

## **SINGAPOREANS' INFLATION EXPECTATIONS ON A STABLE DOWNTREND**

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SINGAPORE, 21 January 2019 – Singaporeans' One-year-Ahead headline inflation expectations (DBS-SMU CPIEx) polled at 2.9% in December 2018, owing mainly to uncertainty in global growth prospects and a prospective resolution in the Sino-American trade wars despite ongoing US policy tightening. This is the research findings of the latest quarterly release for the DBS-SMU Singapore Index of Inflation Expectations (SInDEx) Survey supported by the Sim Kee Boon Institute for Financial Economics (SKBI) at Singapore Management University (SMU).

In the latest and the thirtieth wave of the DBS-SMU SInDEx survey conducted in December 2018, consumers shared their views on expectations of inflation-related and asset management related variables over the medium term (One-year-Ahead) to long term (Five-year-Ahead).

In December 2018, the quarterly SInDEx survey showed that the One-Year-Ahead DBS-SMU CPIEx Inflation Expectations (for CPI-All Item inflation) maintained a downward trend to 2.9%, unchanged from September 2018, at its recent fourth quarter

average. Additionally, compared to the historical average of 3.4% for the DBS-SMU CPIEx inflation expectations (since the survey's inception in September 2011), current CPIEx is significantly lower.

In the June 2018 SInDEx survey, the team at SMU polled individuals on the constituents of DBS-SMU CPIEx inflation expectations while providing them with more current economic information to facilitate informed responses. This research was conducted in collaboration with the Behavioural Insights Team (BIT) and MAS to study how behavioural biases could affect the formation of inflation expectations, and helped sharpen the SInDEx survey questions to accommodate for potential behavioural biases in the individuals' responses.

Since the updated SInDEx survey was launched in June 2018, the one-year-ahead DBS-SMU CPIEx inflation expectations of some of the components of CPI-All Item inflation such as Food, Transport, Housing & Utilities, Healthcare, and more recently, Recreation and Education were also recorded. Compared to September 2018, the December 2018 survey revealed inflation expectations of these major components of the CPI basket remained unchanged. Food, Housing and Utilities inflation remained unchanged at 2%; Transportation inflation inched down to 2% from 2.1%, while Healthcare inflation remained unchanged at 3%. In the December 2018 survey, Education related inflation expectations polled at 3%, while Recreation costs inflation expectations surveyed stood at 2%.

The overall DBS-SMU CPIEx Inflation Expectations, after adjusting for potential behavioural biases, was at 2% in December 2018, unchanged from the September 2018 survey. This also suggests that the DBS-SMU CPIEx inflation expectations seem to be “anchored” fairly well despite various short-term uncertainties of the global economy, including Sino-American trade tensions, US Federal Reserve’s continued policy normalisation (i.e. interest rate increase) and possible slowdown in the global economy despite stable US growth prospects.

Excluding accommodation and private road transportation related costs, the One-year-Ahead DBS-SMU CPIEx core inflation expectations was recorded at 3% in December 2018, marginally higher from the September 2018 survey of 2.9%. For a subgroup of the population who own their accommodation and use public transport, the One-year-Ahead DBS-SMU CPIEx core inflation rate was unchanged at 2.9% from September 2018. This subgroup’s expectations of core inflation closely resembles the Singapore Core Inflation Expectations, as unlike the general population they are not exposed to private road transportation or accommodation expenses. These results suggest that there seems to be an expectation of higher increase in non-private road transportation and non-accommodation related component of future overall price changes, possibly as a reaction to expectation of stronger US dollar if US interest rate keeps rising, and higher domestic wages.

The SMU research team also polled the respondents for their One-year-Ahead expectations of inflation after excluding accommodation and public road transportation expectations by providing respondents with further information of current and past core inflation rates. After adjusting for some potential behavioral biases, the One-year-Ahead inflation expectations, excluding accommodation and private road transportation, was polled at 2%, this was unchanged from a similar survey done in September 2018, suggesting some degree of anchoring of inflation expectations despite short term global uncertainties.

In summary, the One-year-Ahead DBS-SMU SInDEx1, a composite weighted index of One-year-Ahead median inflation expectations, held steady at 2.9% in December 2018 survey. SInDEx1 remained lower than its historical average value of 3.4% since the survey's inception in September 2011. SInDEx1 was constructed as a plausible alternative and a more stable measure of inflation expectations by putting lower weightage on the more volatile and policy- sensitive components such as accommodation, private transportation, food and energy. SinDEx1 is also less adversely affected by extreme values, unlike the original mean.



