External Risks to the U.S. Economy

Georgia State University Forecasting Center Conference

August 27, 2008

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External Risks to U.S. Economy

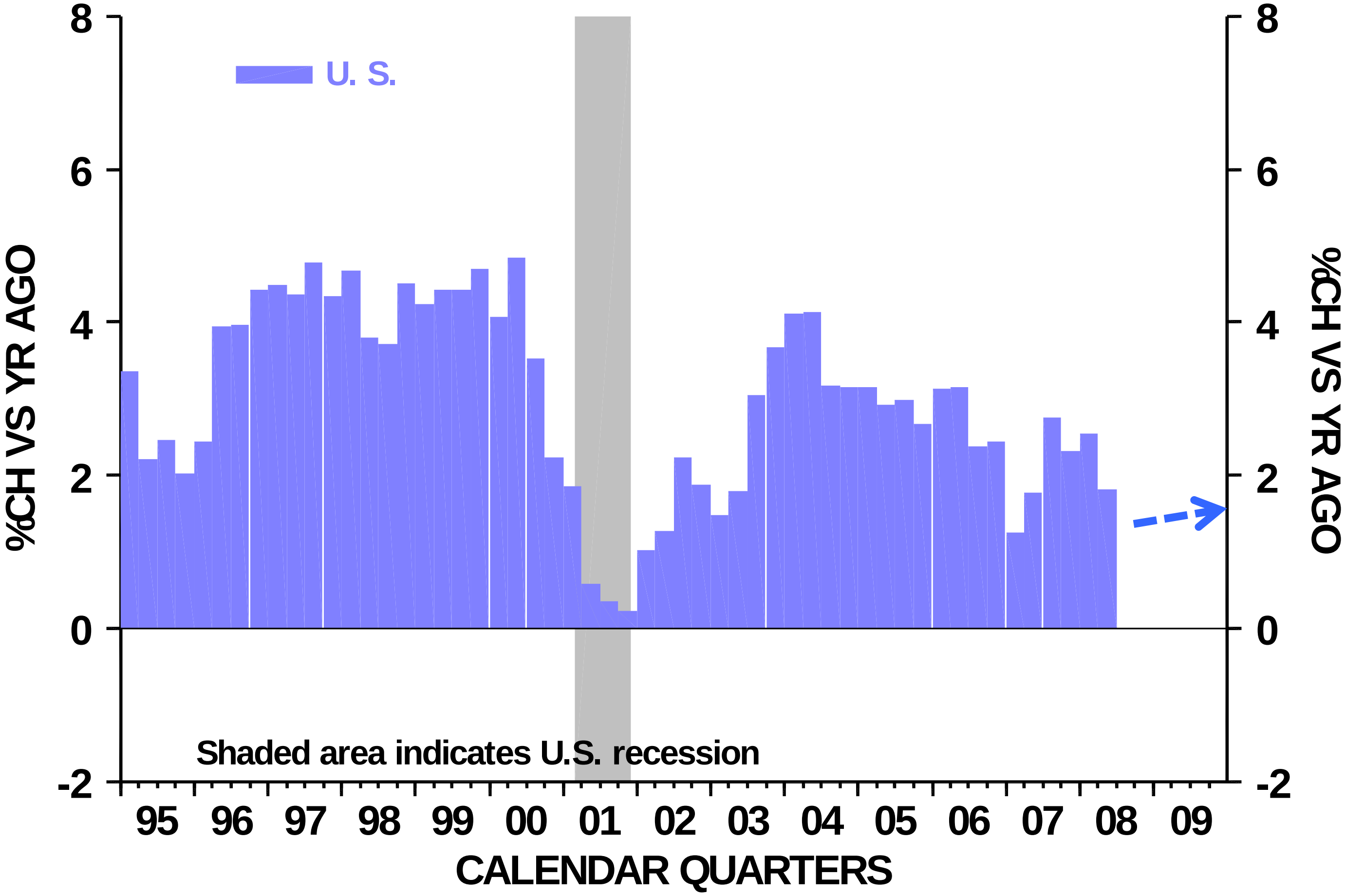
- Faltering growth outside the U.S.
- Global Inflation
- Global credit contraction
- Political risks
  - Wars
  - WTO collapse
  - Differential economic policies

U.S. Economy 2008-2009

- Financial industry problems restrain growth
  - Consensus: real GDP grows ~ 1½% in both years
  - Tight credit, a hangover from subprime mess, offsets stimulus from tax rebates and interest rate cuts
  - The housing and auto declines last through end of 2008
  - Consumer spending weak until jobs pick up in 2009
- Temporary boost to inflation due to global factors
  - Energy, commodities & food prices
    - Demand strong from developing world
    - Supply tightness slowly eased as capacity expands
  - Low wage inflation will keep long-run inflation in check
- Manufacturing outlook mixed, below-trend
  - Long, slow recovery in housing
  - Modest demand for consumer goods
  - Energy-related markets remain healthy into 2009
  - Foreign demand boosts export-oriented industries

REAL GDP GROWTH

The U.S. outlook framework grew out of the post-interest rate increases of 2006-2007, which noticeably slowed the economy



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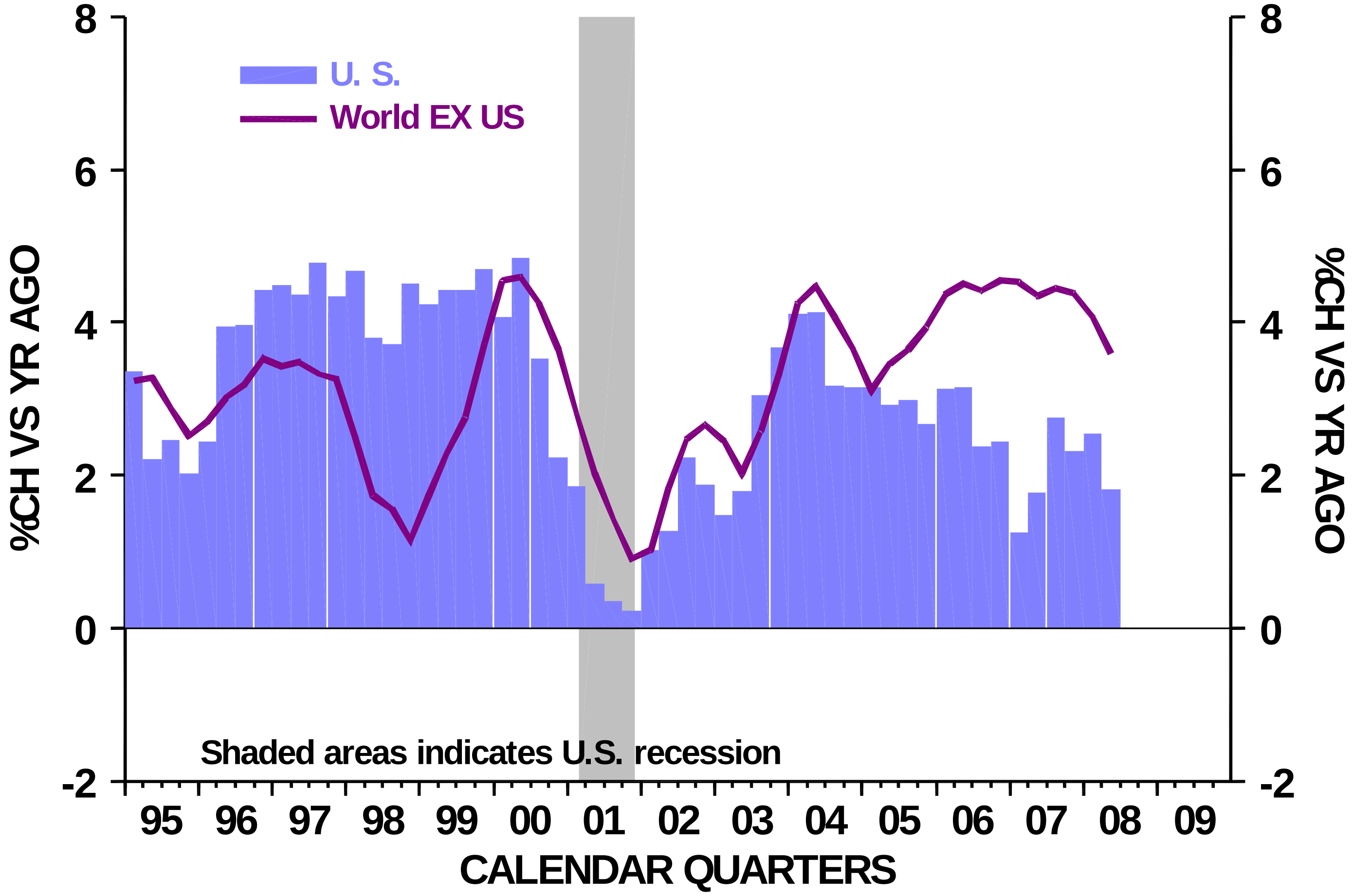
REAL GDP GROWTH

