

Cement Outlook: 2007



NESMEA Workshop
Newark, DE
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For the Second Straight Year Awarded Most Accurate Forecaster (GDP) by the Chicago Federal Reserve

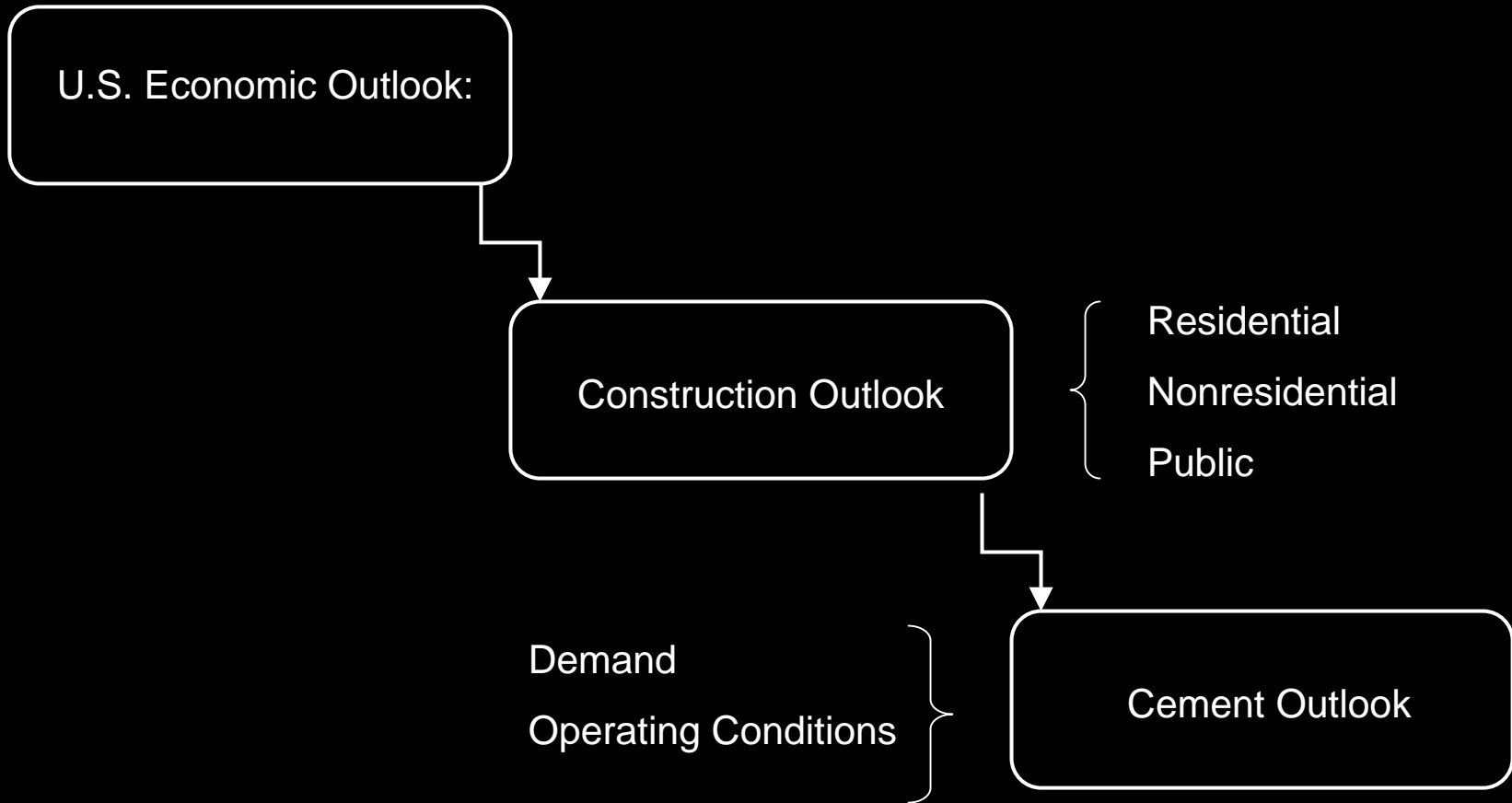
Introduction



Construction Market In Transition

- Slowing Economic Growth
 - Rising Inflation, Higher Interest Rates, High Energy Prices
- Construction Market Flattening
 - Harsher Decline in Residential
 - Slower Nonresidential & Public Recoveries
 - Higher Material Costs
 - Potential for Market Contraction in 2007
- Cement Supply Slow to Adjust to Slower Growth Environment
 - Imports May Smash Last Year's Record
 - If unchecked, could create a 6 MMT overhang by year-end.
 - Tight Market Conditions Dramatically Reduced
- Add Extra Dose of Conservatism to Forward Plans
 - Particularly true for states where total cement consumption is highly dependent on housing.
 - Prepare Contingency Plans Incorporating Downside Risks.

Key Points of Analysis



U.S. Economic Outlook



Slower Economic Growth Ahead

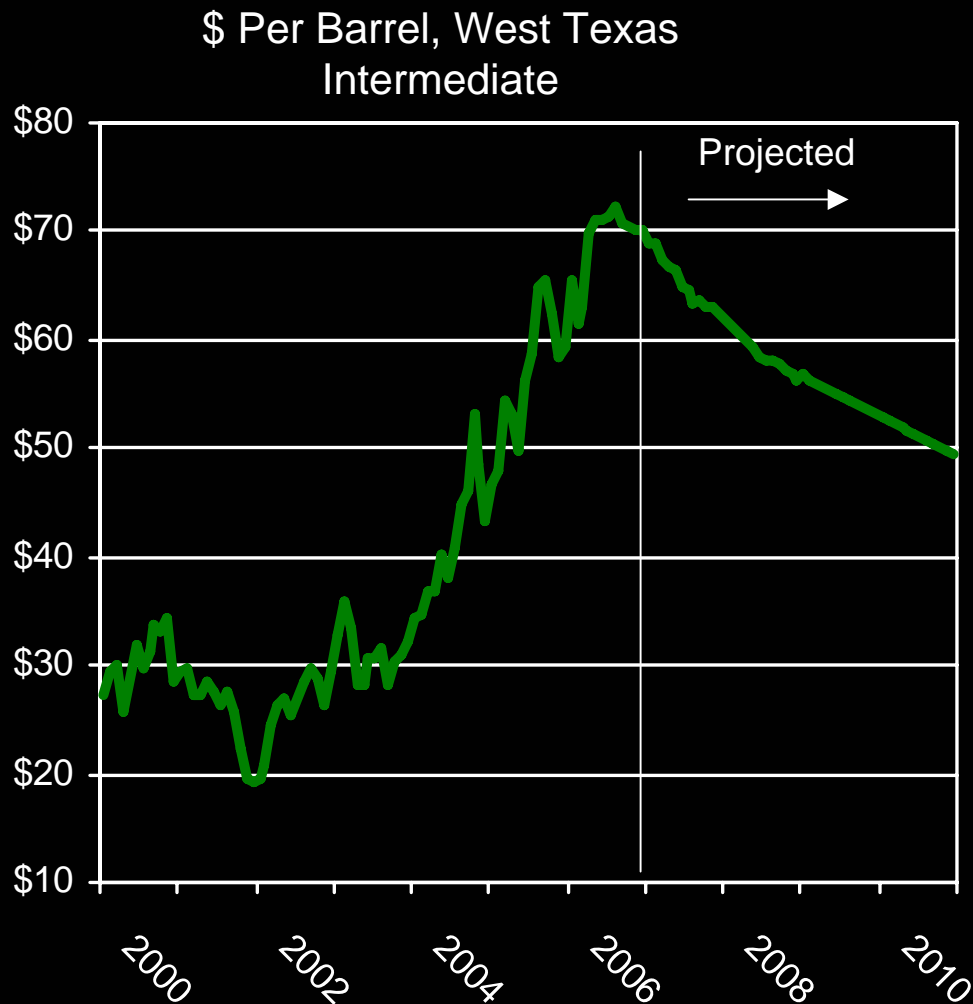
- Higher Oil Prices
- Inflation Runs Stronger
- Interest Rates Rise Faster
- Slower Net Job Creation
- Consumption Growth Slows 2006-2007.
 - Accounts for \$2 out of every \$3 total economy generates.

Energy Outlook



Slower Economic Growth: Oil Price Outlook

- **Strong International Demand**
 - Japan's Economic Recovery
 - Stronger Asian Demand: China & India
- **Supply Disruptions Continue**
 - Middle East Uncertainties, Nigeria, Venezuela
 - Iran & Uranium Enrichment
- **Structurally Weaker Dollar**
 - Higher Energy Prices
- **2006: \$68.87 per barrel WTI 2007: \$65.22**
- **Impact:** Higher oil prices raises inflation, inflationary expectations, trims growth in consumption and overall economic activity.



Slower Economic Growth: Gasoline Price Impact

- **Gasoline Prices Top \$3**
 - Seasonal patterns suggest September peak.
- **Gasoline Purchases To Account for 5.3% of Total Consumption.**
 - 2005: 4.2%, 2004: 3.6%, 2003: 3.3%
- **Steals \$125 Billion from Consumer Spending Compared to 2005**
 - Rising gasoline prices stole \$75 Billion in 2005 and \$50 Billion in 2003
- **Impact:** Going forward, consumer spending growth reduced...slower economic growth.

Estimated Annual Gasoline Spending Per Vehicle



Slower Economic Growth: Heating Oil Impact

- **Peak Heating Season Begins In November**

- Seasonal patterns suggest move to more than \$3.10 per gallon.

- **Nearly \$500 Increase Over High 2005 Levels.**

- \$1200 increase over “normal” 2004 levels.
- 2005 impacts minimized by mild winter conditions.

- **Assumes “Average” Winter.**

- Adverse impact increases with severity of winter.
- Going forward, consumer spending growth reduced...slower economic growth.

Estimated Seasonal Home Heating Costs Per Home



80% of Total Heating Bills Occur Nov - March

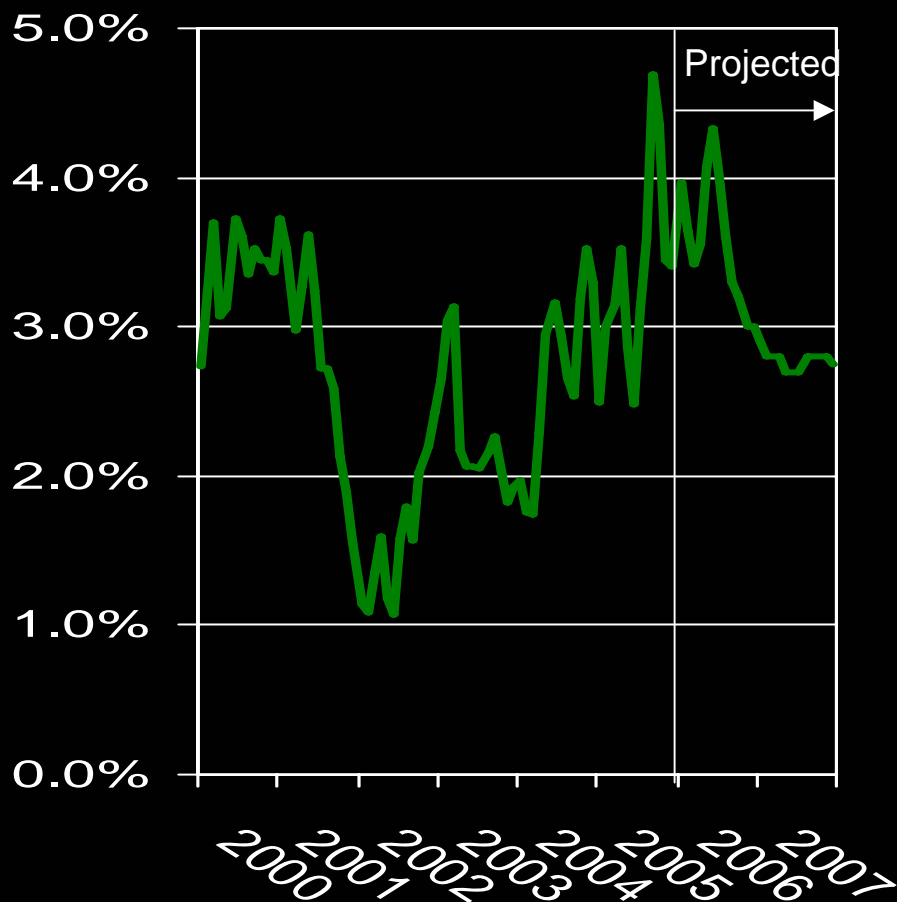
Inflation Outlook



Slower Economic Growth: Inflation Outlook

- **Higher Energy Prices Structure**
 - Still Cyclical...but...
 - Stronger Asian Demand: China & India
- **Labor Costs Rising**
 - Unemployment Rates Decline below 5%
 - Workers Cautious in Pushing for Increases
 - Productivity Growth Easing ?
- **Structurally Weaker Dollar**
 - Trade Deficit Widens
- **Structurally Higher Transportation Costs**
 - Energy & Logistical bottlenecks
- **2006: 3.6% 2007: 2.9%**
- **Impact:** Higher prices undermine consumer affordability & raise long term interest rates (mortgages)

Annual Percent Change, CPI Urban



Interest Rate Outlook



Inflationary Expectations

18 Month Moving Average, CPIU

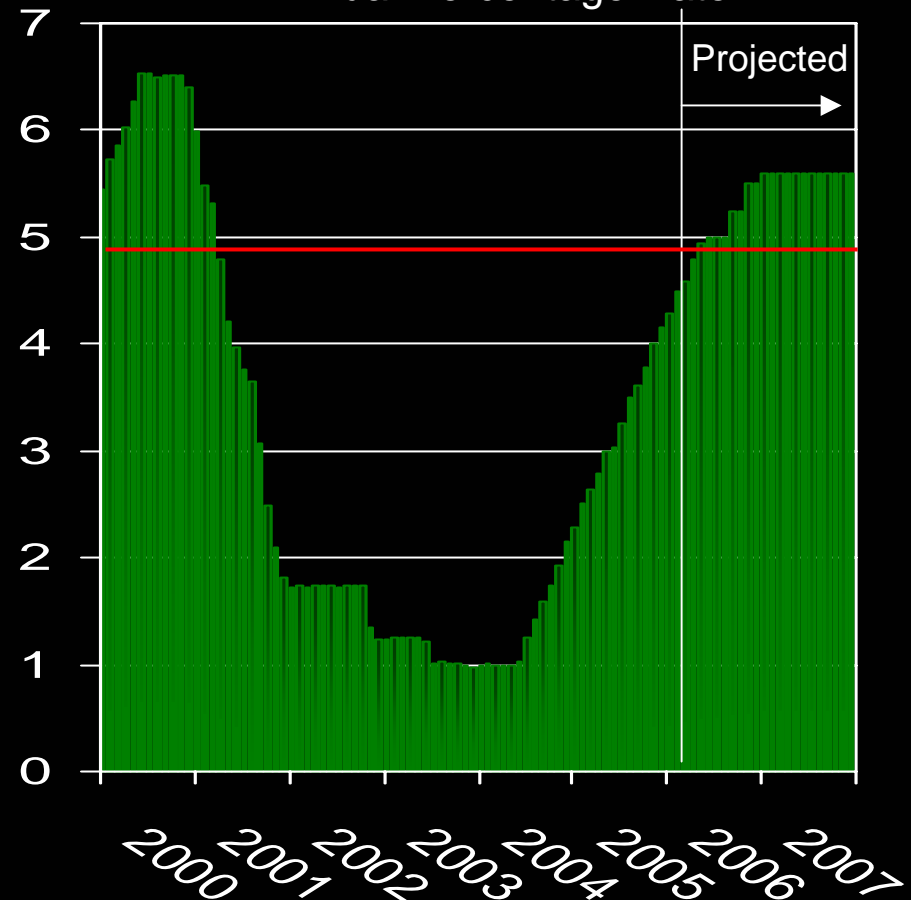


200 Basis Point Increase Since Mid-2003. When Fully Digested Implies 7%+ Mortgage Rate

Federal Reserve Policy Actions

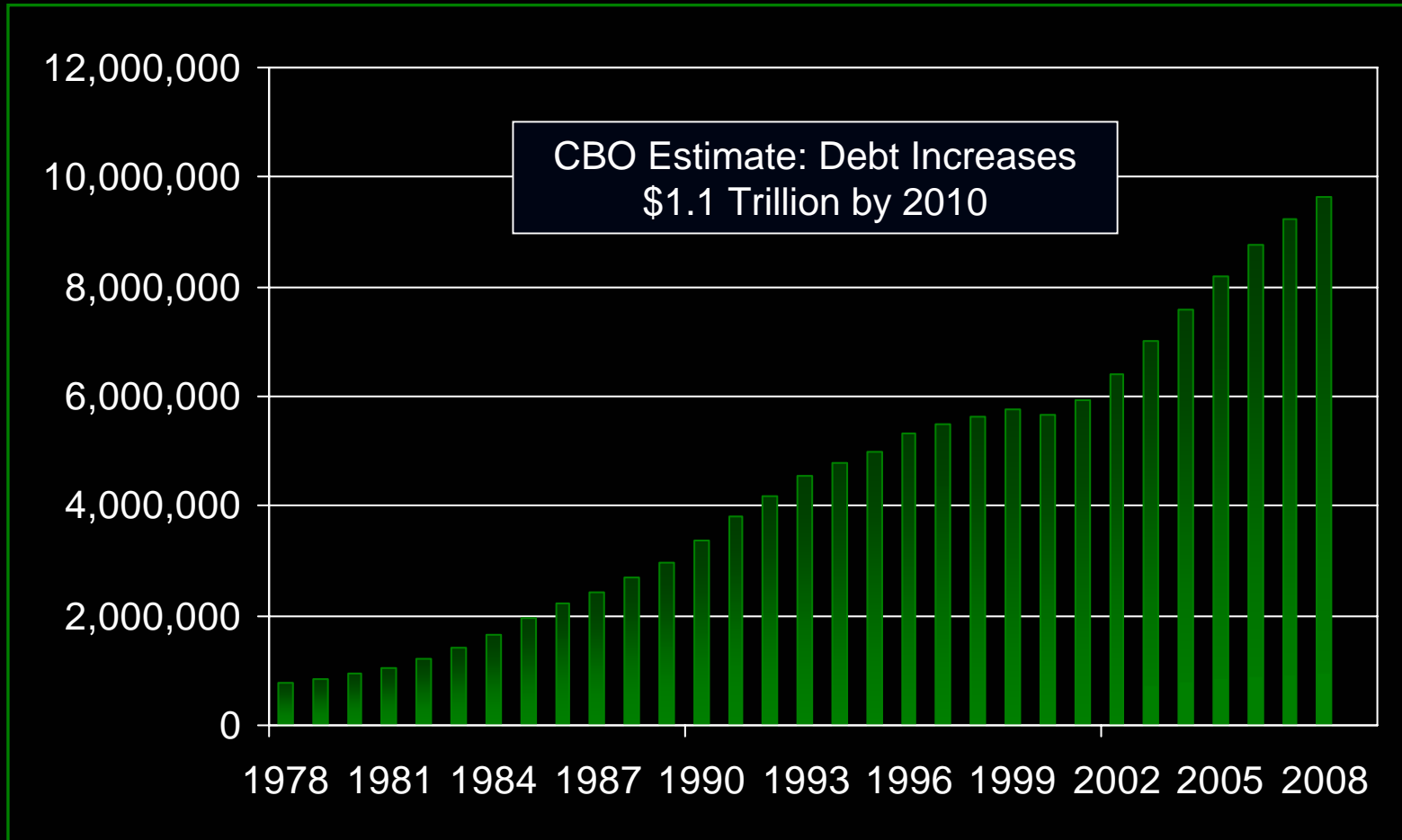
- Overall Economy & Job Growth Slowing.
- Inflation a growing concern.
 - Fed Policy: Reaction to potential future inflationary threats...not current CPI.
- Dilemma: Inflation or Growth?
 - Fed Fights Inflation!
- One more rate hike anticipated during 2006/early 2007.
 - Federal Funds to 5.5%
- Risk of Fed over-reaction.

