

16 October 2017

Backgrounder on the *Business Outlook Survey* Question on Future Sales Indicators

Since the 2016 summer survey, the results from a question on future sales indicators (FSI) have been included in the *Business Outlook Survey* (BOS). This backgrounder briefly describes the question and presents the correlations between the responses and various measures of business activity.

A question on future sales (FS) growth has been part of the survey since it began in 1997 and has been included in the BOS publication since its first release in 2004. The aim of the question is to solicit expectations of sales growth over the next 12 months compared with the past 12 months; as such, the balance of opinion on FS growth was shown in Martin and Papile (2004) to share a moderate correlation with real business GDP momentum.^{1,2} In the third quarter of 2003, an additional question was introduced in the survey to assess concrete indicators of FS, such as order books and advance bookings. More specifically, firms are asked whether recent indicators of FS have improved, deteriorated or remained the same as they were 12 months ago. Results are expressed as a balance of opinion obtained by subtracting the percentage of respondents reporting that indicators have deteriorated from the percentage reporting that indicators have improved.

To assess how informative the results from the question on FSI are about Canadian business activity, responses to this question are compared with real business GDP growth and real business GDP momentum. Real business GDP growth is calculated using year-over-year (y/y) and quarter-over-quarter (q/q) changes, while real business GDP momentum refers to the year-to-year change in the year-over-year growth rate. **Chart 1** shows that the question on FSI tracks the different measures of real business GDP relatively well. Because it measures the change in sales indicators (as opposed to the momentum), the question on FSI follows GDP growth (panel a) more closely than GDP momentum (panel b).

The correlations between the balance of opinion on FSI and (i) real business GDP growth and (ii) real business GDP momentum are shown in **Table 1**. For comparison, the correlations between responses to the question on FS growth and the real business GDP measures are also reported. This analysis confirms that the balance of opinion on FSI is a useful indicator for both real business GDP growth and real business GDP momentum. It is strongly correlated with y/y GDP growth and shows a moderately strong correlation with q/q GDP growth and a moderate correlation with GDP momentum.³ While the balance of opinion is a

¹ The balance of opinion is the percentage of firms expecting faster sales growth minus the percentage expecting slower growth.

² See M. Martin and C. Papile, “The Bank of Canada’s Business Outlook Survey: An Assessment,” Bank of Canada Staff Working Paper No. 2004-15 (April).

³ The scale used to evaluate the correlation coefficients is that used in Martin and Papile (2004): strong, > 0.80; moderately strong, 0.60 to 0.80; moderate, 0.40 to 0.60; weak, 0.20 to 0.40; insignificant, < 0.20.

good contemporaneous indicator of q/q GDP growth and GDP momentum, the highest correlation with y/y GDP growth is observed one quarter ahead. The correlation analysis reveals that, for up to one quarter ahead, the balance of opinion on FSI is generally a better indicator of real business GDP growth and real business GDP momentum than the question on FS growth.

Over the past few years, the *Business Outlook Survey* has referred to the results of the question on FSI every quarter, since they are based on concrete indicators of expected future sales, such as order books and advance bookings. The correlation analysis presented in this backgrounder shows that firms’ responses to this question can help the Bank better gauge current and prospective business activity. Therefore, responses to the question on FSI have been made available to the public since the summer 2016 issue of the *Business Outlook Survey*.

Table 1: Business Outlook Survey — Correlations between balances of opinion on future sales indicators and future sales growth and measures of real business GDP

Sample: 2003Q3 to 2017Q2

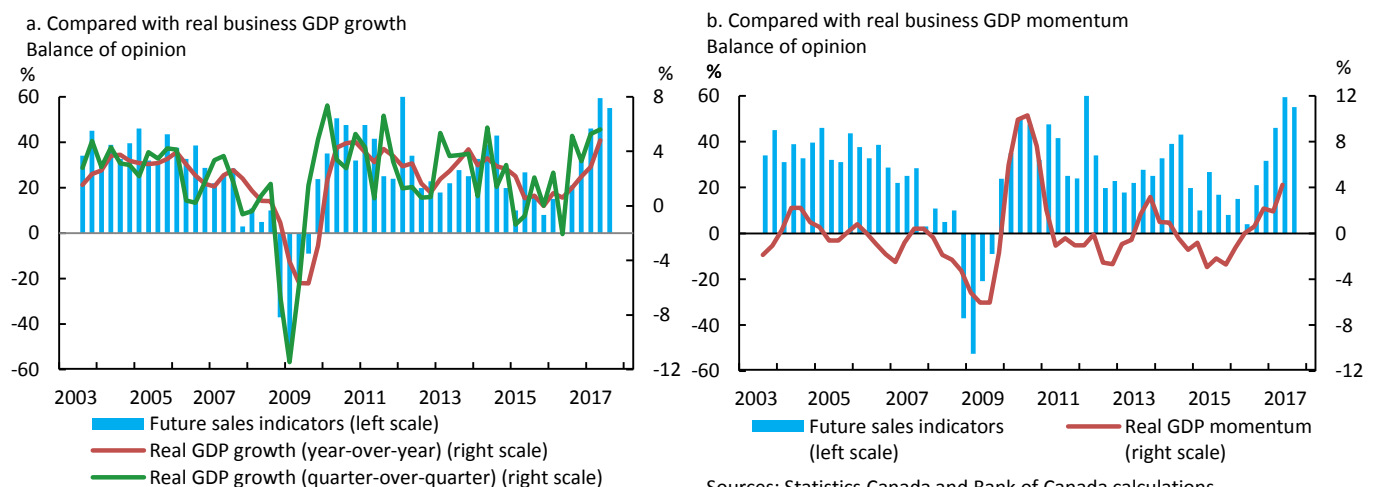
BOS series at time <i>t</i>	Real business GDP measures	<i>t</i> - 2	<i>t</i> - 1	<i>t</i>	<i>t</i> + 1	<i>t</i> + 2	<i>t</i> + 3	<i>t</i> + 4
Future sales indicators ^a	GDP growth (y/y)	0.33	0.55	0.78	0.88	0.78	0.55	0.30
	GDP growth (q/q)	0.52	0.67	0.74	0.56	0.25	0.02	-0.01
	GDP momentum	0.41	0.52	0.59	0.55	0.32	0.00	-0.34
Future sales growth ^b	GDP growth (y/y)	-0.37	-0.29	0.00	0.33	0.56	0.64	0.54
	GDP growth (q/q)	-0.24	0.06	0.50	0.66	0.41	0.25	0.18
	GDP momentum	-0.08	0.01	0.26	0.51	0.68	0.68	0.41

Notes: Peak correlations are in bold. y/y = year-over-year; q/q = quarter-over-quarter

a. Percentage of firms reporting that indicators have improved minus the percentage reporting that indicators have deteriorated

b. Percentage of firms expecting faster growth of sales volumes over the next 12 months than in the past 12 months minus the percentage of firms expecting slower growth

Chart 1: Business Outlook Survey responses on future sales indicators



Sources: Statistics Canada and Bank of Canada calculations