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The Role of Occupational Pension Funds in Mauritius

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Abstract

Mauritius belongs to a select group of developing countries where contractual savings—savings with insurance companies and pension funds—exceed 40 percent of GDP and represent a major potential force in the local financial system. Pension funds account for 75 percent of contractual savings.

Contractual savings institutions invest in government securities, housing loans, corporate securities, real estate and bank deposits. They currently hold 35 percent of government securities and also account for 36 percent of total outstanding housing loans.

Given their strong demand for long-duration assets, they can stimulate the issue of long-term government bonds (both inflation-linked and zero-coupon) and the development of corporate debentures, mortgage bonds, and mortgage-backed securities.

Mauritius has a balanced and well-managed multipillar pension system. In addition to several public components, such as the Basic Retirement Pension, the National Pensions Fund (NPF), the National Savings Fund, and the Civil Service Pension Scheme, there are over 1,000 funded occupational pension schemes that play an increasingly important part in the whole system.

The funded schemes are divided into two main groups—those insured and/or administered by insurance companies, and those that are self-administered and are registered with the Registrar of Associations.

Coverage of the funded schemes is estimated at about 10 percent of the labor force. Together with the unfunded civil service scheme, occupational pension schemes cover about 100,000 employees or 20 percent of the labor force.

All types of pension funds, including the public ones, report low operating costs. This reflects the absence of marketing and selling costs and, in the case of large private pension funds, the assumption of some costs by sponsoring employers.

The investment performance of the self-administered funds was less than fully satisfactory in the late 1990s, reflecting poor returns on the local and foreign equity markets. Funds insured or administered by insurance companies as well the NPF performed better during this period because of their heavier allocations in government securities and housing loans. However, over a longer period, the private pension funds probably outperformed the NPF.

The regulatory framework, though fragmented, is not unreasonable. It has many important provisions, such as observance of internationally acceptable accounting and actuarial standards and minimum vesting and portability rules, and it does not impose prescribed limits on investments.

However, consolidation and modernization of the regulatory framework is required, while supervision, which is currently nonexistent, needs to be developed and to be proactive.

This paper—a product of the Financial Sector Operations and Policy Department—is part of a larger effort in the department to study pension funds and contractual savings. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Priscilla Infante, room MC9-904, telephone 202-473-7642, fax 202-522-7105, email address pinfante@worldbank.org. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The author may be contacted at dvittas@worldbank.org. April 2003. (34 pages)

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Glossary

BOM	Bank of Mauritius
BRP	Basic Retirement Pension
CEB	Central Electricity Board
CSPS	Civil Service Pension Scheme
FSC	Financial Services Commission
GAD	Government Actuary's Department
IAS	International Accounting Standards
LEL	Lower Earnings Limit
MAS	Mauritius Accounting Standards
MCB	Mauritius Commercial Bank
MHC	Mauritius Housing Corporation
NPB	National Pensions Board
NPF	National Pensions Fund
NSF	National Savings Fund
SBM	State Bank of Mauritius
SICOM	State Insurance Corporation of Mauritius
SIPF	Sugar Industry Pension Funds
UEL	Upper Earnings Limit

I. Introduction

Mauritius, a small island economy in the Indian Ocean off the coast of Africa, has been remarkably successful in achieving rapid economic growth in the context of financial and political stability. It has been able to overcome unfavorable initial conditions and exposure to economic sectors that suffered from cyclical and structural weaknesses. This success has been attributed to the pursuit of stable macroeconomic policies and the promotion of sound and efficient institutions. The importance of the latter in explaining the strong growth performance of Mauritius has been highlighted in Subramanian and Roy (2001).

These policies have benefited many sectors of the economy, including the financial sector. They have stimulated the growth of banks as well as insurance companies and pension funds. In the pensions area, they are underscored by the creation of a well-designed multi-pillar pension system that comprises several public components, such as the Basic Retirement Pension, the National Pensions Fund, the National Savings Fund, and the Civil Service Pension Scheme, alongside a large number of occupational pension schemes.

This paper provides an overview of the development and role of occupational pension schemes in Mauritius. The main focus is on the funded schemes that have been set up by private companies and statutory bodies. However, to provide a broader context of their role and relative importance, the paper also offers a brief overview of the contractual savings market and the public provision of pensions. The various components of public provision are discussed at greater length in the Annex. The paper draws extensively on, and also complements, the recently completed World Bank study (World Bank 2001) and its background papers (Demarco 2000, Piggott and Whitehouse 2000, Rofman 2000, and Sin 2000).

