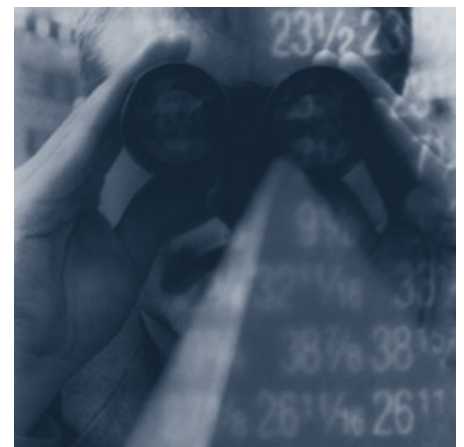


Monetary Policy in Norway and Sweden

Kevin Daly and Fiona Lake
Goldman Sachs International
March 2005



Three Key Messages

- **Economic growth rather than current inflation plays the central role in driving Riksbank policy and, increasingly, Norges Bank policy. Financial markets react as if the opposite is true.**
- **Financial conditions indices provide a useful tool for gauging the monetary policy stance. Given the outlook for growth and inflation in Scandinavia, financial conditions appear loose in Norway and very loose in Sweden.**
- **Markets are too sanguine about the likely speed of tightening in Sweden, and the peak in rates in both Norway and Sweden.**

Norges Bank and Riksbank are Both “Flexible” Inflation Targeters. What Does this Mean in Practice?

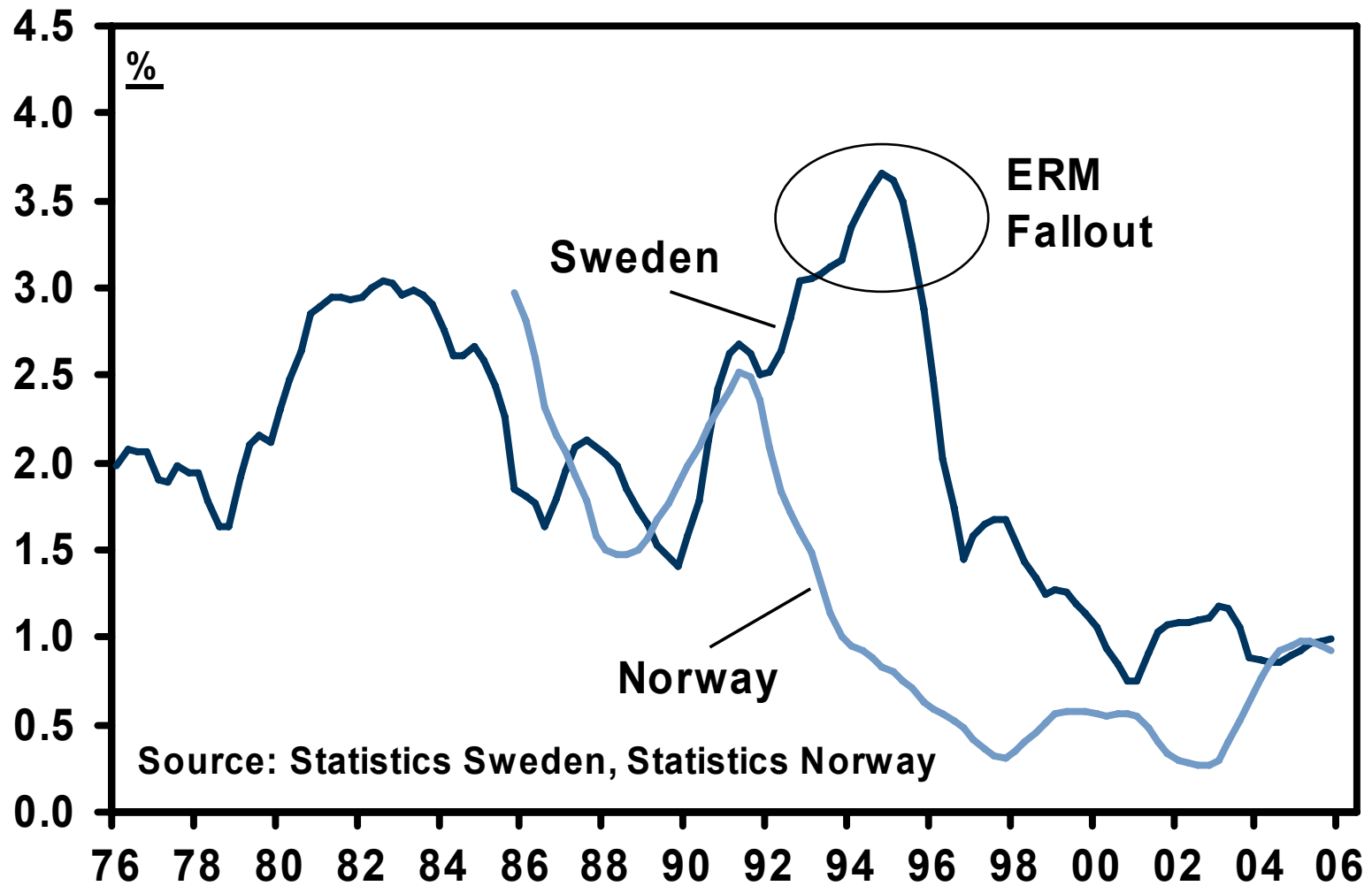
- A “strict” inflation targeter - who does not care about output stabilisation - will still respond to output because it helps to predict future inflation.
- A “flexible” inflation targeter works harder to stabilise output (relative to inflation), because they care about it for its own sake.
- The distinction between a flexible and strict inflation targeter is clearest in the face of a supply/inflation shock (when there is a trade-off between inflation and output stabilisation). A flexible inflation targeter will still place weight on output stabilisation, even if that means bringing inflation back to target more slowly.
- This is true for a negative shock (e.g. higher oil prices) but also a positive shock (e.g. lower prices from “globalisation”).

