

# Singapore's CPF: A Sustainable and Fair Solution to the Country's Pension Challenge?

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# Introduction

- Pension reforms designed to improve sustainability and fairness of arrangements to finance old-age (often referred to simply as pension system) have become a major public policy priority in developed and emerging market economies.
- Sustainability may be viewed from a narrow and from broader perspectives.
- From a narrow perspective, sustainability refers to specific pension schemes, which must be managed to balance long term and assets and liabilities.
- At a macro-level, sustainability involves an assessment of fiscal and economic burden of the pension system currently and in the future; adequate level of protection against longevity, inflation, and survivors' risks and near universal coverage of the pension system among the country's population.

# Introduction

- The fairness criteria may be interpreted in different ways. But generally it involves:
  - ensuring that different groups in the society do not have vastly different levels of pension provision and sustainability characteristics;
  - equitable pension provision between men and women;
  - Equitable tax and other treatments between pension products and providers;
  - With increasing cross-border labor flows, equitable treatment of foreign workers;
  - intergenerational aspects of pension systems.

# Introduction

- The city-state of Singapore has evolved from a low-middle income country to a high-income country in a relatively short period of about four decades.
- Singapore has skilfully pursued a business location strategy, whose key requirements include keeping the share of wages in the national income below the share accruing to capital, and nimbleness is tapping new commercial opportunities and widening of economic partners.
- This strategy has meant that the external sector has been the predominant contributor to economic growth.

# Introduction

- Singapore is now at a juncture where it increasingly needs to balance its growth strategy with domestic imperatives focussing on inequalities (Singapore's wage income Gini was officially reported at 0.47 in 2011, the income Gini will however be much higher).
- Inequalities; and concerns about congestion externalities, particularly in transport, housing, and recreational facilities; and competition for positional goods such as cars, housing, and education have become an integral part of political and social discourse in Singapore.
- Policymakers recognize that Singapore will increasingly need to rely on higher total factor productivity (TFP) and on commercialization of Research and Development (R and D) activities to generate sustainable high growth.

# Introduction

- The official goal is to increase TFP from 1 per cent annually exhibited over the last decade to between 2 and 3 per cent. This will however require far-reaching changes in economic, social and political management of Singapore.
- The above suggests that the balancing of growth strategy and domestic imperatives is one of the larger set of issues confronting Singapore

# Why Concerns Over Sustainability and Fairness of the Pension System?

- Singapore's economic success notwithstanding, there are three major factors, which are contributing to the need by the policymakers for assigning greater weight to promoting sustainability and fairness of the current pension arrangements in Singapore.
- Concerns over First, one of the consequences of Singapore's growth strategy has been the rising share of non-citizen population in Singapore. The ratio increased from 14 percent in 1990, to 26 percent in 2000, to 38 percent in 2012.
- The growth rate of citizens has been a fraction of the growth rate of non-citizens. Such a trend is difficult to sustain in any country over the long term.



# Why Concerns Over Sustainability and Fairness of the Pension System?

- An illustration of the challenges in balancing growth strategy with domestic imperatives is the urging by the Singapore International Chamber of Commerce (SICC), representing about 700 MNCs, that the policymakers bring much greater clarity and transparency to the policies and regulations concerning foreign workers.
- The SMEs have also been strongly urging the government to liberalize foreign worker flows. Such liberalization can accentuate domestic imperatives.
- Moreover, some analysts suggest that the projected GDP growth rate of around 3 to 4 percent, could become a new norm for Singapore, requiring further changes in economic, social, and political management.

# Why Concerns Over Sustainability and Fairness of the Pension System?

- Second, Singapore is expected to experience very rapid ageing of the population in the next two decades as a result of below replacement rate fertility rates since 1975.
- The population aged above 65 years, as projected by the United Nations, will increase from about 0.46 million in 2010 to 1.40 million in 2030, an increase of 207 percent in just two decades (UNDESA, 2010).
- Life expectancy at age 65 which was 18.3 years for men, and 21.8 years for women in 2011 (DOS, 2011), is also expected to rise. It is projected that substantial proportion will live until age 85, and persons in their nineties will increase in the future.
- The age related pension and healthcare expenditure in Singapore is therefore expected to rise. There is a disproportionate increase in healthcare expenditure with age. For instance, health expenditure for individuals aged 65 and above is approximately four times higher than that for individuals below age-65 in Japan (Takayama, 2010).