The structure of the paper is as follows. Following this introductory section, section II provides a brief summary of the contractual savings market. This is followed by section III that covers the institutional structure of the pension system, subdivided into non-occupational and occupational pension schemes. Section IV analyzes the investment and operating performance of different types of funds, while section V reviews the regulation and supervision of pension funds with particular emphasis on existing gaps and areas requiring strengthening. Section VI offers a brief evaluation of the performance of company pension funds against a set of economic criteria and then reviews their future prospects and main policy issues. The Annex offers a more detailed discussion of the various components of public provision of pensions.

II. The Contractual Savings Market

Mauritius belongs to a select group of developing countries where contractual savings (i.e., savings with insurance companies and pension funds) exceed 40 percent of GDP and represent a major potential force in the local financial system. Occupational

pension funds, including those insured and/or administered by insurance companies, represent 75 percent of contractual savings.

Other developing countries with large contractual savings sectors include South Africa, Malaysia and Chile alongside most high income countries and some island economies like Cyprus and Malta. The vast majority of developing countries in Africa, Asia and Latin America as well as most transition countries of Eastern Europe are well below this level.

Table 1: Assets of Contractual Savings Institutions, 1997-2001

	1997	1998	1999	2000	2001
			(MUR million)		
Registered Pension Funds	1704	2095	2368	2720	2959
Sugar Industry Pension Funds	1180	1750	2005	2500	2196
Insured and Administered**	5502	6460	7210	8120	8904
Total Occupational Pension Funds	8386	10305	11583	13340	14059
NPF	12174	14266	16464	18899	21772
NSF	948	1366	1825	2385	2849
Insurance Companies	14130	16672	19200	21123	23971
Total	35638	42609	49072	55747	62651
Less Double Counting**	5502	6460	7210	8120	8904
Contractual Savings Assets	30136	36149	41862	47627	53747
			(percent of GDP)		
Registered Pension Funds	1.93	2.10	2.21	2.30	2.25
Sugar Industry Pension Funds	1.34	1.75	1.87	2.11	1.67
Insured & Administered**	6.23	6.47	6.72	6.85	6.77
Total Occupational Pension Funds	9.50	10.32	10.80	11.26	10.69
NPF	13.78	14.28	15.33	15.95	16.56
NSF	1.07	1.37	1.70	2.01	2.17
Insurance Companies	15.99	16.69	17.88	17.83	18.23
Total	40.34	42.66	45.71	47.05	47.65
Less Double Counting**	6.23	6.47	6.72	6.85	6.77
Contractual Savings Assets	34.11	36.19	38.99	40.20	40.88
			(percent of total assets)		
Registered Pension Funds	5.65	5.80	5.66	5.71	5.51
Sugar Industry Pension Funds	3.92	4.84	4.79	5.25	4.09
Insured & Administered**	18.26	17.87	17.22	17.05	16.57
Total Occupational Pension Funds	27.83	28.51	27.67	28.01	26.16
NPF	40.40	39.46	39.33	39.68	40.51
NSF	3.15	3.78	4.36	5.01	5.30
Insurance Companies	46.89	46.12	45.86	44.35	44.60
Total	118.26	117.87	117.22	117.05	116.57
Less Double Counting**	18.26	17.87	17.22	17.05	16.57
Contractual Savings Assets	100.00	100.00	100.00	100.00	100.00

* estimates; ** insured and administered pension funds

Source: FSC, NPF, NSF.

Contractual savings amounted to MUR 54 billion in 2001, equivalent to 41 percent of GDP (Table 1).[1] In 2001, the sector covered the National Pensions Fund, the National Savings Fund, 22 active insurance companies and 1007 occupational pension funds created by statutory bodies and private sector companies (of the latter, 37 were self-administered and registered with the Registrar of Associations; the remainder were either insured or administered by insurance companies).

Funded occupational pension funds accounted for 26 percent of total net assets of contractual savings institutions, the NPF and NSF together represented 46 percent of total net assets, while the non-pension assets of insurance companies accounted for the remaining 28 percent. Public sector institutions, including the NPF, NSF and SICOM were responsible for managing 57 percent of the total, although the operations of SICOM are no different from those of any private sector manager.

