



Monetary Authority of Singapore

economic policy group

A nighttime aerial photograph of Singapore's cityscape, showing illuminated skyscrapers, a waterfront, and a highway interchange. The image is used as a background for the title text.

Survey of professional forecasters

Dataset Documentation

Overview

The MAS Survey of Professional Forecasters (SPF), which started in 1999, is aimed at collating the short-term projections of Singapore's key macroeconomic variables made by professional forecasters based in Singapore. The survey is released each quarter in the first week of March, June, September and December, after the release of economic data for the previous quarter by the Ministry of Trade and Industry (MTI). The main objective of the survey is to establish a regular and consistent benchmark on private sector expectations of key economic variables that are relevant to the Singapore economy. The summary results are released on the MAS website. These survey results reflect expectations held by respondents and do not represent the views or forecasts of the MAS.

This documentation provides information on the variables forecasted and the format of the files and data series available for download.

Timing of the Survey

The first survey was conducted in Q4 1999. Each survey's timing coincides with the release of the *Quarterly Economic Survey of Singapore* (QES) of every quarter. The survey questionnaire is sent to forecasters after the QES is released to the public, so forecasters' information sets would include the data in the QES report. The MAS SPF report is released no later than the second Wednesday of the last month of each quarter.

Table 1
Timing of the MAS Survey of Professional Forecasters

Survey quarter	Questionnaire sent out	Last quarter of information published	Deadline for Submission	Results released to the public
First Quarter	Middle of Feb (after AES)	Q4	End of Feb	No later than the second Wednesday of Mar
Second Quarter	Middle of May (after QES)	Q1	End of May	No later than the second Wednesday of Jun
Third Quarter	Middle of Aug (after QES)	Q2	End of Aug	No later than the second Wednesday of Sep
Fourth Quarter	Middle of Nov (after QES)	Q3	End of Nov	No later than the second Wednesday of Dec

Description of Dataset

1 Variables

The MAS Survey of Professional Forecasters contains forecasts for these key economic indicators:

- 1) Gross Domestic Product (GDP) (year-on-year growth in percentage terms and constant prices)
- 2) Private consumption (year-on-year growth in percentage terms and constant prices)
- 3) Non-oil domestic exports (year-on-year growth in percentage terms and constant prices)
- 4) Sectoral variables¹:
 - a. Manufacturing (year-on-year growth in percentage terms and constant prices)
 - b. Finance & Insurance (year-on-year growth in percentage terms and constant prices)
 - c. Construction (year-on-year growth in percentage terms and constant prices)
 - d. Wholesale and Retail Trade (year-on-year growth in percentage terms and constant prices)
 - e. Accommodation & Food Services (year-on-year growth in percentage terms and constant prices)
- 5) Consumer Price Index (All-Items) (year-on-year growth, in percentage terms)
- 6) MAS Core Inflation (year-on-year growth, in percentage terms)
- 7) Unemployment Rate (seasonally adjusted in percentage terms, end of period)
- 8) Financial variables:
 - a. Bank loans (year-on-year growth in percentage terms, end of period)
 - b. 3-month interbank rate (percent per annum, end of period)
 - c. 3-month S\$ SIBOR (percent per annum, end of period)
 - d. Exchange rate (USD/SGD, end of period)

2 Changes in Base Year

There have been a number of changes of base year since the survey began. The first CPI series was compiled in 1960 using the results of the Household Expenditure Survey (HES) conducted in 1956/57. The series was replaced in 1974 based on the results of the 1972/73 HES. Since then, regular reviews were carried out in every five years – 1977/78, 1982/83, 1987/88, 1992/93, 1997/98, 2003/04 and 2007/08. The base-year period of a CPI series thus corresponds to the period when the HES' are conducted. The latest revision, with base year 2009, was based on the results of the Household Expenditure Survey conducted from Oct 2007 to Sep 2008.² The GDP series has been rebased every five years to the following base years: 1990, 1995, 2000, 2005 and 2010.³

These are documented in Table 3.

1 Forecasts for the manufacturing, financial services and construction sectors only began in Q4 2000. In place of forecasts for the various sectors, the surveys from Q4 1999 to Q3 2000 compiled forecasts for industrial production.

Before 2005, analysts were asked to provide their forecasts for the 'Commerce' sector, which comprised 'Wholesale & Retail Trade' plus 'Accommodation & Food Services'. However, from the Q1 2005 MAS SPF onwards, the survey was modified to include forecasts for 'Wholesale & Retail Trade' and 'Accommodation & Food Services' as separate sectors.

2 For more information on the rebasing of the CPI series, please refer to the Department of Statistics Information Paper available at the following link: <http://www.singstat.gov.sg/pubn/papers/economy/ip-e36.pdf>.

3 For more information on the rebasing of the GDP series, please refer to the Department of Statistics Information Paper available at the following link: http://www.singstat.gov.sg/publications/publications_and_papers/national_accounts/ip-e40.pdf.

Table 3
Changes in Base Year

Variable	Survey Range	Base Year
CPI-All Items	Q4 1999 – Q1 2005	1997
	Q2 2005 – Q1 2010	2004
	Q2 2010 – present	2009
GDP	Q4 1999 – Q4 2002	1990
	Q1 2003 – Q4 2005	1995
	Q1 2006 – Q4 2009	2000
	Q1 2010 – Q4 2013	2005
	Q1 2014 – present	2010

3 Forecast Horizons

The MAS SPF dataset contains projections for up to three different forecast horizons for each of the economic indicators:

- 1) An annual average forecast for the current calendar year.
- 2) An annual average forecast for the next calendar year.
- 3) A ‘rolling-horizon’ forecast for the current year’s quarters.

