

Planned Revisions of the *Tankan* Survey
-- Review of survey items, including the introduction of
a survey on *Inflation Outlook of Firms*--

The Bank of Japan (“the Bank”) conducts *The Short-term Economic Survey of Enterprises in Japan (Tankan)* with a view to gauging business conditions in Japan in its pursuit of sound monetary policy. The *Tankan* survey covers a sample of approximately 11,000 private firms selected from the population of approximately 210,000 firms in Japan. The *Tankan* survey is one of the important information sources for the Bank in assessing the Japanese economy, and is also highly appreciated by a wide variety of users.

The Bank will change the *Tankan* survey items in three respects: 1) the introduction of a survey on the inflation outlook of firms; 2) the removal of some questions requesting quantitative responses; and 3) a review of survey methods relating to the “conditions for commercial paper issuance” diffusion index (DI).

In formulating its plan for these changes, the Bank released a proposal in November 2012 and invited suggestions from the public (through mid-January 2013) as is usual when planning major revisions to the statistics it compiles. The Bank received comments from 32 interested parties including business organizations, academic experts and economists. The planned revisions of the *Tankan* survey items laid out in this paper have reflected these comments (major comments and the Bank's responses are summarized on Page 9). The Bank is deeply grateful to these parties for their valuable comments.

The Bank intends to implement these changes to the *Tankan* survey items around the first half of 2014. A more detailed schedule will be announced in due course. Looking ahead, the Bank will continue its efforts to improve the *Tankan* survey with a view to providing richer information on developments in the business sector in Japan.

1. Introduction of a Survey on Inflation Outlook of Firms

1) Survey Format

Details of the proposed survey on the inflation outlook of firms are as follows (See Annex for an overview):

A) Survey Items and Forecasting Horizons

The Bank intends to introduce two new outlook survey items, “*Output Prices*” (rate of price changes relative to the current level) and “*General Prices*” (rate of price changes from the previous year). The forecasting horizons for these survey items are planned to be one, three, and five years ahead.

The survey of “*Output Prices*” will ask firms about their expectations of the rate of price changes relative to the current level with respect to their mainstay domestic products and services. The definition for *output prices* would be the same as the one adopted in the current *Tankan* item on short-term changes in output prices. The survey of “*General Prices*”, meanwhile, will ask firms about their expectations of the annual percentage change in general prices as measured by the consumer price index.

B) Survey Coverage

All the sample firms (10,654 firms as of December 2012) covered by the current *Tankan* survey will be asked to respond to the new survey items, as it is desirable that survey results reflect the overall structure of Japanese industry (including the distributions of firm sizes and sectors) to the greatest extent possible.

C) Questionnaires and Responding Format

The responding format is designed for the respondents to indicate the range of inflation outlook nearest to their own outlook from the 9 or 10 response options given (e.g., “around +6% or higher”, “around 5%”, ... “around -3% or lower”) for both “*Output Prices*” and “*General Prices*” survey items.¹ A numerical range is added to each response option (e.g.,

¹ The Bank also intends to provide two other response options, “Don’t know” and “Don’t have a clear view.” Although these answer options are not available for other survey items, the Bank

“+4.5%~+5.4%” for “around 5%”) to clarify the range of inflation rates that each response option is intended to cover.

2) Significance of the Survey

The Bank has considered introducing an inflation outlook survey in the *Tankan* survey for the following reasons:

First, the inflation outlook of business and households (“inflation expectations”) is considered an important determinant of both economic activities and price formation, meaning that greater availability of information on inflation expectations would be likely to enhance the decision making of various economic agents. More specifically, the inflation expectations of businesses are believed to influence actual inflation rates because prices of products and employees' wages are determined based on firms' own views regarding the inflation outlook. Moreover, a more accurate grasp of real interest rate movements—a significant determinant of household consumption behavior and other economic activities—may be achievable by enhancing the accuracy with which inflation expectations are measured. It is therefore the Bank's belief that the gathering of information with regard to inflation expectations will support effective decision-making by households and businesses, thereby facilitating the economic projections of economists as well as the policy decision-making of the central bank and the government.

