Global inflation, monetary policy and turbulent financial conditions

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Introduction

- Crisis, stock market crashes, fear of recession … It is exciting times for economists!
- Problems are escalating fast. When the U.S. Federal Reserve Fed lowered interest rates by 25 basis points in December, they did so to “foster maximum sustainable growth and provide some additional insurance against risks.”
- In contrast, during the last two weeks, Fed has lowered its policy interest rate 125 basis points based largely on its assessment of the need to battle strong recessionary forces.
- These events should remind us of how extraordinarily challenging it is to forecast economic activity (in a global world).

Plan

I. Globalization – some stylized facts on integration and implications for policy

II. Integration and current fear of recession

III. Can we forecast the recession?

IV. Financial variables as predictors

V. Consequences – depend on shocks

I. Globalization
Trade and growth

- The phenomenon of globalization, which refers to the rising trade and financial integration of the world economy, has gained momentum in recent decades, with the growth rate of world trade being greater than the growth rate of world output in almost every year since the 1960s.

- Surge in cross-border capital flows over the last two decades.
  - Since the early 1980's, gross capital flows have increased from 5 % to 20 % of GDP for advanced countries.
  - For emerging markets, gross capital flows have increased almost fourfold over the same period, see Kose et al. (2004, 2006).

- Increased trade and financial integration has an impact on international business-cycles. Evidence of increased interdependence?
  - Slightly more synchronized business cycles – not all the way.
  - More importantly, trade and financial-market integration enhance global spillovers of macroeconomic fluctuations, see Kose et al. (2006).

Globalisation and inflation

- Greater openness to trade has increased the influence of import prices on domestic inflation. Import prices have generally risen at a slower rate than other consumer prices, slowing overall inflation.
  - Domestic inflation depend to a greater extent on the prices of imported goods (enter consumption basket or as an intermediate good).
  - Competition with imports affects the pricing power of domestic producers.
  - The level of resource utilization in the world economy is another potential influence on domestic inflation.
  - Does the global output gap affects domestic inflation? Yes, according to Borio and Filardo (2006). Evidence is not conclusive. Measurement issue.

- But globalisation may also lead to higher inflation. Strong growth in large emerging-market economies contributed to recent increases in the prices of energy and other commodities.

- Need to monitor international influences on the inflation process.

Globalisation and monetary policy

- While some variables have been more correlated with global factors, the transmission mechanism of monetary policy may have remained the same Boivin and Giannoni (2007), Woodford (2007).

- But, correlations between long-term interest rates and yields in the United States and those in other industrial countries are high and appear to have risen significantly in the last few years. Is monetary policy in open economies less independent?

- Integration has increased the extent that economic shocks (oil price) have global rather than purely local effects. Central banks are guiding their policy response similarly to such shocks.

- U.S. monetary policy actions more significant effects on foreign yields and asset prices, see Ehrmann, Fratzscher, and Rigobon (2005), Faust et al. (2006).

- Globalization has added a dimension of complexity to the analysis of financial conditions which monetary policy makers must take into account.

II. Integration and current fear of recession

- When/if the US economy is falling into the recession - Do we all fall, or do we think that we can remain in this expansion forever?

- Is the world decoupled from the US?

- Either you believe in the globalization story… I.e. the world is more integrated, or you believe in decoupling.

- However, you can not believe in both.

Is the US already in a recession?

- In the US, the responsibility for declaring the stages of the business cycle is informally held by a committee of economists.

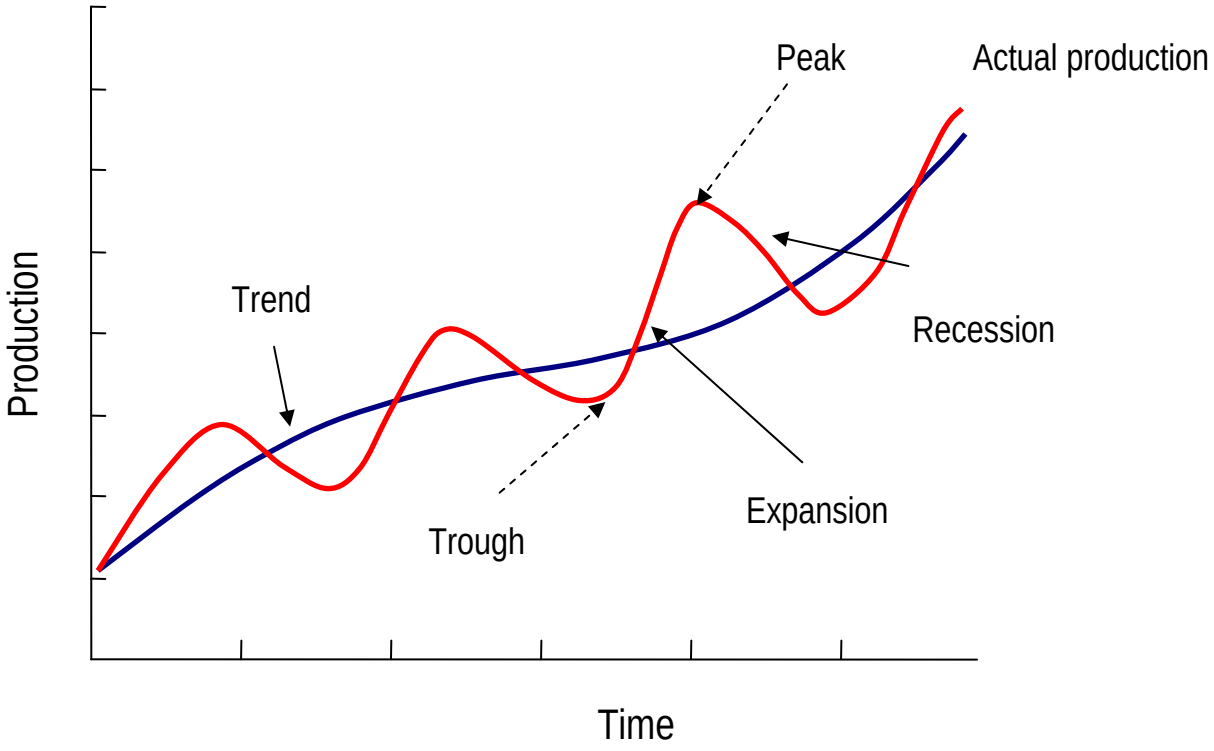
- The Business Cycle Dating Committee of the National Bureau of Economic Research (NBER) uses a number of economic indicators, including personal income, unemployment, industrial production and sales and manufacturing volume, to date the business cycles

- It's not true that they declare a recession if economic growth is negative for two quarters in a row. If it were that simple, we wouldn't need a committee.