Slower real GDP growth in the U.S. than in the rest of the world slowed US import growth, improving net exports (and GDP)



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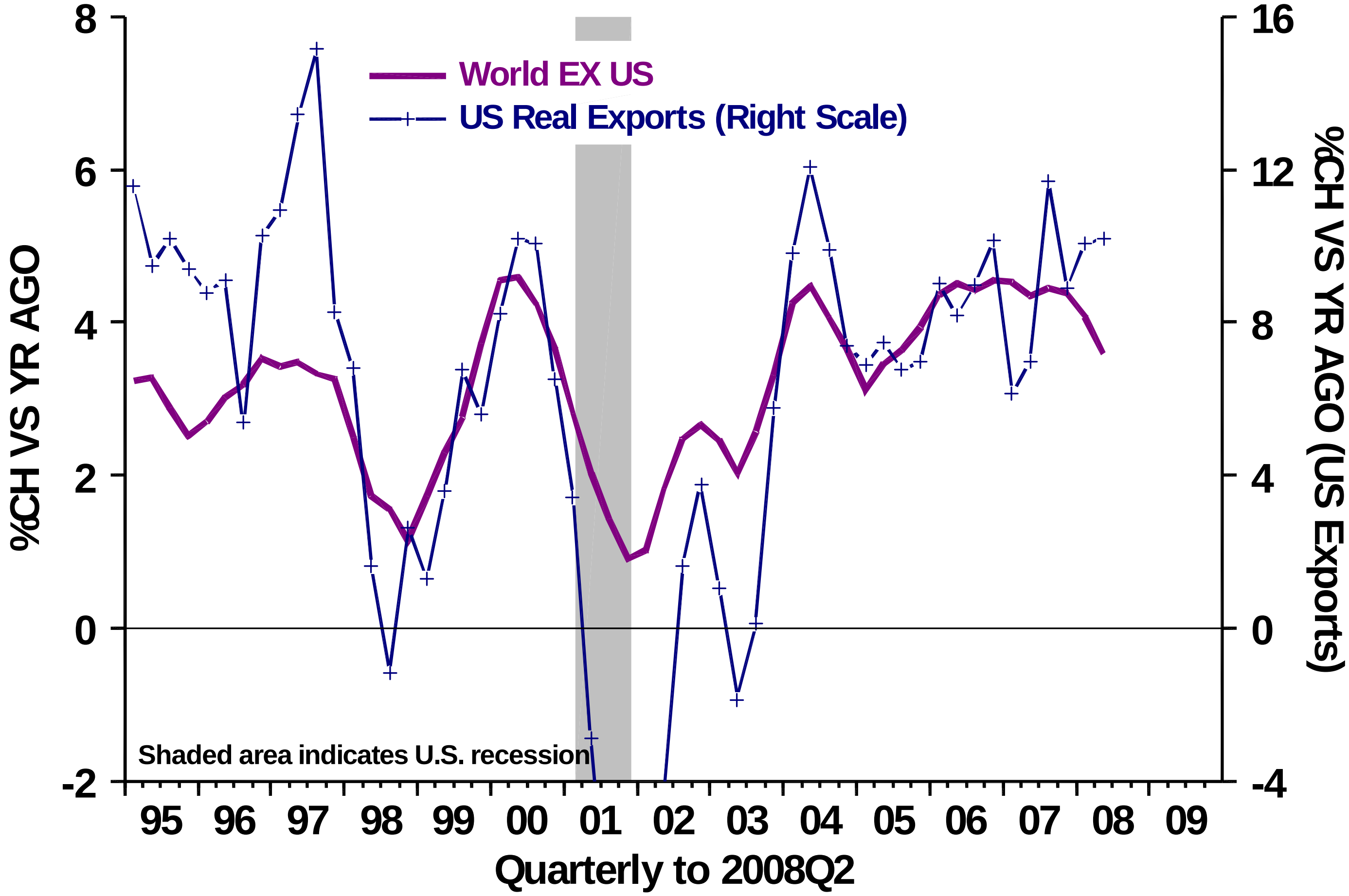
WORLD REAL GDP GROWTH VS US EXPORTS

U.S. exports grow (or decline) at a multiple to world growth
Strong demand growth since 2004 boosted U.S. export growth



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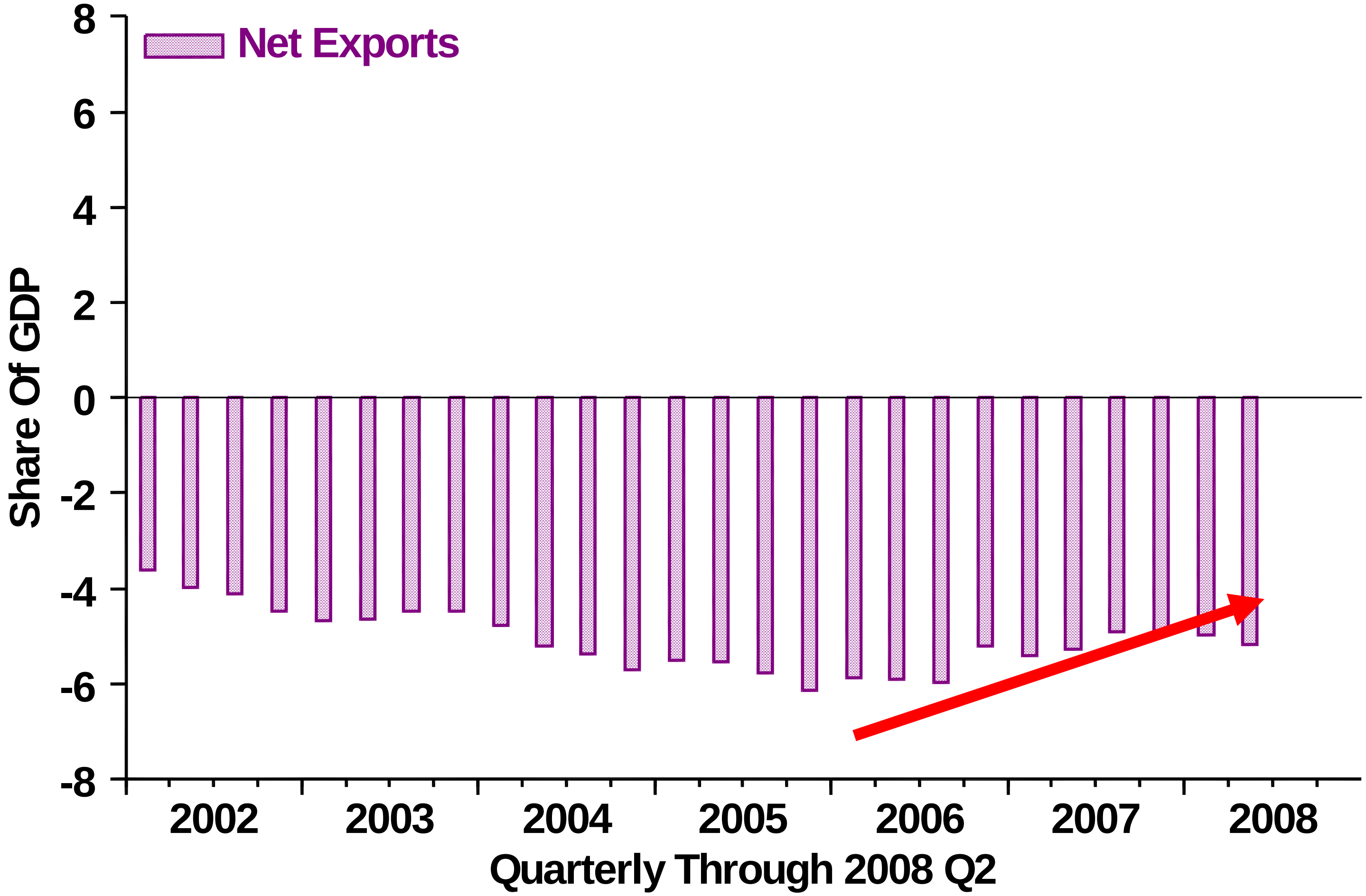
SHARE OF GDP