# Why Concerns Over Sustainability and Fairness of the Pension System?

- The official response to rapid ageing of Singapore's population is to raise productivity through business restructuring and retraining of work force, encouraging higher labor force participation; continuing to encourage foreign manpower, albeit in a calibrated manner (MTI, 2012).
- The above suggests that the Singapore policy makers do recognize that single-minded pursuit of growth is no longer desirable.
- Third, Singapore has relied primarily on a single-tiered retirement financing system, involving mandatory savings administered by a national agency, called Central Provident Fund (CPF).

# Why Concerns Over Sustainability and Fairness of the Pension System?

- With increasing longevity, and continuing increases in old-age dependency (ODR) ratio, relying on savings from income during the working years to finance retirement period, which in some cases may exceed the proportion of life spent in labor force, has become increasingly untenable for a significant proportion of the population.

# CPF System: An Overview

- Given its complexity and multi-faceted nature, a brief overview of those characteristics that are relevant for analyzing sustainability and fairness aspects is provided.
- These aspects are aggregate indicators, high pre-retirement withdrawals, including for investments, administered rate of interest credited to members, and CPF-Life, an annuity scheme at the payout phase, but without any social insurance provision.

# Aggregate Indicators

**Table 1: CPF System: Coverage and Aggregate Balances**

Total Members (million)	3.4	100
Active Members (million)	1.76	52
Active Members/ Total Labor Force	54	
Active Members/ Resident Labor Force	85	
Aggregate Balances (billion)		Share of 2011 GDP
Total Member Balances	219.3	73
Ordinary Account	88.89	30
Special Account	50.79	17
Medisave Account	57.00	19
Retirement Account	22.66	8
Note: Data are as of June 30, 2012; Labor force data are for 2011.		

Source: CPF Statistics; DOS (2012)

# High Pre-Retirement Withdrawals

- For the 1997-2011 period, the withdrawals averaged 74.9 percent of the contributions .
- During this period, the CPF's contribution to gross national savings (GNS) averaged 8.1 percent, including interest income earned on CPF balances.
- This is a relatively modest contribution as Singapore's Gross Domestic Saving rates have been high, averaging 49 percent during the 1997-2011 period.
- This suggests that public sector and business sectors have been much more significant contributors to Singapore's high saving rates than the mandatory CPF savings.

# CPFIS Scheme

- This is a pre-retirement withdrawal scheme, which provides choice to members to invest their balances in approved financial and real assets.
- Individual CPF members may invest their Ordinary Account (OA) balance as well as Special Account (SA) balance in approved assets. There is no limit on investments in shares through the approved Unit Trusts.
- The wide choice available to members under the CPFIS scheme is in sharp contrast to the no choice provided to members on the funds managed by the CPF Board.



# CPFIS Scheme

- A member may open a CPF investment account with approved agent banks, all of which are locally controlled banks. Their charges and fees are not regulated.
- For the low to medium-risk category, expense ratios for UTs (ILIP) ranged from 0.40 (0.58) to 1.15 (2.24) percent of assets under management; while the corresponding ratios were 1.36 (0.49) and 3.59 (3.59) for medium to high-risk category. Given such a wide-range, the actual returns obtained by different members of the CPFIS are expected to vary widely.
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# CPFIS Scheme