The main types of contractual savings institutions exhibit significant differences in their asset allocation policies (Table 2). As a group, contractual savings institutions favor government securities (mostly two-year treasury bills) and housing loans. The NPF invests more heavily in government securities, but is underweight in company shares and foreign assets. The NPF provides substantial indirect support to the financing of the housing market, through its sizable loans to the Mauritius Housing Corporation.

Table 2: Asset Allocation of Contractual Savings, 2001

Percent of total assets	Pension Funds	NPF	Insurance Companies	All
Government Securities	21	58	15	35
Non-Government Bonds	3	5	8	6
Company Shares	15	7	17	12
Bank deposits	6	11	9	10
Housing Loans	27	8	23	17
Loans to Sponsors	4	--	--	--
Real Estate	8	2	6	5
Foreign Investment	12	4	9	7
Other	4	5	13	7
Total	100	100	100	100

Source: Estimated on the basis of data collected by the FSC, NPF and Registrar of Associations

Pension funds and insurance companies are more heavily involved in extending direct housing loans and in holding company shares and foreign assets.[2] However, there are large differences in asset allocation policies among individual pension funds and insurance companies, which tend to deviate significantly from the average pattern of their respective sectors.

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[1] The reported data aggregate statistics of individual pension funds. Most funds have financial years ending in December but several report at the end of June and some use other months.

[2] The asset allocation of insurance companies differs from the data published by the FSC. This is because official statistics do not divide clearly the various types of assets. The figures reported in Table 2 were estimated from a perusal of the annual reports of all operating companies. The high level of "other assets" is worth noting. To some extent, it reflects "loans to shareholders" among the more closely held companies

Most types of contractual savings institutions benefit from positive cash flows and their total assets are likely to continue to grow relative to GDP. This has important implications for the need to develop robustly regulated and effectively supervised financial institutions and markets, but also for the need to increase overseas investments in order to achieve a more optimal level of risk diversification. Pension funds and insurance companies play an active part in the provision of long-term and fixed-rate housing loans and have in general a strong demand for long-duration assets. They can stimulate the issue of long-term government bonds (both inflation-linked and zero-coupon) and the development of corporate debentures, mortgage bonds and mortgage-backed securities.

III. Institutional Structure of Pension System

The institutions of the Mauritian pension system can be divided into two separate groups: those that are occupationally based and those that are based on more general characteristics. The BRP, NPF and NSF belong to the second group, whereas the CSPS and the funds established by statutory bodies and private companies form the first group. This section summarizes the main features of the general group and then reviews the different types of occupational pension schemes.

A. Non-Occupational Pension Schemes

Basic Retirement Pension (BRP)

The BRP is a universal pension that is financed from general taxes. It is equal to 20 percent of average earnings and is paid to all people aged over 60 years. Its current cost is estimated at 3 percent of GDP (2000), but demographic aging is projected to raise this to 6 percent by 2020 and 11 percent by 2050 (World Bank 2001). The government is considering various options for containing the cost of the BRP. These essentially include raising the retirement age and introducing means tested benefits (see the Annex to this paper for more details).

National Pensions Fund (NPF)

The NPF is a compulsory scheme that covers all employees of private sector firms, except those on very low wages and some sugar industry employees.[3] It is a defined benefit scheme operating on the French point system. It covers over 300,000 employees or 60 percent of the labor force. Beneficiaries are still less than 50,000, resulting in a support ratio of over 6 active contributors per beneficiary.

Contributions are paid by both employers and employees and amount respectively to 6 and 3 percent for a total of 9 percent of covered earnings (subject to a ceiling). Contributions result in the accumulation of points on the basis of the declared cost of a point at the time of contribution. Pension benefits depend on the accumulated points and the declared value of a point at the time of retirement. The cost and value of points have

[3] The NPF also administers the BRP, the benefits and administration expenses of which are covered by budgetary transfers.

been set a ratio of 11 to 1 (implying an annuity conversion factor of 9.09 percent). In a fully-indexed system (or in a world without inflation and wage growth), a 40-year contributory career would produce a replacement rate of just below 33 percent of indexed earnings.

