

Central Provident Fund in Singapore

A Capital Market Boost or a Drag?

Edward Ng

A Brief History

The Central Provident Fund (CPF) scheme was introduced as the national funded pension scheme on 1 July 1955 under the British colonial government. Although it was evidently a pension fund for retirement, it was not meant to be the single social security system that it is today. Just before Singapore achieved self-government in 1959, a plan was in place to introduce a social insurance cum public assistance scheme to cater to the needy. At first, the scheme covered all employees in Singapore except those working in the civil service or contributing to other approved provident funds.¹ This plan was later scrapped, however, as the first local government in 1959 believed it would take “available capital resource from other even more pressing needs.”² While the CPF scheme has remained as Singapore’s national funded pension scheme over the past four decades, its character has substantially changed. It retains its primary role as a pension fund for retirement, but its functions have been expanded to include funding medical expenses as well as property and financial investments. Today, the CPF Board (Central Provident Fund Board is the official name) is more like a mandatory savings bank, a significant portion of whose assets can be channeled to “desirable” activities like home ownership.

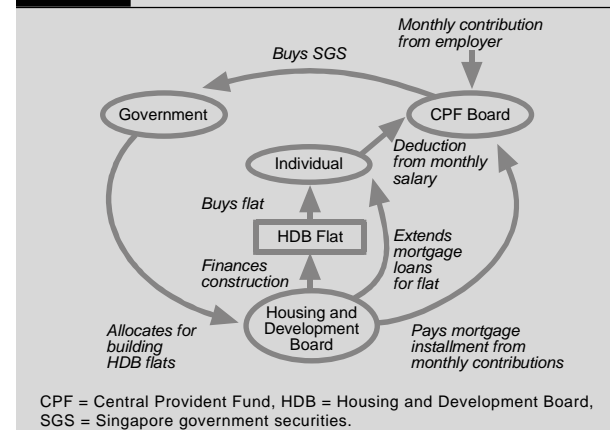
The evolution of the CPF scheme was not accidental. The scheme came about through a calibrated series of measures designed to exploit a critical pool of funds in a small developing country. However, one overriding principle that has not changed over the years is individual responsibility for one’s own future. The emphasis on individual decision making and responsibility has always been the central tenet in the management of CPF savings and had a significant influence in the development of the securities markets in Singapore.

Central Provident Fund as a Financing Tool

There are two landmark events in the development of the CPF scheme. The first took place in 1968,

three years after Singapore became independent from the Malaysian Federation, when CPF savings were allowed to be withdrawn for the first time but limited to the purchase of government flats. This was the first policy measure wherein the government used CPF savings to achieve national objectives. This period of the nation’s history was marked by political and social turmoil. Singapore did not become independent by choice and was largely considered economically unviable. Populated largely by immigrants, it faced the risk of an exodus, which would have made the country’s collapse a self-fulfilling prophecy. The government thus decided that home ownership was the way to make its citizens cast their lot with the new nation. With little surplus and private savings, the funds in the CPF accounts were identified as a source of valuable financing. Figure 1 shows how CPF savings have been used to fund the development of government housing projects.

Figure 1: Circular Flow of Central Provident Fund Savings to Finance the Construction of HDB Flats



By most measures, the policy was a great success. Today, about 80 percent of Singapore citizens and permanent residents live in government flats. The flats have also become a valuable investment as most of them command market values more than double their purchase price.

The second major policy change occurred in 1986. That year the government decided to pull the

economy out of its most serious recession since independence. “Sunrise” industries were identified but the securities markets had to be tapped for the new businesses. Thus, individuals were allowed to invest CPF savings in risky financial assets. This was not, however, the first time CPF savings could be invested in the securities market. Early in 1978, CPF members were allowed to invest their savings in shares of the Singapore Bus Service Ltd. (SBS). SBS shares were, however, not a really risky investment as the firm was a government-linked monopoly that generated healthy cash flows. Each member was also limited to the purchase of S\$5,000 worth of shares. The 1986 measure was intrinsically different in terms of the risk profile of the investments allowed. An Approved Investment Scheme was initiated and has so far been regularly updated. The original list of approved assets included selected blue chip stocks, unit trusts, and gold.

One important aspect has remained unchanged despite the measures to liberalize the use of CPF savings. The principal amount plus the accrued interest cannot be withdrawn until the member reaches the age of 55. Rather than using his own money, the CPF member is “borrowing” from his savings. Anytime an investment, whether property or securities, is liquidated, the CPF Board has the first claim to the principal amount used and any interest that has accrued over the holding period of the investment. Only after these amounts have been returned to the individual’s CPF account can any capital gain be permanently withdrawn. A capital loss, however, does not need to be reimbursed by the individual.

The CPF scheme is quite clearly not a conventional pension system. Carefully timed measures have been introduced to allow this increasingly large amount of forced savings to be productively employed to finance the nation’s development. Appendix 1 gives a chronology of these measures.

Changes in the Central Provident Fund Scheme

In its early years, the CPF scheme was largely devoted to savings for retirement. The static contribution rate of 5 percent each by the employer and the employee on the salary and the undivided individual CPF account quite clearly reflects this objective. If this contribution rate had remained, an individual would have consistently set aside 10 percent of his salary for retirement.

Not long after the country’s independence, the government implemented rapid changes. First, the contribution rate was increased almost every year. With just three increases starting in 1968, the contribution rate reached 10 percent by 1971, which was double the original rate. By 1974, the CPF contribution was 30 percent of a member’s salary. Such a high savings rate is evidence of the intent to make CPF more than a pension scheme for retirement.

The second change was the departure from the equal burden on the employee and the employer. The contribution rate first became asymmetric in 1972. While the employee’s contribution remained at 10 percent as in the previous year, the employer was made to contribute 14 percent. This marked the beginning of the fine-tuning of the CPF scheme to achieve various social and economic objectives.

The third change took place in 1977 when the individual’s CPF account was divided into two subaccounts. The Special Account was created to ensure that a minimum level of financial needs could be met at retirement. Funds in this account cannot be withdrawn except at retirement. Starting at 1 percent of salary, the contribution rate for the Special Account quickly rose to 7 percent in 1979.

The major portion of the CPF savings goes into the Ordinary Account. Since the Special Account is truly the pension savings, the Ordinary Account is aimed at other possible uses. Beyond the regulatory minimum percentage for the Special Account,

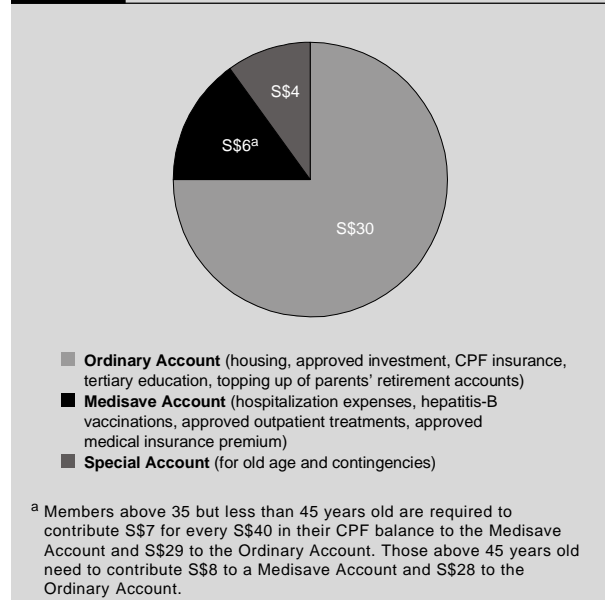
an individual has the option to transfer funds from the Ordinary to the Special Account. A transfer in the opposite direction is, however, not allowed even if it is to reverse from the Ordinary Account. On the other hand, the Special Account enjoys a slightly higher interest rate than the Ordinary Account.

In 1984, the CPF account was further divided. Besides the Ordinary and Special Accounts, a third account called the Medisave Account was created. Funds in this account were specifically targeted at medical expenses, initially for the account holder himself and later expanded to cover immediate family members.

Right from the country's independence, the government has intended the CPF scheme to be a central social and economic policy tool while preserving the savings-for-retirement purpose as much as possible.³ The present CPF scheme is far more than just a pension system. It serves three broad objectives. The first is to preserve and enhance the individual's integrity. In this respect, the CPF savings could be used for housing, health care, life and health insurance, risky investments (including property), education, or retirement. The second objective is to strengthen the institution of the family, which the government strongly believes to be essential to social stability. In this regard, an individual can use his CPF account for the well-being of his immediate family members. Figure 2 shows the various ways a member can use the CPF savings other than for retirement.

The CPF scheme was made to serve a third purpose from 1986. The Singapore economy was in the second year of its first postindependence recession. To help the country regain its competitiveness, the employer's contribution to CPF was drastically reduced from 25 to 10 percent. This translated into a 12 percent reduction in total payroll and was one reason for the quick economic recovery. That success with the use of the CPF contribution rate to regain competitiveness has made the government quite ready to use the CPF

Figure 2: Approved Uses of Central Provident Fund Savings for Every S\$40 of a Member's Balance



scheme for its economic policies. Beginning 1 August 1995, all employers were exempted from having to make CPF contributions for their new foreign employees on short-term work permits. The foreign employee may require a higher salary but is likely to accept a lower total remuneration because all his wages are now disposable.⁴ This reduces the employer's wage cost. Table 1 shows the changes in CPF contribution rates over the years.

