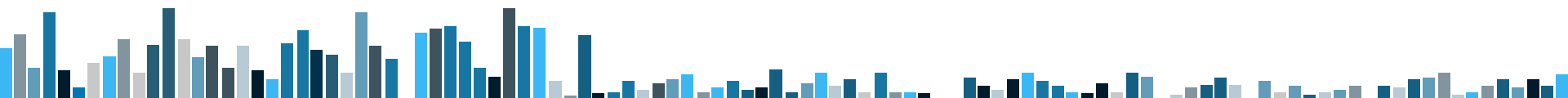


A Monthly Indicator of Economic Growth

presentation prepared for the Joint EU/OECD Workshop on
Recent Developments in Business and Consumer Surveys,
Brussels, 14-15 November 2013

Leendert Hoven

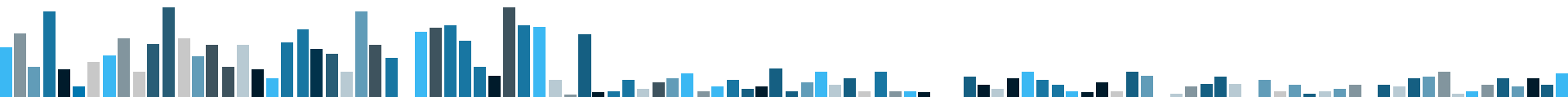




Inspiration/motivation

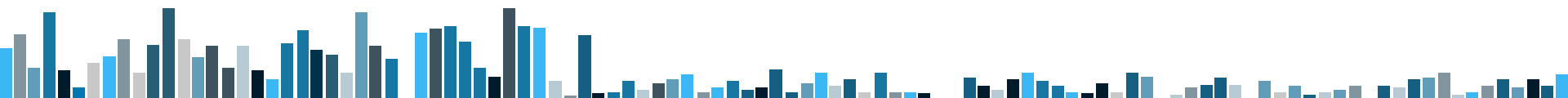
Special meeting on official statistics and the global crisis
(World Bank, IMF, UNSD Feb. 2009):

Vitally important to develop a work programme on the **availability**, **periodicity** and **timeliness** of high frequency statistics in accessible and analytically useful formats allowing their use in the early detection of turning points of financial and economic trends.



Why a monthly indicator of economic growth?

- A lot of information is available on a monthly basis, but a monthly overall measure of the state of the economy is still lacking;
- Monthly indicator gives a very timely and up-to-date picture of the economy;
- Monthly indicator gives information about what is happening within each quarter.



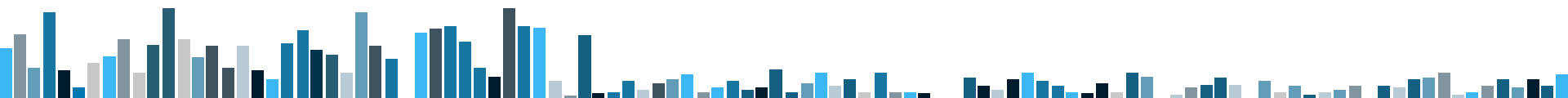
Methodology

Production approach

Building blocks:

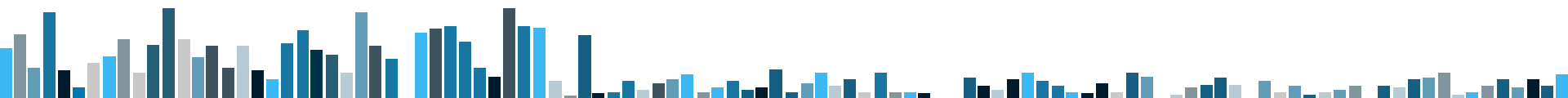
- monthly y.o.y. volume growth rates for separate industries;
- value shares of corresponding quarter previous year of each industry.

y.o.y. volume change of total value added is compiled as the summation of the weighted growth rates of the separate components; next, total value added is converted from basic prices to market prices.



Where do the monthly year-on-year volume growth rates for separate industries come from?

