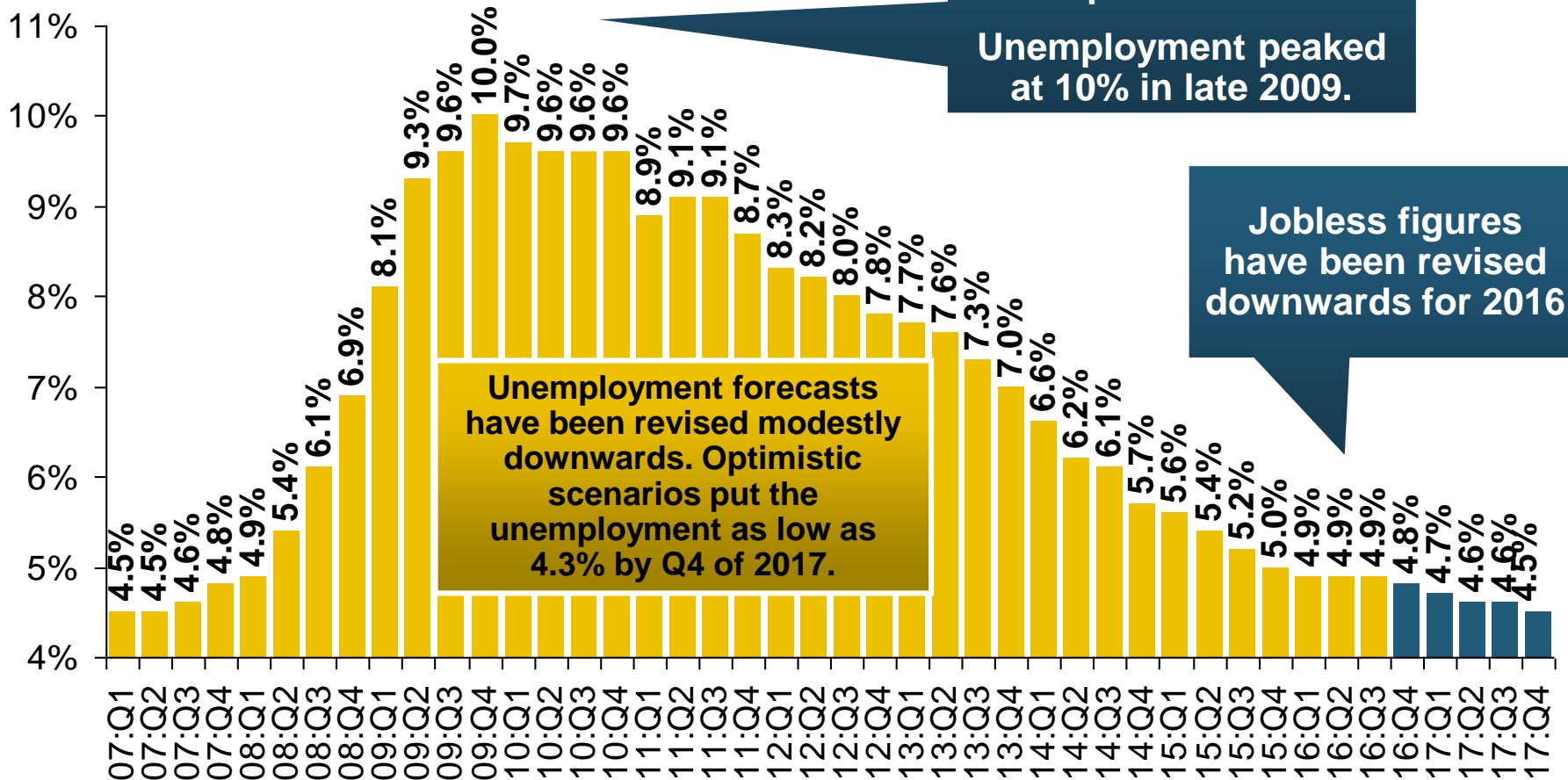
GDP Growth Is Expected to Continue at a Steady, Albeit Moderate Pace that Gradually Benefits the Economy Broadly

* Estimates/Forecasts from Blue Chip Economic Indicators.

Source: US Department of Commerce, Blue Economic Indicators 10/16; Insurance Information Institute.

US Unemployment Rate Forecast

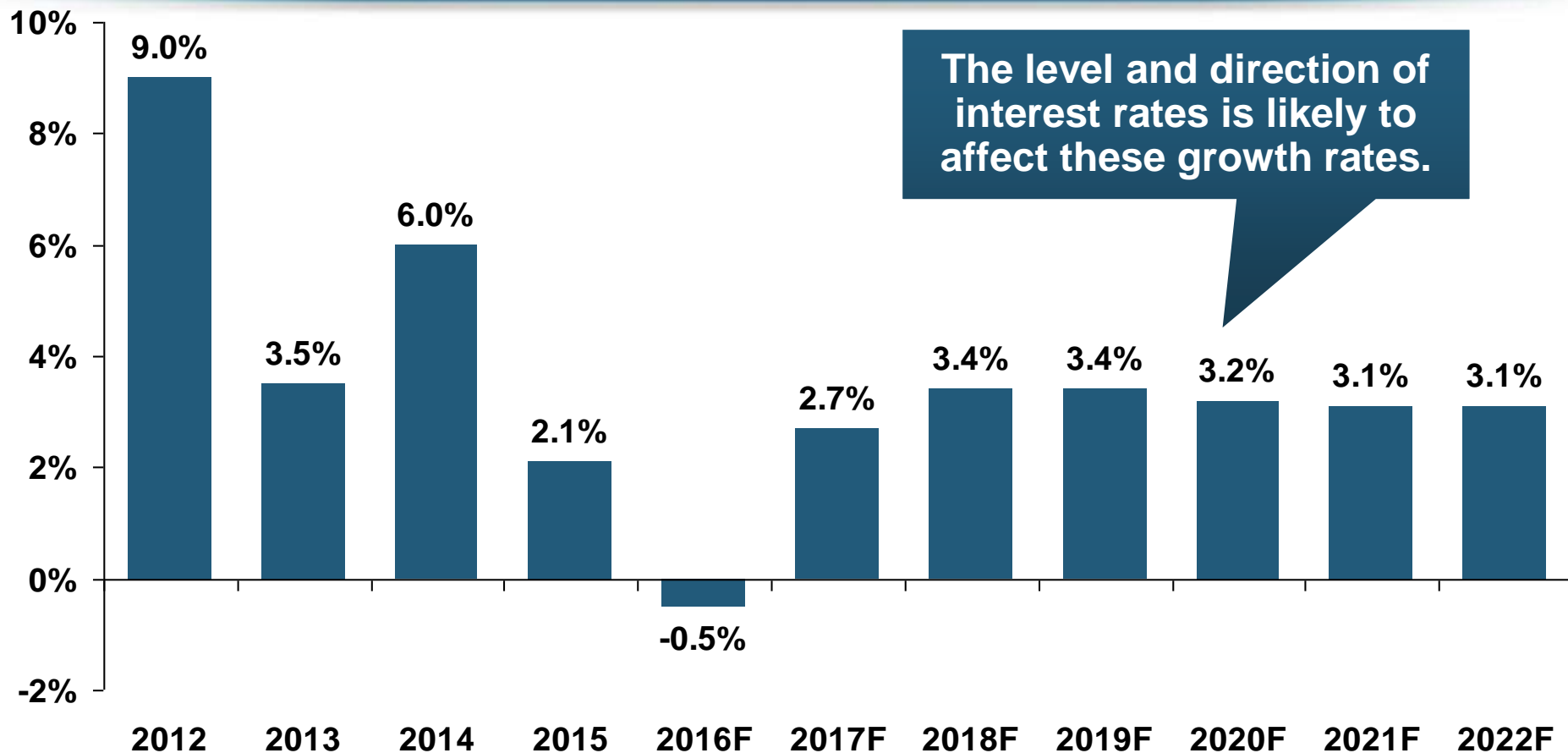
2007:Q1 to 2017:Q4F*



* ■ = actual; ■ = forecasts

Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators (10/16 edition); Insurance Information Institute.