The CPF scheme continues to provide funding security for retirement. The recent concern about individuals retiring with a valuable piece of residential property but little cash prompted the government to impose a minimum cash reserve for each account. This policy took effect on 1 July 1995 with a minimum of S\$4,000 in cash in each account. The amount would be increased by S\$5,000 every year, reaching S\$40,000 in 2003. In other words, a CPF member who retires after 2003 will have at least S\$40,000 cash in his pension account.

The CPF scheme was fine-tuned not only to boost the economic fundamentals of the country but also to provide depth to the securities markets, albeit with little success. The next section discusses

Table 1: Central Provident Fund Contribution Rates, 1955–1994 (percent of salary)

Date ^a	Contributed by		Credited to			Total
	Employer	Employee	Ordinary Account	Special Account ^b	Medisave Account ^c	
Jul 1955	5.0	5.0	na	na	na	10.0
Sep 1968	6.5	6.5	na	na	na	13.0
Jan 1970	8.0	8.0	na	na	na	16.0
Jan 1971	10.0	10.0	na	na	na	20.0
Jul 1972	14.0	10.0	na	na	na	24.0
Jul 1973	15.0	11.0	na	na	na	26.0
Jul 1974	15.0	15.0	na	na	na	30.0
Jul 1977	15.5	15.5	30.0	1.0	na	31.0
Jul 1978	16.5	16.5	30.0	3.0	na	33.0
Jul 1979	20.5	16.5	30.0	7.0	na	37.0
Jul 1980	20.5	18.0	32.0	6.5	na	38.5
Jul 1981	20.5	22.0	38.5	4.0	na	42.5
Jul 1982	22.0	23.0	40.0	5.0	na	45.0
Jul 1983	23.0	23.0	40.0	6.0	na	46.0
Jul 1984	25.0	25.0	40.0	4.0	6.0	50.0
Apr 1986	10.0	25.0	29.0	na	6.0	35.0
Jul 1988 ^d	12.0	24.0	30.0	na	6.0	36.0
Jul 1989	15.0	23.0	30.0	2.0	6.0	38.0
Jul 1990	16.5	23.0	30.0	3.5	6.0	39.5
Jul 1991	17.5	22.5	30.0	4.0	6.0	40.0
Jul 1992	18.0	22.0	30.0	4.0	6.0	40.0
Jul 1993	18.5	21.5	30.0	4.0	6.0	40.0
Jul 1994 ^e	20.0	20.0	30.0	4.0	6.0	40.0

na = not available.

^a Years in which the contribution rates were the same as the previous year's are excluded.

^b Contributions to the Special Account were suspended from 1986 to 1988 when the economy was in recession.

^c Since 1986, amounts above S\$15,000 in the Medisave Account have gone to the Ordinary Account.

^d In 1988, contributions from the various five-year age brackets above the age of 55 were set at a declining rate.

^e The contribution rate has remained unchanged from 1994.

the impact of CPF policies on the development of the government bond market, and the section after that continues the analysis with respect to the equities market.

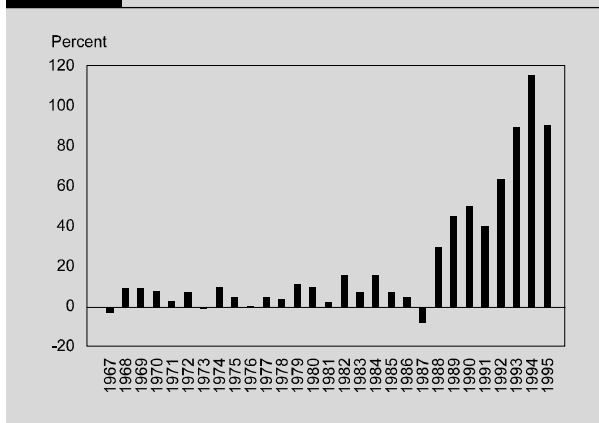
The Central Provident Fund Scheme and the Development of the Government Bond Market

The Singapore government is known for its fiscal discipline. Since independence in 1965, it has run a surplus almost every year. (Deficits were recorded only for 1967, 1973, and 1987.) This surplus does not include the profits generated by the statutory boards and government-owned or government-

linked companies. For the consolidated central government account, the noncapital revenues alone usually cover all expenditures. Even in the years of deficit, the size of the deficit in relation to total expenditure was minuscule. Figure 3 shows the surplus/deficit as a proportion of total expenditure.

The persistent fiscal surplus has had a significant impact on the development of the government and corporate bond markets. Compared with the equity market, the secondary bond market in Singapore may be considered anemic. There is virtually no secondary government bond market outside of the commercial banks. To better understand the government bond market, we should look first at the government securities market and how government securities are issued.

Figure 3: Fiscal Surplus/Deficit as a Percentage of Total Expenditure



The Singapore government issues two broad types of debt securities. Treasury bills are issued under the Local Treasury Bills Act of 1923, which was most recently amended in 1992. Up to 1974, only 91-day bills were issued. The 182-day bill was introduced in 1974, and the 273-day and 364-day bills were introduced in 1975. Bills of the latter two maturities are now issued infrequently, depending on how the Monetary Authority of Singapore (MAS) views the conditions in the market. The 91-day bill is issued weekly and the 182-day bill, monthly. Unlike the US and most other countries, Singapore does not issue Treasury bonds.

Instead of Treasury bonds, the government issues what are officially termed Singapore government securities (SGS). For a while, SGS were issued under two separate pieces of legislation. Those issued under the Government Securities Act were used to finance current expenditure and those issued under the Development Loan Act, for infrastructure development.

Before 1987, most SGS were issued to the CPF Board as tax-free registered stock. There was no active secondary market for such securities as there were no market-makers. The SGS market (SGSM) essentially took shape only in 1987. Probably in response to the recession, a plan was launched in 1986 to further develop the domestic financial markets.

A key aspect was the revamp of SGSM, with the help of experts from the US. This move to activate SGSM was also meant to boost the development of a corporate bond market. As described in the MAS Annual Report for 1986/87:

*The new Singapore Government Securities Market (SGSM), which commenced in May 1987, should provide the basis for a full-fledged market for fixed-income securities. The main purpose of the revamped SGSM is to provide a yield curve which would serve as a needed benchmark for corporate bond issues.*⁵

In 1987, a regular schedule of taxable book-entry issues was introduced. Two- and five-year notes were issued quarterly. Also, three-month Treasury bills were issued weekly and six-month bills were issued bimonthly. Except for the three-month Treasury bill, the frequency of all issues was changed in 1988 to once every four months.

A major change after 1987 was the replacement of the four discount houses by a panel of five primary and three registered dealers, who are obliged to quote two-way prices. Another 29 secondary dealers were approved to transact with nonbank customers, and trading moved to a computerized book-entry system. However, this new system applies only to taxable bonds and not to registered stock, largely held by the CPF Board. Table 2 shows the amount of SGS issued and outstanding each year.

Issuance of Government Securities

MAS manages the sale of SGS. Before 1 July 1987, four discount houses acted as dealers in SGSM. These discount houses were joint ventures between MAS and the major local banks. They were obliged to tender for every issue of Treasury bills. They then sold these bills and other SGS to financial institutions, especially commercial banks, to meet their liquidity ratios. The discount houses also acted as agents of MAS in the open market. In 1987, the dis-

Table 2: Amount of Singapore Government Securities Issued and Outstanding (S\$ billion)

Year	Amount Issued	Amount Outstanding
1967	*	0.59
1968	*	0.76
1969	*	0.97
1970	0.07	1.09
1971	0.30	1.35
1972	0.36	1.63
1973	0.75	2.37
1974	0.50	2.80
1975	1.17	3.82
1976	1.65	5.40
1977	1.74	6.97
1978	1.34	8.01
1979	1.90	9.72
1980	2.30	11.73
1981	**	*
1982	1.30	*
1983	6.15	*
1984	**	*
1985	**	18.10
1986	**	17.80
1987	30.30	34.02
1988	3.63	39.40
1989	4.35	42.40
1990	1.85	11.20
1991	2.30	13.20
1992	17.70	15.70
1993	3.26	17.20
1994	3.75	12.90
1995	7.20	14.50
1996	4.20	20.50

* Not mentioned in *Monetary Authority of Singapore Annual Report*.
 ** No bonds issued.

count houses were abolished. Today, the major commercial banks act as the primary dealers for SGS. Appendix 2 shows a chronology of developments in SGSM since 1987.

The consistent fiscal surplus means that the government does not need to sell SGS for public financing. A Government Securities Fund holds the proceeds from SGS sales and from the way the use of the fund is regulated it is evident that deficit financing is not its main purpose. As explicitly mandated, transfers to the Consolidated Account to finance expenditure have the last priority in the use of the

fund. The operational needs of the fund itself and repayment of principal and interest due on the SGS take precedence.

In recent years, the issuance of SGS has become obligatory rather than discretionary. The MAS Annual Report for 1997 stated that:

There were seven issues of two-, five- and seven-year book-entry Singapore government bonds altogether in 1996.... The increase in supply of government bonds was necessary to meet banks' higher demand for liquid assets arising from a growing liabilities base.... The bulk of the SGS issued were held by banks and primary dealers with the remainder held by finance companies, insurance companies, other corporations and individuals.

The primary market for SGS is similar to that for US Treasury securities. A panel of eight primary dealers⁶ tenders for each issue through a pay-as-you-bid closed auction. The minimum denomination is S\$1,000 and any individual or corporate body can submit a tender through a primary dealer.

There are two forms of tenders. The first form is only for the amount of the securities. In this case, the tenderer would accept the yield derived through the tender. The second form is for both the amount of securities and the yield.