Norges Bank and Riksbank on “Flexible” Inflation Targeting in Practice

- Svein Gjedrem (Annual Address, February 2006): as a “flexible inflation targeter”, NB gives weight to “both variability in inflation and variability in output and employment in interest rate setting.” With Globalisation resulting in bigger swings in inflation, Norges Bank should also focus on the strength of Norwegian economy and the implications of this for capacity utilisation.
- Irma Rosenberg (March 2006): “This flexibility could be used if the economy were to suffer a shock that led to inflation moving in one direction, and production moving in the opposite direction... in this situation, adjusting the interest rate so that inflation would immediately be brought in line with the target could have an overly drastic effect on the economy...in the event of major disruptions, it may be necessary to allow longer than two years for inflation to return to target.”

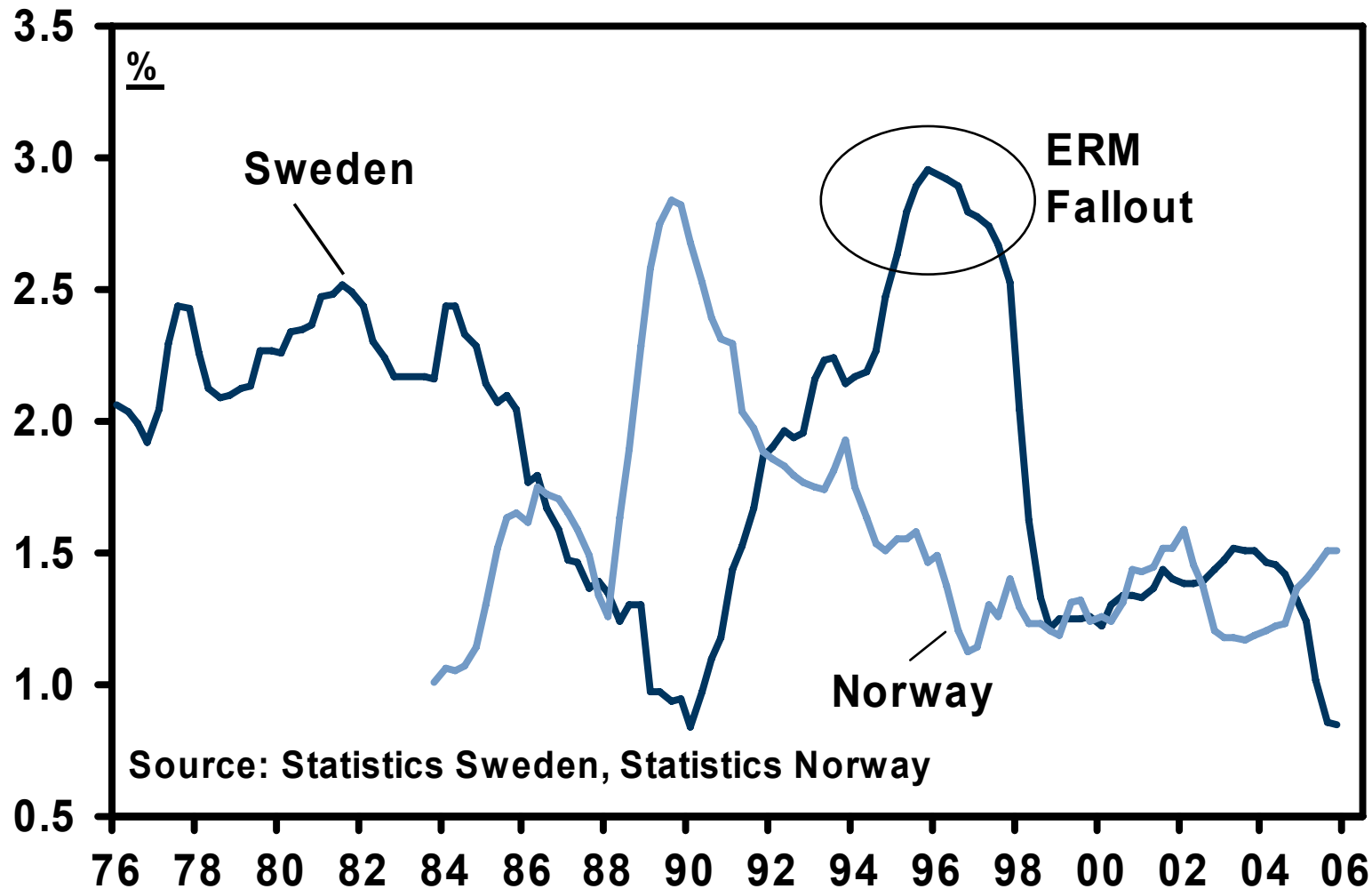
More Stable Inflation in Norway and Sweden