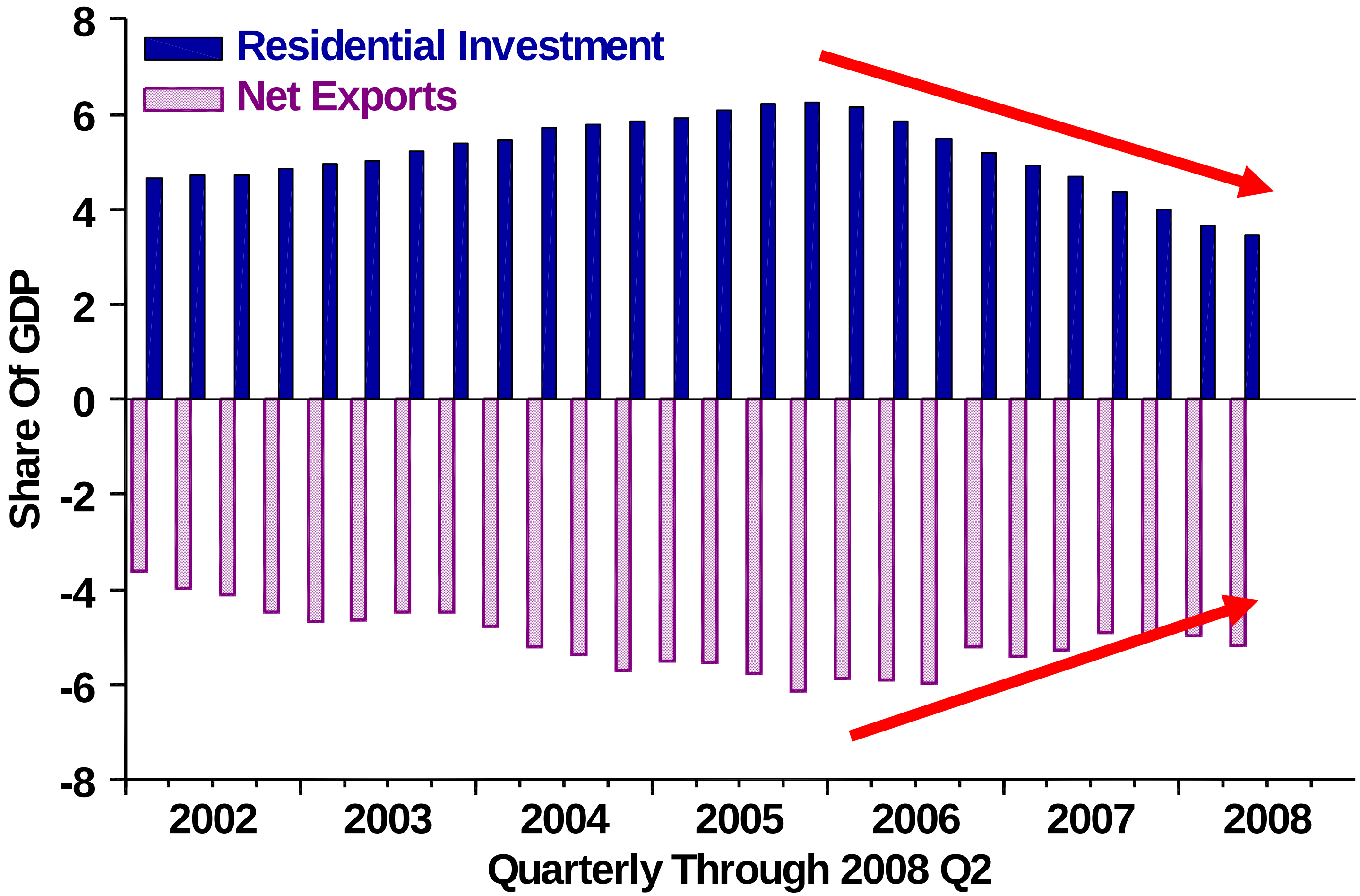
Until the oil price spike, better export performance improved net exports INCREASING U.S. real GDP growth



AIR PRODUCTS

SHARE OF GDP

Until the oil price spike, better export performance made up for some of the housing collapse impact on GDP



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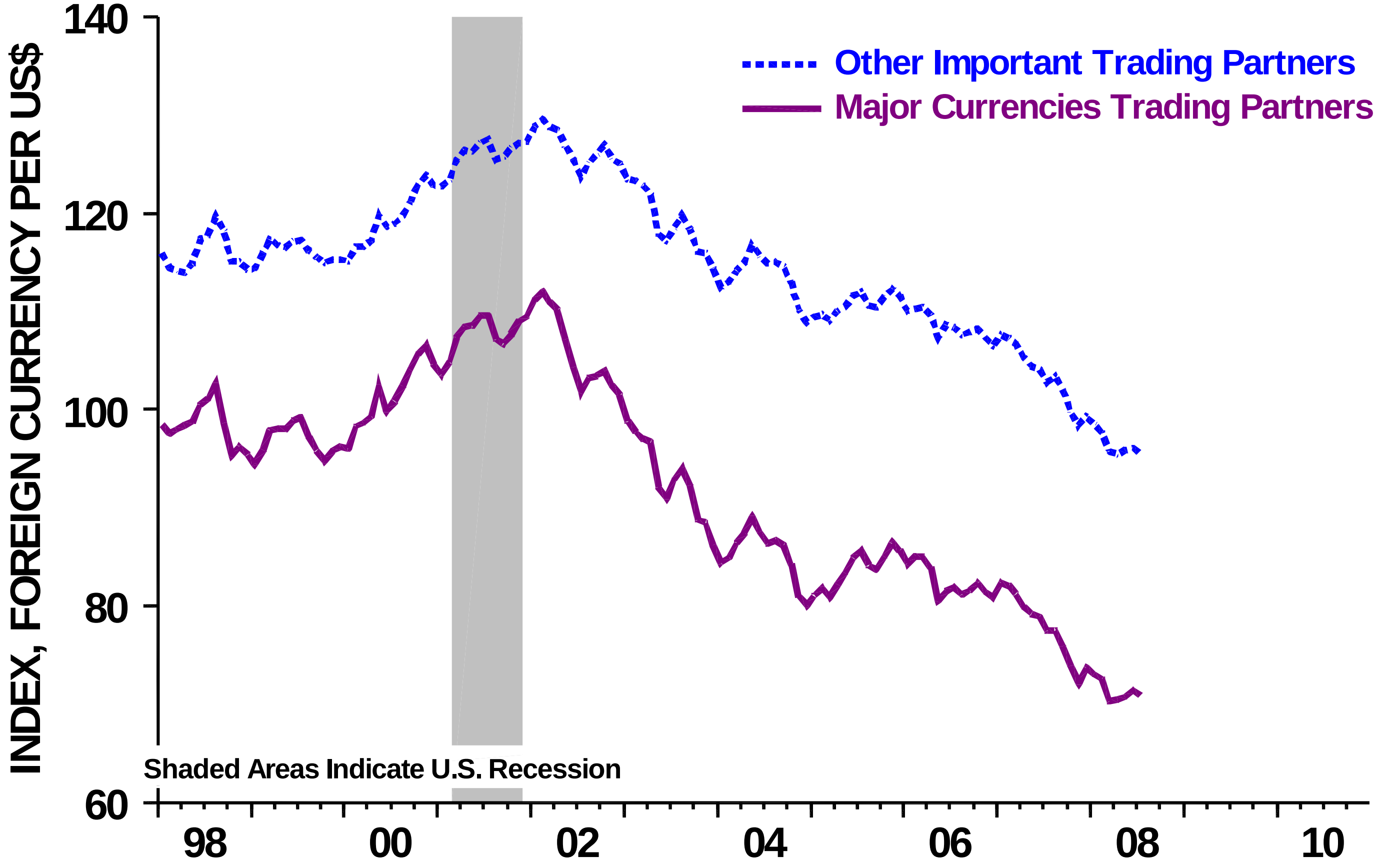
Faltering Growth Risk

- **Risk:**
  - U.S. exports would slow more than anticipated while imports remained unchanged, causing real GDP growth to slip lower than the 1.5% now anticipated by the consensus
  - (with an additional negative impact from weaker overseas profits earned by US corporations)
- **Recent developments:**
  - Europe: slowing from ~3% to ~1 - 1½%
  - Asia: slowing from ~6% to ~4 ½%
  - Latin America: slowing from ~5.5% to ~4%
  - Oil exporting Middle East/North Africa: accelerating from ~4% to ~6%
  - World Ex US: SLOWING from ~4% to ~2 ½ - 3%

Global Inflation Risk

Weak Dollar Helped Boost US Exports

Since 2002 peak, dollar declined more than 35% VS major currencies and more than 25% VS other important currrencies



Source: U.S. Federal Reserve (Monthly Through July 08)