Table 2 gives an example of the forecast horizons included at four successive survey dates, from Q2 2010 to Q1 2011.

Table 2
Forecast Horizons

Survey Date	Quarterly ‘Rolling-Horizon’ Forecasts				Annual Average Forecasts	
Q2 2010	-	Q2 2010	Q3 2010	Q4 2010	2010	2011
Q3 2010	-	-	Q3 2010	Q4 2010	2010	2011
Q4 2010	-	-	-	Q4 2010	2010	2011
	Q1 2011	Q2 2011	Q3 2011	Q4 2011		
Q1 2011	-	Q2 2011	Q3 2011	Q4 2011	2011	2012

The forecast horizons have evolved over the years. Please refer to Annex A for details on the forecast horizons at each survey release.

4 Types of Forecasts

For the GDP variable there are two types of forecasts made in the MAS SPF:

1) Point Forecasts

Forecasters provide a single value of the forecast variable for each of the time periods in the forecast horizon.

2) Probability Distribution Forecasts

Forecasters also provide a probability distribution of the predicted outcomes for each of the time periods in the forecast horizon. The MAS provides the set of intervals for each variable at each round, for which, forecasters report the probability distribution. This set of intervals varies across surveys and variables, to take into account prevailing economic developments. The probability distribution forecasts were introduced in the third quarter of 2001. Please refer to Annex B for details on the probability distribution intervals at each survey release. The intervals at the top and bottom end of the probability distribution are open intervals, in the sense that there is no upper or lower limit to the GDP forecast respondents assign probabilities to.

For all other variables, only the point forecasts are made.

Forecasts of Individual Participants

In reporting the results of the MAS Survey of Professional Forecasters, the identities of the participants are kept confidential. However, we include an additional column giving the forecaster's confidential identification number (ID). This column appears after the columns giving the year and quarter in which the survey was conducted.

The identification numbers are consistent over time, allowing users of the dataset to trace a given forecaster's response from one survey to the next. In recent years, the sample size has ranged from 20 to 30 forecasters, with a response rate of more than 80% each survey. Over time, respondents may drop out or be added to the sample pool.

Caveats on Using the Dataset

Users of the dataset should note that at each survey, the forecasters would have based their projections on real-time data, which are subject to subsequent revisions.

As noted above, the dataset of individual responses is coded with an identification number for each forecaster. In principle, this identifier allows one to track the individual responses over time. However, some caveats should be noted in using these numbers. The identifiers for the forecasters represent individual institutions. However, at times when an individual economist changes his place of employment, we continue to use the identification number associated with the firm and not with the economist making the forecast.

At other times, institutions may merge or be taken over. In such an event, we will not assign a new individual identification number for the newly formed institution, but would retain the identification number of one of the institutions before the merger. This would depend on which institution the forecasts are more strongly associated with. For example, if the economist at institution A continues to provide the forecasts even after institution A and institution B have merged, then we would continue to use the identification number for institution A.

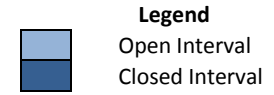
Annex A

Evolution of Forecast Horizon Structure at each Survey Release

		SPF Round																												
		201001	201002	201003	201004	201101	201102	201103	201104	201201	201202	201203	201204	201301	201302	201303	201304	201401	201402	201403	201404	201501	201502	201503	201504	201601	201602	201603	201604	
Forecast Horizon for yoy GDP Growth	Current calendar year (full year)																													
	Next calendar year (full year)																													
	Calendar year two years ahead																													
	Current calendar year Q1																													
	Current calendar year Q2																													
	Current calendar year Q3																													
	Current calendar year Q4																													
	Next calendar year Q1																													
	Next calendar year Q2																													
	Next calendar year Q3																													
	Next calendar year Q4																													

Annex B

Probability Distribution Intervals at each Survey Release



		201401	201402	201403	201404	201501	201502	201503	201504	201601	201602	201603	201604	
Probability Distribution Interval	(17.0%, 17.9%)													
	(16.0%, 16.9%)													
	(15.0%, 15.9%)													
	(14.0%, 14.9%)													
	(13.0%, 13.9%)													
	(12.0%, 12.9%)													
	(11.0%, 11.9%)													
	(10.0%, 10.9%)													
	(9.0%, 9.9%)													
	(8.0%, 8.9%)													
	(7.0%, 7.9%)													
	(6.0%, 6.9%)													
	(5.0%, 5.9%)		Open				Open							
	(4.0%, 4.9%)		Closed	Open			Closed	Open			Open			
	(3.0%, 3.9%)		Closed	Closed			Closed	Closed			Closed			
	(2.0%, 2.9%)		Closed	Closed			Closed	Closed			Closed			
	(1.0%, 1.9%)		Closed	Closed	Open		Closed	Closed			Closed			
	(0.0%, 0.9%)		Open	Open			Open	Open			Closed			
	(-1.0%, -0.1%)						Open				Open	Open		
	(-2.0%, -1.1%)													
	(-3.0%, -2.1%)													
	(-4.0%, -3.1%)													
	(-5.0%, -4.1%)													
	(-6.0%, -5.1%)													
	(-7.0%, -6.1%)													
(-8.0%, -7.1%)														
(-9.0%, -8.1%)														
(-10.0%, -9.1%)														
Probability Distribution Range	(1.0, 5.0)													
	(1.0, 5.0)													
	(1.0, 4.0)													
	(2.0, 4.0)													
	(0.0, 5.0)													
	(1.0, 5.0)													
	(1.0, 4.0)													
	(1.0, 3.0)													
	(0.0, 4.0)													
	(0.0, 4.0)													
	(0.0, 3.0)													
	(1.0, 3.0)													