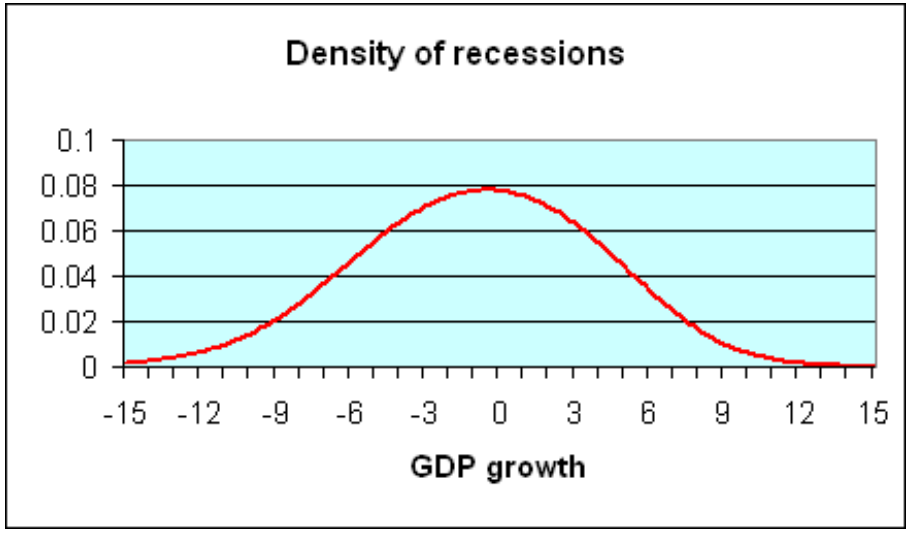
- A recession begins just after the economy reaches a peak of activity and ends as the economy reaches its trough. Between trough and peak, the economy is in an expansion.

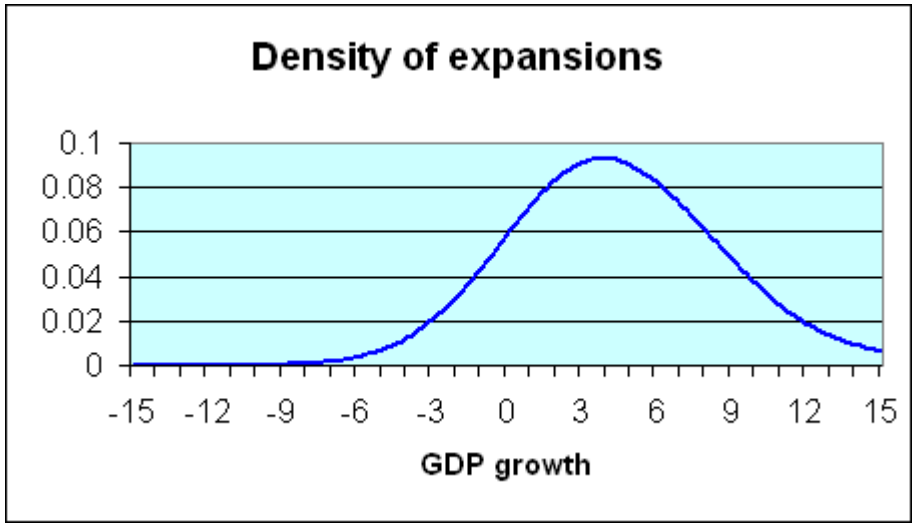
- NBER's pronouncements historically come long after recessions have begun, seven months on average. By the time the bureau announced the recession of 2001, it was already close to ending. Next announcement?

Actual production, trend and the business cycle



BUSINESS CYCLE REFERENCE DATES		DURATION IN MONTHS			
Peak	**Trough**	**Contraction**	**Expansion**	**Cycle**	
		Peak to Trough	*Previous trough to this peak*	*Trough from Previous Trough*	*Peak from Previous Peak*
April 1960	February 1961	10	24	34	32
December 1969	November 1970	11	106	117	116
November 1973	March 1975	16	36	52	47
January 1980	July 1980	6	58	64	74
July 1981	November 1982	16	12	28	18
July 1990	March 1991	8	92	100	108
March 2001	November 2001	8	120	128	128
Average, all cycles:					
1854-2001 (32 cycles)		17	38	55	56
1854-1919 (16 cycles)		22	27	48	49
1919-1945 (6 cycles)		18	35	53	53
1945-2001 (10 cycles)		10	57	67	67





Source: Hamilton (2007)

III. Can we forecast the recession?

- Economic forecasting is no better than weather forecasting… However, weather forecasters have immense advantages over economic forecasters.

- Weather forecasters have access to data on the current and recent past conditions. In contrast, when economist make forecast for the next periods, the latest available data on real activity could lag with several months.