The Variability of CPI Inflation: Five-Year Rolling Standard Deviations



More Growth Stability in Norway and Sweden

The Variability of GDP Growth: Five-Year Rolling Standard Deviations



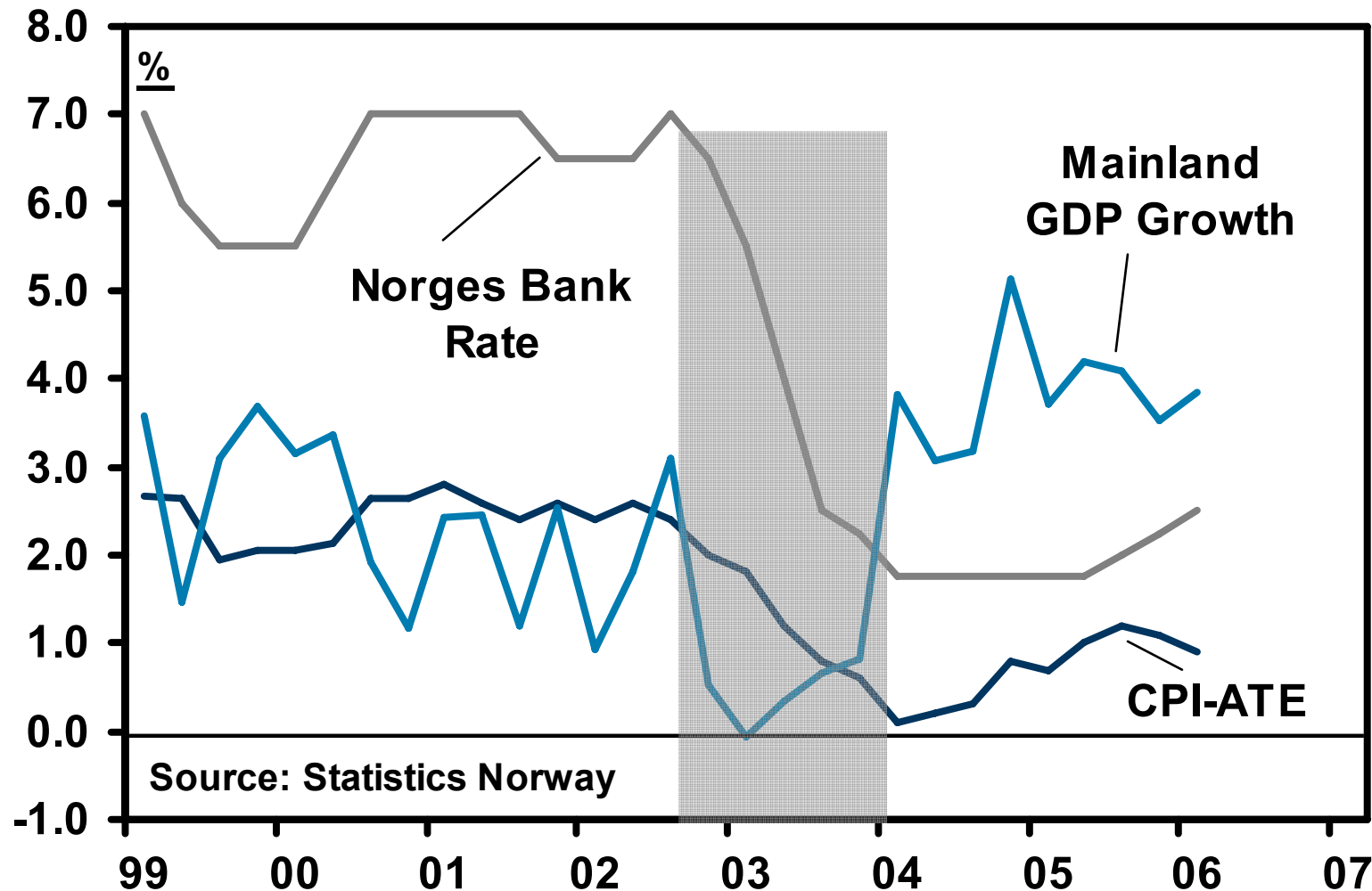
Riksbank Policy Driven More by Output Gaps than Inflation

Riksbank Taylor Rule Estimates

1999:Q1 - 2006:Q1							
Model	Neutral Rate i	UND1x β	CPI	Output Gap α	Growth	Smoothing ρ	Fit
1	3.00 2.36	1.28 2.95		1.62 5.05		0.83 13.35	0.95
2	NA	2.38 1.81			1.73 2.54	0.92 12.56	0.92
3	3.23 2.16		1.02 2.51	1.45 4.64		0.83 12.10	0.97
4	NA		1.82 3.09		1.15 3.62	0.83 10.61	0.94

The coefficients are in bold and the smaller numbers are the corresponding t-statistics.

Norway: Sample Period Dominated by Developments in 2002Q3-2003Q4



Norges Bank, in its Short History as an Inflation Targeter, Has Been Driven More by Current Inflation than Growth

Norges Bank Taylor Rule Estimates

1999:Q1 - 2005:Q4						
Model	Neutral Rate	Core Inflation	Output Gap	Growth	Smoothing	Fit
1	6.93 3.13	2.63 3.32	0.02 0.07		0.62 5.63	0.97
2	6.98 3.10	2.76 3.93		0.17 0.66	0.66 6.24	0.97

The coefficients are in bold and the smaller numbers are the corresponding t-statistics.

Growth is a More Important Driver of Policy than Inflation for Many Central Banks

If inflation expectations are well anchored and policymakers believe that output gaps lead inflation, there is nothing unusual about output gaps getting more weight than inflation in policy responses

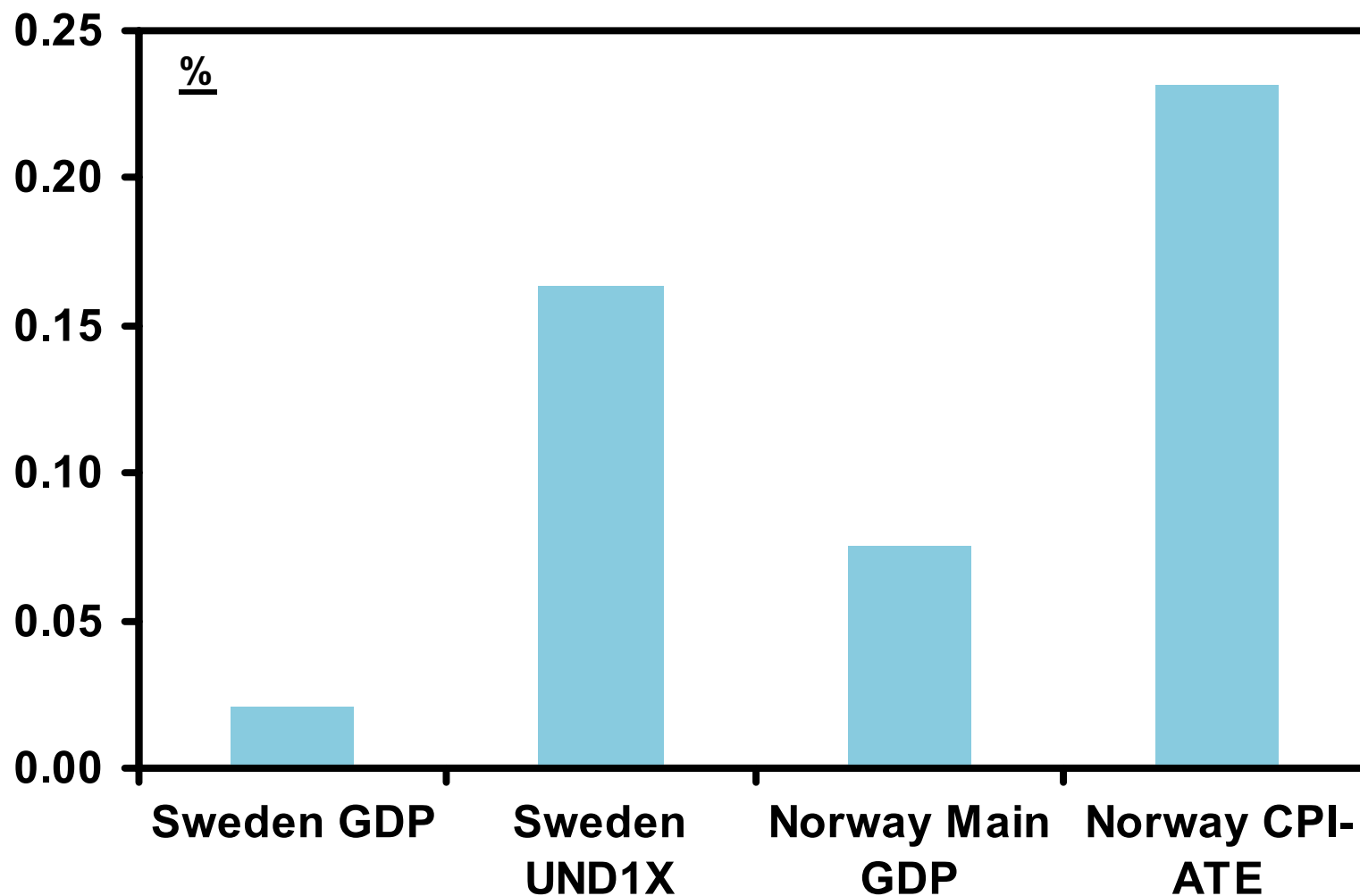
Response to a 1% Inflation or Output Gap Shock (99Q1-'05Q4)