- monthly source statistics (industry, construction, mining and quarrying, energy and water supply);
- nowcasting:
 - simple time series model;
 - Chow-Lin model for intertemporal disaggregation and extrapolation using monthly indicator series;

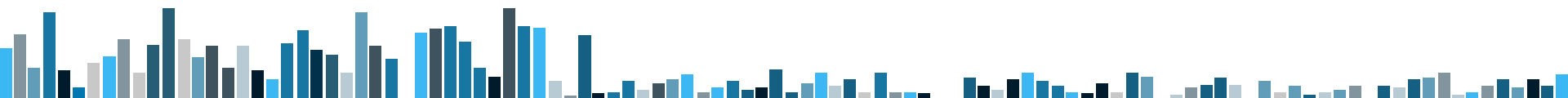


Indicators used for commercial services (1)

Requirements

- available on a monthly and timely basis
- available over a sufficiently long time period (this was set to 15 years)
- have a logical relationship with the series to be estimated

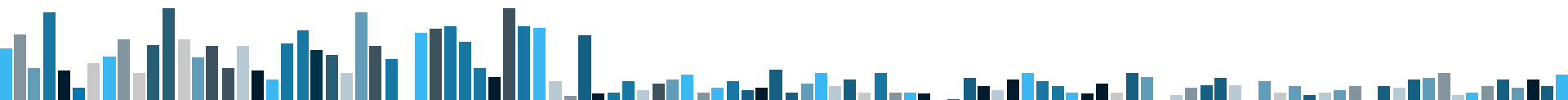
47 potential candidates were tested, of which different sentiment indicators from business and consumer surveys



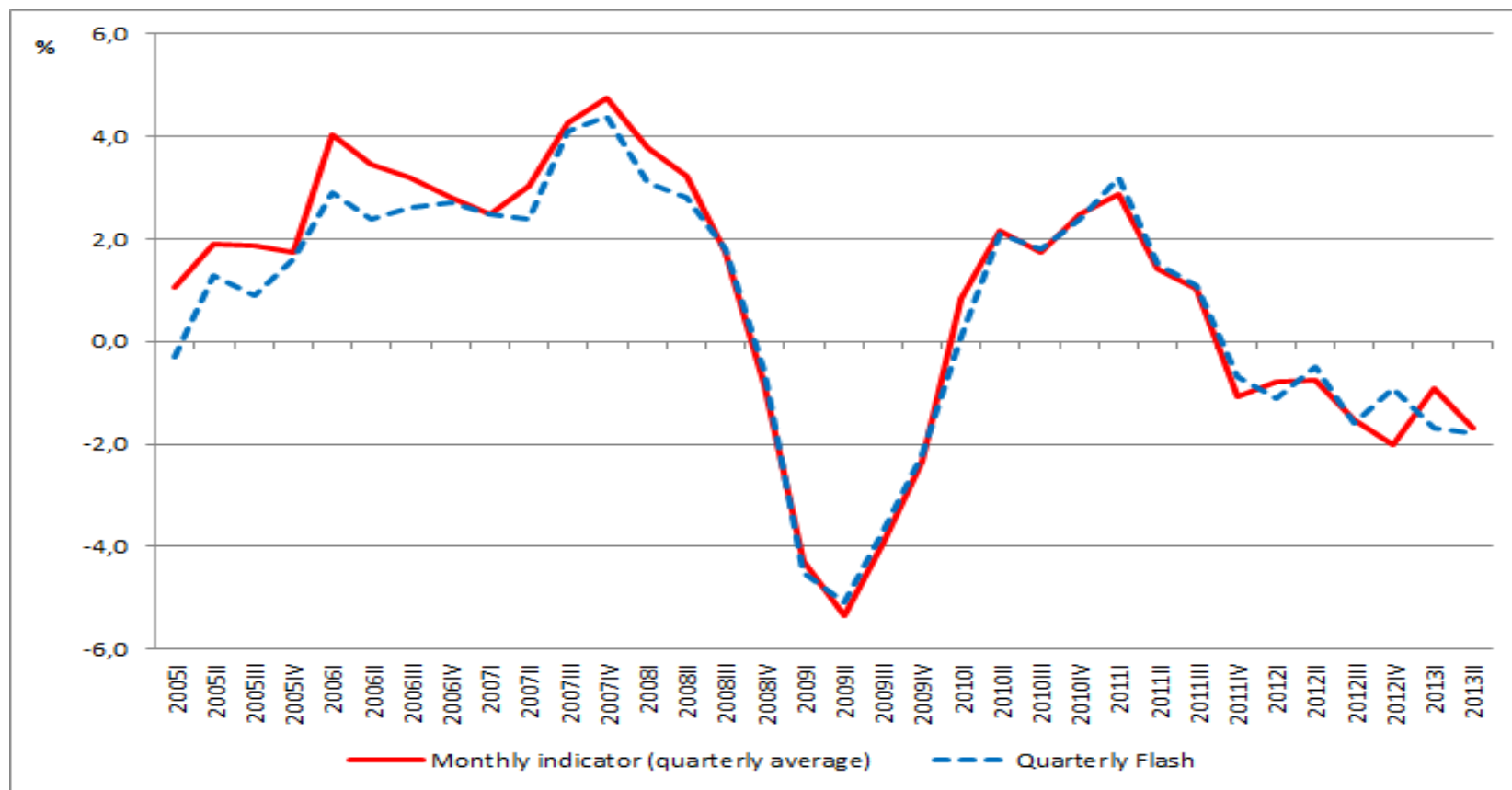
Indicators used for commercial services (2)