For Treasury bills, the yield on the issue is computed as the weighted average of the yields for which successful tenders were made. This yield is applied to tenders where the yield is not specified. For bonds, the coupon rate is also determined through auction. The coupon rate is rounded to the 1/8th of a percentage point nearest to the derived yield and the price is adjusted accordingly.

Since SGS are issued more to meet the needs of commercial banks than for debt financing, the kinds of yield are quite easy to envisage. In 1996, the yield on the three-month Treasury bill spiked above 2 percent for only three months and hovered around 1 percent for the rest of the year. Over the same period, the POSBank⁷ offered tax-free

deposit rates averaging 2.5 percent while local commercial banks offered rates about 22 percent points higher. Because deposits with the POSBank are practically risk-free, the virtual absence of demand for SGS for investment comes as no surprise.

Besides their uncompetitive yields, the SGS issued did not allow the construction of a yield curve beyond seven years. Institutional investors, reluctant to consider bonds with no benchmark rates, have by and large kept away from the corporate bond market, hindering its development. Most recently, in February 1998, the new chairman of MAS, who is also the deputy prime minister, announced that the government would start issuing 10-year bonds to allow the construction of a longer-term yield curve.

The Secondary Market and Trading System

Unlike the primary market, the secondary SGSM is not a unified market. Dealers provide quotes but these are not captured in a single manual or computerized order book. The secondary SGSM is similar to the retail market for foreign currencies where individual banks transact from their own inventories at individually set prices. Some market-makers may not even be able to provide quotes for an issue if it has no inventory.⁸ Although an interdealer broking system was introduced in January 1991, the market remains fragmented. Like other fragmented markets, there is no uniform brokerage. Individual dealers may levy an administrative cost but that is usually negligible.

Holdings of Singapore Government Securities

As in most other countries, commercial banks in Singapore are required to maintain liquidity reserves. Before the SGS market was revamped in 1987, commercial banks were required to maintain a liquidity ratio of 20 percent against their liabilities base in addition to their cash reserves, half of it in primary liquid assets and the other half in secondary liquid

assets. Primary assets consisted of cash balances with MAS and SGS.

After 1987, the required liquidity ratio was lowered to 18 percent. At least 10 percent must be in SGS owned by the bank. Up to 5 percent can be in SGS held under repurchase agreements with other banks, approved dealers, and the POSBank.

Table 3 shows the percentage of SGS outstanding, held by the various financial institutions. Despite the restructuring of SGSM in 1987, a large proportion of SGS outstanding continue to be held by the CPF Board, POSBank, and commercial banks. The CPF Board alone accounts for more than 70 percent of the SGS outstanding and these are largely in the form of registered stocks not traded on the secondary market.

Turnover of Singapore Government Securities

The turnover in the secondary SGSM has not increased since the market revamp of 1987. In fact, there was a fairly significant decline from 1991 to 1992. It was only in 1995 and 1996 that the trading volume registered a more consistent year-on-year increase but even then recovering only to 1987 and 1988 levels.

The drop in trading volume was particularly severe for taxable book-entry bonds, which were introduced in 1987 to activate SGSM. In 1987, the average daily volume was 47 percent of the bonds outstanding. This fell to less than 4 percent in 1995.

Turnover as a percentage of SGS outstanding has actually declined quite substantially. Percentage turnover in the 1980s and 1990s has been even lower than in the 1970s. From 1991 to 1995, turnover was less than 1 percent (Table 4).

A daily turnover of 4 percent of the amount outstanding looks respectable compared with a ratio like 0.6 percent for an equity market.⁹ However, two aspects of SGSM need to be considered. First, this is an entirely institutional market. Institutional trade volume should therefore far exceed retail trade vol-

Table 3: Major Holders of Singapore Government Securities, 1967–1996 (percent)

Year ^a	CPF Board	Commercial Banks	POSBank	Discount Houses ^b	Insurance Companies	Total
1967	85.47	7.01	0.50	0.00	2.48	95.46
1968	71.33	4.99	1.03	0.00	3.28	80.63
1969	65.28	6.92	5.09	0.00	3.26	80.56
1970	68.93	5.51	5.66	0.00	3.30	83.41
1971	71.11	6.84	6.42	0.00	3.32	87.70
1972	71.25	8.65	5.46	0.00	3.50	88.86
1973	68.86	10.87	1.94	3.34	3.38	88.39
1974	72.96	12.30	1.59	0.79	3.20	90.84
1975	75.09	12.39	1.73	1.18	3.36	93.75
1976	69.85	14.12	5.63	1.47	2.85	93.93
1977	66.04	10.54	9.58	1.56	2.34	90.05
1978	65.57	9.77	8.59	1.55	2.39	87.87
1979	71.17	7.43	7.29	0.80	2.35	89.03
1980	77.41	7.34	6.20	0.17	1.91	93.03
1985	75.35	11.78	3.63	2.78	3.08	96.63
1986	76.62	9.96	5.29	1.18	3.67	96.72
1987	84.12	8.49	3.34	0.00	2.20	98.14
1988	76.45	8.25	2.81	0.00	2.22	89.73
1989	75.75	11.92	2.68	0.00	2.45	92.79
1990	74.15	13.70	2.60	0.00	0.00	90.44
1991	70.87	14.13	3.15	0.00	0.00	88.16
1992	74.40	11.33	3.02	0.00	0.00	88.75
1993	72.18	12.90	3.73	0.00	0.00	88.80
1994	70.90	14.11	3.87	0.00	0.00	88.88
1995	71.77	16.13	4.17	0.00	0.00	92.07
1996	71.57	16.37	3.91	0.00	0.00	91.84

CPF = Central Provident Fund.

^a No data available for 1981–1984.^b Discount houses became defunct in 1987.

Source: Monetary Authority of Singapore.

ume. Second, the amount of taxable book-entry SGS outstanding is quite limited. These two factors, together with the fact that government bonds are more homogeneous than equities, should favor a higher trading volume. But that is not the case, and it is generally agreed that given its few participants, the SGS market is not really liquid.

The CPF Board is undoubtedly the largest holder of SGS (Table 3). This may have a negative, rather than a positive, impact on the development of SGSM. Having generated persistent fiscal surpluses, the government has no need for debt financing. All the SGS issued to the CPF Board are solely meant to absorb the increasingly large balances of CPF members. Even then, the amount of registered stock issued is not sufficient. In 1981, the CPF Board began investing in other forms of securities like

floating-rate notes, negotiable certificates of deposit, and even equities. The amounts placed in such securities are, however, minuscule compared with the size of the balance. Appendix 3 details the efforts made by the CPF Board to find other investments for its funds. Quite evidently, its initial entry into the secondary SGSM in 1978 met with limited success, if any, and there has been no mention since then of further attempts to trade in the market.

The CPF Board did not begin to sell the SGS in its portfolio until 1978. The stated purpose for trading was to help develop the secondary market. Quickly realizing the nature of the market, the board reported in its 1978 annual report that “Market activity in these stocks had so far been limited as financial institutions generally held such investments to meet statutory requirements.”

Table 4: Turnover of Singapore Government Securities, 1967–1997

Year	Daily Outright Turnover (S\$ million)	Daily Repo Turnover (S\$ million)	Total Turnover (S\$ million)	Outstanding (S\$ million)	Turnover/ Outstanding (%)
1967	na	na	na	585	na
1968	na	na	na	757	na
1969	na	na	na	965	na
1970	na	na	na	1,088	na
1971	na	na	na	1,350	na
1972	na	na	na	1,628	na
1973	na	na	na	2,367	na
1974	371	na	371	2,796	13.3
1975	399	na	399	3,822	10.4
1976	434	na	434	5,397	8.0
1977	405	na	405	6,966	5.8
1978	1,127	na	1,127	8,007	14.1
1979	1,048	na	1,048	9,720	10.8
1980	672	na	672	11,729	5.7
1981	328	na	328	na	na
1982	472	na	472	na	na
1983	620	na	620	na	na
1984	3	na	3	na	na
1985	7	na	7	18,100	0.0
1986	3	na	3	17,800	0.0
1987	460	340	800	34,021	2.4
1988	450	700	1,150	39,400	2.9
1989	250	790	1,040	42,400	2.5
1990	225	430	655	43,320	1.5
1991	210	200	410	45,320	0.9
1992	280	150	430	61,320	0.7
1993	370	160	530	61,820	0.9
1994	300	160	460	61,520	0.7
1995	404	260	664	71,900	0.9
1996	442	590	1,032	72,100	1.4

na = not available, repo = repurchase agreement.
Source: Monetary Authority of Singapore.

The Central Provident Fund Scheme and the Development of the Equity Market

The immense soaking up of investable funds from the CPF scheme was recognized quite early. The plan to channel CPF savings into equities was initiated back in 1978 with the introduction of the SBS Share Scheme. SBS was the national public transport company created from the merger of several private and public bus services. The firm was listed on the Stock Exchange of Singapore (SES) in 1978.

The SBS Share Scheme allowed the use of CPF savings to buy SBS shares. This marked the first time CPF tender was allowed for securities invest-

ments. A total of 31,500 CPF members (2.35 percent) withdrew S\$18.8 million (0.3 percent) of the funds to subscribe to the initial public offering. Almost 90 percent of the subscriptions were for a single lot of 500 shares. The stock was listed on 26 June 1978. By 31 December of that year, only 26,000 CPF members were still holding the shares.

The government actually encourages greater public participation in the securities markets, as part of the move to give citizens a direct share in the country's assets ("Singapore Inc."). The rather lukewarm response to the SBS Share Scheme, however, reflected the average individual's unwillingness to risk his pension even for potentially higher returns. The next sections will expand on this brief account of the government's approach to liberalizing the use of CPF savings for risky investments.

