

## Methodology for the KOF Employment Indicator

### Basis

The KOF Employment Indicator is based on the quarterly KOF Business Tendency Surveys in nine sectors (industry, hotel and catering, wholesale, construction, project engineering, retail, banks, insurers and other service providers), which account for around 85 per cent of private sector employment in Switzerland. Within these surveys, businesses assess their current employment levels and state whether they expect staffing levels to change over the coming three months. The KOF Employment Indicator is based on the answers provided by businesses to these questions.

A positive figure for the indicator means that the number of participating businesses that envisage cutting jobs during the reference quarter is smaller than the number of businesses that intend to create jobs. Conversely, a negative figure for the Employment Indicator points to a negative employment dynamic. It has been shown in the past that these assessments are a precursor of actual developments on the labour market. The KOF Employment Indicator consistently pre-empted the previous year's rate of change in full-time equivalent employment according to the Federal Statistics Office (FSO) by one quarter. The Indicator also pre-empted changes in the number of persons involved in gainful activity in Switzerland according to the FSO. The Indicator therefore enables an early assessment of the position on the labour market over the coming months.

The FSO publishes data concerning changes in employment around two months after the end of the reference quarter. On the other hand, the KOF Employment Indicator is published at the end of the first month of the relevant quarter. It thus pre-empted the reference series by around five months. This means that the KOF Employment Indicator closes a significant informational gap.

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**Calculation:** The KOF Employment Indicator is based on the seasonally adjusted assessments and expectations relating to employment of businesses that participate in KOF Business Tendency Surveys. As a first step, seasonally adjusted balances (proportion of reports of "increasing" less reports of "falling") are created for each sector in relation to both assessments and expectations. The two balances are then averaged out. A weighted average from the individual sectoral indicators is used in order to calculate the Indicator for the economy as a whole. The weighting is applied based on the employment shares of the sectors in question during the previous quarter (cf. table 1).

**Changes:** The input series for the Indicator are based on seasonally adjusted figures. Seasonal adjustment may result in minor changes within previously published series. In addition, at the time of first publication, the last data point for the Employment Indicator must be regarded as provisional. It is based on initial assessments of monthly surveys, which have not yet been fully concluded. In addition, it is based on figures for the first month from surveys that are conducted monthly. Answers provided by businesses during the quarter in question that are only received after the Indicator has been calculated are only taken into account the second time the Indicator is published.

**Retrospective calculation:** The micro-data available will enable the indicator to be calculated retrospectively according to the current methodology back to the quarter 3 of 2007. On the other hand, data published prior to the 3rd quarter of 2007 are based on a reverse extrapolation, for which a seasonally adjusted KOF Employment Indicator obtained using the old methodology is used. In addition, the older figures for the Indicator are in part based on a less comprehensive foundation, as not all KOF surveys were being conducted in 1992. Table 1 provides an overview regarding the point in time from which a specific business tendency survey has been incorporated into the Indicator.

**Table 1: KOF Employment Indicators according to sector and the related coverage**

KOF Business Tendency Survey	Employment represented (according to NOGA 2008)	In the Indicator since
Industry	Manufacturing/production of goods (NOGA 10–33)	1992 Q3
Construction	Construction (NOGA 41-43)	1994 Q4
Wholesale	Wholesale (NOGA 46)	1992 Q3
Retail	Retail (NOGA 47)	1994 Q2
Hotel and restaurant sector	Hotel and restaurant sector/accommodation and restaurant sector (NOGA 55-56)	1992 Q3
Project engineering sector	Architecture and engineering firms (NOGA 71)	1996 Q2
Financial services	Provision of financial services (NOGA 64)	2000 Q2
Insurance services	Insurance (NOGA 65)	2001 Q3
Service sectors	Other service sectors excluding government-related sectors and public sector <ul style="list-style-type: none"> <li>• Transportation and storage (NOGA 49–53)</li> <li>• Information and communications (NOGA 58–63)</li> <li>• Property and residential (NOGA 68)</li> <li>• Provision of freelance, academic and technical services (NOGA 69–75, without 71)</li> <li>• Provision of other economic services (NOGA 77-82)</li> <li>• Art, entertainment and recreation (NOGA 90–93)</li> <li>•</li> </ul>	2006 Q4

<sup>1</sup>See further Siliverstovs, Boriss (2009), Evaluating Short-Run Forecasting Properties of the KOF Employment Indicator for Switzerland in Real Time, KOF Working Paper 226, May 2009; and Siliverstovs, Boriss (2013), Do business tendency surveys help in forecasting employment? A real-time evidence for Switzerland, Journal of Business Cycle Measurement and Analysis, 2013(2), 129–151. These contributions also show that the KOF Employment Indicator can also be referred to in order to make employment forecasts over a horizon of one quarter.

<sup>2</sup>The indicator relates to the entire quarter. In sectors in which monthly surveys are carried out, an average figure for the three months is used.