## Average Nominal Rate of Return in SGD of CPFIS Funds

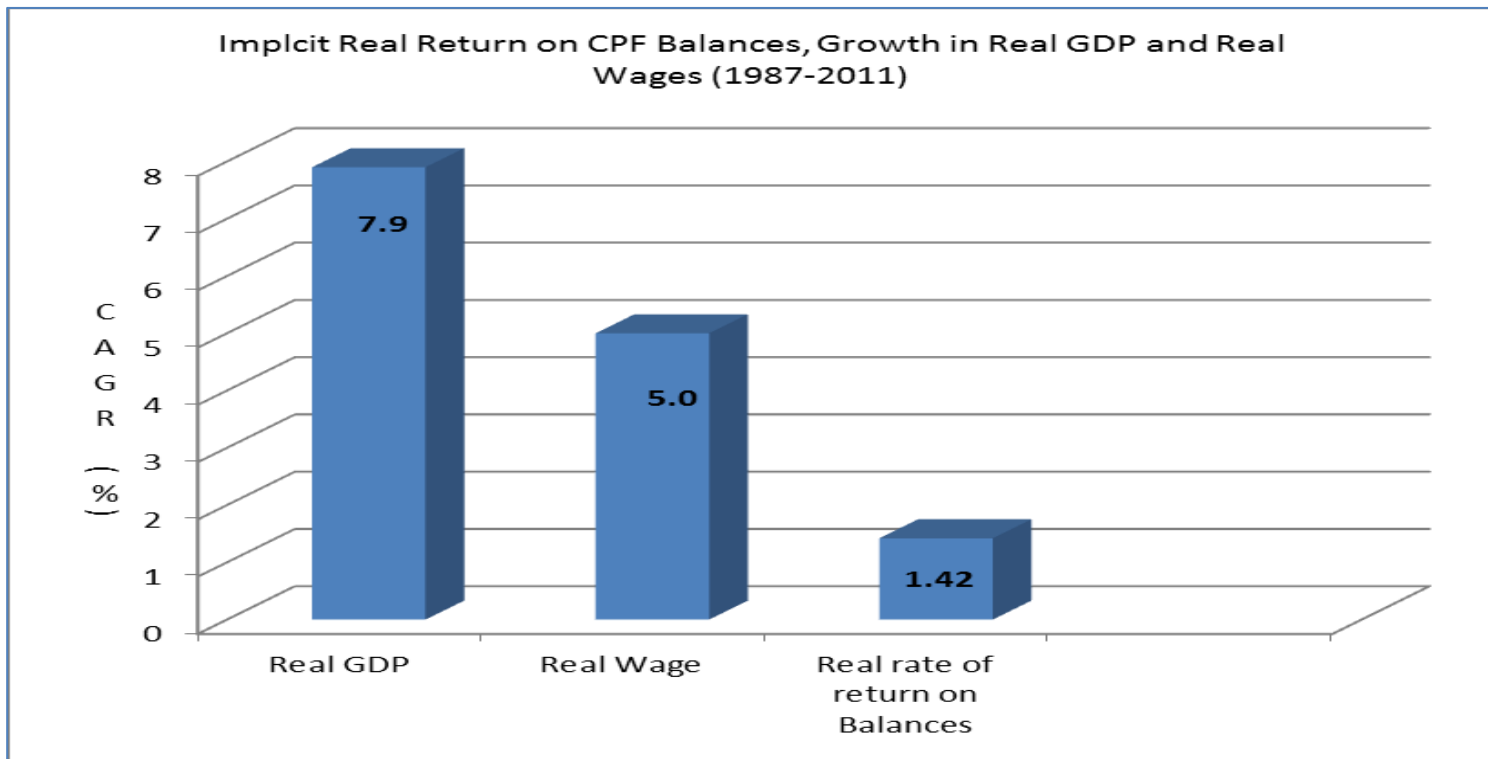
<b>Time Period</b>	<b>All CPFIS Funds</b>	<b>Unit Funds in CPFIS</b>	<b>ILPs in CPFIS</b>
<b>31-03-2011 to 30-06-2011 (three months)</b>	<b>-1.65</b>	<b>-1.70</b>	<b>-1.61</b>
<b>30-06-2010 to 30-06-2011 (one year)</b>	<b>7.74</b>	<b>9.59</b>	<b>6.32</b>
<b>30-06-2008 to 30-06-2011 (three years)</b>	<b>2.4</b>	<b>3.89</b>	<b>7.01</b>

# Administered Rate Credited to Members

- Figure 1 presents implicit real return on CPF balances in comparison with growth in real wages, and real GDP for the time period 1987-2011.
- Growth in real GDP and real wages exceeded the implicit real rate on CPF balances by nearly six and three times respectively in the 25-year period.
- Compound interest arithmetic suggests that a sum of money growing at 1.4 percent per annum will double in nearly fifty years. In January 2012, the average CPF Balance was SGD 65,000 (equivalent to per capita GDP in 2012).
- As CPF is the primary source of financing retirement expenditure, it appears that the current CPF member balances would be inadequate to provide a reasonable replacement rate during the retirement phase, though its extent will vary among members.