Second, a survey of economic agents is considered to be one of the effective means of measuring inflation expectations. Although market information (such as pricing of inflation-indexed securities) and economic models are also widely used as tools for the measurement of inflation expectations, surveys have the advantage of collecting information directly from the decision-making economic agents like business or households. It is for this reason that numerous surveys of inflation expectations are already conducted both within Japan and abroad (Table 1). However, we believe that introducing a survey of

decided to make them explicitly available for the two inflation outlook survey items. This reflects a belief that accuracy of the survey would be enhanced if respondents choose none of the indicated inflation figures when they feel it difficult to choose one due to either high uncertainty over the medium-and-long-term outlook or a perception that the general inflation outlook would not necessarily affect their management strategy.

medium-to-long-term business inflation expectations in the *Tankan* survey will help to fill an important gap given that there are presently no inflation outlook surveys in Japan that ask firms for their views on medium-to-long-term inflation.

3) Feasibility

While acknowledging that adding questions on inflation expectations to the *Tankan* survey would be valuable, one might still question whether it is possible to collect information on the perceived medium-to-long-term outlook for general prices from non-financial corporations. The Bank therefore conducted two pilot surveys in March and June 2012 to assess the feasibility of expanding the *Tankan* survey in this manner, obtaining the cooperation of 1,400 firms from within the usual *Tankan* sample. The results proved to be generally positive as summarized below.

The results of the pilot surveys suggested that the new survey is highly feasible, with effective response rates² approaching 90 percent. The second pilot survey yielded “real” effective response rates³ for 1-year, 3-year, and 5-year horizons of 80-90%, 70-80%, and approximately 50% respectively. Although real effective response rates did decline as the outlook moved to a longer-term horizon, the Bank nevertheless found that around half the respondents had formed some kind of inflation expectation even over a 5-year horizon.

2. Other Reviews

The Bank will also add changes in two other areas of the *Tankan* survey.

1) The Bank will stop asking firms some questions that require quantitative responses (see Table 2 for details). The proposed removal of survey items pertaining to certain fiscal-year projections (including detailed cost outlooks) and quarter-end outstanding balance sheet

² The ratio of the number of effective respondent firms (the number of collected survey sheets minus the number of sheets left blank) to the total number of firms to which the survey was sent.

³ Real effective response rates are obtained by subtracting the response rates for two responses—“Don’t know” (“*Output Prices*”) and “Don’t have a clear view” (“*General Prices*”)—from effective response rates.

amounts is deemed essential to mitigate the respondent burden and thereby maintain high response rates for the *Tankan* survey. Meanwhile, the Bank will continue asking questions on critical items such as sales, current profits, and fixed investment.

2) The Bank has until now been asking all *Tankan* respondents about CP (commercial paper) issuance conditions irrespective of whether or not the firms have issued CP themselves. Given that most of the respondents will never have issued CP before, this survey item may have failed to provide an accurate indication of actual CP issuance conditions. The Bank therefore will limit responses to those firms who either have an established record of CP issuance or are considering CP issuance at a future date.

Overview of Inflation Outlook Survey Items in *Tankan*

Survey Items	“Output Prices” (rate of price changes relative to the current level) “General Prices” (annual % change)
Forecasting Horizons	1 year ahead, 3 years ahead, 5 years ahead
Sample Firms	Equivalent to the sample firms of the current <i>The Short-term Economic Survey of Enterprises in Japan (Tankan)</i> (10,654 firms as of December 2012)
Questionnaire	Outlook for Output Prices
	<p>【Question】 Relative to the current level, what are your institution's expectations of the rate of price changes in your mainstay domestic products or services for one year ahead, three years ahead, and five years ahead, respectively? Please select the range nearest to your own expectation from the options below.</p> <p>【Options】 Rate of changes relative to the current level</p> <ol style="list-style-type: none"> 1. around +20% or higher (+17.5% or higher) 2. around +15% (+12.5% ~ +17.4%) 3. around +10% (+7.5% ~ +12.4%) 4. around +5% (+2.5% ~ +7.4%) 5. around +0% (-2.5% ~ +2.4%) 6. around -5% (-7.5% ~ -2.6%) 7. around -10% (-12.5% ~ -7.6%) 8. around -15% (-17.5% ~ -12.6%) 9. around -20% or lower (-17.6% or lower) 10. Don't know.
	Outlook for General Prices
	<p>【Question】 What are your institution's expectations of the annual % change in general prices (as measured by the consumer price index) for one year ahead, three years ahead, and five years ahead, respectively? Please select the range nearest to your own expectation from the options below.</p> <p>【Options】 In annual percent rate change</p> <ol style="list-style-type: none"> 1. around +6% or higher (+5.5% or higher) 2. around +5% (+4.5% ~ +5.4%) 3. around +4% (+3.5% ~ +4.4%) 4. around +3% (+2.5% ~ +3.4%) 5. around +2% (+1.5% ~ +2.4%) 6. around +1% (+0.5% ~ +1.4%) 7. around 0% (-0.5% ~ +0.4%) 8. around -1% (-1.5% ~ -0.6%) 9. around -2% (-2.5% ~ -1.6%) 10. around -3% or lower (-2.6% or lower) <p>※If you have no clear views on general prices, please select one of the three following reasons.</p> <ol style="list-style-type: none"> 11. Uncertainty over the future outlook is high 12. Not really conscious of inflation fluctuations because they should not influence the strategy of the institution. 13. Other