Federal Funds Interest Rate,
Annual Percentage Rate



Total Public U.S. Debt Approaching \$10 Trillion

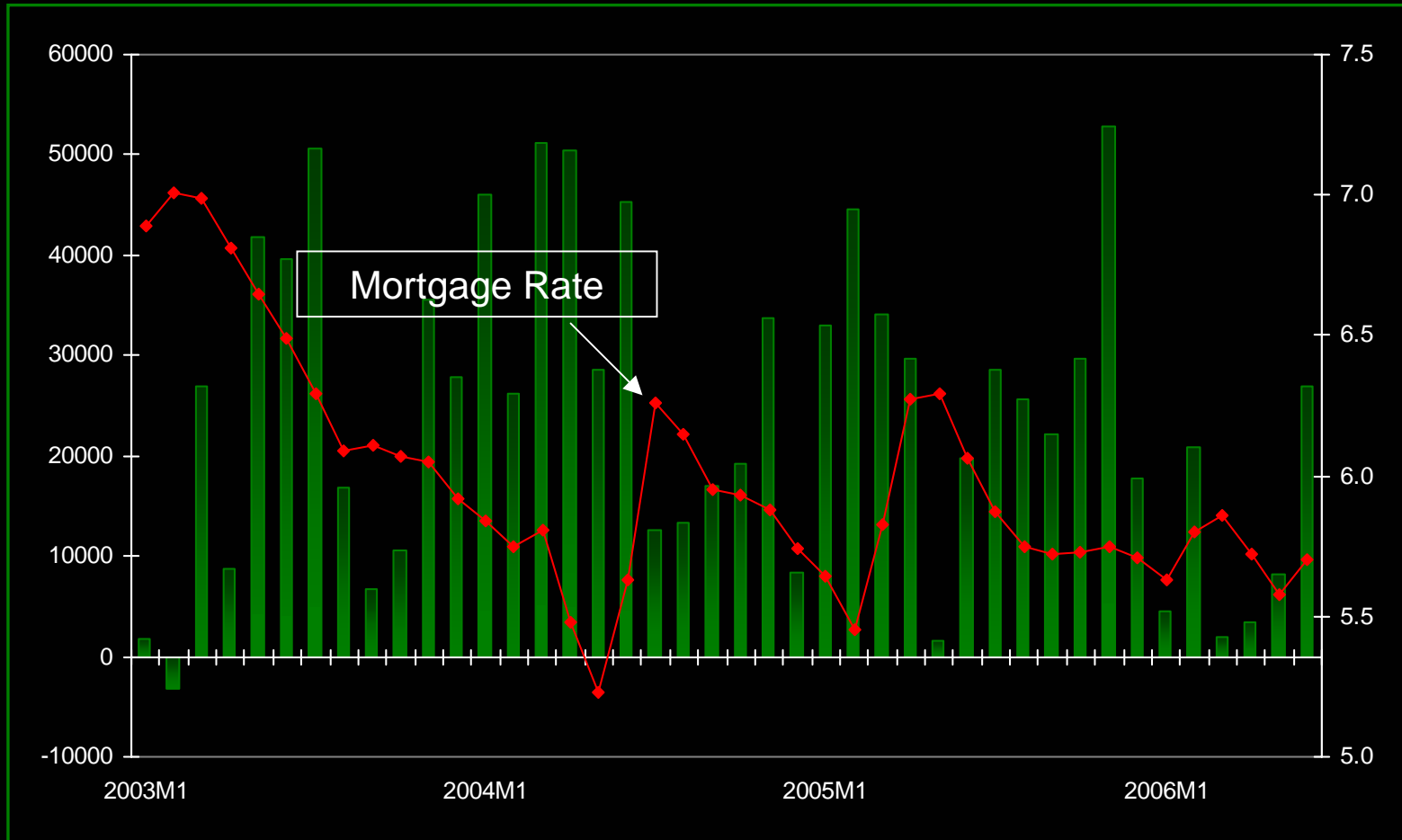
Total Public Debt, Million \$



Government Relief & Rebuilding Efforts Exceed \$250 Billion

Net Foreign Purchases: US Bonds & Notes

\$ Millions



China May Diversify its Portfolio Away from U.S.

Interest Rate Conclusions: 2007-2010

- **Higher Inflation Premiums**
 - Add to “Real” Rates
 -
- **Federal Reserve Pursues Tighter Monetary Policy**
 - New Fed Chairman demonstrates resolve
 - Favors Inflation Targeting (2%)
- **Larger Public Demand for Funds**
 - Middle East
 - New Orleans
- **Private Demand for Funds Increase**
- **Foreign Supply Slows**
 - Weak Dollar lower foreign returns
 - Competing Investment Instruments

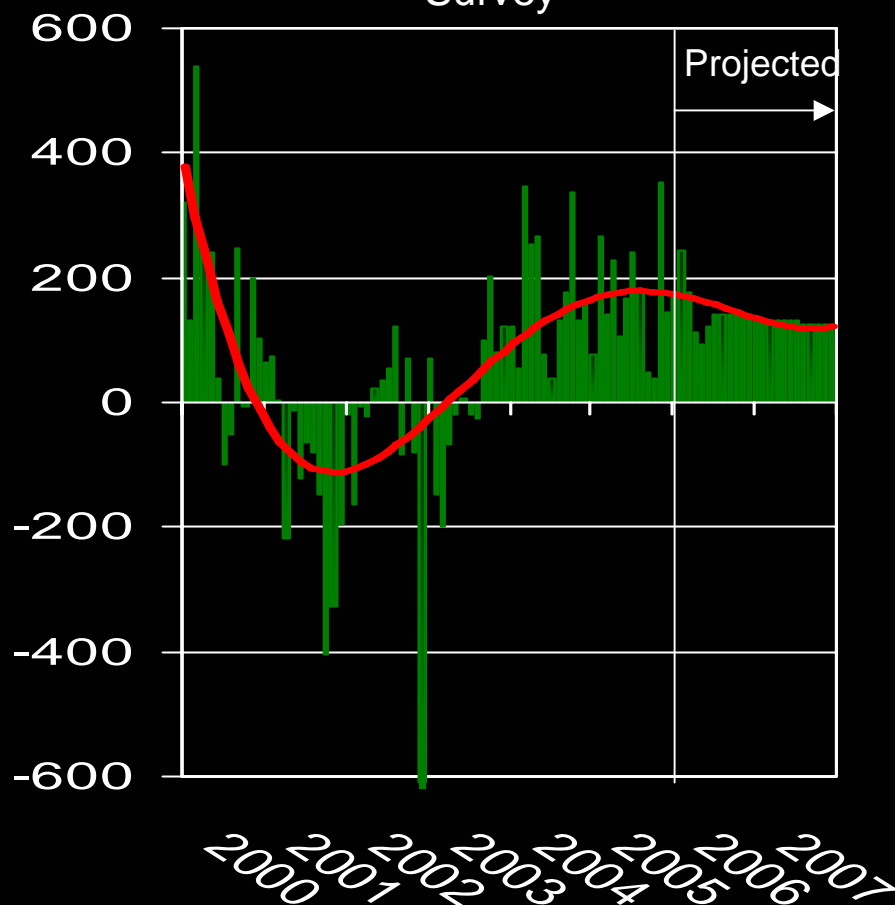
Employment Outlook



Slower Economic Growth: Labor Market Outlook

- Job growth slowing from 1st Quarter average of 176,000 net new jobs per month to 2nd Quarter averaging 110,000 net new jobs per month.
- 2006: 1.7 million 2007: 1.6 million net new jobs creation
- 2006-2008 Job creation: Estimated at 4.7 million jobs 2006-2008, compared to 6.1 million in Spring forecast.
- Unemployment rises to 4.8% year end. 2007: 5.2%
- Slow down in trend of accelerating wages by 2008.
- **Impact:** Slower consumer spending & Federal Reserve increasingly more cautious approach toward future rate hikes.

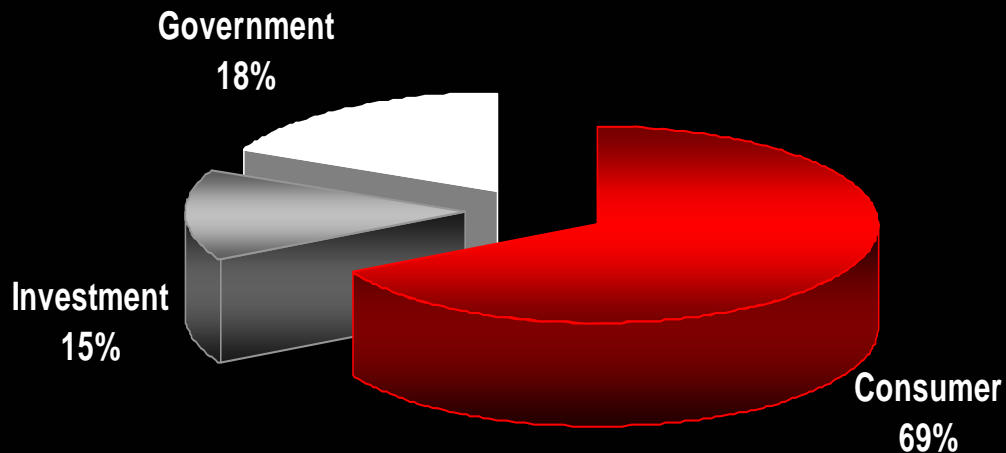
Monthly Net Job Creation, Payroll Survey



Economic Outlook



Snap Shot of Economic Activity



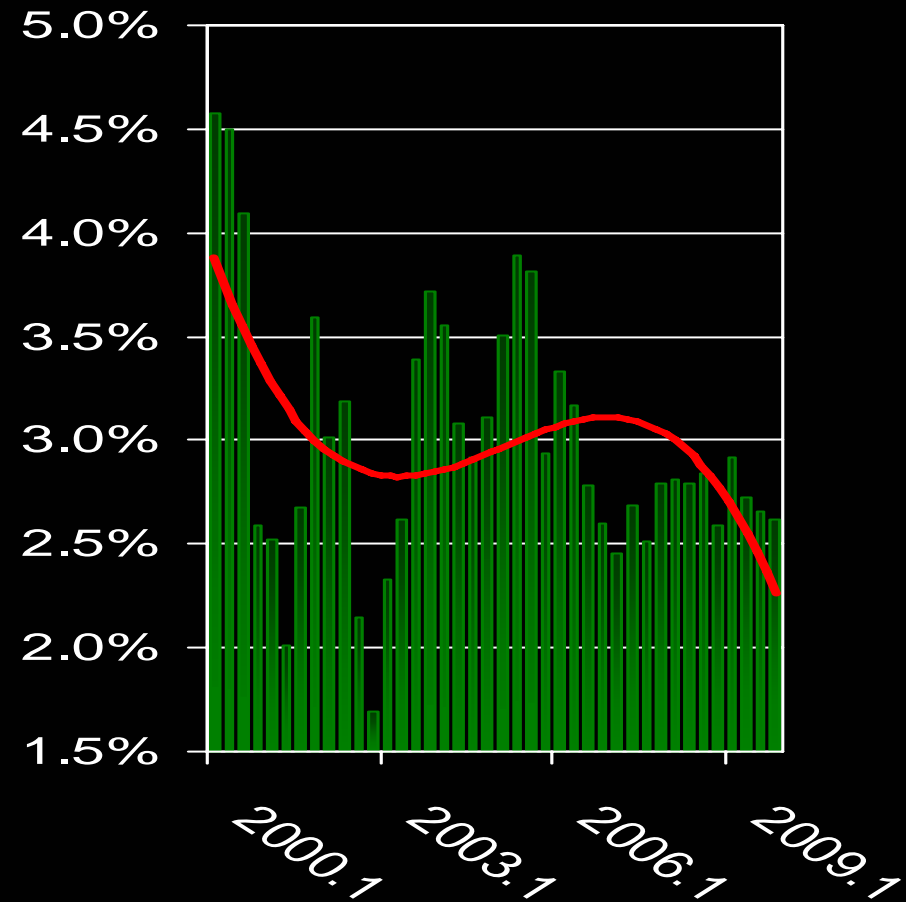
Consumption acts as the anchor for US economic activity.

Any retrenchment in consumer spending will lead to slower economy-wide growth rates

Slower Economic Growth: Consumer Spending

- Consumer spending accounts for more than 2 out of every 3 dollars created by U.S. economy.
- Slower Job & income growth implies slower growth in consumer spending.
- Higher Oil prices, inflation and rising interest rates dampen improvement in sentiment.
- Affordability erodes, but high from historical perspective.
- Less home refinancing activity & growth in mortgage ARMs dampen
- Slower Automotive Spending
- **Consumer Spending** Grows below 3.0% next two years. Downside risk.

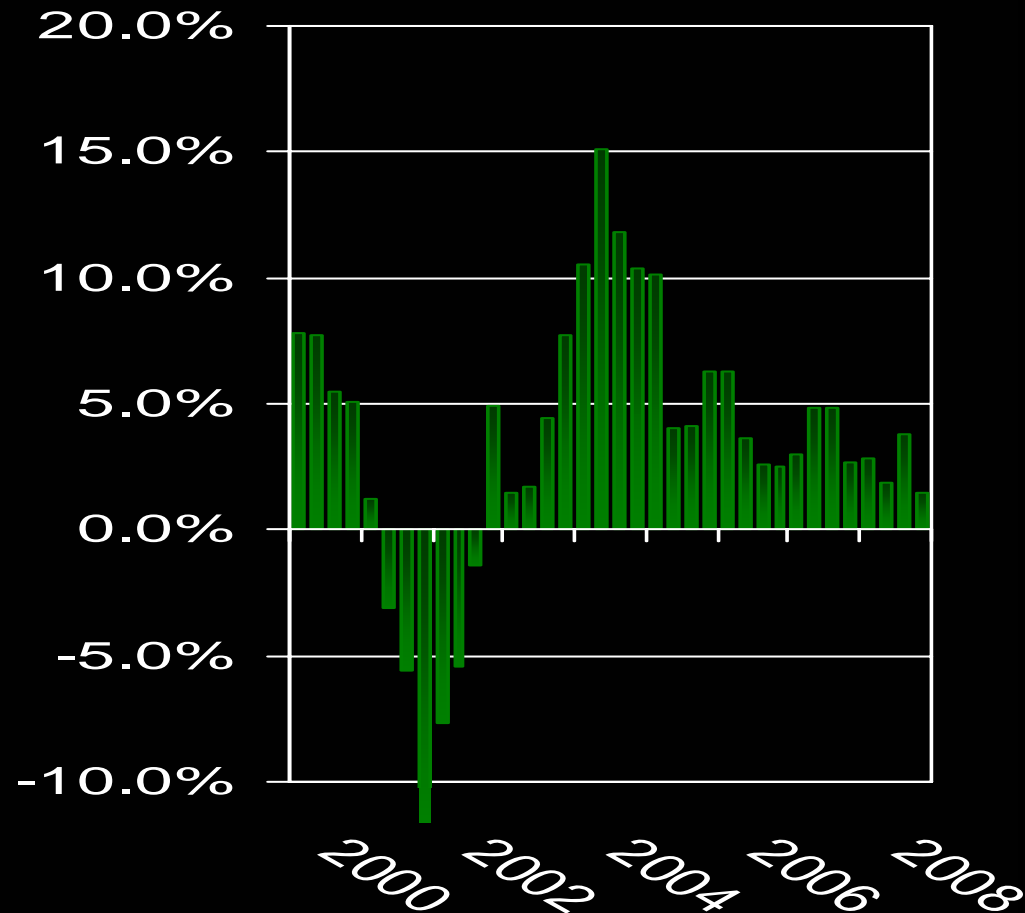
Consumer Spending Outlook



Slower Economic Growth: Investment Spending

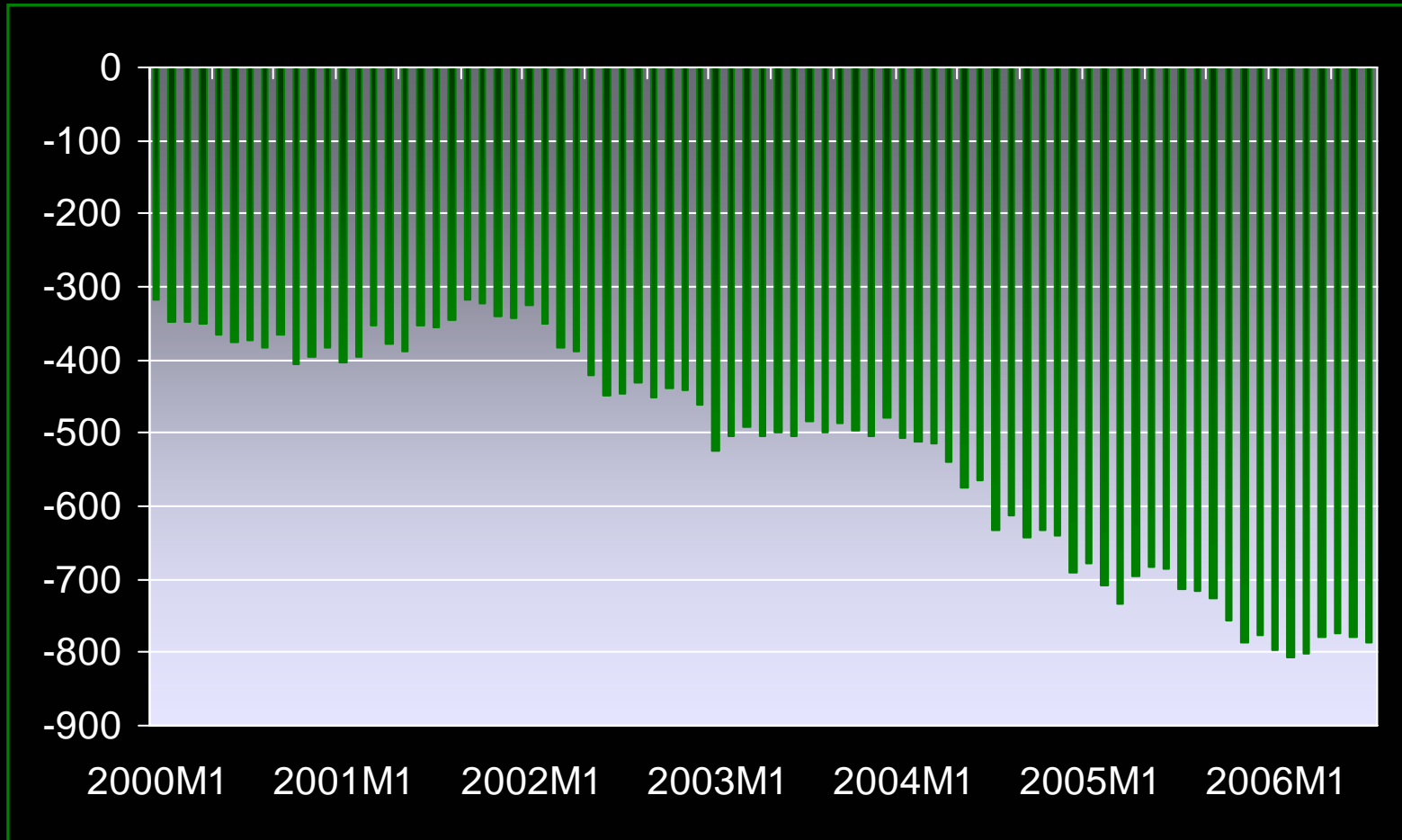
- Near term outlook remains positive...but less so than six months ago.
- Fixed, Non-residential investment has recorded strong growth during last two years.
 - Economic growth improves expected return on investment.
 - Funds availability
 - Internal Funds: Profitability
 - External Funds: Favorable rate environment
 - Risk premiums reduced
 - Small borrowers – easier credit terms and conditions.
- **Going Forward:**
 - Slower economic growth, higher costs reduce expected ROI.
 - Slower profit environment adds extra does of caution in spending for investment.

