



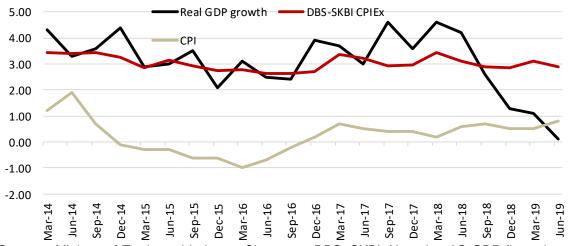
SINGAPORE: CONSUMER INFLATION EXPECTATIONS LARGELY FLAT DESPITE WEAKER GROWTH

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These are the research findings of the 32nd quarterly release of the DBS-SKBI Singapore Index of Inflation Expectations (SInDEx) Survey at the Sim Kee Boon Institute for Financial Economics (SKBI), Singapore Management University (SMU).

One-year-Ahead headline inflation expectations polled at 2.9% in June 2019. The reading compares to 3.1% polled in March 2019, and the recent second quarter (2018-19) average of 3%. The overall CPIEx Inflation Expectations, after adjusting for potential behavioral biases and re-combining across components, were also at 2.9% in June 2019 compared to 3.1% in March 2019. This also suggests that Singaporeans' inflation expectations are well-grounded from both the aggregated and the components-wise comparisons. One-year-ahead inflation expectations, adjusted for behavioral biases, dropped to 2% in June 2019, reverting to its most frequently polled value since inception in June 2018 (Fig 3).

%yoy Inflation expectations yet to be dented by soft growth



Sources: Ministry of Trade and Industry, Singapore, DBS, SKBI. Note that 2Q GDP figure is an advance estimate and June inflation is a forecast.

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Excluding accommodation and private road transportation related costs, the One-year-Ahead Core CPIEx inflation expectations stayed unchanged 3.1% in June 2019 from March 2019. For a subgroup of the population who own their accommodation and use public transport, the One-year-Ahead CPIEx core inflation expectations inched up to 3.1% from 3.0% in March 2019. This subgroup's expectations of core inflation follow the Singapore Core Inflation Expectations readings, as unlike the general population they are not exposed to private road transportation or accommodation expenses.

DBS-SKBI SInDEx survey was augmented in June 2018, based on a joint research study conducted by SMU researchers in collaboration with the Monetary Authority of Singapore (MAS) and the Behavioral Insights Team, where respondents were polled about their perceptions of components of the Consumers Price Index (CPI) and adjusted for possible behavioral biases prevalent in online surveys.

Based on the recommendations of that study the research team had, since March 2019 polled the one-year-ahead inflation expectations of all of the major components of CPI-All Items inflation. Compared to March 2019, the June 2019 survey revealed inflation expectations across all categories have either stayed the same or dropped quarter on quarter, although without the same quarterly benchmark we were not able to conclude if the moderation is a peculiarity or a natural quarterly seasonality of these indices. The component inflation expectations indices that dropped in June 2019 survey compared to March 2019 are healthcare, education, recreation and communications.

Dr. Taimur Baig, DBS Chief Economist, commented, "Despite a weakening of growth in recent quarters and sub-1% headline inflation for several years, inflation expectations continue to hover around 3% in Singapore. This interesting finding suggests factors such as perceptions about broader cost of living continue to persist in a sticky manner."

For the longer horizon, the Five-year-Ahead CPIEx inflation expectations in the March 2019 survey edged down to 3.9% from 4.1% in March 2019. The current polled number is lower than the long-term (from 2012-19) average of 4.2%.

The Five-year-Ahead CPIEx core inflation expectations (excluding accommodation and private road transportation related costs) stayed unchanged at 3.8% in June 2019 from March 2019. Overall, the composite Five-year-Ahead SInDEx5 dropped to 3.8% in June 2019 from 3.9% in March 2019, much lower compared to its historical average of 4.1%.