(Table 1)

Overview of Inflation Outlook Surveys in Japan

	Forecasting Horizons	
	Short-term (1 year or less)	Medium-to-long-term (2 to 10 years)
Households	<ul style="list-style-type: none"> • Opinion Survey (1 year) • Monthly Consumer Confidence Survey (1 year) 	<ul style="list-style-type: none"> • Opinion Survey (5 years)
Business	<ul style="list-style-type: none"> • Tankan (3 months) • Business Outlook Survey (3, 6 months) • Annual Survey of Corporate Behavior (1 year) 	Not available
Economists	<ul style="list-style-type: none"> • ESP Forecast (1 year) • Consensus Forecast 	<ul style="list-style-type: none"> • ESP Forecast (2, over 5 years) • Consensus Forecast

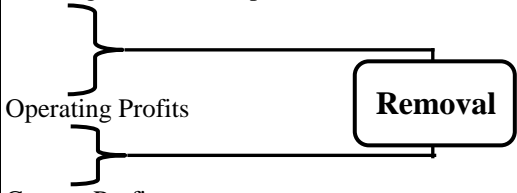
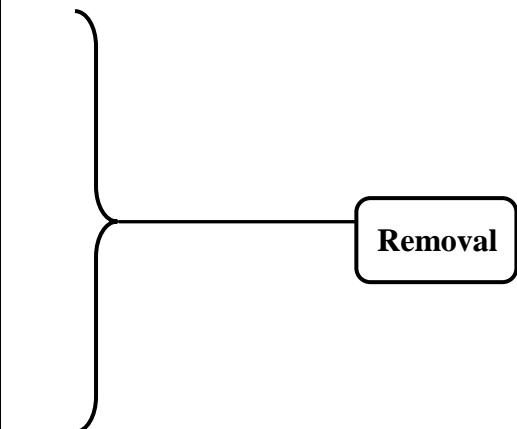
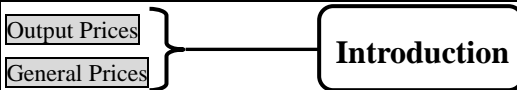
Overview of Overseas Inflation Outlook Surveys

	Forecasting Horizons	
	Short-term (1 year or less)	Medium-and-long-term (2 to 10 years)
Households	<ul style="list-style-type: none"> • US : Surveys of Consumers (Michigan Survey) (1 year) • Euro Area : Business and Consumer Surveys (1 year) • UK : Inflation Attitudes Survey (1 year) 	<ul style="list-style-type: none"> • US : Surveys of Consumers (Michigan Survey) (5-10 year) • UK : Inflation Attitudes Survey (2& 5 year)
Business	<ul style="list-style-type: none"> • US : Empire State Manufacturing Survey (6 months) • US : Business Outlook Survey (6 months) • Canada : Business Outlook Survey (1 year) • Euro Area : Business and Consumer Surveys (3 months) • UK : CBI Company Survey (1 year) • NZ : Survey of Expectations (3 months, 1 year) • NZ : Business Outlook (1 year) 	<ul style="list-style-type: none"> • Canada : Business Outlook Survey (2 years) • NZ : Survey of Expectations (2 years)
Economists, etc	<ul style="list-style-type: none"> • US : Survey of Professional Forecasters (Every 3 months until 1 year, 1 year) • US : Livingston Survey (6 months, 1 year) • Euro Area : Survey of Professional Forecasters (1 year) • Sweden : Inflation Expectations (1 year) • Consensus Forecasts 	<ul style="list-style-type: none"> • US : Survey of Professional Forecasters (2,3, 5, 10 years) • US : Livingston Survey (2, 10 years) • Euro Area : Survey of Professional Forecasters (2, 5 years) • Sweden : Inflation Expectations (2, 5 years) • Consensus Forecasts