Continued Business Investment Will Spur Commercial Exposure Growth

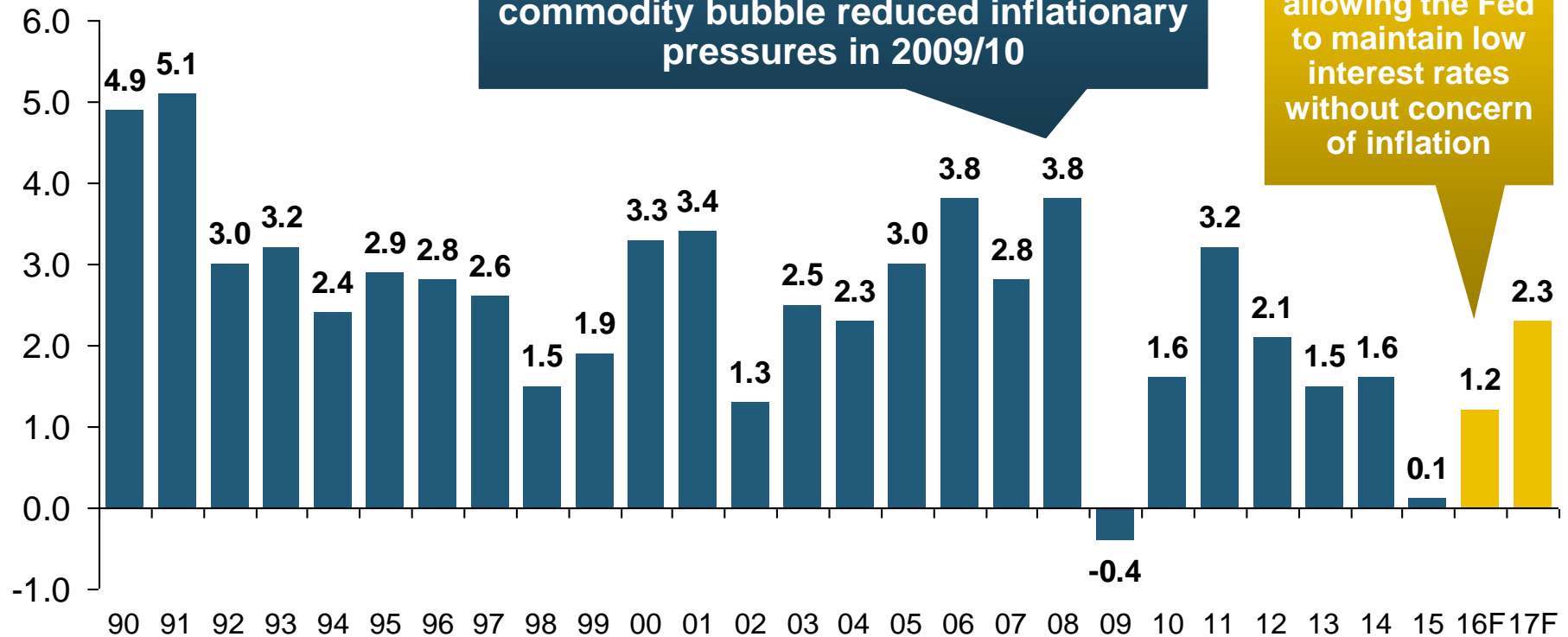


Business investment was a major drag on the economy in 2016 and adversely impacts commercial property and liability insurance exposures. Growth should begin a modest recovery in 2017.

Sources: Blue Chip Economic Indicators, 10/2016 (history and forecasts for 2016 and 2017, 10/2016 for forecasts for 2018-2022); Insurance Information Institute.

Annual Inflation Rates, (CPI-U, %), 1990–2017F

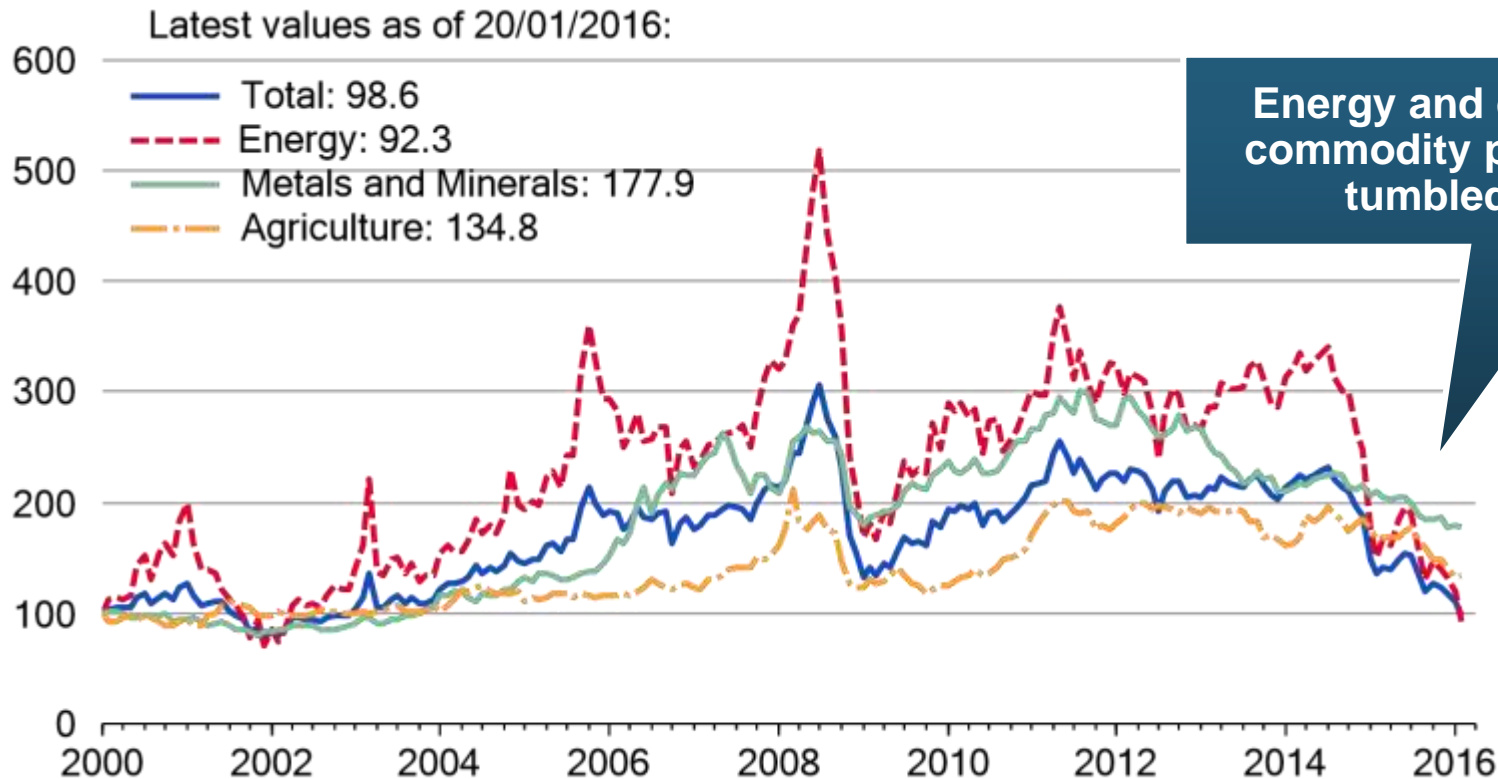
Annual Inflation Rates (%)



Slack in the U.S. economy and falling energy prices suggests that inflationary pressures should remain subdued for an extended period of times

Commodity Prices In Early 2016 Plunged to Lowest Levels Since 2000

Bank of Canada, Commodity price indices, weekly data, (indexed to Jan 2000=100)



Note: Total index includes energy, metals & minerals, agriculture, forestry and fish.

Upside for most advanced economies, but a downside for commodity exporters

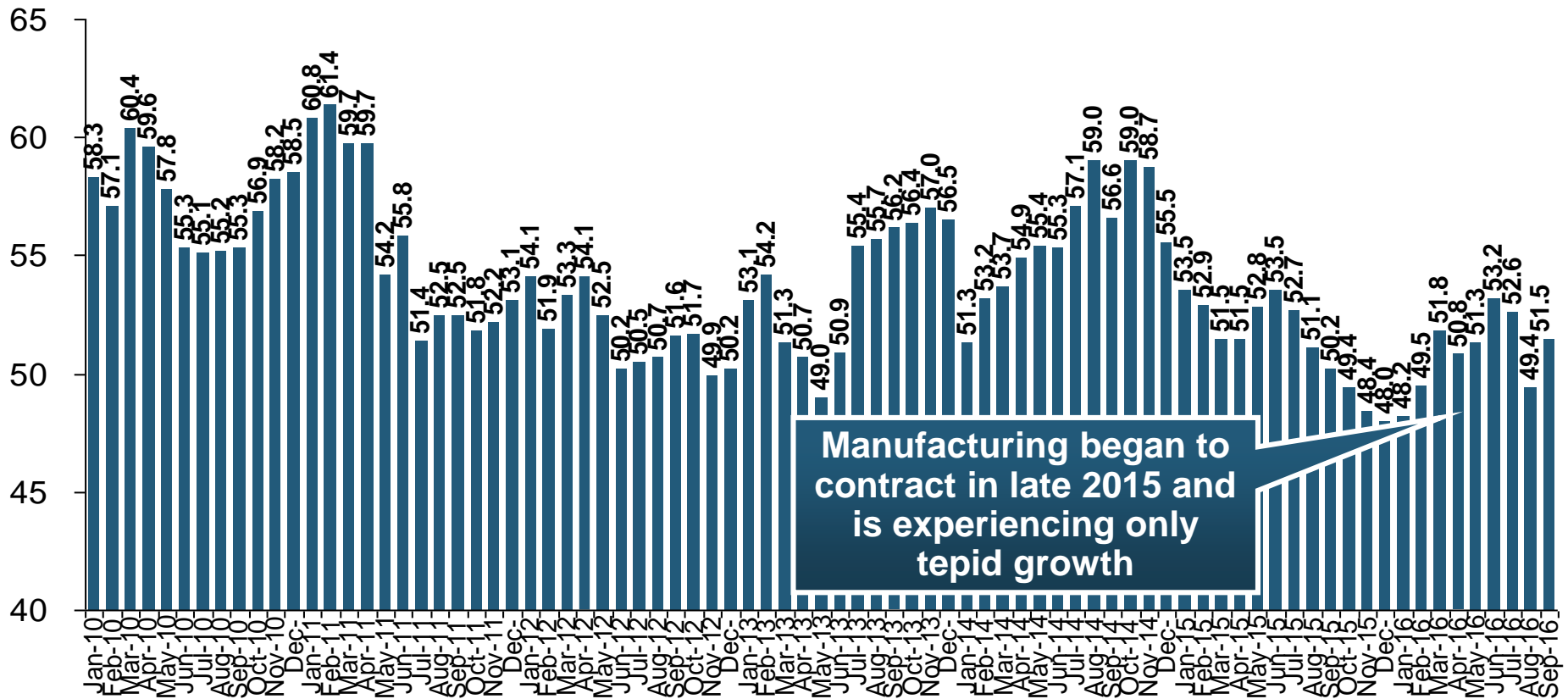
Source: Datastream from IUMI Hamburg 2016 presentation by Doug Harrell, Aspen Insurance.