DBS Chief Economist and Managing Director of Group Research, Dr. Taimur Baig commented, "DBS is pleased to embark on a partnership with SMU to strengthen this valuable undertaking. Understanding the sentiment and expectations of Singaporeans with regard to inflation is critical for policy makers, analysts, companies, academics, and financial sector participants. We hope the valuable insights gathered in this survey will be of wider benefit. As per the latest results, at 2.9%, the 1-year ahead inflation expectations of Singaporeans were broadly unchanged in December, compared to the September 2018 survey. Given that the historical median has been 3.4% (since the inception of the survey in September 2011), this reflects a gradual downtrend in inflation expectations."

For the longer horizon, the Five-year-Ahead DBS-SMU CPIEx inflation expectations in the December 2018 survey dropped significantly to 3.6% from 3.8% in September 2018, continuing a downward trend since December 2016. The current polled number is much less than its historical average of 4% since the survey started in September 2011. The Five-year-Ahead DBS-SMU CPIEx Inflation expectations, after adjusting for behavioral biases, was recorded at 3% in December 2018, once again unchanged from the survey polled in September 2018.

The Five-year-Ahead DBS-SMU CPIEx core inflation expectations (excluding accommodation and private road transportation related costs) pared to 3.5% in December 2018 from 3.7% in September 2018. Overall, the composite Five-year-Ahead SInDEx5 declined in December 2018 to 3.5% from 3.7% in September 2018, still substantially lower

than its historical average of 4%. The Five- year-Ahead median inflation expectations (excluding accommodation and private road transportation), after adjusting for potential behavioural biases, was recorded at 3%, unchanged since June 2018. These unchanged inflation expectations, despite the price risk of global trade wars and increasing commodity prices, also indicate signs of anchoring of long-term inflation expectations.

SMU Assistant Professor of Finance and Principal Investigator of the DBS-SMU CPIEx Project, Aurobindo Ghosh observed, “In their 2019 Global Economic Prospects (GEP), the World Bank Group warned of Darkening Skies over global growth, especially the continuing Sino-US trade tensions and their negative spillover effects on emerging as well as other developed markets. Of particular concern is the impact of policy tightening in the US on emerging markets with debt denominated in US dollars. Inflation expectations play a significant role in that impact both for monetary policy and individual decision makers.”

”In Singapore, further tightening of the monetary policy in October 2018 seem to have lowered overall inflation expectations both in the medium and long term, and bodes well for the future effectiveness of the monetary policy regime. DBS-SMU SInDEx survey produces several indices of inflation expectations including DBS SMU CPIEx, both unadjusted and pioneering behavioral bias adjusted series. The research team in SMU is glad to partner with economists at DBS to analyze and interpret a dashboard of inflation

expectations and help understand the complex dynamics of inflation expectations and its formation by using a number of CPIEx measures.” Prof. Ghosh added.

### **Methodology**

DBS-SMU CPIEx Inflation Expectations (estimating headline inflation expectations) and related indices are products of the online SInDEx survey of around 500 randomly selected individuals representing a cross section of Singaporean households. The survey is led by Principal Investigator Dr. Aurobindo Ghosh, Assistant Professor of Finance (Education) at Lee Kong Chian School of Business, SMU. The online survey helps researchers understand the behaviour and sentiments of decision makers in Singaporean households. DBS Group Research is a co-sponsor and research partner together with the Sim Kee Boon Institute for Financial Economics (SKBI) at SMU.

The quarterly DBS-SMU SInDEx survey has also yielded two composite indices, SInDEx1 and SInDEx5. SInDEx1 and SInDEx5 measure the 1-year inflation expectations and the 5-year inflation expectations, respectively. The sampling was done using a quota sample over gender, age and residency status to ensure representativeness of the sample. Employees in some sectors like journalism and marketing were excluded as that might have an effect on their responses to questions on consumption behavior and expectations.