Initially, the cost and value of a point lagged inflation by a significant margin. As a result, the real level of the cost and value of a point fell to 75 percent of the original level. However, since 1989 the cost and value of a point have been adjusted in line with price inflation. Because of this under-indexation and of the positive real wage growth, the resulting pensions have been a lower percentage of pre-retirement earnings than the targeted level of 33 percent. **As a result, the performance of the NPF as a pension institution has not been fully satisfactory.**

The ceiling on covered earnings was initially set at a very high level (175 percent of average earnings). However, it has also been broadly indexed to prices (rather than wages) and this has resulted in its relative decline over time (presently it amounts to 80 percent of average earnings). This has left more scope for the development of occupational pension schemes. The lower earnings limit has also fallen in relative terms (from the original 25 percent to about 11.5 percent of average earnings in 2001), thus widening the net of covered workers.

The NPF has accumulated substantial financial resources equivalent to 17 percent of GDP. These are heavily invested in government bonds (58 percent) with relatively small shares in corporate securities and foreign assets. Asset allocation is not subject to legally imposed limits but is decided by an Investment Committee, comprising senior civil servants. **The performance of the NPF as a financial institution has been satisfactory.** The real investment return averaged nearly 4 percent in the 1990s (and almost 5 percent over the past five years), while its operating expenses have been on a declining trend. In 2001, they amounted to 9.2 percent of contributions or 48 basis points of average total assets. The NPF's investment and operating performance has been superior to that of the average private sector pension fund during the period under review.[4]

This satisfactory performance was marred by the discovery in February 2003 of a fraud that had been ongoing for five years and involved a time deposit of MUR 500 million with the Mauritius Commercial Bank (MCB), the largest and oldest commercial bank in the country. The details of the scandal are still unraveling at the time of writing this paper. However, its non-detection for many years indicates a major deficiency in internal audit and control systems at both of these nationally important institutions. The NPF accounts are audited by the Director of Audits, but usually with a lag of at least two years. This incident underscores the importance of commissioning external audits by private international firms as well as the need to strengthen internal audit and control systems.

[4] This is related to the poor performance of domestic and foreign equities in the late 1990s. Over a longer period, the average private pension fund probably outperformed the NPF.

The NPF faces two major challenges. First, there is a need for a greater diversification of its assets in non-government securities (corporate securities and foreign assets). Investing a greater proportion of assets in such securities would require the creation of a more transparent, professional and independent fund governance and asset management structure. The second challenge is to enhance the transparency of its operations, simplify the link between contributions and benefits, and improve its performance as a pension institution. The authorities are considering conversion of the NPF from its current opaque point system to a defined contribution system with individual capitalization accounts, crediting of net investment returns to workers' accounts and purchase of a real annuity on retirement (see the Annex for more details).

National Savings Fund (NSF)

The NSF is a defined-contribution scheme that offers covered workers a lump sum on retirement. All employees are required to participate in the NSF, including civil servants and employees of statutory bodies. The contribution rate amounts to 2.5 percent of covered earnings and is paid by employers. The NSF has accumulated resources equivalent to 2 percent of GDP. These are heavily invested in government securities. The NSF does not play a major part either as a pension fund or as a financial institution. It could be merged into the activities of a reformed NPF in the future.

B. Occupational Pension Schemes

Occupational pension schemes cover three main types: the civil service pension scheme (as well as those covering local government employees); pension schemes for various statutory bodies; and pension schemes established by private sector entities. The latter two types operate heavily (but not fully) funded schemes that have accumulated substantial resources, amounting to MUR 14 billion in 2001 and corresponding to 11 percent of GDP. However, the scheme covering civil servants is unfunded and is financed from the budget. Its cost was estimated at 1.3 percent of GDP in 2001.

Table 3: Number of Approved Occupational Pension Schemes (1998-2002)

	1998	1999	2000	2001	2002
Total Number	882	922	967	1007	1095
Registered	30	32	35	37	42
Insured and/or Administered	852	890	932	970	1053

Source: Tax Commissioner and Registrar of Associations

Approved pension schemes, outside those covering civil servants and local government employees, increased from 882 in 1998 to 1007 in 2001 (and 1095 in 2002). The number of self-administered and registered funds rose from 30 in 1998 to 37 in 2001 (and 42 in 2002). The vast majority of funds, old as well as new, continues to be insured and/or administered by insurance companies (Table 3). Anglo-Mauritius Life Assurance Company appears to have the lion's share of group pension insurance business, facing competition from a small number of life insurance companies.