MANUFACTURING SECTOR OVERVIEW & OUTLOOK

**The U.S. Manufacturing Sector Is
Being Buffeted by a High Dollar,
Weak Export Markets and
Plunging Oil Prices**

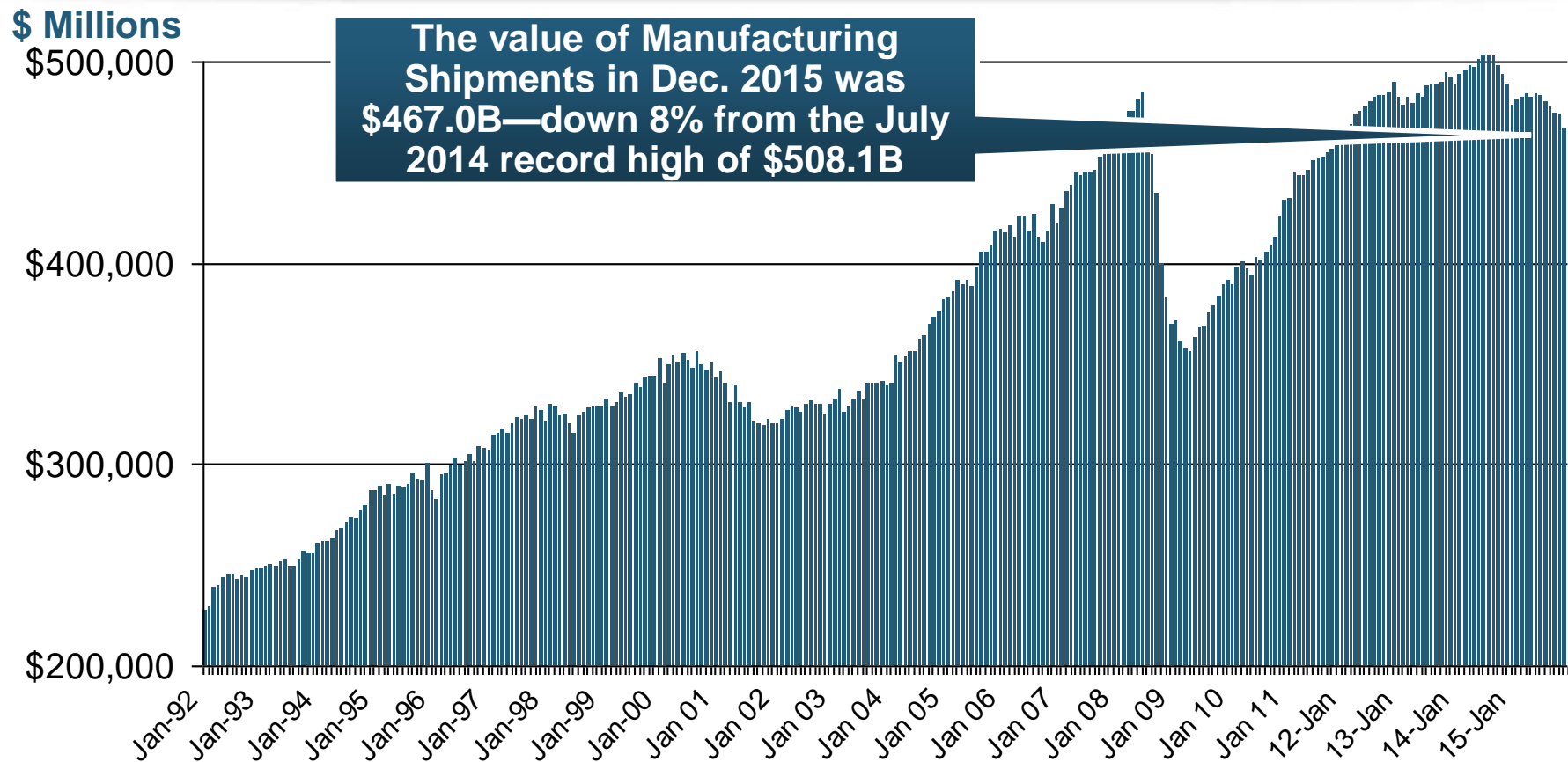
ISM Manufacturing Index (Values > 50 Indicate Expansion)

January 2010 through September 2016



The manufacturing sector expanded for 68 of the 72 months from Jan. 2010 through Dec. 2015. The Manufacturing then weakened due to weakness abroad, the strong dollar and a collapse in oil prices

Dollar Value* of Manufacturers' Shipments Monthly, Jan. 1992—December 2015



Monthly shipments in Nov. 2014 exceeded the pre-crisis (July 2008) peak but has declined in recent months. Weakness abroad, falling energy prices and a strong dollar are hurting the sector, especially exports. Manufacturing growth leads to gains in many commercial exposures: WC, Commercial Auto, Marine, Property, and various Liability Coverages.

* Seasonally adjusted; Data published Feb. 4, 2016.

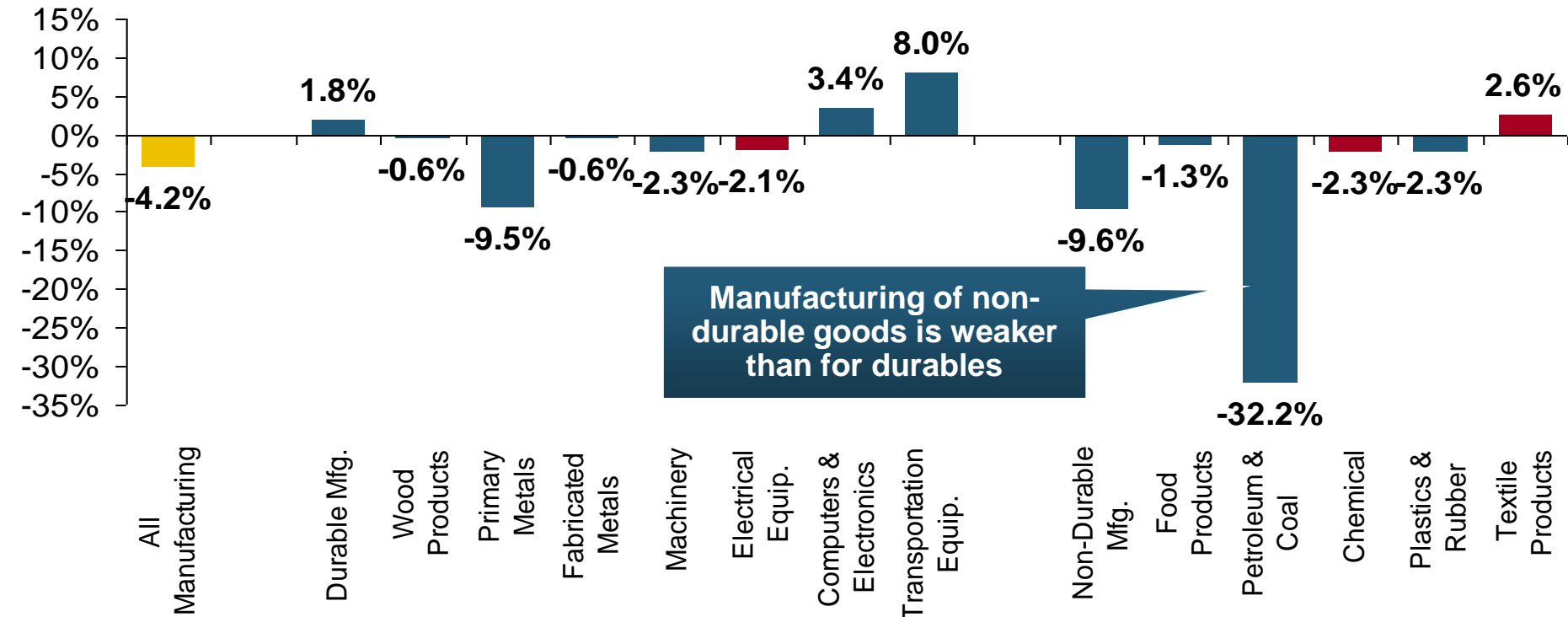
Source: U.S. Census Bureau, *Full Report on Manufacturers' Shipments, Inventories, and Orders*, <http://www.census.gov/manufacturing/m3/>

Manufacturing Growth for Selected Sectors, 2015 vs. 2014*

Growth (%)

Durables: +1.8%

Non-Durables: -9.6%



Manufacturing Is Contracting Across a Number of Sectors, Especially Petroleum. Adverse Exposure Impacts Are Likely for: WC, Commercial Property, Commercial Auto and Certain Liability Coverages

*Seasonally adjusted; Date are YTD comparing data through November 2015 to the same period in 2014.