Nonresidential Fixed Investment,
Annual Percent Change



Net Exports: Rising Trade Deficit

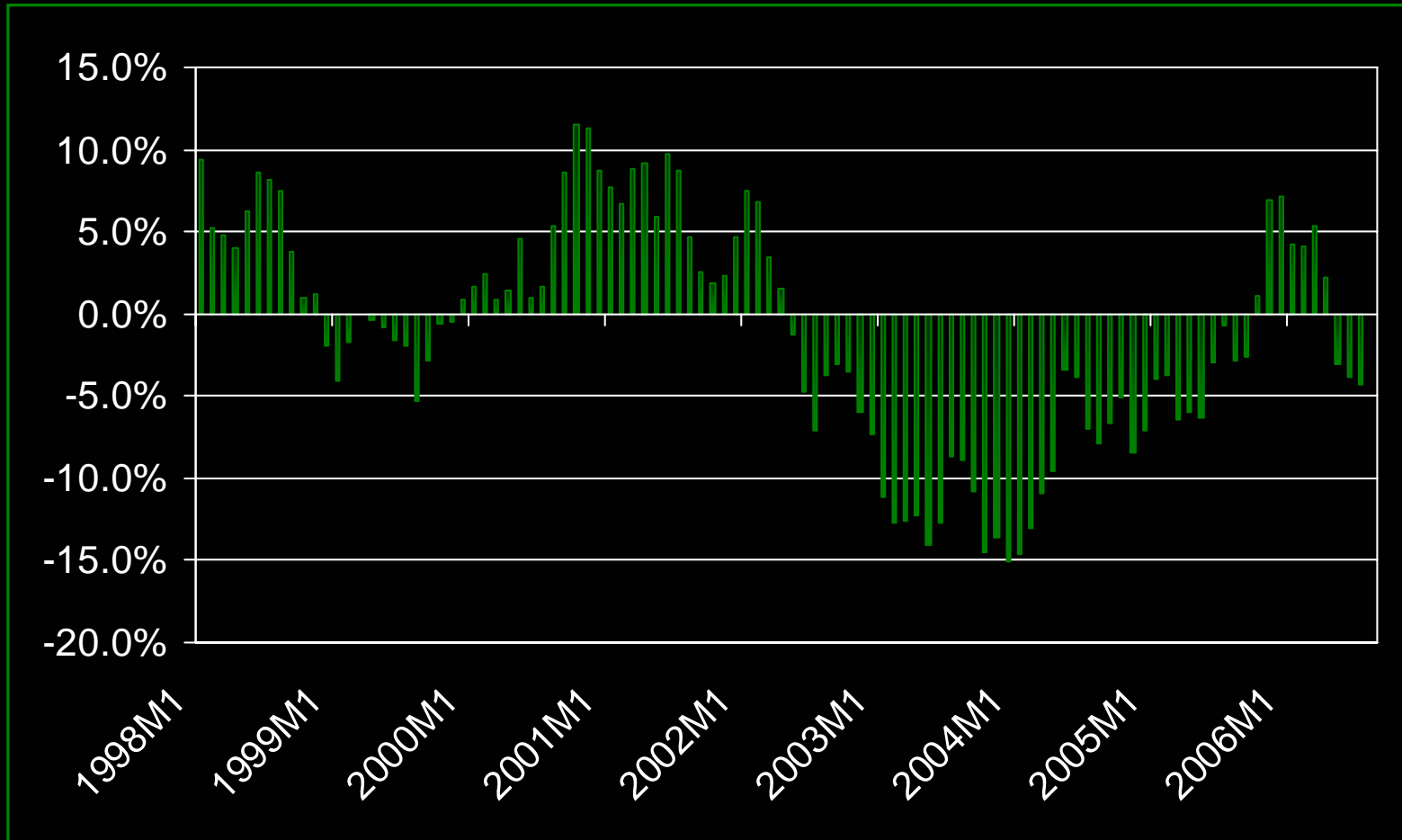
Real Chained \$



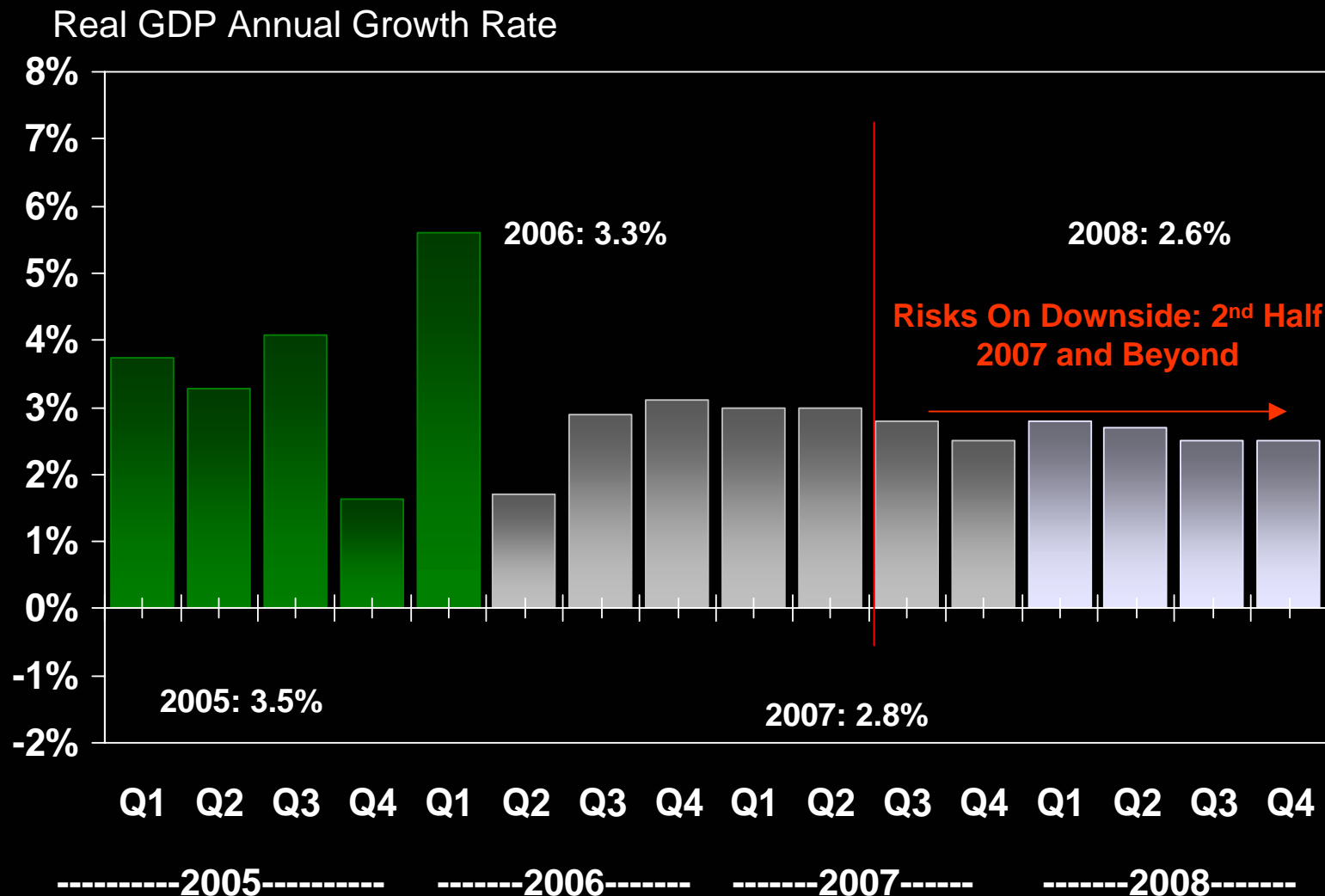
Higher Price of Oil Imports Worsens Trade Deficit

Value of U.S. \$: Sustained Weakness

Percent Change, Broad Index



Economic Outlook : Real GDP Growth



Recent Government Data Puts 2nd Quarter GDP at 2.9%...PCA Projected 2.8%.

Forecast Remains on Track

Construction & Cement Outlook

Overview



Total Construction

Billion 1996 \$



Changing Composition of Construction Spending

2001-2005

Low Interest Rates, Weak Economy

- Growth Leader: Residential
 - Low Interest Rates
- Public
 - State Tax Revenues Hurt by Anemic Economic Growth
- Growth Laggard: Nonresidential
 - Weak Economy

2006-2010

Rising Interest Rates, Strong Economy

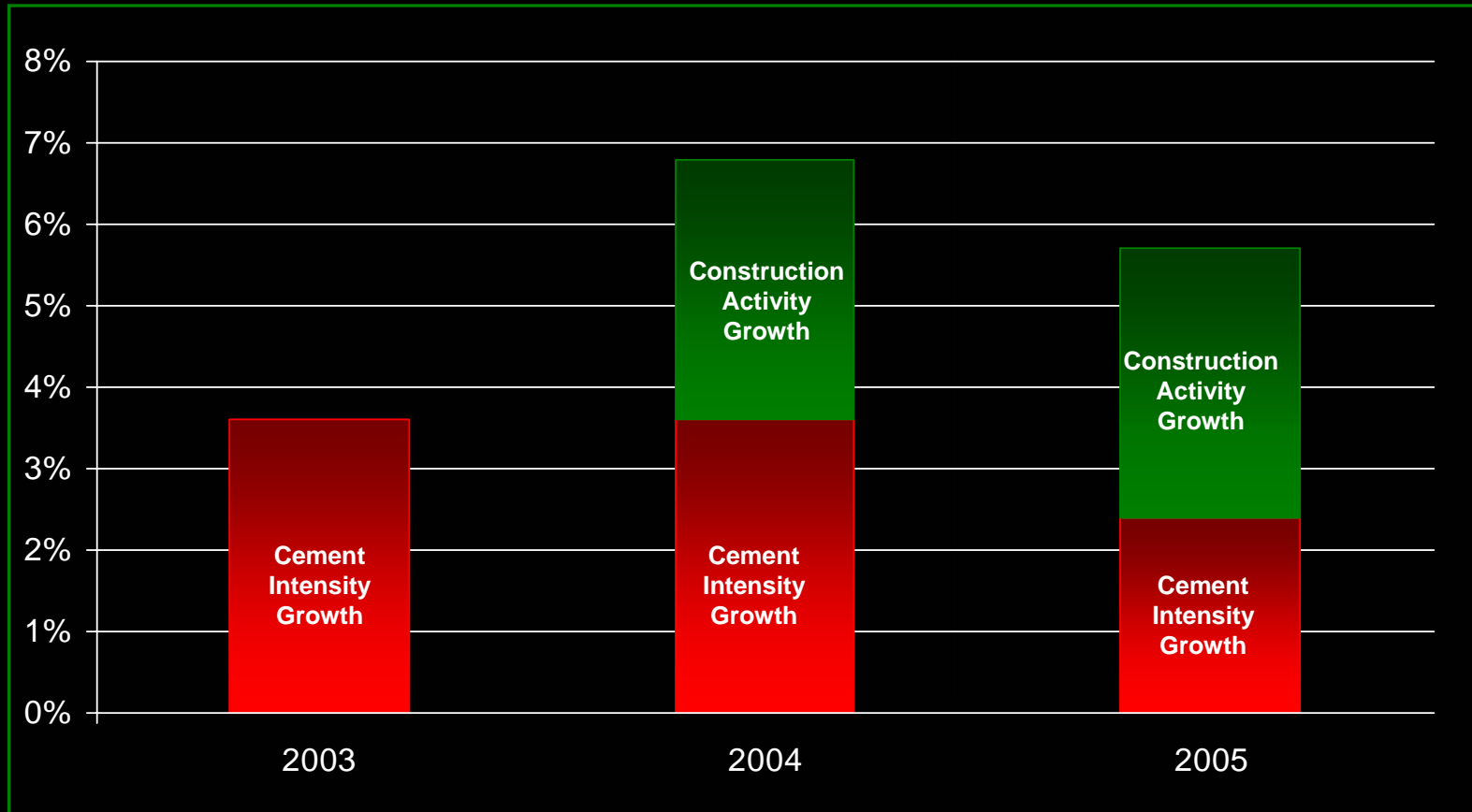
- Growth Leader : Nonresidential
 - Strong Economy
- Public
 - State Tax Revenues Recovery Due to Strong Economic Growth
- Growth Laggard : Residential
 - Rising Interest Rates

Cement Intensities

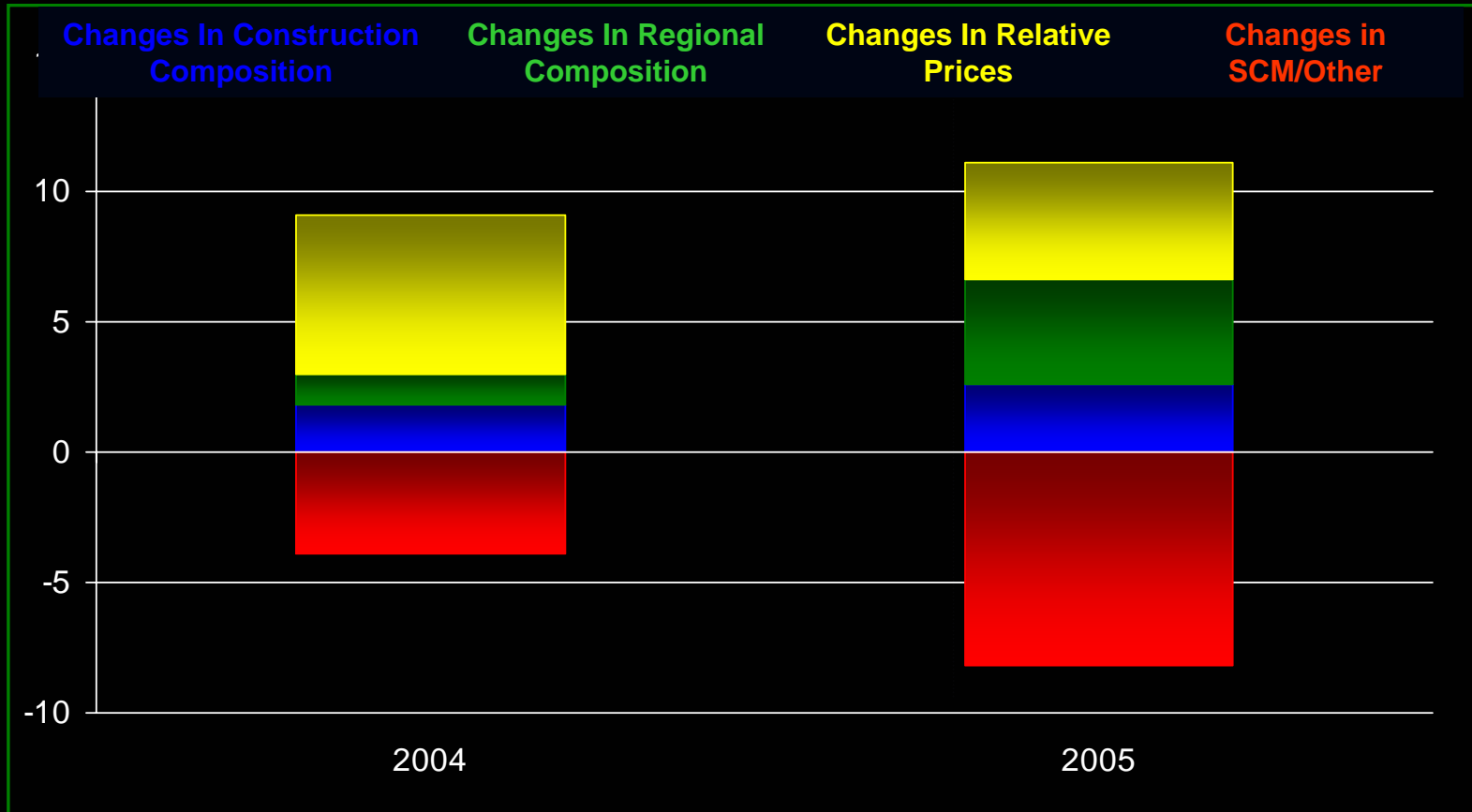


Composition Of Cement Growth: Construction Activity Vs Cement Intensity Growth

Annual Percent Change, Real Put-In-Place Construction & Cement Intensity



Composition Of Intensity Growth Preliminary Estimates*

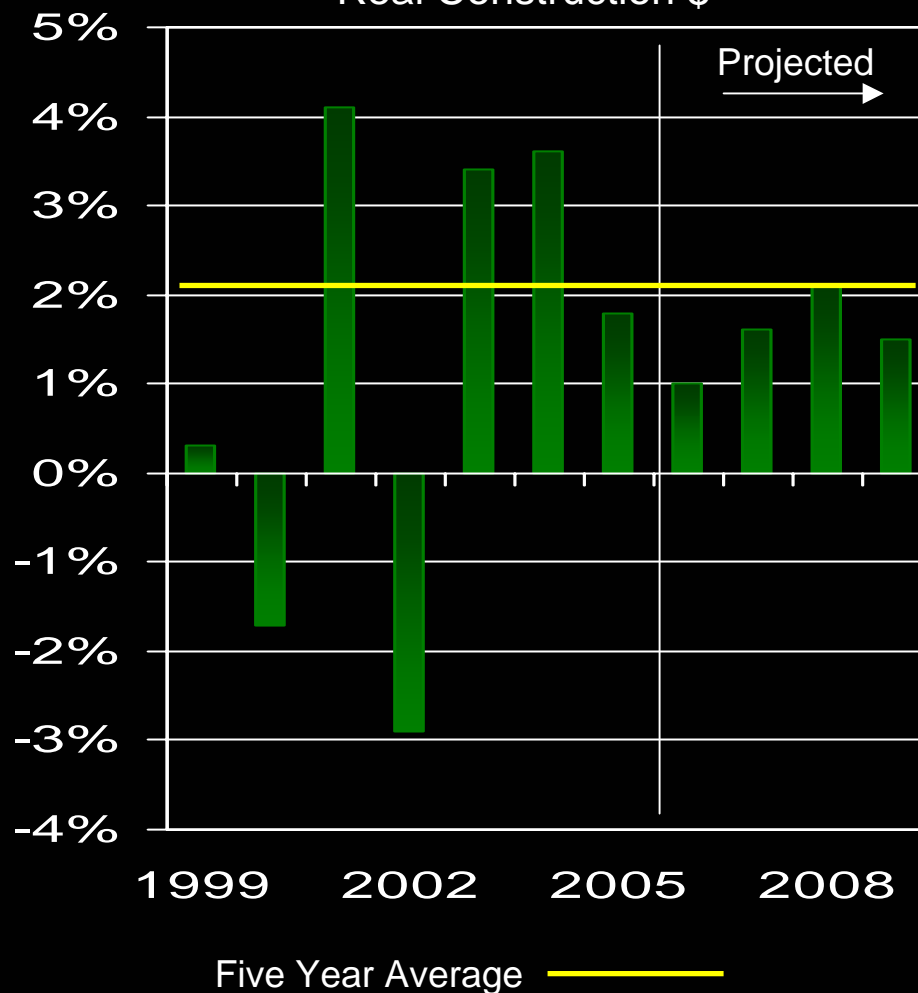


*Based on Forthcoming PCA Economics Report

Cement Intensity Outlook

- Competitive price position Vs other building materials
- Composition of construction
- Nonresidential intensities are cyclical
- Code changes: hurricane
- Green environment
- Product
- SCM's steal some intensity growth
- Fiscal healing: local roads higher portion of construction \$

Annual Growth Metric Tons Per Real Construction \$





Residential Construction

Single Family

Strength in Starts More Than Low Rates...