Government Philosophy on Risky Investments with Central Provident Fund Savings

To understand the development of the various CPF investment schemes, one must have a better appreciation of the government's philosophy on the use of CPF savings for risky investments. Aside from foreign reserves, CPF savings form the largest single pool of investable funds in Singapore. If the American model of pension fund management were to be applied, it could be assumed, as it often has been, that the CPF Board would manage the funds to obtain maximum returns for future retirees, but this is not the case. This misperception has surfaced in some formal articles and studies such as Pacific Economic Cooperation Council (PECC) working papers.

The government has a paternalistic view of its role in ensuring the welfare of the people. It has, however, consistently repudiated social welfarism and stressed self-reliance, letting the individual assume responsibility for his own retirement. Hence, it has adopted the funded pension scheme instead of the pay-as-you-go system used in most Western countries. The government, through the CPF Board, acts as custodian of the retirement savings. Self-sufficiency during retirement requires a substantial level of compulsory savings. This accounted for the rapid rise in the CPF contribution rate, especially in the early years of the country's independence.

On the other hand, the government knows that an accumulating national pension fund that is not actively deployed becomes an economic dead weight. It is therefore not averse to the judicious use of such savings before the individual's retirement. In this regard, the government holds fast to two principles in the use of CPF savings. One is that it must be a form of investment and not outright consumption. Premature consumption of one's own pension is not allowed. The other principle is that investment decisions are made only by the individual. This is consistent with the philosophy of individual responsi-

bility for retirement. If the savings are to be invested, the individual should make the decision and bear the risk. Only recently (in February 1998), the government rejected a recommendation of a special committee¹⁰ to allow the individual to choose a private pension fund other than CPF. In the words of the deputy prime minister and chairman of MAS: "We have CPF and that's a major feature of the landscape. It will be adjusted, modified, trimmed at the edges but it will not go and we work our system around it."¹¹

In principle, the government is not against the individual risking some of his pension money for a possibly higher return. In fact, it strongly encourages securities investment, both to broaden participation in "Singapore Inc." and to develop greater depth in the financial markets. Annual investment seminars have been organized to give free advice on the basics of stock trading. Commercial banks have been allowed to provide facilities for individual buying and selling of shares. When shares in Singapore Telecommunications were floated, every Singaporean CPF member was given group A shares at a discounted price. Such shares could not be purchased with cash, which made them exclusive to Singaporean CPF members. CPF savings can also be invested in approved unit trusts. But despite all these, the government makes a clear distinction between letting the individual take risks and letting a pension fund take the risks on his behalf. Should the individual lose all that has been risked, there is no one else to blame. The government is not obliged to bail out the individual, who alone must pay the price for risk taking.¹²

However, if retirement funds are lost by a private pension management firm, the consequences are very different. In the first place, such a loss is likely to affect many. The effect is widespread and the amount involved, probably large. A political problem can quickly be created if the government ignores the plight of those affected. Besides, the government would have to bear moral responsibility for

having allowed the event to occur. The collapse of a pension firm could be regarded as supervisory negligence and would be quite a disaster. The government has built its reputation on trust. It has prided itself on its strong regulation and supervision to safeguard the individual's interest. This is a major reason why Singaporeans, in general, have tolerated a high degree of intrusion into their personal lives.

The disapproval of nationwide private pension management schemes does not, however, mean that the government is against the principle of having pension schemes apart from CPF.¹³ In fact, there are about 100 corporate pension schemes in Singapore, most of them set up by multinational corporations based in the country. In December 1993, tax laws were even amended to make the employer's contribution to such pension funds tax-deductible and to exempt from taxation any gains invested by the funds. Contributions to corporate pension schemes must, however, be over and above CPF contributions by both employer and employee. Besides, contributions to corporate pension schemes must come only from the employer. Such schemes are largely not portable unlike CPF. The Schroder group, for instance, contributes 2 percent of an employee's salary to its corporate pension fund. The employee must serve at least five years to be eligible for any distribution. Withdrawals can be made only after 14 years of service. The government does not regulate the operations of such funds.

The government has given the CPF scheme a clear purpose. It is a mistake to view CPF as a conventional pension management institution. It is no more than a passive depository and, as such, the fund does not compile detailed statistics on the investment activities of its members.

Central Provident Fund—Approved Investment Schemes

The CPF Approved Investment Scheme (CPFAIS) was first introduced on 1 May 1986 under the concept of asset enhancement. By then, the Approved Residential Properties Scheme, where the individual could use his CPF savings to purchase private property for residence or investment, had been in place for five years. Over the past 11 years, CPFAIS has undergone much fine-tuning. The most significant modification was the introduction of the Basic Investment Scheme (BIS) and the Enhanced Investment Scheme (EIS) on 1 October 1993. Table 5 shows the types of instruments permitted under each of these schemes. The essential difference between the two schemes lies in the scope of investment, which is wider for EIS but at the expense of a higher cash reserve in the CPF account.

If the investment schemes were meant to unlock CPF savings into the securities markets, the measures can be regarded as minimally successful at best. At the end of 1996, 373,895 CPF members, or 13.6 percent of the outstanding membership, had made

Table 5: Scope of Investment under the Basic and Enhanced Investment Schemes

Basic Investment Scheme (BIS)

- Fully paid ordinary shares of Singapore-incorporated companies listed on the main board of Stock Exchange of Singapore (SES) only
- Loan stocks of trustee companies approved under the BIS
- Approved unit trusts
- Gold and fully paid ordinary nontrustee shares or loan stocks of Singapore-incorporated companies listed on the main board of the SES (limited to 10%)

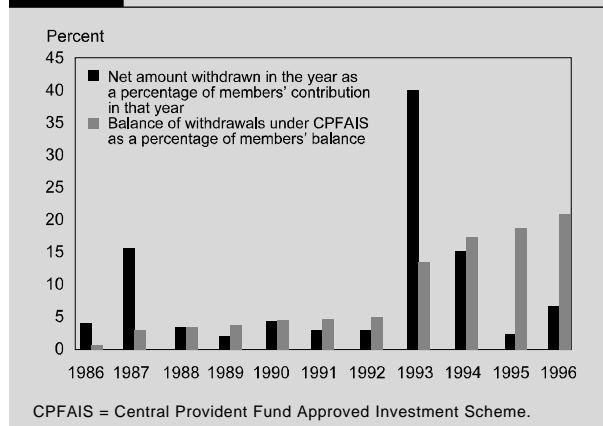
Enhanced Investment Scheme (EIS)

- Fully paid ordinary shares of Singapore-incorporated companies on both the main board of SES and Stock Exchange of Singapore Dealing and Automated Quotation (SESDAQ)
- Loan stocks of Singapore-incorporated companies approved under the EIS
- Approved unit trusts
- Gold (limited to 10%)
- Government bonds
- Fund management accounts
- Bank fixed deposits (minimum of one year)
- Endowment insurance policies

cumulative net investments of S\$15 billion. This was 20.7 percent of the members' balance in CPF, excluding the money previously withdrawn for investments in properties or securities. Including the S\$15 billion and ignoring the cash reserve required for each account, the securities investment amounted to 17.1 percent of the investable funds in CPF. Viewed from another angle, more than 80 percent of the compulsory savings remain as passive deposits. It is no surprise then that the CPF Board continues to demand increasing amounts of SGS to absorb the funds.

But if the proportion of the CPF balance invested in securities is low, the percentage of contributions drawn under CPFAIS in recent years has been even lower. In 1996, S\$1.0 billion was withdrawn under CPFAIS. This was 6.8 percent of the S\$14.6 billion in CPF contributions made that year. Figure 4 shows the net withdrawals under CPFAIS as a proportion of the annual contribution and of the CPF members' balance.

Figure 4: Withdrawals under CPFAIS as a Percentage of Annual Contribution and Members' Balance

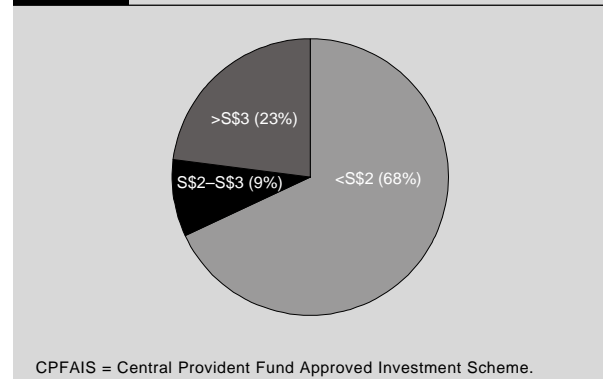


The spike in 1993 was due to the subscription for Singapore Telecommunications, which remains the largest public listing on SES. The percentage of net withdrawals each year provides a more accurate picture of the use of CPFAIS. After the initial euphoria in 1987, net withdrawals have remained low except in 1993. In 1995, net withdrawal as a percentage of

contributions was among the lowest since the introduction of the CPFAIS.

In a keynote address on 3 September 1996, the SES president mentioned the types of investments made under CPFAIS.¹⁴ Most of them are on penny stocks. Figure 5 shows the price range of stocks bought under the investment schemes. In terms of market value, investments made in equities with CPF savings accounted for 3.4 percent of SES market capitalization and for 5.8 percent of the total number of shares issued. The SES president cited these figures to highlight the highly risk-averse nature of investments made with CPF savings.