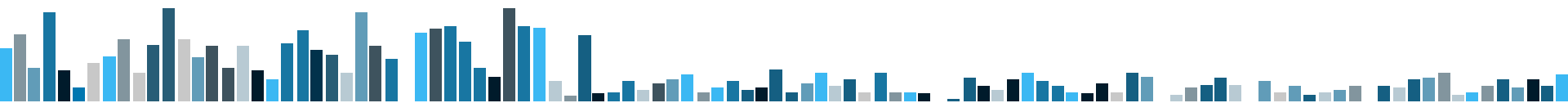
Indicators chosen:

- domestic household consumption (y.o.y. volume growth)
- consumer survey: economic climate (seasonally adjusted)
- number of bankruptcies (y.o.y. change, two months average)
- business survey: assessment order position of manufacture of intermediate goods

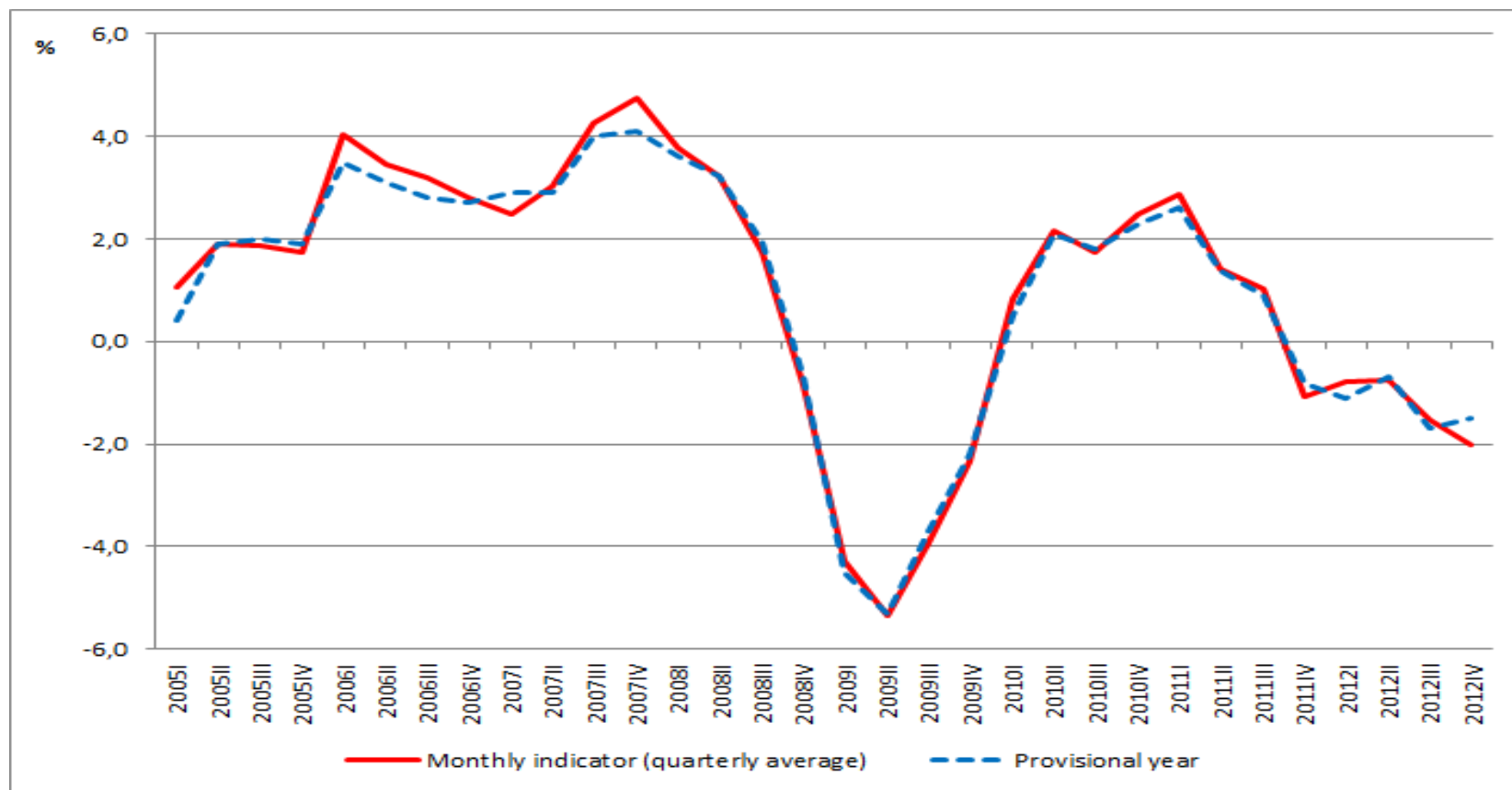


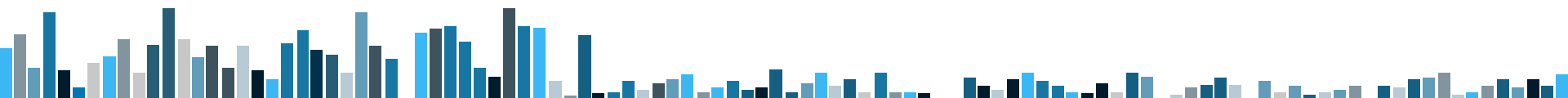
Monthly indicator of economic growth compared to QGDP (flash), real-time series, y.o.y. volume changes 2005-2013II





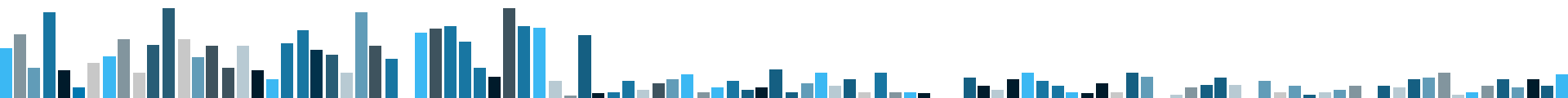
Monthly indicator of economic growth compared to QGDP (provisional year), real-time series, y.o.y. volume changes, 2005-2012





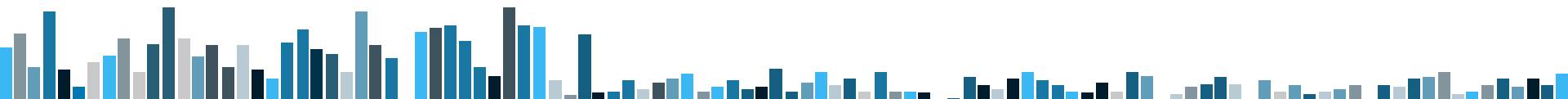
Monthly indicator compared to flash GDP, regular GDP, provisional year (2005-2012) and final year (2005-2010)

Summary statistic	Flash	Regular quarterly estimate	Provisional year	Final year
Mean revision	-0.20	-0.14	-0.08	0.09
Mean absolute revision	0.40	0.32	0.24	0.29
RMSR	0.54	0.47	0.29	0.36
Maximum positive revision	1.1	0.8	0.5	0.7
Maximum negative revision	1.4	1.6	0.7	0.5