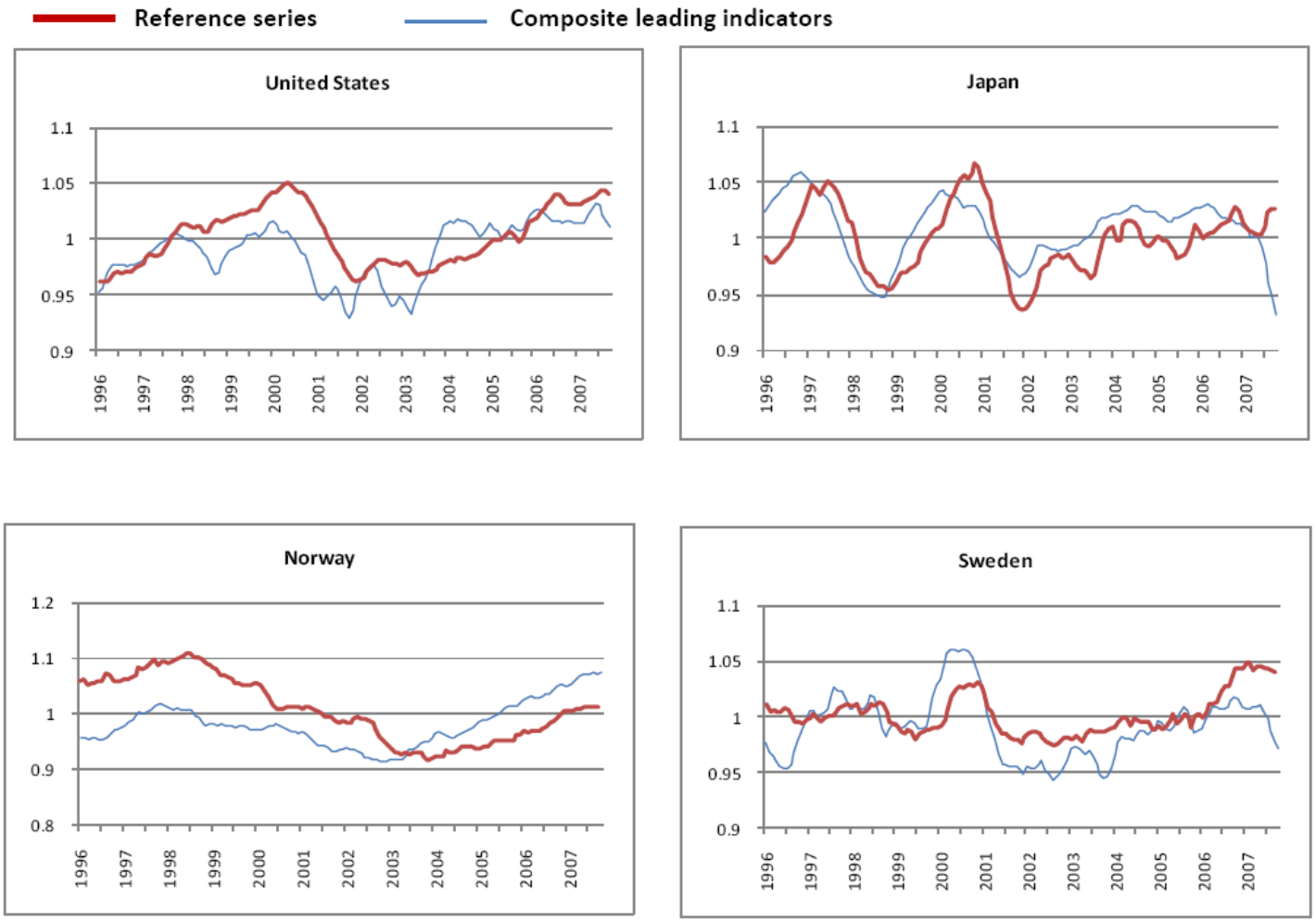
    1. GDP figures are only available at a quarterly frequency and they are published with a rather long delay.
    2. GDP figures can be misleading since in any given month GDP growth may be high or low depending on seasonal effects and measurement errors
    3. GDP is subject to large revisions. Revisions are larger around turning points.

- What model to use? Economist don't exactly agree….

- Forecast should reveal uncertainty. Only then can get the right probability of recession.

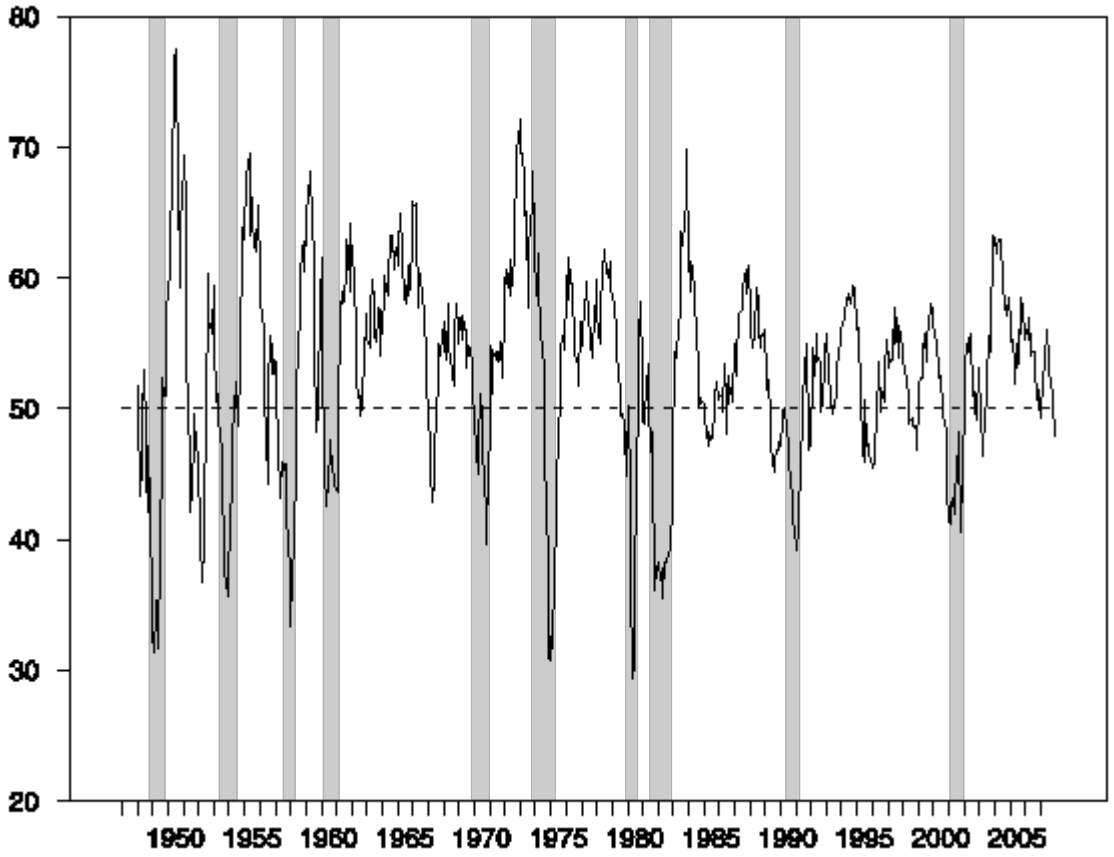
Economic indicators take a turn for the worse