Figure 5: Price Range of Stocks Bought Under CPFAIS



Besides risk aversion and, generally, unfamiliarity with securities investment, there is another reason for the lack of enthusiasm for CPFAIS. The procedure for withdrawing CPF savings for securities investments is especially cumbersome and complicated. Over and above the basic requirement to have a brokerage account, there is the need to open an account with an approved local bank. Each time the individual makes a purchase with his CPF savings, that bank has to apply to the CPF Board for a release of funds from his account. Besides keeping a record of the flow of funds from and to CPF for the individual, the bank also acts as the nominee for all acquired securities. In other words, the CPF member does not get to register in his own name the securities he paid for. Since the registered shareholder is the bank (which acts for numerous CPF

members), the stock-issuing firm is not obliged to make annual financial statements available to the individual investor. The CPF member has to ask for a copy of the annual report if he wishes to have one.

But the securities ownership issue, while unpalatable, is not what deters many from investing their CPF savings. Rather, it is the determination of how much of a CPF account balance can be used for CPFAIS that totally deceives most people.

Investments in securities cannot take up the entire balance in an individual's CPF account. Besides a cash reserve, a minimum sum, which can be partly made up of the amount used for property acquisitions, must be kept in the account. These reserve amounts are different for the Basic Investment Scheme and the Enhanced Investment Scheme. If all these required reserves are taken into account, only 80 percent of the balance can be used.

If an individual places a buy order and is later told by his CPFAIS bank that there are not enough funds in his CPF balance to complete the order,¹⁵ there are two solutions to the problem. One is for the broker to execute a sell in the cash market at an unfavorable price to offset the buy. The other is for the individual to top up the shortfall with a cash deposit into his CPFAIS account.¹⁶ The individual may withdraw this cash later by making another application, on the condition that sufficient cash has been generated by another sale of securities.

The CPF Board tries to keep the public updated on CPFAIS guidelines, but the scheme is already so complicated and is changed so often that most CPF members have given up on it.

Impact of Central Provident Fund-Approved Investments on Trading Volume and Prices

Given its low level of use, CPFAIS has little impact on the primary and secondary equity markets. Since decisions associated with CPFAIS are made individually, the CPF Board has no obligation to keep track of and provide aggregate information on mat-

ters like trading activity. One can, nevertheless, infer from some events how much, or how little, CPFAIS affects the market.

As briefly described above, the government distributed Singapore Telecommunications group A shares to all Singaporean CPF members except those who opted not to participate in the scheme. Although more than one million individuals accepted the offer, the price of the share did not find much support. After a short rise, the price went on a sustained slide.¹⁷ This episode suggests that widespread subscription or ownership through CPFAIS does not translate into support for a share's price.

The preference for penny stocks also means that investments with CPF savings make very little impact, if any, on the stock market.

Macroeconomic Policy Implications of the Central Provident Fund's Role

The impact of the CPF scheme in the early years of Singapore's development is unequivocal. Without it, capital mobilization for the massive public housing project would not have been possible. When the economy went into a recession in 1985 because of structural inflexibility, a reduction in the employer's contribution to CPF helped in the quick turnaround.

The large pool of CPF savings has certainly helped Singapore build up its foreign reserves. As there is no separate accounting for the CPF savings tapped through the issue of government bonds, there is no way of determining how much of these savings is channeled into infrastructure development and how much is invested overseas. But it is believed that the government began investing CPF savings overseas in the early years of the scheme.¹⁸ What is more widely known, though, is that the government rarely directs funds managed by MAS, and later by the Government of Singapore Investment Corporation, into the domestic financial markets.

Conclusion

The economic success of Singapore has attracted much attention to its CPF pension scheme. Not only has the scheme come to symbolize the “Asian value” of a high savings rate, it has also been regarded as a strategic tool for the government to manage competitiveness and develop markets. Given the other major success of Singapore as a financial center, it has often been assumed that directing CPF savings into the financial market has been a critical factor. This seems to be an incorrect impression. In spite of its very significant role in social development, particularly in housing and healthcare, the CPF system, in fact, had a negative impact on securities market development in Singapore.

The CPF system is definitely a critical element in the government’s success in providing housing to the masses in the early years. Through a carefully controlled circular flow of funds, CPF savings have been used to enable individuals to fund the construction and ownership of government flats. Today, about 80 percent of Singapore citizens reside in such housing.

The contribution of the system to financial market development is quite different. In the government bond markets, the CPF is the biggest participant but a serious dead weight. More than 70 percent of government bonds are held by the fund. As the government runs a nearly perpetual fiscal surplus, there is no need for public debt. Government bonds are issued purely to meet the demand of commercial banks for their statutory reserves. MAS annual reports, almost without fail, mention this fact. With CPF soaking up increasingly large amounts of government bonds, the government has little room to increase the size of public debt for private investments. As a passive national custodian of pension funds, CPF is under no pressure to produce competitive returns for its members. This means that it does not need to actively trade to maximize the yield on its funds.

With CPF literally sitting on 70 percent of the government bonds issued and the government not wanting to issue more bonds than are needed, secondary market activity has been limited. In dollar terms, the average daily volume has only begun to recover to its levels in the late 1980s when SGSM was revamped. As a percentage of the amount outstanding, trading volume in 1996 has actually declined to half the level of 1988. Furthermore, half of the trades are repurchase agreements. Even for outright trades, almost all are between commercial banks trying to manage their reserve ratios.

One may actually see a more robust government bond market if there were no CPF scheme. Even if the amount of bonds issued were halved, there would still be a surplus for investors other than the commercial banks. Wider participation could produce a spillover effect on the anemic corporate bond market.

The CPF scheme makes almost as little contribution to the development of the equity market. Although the use of CPF savings for securities investment has increasingly been liberalized, the response to the investment schemes continues to be low. In 1996, only 6.8 percent of the CPF contributions were redirected to the stock market. In the same year, the value of securities held through CPFAIS amounted to 3.4 percent of the total market capitalization. This was 10 years after the introduction of CPFAIS. Since the CPF Board does not actively manage its funds, this means that CPF sits passively on a huge pool of savings. In 1996, the balance due to CPF members amounted to 55 percent of the gross domestic product. This amount does not include funds that were already withdrawn for housing, property, and securities investments. Although CPF funds are placed with the government through the purchase of SGS, it is unlikely that much of these funds are channeled into the Singapore securities markets. As a general policy, the government invests its surpluses and other public funds overseas.

The complicated procedure for keeping the required minimum reserves in cash or other forms and the burdensome task of having to instruct an approved commercial bank to transfer funds from and to CPF certainly did not help popularize CPFSAIS. To make matters worse, the schemes are modified every year, leaving many CPF members totally confused about the latest guidelines. Not a few individuals who actively invest their CPF savings have been caught with insufficient funds in their CPF accounts to fulfill buy orders even when the account statements showed a healthy balance.

The well-documented unequivocal success of the CPF system on the social development front has probably led to a misperception of its large positive contribution to financial markets in Singapore. If anything, the current CPF system has been a drag and not a boost to the development of securitized debt and equity markets in Singapore.

A natural question then is if CPF can be reformed to make a positive contribution to capital market development in Singapore and, if so, what are the specific changes that would have to be made. The answer in short is no, but changes can surely be made to alleviate some of the drawbacks.

The recommendation to move all or part of CPF toward the Chilean system where the individual chooses one of several authorized investment funds to save with was soundly rejected. The pension aspect of the CPF remains the paramount consideration and as far as the government is concerned, savings for retirement cannot be exposed to risk. In fact, the most recent debate on CPF is whether the Special Account is really large enough to see one through retirement. Calls have been made even by Members of Parliament to raise the minimum sum in this account.

Unlike some more recently designed pension schemes (the Chilean system being one of the most well-known), CPF was not conceived with capital market development in mind. Until today, boosting market development is not a major objective. The

calibrated steps to relax constraints on securities and other forms of “risky” investments (real estate is generally not regarded as such) may be considered as concessions to the populace who felt deprived of the opportunity to benefit from the booming stock market in the latter half of the 1980s. Caution on the risk of such investments was repeatedly raised, and the printed press is generously supplied with data on how worse off those who invested were compared with those who simply left their savings in CPF. When the stock market performs badly, there is almost no shortage of voices advocating the abolition of the use of CPF savings for securities investments.

If the individual could withdraw part of his CPF savings to be placed in unit trusts, would this not have the same impact on the capital markets just like the Chilean model, in function, if not in form? The answer would be yes, if the necessary ingredients were in place. Of these, the most critical is the individual’s propensity for risk taking.

In the Chilean model, risk taking is institutionalized. The funds compete for accounts with their performance on risk and return. The individual can only choose the level of risk rather than avoid it altogether. Besides, there are not many funds to choose from.

While the CPF account holder could have done nearly the same, there are several important differences here. First, the individual in the CPF scheme is made to save in risk-free deposits by default. Moving out of this position requires not only a conscious effort; it involves breaking a psychological barrier toward risk taking for those who have never invested in securities before. As in many other cultures, the Asian mindset associates risk taking with gambling, a vice that becomes more deplorable if one were to gamble with his “nest egg.” Even for those who overcome this barrier, the degree of risk-aversion remains high. It is not surprising then that the bulk of investments made with CPF savings are in penny stocks where the downside is much more limited. By contrast, exhausting available CPF savings for property,

whether for residence or for investment, is perceived favorably even if financial economics show that real estate investment need not be less risky than stocks and shares.