	Short Term (1 Quarter)		Cumulative (Over All Qtrrs)		Smoothing Parameter
	Inflation ¹	OutGap	Inflation ¹	OutGap	
Riksbank	0.2	0.3	1.3	1.6	0.8
Norges Bank	1.0	0.0 ²	2.5	0.0 ²	0.6
UK MPC	0.0 ²	0.5	0.0 ²	1.8	0.7
ECB	0.0 ²	0.4	0.0 ²	1.8	0.8
US Fed	0.0 ²	0.4	0.0 ²	2.1	0.8

¹UND1X in Sweden, CPI-A TE in Norway, CPI in UK, core CPI in EM U, and Priv.Cons.Defl. in the US; ² Not significant

Markets React as if Current Inflation is More Important

Response of 1-yr Fwd Implied 3-mth Rates to a 1% Growth or Inflation Surprise



Introducing the Goldman Sachs Financial Conditions Indices for Norway and Sweden

- **A FCI incorporates equities into a more traditional monetary conditions framework.**

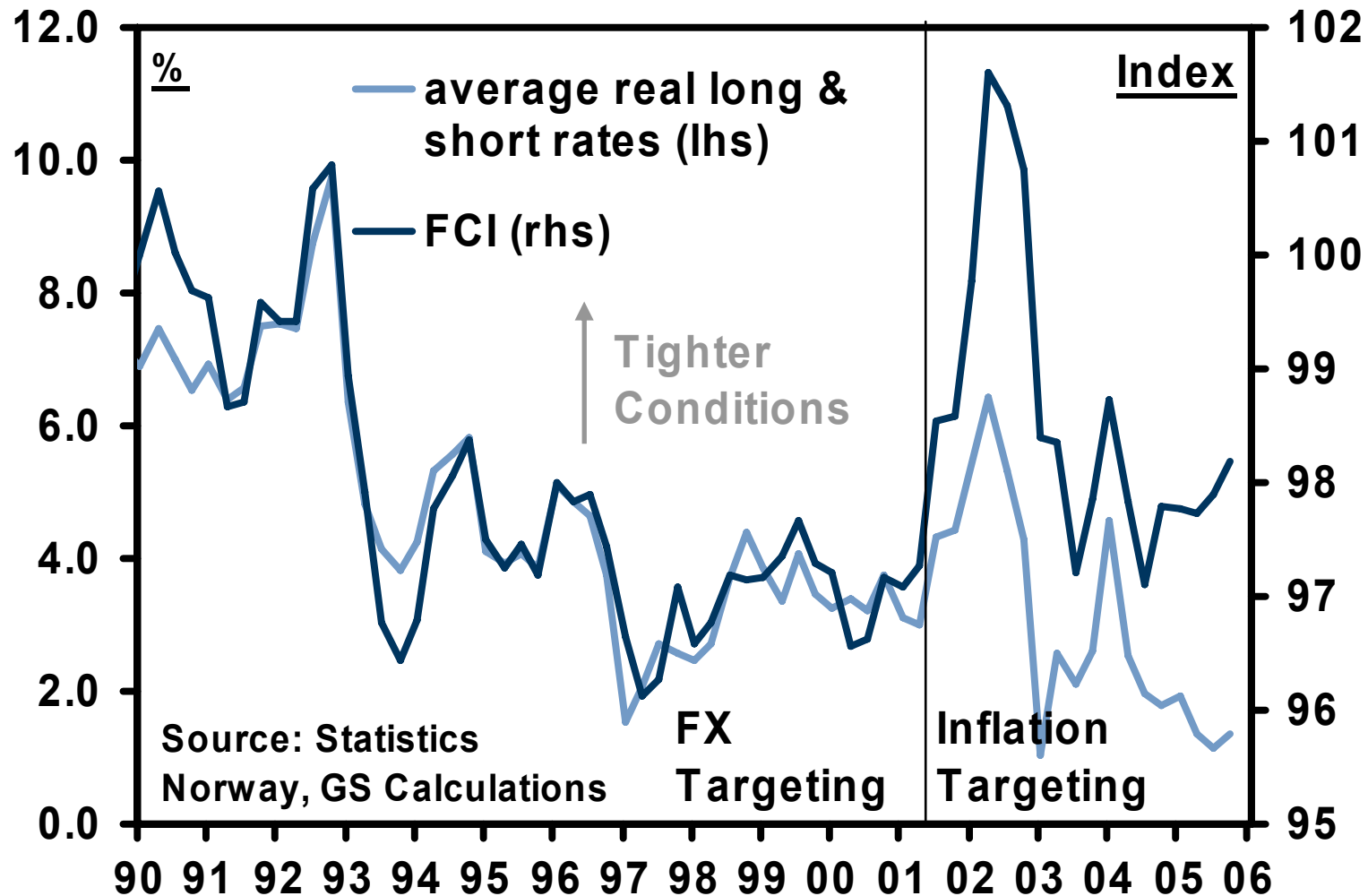
Estimating the FCI Weights

- **We calculated the weights using real inputs:**
 - **Real Interest Rates – long and short**
 - **Real Broad Trade-Weighted exchange rates**
 - **Equity % GDP**
- **We have used a VAR to deal with the endogeneity problem**
- **We used a two-quarter lag**