# Figure1: Implicit Real Return on CPF Balances, Growth in Real GDP and Real Wages (1987-2011)

**Implicit Real Return on CPF Balances, Growth in Real GDP and Real Wages (1987-2011)**



# CPF Life

- The CPF Life, introduced in 2009, is a deferred annuity scheme, with individuals bearing the cost of purchasing the annuity from their accumulated balances from their retirement account (RA). The pay-outs are not indexed to prices.
- Effective January 2013, the CPF Board has reformed the CPF Life Scheme and offers two plans: *reformed standard plan* and the *basic plan*.
- The scheme will be compulsory for those born after 1958, and have \$40,000 in their Retirement Account at age 55, or at least \$60,000 at their DDA. The two plans differ on the amount of bequest members wish to leave.

# CPF Life

- It should be noted that the CPF- Life does not increase resources available to individuals for retirement. It however gives greater control to the government over the stock of savings of CPF members as the CPF Life is organized and administered by the CPF Board.
- It however provides greater security to those purchasing CPF Life products because of government's implicit backing for the promises. It is also important to note that CPF Life is only applicable to the minimum sum

# Addressing Sustainability and Fairness Issues

Singapore's pension system is based on two major propositions.

1. It is possible to finance retirement expenditure entirely by mandatory savings micro-managed and intermediated by the state.
2. The pension system should focus on mitigating absolute rather than relative poverty.

# Addressing Sustainability and Fairness Issues

- It is important to distinguish financial from economic sustainability for a pension system. Financial sustainability refers to the matching of assets and liabilities.
- Economic sustainability on the other hand, is the capacity of the economy to finance projected liabilities without sacrificing economic growth or other priorities. In this context, the most important macroeconomic variable is the long-term trend in economic growth.
- Sustainability in a Defined Contribution (DC)-based pension system is intricately linked with adequacy of pension benefits.



# Addressing Sustainability and Fairness Issues

- This is because in a DC system, in which contribution obligations are defined but the benefits depend:
  - on the number and level of contributions;
  - interest income earned;
  - extent of pre-retirement withdrawals;
  - the outcomes of conversion of accumulated balances into a retirement income stream;
  - individual members bear the investment and macroeconomic risks, such as unemployment, relatively stagnant wages, or higher than anticipated inflation.

# Addressing Sustainability and Fairness Issues

- Sustainability of Singapore's pension system may be viewed from a narrow perspective of the CPF system's sustainability; and from a broader perspective of constructing a pension system, which provides *adequate* real (i.e. inflation adjusted) income throughout the old age, thus mitigating longevity, inflation and survivors' risks.
- From a narrow perspective, the CPF system - Singapore's pension system - is sustainable.

# Addressing Sustainability and Fairness Issues

- This is an important achievement, but insufficient to address pension sustainability from a broader perspective.
- The primary reasons are over simplified organizing principle (mandatory savings using DC method) and consequent absence of social risk pooling, requiring individuals to bear macroeconomic and other risks for which they are not necessarily equipped.
- As the CPF Board does not publish cash balances of the CPF members, and other relevant information, it is not feasible to estimate replacement rates, i.e. the ratio of pre-retirement income to retirement income in real terms throughout the retirement period.

# Addressing Sustainability and Fairness Issues

- There are nevertheless indications that inflation-adjusted replacement rate will be inadequate for most CPF members.
- First, even for the significant proportion of the active members, the requirements for setting aside the stipulated minimum sum for basic needs is not being met.
- Thus, in 2011, only 45 percent of those 33,644 active members who turned 55 in 2011, were able to meet the minimum sum. This suggests that the majority (55 percent) did not meet even the stipulated basic income requirements, let alone being able to maintain their pre-retirement living standards.

# Addressing Sustainability and Fairness Issues

- Second, the focus of retirement provision is on meeting basic minimum needs in old-age. However, it is not absolute but relative poverty that is of increasing concern in affluent societies, including Singapore (The Economist, 2012).
- Singapore's pension system does not focus on relative poverty as evidenced by the absence of social insurance principles; absence of budget finances inflation-adjusted basic pension; and insistence on levying health insurance and CPF Life premiums according to age and gender.
- This particularly reduces the adequacy of retirement income for women, who, as a group, live longer and have lower labor force participation rates than men.

