ESTIMATING THE EFFECTS OF COST-OF-LIVING SUPPORT MEASURES IN 2022

Ministry of Finance Technical Report

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1. Introduction

1.1 The world is currently seeing a surge in inflation, driven by a strong post-pandemic rebound, supply-chain frictions, war-related disruptions, and tight labour markets. Likewise in Singapore, imported inflation, a strong recovery from the pandemic, and a tight labour market are adding to price pressures. For 2022, the CPI-All Items Inflation is forecasted to be around 6% while the Monetary Authority of Singapore (MAS) Core Inflation is projected to average around 4%.[1] This is much higher than the average of 1.5% for both CPI All-Items and MAS Core inflation experienced over the past 20 years.

1.2 Heightened inflation erodes the purchasing power of households and raises the cost of living (COL). In response, the Singapore Government implemented various measures in 2022 to mitigate COL pressures and provide support for households. Other than direct support for our households, the Government has also taken other steps to help manage supply disruptions and their impact on prices, for example, by diversifying our food sources.

1.3 This note examines the extent to which government support measures provide support to Singaporean households and defray increases in their living expenses. We make use of two different methodologies to provide some numerical estimates of the impact of these measures.

2. Impact of measures on the Consumer Price Index

2.1 The first methodology considers how, if at all, government support measures are reflected in the Consumer Price Index (CPI).

2.2 Government support comes largely in two forms: price subsidies, and cash or near-cash support. Whilst some, such as Service and Conservancy Charges (S&CC) rebates or Community Health Assist Scheme (CHAS) subsidies, will directly lower final prices faced by consumers, others, such as MediSave top-ups, will not.

2.3 According to international guidelines, a support measure can cause a price reduction only if it relates to a single product or service in the CPI basket and is granted within a specific month.[2] Existing government measures that fall into this category are S&CC rebates, levy concession for migrant domestic workers, CHAS subsidies, COVID subsidies for Public Health Preparedness Clinics (PHPCs) and polyclinics, road tax

[1] Based on the MAS Monetary Policy Statement in October 2022.

[2] Specifically, the Consumer Price Index Manual: Concepts and Methods 2020 states that "regular rebates or refunds should only be considered when attributable to the purchase of an individual identifiable product and granted within a time period from the actual purchase."

rebates, and subsidies for childcare and kindergartens. They result in direct price reduction and are already reflected in the CPI.

2.4 The effects of many other support measures are not reflected in the CPI because they can be utilised for more than one specific purpose and/or utilised over a longer duration. For instance,

- GSTV-U-Save rebates and the Household Utilities Credit (HUC) can apply to the entire utility bill, which includes water, electricity, gas, and domestic refuse removal fees and can be rolled over to subsequent months until fully utilised.
- MediSave top-ups add to the MediSave balances of individuals. These balances can be used for several categories of health expenditures. Similarly, Public Transport Vouchers, Edusave top-ups and Community Development Council (CDC) vouchers can be spent on a wide variety of items. The timing of utilisation is up to the discretion and need of recipients.

2.5 Including these measures in the CPI would require assumptions on how the subsidies, vouchers, and rebates are used, and would render the CPI sensitive to the timings of disbursement and usage.

2.6 These measures are considered as income transfers, rather than price subsidies. Though they are out of scope of the CPI, they help households defray their daily expenses and have the effect of tempering the COL increases faced by them. As such, we have attempted to simulate the effects of these measures on the CPI using the methodology of an "experimental CPI".

2.7 In particular, we simulate the price impact of the schemes in Table 1 by constructing an experimental CPI series and assumed that the schemes were applied to specific items in the CPI over a fixed period from January 2021 to August 2022. The U-Save rebates, Household Utilities Credit (HUC), and Public Transport Vouchers (PTV) were assumed to be utilised in their respective months of disbursement. If the amount was not fully used up, the remainder was rolled over to subsequent months until it was completely used up. This mimics how the schemes would be used in practice. Since health episodes are random events, we assume that MediSave top-ups are utilised uniformly over 12 months of each year.