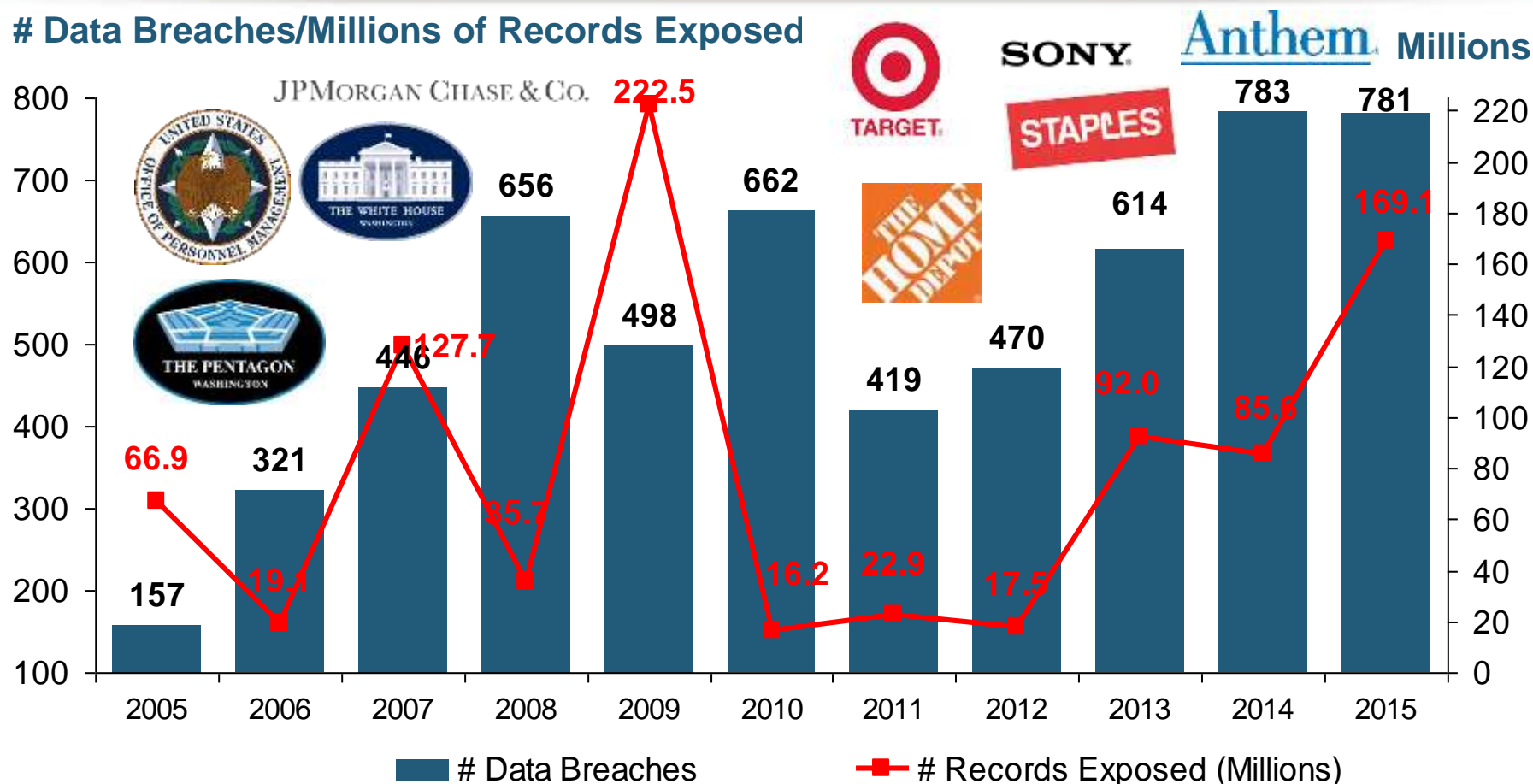
Source: U.S. Census Bureau, *Full Report on Manufacturers' Shipments, Inventories, and Orders*, <http://www.census.gov/manufacturing/m3/>

CYBER RISK AND INSURANCE

**Cyber Risk is a Rapidly Emerging
Exposure for Businesses Large and
Small in Every Industry**

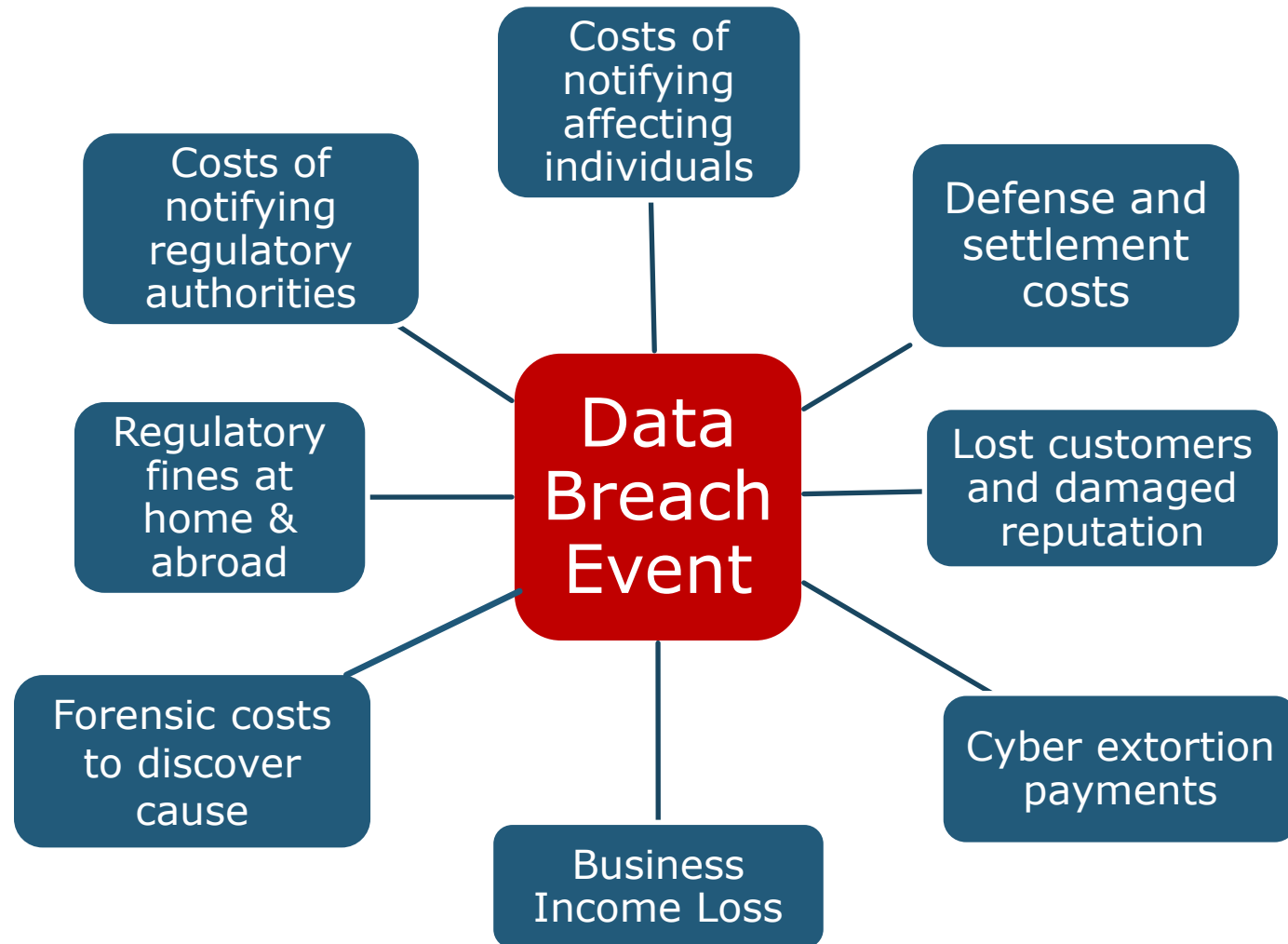
Data Breaches 2005-2015, by Number of Breaches and Records Exposed