Figure 1: One-year-Ahead-inflation expectations in Singapore

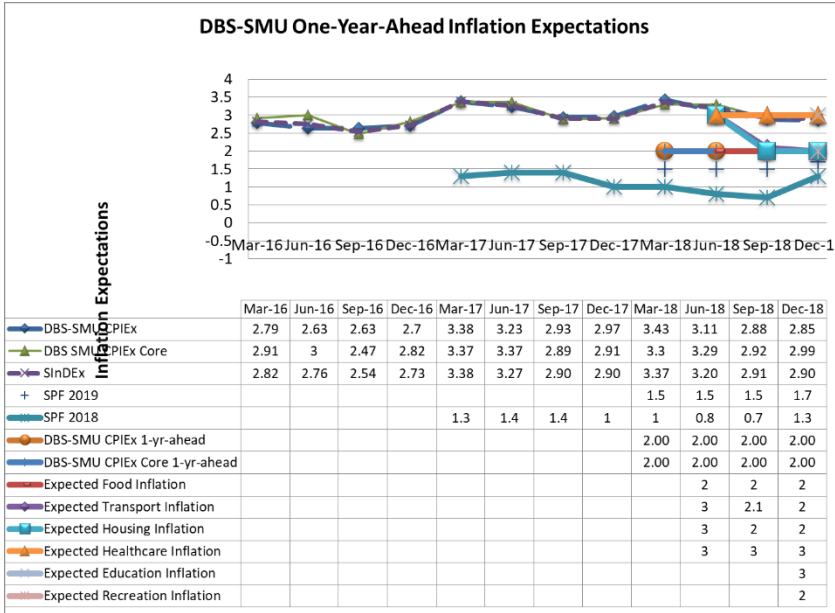


Figure 2: Five-year-Ahead-Inflation Expectations in Singapore

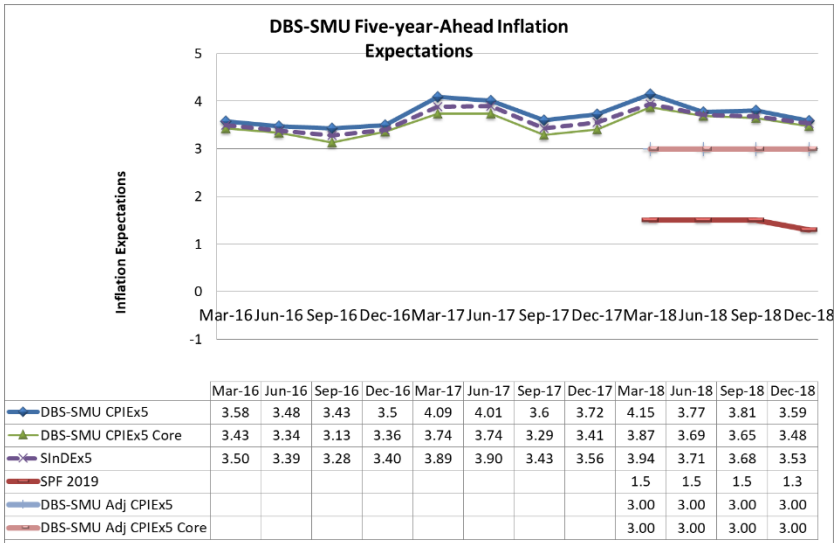
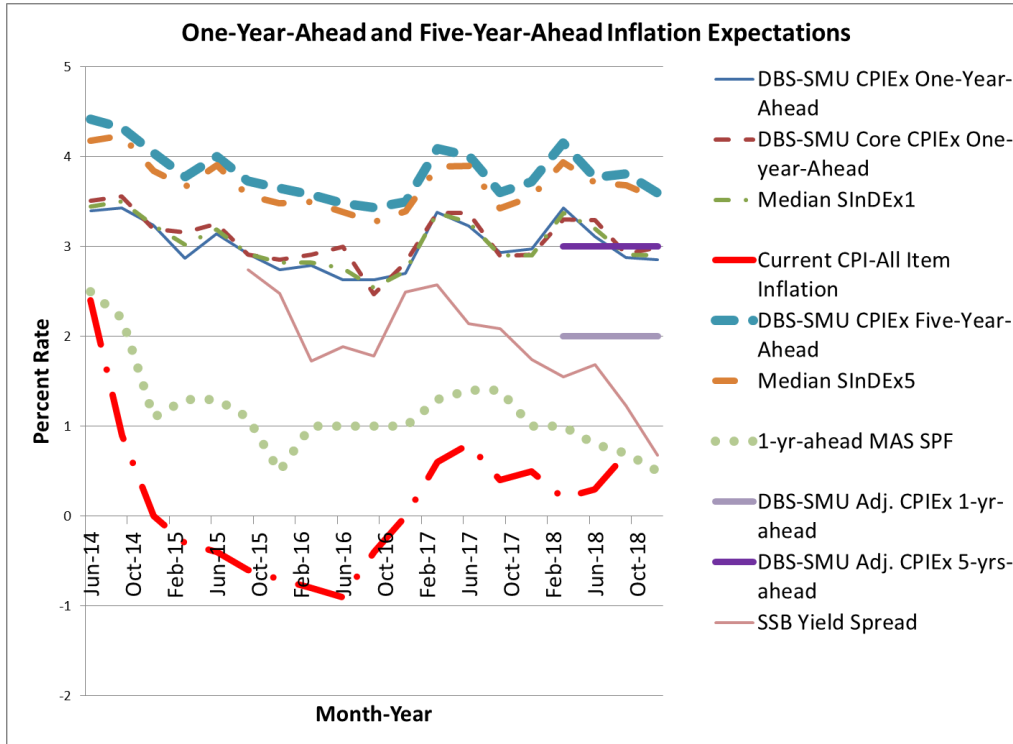