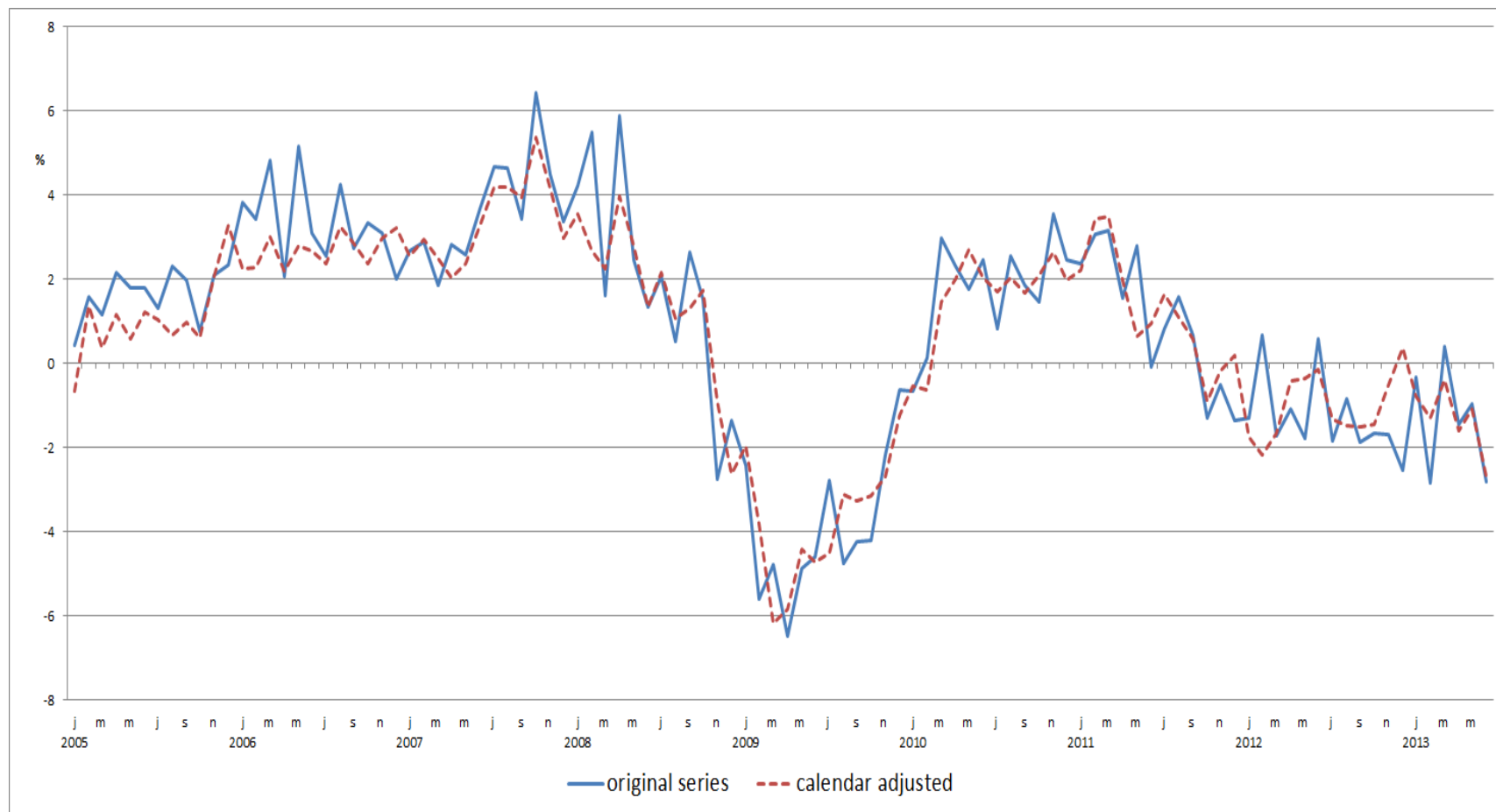


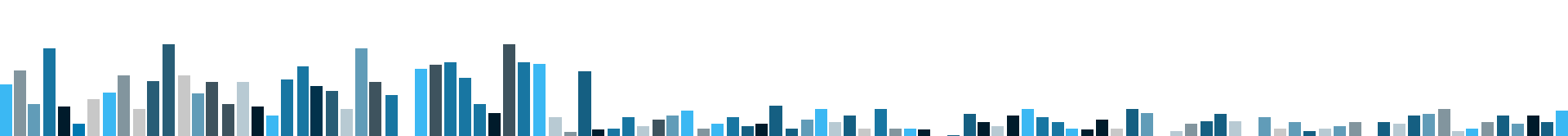
Monthly indicator, flash GDP, regular QGDP and provisional year compared to the final estimate, 2005-2010 (2006III-2010)