Data Breaches/Millions of Records Exposed



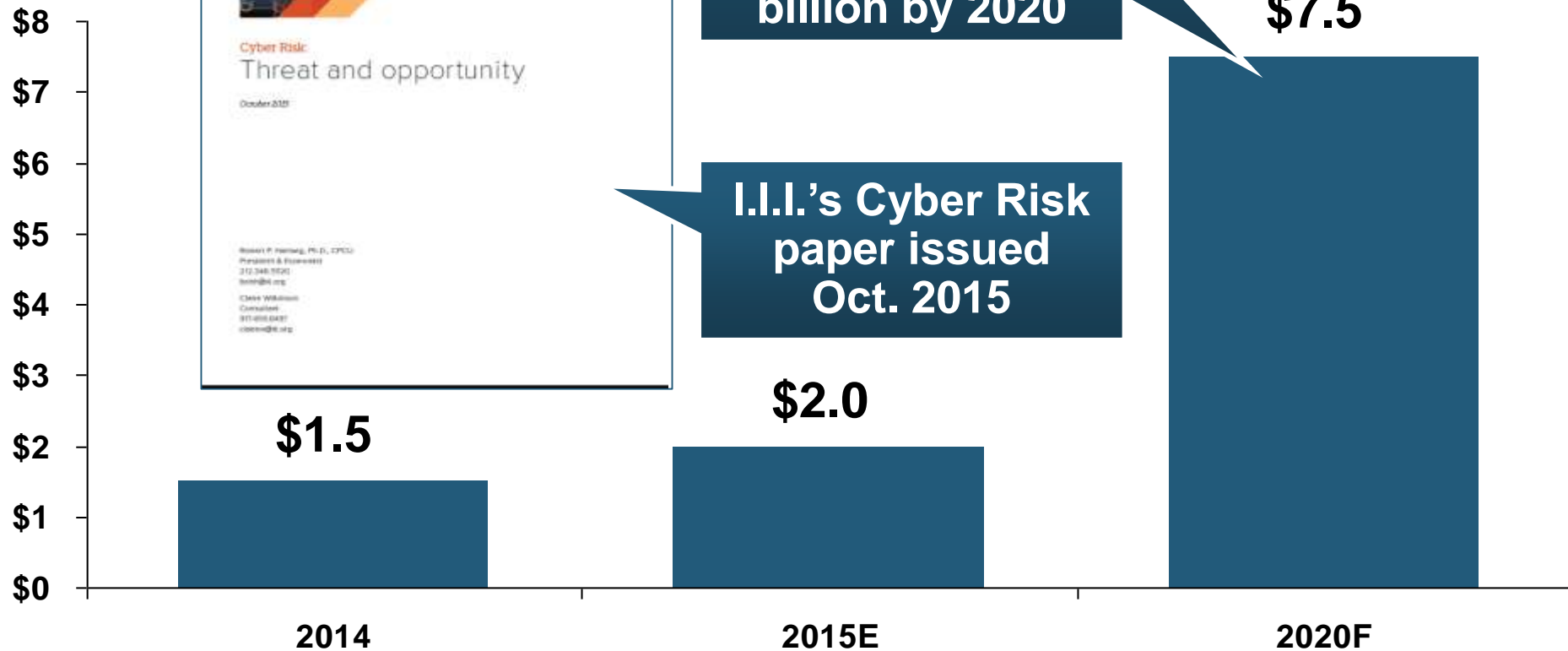
The 781 reported data breaches in 2015 was virtually unchanged from the record 783 reported in 2014. The number of exposed records soared to 169.1 million, and increase of 97.5%.

Data/Privacy Breach: Many Potential Costs Can Be Insured



Estimated Cyber Insurance Premiums Written, 2014 – 2020F

\$ Billions



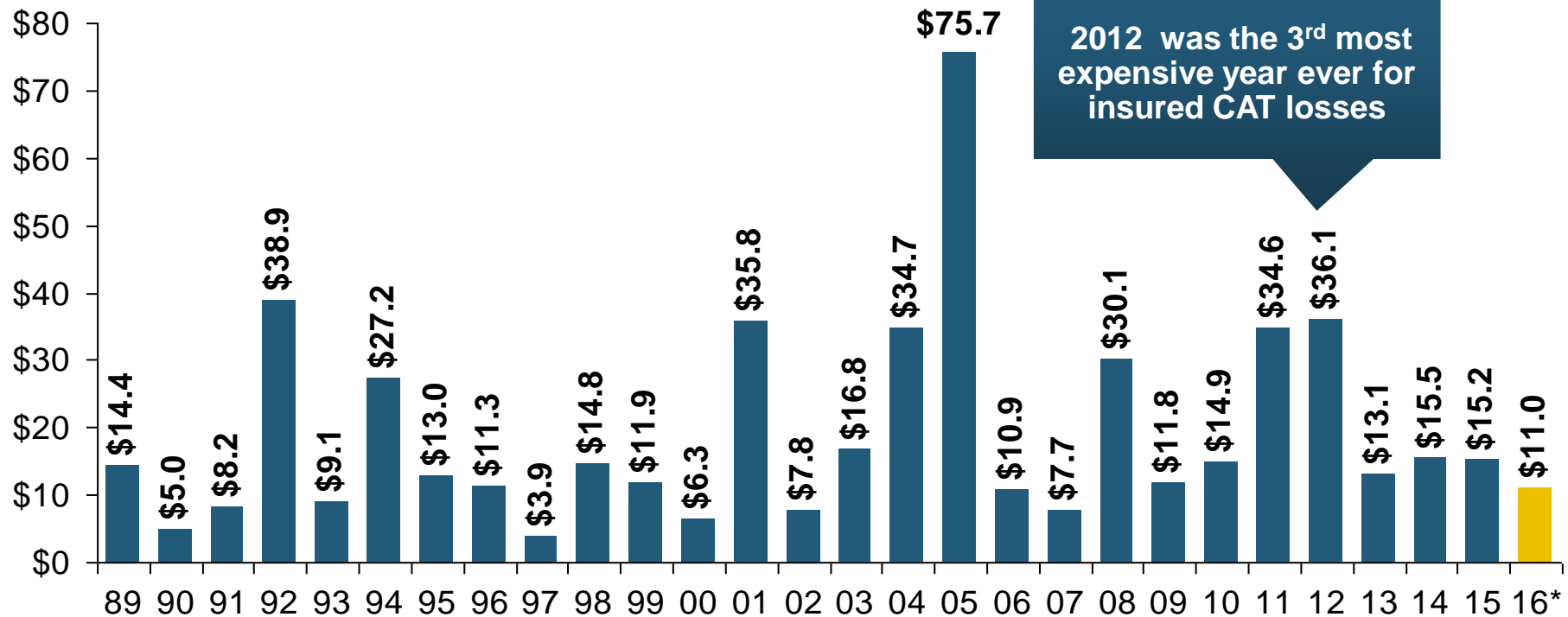
Insured Catastrophe Losses

**2013-2015 Experienced Below Average
CAT Activity After Very High CAT Losses in
2011/12**

2016 Is On Track to Surpass Recent Years

U.S. Insured Catastrophe Losses

(\$ Billions, \$ 2015)



2012 was the 3rd most expensive year ever for insured CAT losses

2013/14/15 Were Welcome Respites from 2011/12, among the Costliest Years for Insured Disaster Losses in US History. 2016 Is Off to a Costlier Start.

\$11.0B in insured CAT losses though 6/30/16

*Through 6/30/16. 2016 figure stated in 2016 dollars.

Note: 2001 figure includes \$20.3B for 9/11 losses reported through 12/31/01 (\$25.9B 2011 dollars). Includes only business and personal property claims, business interruption and auto claims. Non-prop/BI losses = \$12.2B (\$15.6B in 2011 dollars.)

Sources: Property Claims Service/ISO; Insurance Information Institute.