- Leading indicators, like the OECD composite leading indicator (CLI) is designed to provide early signals of turning points (peaks and troughs).
- Cyclical indicator systems are constructed around a “reference chronology”. The reference series whose cyclical movements it is intended to predict. OECD used the index of total industrial production as the reference series.
- But leading indicators often fail. Each recession is caused by a unique set of factors. Variables to predict recession will therefore change.
- Surveys, (ie. survey of Professional Forecasters)
- But not all recession probabilities agree. Different probabilities.



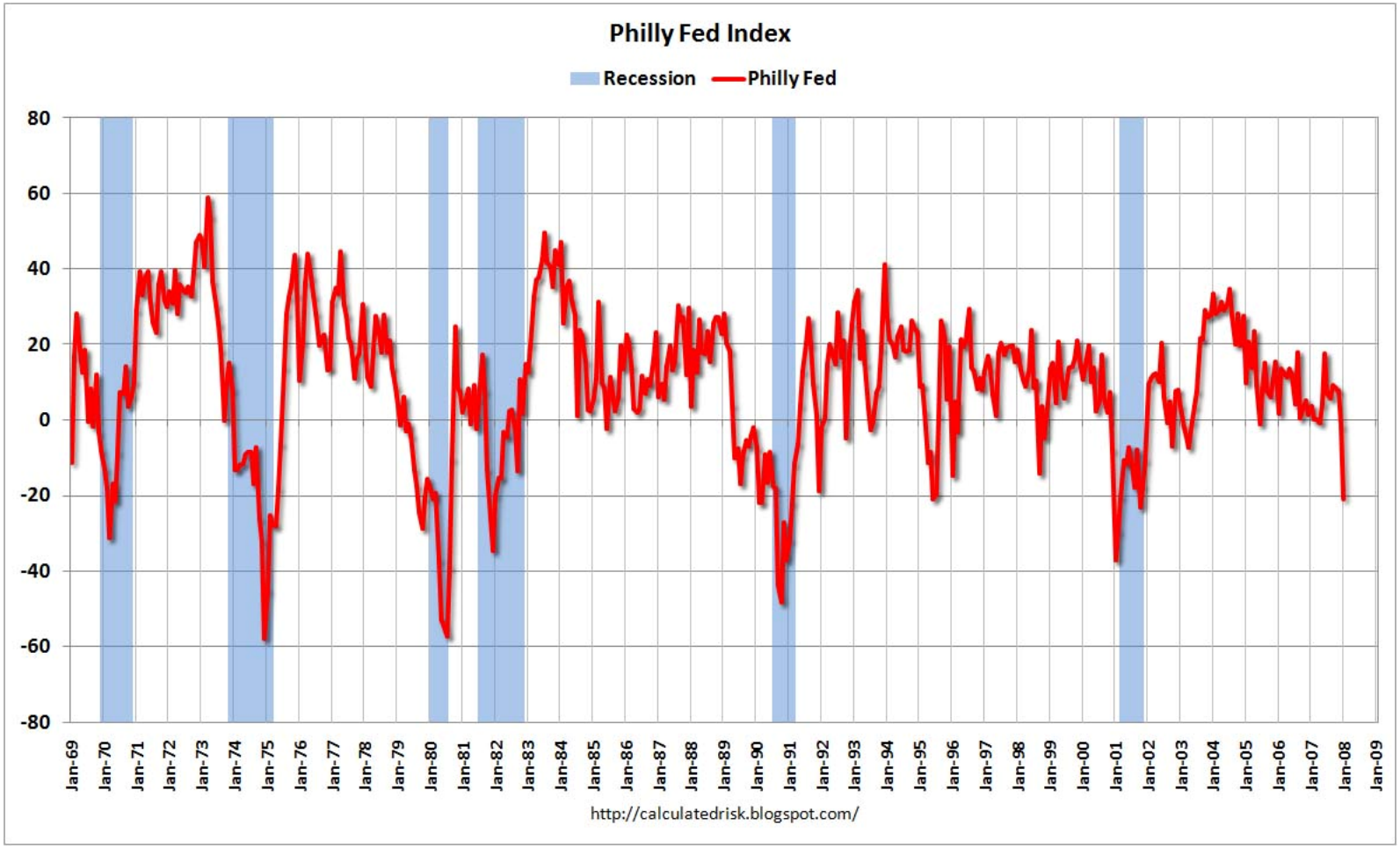
Source: OECD. January update: OECD Composite Leading Indicators signal a downswing in all major OECD economies

Institute of Supply Management's manufacturing PMI, with NBER-dated recessions as shaded regions.