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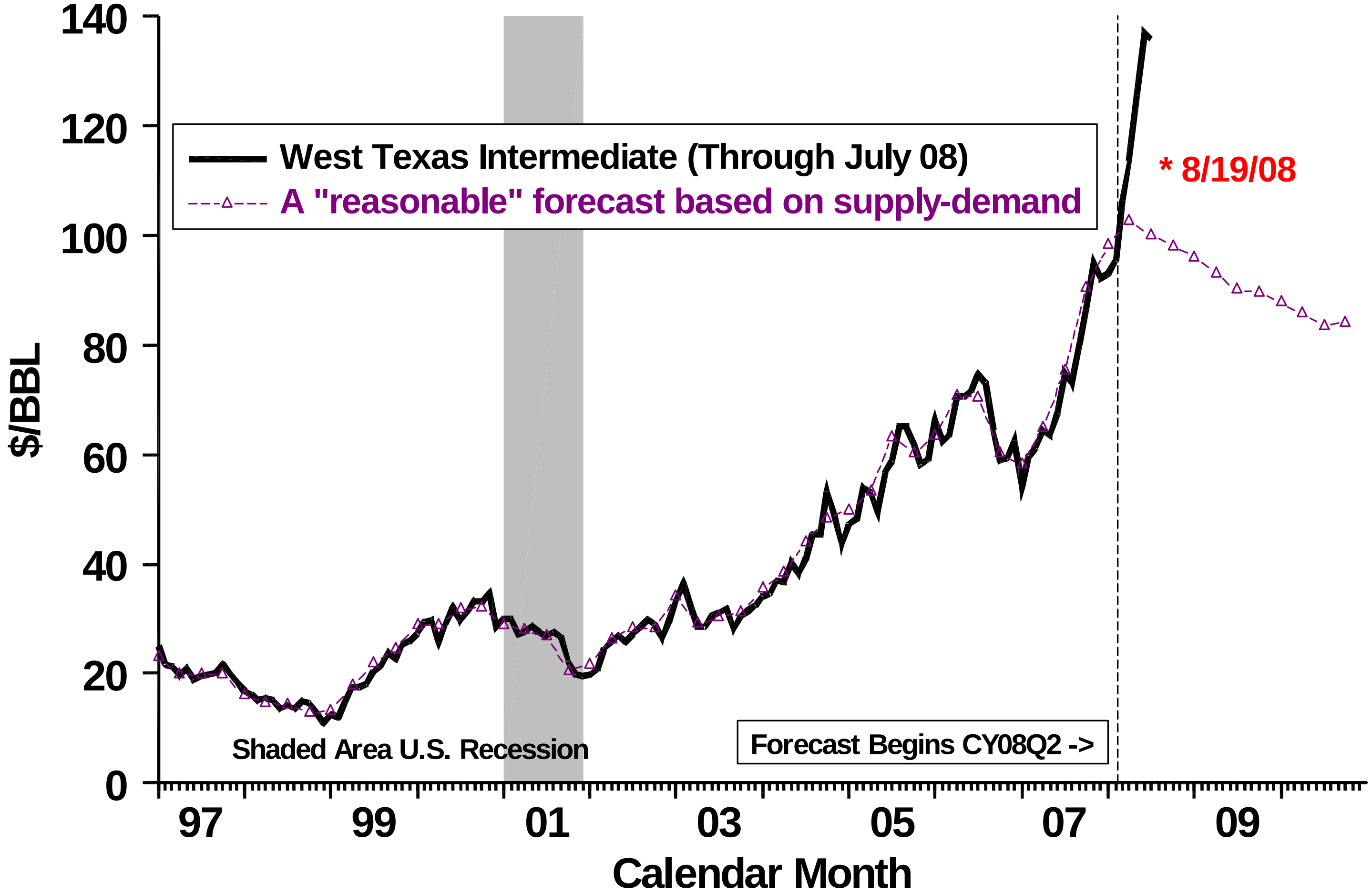
OIL PRICE FORECAST (WTI)

Energy prices surged far above fundamental drivers
Now seeing readjustment (as demand weakens)



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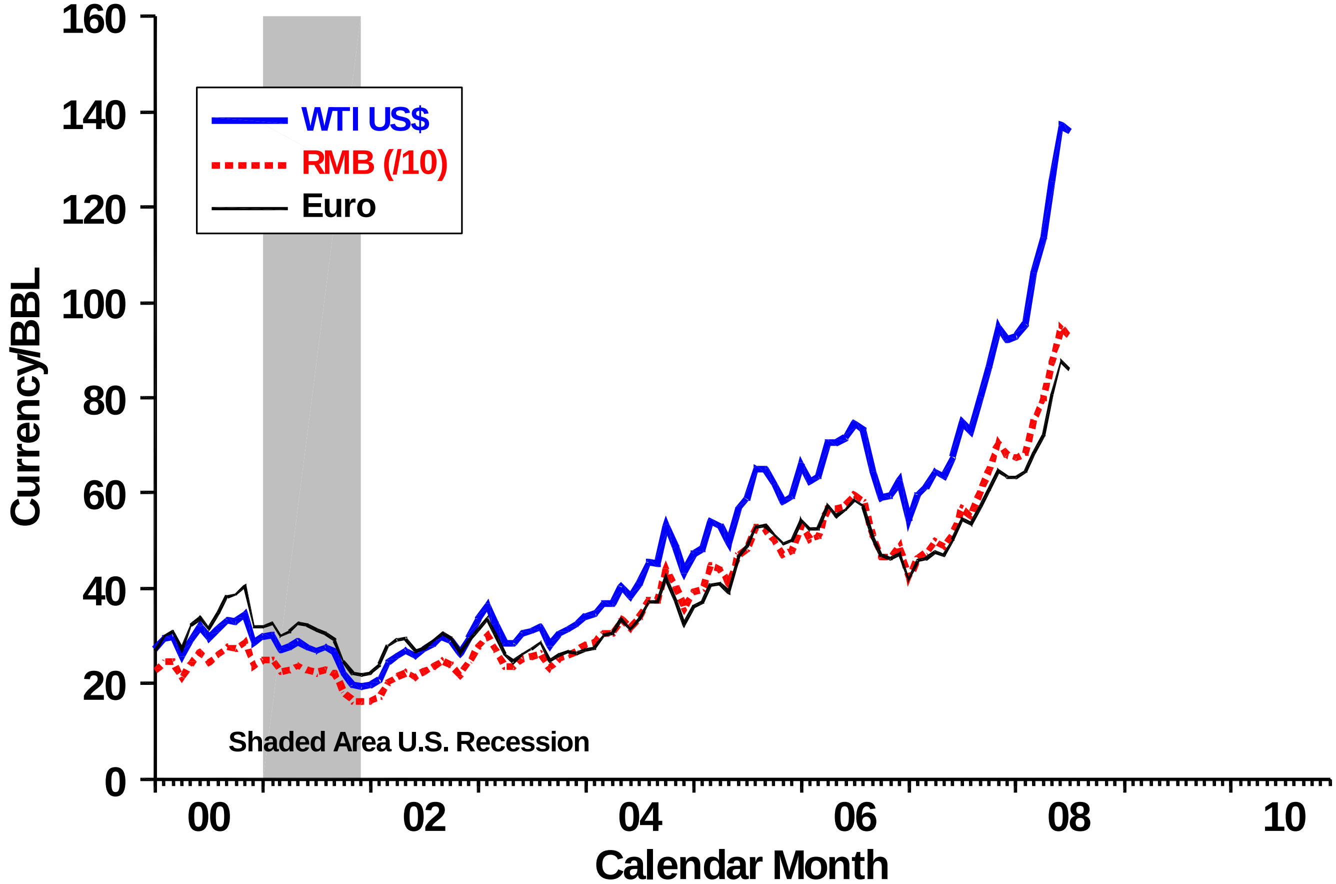
OIL PRICE (WTI)

Prices increased less when measured in many local currencies, but still drove up inflation