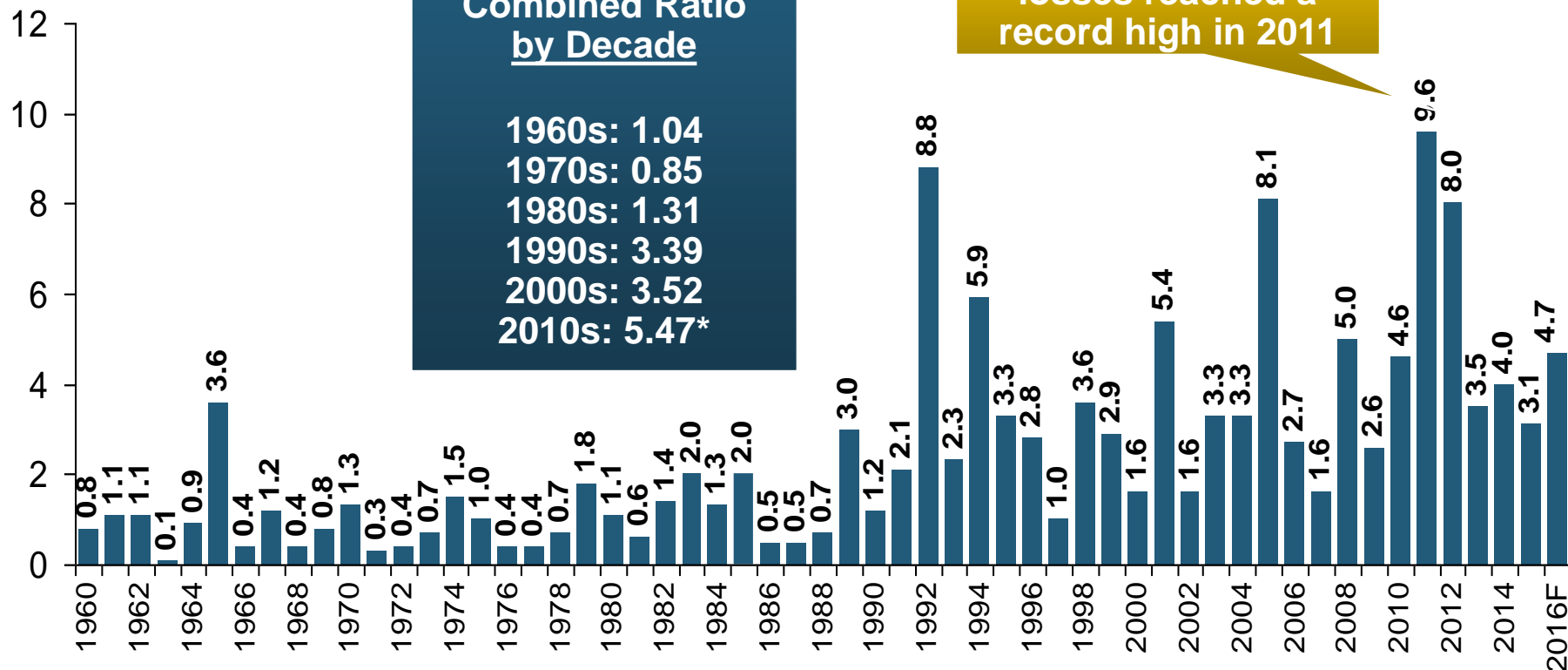
Combined Ratio Points Associated with Catastrophe Losses: 1960 – 2016F*

Combined Ratio Points

Avg. CAT Loss Component of the Combined Ratio by Decade

1960s: 1.04
1970s: 0.85
1980s: 1.31
1990s: 3.39
2000s: 3.52
2010s: 5.47*

Catastrophe losses as a share of all losses reached a record high in 2011



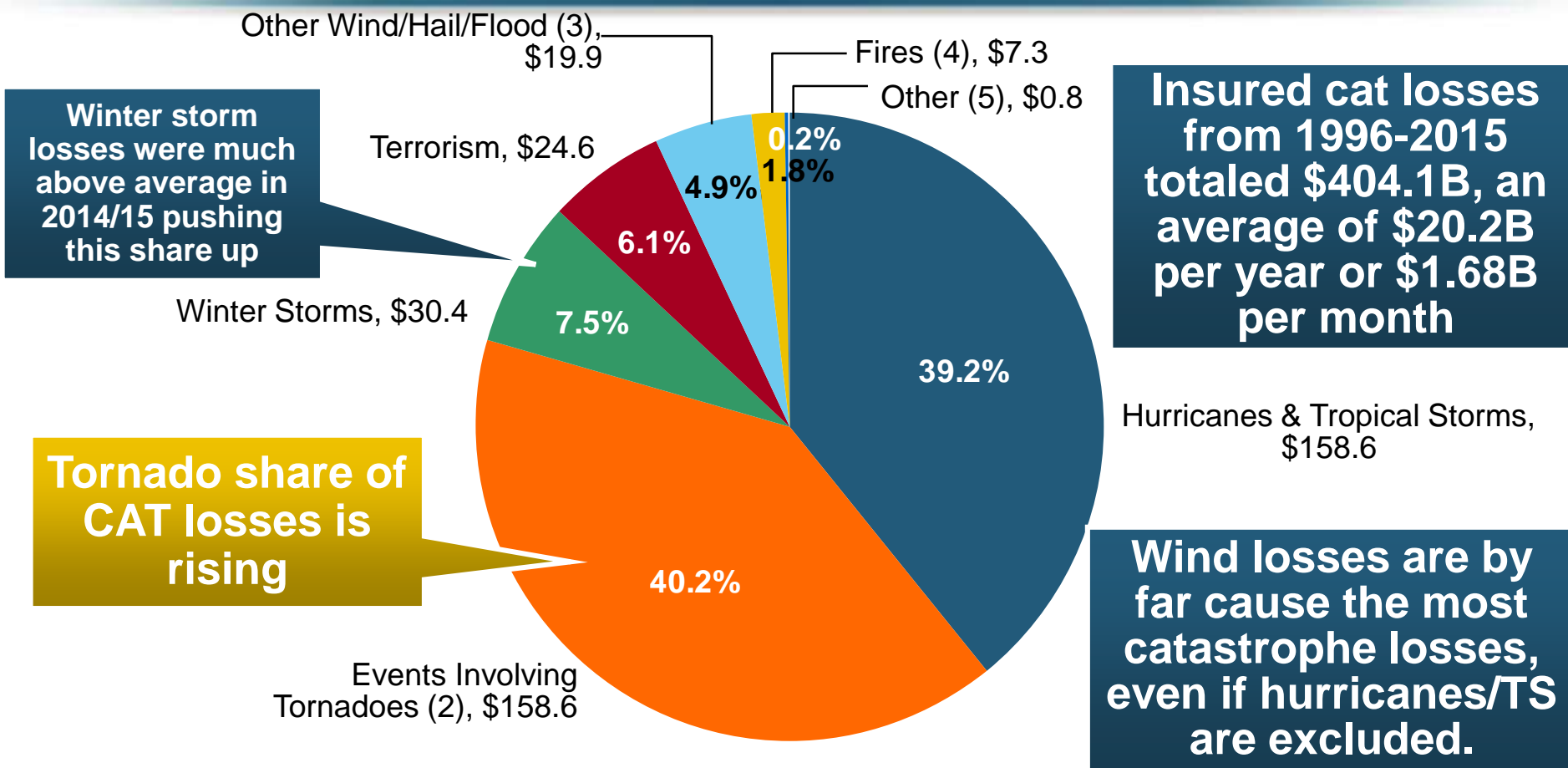
The Catastrophe Loss Component of Private Insurer Losses Has Increased Sharply in Recent Decades

*2010s represent 2010-2015.

Notes: Private carrier losses only. Excludes loss adjustment expenses and reinsurance reinstatement premiums. Figures are adjusted for losses ultimately paid by foreign insurers and reinsurers.

Source: ISO (1960-2009); A.M. Best (2010-16E) Insurance Information Institute.