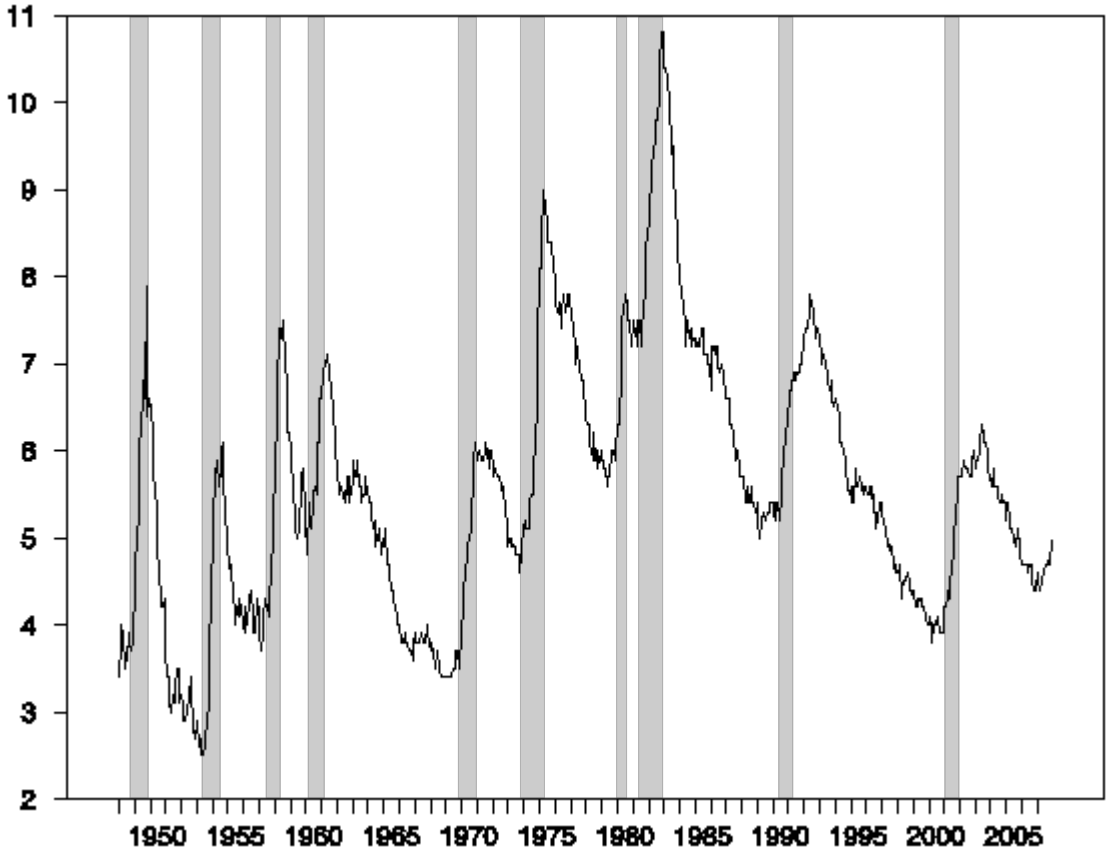


The Philadelphia Fed Index vs.recession

The lower, the more likely that the economy is already in recession.



Seasonally adjusted civilian unemployment rate, with NBER-dated recessions as shaded regions.