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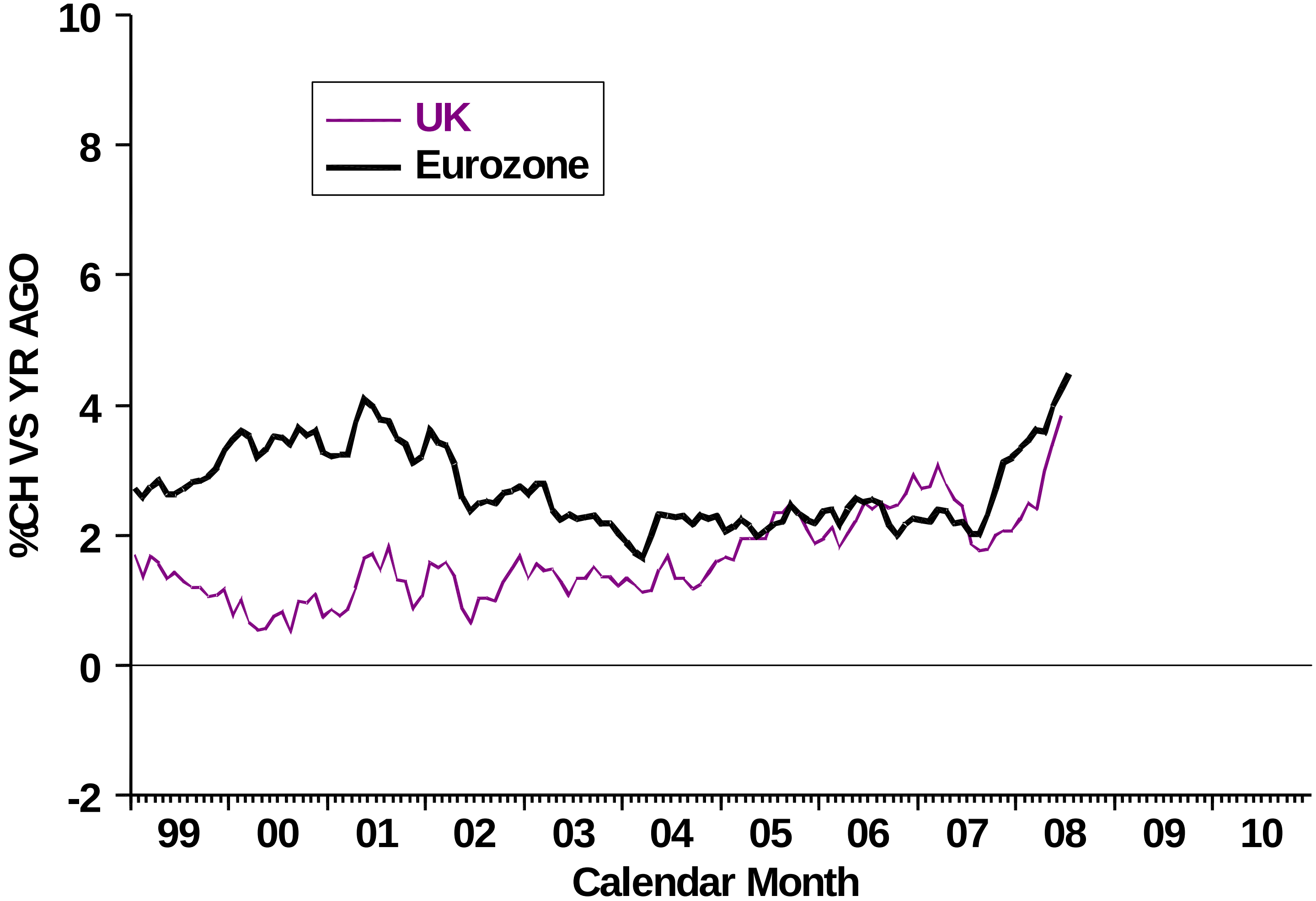
CPI Inflation Rising Globally

Pass-through of higher energy, commodity & food prices



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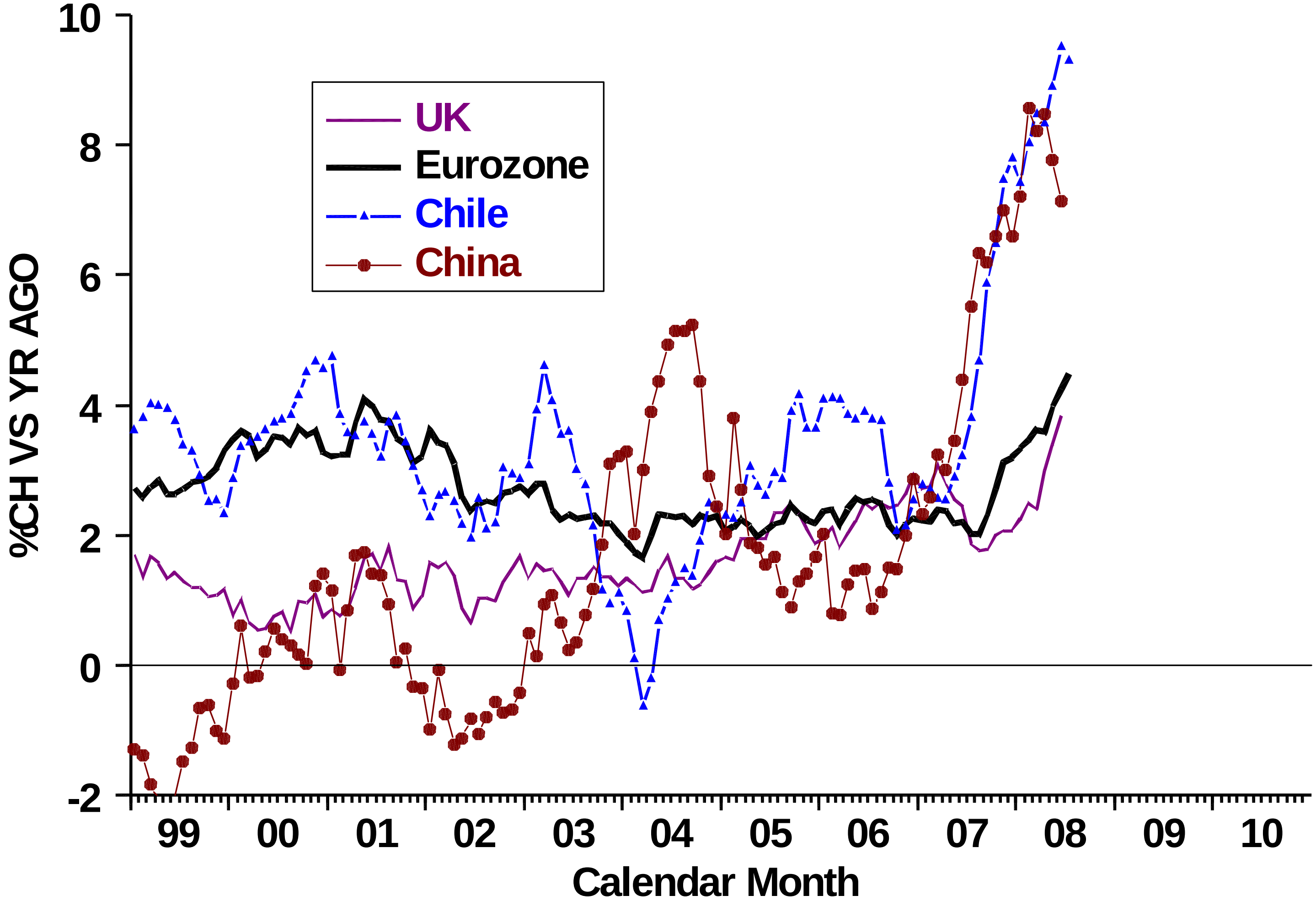
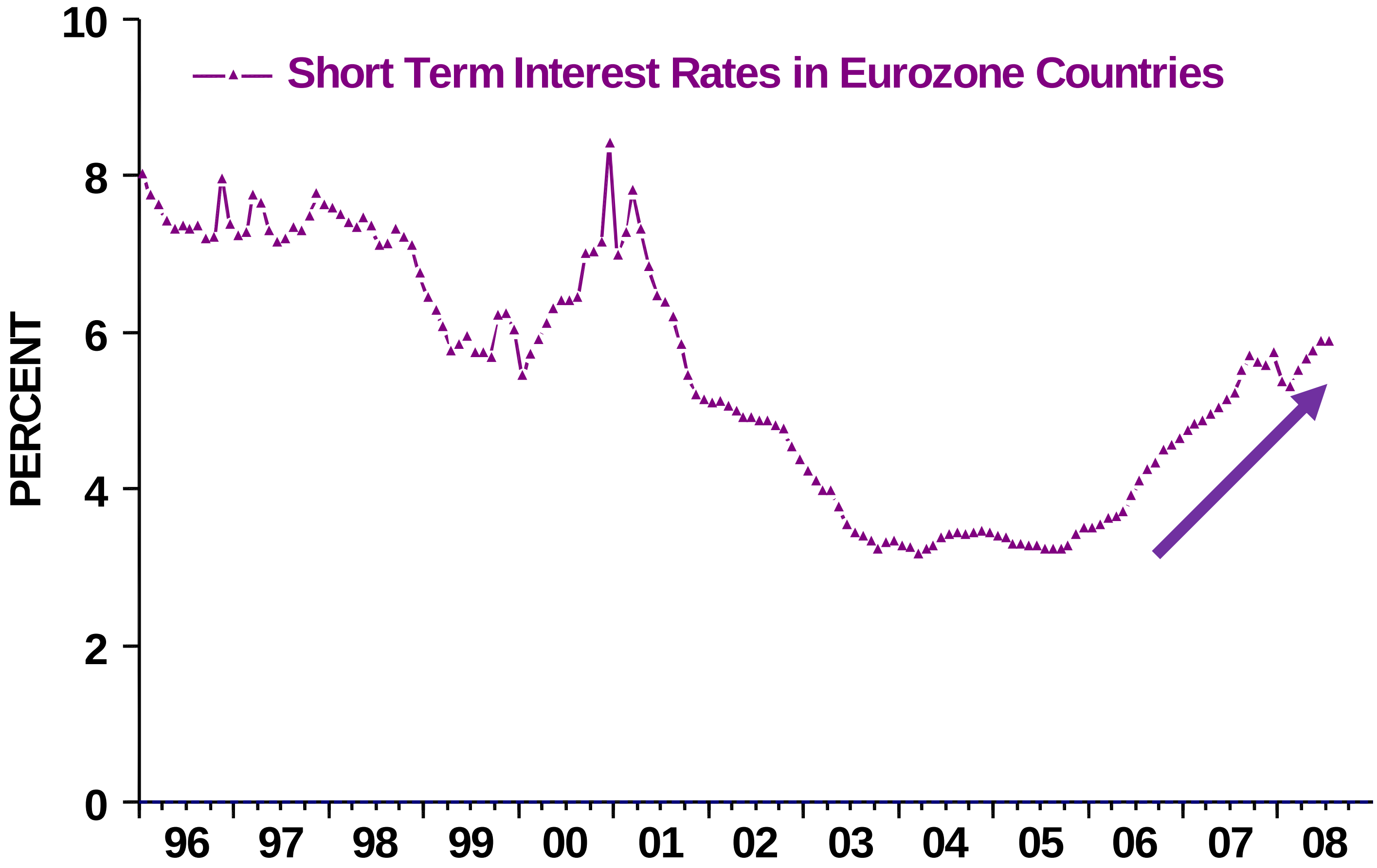