SMU Assistant Professor of Finance and Principal Investigator of the DBS-SKBI SInDEx Project, Aurobindo Ghosh observed, "The World Bank, in its semiannual Global

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Economic Prospects (June 2019), have underscored the fragility in the global growth momentum with downside risks including a significant drop in global trade growth and consequent negative impact on business confidence. These headwinds to global growth might have slightly dampened inflation expectations in Singapore as well.

"Generally, on a year-on-year basis, there have been smaller declines in accommodation costs and private road transportation costs have picked up, although increases in the costs of food, fuel & utilities and other travel & transport have moderated in recent months. Furthermore, overall and non-energy import prices have been low. Softening labor market have also somewhat reduced the price pressure passed through to consumers. All these counterbalancing factors in net have caused overall inflation expectations CPIEX to move marginally downwards while the Core CPIEx Inflation expectations have remained unchanged. The DBS-SKBI survey also have provisions for adjusted indices to account for potential behavioral bias in survey responses. The median inflation expectations, after adjustment for behavioral biases for both Headline and Core Inflation Expectations, drops to 2% and 2.2% respectively, which are lower than the unadjusted indices reported. These are consistent with several academic studies, such as the Michigan-Reuters Survey in the US and the more recent surveys in New Zealand on persistent biases in inflation expectations." Prof. Ghosh added.





ANNEX

Methodology

DBS-SKBI SInDEx survey yields CPIEx Inflation Expectations and related indices are products of the online 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 behavior 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.

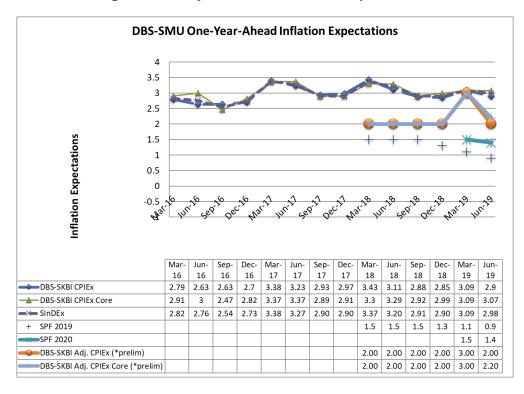


Figure 1: One-year-Ahead-inflation expectations

The quarterly DBS-SKBI 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

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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.

DBS-SMU Five-year-Ahead Inflation Expectations 5 3 Inflation Expectations 1 0 Sep-Dec- Mar- Jun-Sep-Dec- Mar-Sep-16 16 16 16 17 17 17 17 18 18 18 18 19 19 → DBS-SKBI CPIEx5 3.58 3.48 3.43 3.5 4.09 4.01 3.6 3.72 4.15 3.77 3.81 3.59 4.07 3.85 → DBS-SKBI CPIEx5 Core 3.43 3.34 3.13 3.36 3.74 3.74 3.29 3.41 3.87 3.69 3.65 3.48 3.83 3.8 SInDEx5 3.77 3.50 | 3.39 | 3.28 | 3.40 | 3.89 | 3.90 | 3.43 | 3.56 | 3.94 3.71 3.68 3.53 3.92 SPF 2019 1.5 1.5 1.5 1.3 1.1 0.9 4.00 4.00 DBS-SMU Adj CPIEx5 (*prelim) 3.00 | 3.00 | 3.00 | 3.00

Figure 2: Five-year-Ahead-Inflation Expectations

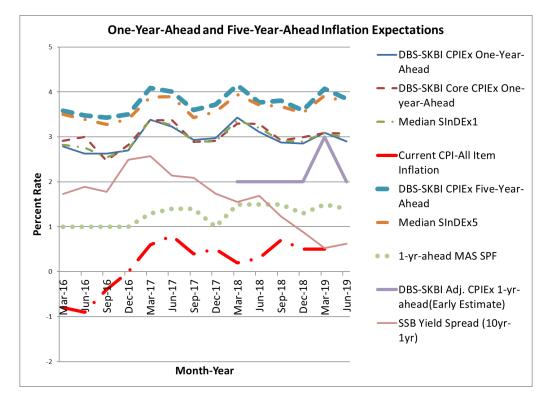
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Live more, Bank less

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



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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

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.

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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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