# Addressing Sustainability and Fairness Issues

- As in the case of sustainability, **fairness** issues arise from the two propositions of Singapore's pension system noted earlier, and from certain design features of the pension system.
- The absence of social risk pooling is particularly unfair to women. This is because they, as a group, have higher longevity than men, but lower labor force participation rates and lower balances in CPF accounts to finance their retirement.
- Frequent changes in the rules governing the CPF system also create disparities amongst cohorts of members.

# Addressing Sustainability and Fairness Issues

## Disparities among public and private sector pension provision

- As most of the civil servants in Singapore are under the CPF system, the disparities in pension arrangements of public and private sector workers are relatively less prominent. The disparities arise from the following sources.
- First, there are select bureaucratic positions at higher levels, which continue to have more favorable pension benefits than the rest of the population. However, their number is very small.
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# Addressing Sustainability and Fairness Issues

- Second, the funds managed for the members of armed forces are more transparent and more consistent with international fund management practices (such as choice among limited options based on risk profiles), as compared to CPF members.
- The implicit tax on CPF wealth, and non-transparent nature of investments of CPF balances have been noted earlier. Wide choice of products and providers under CPFIS, and no choice on balances with the CPF Board is in sharp contrast with how member balances for armed forces are managed.



# Addressing Sustainability and Fairness Issues

## Tax Treatment

- The CPF contributions (subject to a wage ceiling), income, and withdrawals are free of tax, thus receiving EEE (exempt-exempt-exempt) tax treatment.
- As the CPF Contributions by the employees are tax exempt, the rate of subsidy varies with the marginal tax rate of income tax.

# Addressing Sustainability and Fairness Issues

- Since the labour force includes many high income earning expatriates, the share of income tax payers among citizens and permanent residents is likely to be lower.
- The implicit tax subsidy therefore is regressive, with vast majority of CPF members not benefiting from the income tax deduction. The wage ceiling on which CPF contributions are paid has been lowered, so have income tax rates. Therefore, the extent of the implicit subsidy is likely to have been lowered as well.

# Addressing Sustainability and Fairness Issues

- The regressivity is compounded by the implicit tax on CPF wealth which falls disproportionately on the bottom half of the income group.
- The officially reported annualized rolling 20-year (1981-2009) rate of return in Singapore dollar terms on SGIC's portfolio was 4.4 per cent in nominal terms and 2.6 per cent in real terms.
- Assuming, the CPF balances are managed by the SGIC, the implicit tax on the CPF wealth is the difference between what the SGIC has announced as its returns and what is credited to the accounts of CPF members.

# Addressing Sustainability and Fairness Issues

- Applying the difference between 2.6 per cent and 1.4 per cent obtained on CPF Balances, provide a crude estimate of the implicit tax of CPF wealth of \$2.63 billion ( $2.6 - 1.4 = 1.2 * \$219.3$  billion).
- The tax is both large and regressive as relatively lower income households are likely to have larger proportion of their wealth in the form of CPF Balances.
- In estimating Singapore's household tax burden, this implicit tax should be included.

# Addressing Sustainability and Fairness Issues

## Fairness Issues in the Pay-out Phase

- In 2009, CPF Lifelong Income Scheme (CPF LIFE) was introduced for the pay-out phase of the CPF. It is essentially a deferred annuity managed by the CPF, and paid for by members. Its design raises at least two fairness issues.
- First, the premiums charged for the annuity is based on age and gender, with women paying higher effective premium than men, as they as a group live longer.
- Thus, the premium of CPF LIFE is structured along private, not social insurance methods. This particularly disadvantageous to women, who as a group have lower CPF balances than men, but need income support for a longer period.

# Addressing Sustainability and Fairness Issues

- Second, the annuity benefit is specified in nominal terms. This implies that real benefits will decline at the rate of inflation.
- The CPF Life scheme thus does not increase the resources available for retirement. Instead, as the members pay the premiums, it reduces the resources available for retirement, though the benefits are in terms of life-time stream of benefits in nominal terms.
- The above suggests that pre-retirement income inequalities are not only carried forward in the retirement period, but are accentuated due to the lack of indexation and methods to share the increasing wage and income levels of the country.