ECB Pushed Short Term Rates Up

Inflation fighting measure that will slow growth in Europe



Source: Global Insight

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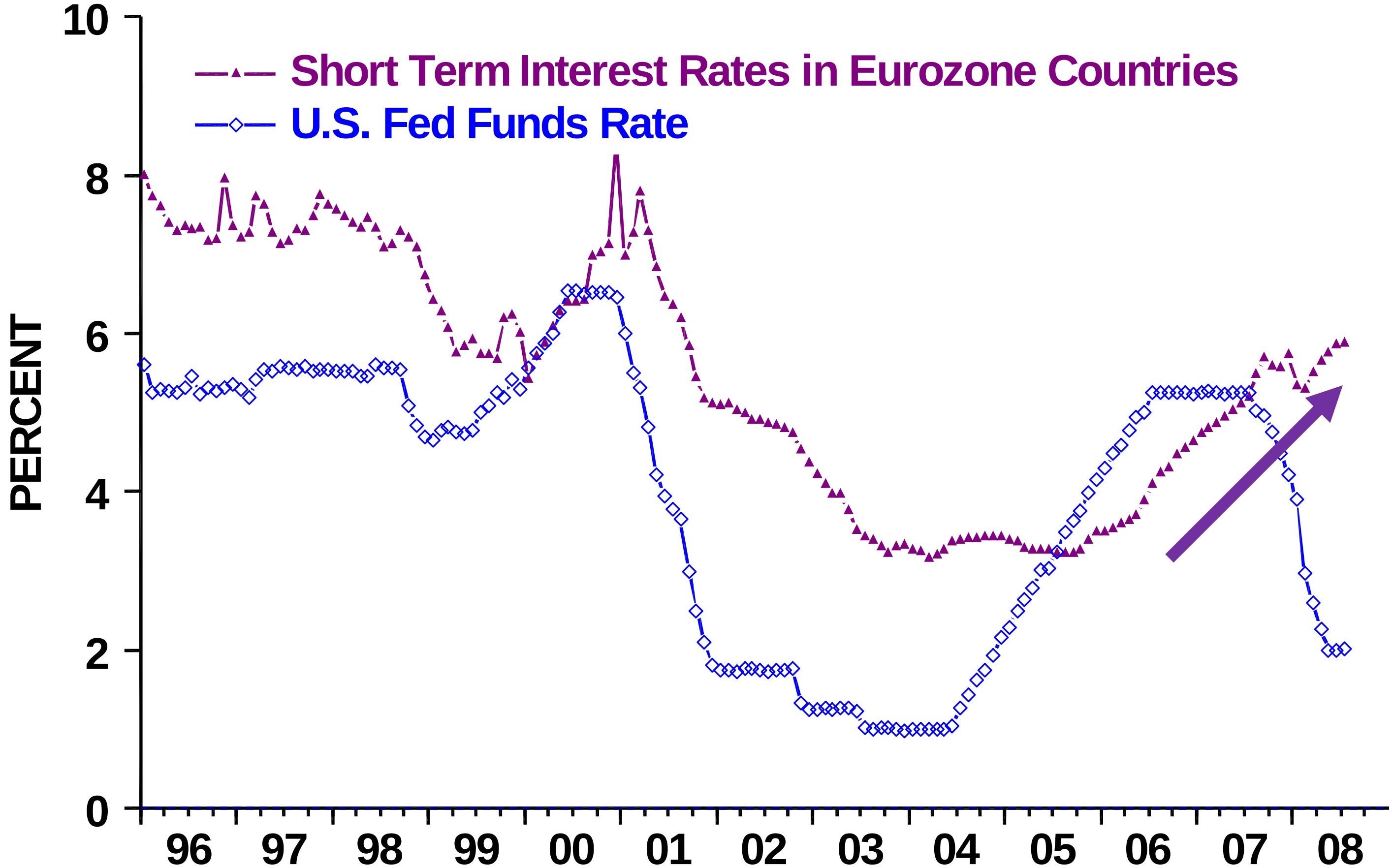
ECB Pushed Short Term Rates Up

Inflation fighting measure that will slow growth in Europe and a far different policy than being followed in U.S.



Source: Global Insight

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Global Inflation Risk

- **Policy response to inflation could weaken growth more than anticipated**
  - Europe already much weaker than recent forecasts
  - Asia & Latin America mixed possibilities
    - Some countries susceptible to boom-bust
    - Some susceptible to stagflation
  - Oil exporting Middle East/North Africa overheated
  - Currency turmoil possible
- **Multiple possible outcomes make planning more difficult**

Global Credit Risk

Reported losses at major financial institutions headquartered outside the U.S. as large as losses in U.S. headquartered institutions.

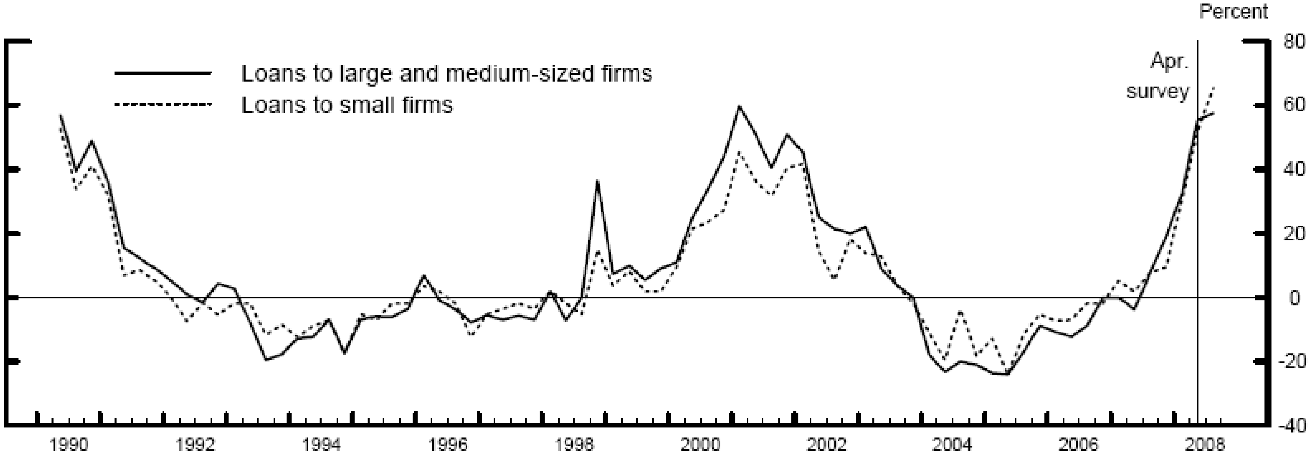
Capital shortfalls ensure tighter credit standards, less credit available from major institutions.