Aside from the attitude toward risk taking, information cost is another barrier to the CPF's having a positive effect on capital market development. The problem here is the range of choices available to the individual. These include fixed deposits in a bank, bonds, unit trusts, and even gold. The number of approved unit trusts alone continues to increase almost yearly. In essence, the individual has to determine his own portfolio against his utility function. When it comes to financial investment, both the cost of information and information overload would easily overwhelm the layman. Couple this with inertia, many individuals simply leave their CPF savings alone.

CPF can make a big impact on the capital markets provided investment options allowed under CPFAIS are fully exploited. In turn, this requires all CPF members to be knowledgeable about financial investment and the accompanying risk and return. That might have been the government's intention all along. That is, risky investments should be engaged in only when the individual is ready; they should not be delegated to a professional by default, as in the Chilean system. This is the reason why the CPF Board can act only as a custodian and not manager of CPF savings. The government is prepared to educate the populace on these matters through free seminars and other events but will not permit abdication of personal responsibility, a central pillar of social welfare management. Given such realities, it will be a long while before CPF

has any noticeable effect on capital market development.

If there were any way to improve the CPF's contribution to capital markets in the short term, it would have to be the simplification of transactions made under CPFAIS. Some steps in this direction have been made since CPFAIS was first implemented. More, however, could be done. For instance, since the amount of CPF savings does not remain static for a working individual, it might be easier to put a percentage limit on the monthly contribution that can be placed under CPFAIS rather than requiring the maintenance of various minimum sums in the CPF account. All the improvements would, nevertheless, not make CPF a boost to the capital market.

In conclusion, CPF was never conceived with capital market development in mind. Even today, how CPF can be reformed to improve the capital market is not a priority. It is unequivocally clear that CPF is meant to be a social fund first and foremost, and any liberalization to accommodate desires for higher return through higher risk are largely concessions rather than part of an active agenda. The most recent preoccupation with CPF savings is not whether they have been too much but rather whether the contribution rate is high enough to provide an adequate pension. As a social fund, CPF has made valuable contributions to the country's development. Changing its purpose to make it resemble the Chilean model has been officially proposed and rejected. The unfortunate side effect is that it has also become a drag to capital market development. But it is highly unlikely that the government would consider this drawback significant enough to redefine CPF.

Appendix 1

A Chronology of Measures to Liberalize the Use of Central Provident Fund Savings

1968. The Public Housing Scheme (PHS) is implemented. This low-cost housing scheme enables members to withdraw their Central Provident Fund (CPF) savings to buy low-cost flats from the Housing and Development Board (HDB) and Jurong Town Corporation (JTC).

1 Dec 1975. The CPF (Approved Housing Scheme) Regulations, 1968, are amended to allow a member who has applied to purchase a flat from HDB or JTC, to pay a deposit for the flat with all or part of his balance in the fund. Members can withdraw the deposit payment of 20 percent of the purchase price from their accounts in the fund right after registering for a flat.

1975. The Approved Middle-Income Housing Scheme is introduced to allow the purchase of residential properties from the Housing and Urban Development Co. (Pte) Ltd (HUDC) by middle-income members who would otherwise not be able to acquire their own homes.¹

11 Feb 1977. The Housing Scheme is extended in 1977 to enable officers of the Singapore Armed Forces to use their CPF balances and monthly contributions to buy flats built by the Ministry of Defense.

9 Sept 1977. An amendment to the CPF (Approved Middle-Income Housing Scheme) Regulations, 1975, is made. This amendment provides that the first withdrawal by a member of the fund to be used as a deposit for the purchase should not exceed 5 percent of the price of the property.

April 1978. The Singapore Bus Services (1978) Ltd. Shares Stock Scheme is introduced to enable members to withdraw their CPF savings for the pur-

chase of shares of Singapore Bus Services (1978) Limited. It allows members to have a stake in the republic's major public transport company and to enjoy concessionary rates for travel to and from their place of work.

1980. The CPF Act is amended to mitigate the hardship of bankrupts. Under the amendments, bankrupts can withdraw their CPF savings for the purchase of HDB/JTC flats. They can also withdraw from their CPF savings a monthly sum, to be determined by the CPF Board for their maintenance if they have reached the age of 55, or are physically or mentally incapacitated or of unsound mind. In addition, the Minister of Finance may also approve the total withdrawal of CPF savings of an undischarged bankrupt if he qualifies on the same grounds.

1 Jun 1981. The Approved Residential Properties Scheme (ARPS), a new housing scheme for private housing, is introduced. ARPS allows members to use their CPF savings to buy private residential properties for their own use or for rental. Its objective is not just home ownership, as in the case of other housing schemes, but also to give members a hedge against inflation.²

1 Nov 1981. The Home Protection Insurance Scheme (HPIS), a mortgage-reducing insurance scheme, is introduced. HPIS protects members and their dependents against the loss of their homes by paying the outstanding loans on their HDB, JTC, HUDC, or Ministry of Defense (MINDEF) flats, should the members become permanently disabled or die.

Nov 1983. The CPF Board eases its rulings on the use of CPF savings to purchase HDB resale flats. Previously, the amount of savings that a member

¹On 1 May 1982, HDB also became responsible for providing middle-income housing as a result of the merger of the Housing and Urban Development Co. (Pte) Ltd. with HDB.

²ARPS was implemented in two phases. The first phase, implemented from 1 June 1981, allowed a member to use his CPF savings to redeem all or part of his outstanding housing loan on one private residential property. The second phase, from 1 Jan 1982, enabled a member to use his CPF savings to make direct payment to the vendor or developers for the purchase of a residential property. In both phases, the member's accumulated savings and monthly contributions could also be used to meet installment payments on his housing loan.

could withdraw for their purpose could not exceed HDB's posted price for a resale flat. Now, he can withdraw up to 140 percent of the "posted price," which is nearer the market price of such property. This has certainly made it easier for members to buy HDB resale flats.

Mar 1984. To enable members to upgrade their homes or buy additional properties for investment, the three-year time bar on the reuse of CPF savings under the board's ARPS is relaxed. A member can immediately reuse his CPF savings to buy a second property if he has already owned for five years his first property bought under ARPS and has refunded to CPF, with interest, savings he withdrew for that purpose.

1 Apr 1984. The Medisave Scheme takes effect. A third account, called the Medisave Account, is created for each CPF member in addition to his Ordinary and Special Accounts. This scheme forms part of the National Health Plan. It provides for a small but regular sum of CPF savings to be set aside each month to help members meet their hospitalization expenses in government hospitals.

The balance in each member's Special Account is transferred to his Medisave Account. Henceforth, the 6 percent CPF contribution previously credited to the Special Account will now go to the Medisave Account.

1 Apr 1985. The Medisave limit for those above 55 years of age is raised from S\$5,000 to S\$5,500.

Jun 1985. The Medisave Scheme is extended to include the National University Hospital.

20 Jul 1985. Members are permitted to use the entire amount in their Ordinary Account to buy private property and to redeem outstanding housing loans. Prior to this, they were able to use only up to 90 percent of the funds in their Ordinary Account. In addition, members are allowed to buy more than one residential property with their savings.

1 Jan 1986. The Medisave Scheme is further extended to include seven private hospitals and also to cover the hospitalization expenses of

grandparents who are Singapore citizens or permanent citizens.

1 Apr 1986. A ceiling of S\$5,000 is set for the Medisave Account. For those above age 55, the ceiling is raised to S\$6,000.

1 May 1986. The Approved Investments Scheme is introduced to give CPF members the flexibility to invest their CPF savings in trustee and approved stocks, unit trusts, convertible loan stocks, and gold. The objective is to enable members to earn higher returns if they can, so as to enhance their savings for old age.

The Approved Nonresidential Properties Scheme (ANRPS) is introduced. Under this scheme, members are allowed to use funds to purchase commercial and industrial properties.

Jun 1986. The Government Bridging Loan Scheme, administered by the CPF Board on behalf of the government, is introduced to assist private homeowners who might be adversely affected by the reduction in CPF contributions. The scheme provides low-cost bridging finance to make up for the reduced contributions of such members for a period of two years.

1 Nov 1986. The Approved Investments Scheme is liberalized to let members use up to 40 percent of their investable savings for approved investments.

1 Jan 1987. The Minimum Sum Scheme (MSS) enables members to withdraw all their savings in their Ordinary and Special Accounts at age 55 after setting aside a minimum sum in the Retirement Account, which acts as a safety net for members to fall back on in case they have no other means of support. The maximum amount to be set aside in the Retirement Account is S\$30,000 for an individual and S\$45,000 for a married couple. The savings in this account can be used to buy an approved annuity, which is deposited with an approved bank or retained with CPF. From age 60, a member receives a monthly payment of at least S\$230 until the minimum sum plus interest is exhausted. Members can also pledge their properties in place of the minimum sum.

1 Apr 1987. MSS is extended to enable individuals (CPF and non-CPF members) to provide for their parents' or their own old-age needs. They can tap their Retirement Accounts through transfers of CPF savings or with cash. Siblings can also combine their CPF savings to tap their parents' Retirement Accounts. If a member is permanently disabled, he is not required to set aside a minimum sum.

For those above age 55, a ceiling of S\$6,500 is set for the Medisave account.

Aug 1987. Four approved unit trusts, namely, the Shenton Thrift Fund, the Savers Capital Fund, the Union Singapore Fund, and Unifund, are included under the Approved Investments Scheme.

1 Jan 1988. The limit on the use of CPF savings under ARPS is raised from 80 to 100 percent of the valuation price. Members can thus use more of their CPF savings to buy properties or service their housing loans.

The use of Medisave for hepatitis-B vaccinations is extended to private clinics.

Mar 1988. The Home Protection Insurance Scheme (HPIS) is further refined. A health declaration to determine the insurability of individuals before joining the scheme is introduced.