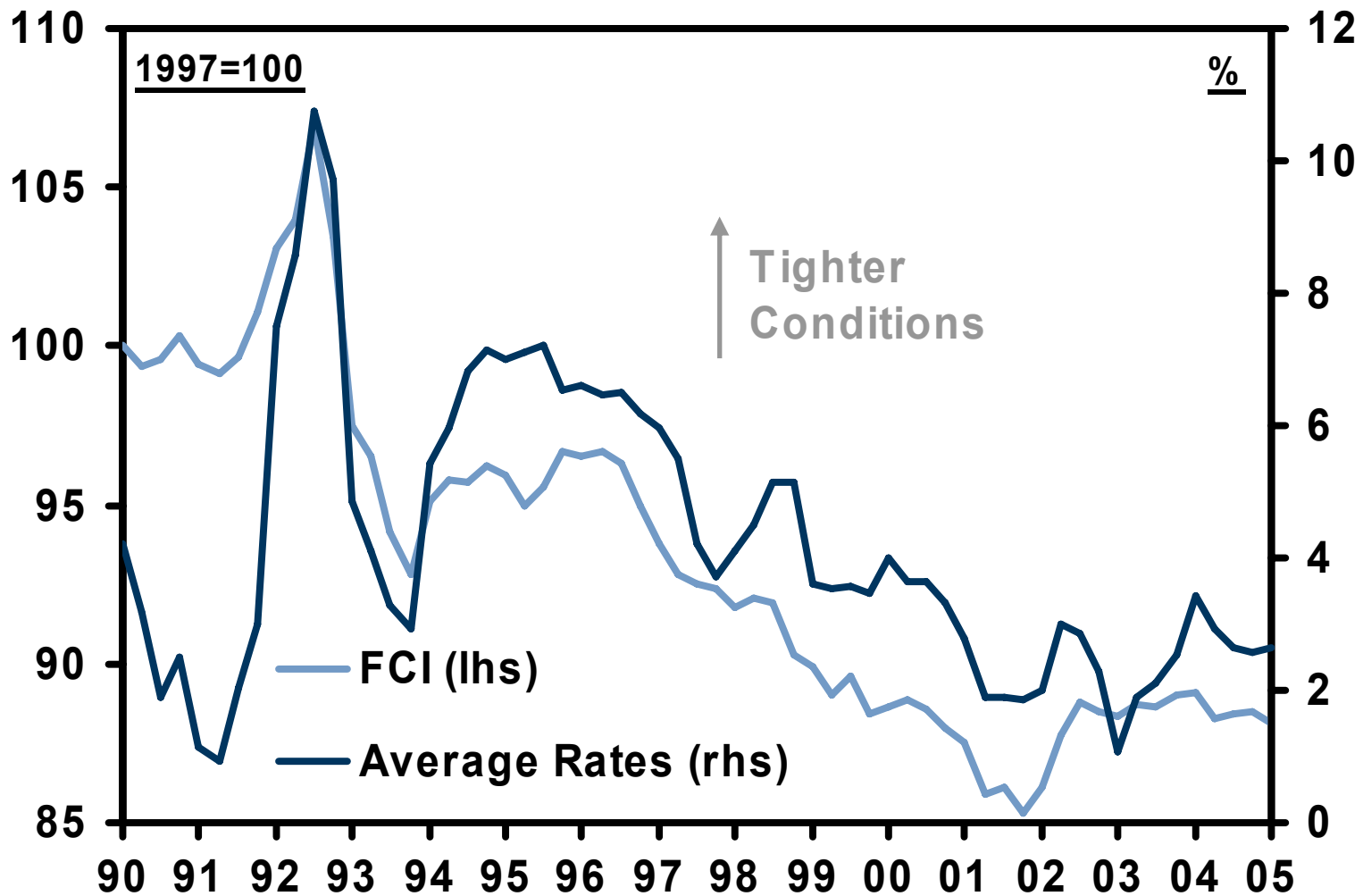
Goldman Sachs FCI Weights for Sweden, Norway, US and Euroland

	Sweden	Norway	US	Euroland
Short-Term Rates	36%	39%	35%	34%
Long-Term Rates	36%	39%	55%	54%
Exchange Rate	25%	21%	5%	10%
Stock Market	3%	1%	5%	2%