The Cyclical Upside: 2001 - 2005

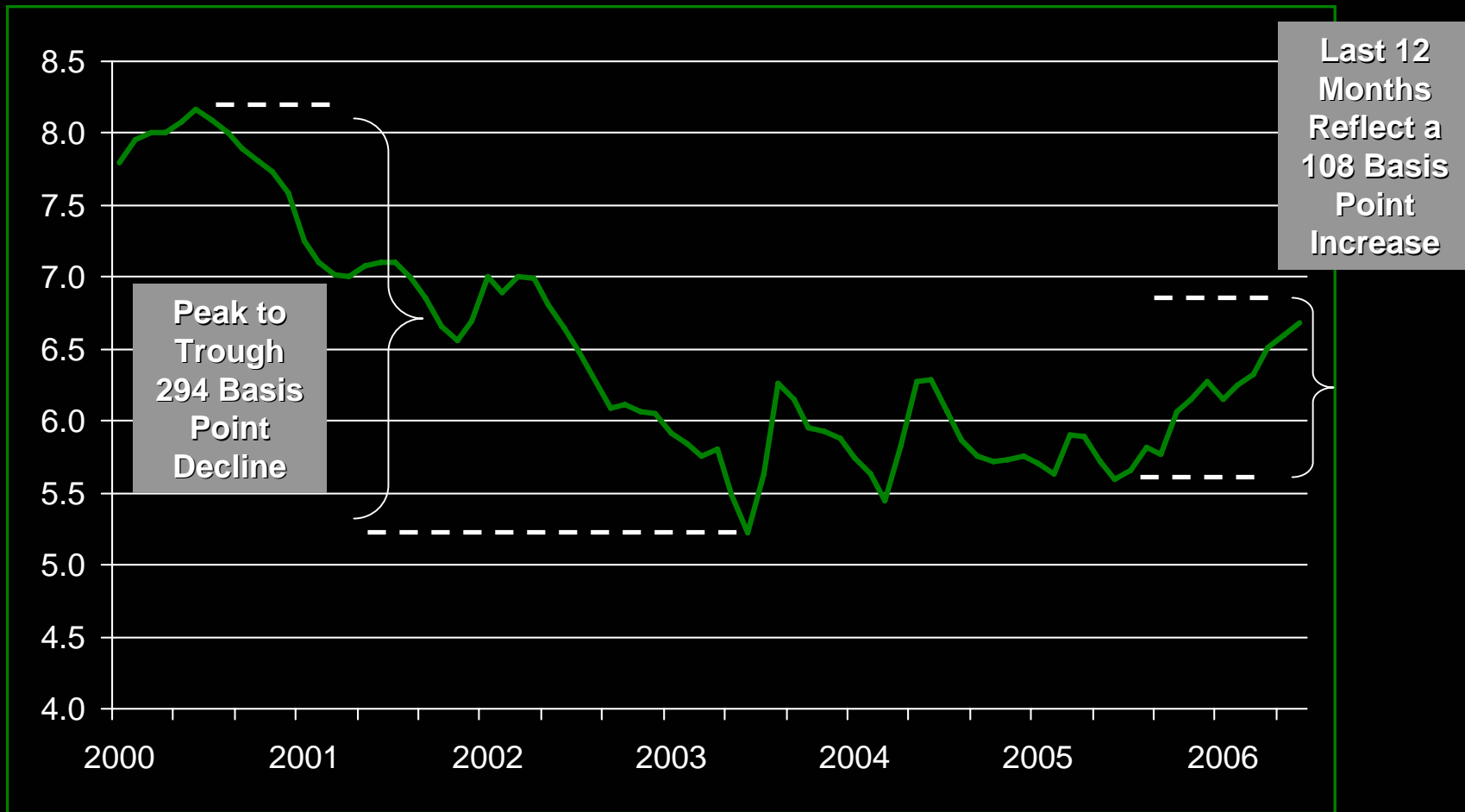
- Low mortgage rates key factor in single family starts over past few years.
- Emergence of exotic mortgages also a key factor...particularly in strong home appreciation environment.
- Easy credit conditions contributed to strong home-buying environment.
- Speculators add froth to market in light of strong appreciation rates.

The Cyclical Downside: 2006 - 2009

- Mortgage rates rising.
- Exotic mortgages losing favor.
- Defaults and delinquencies cause a deterioration in credit quality and a tightening of credit conditions
- Speculators reduced/disappear in lower appreciation rate environment

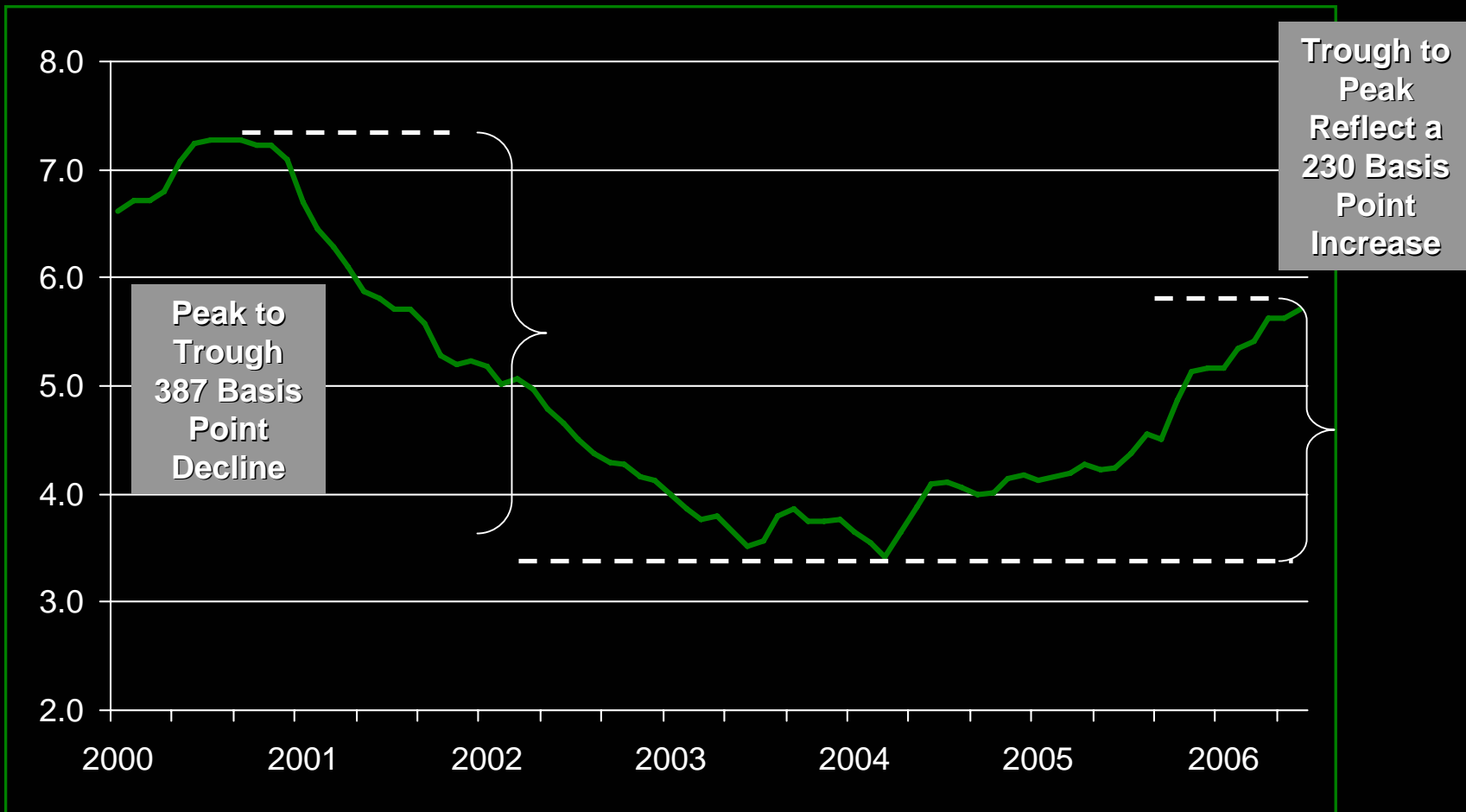
Mortgage Rate History: 30 Year Conventional

Annual Growth Rate, 30 Year Conventional



Mortgage Rate History: 1 Year Adjustable Rate

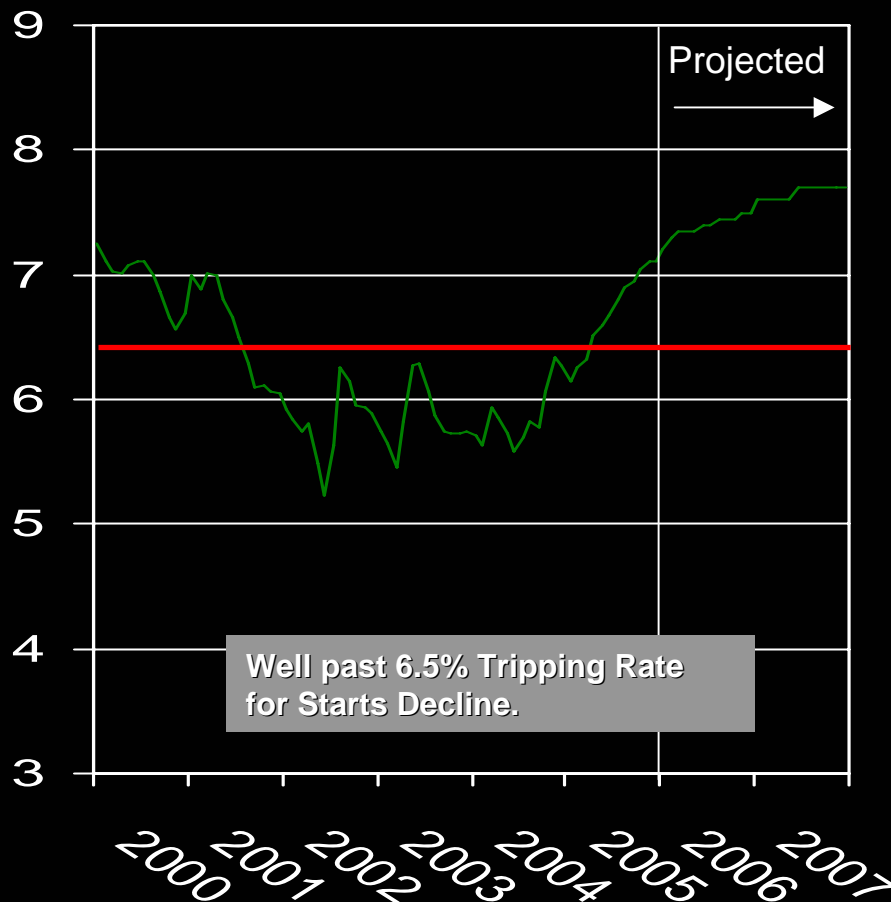
Annual Growth Rate, 1 Year ARM



Mortgage Rate Outlook

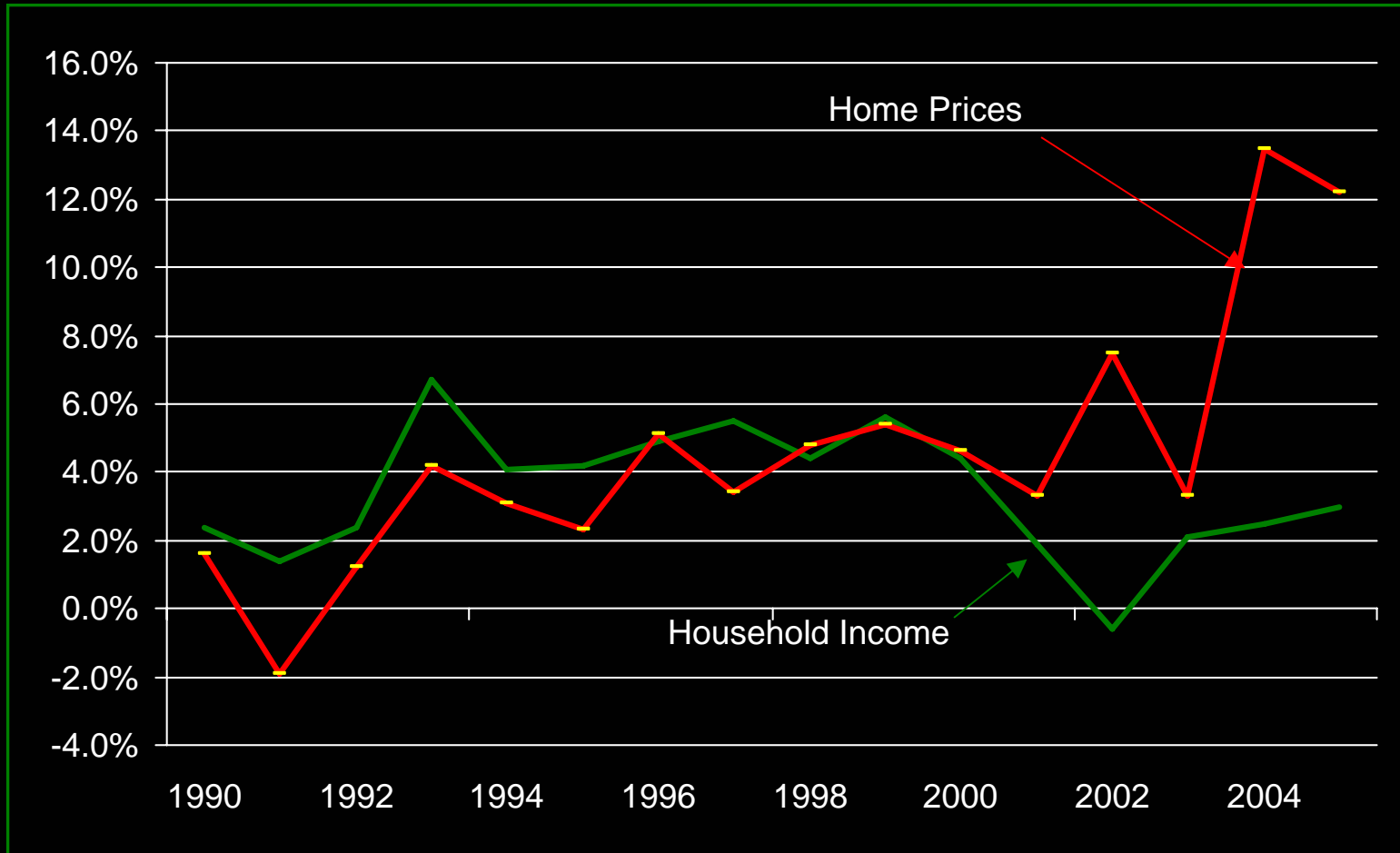
- Higher inflation premiums
- Federal Reserve pursues tighter monetary policy
- Larger public demand for funds
- Private demand for funds increase
- Foreign supply slows
- 2006 Year End: 7.1% 2007 Year End: 7.5%
- Note: 2005: 5.87%

Annual 30 Year Convention Rate



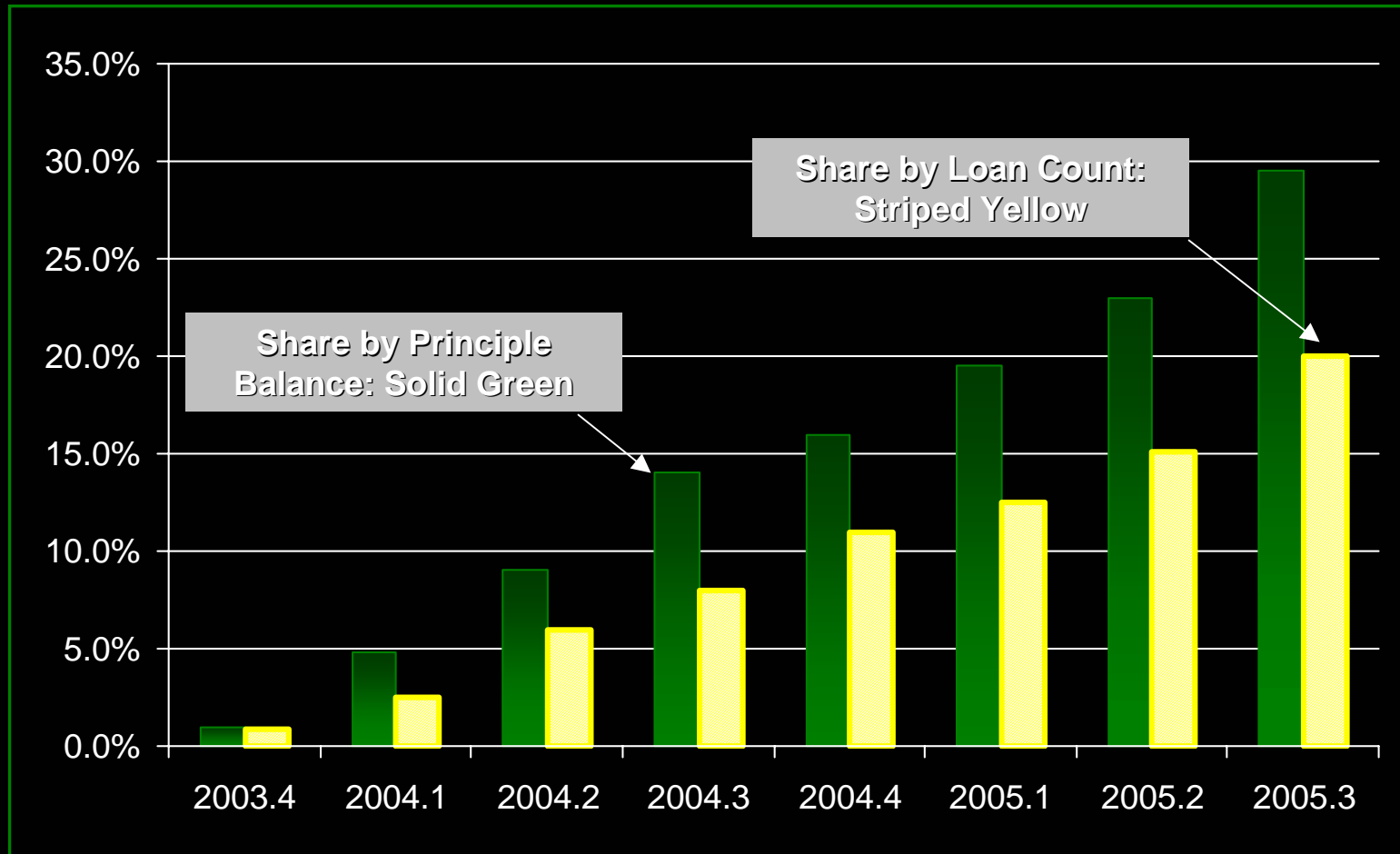
Growing Home Price & Income Gap

Annual Growth Rate Comparison



Emergence of Exotic Mortgages

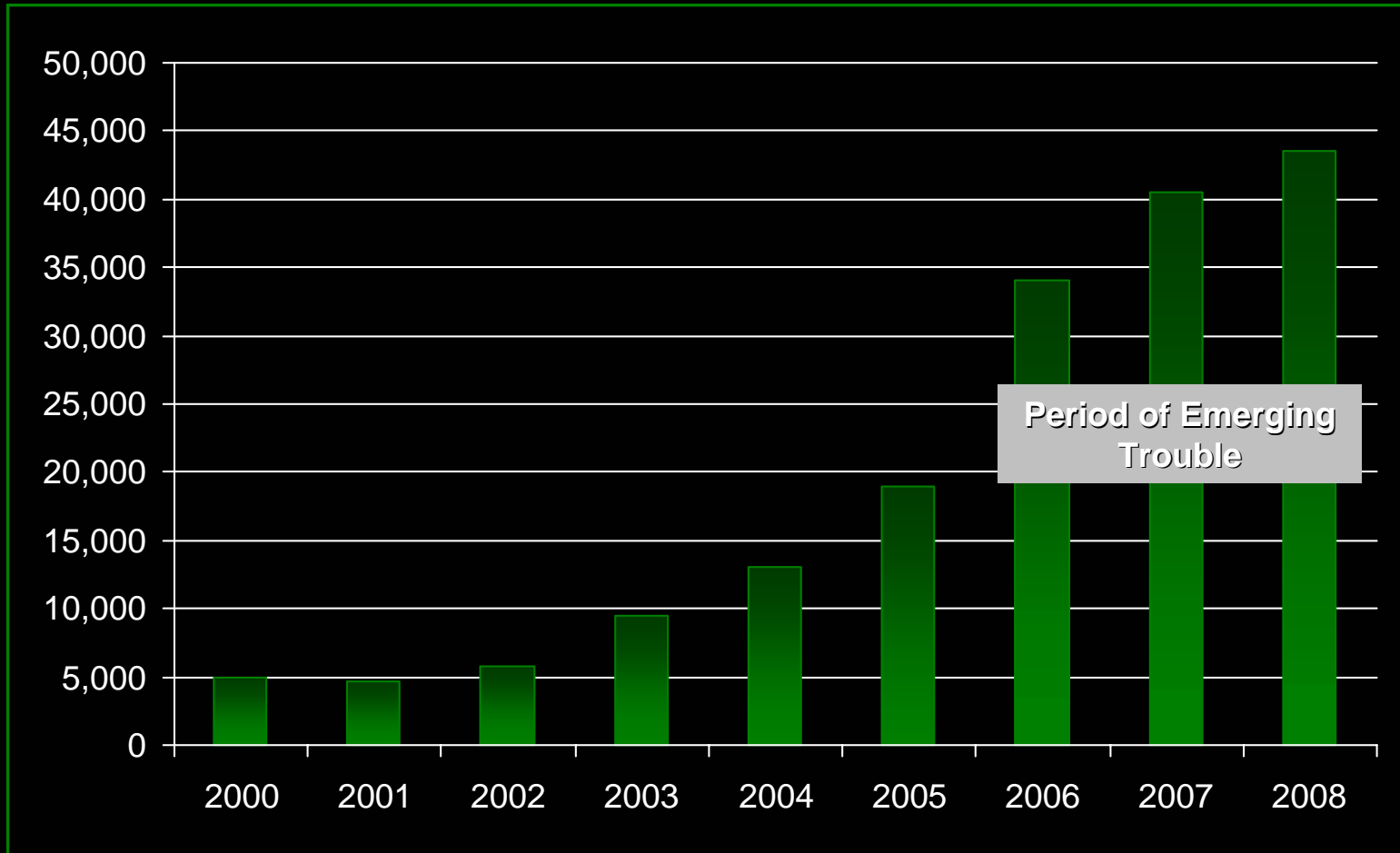
Interest Only Loan Share of Sub-Prime Market