1 Apr 1988. For those above age 55, a ceiling of S\$7,000 is set for the Medisave Account.

1 Jun 1988. The use of Medisave for hepatitis-B vaccinations is extended to polyclinics.

1 Nov 1988. Childless couples can use up to S\$2,000 of their Medisave savings to pay for assisted conception procedures.

April 1989. The minimum sum to be set aside under MSS is S\$30,900 for an individual, and S\$46,400 for a married couple. The upper limit is also revised upward. Members or their parents can now enjoy a higher limit. By paying a lower annual premium with his CPF savings, a member is insured for a sum of S\$30,000. He or his dependents will receive the money should he become permanently disabled or die.

14 May 1989. The Dependents' Protection Insurance Scheme is introduced. It is an optional life insurance scheme that gives financial protection to CPF members below 55 years of age. It covers members against permanent disablement or death.

1 Jun 1989. The Approved Education Scheme (AES) is introduced. It enables members to borrow part of their CPF savings to pay for their own or their children's tertiary education, subject to the 40 percent investable savings limit.

Jun 1989. Medisave is extended to include the use of renal dialysis and radiotherapy at the Mount Elizabeth Hospital.

Sep 1989. Medisave is extended to include the use of renal dialysis and radiotherapy at the Singapore General Hospital.

1 Apr 1990. The minimum sum to be set aside under MSS is S\$31,600 for an individual, and S\$47,400 for a married couple. The upper limit is also revised upward.

1 Jul 1990. MediShield, a catastrophic illness insurance scheme, is introduced. It helps participants pay for their hospitalization expenses when they are struck with prolonged or serious illnesses.

1990. The use of Medisave savings is extended to include psychiatric treatment at private hospitals and eye surgery at the Singapore National Eye Center.

1 Apr 1991. The minimum sum to be set aside under MSS is S\$32,700 for an individual, and S\$49,100 for a married couple. The ceiling is also revised upward.

1991. Repayment of education loans begins.

Medisave is extended to cover outpatient chemotherapy treatment for cancer at approved hospitals and centers, and for treatment at the Balestier Medical Center. Members have to set aside S\$9,000 in their Medisave Account when they withdraw their CPF at age 55.

MediShield is extended to cover cyclosporin prescriptions for patients who have undergone organ transplants.

1 Apr 1992. The minimum sum to be set aside under MSS is S\$33,800 for an individual, and S\$50,700 for a married couple. The limit is also revised upward.

Members have to set aside S\$10,000 in their Medisave account when they withdraw their CPF savings at age 55.

1 July 1992. MediShield is extended to cover members up to 70 years of age. The claim limit is also revised upward to give better benefits to CPF members for their hospitalization and medical expenses.

Medisave is extended to all self-employed persons. By contributing to Medisave, the self-employed are also covered by MediShield.

1 Dec 1992. Non-Residential Properties Scheme (NRPS) members can use their CPF savings to invest in commercial properties with a remaining lease of 60 years, instead of the previous 75 years.

Residential Properties Scheme (RPS) rules are relaxed to allow members to use their CPF savings to buy private properties with a remaining lease of 60 years, instead of 75 years.

1992. Medisave is extended to cover treatment at the St. Andrew's Community Hospital and outpatient azidothymidine (AZT) treatment for AIDS patients at approved hospitals.

Fourteen trustee stocks, one loan stock, and one primary share issue are added to the list of approved investments. Another two trustee stocks that do not meet the requirements set out in the Trustees Act are removed.

1 Jan 1993. Medisave is extended to cover outpatient chemotherapy treatment at approved private clinics.

1 Apr 1993. The minimum sum for an individual is revised from S\$33,800 to S\$34,600. For a married couple, the new minimum sum is S\$51,900. The limit is revised upward.

Members below age 55 are required to set aside up to S\$16,000 in their Medisave Account, while those who withdraw their savings at age 55 have to

set aside S\$11,000 for their health-care needs during retirement.

1 Jun 1993. Medisave is extended to cover treatment at the Ang Mo Kio Community Hospital.

1 Oct 1993. Under the Public Housing Scheme, members can withdraw up to 100 percent of the purchase price of the flat or its market value at the time it was bought, whichever is lower. When this limit is reached, members can further withdraw up to 80 percent of their gross CPF savings in excess of the minimum sum to repay their outstanding housing loan.

Under RPS, before 1 October 1993, members could withdraw from their Ordinary Account only up to 100 percent of the purchase price of the property or its value at the time it was bought, whichever is lower. From 1 October 1993, they can withdraw further to repay their outstanding loan. The additional amount members can use is up to 80 percent of their gross CPF savings in excess of the minimum sum of S\$34,600. In addition, members can use their CPF savings to buy land and build their own houses. They are allowed to withdraw their CPF savings only after the construction of the building has been completed and the temporary occupation permit issued. CPF members who have properties under RPS and now wish to totally demolish the houses to build new ones can also use the CPF savings to repay the loan taken out for the construction.

The Basic and Enhanced Investment Schemes are introduced. Under the Basic Investment Scheme (BIS), a member may use up to 80 percent of his savings, after setting aside a minimum reserve of S\$34,600, to invest in trustee shares, loan stocks, and unit trusts. Ten percent of his investable savings may also be invested in gold and nontrustee shares. Under the Enhanced Investment Scheme (EIS), a member may use up to 80 percent of the CPF savings in excess of the S\$50,000 cash balance in his Ordinary and Special Accounts for investments approved under BIS. In addition, he may also invest in shares and loan stocks listed on Stock Exchange

of Singapore Dealing and Automated Quotation (SESDAQ), government bonds, bank deposits, fund management accounts, and endowment insurance policies. A CPF member can only have either a BIS or an EIS account at a time.

Oct 1993. Under the government's asset enlargement program, Singaporeans who are CPF members are able to buy Singapore Telecommunications Ltd. group A shares, which are special discounted shares. The aim is to make Singapore a share-owning as well as home-owning society, thereby giving Singaporeans a greater stake in the country.

1993. The CPF Share Ownership Top-Up Scheme (SOTUS) is introduced to help Singaporeans own shares. It gives a S\$200 cash grant to Singaporeans aged 21 years and above who contributed and retained S\$500 in their CPF accounts during the qualifying period between 1 Mar 1993 and 31 Aug 1993. Members who put in less than S\$500 receive a prorated amount.

1 Apr 1994. The minimum sum for an individual is increased to S\$35,400. For a married couple, the new minimum sum is S\$53,100. The limit is revised upward.

Members below age 55 are required to set aside up to S\$17,000 in their Medisave Account. Those who withdraw their savings at age 55 have to set aside S\$12,000 for their health-care needs during retirement.

1 Jul 1994. MediShield Plus is introduced for those who want a higher coverage than that offered under the regular MediShield. It works the same way as MediShield and has two plans, Plan A and Plan B.

Medisave is extended to cover day treatment at the Alexandra Day Hospital.

1 Sep 1994. Medisave is extended to cover treatment at the Ren Ci Hospital.

1 Nov 1994. Medisave is extended to cover treatment at the Assisi Home and Hospice.

1994. All self-employed license holders will have to be up-to-date in their Medisave payments before they can apply or renew their licenses.

The Singapore government introduces the second Share Ownership Top-Up Scheme to help Singaporeans own shares. A cash grant of S\$300 will be given to Singaporeans who contributed at least S\$750 in their CPF accounts during the qualifying period between 1 Mar 1994 and 31 Aug 1995. Members who put in less than S\$750 will receive a prorated grant from the government. The S\$300 cash grant and the voluntary CPF contributions can be used to buy shares when major government-owned corporations go public.

1 Jan 1995. EIS members can invest in foreign stocks through the EIS Unit Trusts and Fund Management Accounts.

1 Mar 1995. The government announces the CPF Top-up Scheme to reward all Singaporeans who have helped contribute to the economy of Singapore. Under the scheme, all adult Singaporeans are given an additional S\$200 in their CPF Ordinary Accounts in mid-October.

The age limit for the Home Protection Insurance Scheme is raised from 55 to 60 years old.

1 Apr 1995. Members are required to set aside up to S\$18,000 in their Medisave Account, while those who withdraw their savings at age 55 have to set aside S\$13,000 in their Medisave Accounts to meet health-care needs during retirement. These Medisave limits will be raised by S\$1,000 every April until they reach S\$20,000 and S\$15,000, respectively.

14 May 1995. The age limit for the Dependents' Protection Insurance Scheme is raised from 55 to 60 years to be in line with the current retirement age. At the same time, the insured amount is increased from S\$30,000 to S\$36,000 to take into account wage increases over the years.

Jun 1995. The CPF Board implements the automatic refund of cash balances in excess of S\$1,000 in members' CPF Investment Accounts to their CPF Ordinary Accounts at the end of every quarter.

During the year, the board includes six unit trusts and two fixed-deposit banks under BIS and EIS.

1 Jul 1995. MSS is enhanced to help members set aside sufficient savings to support a modest standard of living during retirement. This scheme was previously pegged at subsistence level. Members who turn 55 from 1 Jul 1995 are required to set aside a minimum sum of S\$40,000, of which at least S\$4,000 must be in cash and the remaining S\$36,000 can be pledged with a property. The minimum sum will be raised gradually by S\$5,000 a year until it reaches S\$80,000 in the year 2003, with S\$40,000 required to be in cash. The limit is adjusted upward.