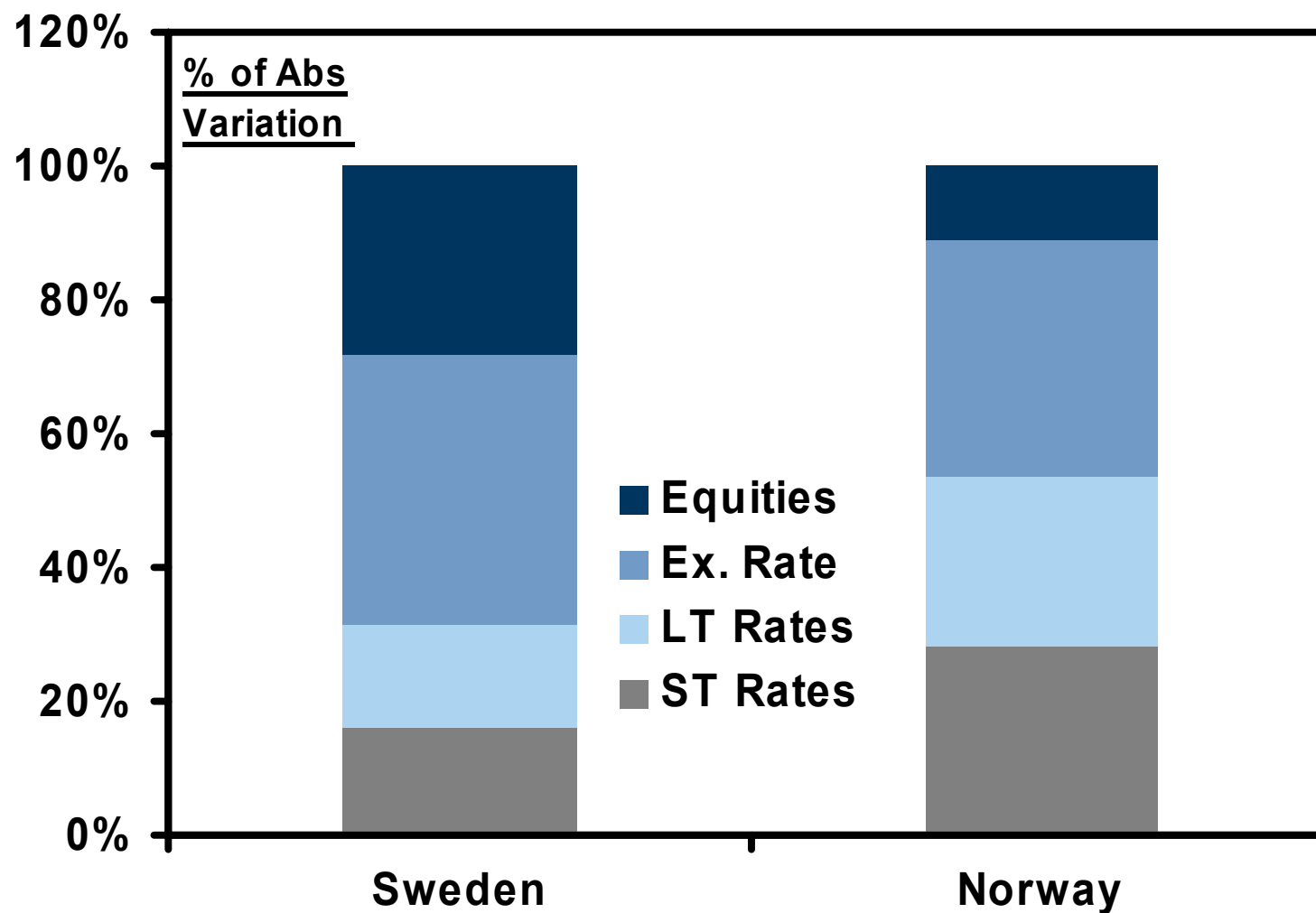
The Norwegian FCI: Now More Influenced by the Currency than by Rates



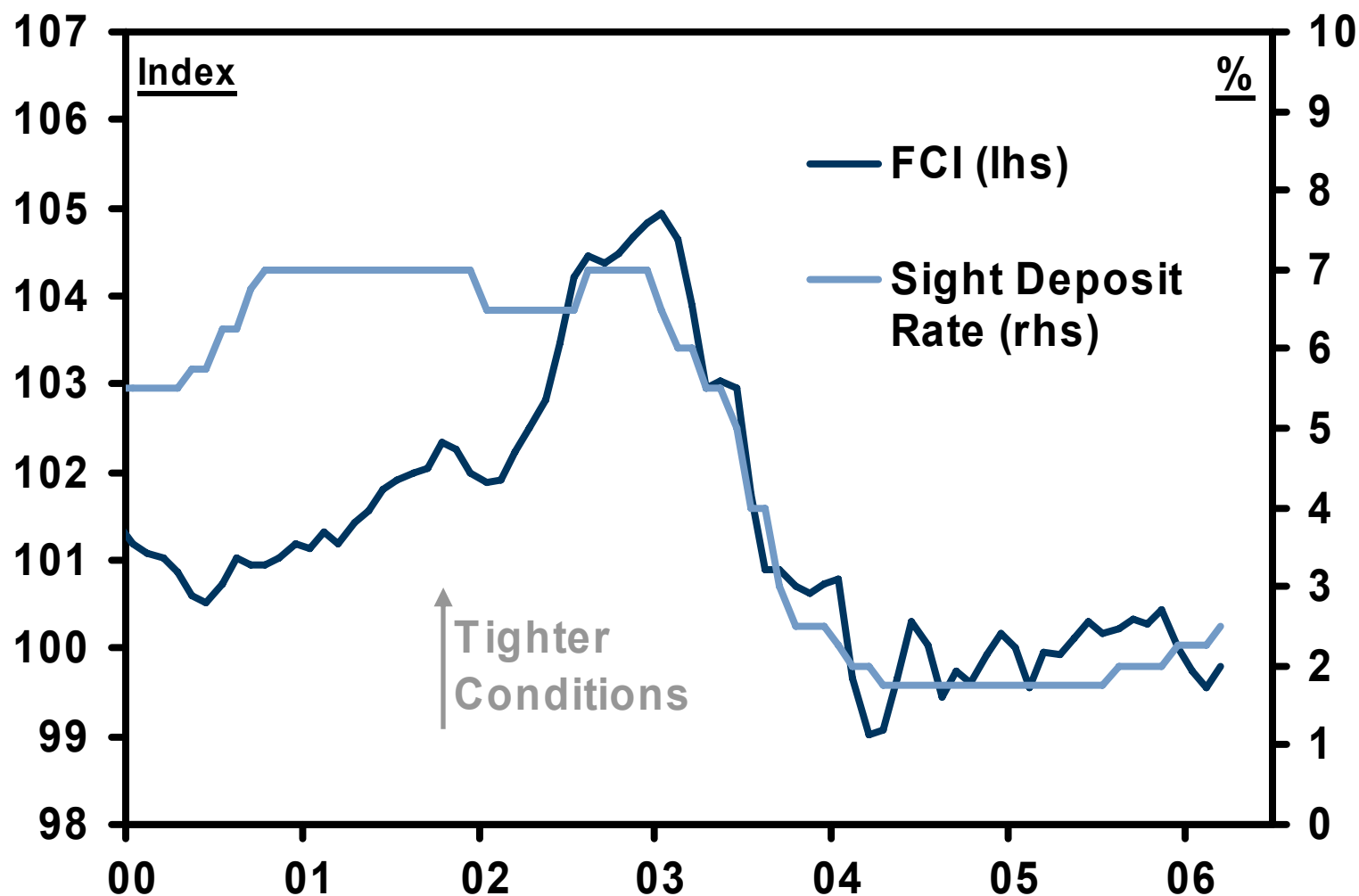
The Swedish FCI: Financial Conditions have been Looser than Implied by Rates