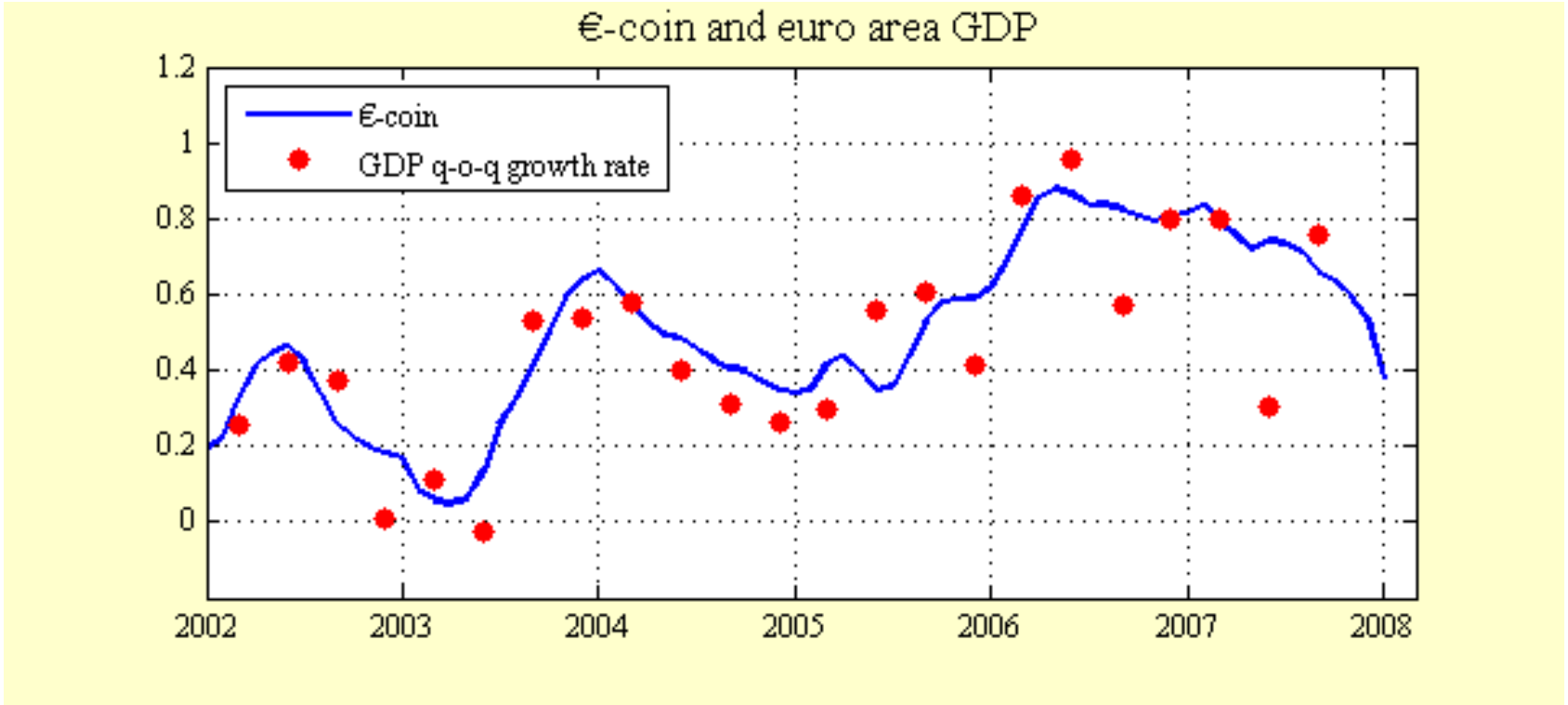
Data source: FRED

€-coin

An indicator for the Euro area

http://eurocoin.cepr.org/

- **€-coin** is constructed weighing the flow of new data that becomes available as time goes by and translating it into an updated estimate of GDP growth free from measurement errors, seasonal and other short-run fluctuations.
- **€-coin** tracks GDP growth, anticipating the release official GDP releases by several months.
- **€-coin** is obtained by extracting, in a statistically optimal fashion, from a large set of data on the euro area, the information that is most relevant to forecast future GDP. Obtain a “smooth version” of GDP growth, that:
  - gives an early estimate of Euro area growth performance in terms of quarter-on-quarter changes in GDP;
  - sheds light on the underlying trend in GDP, because it removes short-run fluctuations and measurement errors



- The downward trend of €-coin steepened in January: the growth momentum in the Euro area decreased to 0.38, from 0.54 in December
- The January estimate was negatively affected by the ongoing decline in financial markets and the dismal outturn of November industrial productions

IV. Financial variables as predictors

- Since macro data is lagging. Why not look at financial data?
- Sometimes actions speak louder than words. The FEDs lowering of interest rate with 0.75 pp last week is both the biggest since the Fed started targeting the overnight rate in the mid-1980s and the closest to a meeting.
- Could appear to be prompted by turmoil in international equity markets. But Fed should not respond to equity prices: The Fed is charged with keeping employment high and inflation low; it's not charged with protecting the capital of investors in the stock market.
- Fed may be using equity prices just as any economic analysts does, namely, as a useful aggregator of private and public information about near-term prospects for economic growth.
- All the recent indicators have suggested a significant deterioration of real economic activity over the last two months.

Bjørnland and Leitemo (2006) "Identifying the Interdependence between US Monetary Policy and the Stock Market"

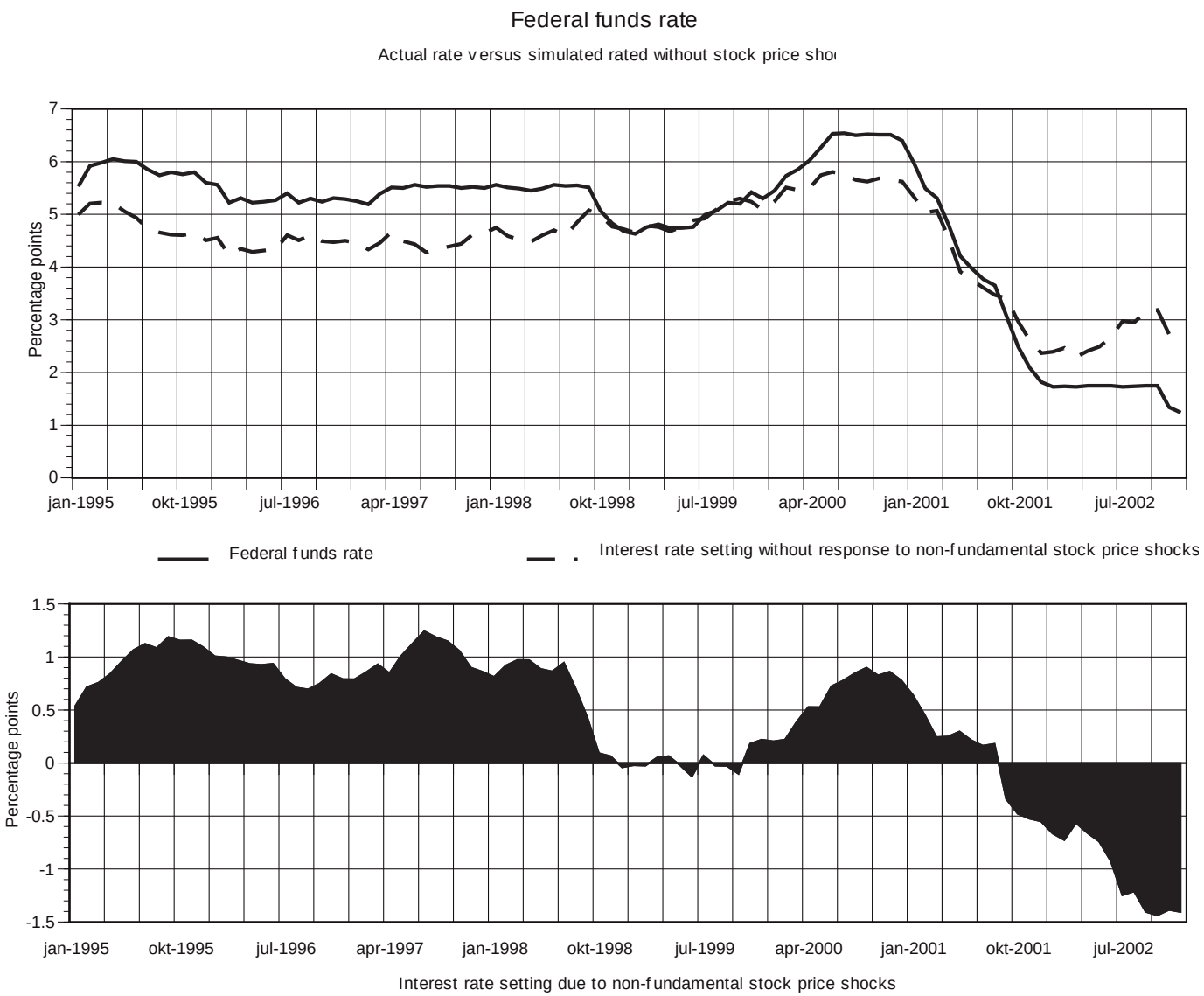
- There is strong immediate interaction between monetary policy and stock prices
  - If the interest rate is *raised* unexpectedly by 10 basis points, stock prices *drop* by 1-1.5 %

- Information conveyed by the stock market important for interest rate decisions.
  - If stock prices *fall* unexpectedly by 1 %, the interest rate is *reduced* by around 7 basis points

- But asset prices are indicators – not targets

  To what extent was the Fed's interest rate decisions influenced by shocks to stock prices (bubble)?