Inflation Adjusted U.S. Catastrophe Losses by Cause of Loss, 1996–2015¹

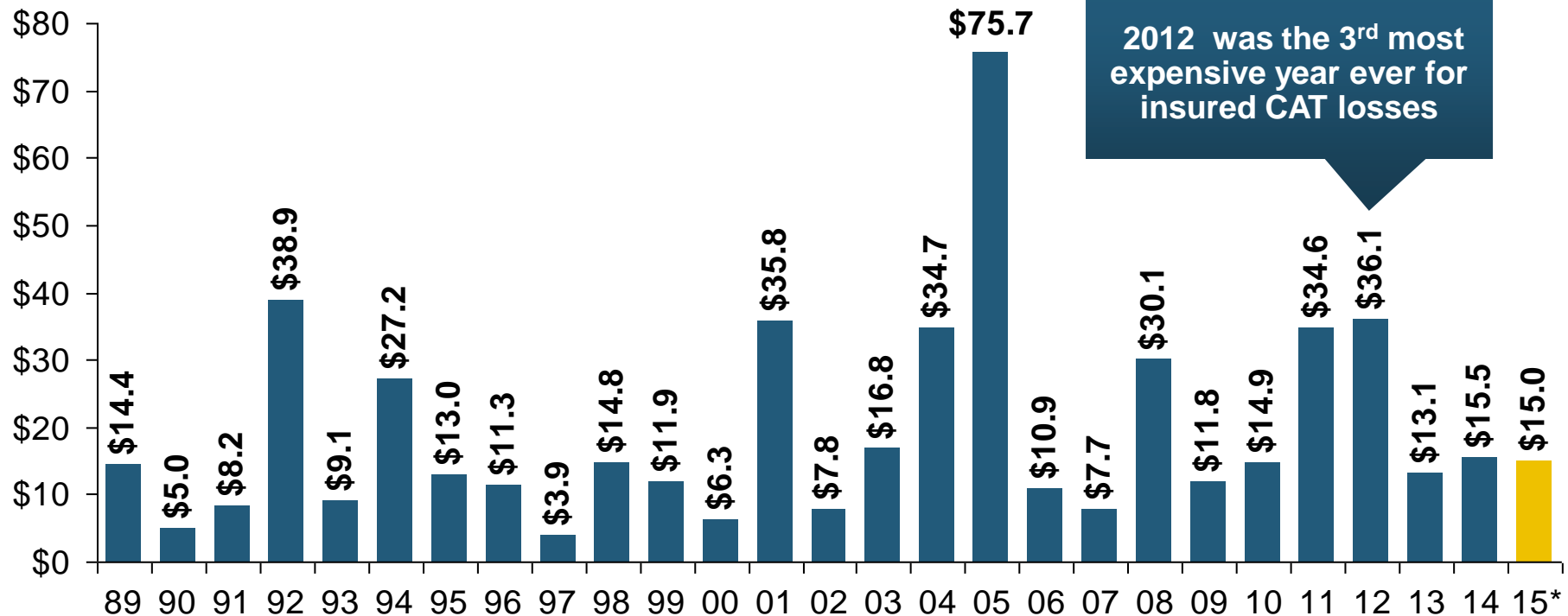


1. Catastrophes are defined as events causing direct insured losses to property of \$25 million or more in 2015 dollars.
2. Excludes snow.
3. Does not include NFIP flood losses
4. Includes wildland fires
5. Includes civil disorders, water damage, utility disruptions and non-property losses such as those covered by workers compensation.

Source: ISO's Property Claim Services Unit.

U.S. Insured Catastrophe Losses

(\$ Billions, \$ 2015)



2012 was the 3rd most expensive year ever for insured CAT losses

2013/14 Were Welcome Respite from 2011/12, among the Costliest Years for Insured Disaster Losses in US History. Longer-term Trend is for more—not fewer—Costly Events

\$15B in insured CAT losses though 12/31/15 (est.)

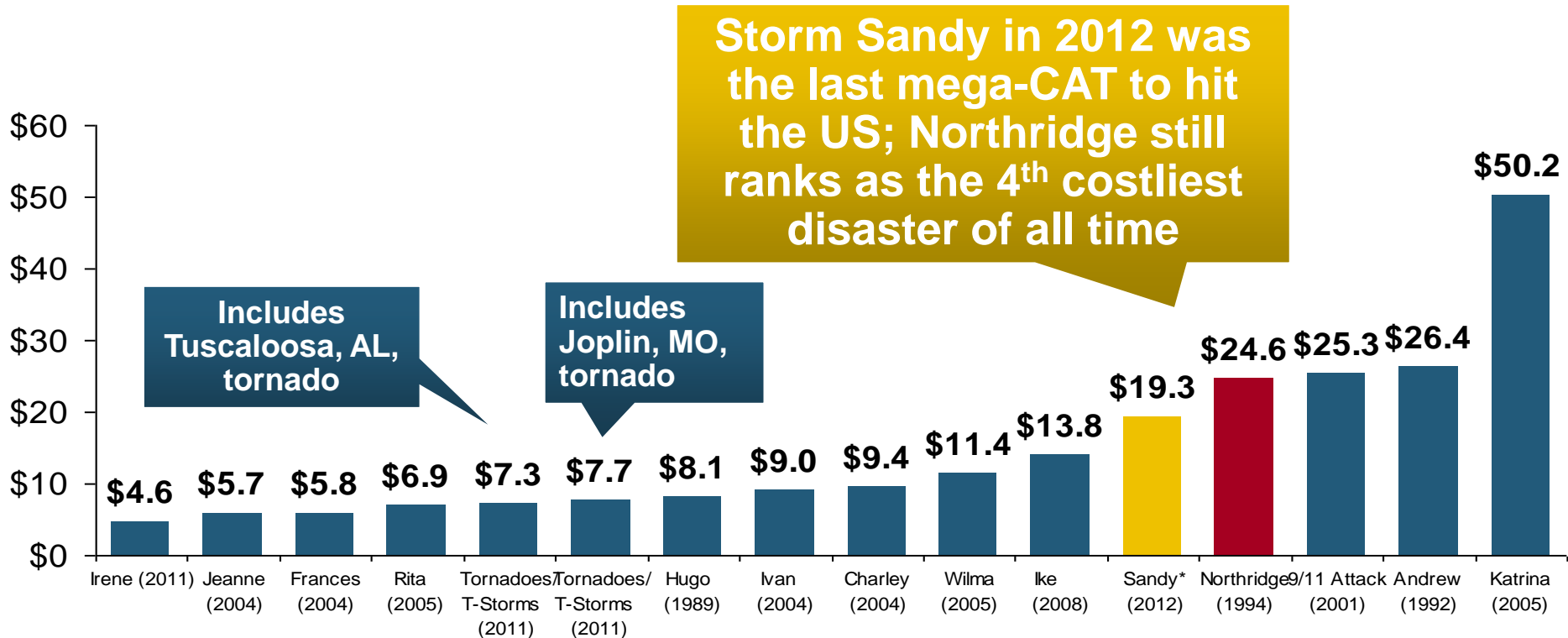
*Estimate through 12/31/15 in 2015 dollars.

Note: 2001 figure includes \$20.3B for 9/11 losses reported through 12/31/01 (\$25.9B 2011 dollars). Includes only business and personal property claims, business interruption and auto claims. Non-prop/BI losses = \$12.2B (\$15.6B in 2011 dollars.)

Sources: Property Claims Service/ISO; Insurance Information Institute.

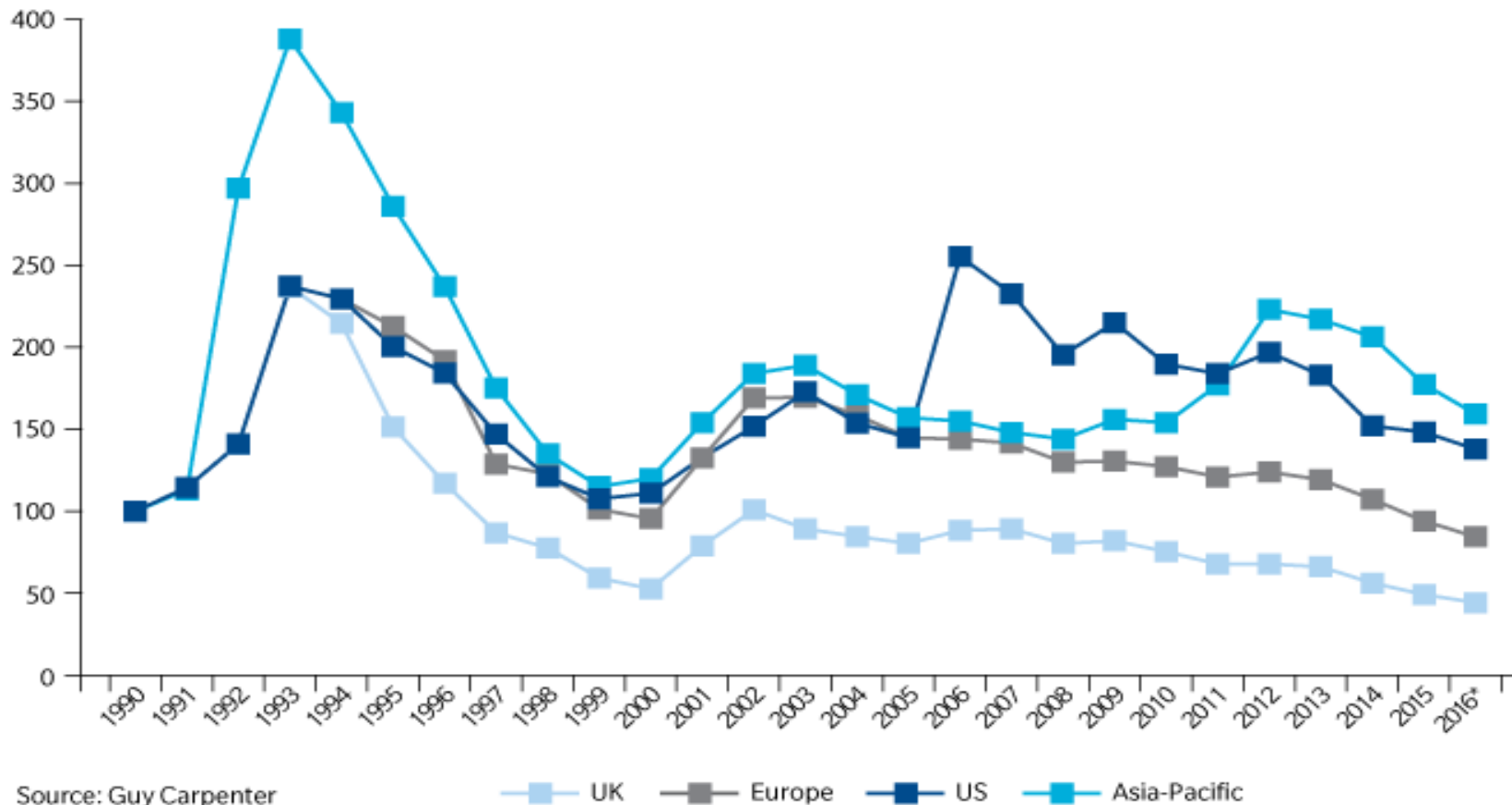
Top 16 Most Costly Disasters in U.S. History—Katrina Still Ranks #1

(Insured Losses, 2014 Dollars, \$ Billions)



12 of the 16 Most Expensive Events in US History Have Occurred Since 2004

Regional Property Catastrophe ROL Index: 1990 – 2016



Record traditional capacity, alternative capital and low CAT activity have pressured reinsurance prices; ROEs are down only very modestly

Alternative Capital

**New Investors Continue to Change
the Reinsurance Landscape**

Global Reinsurance Capital (Traditional and Alternative), 2006 - 2014

Total reinsurance capital reached a record \$570B in 2013, up 68% from 2008.