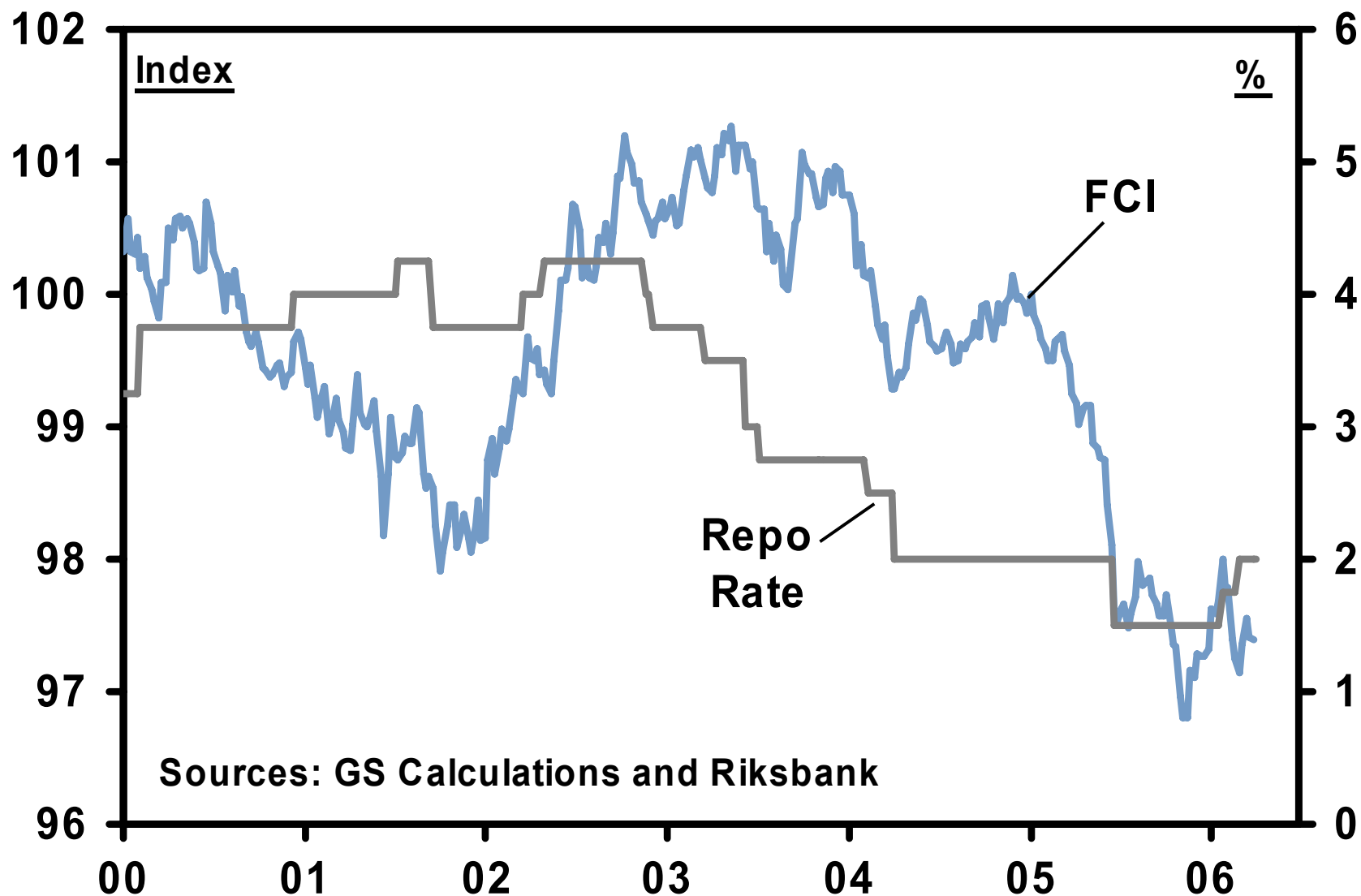
Contributions to Volatility.



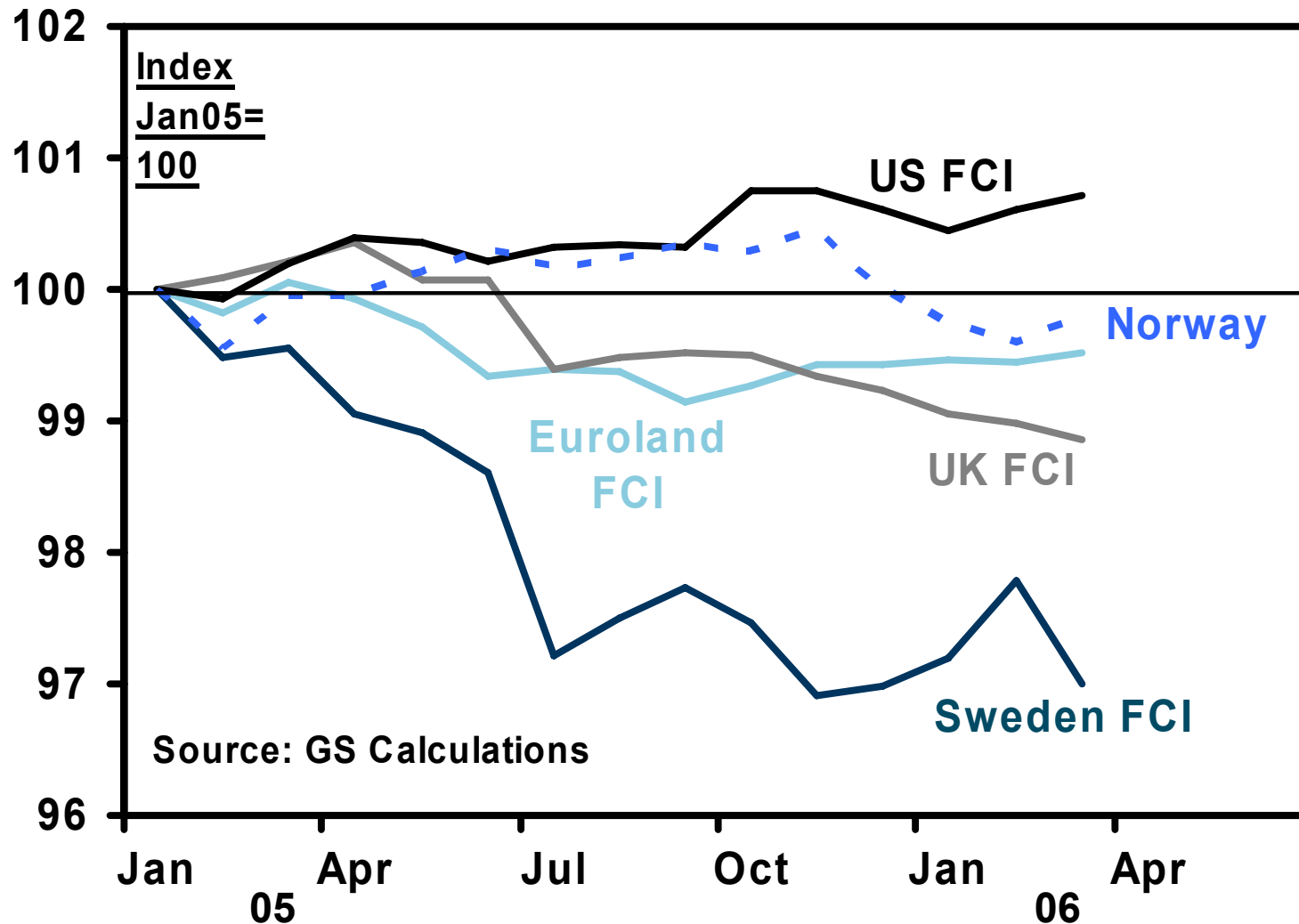
Norwegian Financial Conditions Have been Accommodative for a Long Period