Summary statistic	Monthly indicator	Flash	Regular quarterly estimate	Provisional year
Mean revision	0.09	0.44	0.36	0.20
Mean absolute revision	0.29	0.52	0.49	0.32
RMSR	0.36	0.66	0.61	0.37
Maximum positive revision	0.7	1.7	1.5	0.7
Maximum negative revision	0.5	0.3	0.3	0.3
2006Q3-2010				
Mean revision	0.05	0.22	0.15	0.12
Mean absolute revision	0.27	0.33	0.32	0.29
RMSR	0.32	0.39	0.37	0.34

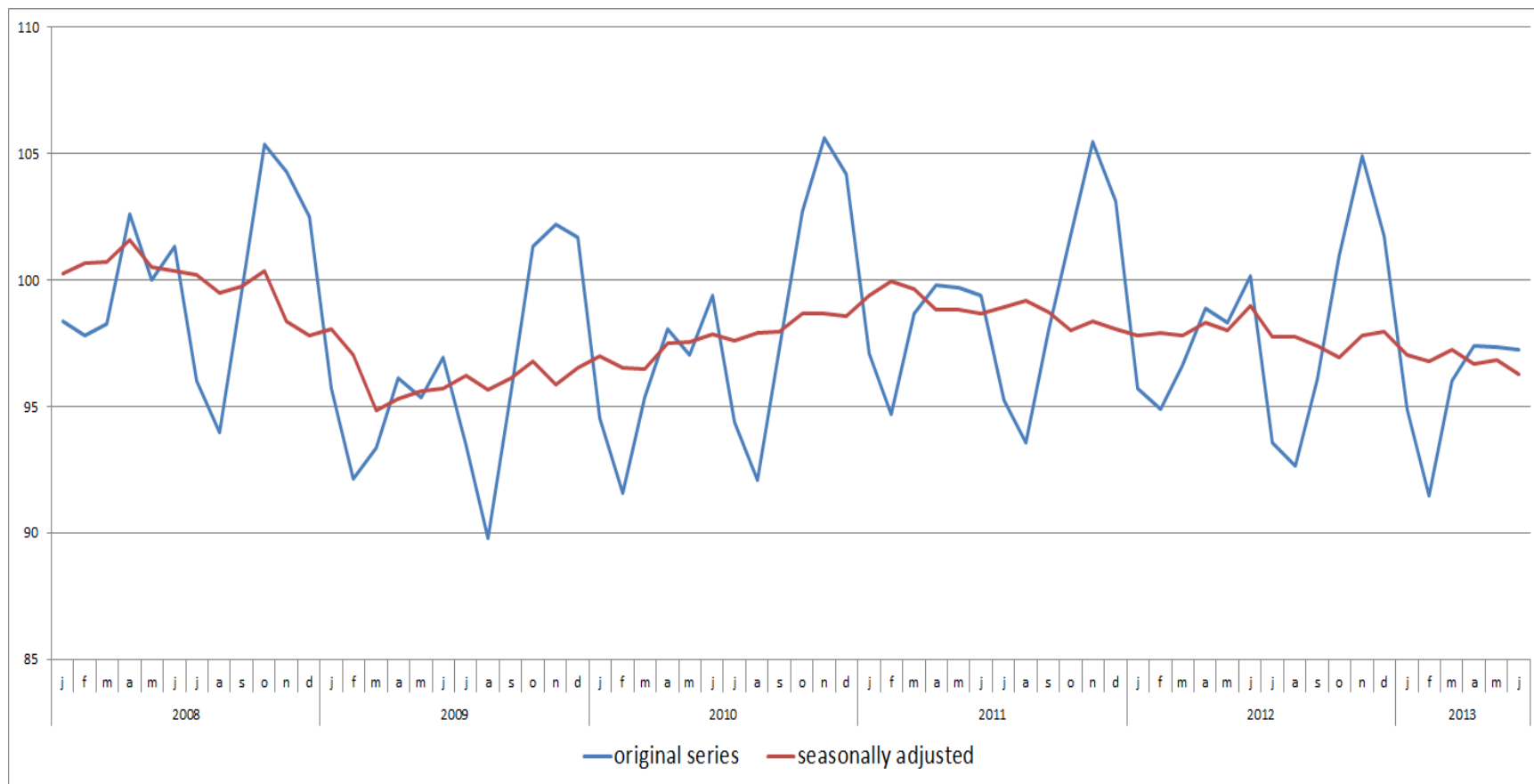


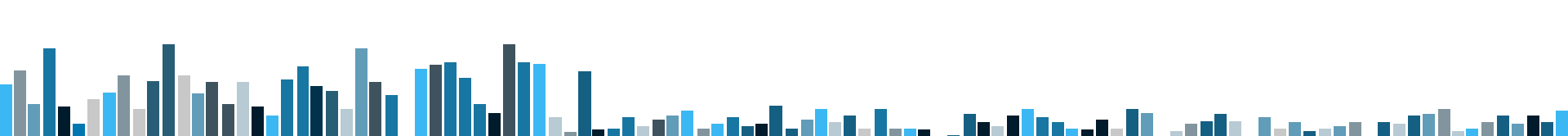
Monthly indicator, benchmarked series, y.o.y. changes, 2005-June 2013