Note: Sub-Prime accounts for 36% total mortgage market

Sub-Prime Mortgage Resets

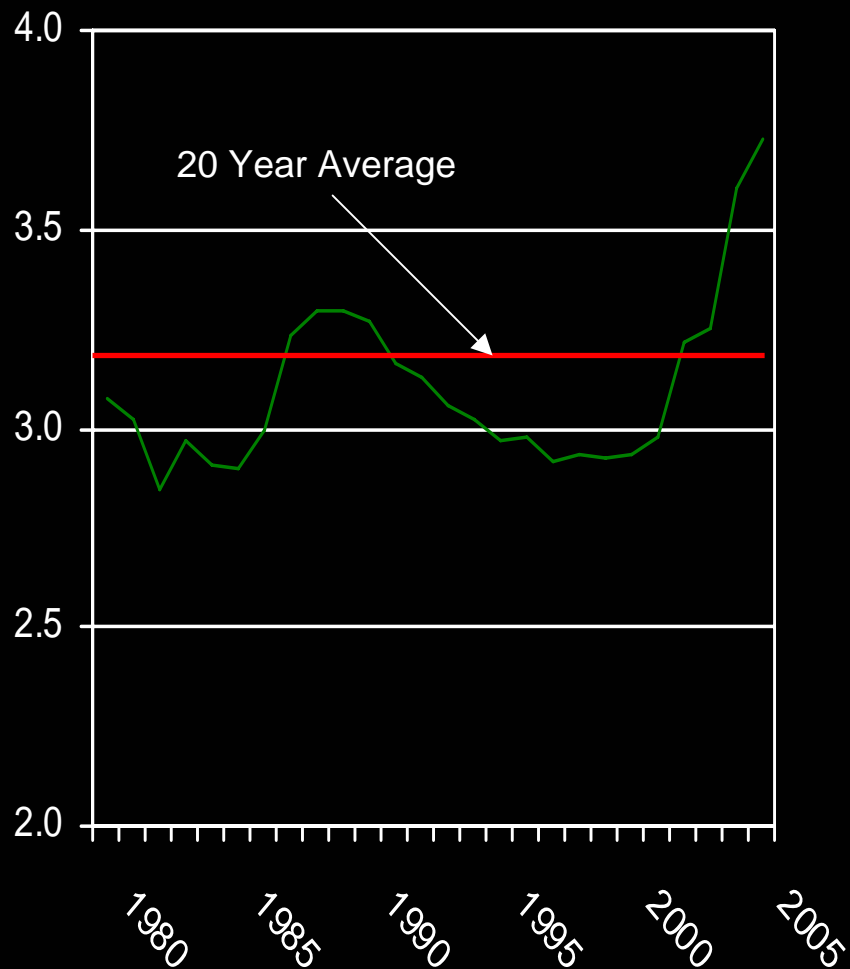
Total Loans Scheduled for Reset



Structure of Borrowing: Credit Tightening?

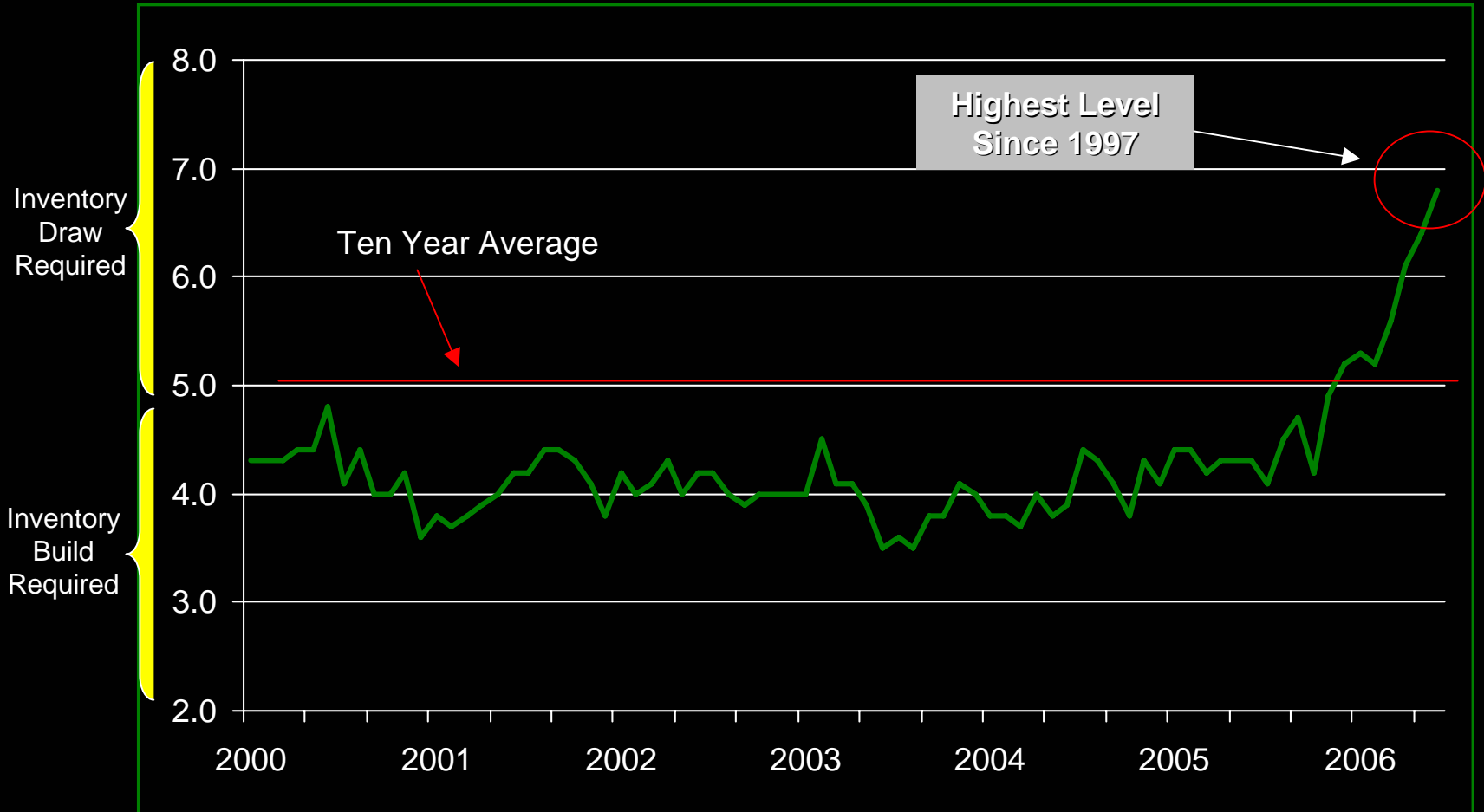
- Strong Appreciation Rates
- Monthly Mortgage Payment to Income Ratio Threatens Housing Expansion
 - Fewer "Qualify", Home Sales decline
- Increase in Alternative Financing
 - Sub-Prime, 75% Adjustable
 - "Exotic" Mortgages
- Amplified by Aggressive Appraisals
- Higher Risk In Rising Interest Rate Environment
 - Alternatives Re-Adjusted to Prevailing Rates
- Mortgage Shock
 - Consumer spending habits slow to change
 - Increase in delinquencies & defaults
- Credit Tightening On Horizon?
 - Ingredients in place
 - At Issue: Timing, Magnitude

Ratio of Home Prices to Income



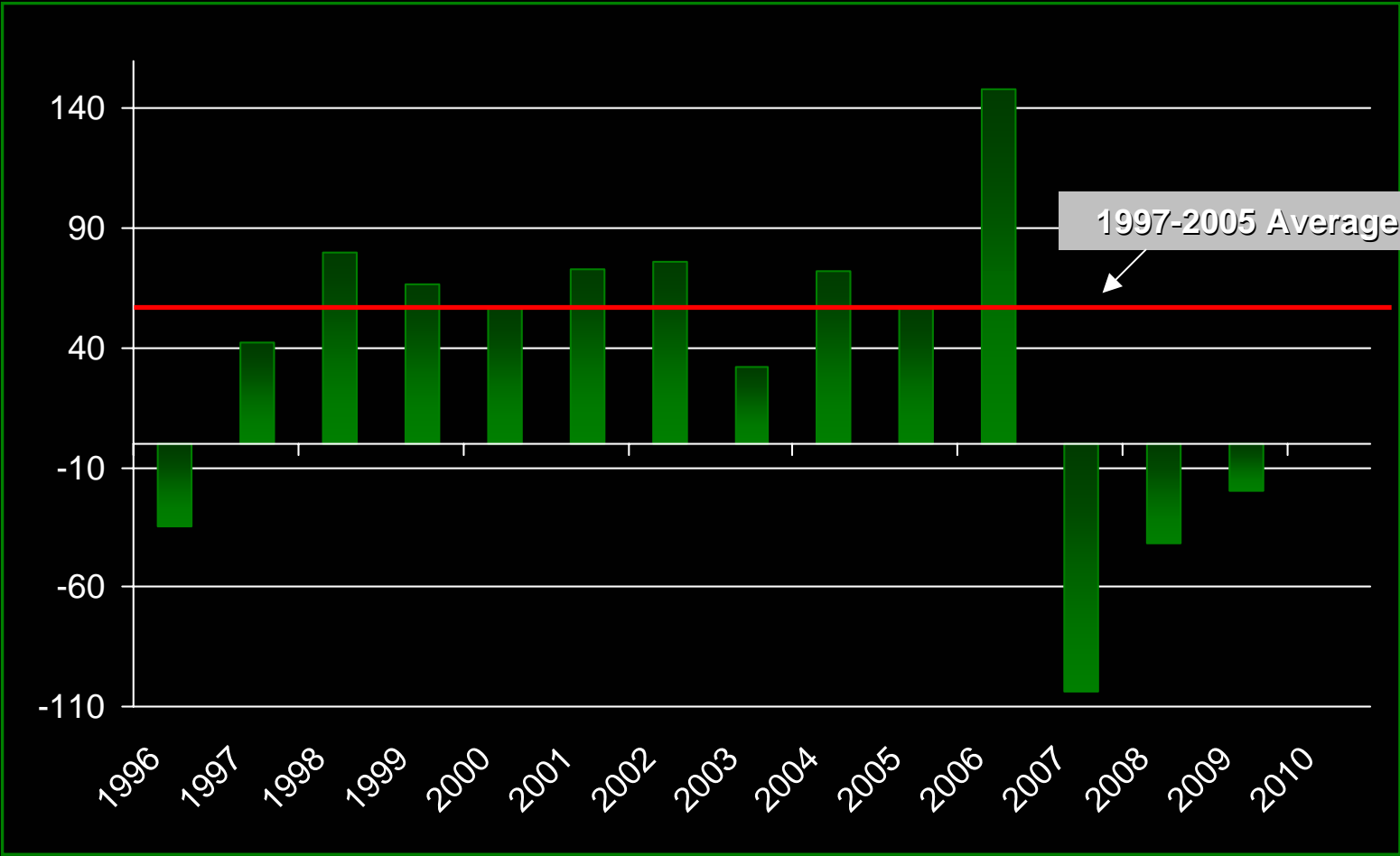
Inventory Draw Required

Homes on Market/Monthly Selling Rate



SF Inventory Adjustment Outlook

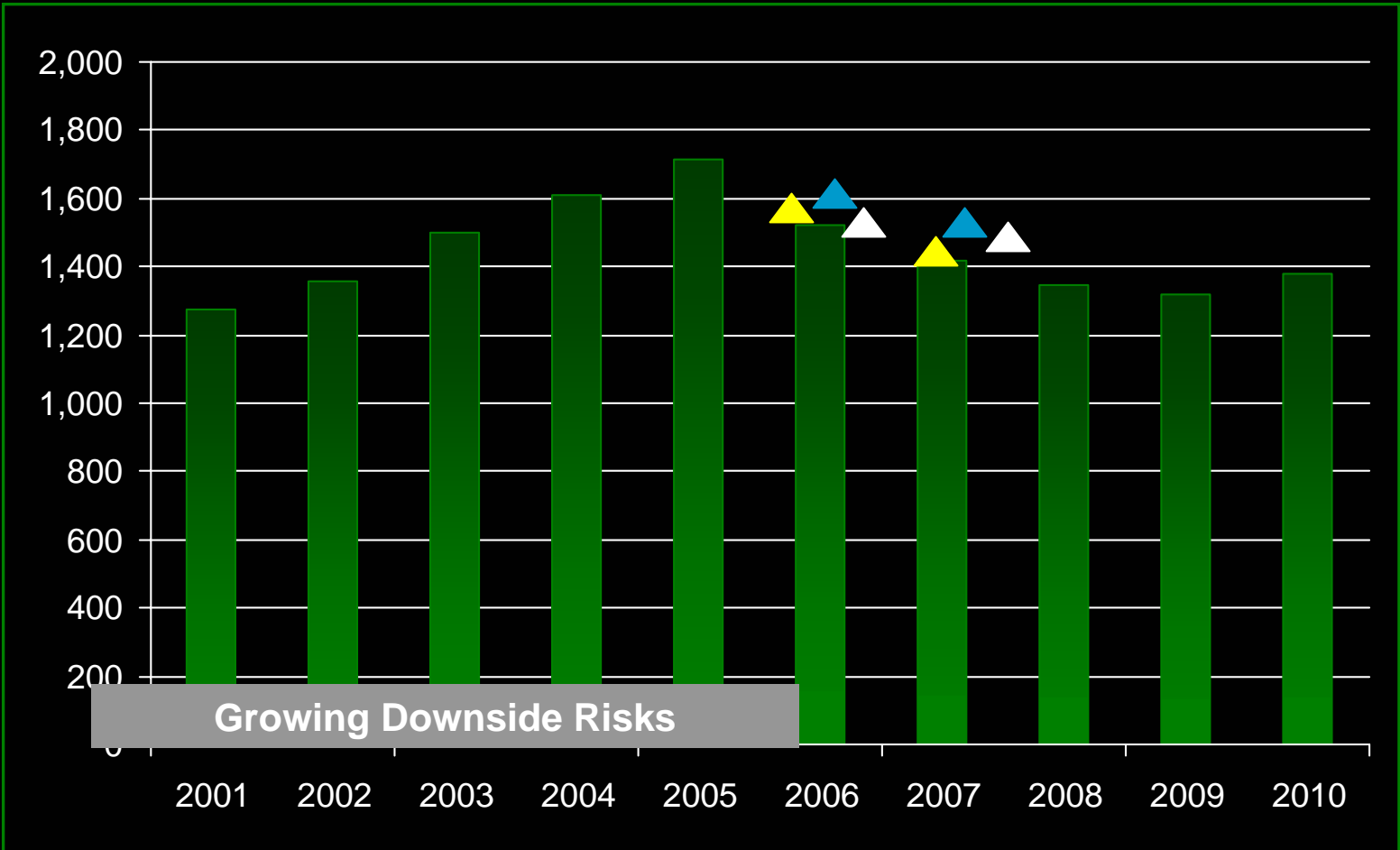
(000) Units



10 Years of Inventory Build Conditions Disappear

Single Family Housing Starts

(000) Units



▲ Mortgage Bankers Association

▲ National Association of Realtors

▲ NAHB

Nonresidential Construction



Overview

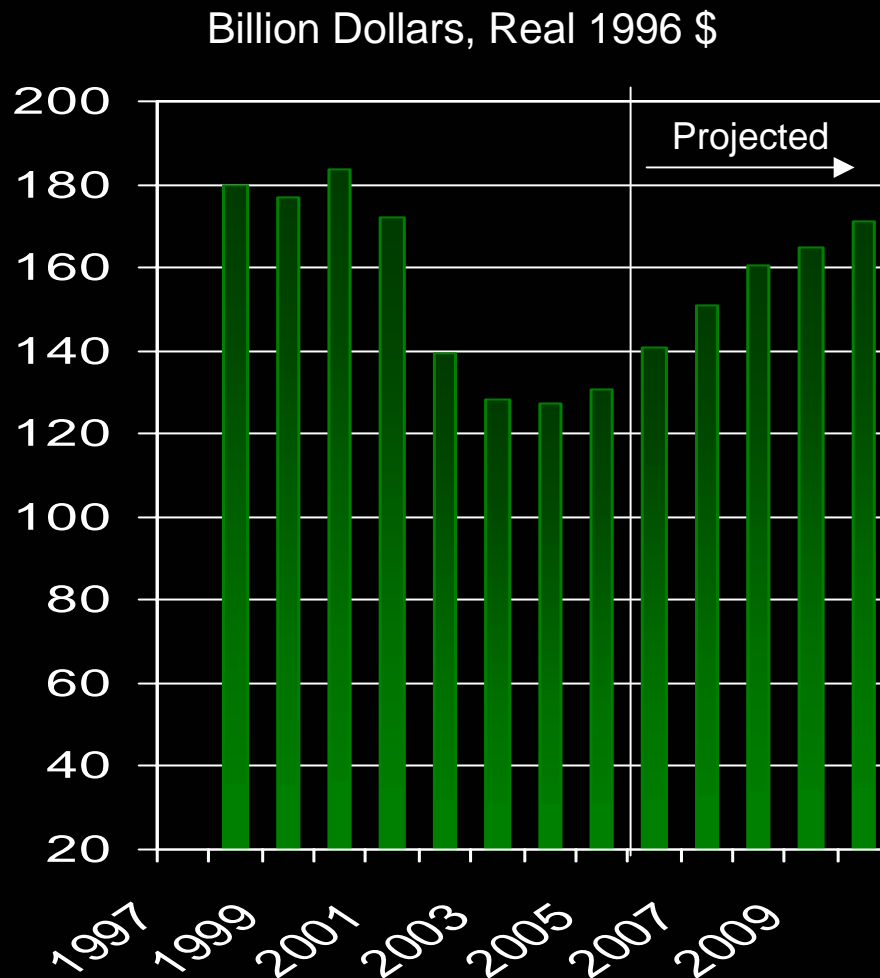
Nonresidential Construction

Annual Growth Rate



Nonresidential Outlook

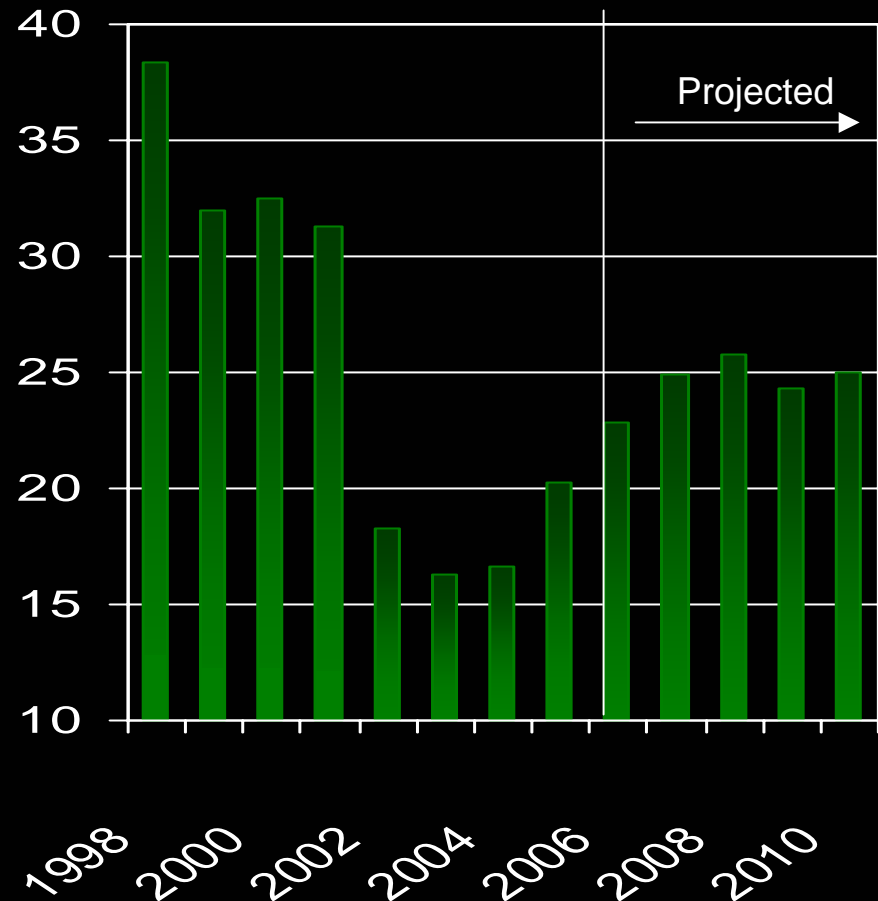
- Non-residential turned in 2005 after 4 years of decline.
- Underlying nonresidential drivers improving.
- Impatient: Improvement slower than expected
 - Story Correct
 - Timing
- Despite large percentage gains for 2006, most markets weak from historical perspective.
- Past cyclical peak not realized.
- Slower growth outlook depresses expected ROI and tempers recovery.
- Increasing cement intensities reinforce construction activity gains.