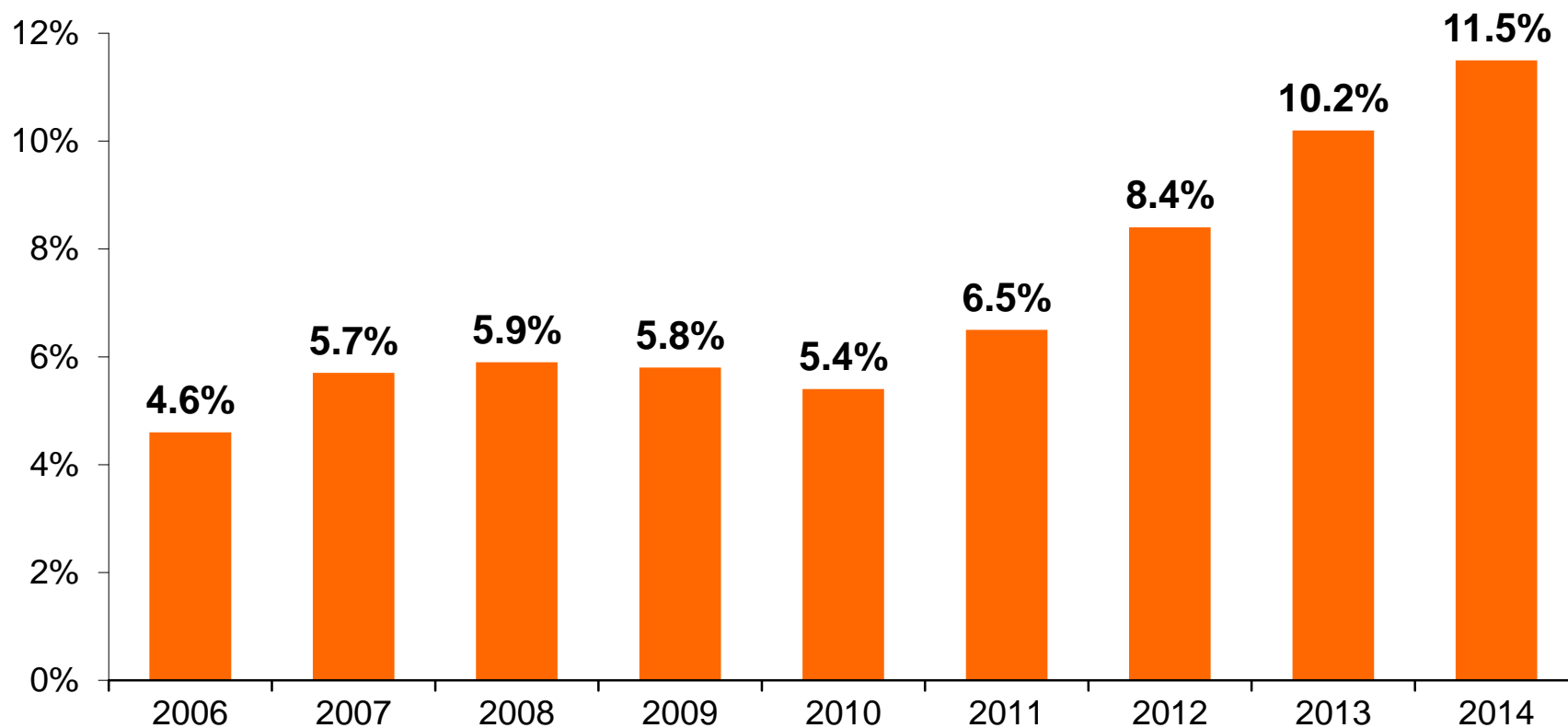


But alternative capacity has grown 210% since 2008, to \$50B. It has more than doubled in the past three years.

2014 data is as of June 30, 2014.

Source: Aon Benfield Analytics; Insurance Information Institute.

Alternative Capital as a Percentage of Traditional Global Reinsurance Capital



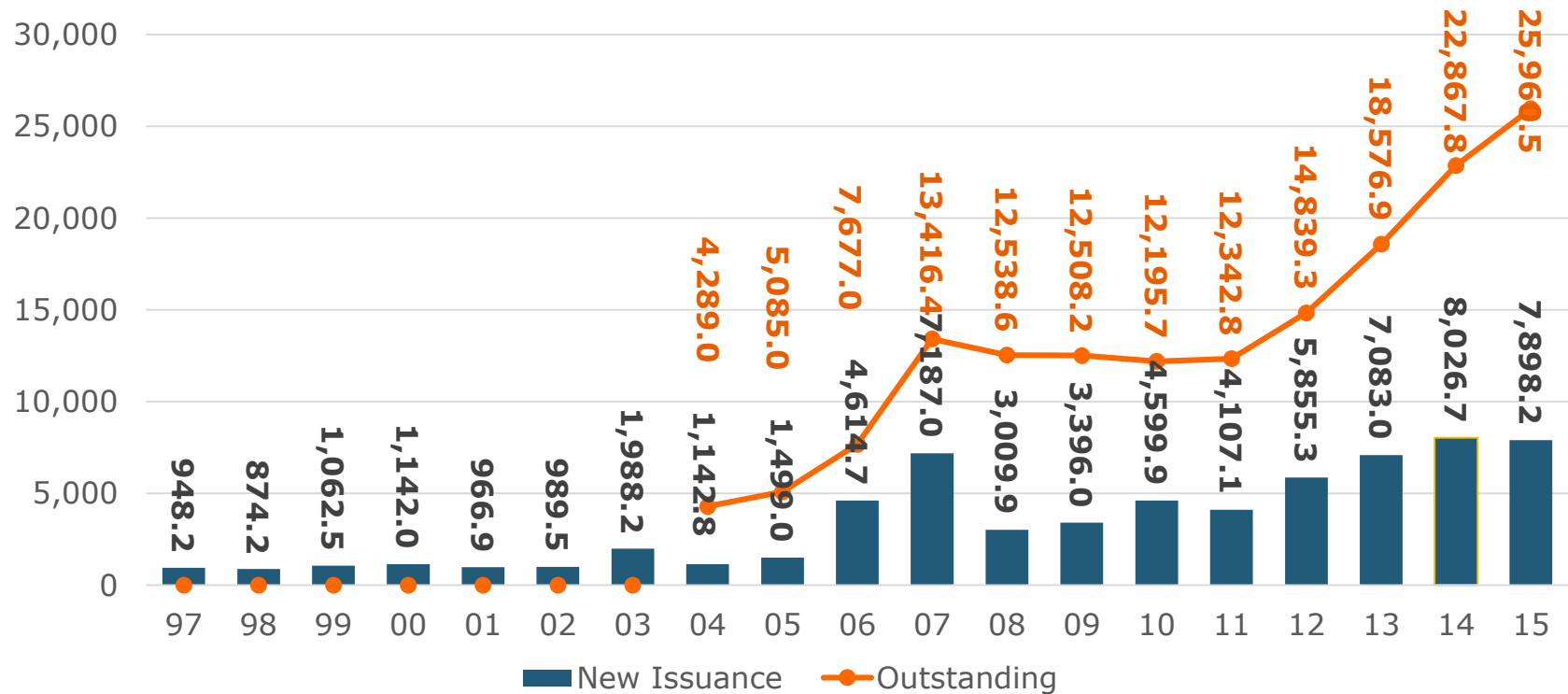
Alternative Capital's Share of Global Reinsurance Capital Has More Than Doubled Since 2010.

2014 data is as of June 30, 2014.

Source: Aon Benfield Analytics; Insurance Information Institute.

Catastrophe Bond Issuance and Outstanding: 1997-2015

Risk Capital Amount (\$ Millions)



Cat Bond Issuance Declined Slightly in 2015 from 2014's Record Pace. Lower Yields on Bonds Explain Some of the Contraction.

Insurance Information Institute Online:

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and your attention!*

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