Data source: Bianco Research LLC and Cumberland Investment Advisors

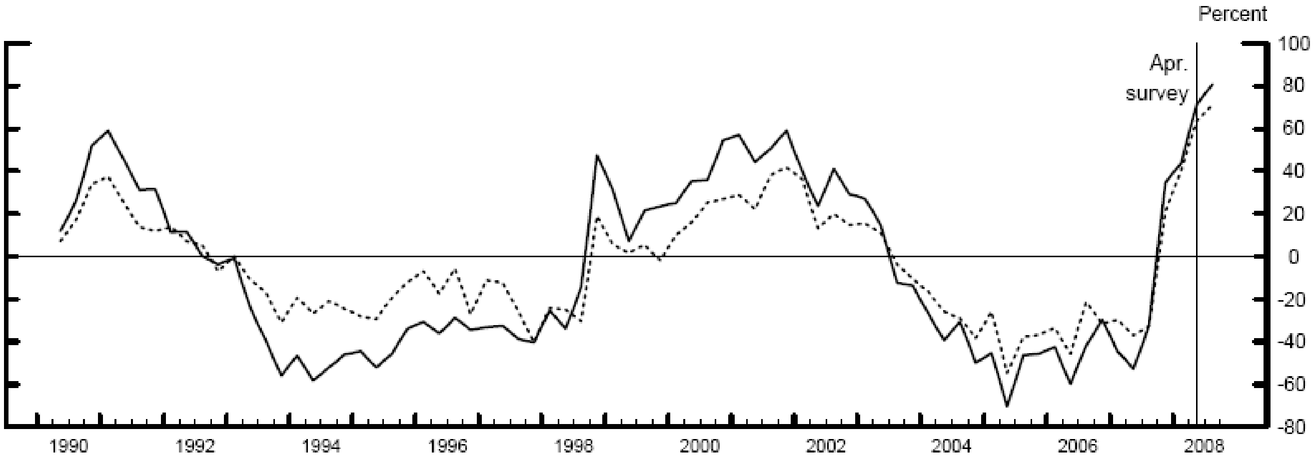
	Losses (Billions)	Capital Raised (Billions)	Losses Less Capital Raised (Billions)
Citigroup	$55	$49	-$6
Merrill Lynch	$52	$30	-$22
UBS	$38	$28	-$10
HSBC	$27	$4	-$24
Bank of America	$21	$21	-$1
Morgan Stanley	$14	$6	-$9
JPMorgan Chase	$13	$8	-$5
Deutsche Bank	$11	$3	-$8
Credit Suisse	$11	$3	-$8
Barclays	$9	$19	$10
Lehman Bro	$8	$14	$6
Mizuiho Financial Group	$6	$0	-$6
Dredsdner	$4	$0	-$4
BNP Paribus	$4	$0	-$4
Goldman, Sachs & Co.	$4	$1	-$3
Bear Stearns	$3	$0	-$3
Wachovia	$22	$11	-$11
IKB Deutsche	$15	$13	-$3
Royal Bank of Scottland	$15	$24	$10
Washington Mutual	$15	$12	-$3
Wells Fargo	$10	$4	-$6
Credit Agricole	$8	$9	$1
Remainder More Than 43 Banks Not Individually Listed with Average Losses of Less than $3 Billion Each	$128	$96	-$64
Total	$493	$353	-$172

Fed's Senior Loan Officer Survey: Tightening Credit, Rising Costs of Credit

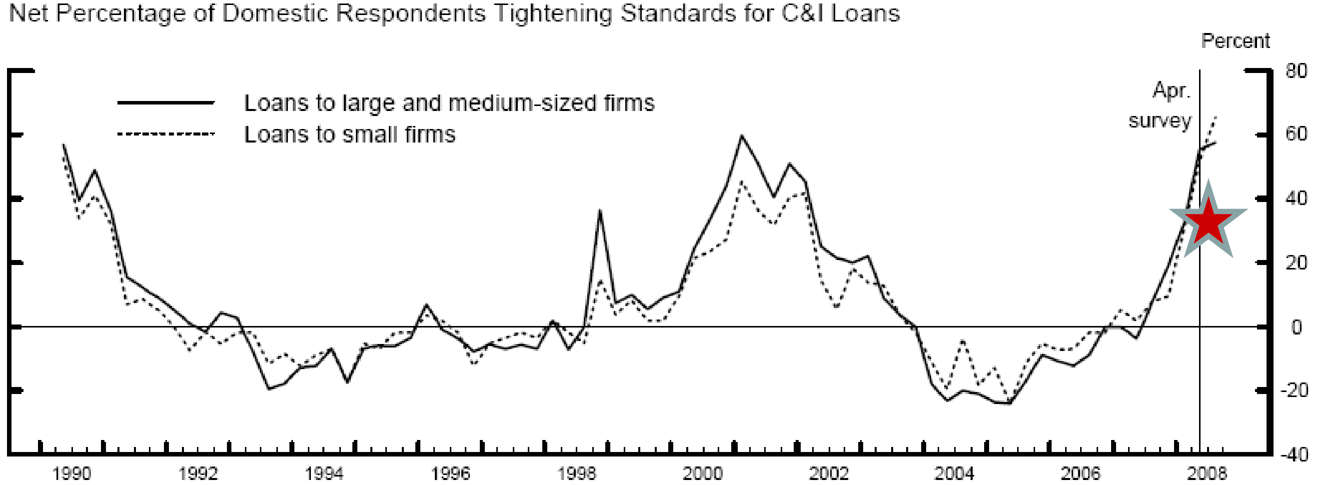
Net Percentage of Domestic Respondents Tightening Standards for C&I Loans

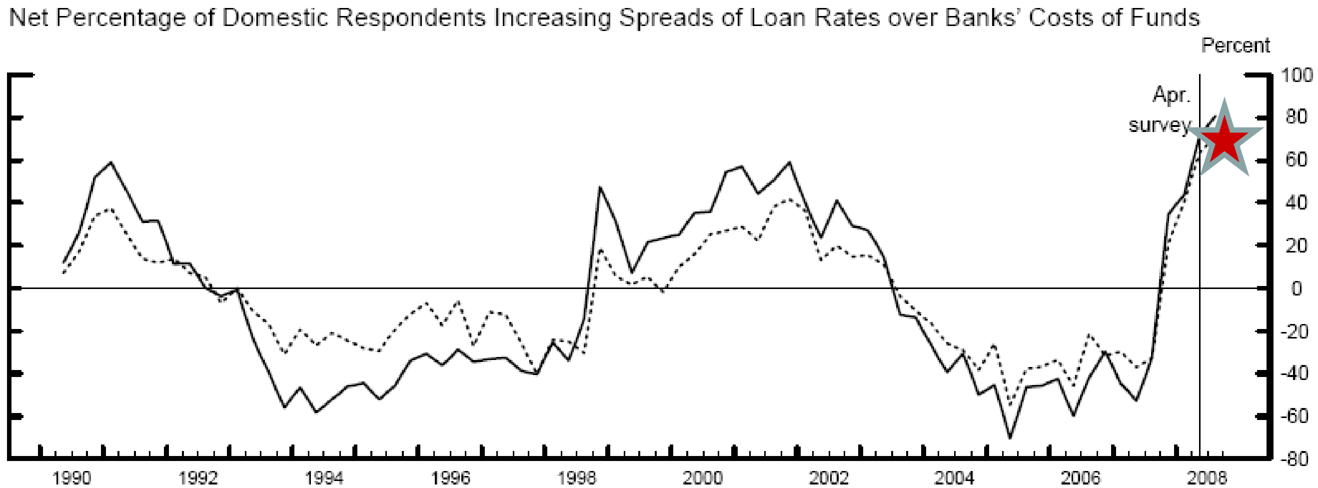


Net Percentage of Domestic Respondents Increasing Spreads of Loan Rates over Banks' Costs of Funds



Foreign-owned Institutions Also Tightening Standards & Raising Margins





AIR PRODUCTS

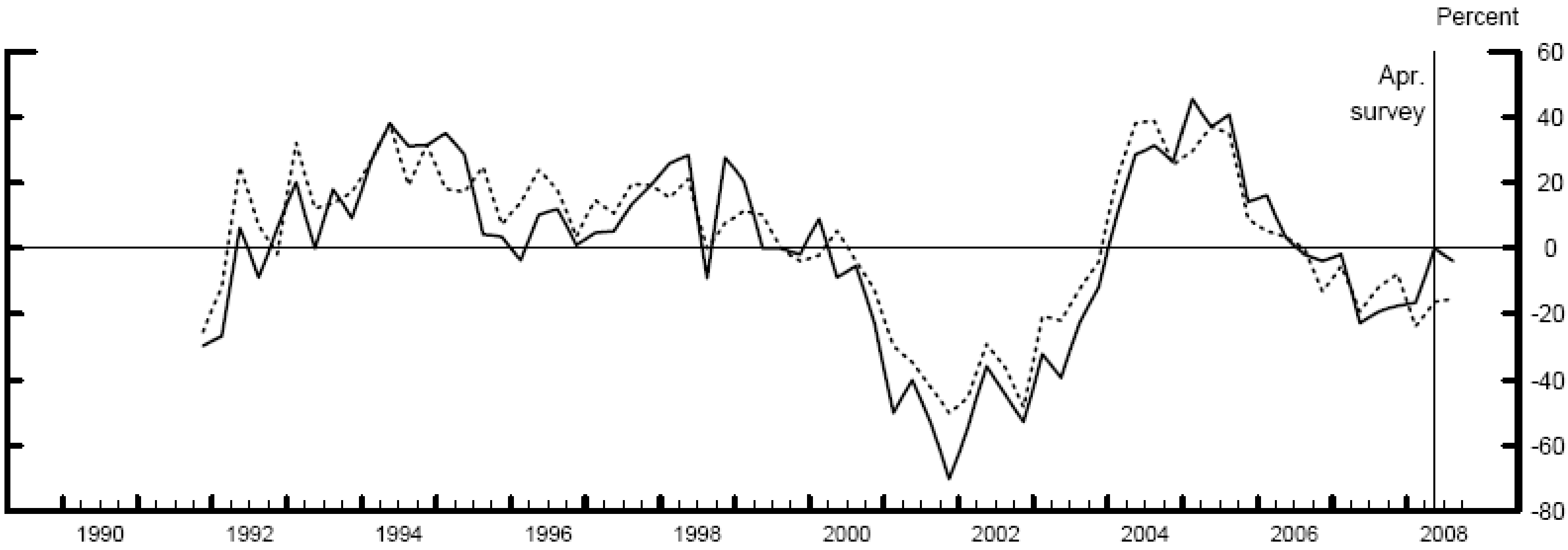
Reasons For Tighter Commercial & Industrial Credit Standards Cited By Foreign Institutions