Industrial Outlook

- Sustained economic growth.
- Weak dollar.
- Utilization rates top 80%.
- Improved corporate profitability.
- Improvement in expected ROI leads to accelerated construction.
- Healing process already two years in progress.
- Big Three retreat partially offset by transplant expansion.
 - Regional impacts arising from automotive widely different.

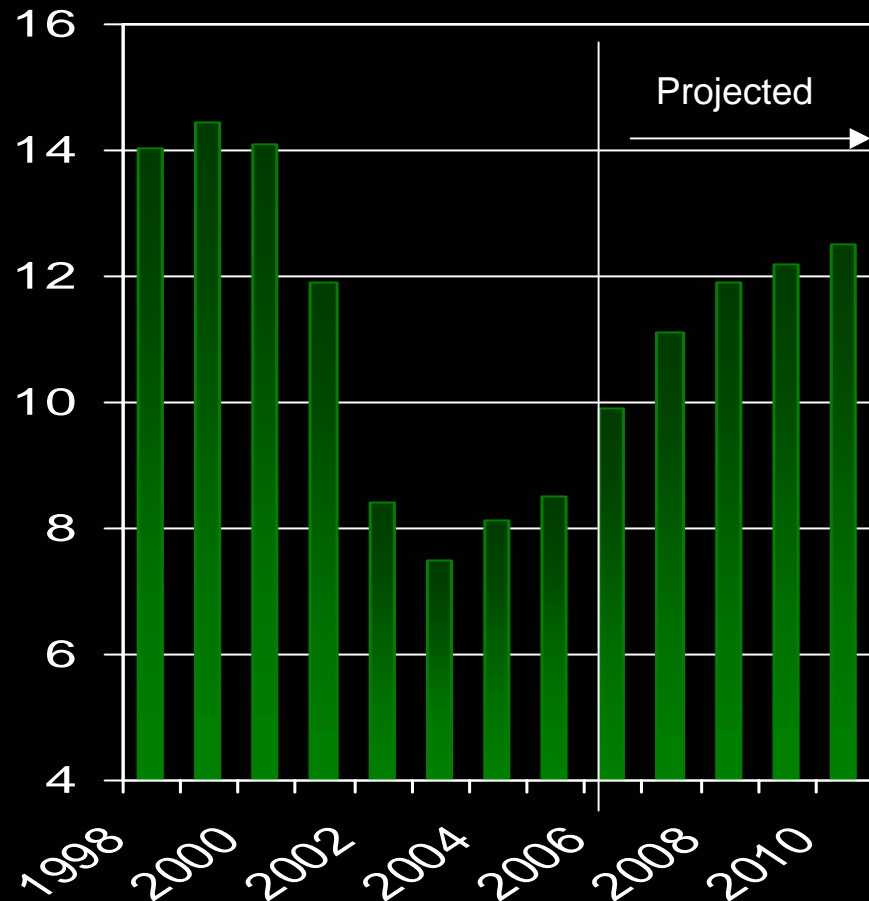
Billion Dollars, Real 1996 \$



Lodging Outlook

- Business Travel Improves:
 - Reflecting economic growth & strong profits & looser travel budgets
- Vacation Travel Improves
 - Reflecting employment gains, wage gains and weak dollar
- Hotel demand growth averages 4%-6% annually
- Occupancy rates improve
- Average room rate increases with revenues growing at 8% Clip
- Improvement in ROI's eventually lead to accelerated supply expansion
- Another year of burn-off likely before more significant gains materialize.

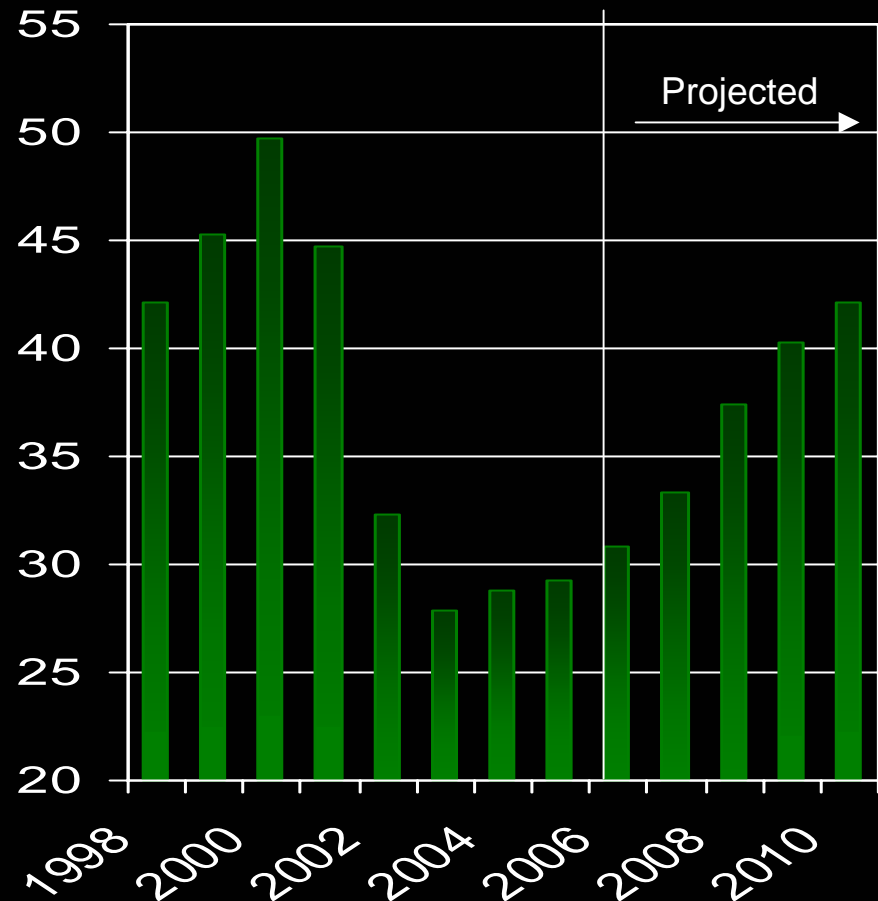
Billion Dollars, Real 1996 \$



Office Building Outlook

- Office employment grows at 3% annual rate.
- Vacancy rates improve 200 basis points in 2006 & 2007.
- Leasing rates firm.
- Improvement in expected ROI leads to accelerated office construction.
- Healing process already two years in progress.
- Gradual recovery anticipated in 2006 and beyond.

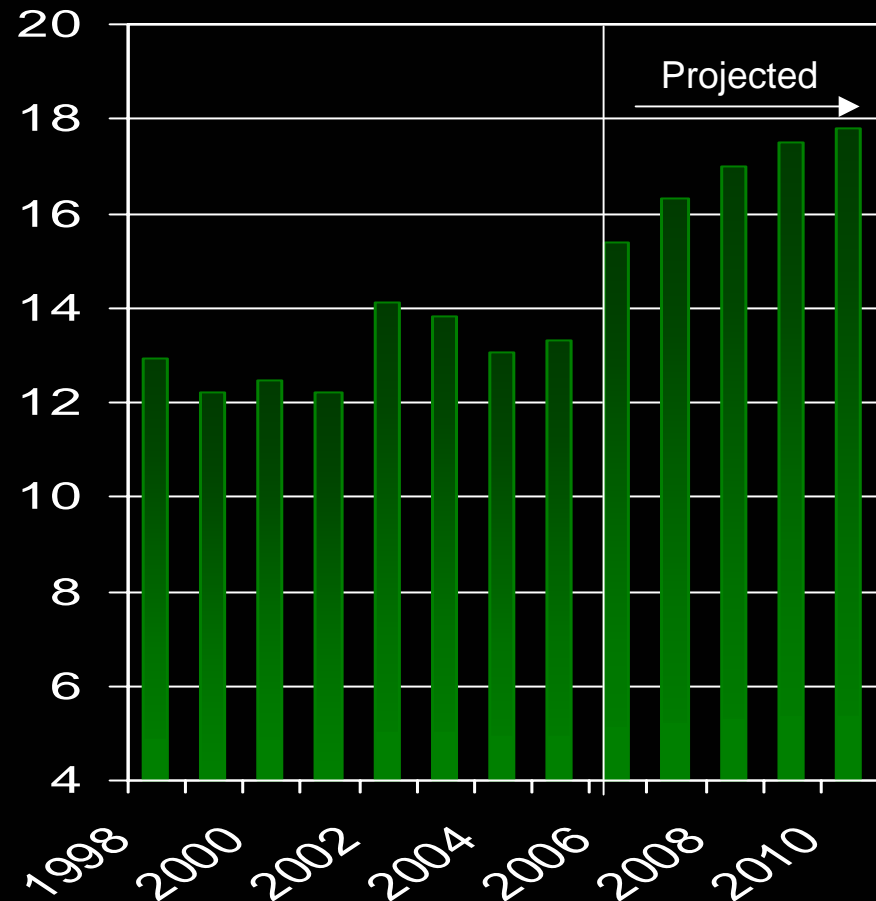
Billion Dollars, Real 1996 \$



Health Construction Outlook

Billion Dollars, Real 1996 \$

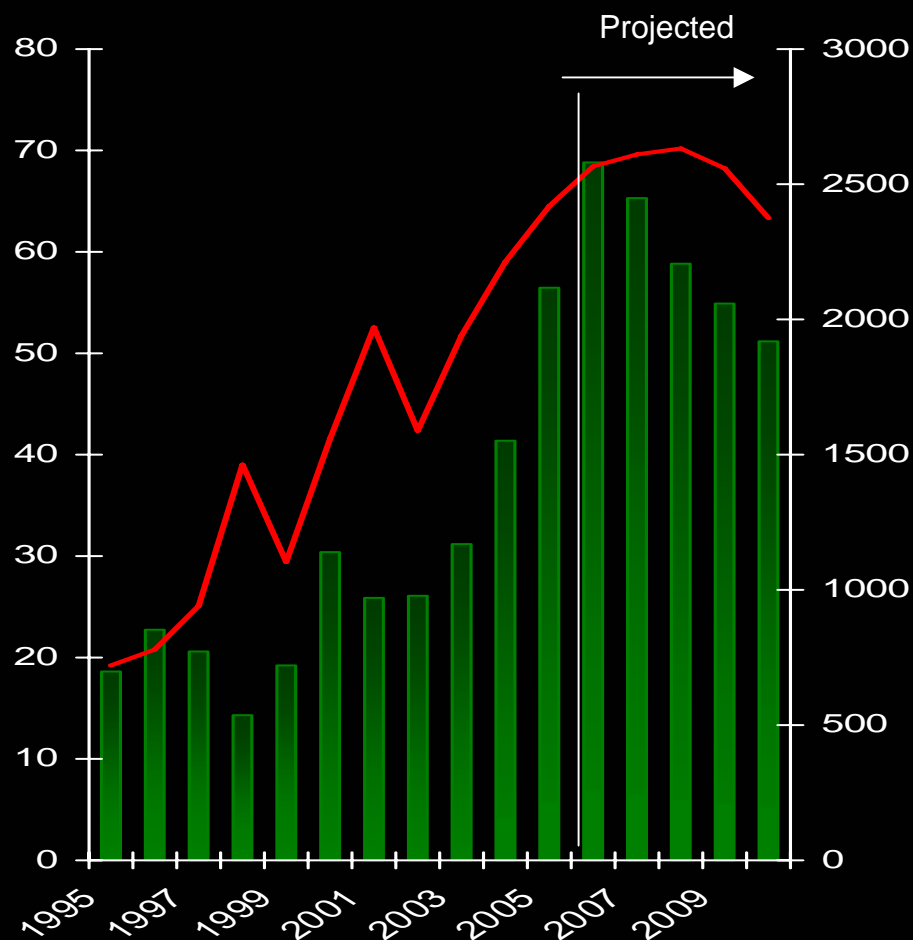
- Recent double-digit growth not an illusion.
- Baby Boomers are aging...adding demand
- Demand increases have been offset by HMO reductions in length of hospital stay.
- Insurance requirements reducing hospital stay have played out.
- Increase in-patient per bed suggests new investment/expansion.
- Supplemented by outpatient construction & nursing homes.



Oil Well Outlook

- Run-up in oil prices 2000-2005 results in:
 - in 50% increase in rig count
 - 120% increase in sector cement consumption.
- Oil Prices remain high and decline slowly.
- Cement consumption mirrors trend in oil prices.

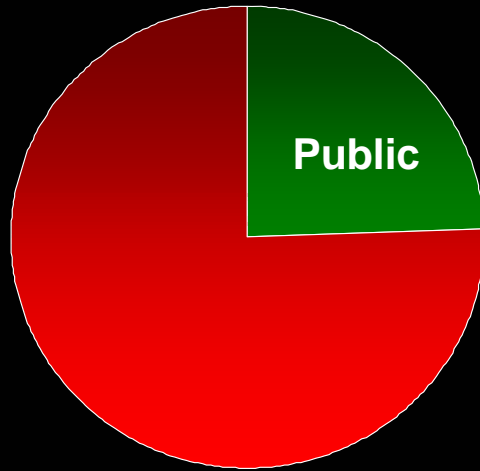
Oil Prices (Bar-Right), Oil Rig Count (Line – Left)



Public Construction

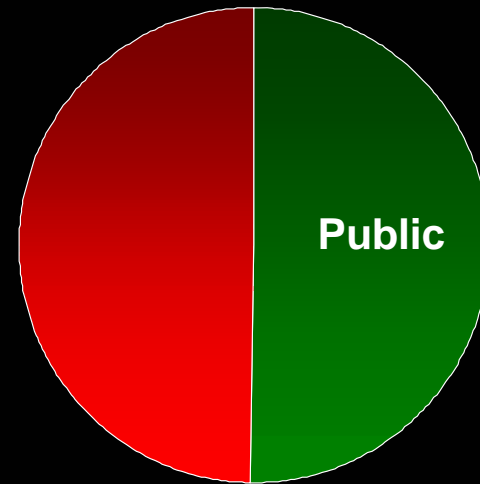


Public Construction Outlook: Importance of Sector



Public Share of Total
Construction

24%

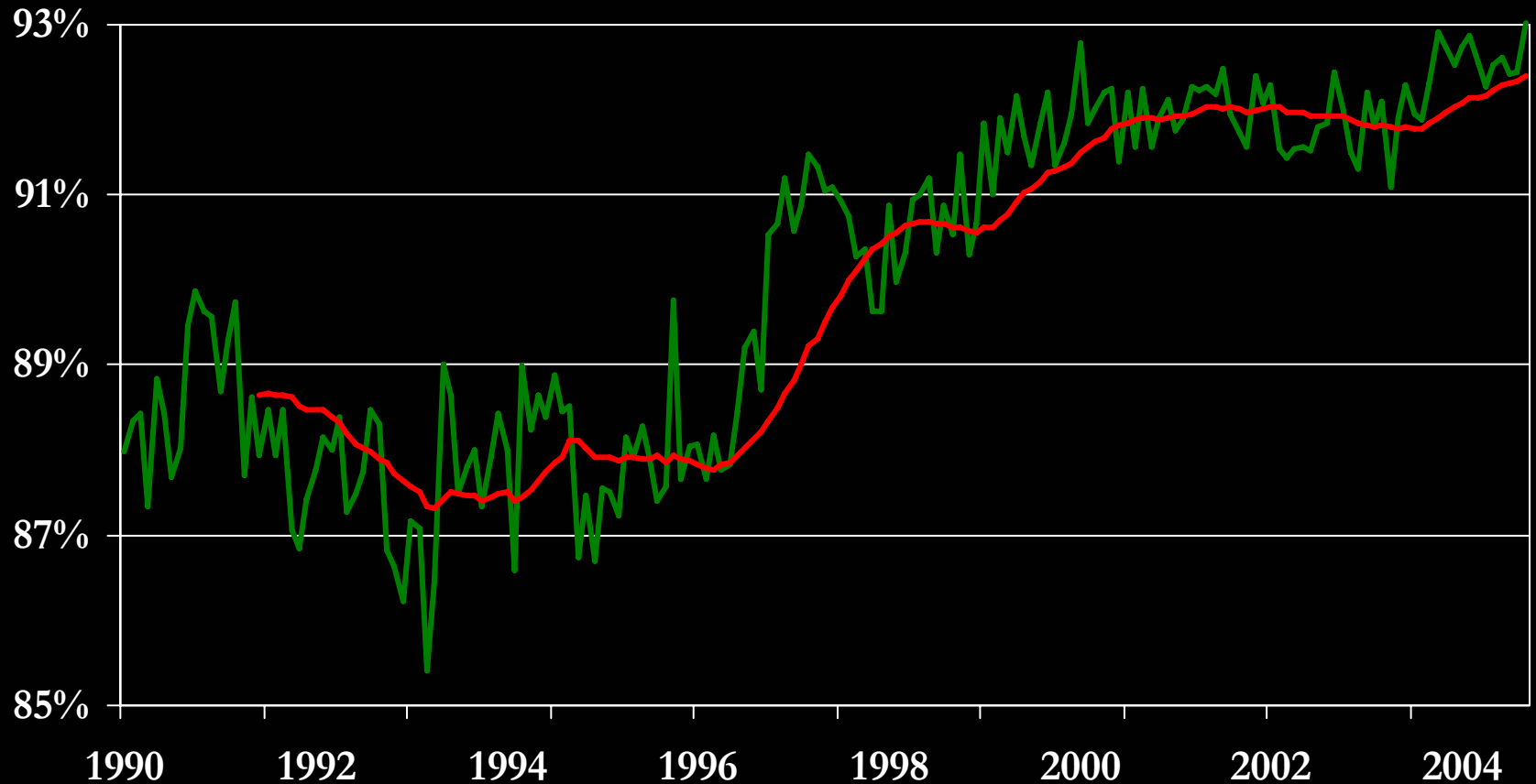


Public Share of Total
Cement

50%

Public Construction Outlook: State & Local Share of Public Construction

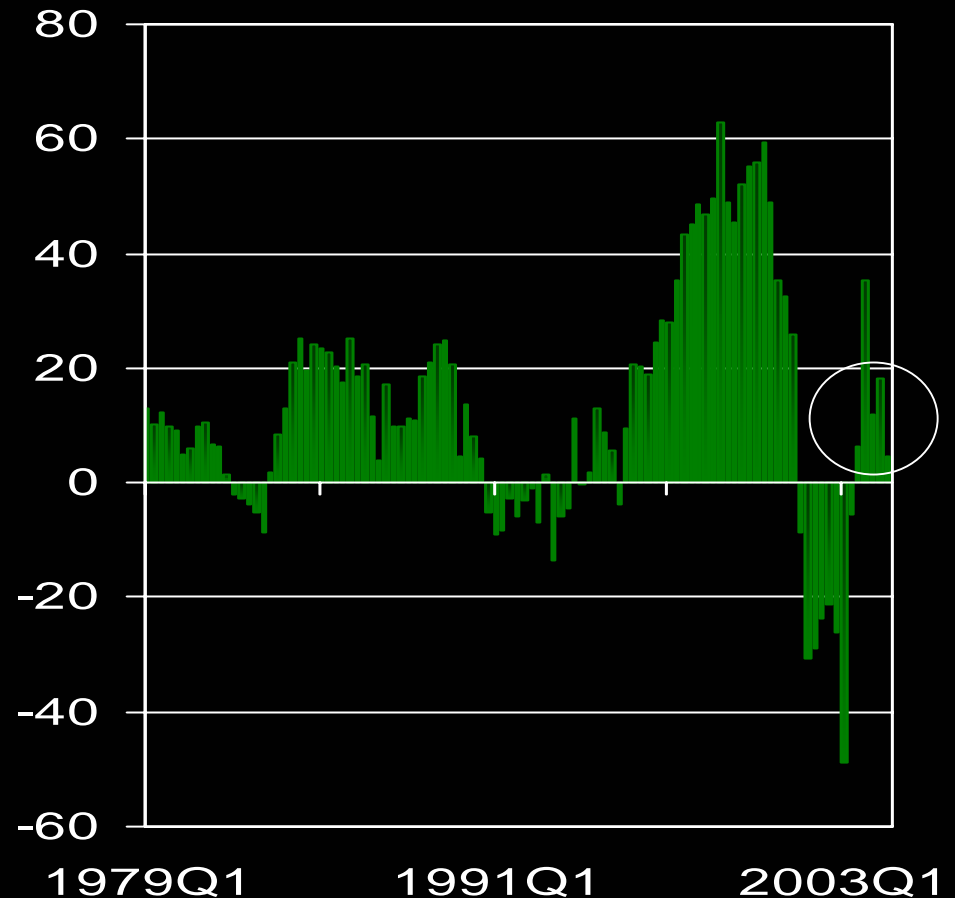
Percent of Total Public Construction Spending