The contribution of non-fundamental stock price shocks to (systematic) interest rate setting



V. Consequences – depends on shocks

- To understand the determinant for the depth of a financial crisis we need to know the size of the initial hit to the system. We don't know that yet.

- If the slowdown deepens and losses spread to credit cards, high-yield corporates and other mortgages, it could be a severe recession.

- Historically, many booms and bust we have seen have been driven by a technological innovation. This latest crisis we see today differs from such historical examples in two important elements.
  - With housing there was no technological revolution. The innovation in this instance was financial.
  - Explosion of easy credit. Complex financial vehicles.
  - Echoes the depression.

- What is the right policy response?
  - Stimulate aggregate demand? But lack of demand is not the cause, it is the symptom!
  - Regulation and transparency of banks could be the right policy response.
  - Timing? Need to react swift.

Decoupling

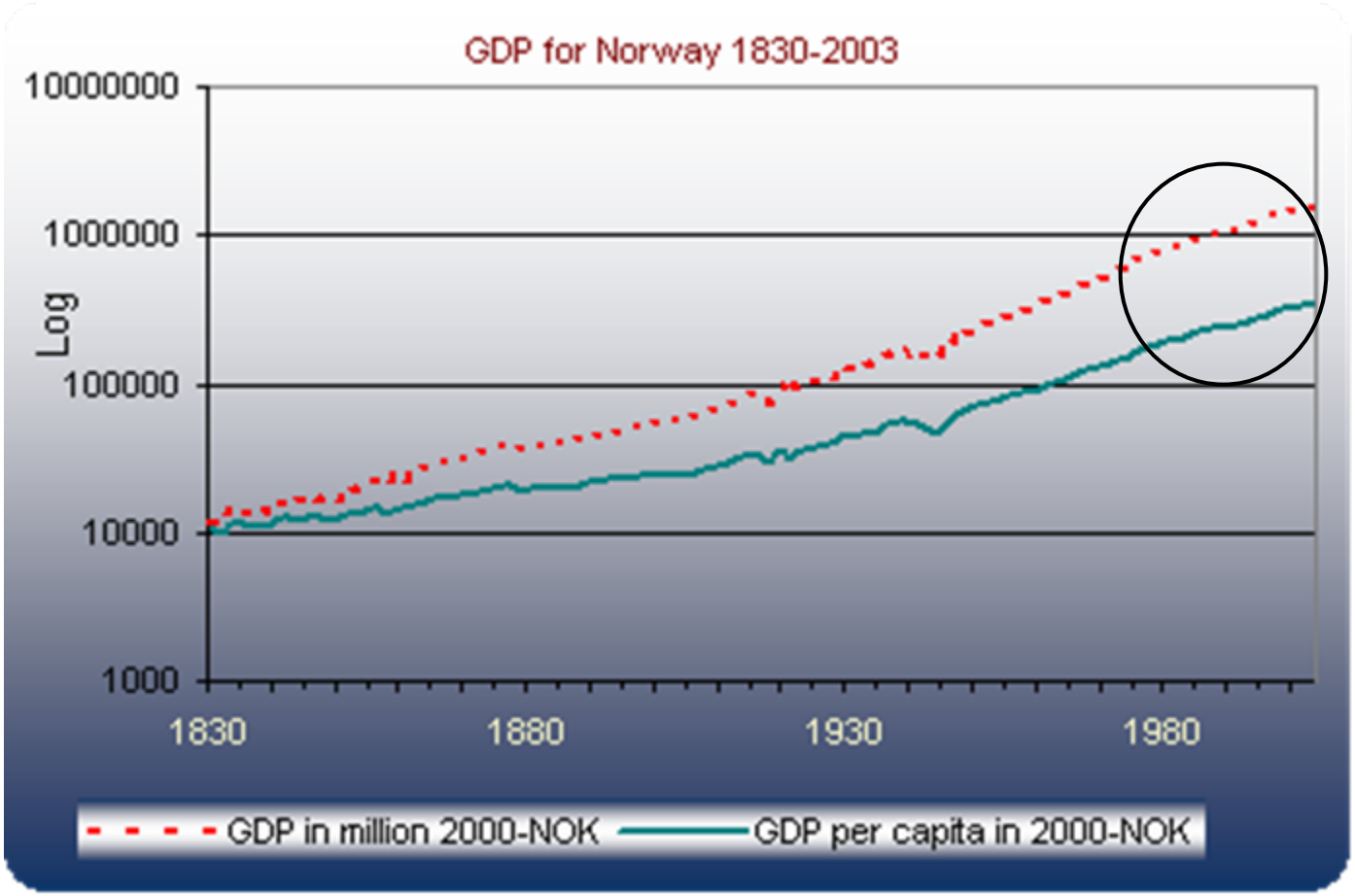
- So much for the US…
- What about the probability of recession in the rest of the world?
- A different meaning of a recession must be attached to the concept of global recession, in a world where China, Russia and India account for half of global growth and are each growing at an annual rates around 10%.
- Decoupling? The idea is that thanks to booming demand from China, the emerging markets can get by and perhaps even flourish despite a downturn in the United States. That way can take over demand form the US, making the impact of the recession in the US less severe on the world.
- There's no region of the world that is more externally driven than developing Asia. Exports represent 45 percent of GDP, a record high. The consumption share of GDP in the U.S. is 72 percent (a record) compared to 48 percent in Asia. Asia is still dependent on US consumption.