- **Less favorable or more uncertain economic outlook (100%)**
- **Decreased liquidity in secondary market for these types of loans (79%)**
- **Reduced tolerance for risk (79%)**
- **Deterioration in bank's current or expected capital position (64%)**

(SRC: Senior Loan Officer Opinion Survey on Bank Lending Practices – FRB Board of Governors August 11, 2008)

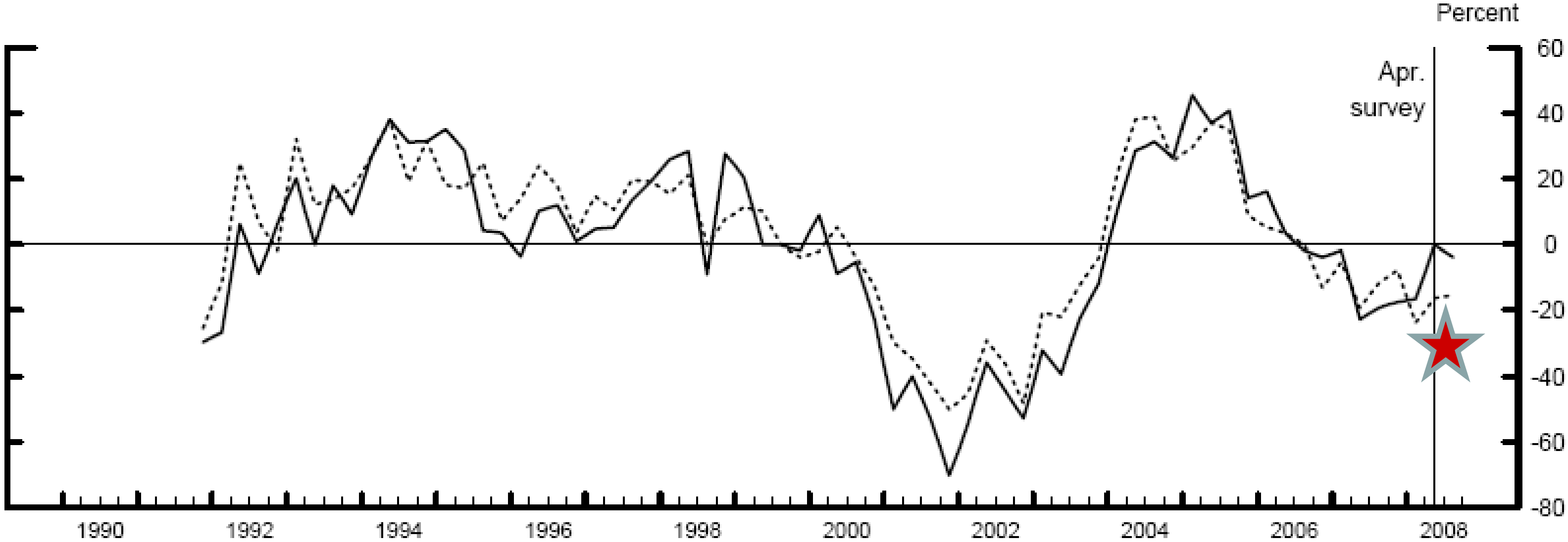
Demand For Loans Continues to Decline

Net Percentage of Domestic Respondents Reporting Stronger Demand for C&I Loans



For Both Domestic and Foreign-owned Institutions

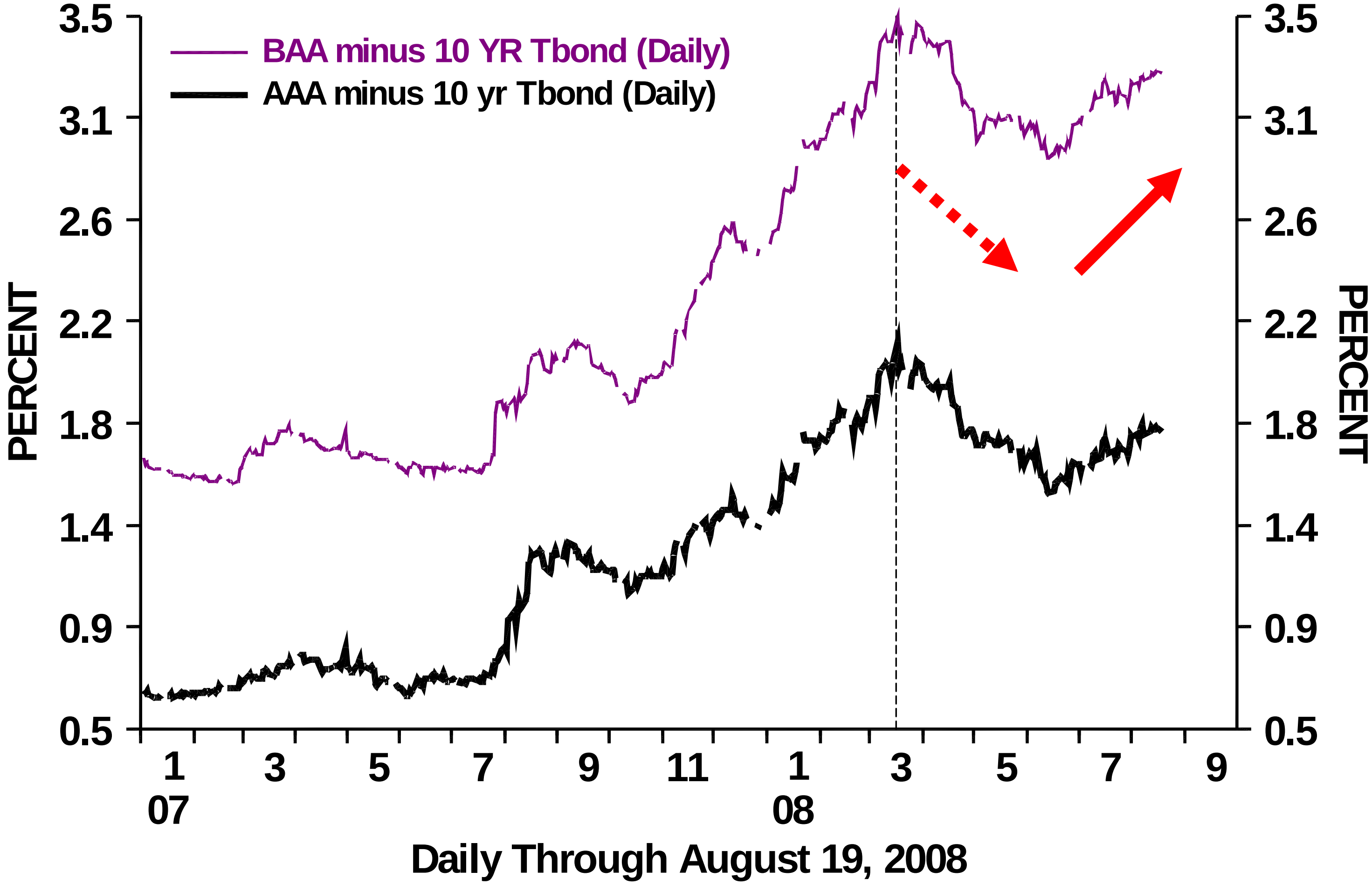
Net Percentage of Domestic Respondents Reporting Stronger Demand for C&I Loans



Risk aversion plus credit restrictions a GLOBAL problem with the potential to sharply reduce investment

RISK PREMIUMS - RISK AVERSION REMAINS

March 17 (Bear Sterns) looked like the "risk" trough
but market deteriorating since early June (IndyMac)



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Increased Political Risk

- New wars or stress points
  - Russia-Georgia (implications for EU and non-EU states)
  - Kashmir
  - Philippines
- New leaders in key countries
  - U.S.
  - Pakistan

Economic Policy Risk

- Less alignment on policy
  - EU vs US (monetary)
  - WTO talks collapsed (developed vs emerging)
- Differing approaches to inflation
  - Monetary restrictions to control
  - Looseness that may lead to boom-bust
- Commodity exporting country wealth recycling
  - Sovereign wealth funds
  - Possibility of commodity price bust that sharply disrupts domestic fiscal policy

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  - Differential economic policies