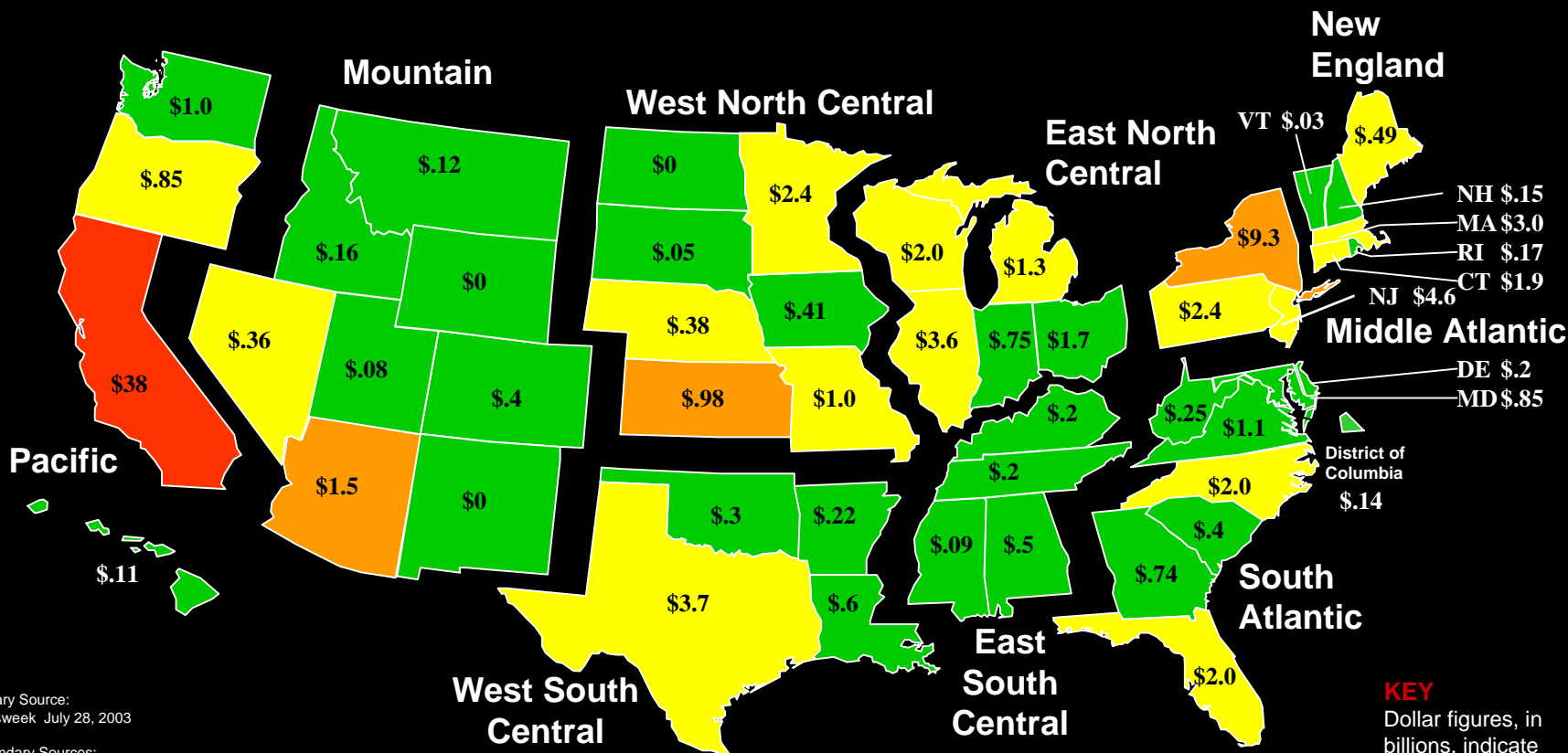
Public Construction Outlook

- 93% of public construction performed at state/local level.
- State/Local fiscal problems fading.
- Revenue growth improves with economy and job growth.
- Surpluses will re-emerge.
- Pent-up demand released.
- Highway Bill adds strength.
- **2006: +4.8% 2007: +5.5%**
- **Note: 2005: +1.9%**

Billion \$ State Surplus/Deficit, NIPA



Public Construction Outlook: State Deficit Estimates Fiscal Year 2004



Primary Source:
Newsweek July 28, 2003

Secondary Sources:
Nat'l Conf. of State Leg., Center on
Budget and Policy Priorities, Nat'l
Assn. of State Budget Officers,
Calif. Budget Project

KEY
Dollar figures, in
billions, indicate
amount states had to
save to balance
2004 budget.



0-9%



10-19%

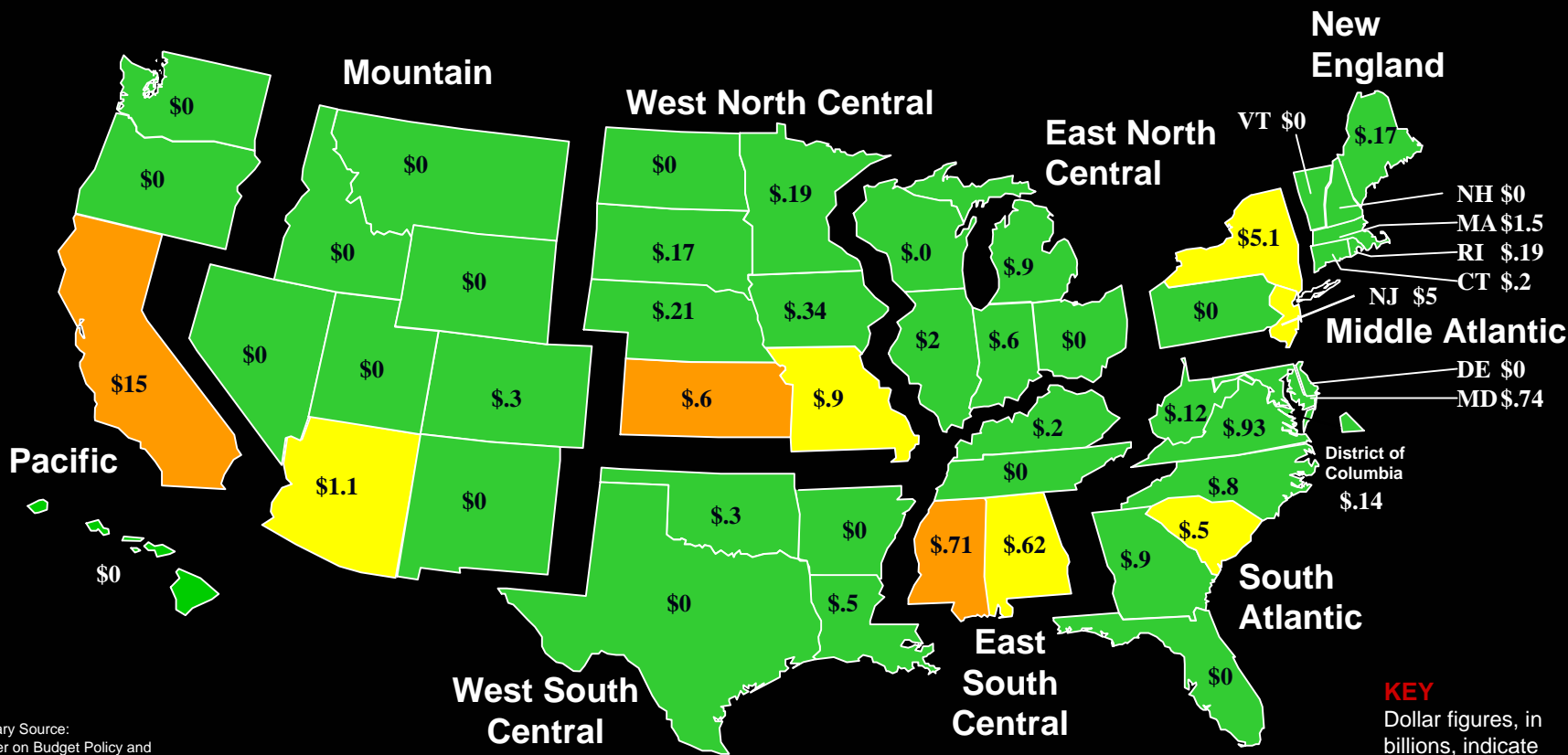


20-29%



30-39%

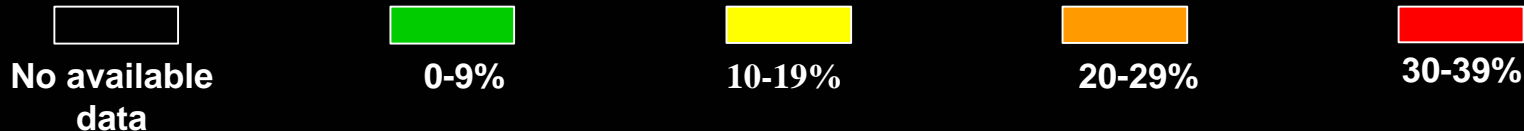
Public Construction Outlook: State Deficit Estimates Fiscal Year 2005



Primary Source:
Center on Budget Policy and
Priorities Feb / 04

Secondary Source:
National Association of Budget
Officers

KEY
Dollar figures, in
billions, indicate
amount states had to
save to balance
2005 budget.