(Source) Masahiko Kataoka and Tetsuya Shiratori, 2011. "The usefulness of medium and long term inflation expectations survey." The Bank of Japan Review, 2011-J-8.(Available only in Japanese)

(Table 2)

Items of the *Tankan* Survey

	Before the revision	After the revision
Judgement Survey	Business Conditions Domestic Supply & Demand Conditions for Products and Services Overseas Supply & Demand Conditions for Products Inventory Level of Finished Goods & Merchandise Wholesalers' Inventory Level Production Capacity Employment Conditions Financial Position Lending Attitude of Financial institutions Change in Interest Rate on Loans Conditions for CP Issuance Change in Output Prices Change in Input Prices	Business Conditions Domestic Supply & Demand Conditions for Products and Services Overseas Supply & Demand Conditions for Products Inventory Level of Finished Goods & Merchandise Wholesalers' Inventory Level Production Capacity Employment Conditions Financial Position Lending Attitude of Financial institutions Change in Interest Rate on Loans Conditions for CP Issuance Change in Output Prices Change in Input Prices
Annual Projections	Sales Exports Exchange Rates for Exports Material Costs Personnel Expenses Depreciation Expenses Operating Profits Financial Income Financial Expenses Current Profits Net Income Fixed Investment Land Purchasing Expenses Software Investment	Sales Exports Exchange Rates for Exports Operating Profits Current Profits Net Income Fixed Investment Land Purchasing Expenses Software Investment <div style="text-align: right; margin-top: 10px;">  </div>
Quarterly Data	Total Liabilities Loans from Financial institutions Commercial Paper Corporate Bonds Total Assets Cash & Deposits Securities Listed as Liquid Assets Securities Listed as Fixed Assets Number of Employees Part-time Workers Interest-bearing Debt Outstanding (Forecast Judgements) Level of Liquidity (Forecast Judgements) Number of Employees (Forecast Judgements)	<div style="text-align: right; margin-top: 10px;">  </div>
Number of New Graduates Hired	Number of New Graduates Hired	Number of New Graduates Hired
Inflation Outlook of Firms	—	<div style="text-align: right; margin-top: 10px;">  </div>

Suggestions on the Proposal for the Revisions of the *Tankan* Survey Items and the Bank's Responses

The Bank invited suggestions on proposed revisions of *Tankan* survey items from November 2012 to January 2013 and received comments from 32 interested parties. This Box summarizes these comments and the Bank's responses.

(a) Comments on the proposal to introduce a survey on inflation outlook of firms

While comments were unanimously supportive of the proposal to introduce new survey items on firms' inflation outlooks, they also included an array of suggestions on the detailed format of the new survey items.

Most importantly, a number of experts conveyed concern that each response option might be inappropriately expressed. Each option was originally expressed as a numerical range between two integers indicating annual inflation, e.g., “on and over 0% ~ less than 1%.” The experts argued that a majority of firms are likely to formulate their inflation outlook around an integer percentage (e.g., “around 0%”). Under the original survey format, these firms would pick a numerical range which has the firms' true inflation outlook as the lower end of the range (e.g., “on and over 0% ~ less than 1%,”) and thus the result could be interpreted with an upward bias. To address this issue, each response option is now expressed as “around (integer) percent” (e.g., “around 0%”).

The Bank also received various suggestions as to how the new survey items could provide richer information. These suggestions include: adding firms' outlook on “input prices” to the survey items; letting each response option represent a smaller range of inflation rates (e.g., “0% ~ +0.5%”); and asking the respondents to assign a probability to each response option. While the Bank believes that these changes would certainly make the new survey more useful, it has not adopted them lest they should impose an excessive burden on survey respondents.

In addition, many parties suggested that the Bank release results for the new survey items by industry and size, which the Bank has decided to take on board.

(b) Comments on the proposal to cut some quantitative survey items

While the Bank did receive suggestions from several parties that the Bank continue asking questions on items such as “Personnel Expenses”, “Number of Employees”, and “Forecast Judgments of Quarterly Data”, these parties also acknowledged the importance of reducing the burden on survey respondents. A majority of interested parties agreed to the Bank's proposal to eliminate 18 survey items.

(c) Other comments

The Bank also received suggestions unrelated to the proposal released in November last year, including: starting to collect data on a consolidated basis; and introducing items about enterprises' activity in foreign countries, the predicted euro/yen exchange rate, and spending on research and development. The Bank will take these valuable comments into consideration as it continues its efforts to improve the *Tankan* survey.