# Addressing Sustainability and Fairness Issues

## Treatment of Foreign Workers

- The stock and flows of foreign workers are subject to government regulation, and administrative measures. The structure of the levy and its design is complex. It varies across sectors, skill levels, nationality and the dependency ratio.
- While disaggregated data on the number of foreign workers is unavailable, as at end-December 2010, there were 201,000 foreign domestic workers.
- The Budget does not provide separate revenue data from levies of foreign workers, combining it with Airport Passenger Service charge under the 'Other Taxes' category. In 2010, the revenue from Other Taxes was \$2.24 billion, and estimates suggest that it will be \$3.3 billion in 2011 (Singapore Budget, 2011).

# Addressing Sustainability and Fairness Issues

- A substantial proportion of the Other Taxes collected can reasonably be assumed to be levies on the foreign workers. They therefore contribute significantly to fiscal revenues in Singapore. Foreign workers however are not members of the CPF, are ineligible for social and community benefit schemes; and do not receive healthcare subsidies and benefits like Singaporean residents do.



# Preliminary Estimate for a Social Pension in Singapore

- One of the avenues to improve fairness is by strengthening non-contributory transfers, financed by budgetary sources.
- These can be targeted to particular groups (elderly poor), or can be universal old-age pension.
- Designing universal as well as targeted non-contributory transfers require robust age-specific disaggregated data on mortality, morbidity, and labor market information.
- In estimating the fiscal cost of such schemes it is important to consider not only direct cash outlays, but their economic or total resource cost of the scheme.

# Assumptions

- In determining the benefit level, a relative rather than absolute benefit level is utilized. The benefit level varies between 10 and 50 percent of income. As data on age-specific income is not publically available, the median gross monthly income (excluding CPF employer contributions) of employed residents was used.
- Using a GDP deflator, the real median gross monthly income was estimated. It was projected forward using a real growth rate of between 1 and 3 percent.
- Historically, Singapore has experienced 5 percent growth in real wages in the 24 year period 1987-2011 (Figure 1). However, in more recent years real wage growth has fluctuated between 1 and 3 percent (IMF, 2012).
- Real GDP growth is also assumed to grow between 1 and 3 percent.
- Data on demographic profile: share of the population aged above 65 and above age 80 was obtained from the World Population Projections (Medium Variant).