Table 1

Schemes simulated in the experimental CPI series

Scheme	Simulation Limitations	Simulation Assumptions
GSTV-U-Save / Household Utilities Credit (HUC)	• Can be used to offset water, electricity, gas, and domestic refuse removal fees • Utilisation is not time-specific as it depends on an individual household's utility consumption and bill size	• Apply to "Electricity", "Water price", "Gas Tariffs" and "Refuse collection" • Allocation of benefits to these categories is estimated using average consumption data from Singapore Power and prevailing tariffs/rates
Public Transport Voucher (PTV)	• Vouchers are given as top-ups to fare cards, which can be spent on non-transport items • Utilisation is not time-specific as recipients can choose when to spend the vouchers	• Apply to only "Bus and train fares" • Allocation estimated using average monthly household expenditure from Household Expenditure Survey (HES) 2017/2018, inflated to January 2021 and 2022 prices
MediSave Top-ups	• Can be used on a variety of healthcare items in the CPI • Utilisation is not time-specific as it is up to the discretion and need of recipients	• Apply to only "Outpatient services", "Hospital services" and "Health insurance" • Allocation of benefits estimated using average monthly household expenditure from HES 2017/2018, inflated to January 2021 and 2022 prices

2.8 On a year-to-date (YTD) basis (to August 2022), **the experimental CPI series (covering three specific measures – utilities rebate/voucher, public transport vouchers and MediSave top-ups) registered an average inflation of 5.4% for YTD 2022, compared with 5.7% for the actual series.**

2.9 In short, this methodology of an experimental CPI series can provide a numerical estimate of the cumulative impact of household support measures that do not directly enter the CPI. However, it requires assumptions to be made about the timing and pattern of utilisation by households. Users should use such estimates in conjunction with other data for a fuller appreciation of the effects of support measures on households' well-being.

2.10 Many of our social schemes are designed to supplement the income of Singaporean households and offset some of their expenditures. This puts such measures out of scope of the CPI measure, but they nonetheless help enhance households' well-being. There is good reason for this policy choice: cash or cash-like transfers do not distort relative price signals between goods, and thus, minimise changes in the consumption basket. Households can also choose to direct such transfers to categories of expenses of greatest value to them.

3. Comparison of expenditure increase due to inflation against benefits received

3.1 The second methodology compares the increase in expenditure due to inflation against the benefits received, to estimate the impact of the benefits of helping households meet their higher expenditure due to inflation.

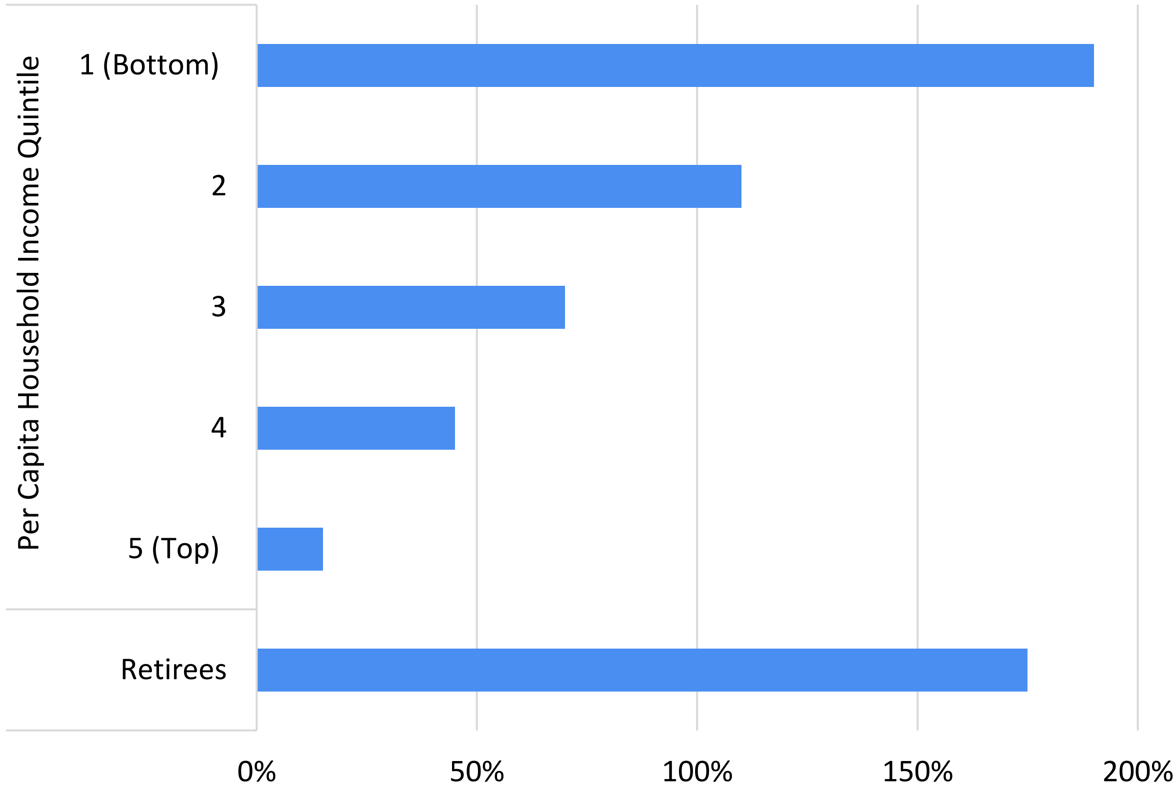
3.2 In this methodology, we consider the COL support that are disbursed in 2022. These are the Household Support Package (HSP) announced in Budget 2022, the PTV disbursement announced in April 2022, and the two COL packages announced in June 2022 and October 2022 [Annex]. We use data from the HES to project how expenditures for different income groups and key household archetypes will increase in 2022, using inflation forecasts for different household income groups that are consistent with MAS' forecast of around 6% for CPI All-Items inflation in 2022.