That takes us to Norway

- Expansion is taking off ..
- Or, higher probability of recession?
- Norway can not continue to grow on its own. The expansion will end.
- Asset prices signal a turn for the worse. House prices are falling.
- Stock prices on Oslo Stock Exchange is the single most important block of data to improve estimates when forecasting *current* quarter GDP in Norway. But only the Norwegian stock markets matter (Aastveit and Trovik, 2007).
- Time will tell…

In the long run, nothing matter…

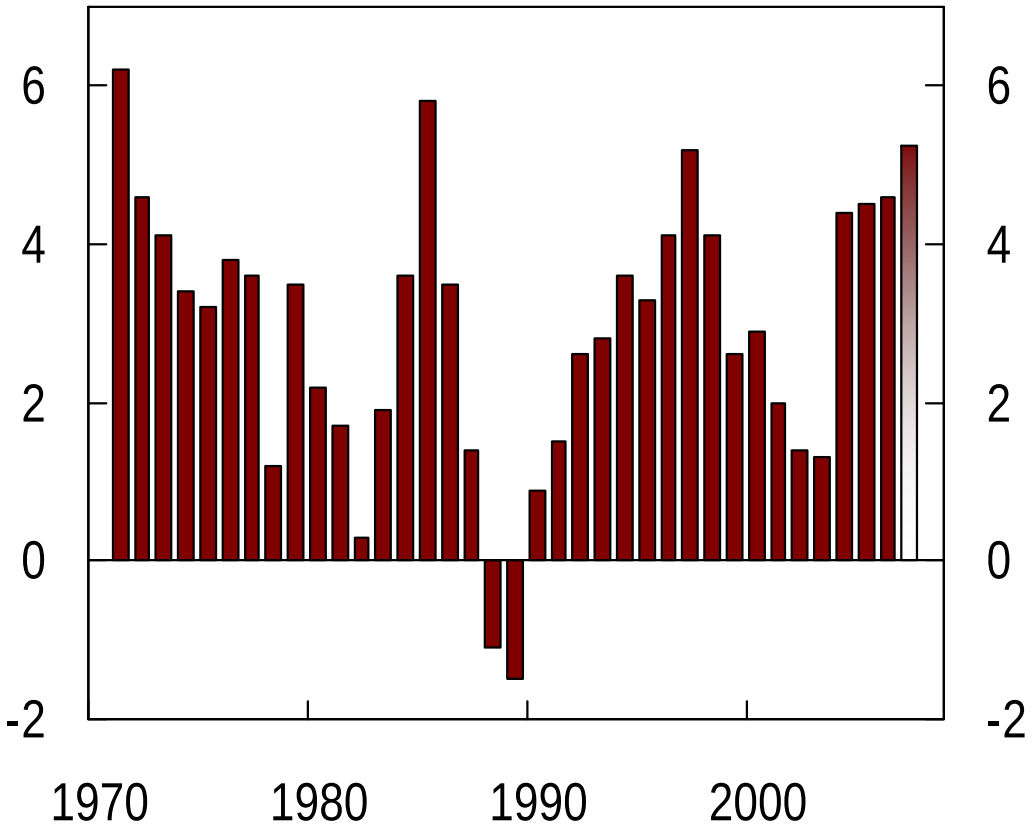
Nothing much to see but stable growth?



Source: http://www.norges-bank.no/

But growth rates are not stable.

Mainland GDP. Annual growth in volume. Per cent.[1)]

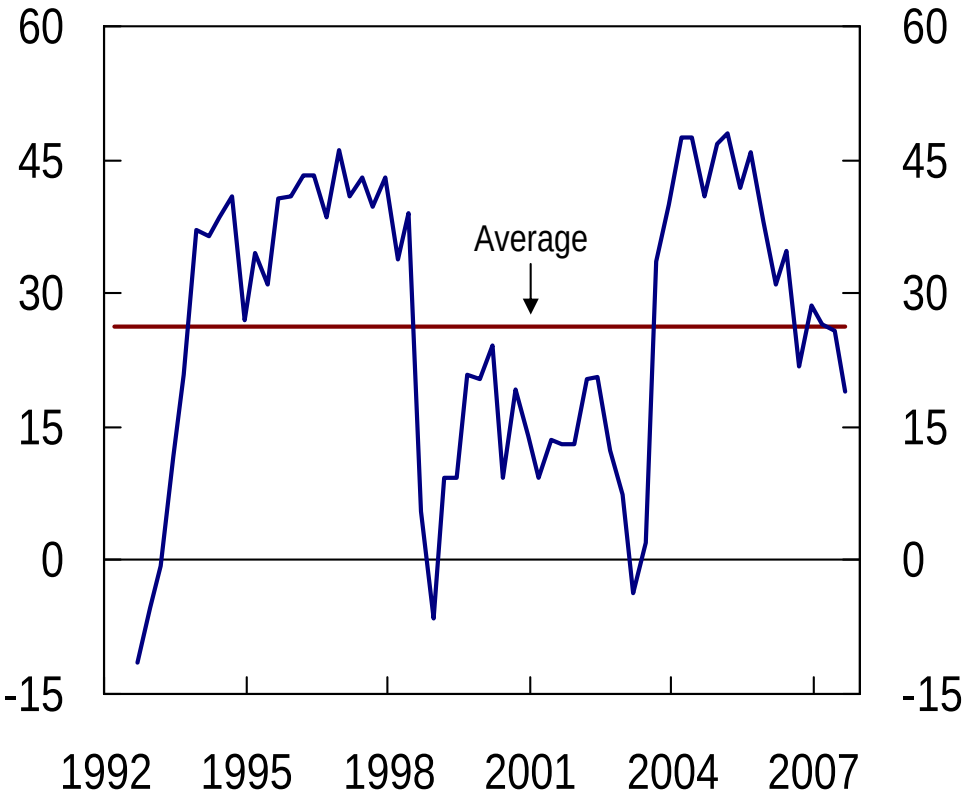


[1)] Projections for 2007.

Sources: Statistics Norway and Norges Bank

Indicators in Norway also signal a turn for the worse…

Household trend indicator: “Is this a good time to make major purchases?"
Diffusion index[1]. s.a.



[1] The index measures the difference between the shares who respond yes and no to the question.

Sources: TNS Gallup and Norges Bank