# Preliminary Estimates of Social Pensions (as percent of GDP)

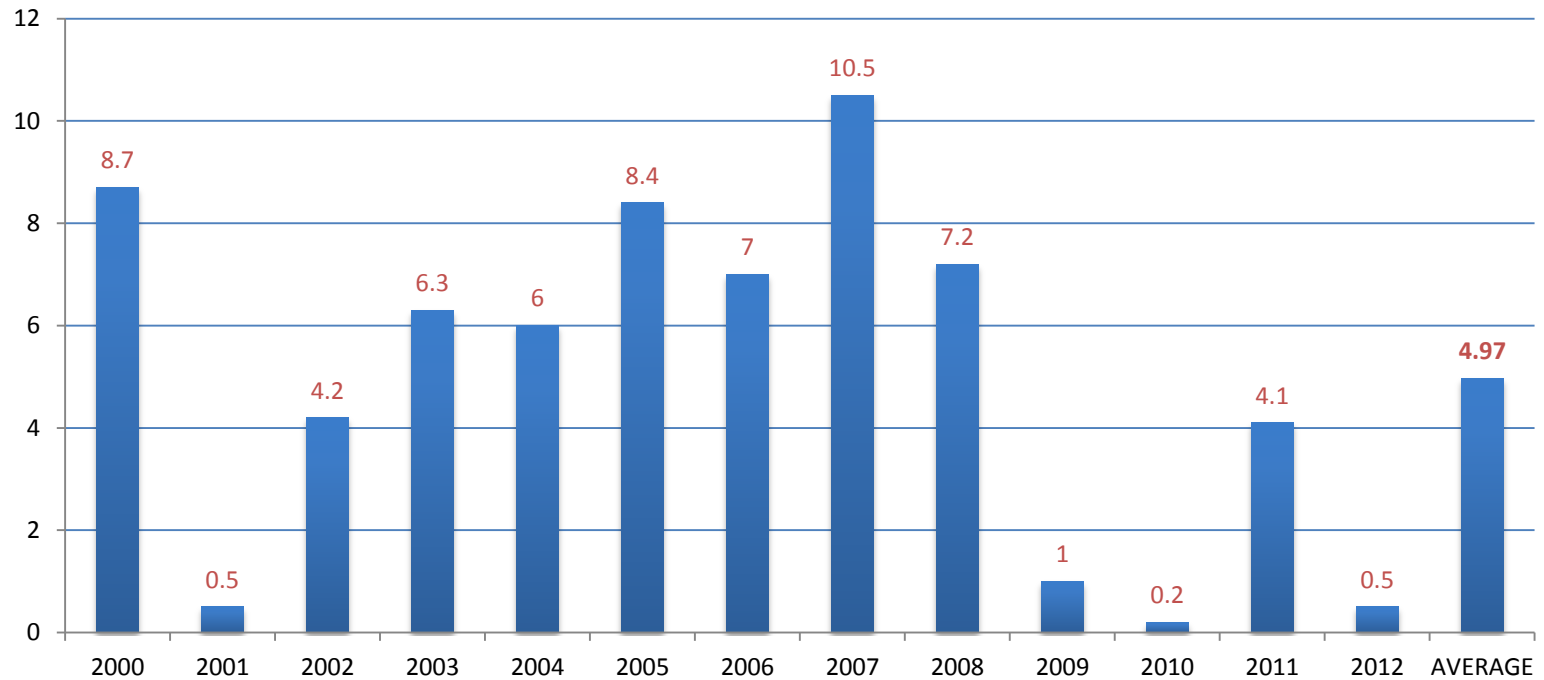
	AT 3% WAGE GROWTH; 3% GDP GROWTH				
	Share of Population above age 65	Benefit Level 10%	Benefit Level 20%	Benefit Level 30%	Benefit Level 50%
2015	14.60%	0.06%	0.12%	0.18%	0.31%
2020	13.79%	0.08%	0.17%	0.25%	0.42%
2025	14.19%	0.11%	0.22%	0.33%	0.55%
2030	14.49%	0.13%	0.27%	0.40%	0.67%
	AT 1% WAGE GROWTH; 2% GDP GROWTH				
2015	14.60%	0.06%	0.12%	0.18%	0.29%
2020	13.79%	0.08%	0.15%	0.23%	0.38%
2025	14.19%	0.10%	0.19%	0.29%	0.48%
2030	14.49%	0.11%	0.22%	0.34%	0.56%

# Preliminary Estimates

- Our preliminary projections suggest that with growth in real wages and real GDP assumed to grow at 3 percent; the monetary cost of a non-contributory pension scheme, with benefit level varying between 10 and 50 percent of gross median income of employed residents, would be between 0.06 and 0.30 percent of GDP in 2015; and 0.13 and 0.67 percent of GDP in 2030 .
- More robust and sophisticated simulations will be carried out and reported in the paper.
- Singapore has enjoyed structural budgetary surpluses over the last decade. The average overall fiscal balance for 2000-2012 was 4.9 percent of GDP (IMF, 2012).

# Preliminary Estimates

Figure 2: Singapore - Overall Fiscal Balance (2000-2012)



Source: Estimated from IMF Article IV Staff Consultation Reports

# Concluding Observations

- Singapore's pension system is based on **two key premises**. The first is that near exclusive reliance on mandatory savings during the working years, micro-managed by the state can provide adequate retirement income. Second, is that the pension system should focus on mitigating absolute rather than relative poverty.
- The analysis in the paper suggests fundamental rethinking of these premises is needed to enhance sustainability and fairness of Singapore's pension system. Minor changes in the current system, being currently favored by policymakers, would be insufficient.

# Concluding Observations

- In restructuring Singapore's pension system, the paper suggests a need to use social risk-pooling methods such as social insurance and budget-financed non-contributory social pensions whose value does not decrease in real terms; and a shift in policy focus from addressing absolute poverty to relative poverty.
- The paper also suggests that reforming aspects of the CPF system, such as shift away from administered interest rates, and improving member choices in investments merits consideration.

# Concluding Observations

- Fiscal and other initiatives to increase the resident fertility rate could help mitigate congestion externalities and competition for positional goods. The main constraints in fundamentally reforming Singapore's pension system are not fiscal, economic, and institutional or capacity related.
- It is the unwillingness of the policymakers to consider alternatives. The political and social policy choices made now, would have a far reaching impact on considered important values by Singapore as a nation



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