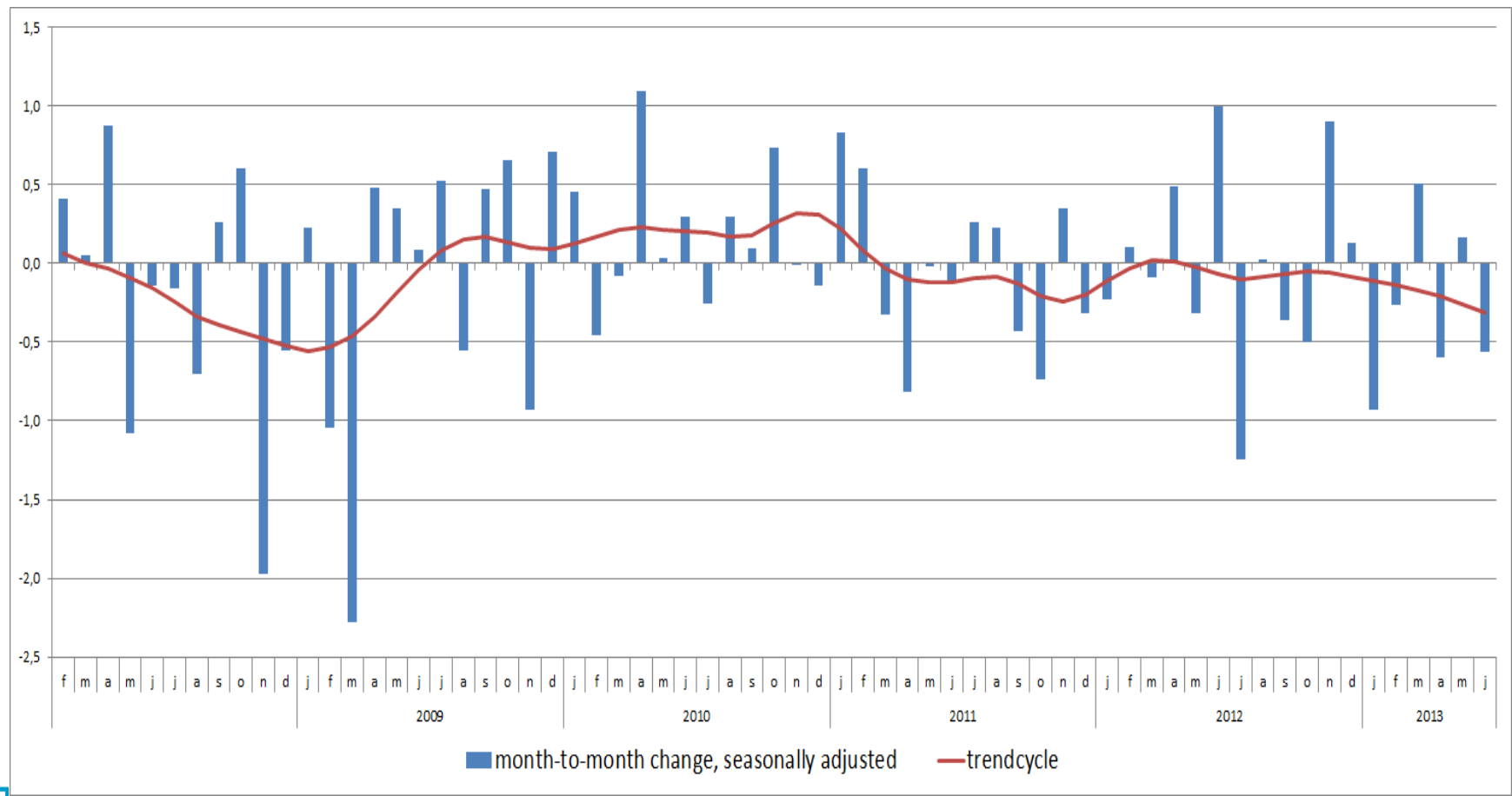


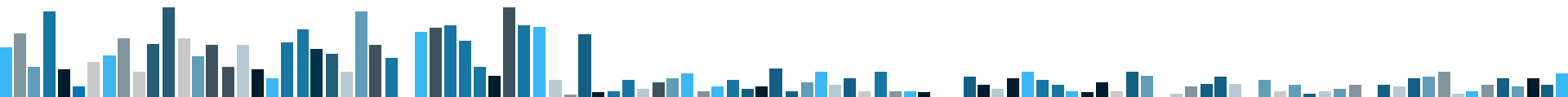
Monthly indicator, original series, seasonally adjusted series, index (2008=100)





Monthly indicator, seasonally adjusted, month-to-month changes and trendcycle, month-to-month changes



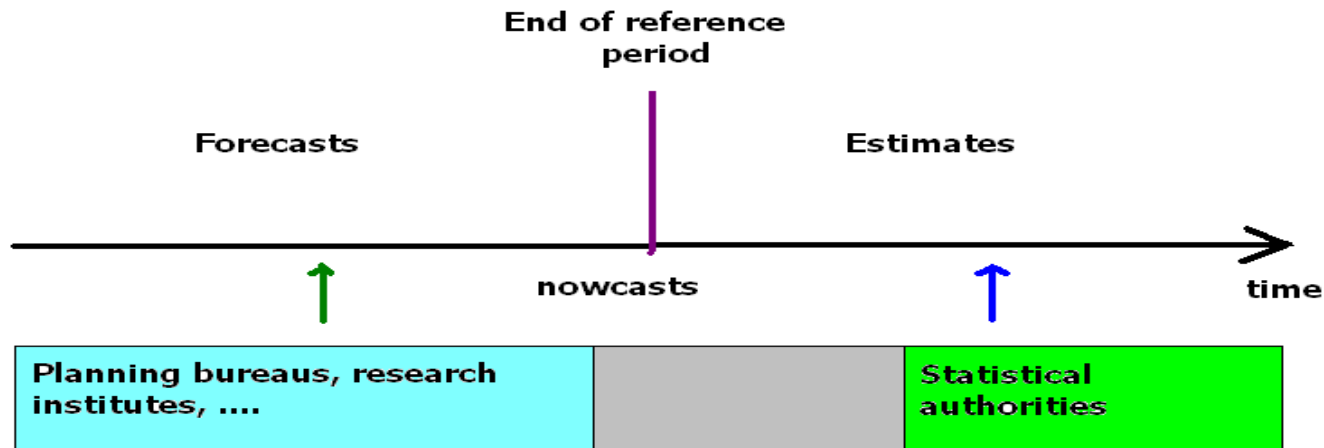


One remaining issue: should a statistical office publish an indicator that leans to such a large extent on an econometric model and indirect indicators?

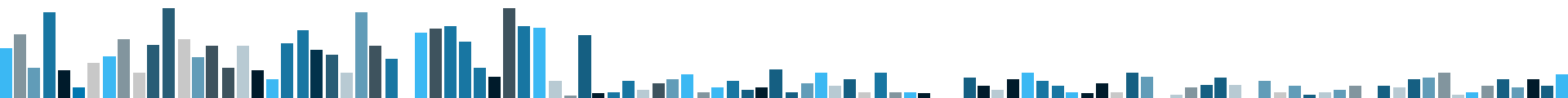
- Borderline between what you can do and what you cannot do is not evident; large grey area;
- Opinions are divided;
- Dilemma: meet the demand for more timely and more frequent information on the one hand and reduce the administrative burden on the private sector on the other hand;
- Nowcasting has been common practice in official statistics for a long time.



Who does what in rapid estimates?



taken from: Roberto Barcellan, 2010, Flash estimates of GDP, paper presented at the Third International Seminar on Early Warning and Business Cycle Indicators, Moscow.



Conclusion

Real time simulation shows that it is possible to compile a reliable monthly indicator, in a relatively easy way, based on existing statistical information.

The question remains, whether the indicator should be based more on direct measurement, and if so, how we are going to do that, when the setting up of new surveys is not an option.