Figure 3: One-Year and Five-Year Ahead Inflation Expectations



**About DBS**

DBS is a leading financial services group in Asia, with over 280 branches across 18 markets. Headquartered and listed in Singapore, DBS has a growing presence in the three key Asian axes of growth: Greater China, Southeast Asia and South Asia. The bank's "AA-" and "Aa1" credit ratings are among the highest in the world.

Recognised for its global leadership, DBS has been named "Best Bank in the World" by Global Finance. The bank is at the forefront of leveraging digital technology to shape the future of banking, having been named "World's Best Digital Bank" by Euromoney. In addition, DBS has been accorded the "Safest Bank in Asia" award by Global Finance for ten consecutive years from 2009 to 2018.

DBS provides a full range of services in consumer, SME and corporate banking. As a bank born and bred in Asia, DBS understands the intricacies of doing business in the region's most dynamic markets. DBS is committed to building lasting relationships with customers, and positively impacting communities through supporting social enterprises, as it banks the Asian way. It has also established a SGD 50 million foundation to strengthen its corporate social responsibility efforts in Singapore and across Asia.



With its extensive network of operations in Asia and emphasis on engaging and empowering its staff, DBS presents exciting career opportunities. The bank acknowledges the passion, commitment and can-do spirit in all of our 26,000 staff, representing over 40 nationalities. For more information, please visit [www.dbs.com](http://www.dbs.com).

### **About Singapore Management University**

A premier university in Asia, the Singapore Management University (SMU) is internationally recognised for its world-class research and distinguished teaching. Established in 2000, SMU's mission is to generate leading-edge research with global impact and to produce broad-based, creative and entrepreneurial leaders for the knowledge-based economy. SMU's education is known for its highly interactive, collaborative and project-based approach to learning.

Home to over 10,000 students across undergraduate, postgraduate professional and postgraduate research programmes, SMU is comprised of six schools: School of Accountancy, Lee Kong Chian School of Business, School of Economics, School of Information Systems, School of Law, and School of Social Sciences. SMU offers a wide range of bachelors', masters' and PhD degree programmes in the disciplinary areas associated with the six schools, as well as in multidisciplinary combinations of these areas.

SMU emphasises rigorous, high-impact, multi- and interdisciplinary research that addresses Asian issues of global relevance. SMU faculty members collaborate with leading international researchers and universities around the world, as well as with partners in the business community and public sector. SMU's city campus is a modern facility located in the heart of downtown Singapore, fostering strategic linkages with business, government and the wider community. [www.smu.edu.sg](http://www.smu.edu.sg)

### **About Sim Kee Boon Institute for Financial Economics**

The Sim Kee Boon Institute for Financial Economics (SKBI) is the premier Asian institute for applied financial research and training in financial economics. It is the think-tank within SMU that spearheads cutting-edge research in financial markets that is driven by industry and societal needs in Singapore and the region.

Over the last 10 years, a diverse portfolio of financial research, outreach and training initiatives has been built. In the coming 10 years, while further expanding that traditional financial economics portfolio, the Institute will focus our efforts on the areas of financial inclusion and literacy, sustainable finance, financial technology, and data and governance. To maintain our relevance to finance practitioners and policy-makers, SKBI also adopts a view on Asian and global economic trends.

Supported by SMU faculty and in collaboration and partnership with industry experts, relevant government bodies, and other world-renowned research agencies, the Institute conducts fundamental and applied research which aims at solving real-world issues. Besides research, SKBI also actively engages in outreach, executive training and

research dissemination through organising courses, seminars and conferences. Our purpose-oriented activities are designed to bridge the gap between theory and practice and to act as accelerators with regard to financial policies and regulations.

SKBI is led by an Advisory Board that consists of prominent leaders of local and international organisations in the finance industry that have footprints across Asia, and of government agencies.

For more info about SKBI, please visit <https://skbi.smu.edu.sg/>.

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