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Backgrounder on Questions in the *Business Outlook Survey* Concerning Past Sales and Credit Conditions

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The results of two additional questions are being included in the *Business Outlook Survey* (BOS) publication, starting with the winter 2007–08 survey: the balance of opinion on past sales and the balance of opinion on credit conditions. This backgrounder briefly describes the two questions and presents the correlations between the responses and relevant economic data.

Past Sales

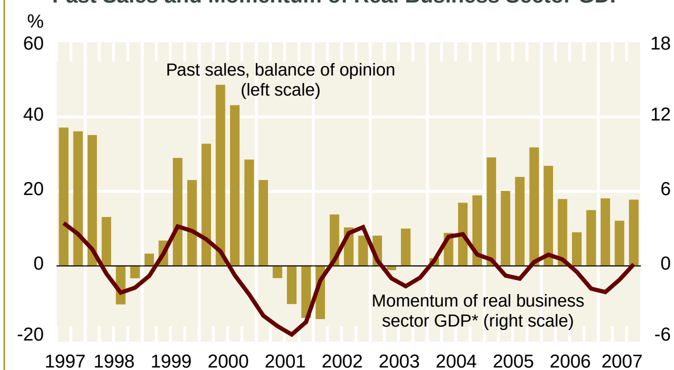
To provide context for the survey questions on the business outlook and production capacity, firms are asked to describe their sales experience over the past year. Up to now, the business activity section of the BOS contained only forward-looking questions. However, we often refer to firms' past sales performance, given its importance in interpreting the outlook for future sales, and we believe it would be useful to report this information on a regular basis.

The question on past sales asks whether the growth of sales volumes over the past 12 months has been greater than, less than, or the same as that over the previous 12 months. The balance of opinion is obtained by subtracting the percentage of respondents answering "less" from the percentage answering "greater."

This question was initially analyzed in a *Bank of Canada Review* article in 2004 and in a background Working Paper.[1] To assess the extent to which this information is indicative of recent economic activity, the balance of opinion is compared with the momentum of real GDP[2] in the business sector, a measure of economic activity expected to closely match the sample and wording of the question.[3] Chart 1 shows that the balance of opinion on past sales tracks the broad cyclical movements in the momentum of real business sector GDP relatively well over much of the 1997Q3 –2007Q3 sample period. An update of the correlation analysis in Martin and Papile (2004) confirms that the balance of opinion on past sales continues to have a moderately strong correlation with the momentum of real business sector GDP in quarter t–1 (Table 1).[4]

While this correlation suggests that the balance of opinion on past sales provides some information on recent economic activity, there are several reasons why it may not correspond to actual changes in real GDP growth in any given quarter (e.g., the survey's small sample size, conceptual differences between sales and GDP, and potential future revisions to GDP). We are reporting this information because it provides useful context for interpreting firms' responses to other questions in the survey.

Chart 1
Past Sales and Momentum of Real Business Sector GDP



* Year-over-year change in GDP growth at basic prices, seasonally adjusted, 2002 constant dollars
Source: Bank of Canada, Statistics Canada (v41881479)

Table 1 Correlation between Past Sales at Time *t* and Momentum of Real Gross Domestic Product (GDP)

	Quarter				
Change in year-over-year GDP growth	***t*-4**	***t*-3**	***t*-2**	***t*-1**	***t***
Correlation	0.22	0.48	0.61	0.66	0.51

1. See M. Martin, "The Bank of Canada Business Outlook Survey." *Bank of Canada Review* (Spring 2004): 3-18 and M. Martin and C. Papile, "The Bank of Canada's Business Outlook Survey: An Assessment," Bank of Canada Working Paper No. 2004-15.
2. Momentum of real business sector GDP is the year-to-year change in the year-over-year growth rate.
3. For the motivation for, and the limitations to, this approach, as well as a more technical definition of momentum, see Martin and Papile (2004).
4. A strong correlation is considered to be greater than 0.80; a moderately strong correlation, between 0.80 and 0.60; a moderate correlation, between 0.60 and 0.40; a weak correlation, between 0.40 and 0.20; and insignificant, less than 0.20.

Credit Conditions

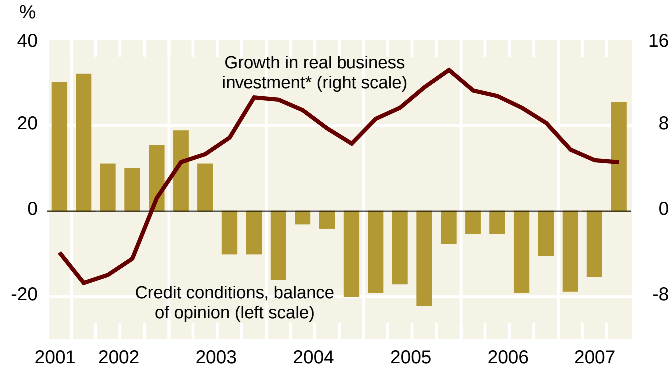
Since the fourth quarter of 2001, the survey has included a question on the change in recent credit conditions. When the BOS was first published in 2004, however, the historical data were insufficient for analyzing the information content of this question.

The question asks whether the terms and conditions for obtaining financing over the past three months have tightened, eased, or remained unchanged compared with the previous three months. On average, about three-quarters of the firms in the sample are in a position to answer this question.[5] The balance of opinion is obtained by subtracting the percentage of respondents answering "eased" from the percentage answering "tightened." As is the case for the other survey questions, the answer provides firms' perspectives on the direction of the change, not the magnitude.

For an indication of the relationship between this information and economic activity, the balance of opinion is compared with year-over-year growth in real business investment in machinery and equipment and in non-residential structures (Chart 2).[6] A negative balance of opinion indicates credit easing and, hence, an easier environment in which to finance investment spending. Chart 2 illustrates this inverse relationship, in which the balance of opinion on credit conditions tracks the broad movements in business investment growth relatively well over much of the 2001Q4 to 2007Q3 sample period. The correlation between the balance of opinion on credit conditions and year-over-year investment growth is strongest in quarter *t*+1 (Table 2).[7]

With only 24 observations and three-quarters of the sample in a position to answer this question, it should be noted that the confidence bands for the correlation coefficients would be quite wide. As well, the change in credit conditions is only one of several factors that would be expected to influence firms' investment decisions at any point in time.

Chart 2
Credit Conditions and Growth in Real Business Investment*



* Year-over-year percentage change, seasonally adjusted, chained 2002 dollars
Source: Bank of Canada, Statistics Canada (v1992144)

Table 2 Correlation between Credit Conditions at Time *t* and Growth in Real Business Investment

	Quarter				
Year-over-year investment growth	***t***	***t*+1**	***t*+2**	***t*+3**	***t*+4**
Correlation	-0.74	-0.78	-0.73	-0.61	-0.43

5. The remaining firms are typically self-financed or have a foreign parent, and thus the question is not applicable.
6. Year-over-year growth is used, reflecting the expectation that changes in credit conditions may affect investment decisions across several quarters or in different quarters by different firms.
7. A moderate correlation is found with quarter-over-quarter growth in real business investment.