3.3 Chart 1 shows that the support measures will **fully cover the *average* projected increase in expenditure per household member for households in the first and second income quintiles. They are also expected to cover more than half of the *average* projected increase in expenditure this year for households in the middle quintile. The average retiree household is expected to see their expenditure increase offset entirely by the support measures.**

3.4 In other words, the bottom 40 percent of households are fully shielded from expected inflation this year. For households in the middle quintile, more than half of their average expenditure increase is covered. This translates to more than halving the effect of around 6% inflation.

Chart 1

Estimated coverage for average projected increase in annual expenditure in 2022 by COL support measures announced in 2022



Source: MOF estimates

Notes: Estimated increase in household expenditure per member in 2022 excludes imputed rentals from owner-occupied accommodation and is projected using internal inflation forecasts for different household income groups in 2022, consistent with MAS' forecast of around 6% for CPI-All Items inflation for the same year. Citizen households, including non-working and retiree households, are ranked by 2021 household income per member (including employer CPF contributions). Retiree households comprise solely non-employed persons aged 65 and over.

4. Conclusion

4.1 The Government had announced several measures over four rounds in 2022 to provide COL support for Singaporean households against a backdrop of persistently high inflation. We have attempted to provide numerical estimates of how government support measures help to cushion households from inflation and defray their expenses.

4.2 The first methodology attempts to estimate the impact of three specific measures – utilities rebate/voucher, PTVs, and MediSave top-ups on the CPI inflation rate. We estimate that the effective inflation faced by households between January 2022 and August 2022 would have been 0.3 percentage points (pp) lower than the actual inflation rate of 5.7%, with these three measures.

4.3 The second methodology compares the increase in expenses due to inflation with the value of the COL support measures. We estimate that the COL measures provide significant support to offset higher household expenses due to inflation, especially for lower-income and retiree households. We estimate that the COL measures in 2022 will fully cover the average expenditure increases due to inflation for households in the bottom 40% and retiree households. In other words, these groups are shielded from expected inflation this year. For households in the middle quintile, more than half of their average expenditure increase is covered. This translates to more than halving the effect of around 6% inflation.

4.4 The difference in the two methodologies reflects the fact that many of our social schemes are designed to supplement the income of Singaporean households and offset part of their expenditure. Cash or near-cash transfers are intended to improve affordability and give households the choice as to how to use the additional resources, rather than lower prices generally for all. This targeted approach more effectively buffers COL pressures for lower- and middle-income households.

Annex

Packages	Measures	Timing of Disbursement
Household Support Package	Additional GSTV-U Save	Apr, Jul, Oct 2022
	CDC Vouchers	May 2022
	Education-related top-ups	May and Sep 2022
Public Transport Vouchers	PTV disbursement	Apr 2022
Cost of Living Package in June	GSTV-Cash Special Payment	Aug 2022
	Household Utilities Credits	Sep 2022
Cost of Living Package in October	Cost of Living Special Payment	Dec 2022
	PTV disbursement	Dec 2022
	CDC Vouchers	Jan 2023