Jul 1995. In recognition of older Singaporeans' contribution to the economy and the need to help them build up their Medisave Accounts, the government announces the Pre-Medisave Top-Up Scheme. Under this scheme, Singaporeans aged 61 and above as of 1 Apr 1995, who contributed S\$50 into their Medisave Accounts during the qualifying period between 1 Jul and 31 Dec 1995 will receive additional money ranging from S\$100 to S\$350 (depending on their age) into their Medisave Accounts.

1995. MediShield is enhanced with increases in claimable limits for daily room and board, intensive care unit treatments, surgical treatments, outpatient treatments, and the overall claimable limit.

Mar 1996. The government announces that from 1 Jan 1997, BIS and EIS will be merged to form the CPF Investment Scheme (CPFIS).

The government taps Singaporeans' CPF accounts under the third SOTUS. Adult Singaporeans who contributed at least S\$500 between 1 Mar 1996 and 28 Feb 1997 will receive an additional sum of money between S\$300 and S\$500 depending on their National Service status. Members who contributed less than S\$500 will receive a prorated amount from the government.

Under the CPF Medisave Top-Up Scheme, all adult Singaporeans are given an additional S\$200 into their CPF Medisave Accounts on 26 Oct 1996.

1 Apr 1996. Members are required to set aside up to S\$19,000 in their Medisave Account, while those who withdraw their savings at age 55 have to set aside S\$14,000 in their Medisave Accounts to meet health-care needs during retirement. These Medisave limits will be raised by S\$1,000 annually until they reach S\$20,000 and S\$15,000, respectively.

1 Jul 1996. Members who turn 55 from 1 July 1996 are required to set aside a minimum sum of S\$45,000, of which at least S\$8,000 must be in cash and the remaining S\$37,000 can be pledged with a property. The limit is revised upward.

In recognition of older Singaporeans' contribution to the economy and the need to help them build up their Medisave Accounts, the government reannounces the Pre-Medisave Top-Up Scheme. Under this scheme, Singaporeans aged 62 and above as of 1 Apr 1996 who contributed S\$50 into their Medisave Accounts during the qualifying period between 1 Jul and 31 Dec 1996 will receive an additional sum ranging from S\$100 to S\$350 (depending on their age) into their Medisave Accounts.

The age ceiling for MediShield and MediShield Plus is extended from 70 to 75 years old.

Aug 1996. The government makes a second offer of discounted Singapore Telecommunications (ST) shares.

1996. RPS is extended to executive condominiums, which the government introduces to replace Housing Board executive flats.

Appendix 2

Major Developments in the Singapore Government Securities Market

May 1987. The new Singapore government securities market is launched. A regular schedule of issues is introduced. A market committee is selected from among the financial institutions to provide the Monetary Authority of Singapore (MAS) with feedback on demand conditions. This group, comprising five primary and three registered dealers, also forms the core of the distribution network for government securities. The new government stocks issued would be scripless, with transactions in these securities being recorded through book entries in the main computerized register maintained by MAS.

Two-year and five-year notes are issued quarterly, while Treasury bills are issued more frequently. Three-month Treasury bills are issued weekly, while six-month and one-year Treasury bills are issued bi-monthly. In light of feedback from the market committee, the schedule of each of these issues is revised to once every four months at the start of 1988, except for three-month Treasury bills, which remain as weekly issues.

Primary and registered dealers are committed to quote two-way quotes under all market conditions.

1988. Except for the 91-day Treasury bill which continues to be auctioned weekly, issues for scripless government securities are made less frequent so that each can be larger and remain the current issue traded for a longer period. With several issues of each maturity already in the market, the issuance of the 182-day, 364-day, two-year, and 5-year notes is reduced to three times.

1989. While 91-day Treasury bills continue to be auctioned weekly, the frequency of the other Treasury bills and government notes issues is moderated to twice a year.

1990. The number of primary dealers decreases from eight to seven toward the end of the year.

Jan 1991. To further enhance liquidity in government securities trading, MAS initiates an interdealer broking system, ensuring that two-way prices are readily available to both dealers and their customers.

One of the seven primary dealers, a joint venture between two banks, goes into voluntary liquidation in the first quarter of 1991. Its primary dealership is taken over by its majority shareholder.

1997. Primary dealers increase from seven to eight.

Appendix 3

Efforts Made by the Central Provident Fund Board to Find Other Investment Avenues

1977. The board decides to trade Singapore government securities in the secondary market. Hitherto, all Singapore government stocks in the board's possession were held to maturity for redemption. However, with the board holding more than 70 percent of all Singapore government stocks issued, it was felt that the board should participate in the secondary market for these stocks and help to activate and develop the market. The board places its funds as advance deposits with the Monetary Authority of Singapore (MAS). During the year, the board invests in two issues of 6.25 percent tax-free registered stocks.

18 Jan 1978. The board begins trading Singapore government-registered stocks in the secondary market to increase its investment returns. Market activity in these stocks was limited, as financial institutions generally held stock investments to meet statutory requirements.

1979–1980. The board invests in Singapore government stocks and places funds as advance deposits with MAS. During the year, the board is allotted three issues of 6.25 percent tax-free registered stocks.

1981–1983. The board invests in Singapore government stocks and places funds as advance deposits with MAS pending the issue of such stocks. Only a small float is set aside to meet operational requirements.

1984. Almost all of the board's funds are invested in Singapore government bonds ranging from one

to 18 years and placed as advance deposits with MAS pending the issue of such bonds. Only a small float is set aside to meet operational requirements.

1985. Almost all of the board's funds are invested in Singapore government bonds ranging from three to 18 years and placed as advance deposits with MAS pending the issue of such bonds. Only a small float is set aside to meet operational requirements.

1986. Besides a small float set aside to meet operational requirements, all of the board's funds are invested in Singapore government bonds with maturity periods ranging from two to 17 years and placed as advance deposits with MAS pending the issue of such bonds.

1987. Central Provident Fund (CPF) members' funds are invested in Singapore government bonds and placed as advance deposits with MAS pending the issue of such bonds. CPF's holdings of fixed-rate bonds are replaced by floating-rate bonds on 1 September 1987. The replacement removes possible financial risk to the fund by matching earnings with interest payments to members. The interest rate on the new bonds is pegged to the CPF interest rate, which is adjusted every six months according to market rates.

Insurance funds are managed by institutional fund managers. These funds are invested primarily in fixed deposits, negotiable certificates of deposit, equities, and government bonds.

1988–1996. CPF members' funds are invested in Singapore government bonds and placed as advance deposits with MAS pending the issue of such bonds.

Home insurance funds are managed by institutional fund managers. These funds are invested primarily in fixed deposits, negotiable certificates of deposit, equities, and government bonds.

Notes

¹An older pension fund called the Academic Staff Provident Fund still exists today. This fund was set up for the teaching staff of the then University of Singapore. The civil service had its own pay-as-you-go pension system.

²Ministry of Finance, (1964), p. 6.

³Whether CPF savings are enough for retirement has been of lingering concern and occasionally emerges as a topic of debate in Parliament. An increasing lifespan and rising healthcare cost are two major factors behind the concern.

⁴A foreigner may withdraw all his CPF savings when he leaves the country but in that case he cannot be employed again in Singapore. This policy of disallowing re-employment in Singapore is clearly stated as a warning in the CPF withdrawal form. It is largely aimed at West Malaysians who, given their proximity to Singapore, would enjoy an undue advantage over the locals should there be no such policy.

⁵MAS Annual Report 1986/87, p. 2.

⁶The eight primary dealers comprise the six local commercial banks, Citibank, and Hongkong and Shanghai Bank.

⁷POSBank, formerly the Post Office Savings Bank, is a statutory board rather than a commercial bank.

⁸A bank officer, asked about the possibility of investments in SGS with CPF savings, expressed surprise. He did not see why anyone would consider investing in SGS given their low yields. He explained that the SGS market is illiquid and specific issues may have to be specially sourced. In his own words, "we get an enquiry from an individual about investing in SGS only once in a blue moon."

⁹Estimated average daily turnover for 1997 on the Stock Exchange of Singapore Dealers Automated Quotation (SESDAQ), the second-tier securities market on the Stock Exchange of Singapore.

¹⁰This was one of 55 recommendations of the finance and banking subcommittee of a national panel formed to look into Singapore's competitiveness. Most of the other recommendations were accepted by the government.

¹¹Reported in the *Business Times*, 19 February 1998.

¹²In Singapore, obtaining social welfare aid is a tortuous process and even then, the amount of the allowance is not meant to be sufficient for one to rely solely on the state.

¹³There is one exception to the disapproval of private pension management firms. The Academic Staff Provi-

dent Board retains its autonomy in actively managing contributions from the university teaching staff who have the option of not contributing to CPF.

¹⁴The figures were compiled by the Central Depository (CDP), the electronic share registry. It is a subsidiary of SES. The information is not available to the public.

¹⁵The bank learns about the prospective purchase only a few days after the order is placed, when CPF applies for a release of funds.

¹⁶Many individuals, including the author, have been caught by a cash shortfall even after determining that there are sufficient funds available for securities investment. One reason for this is the seven-day lag between order and settlement, which means that the account balance on the day of the order may not be the same as the balance on the day of settlement because of outstanding transactions. Even bank officers responsible for CPFSAIS accounts have given up trying to explain how the shortfall could have occurred and simply ask their clients to make cash top-ups.

¹⁷This actually led to murmurs about the share being overpriced in the first place.

¹⁸Based on a report of the Central Provident Fund Study Group in April 1986. Funds raised through the issuance of government bonds are joined with government reserves and the funds entrusted by other government bodies to MAS, and later the Government of Singapore Investment Corporation, for management.

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