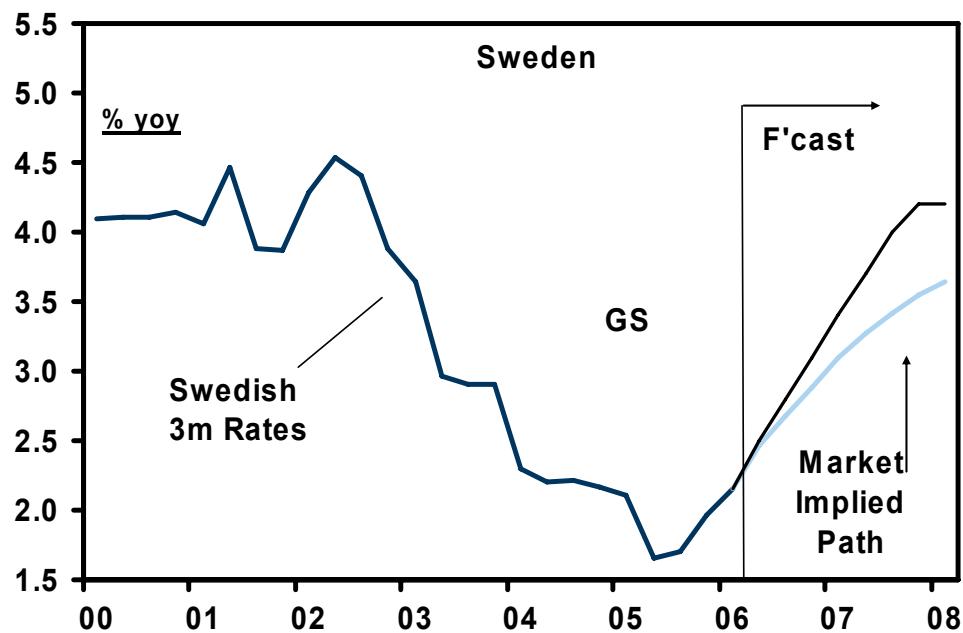
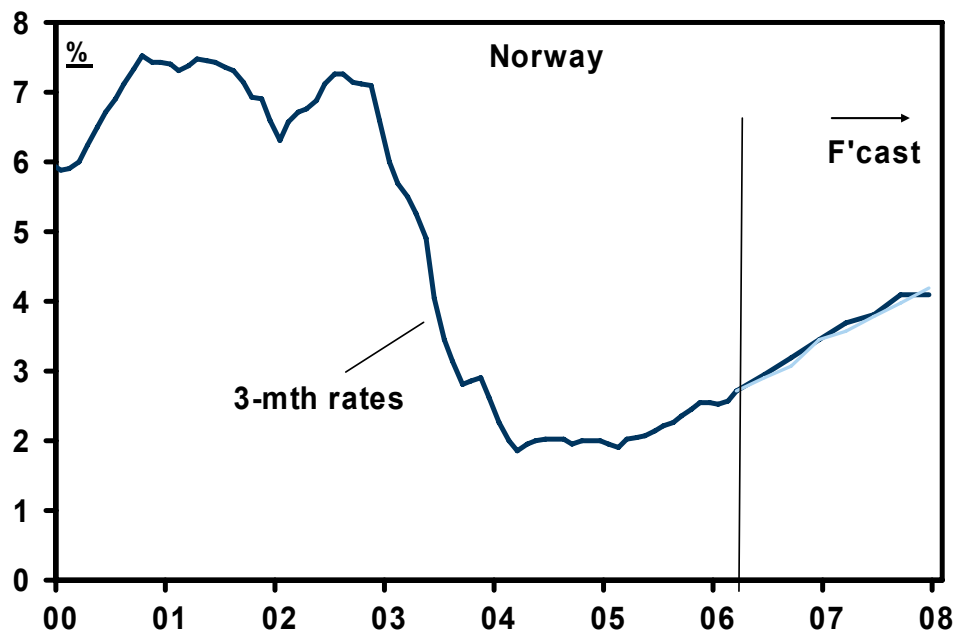
Swedish Financial Conditions Remain Very Loose



Swedish Financial Conditions Have Eased Much More than US, Norway, Euroland and UK Since Jan 2005.



Markets are too Sanguine About the Likely Speed of Tightening in Sweden and the Peak in Rates in Both Norway and Sweden.



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