Market Conditions



Portland Cement Outlook

Annual Percent Change
Growth Rate Yellow Line

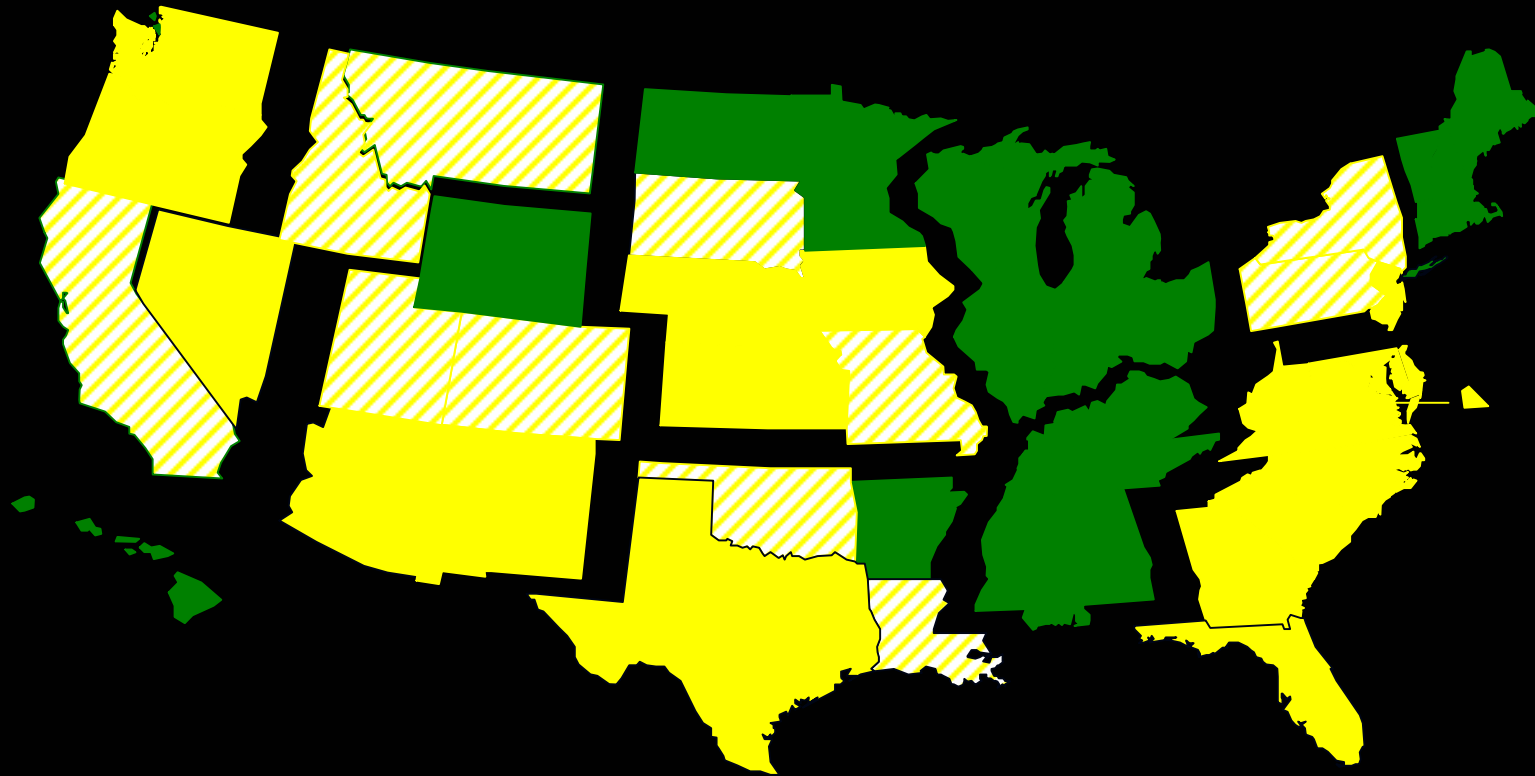
Million Metric Tons
Volume, Green Bar



Supply



Cement Supply Survey Summer 2005



No Shortage

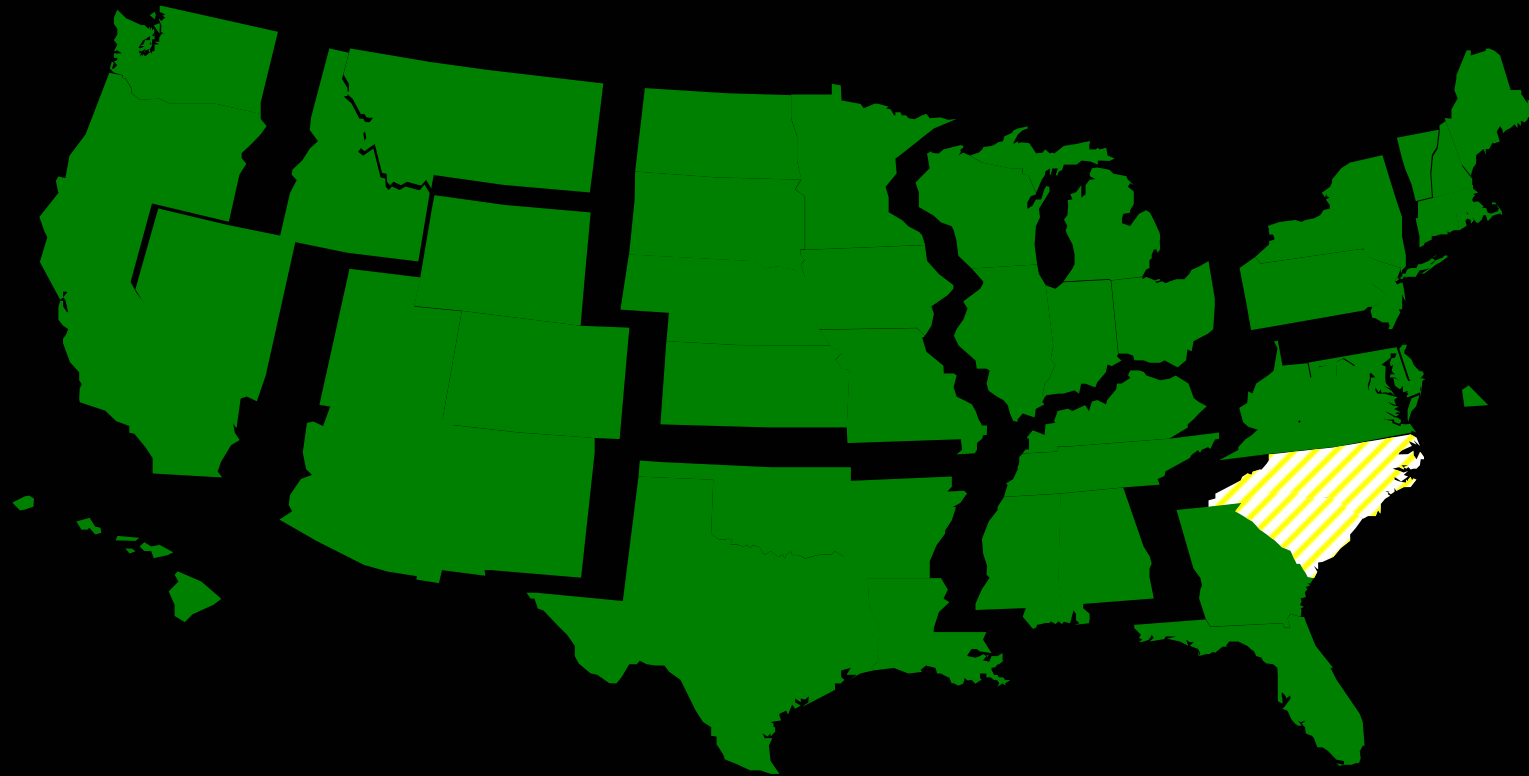


Tight Supplies



Spot Tight Supplies

Cement Supply Survey Summer 2006



No Shortage



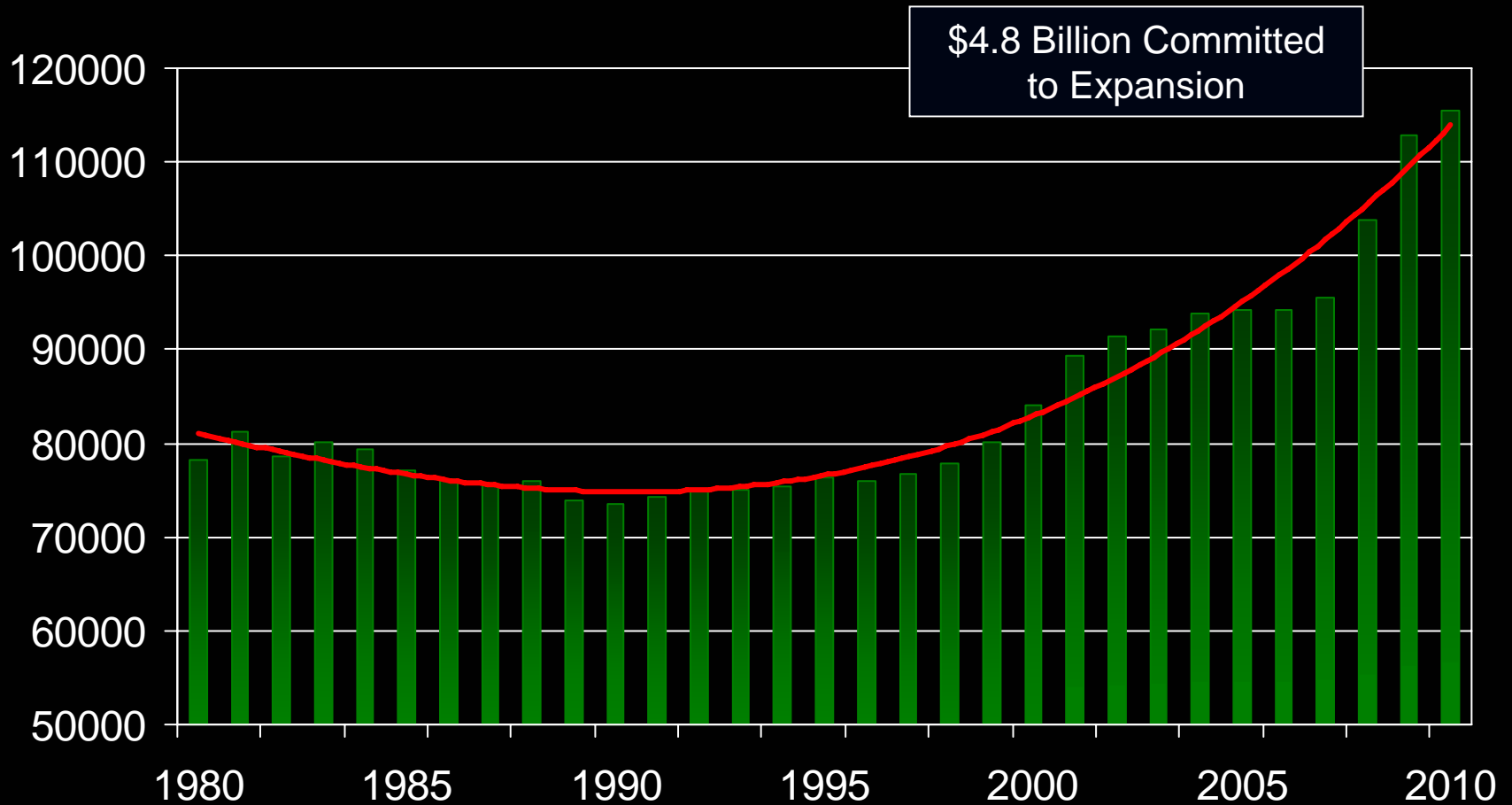
Tight Supplies



Spot Tight Supplies

Cement Capacity Outlook

Thousand Metric Tons Clinker



United States Cement Domestic Production Outlook

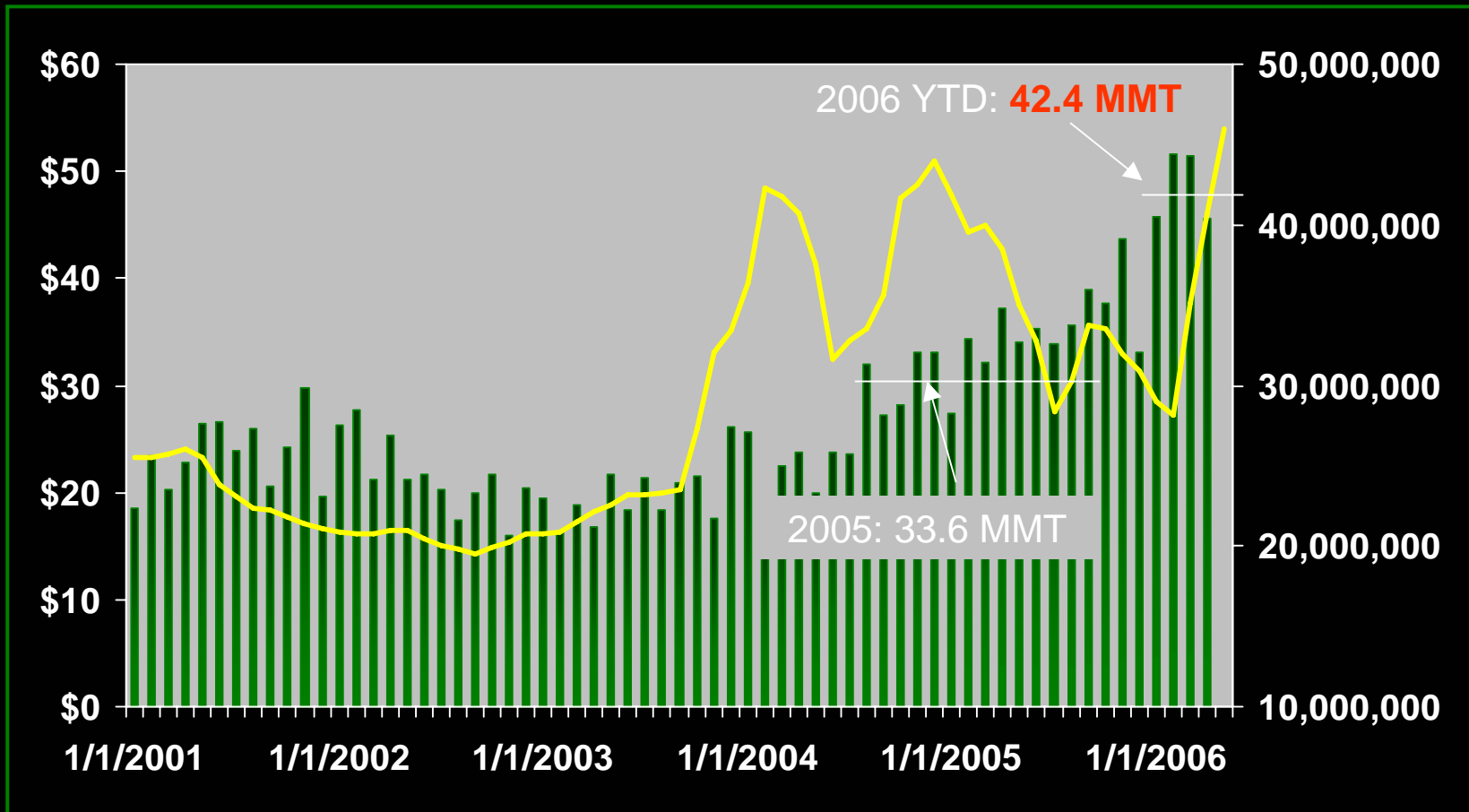
(Thousand Metric Tons)

	Clinker Capacity	Expansion	Operating Rate	Clinker Production	Cement Potential (1)
2002	91,490	0	89.1%	81,518	85,593
2003	92,165	675	88.6%	81,658	85,741
2004	93,925	1,760	92.4%	86,786	91,126
2005	93,925	0	92.9%	87,256	91,619
2006	94,305	380	93.9%	88,552	92,980
2007	95,591	1,287	93.9%	89,760	94,248
2008	103,781	8,190	93.9%	97,451	102,323
2009	112,781	9,000	92.0%	103,759	108,947
2010	115,504	2,723	91.0%	105,109	110,364

Import Volume & Freight Rates

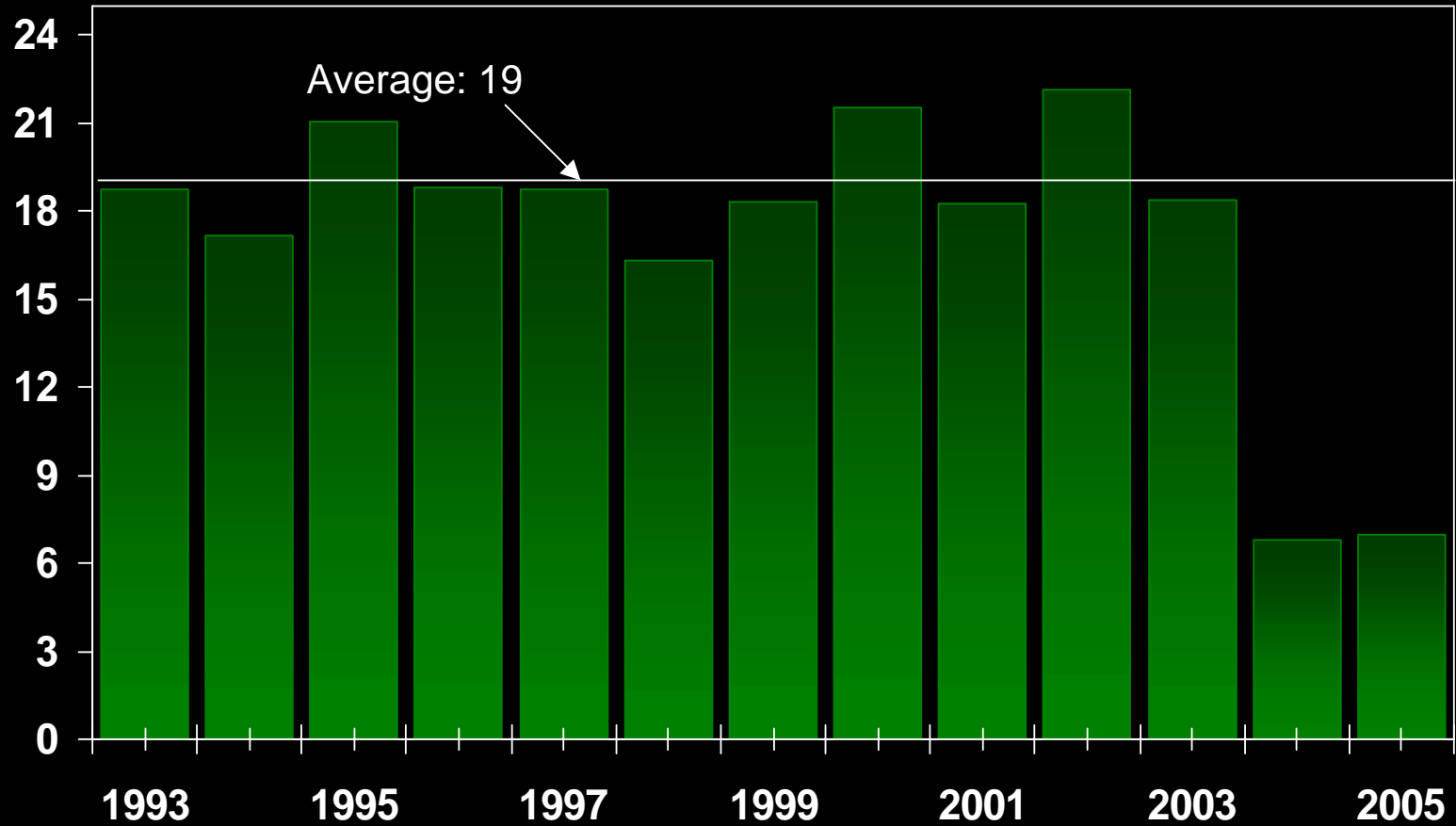
Freight \$ Per Ton, Handymax, Asia-Gulf

Import Volume, Million Metric Tons



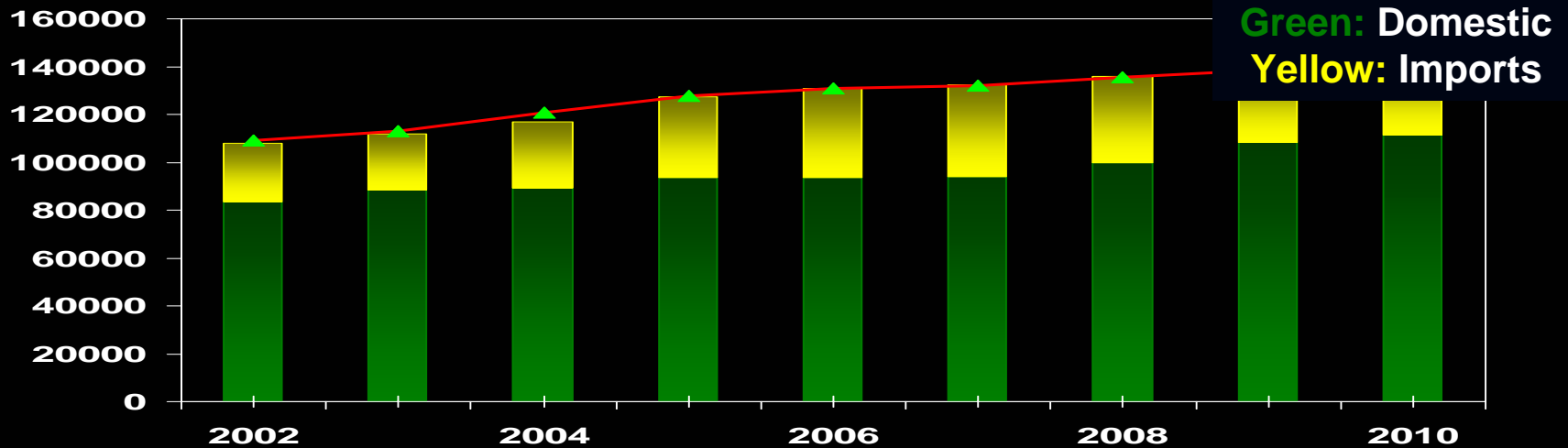
Inventory : Days Supply

Inventory/Daily Selling Rate



Market Balances: Baseline

Adjusted Supply Vs Consumption

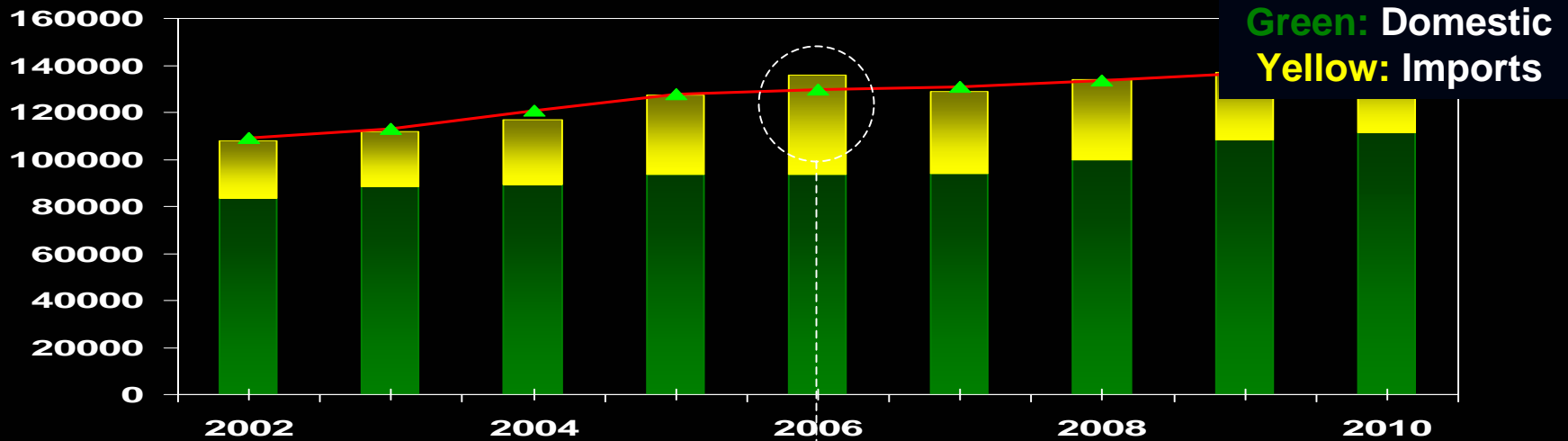


Inventory Adjustment

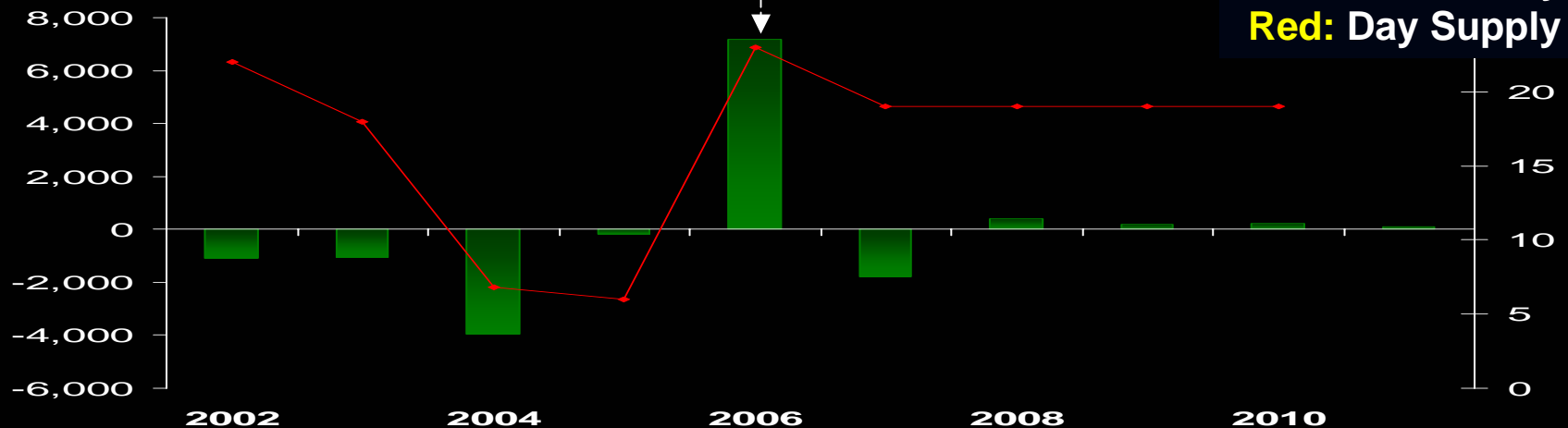


Market Balances: Trend

Adjusted Supply Vs Consumption



Inventory Adjustment



Conclusions



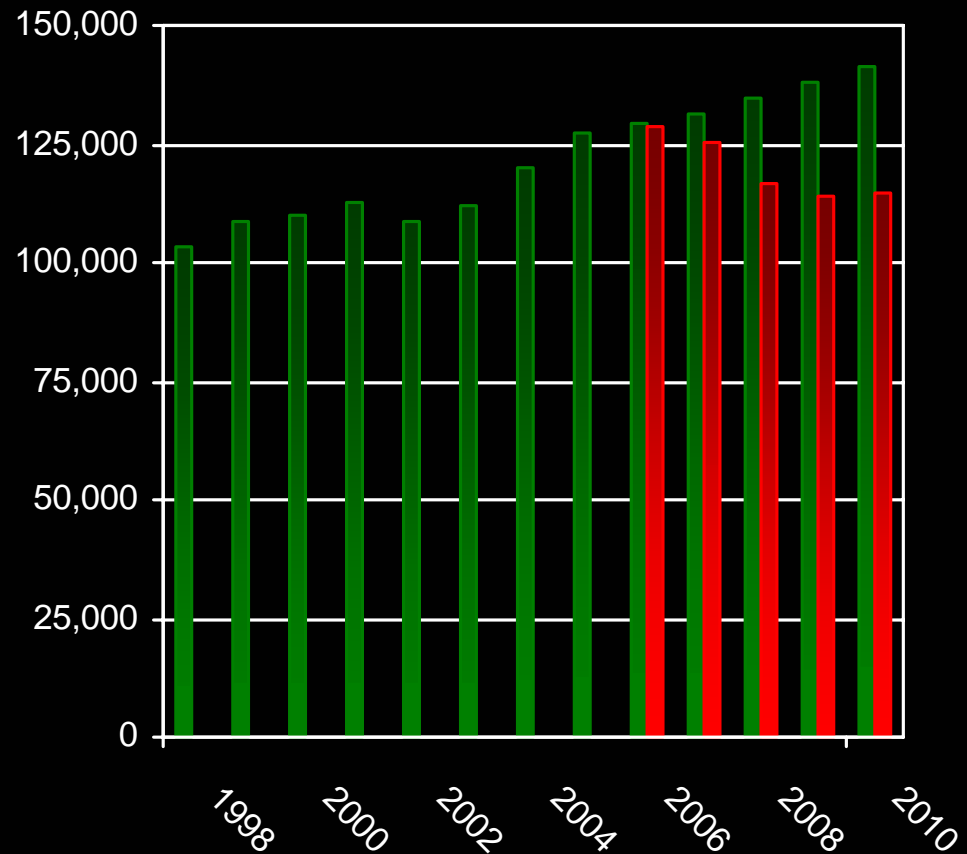
Conclusions

- Slower Economic Growth Ahead
- Harsher Decline in Residential Construction
- Slower Nonresidential Recovery
- Less Robust State Fiscal Outlook Hinders Rate of Growth in Public Sector
- Slower Growth in Cement Consumption
- Imports May Smash Last Year's Record
- Tight Market Conditions Dramatically Reduced
- Timing of Economic Risks Coincide With Capacity Expansion (2008)

Risks: Threat to Growth

- One in five chance of occurrence.
- Beginning in late 2007-2008:
- Mortgage rates rise rapidly and achieve higher levels.
- Residential declines significantly.
- Consumer spending growth moderates.
- Job market flattens, declines.
- Nonresidential flattens.
- Public loses momentum as tax receipts ebb.
- **Risk: 75 Million Ton Correction (2006-2010)**
- Timing coincides with industry expansion.

Total Cement Consumption,
Thousand Metric Tons



Cement Outlook: 2007



NESMEA Workshop
Newark, DE
Edward J. Sullivan
Staff Vice President and PCA Chief Economist

For the Second Straight Year Awarded Most Accurate Forecaster (GDP) by the Chicago Federal Reserve