However, about 100 pension schemes of statutory bodies and some 40 private company schemes are administered (but not insured) by the State Insurance Corporation of Mauritius (SICOM). In terms of total assets (and perhaps also membership) these exceed the funds insured and managed by other insurance companies.

The main self-administered funds include the pension schemes of the Rogers Group, the Mauritius Commercial Bank and the New Mauritius Hotels Group as well as some statutory bodies (e.g., the Central Electricity Board and from this year the State Bank of Mauritius). Most large companies establish two pension schemes, catering separately for clerical and manual staff.

There are no detailed data on the total coverage of occupational pension schemes and on how many of them continue to be active. The Civil Service Pension Scheme has some 50,000 civil servants and the schemes administered by SICOM have close to 22,000 members. The three Sugar Industry Pension Funds list 6,000 members, while four large self-administered funds have over 800 active members each. Thus, all these schemes collectively have over 80,000 members. It follows that even on very conservative assumptions, the total coverage of occupational pension schemes is likely to exceed 100,000 employees or 20 percent of the labor force.

Private sector companies establish their pension schemes under the Employees Superannuation Fund Act of 1982 (which amended the earlier 1954 Act), while the schemes of statutory bodies are governed by the Statutory Bodies Pension Funds Act of 1978. Private schemes are sometimes established as trusts. The use of trusts is likely to grow, especially in the offshore sector. Irrespective of legal form, private pension schemes often outsource several aspects of their administration even when they are not insured. The terms and conditions of all schemes must be approved by the Tax Commissioner in order to be eligible for the considerable tax benefits. These include deductibility of contributions without any ceilings and exemption of investment income from any tax. Pension benefits, but not commuted lump sums, are subject to income tax.

Another important component of the overall system is the obligation under the Labor Act for most employers to provide a lump sum retirement gratuity of half a month's pay for each year of service. This is not a prefunded benefit. In the case of many employers it is the only retirement benefit offered on top of the BRP and NPF.

The Civil Service Pension Scheme (CSPS)

The CSPS covers civil servants and operates on an unfunded basis. In line with similar schemes in most countries around the world it has elements that tend to distort incentives and cause large increases in expenditures (such as use of the last monthly salary for calculating pensions, early retirement with generous benefits, indexation to same rank earnings, and lump-sum commutation by using a fixed formula, irrespective of life expectancy and level of interest rates). Because of progressive aging of the covered population, the cost of the CSPS is projected to increase from its current level of 20 percent of the total salaries bill to 30 percent in 15 years time and 50 percent by 2050. At that time, benefits paid could increase from the current level of 1.3 percent of GDP to

between 3 and 3.5 percent. The unfunded accrued liabilities are estimated at 33 percent of GDP (World Bank 2001).

The CSPS faces several critical policy issues. The first concerns the establishment of an appropriate basis and level of funding in order to protect benefits from future budgetary pressures. The second is a need to harmonize its terms and conditions with those offered by private sector entities in order to facilitate labor mobility between the civil service and the private sector. However, in addressing these challenges it is important to examine the whole compensation package of civil servants to ensure that the civil service continues to be able to attract, train and retain high caliber staff.

As in many other countries around the world, one feasible reform option would be to create a defined-contribution scheme for new recruits to the civil service, while continuing the defined-benefit scheme for existing civil servants. A DC scheme would be both funded and fully portable and would not pose any obstacles to labor mobility.[5]

Pension Funds of Statutory Bodies

The pension schemes for the employees of statutory bodies also are non-contributory and offer similar benefits to those of the civil service scheme. However, one fundamental difference is that the pension schemes of statutory bodies are required, by virtue of the Statutory Bodies Pension Funds Act of 1978, to create a fund covering their actuarial liabilities. These funds are administered by the State Insurance Corporation of Mauritius (SICOM) but are not insured by it. They are not therefore included in its balance sheet but are reported in the notes to its annual report. SICOM administers the pension funds of 100 statutory bodies covering nearly 13,000 members. (It also manages 38 private sector funds with nearly 10,000 members.) The statutory pension funds have contribution rates ranging from 15 to 25 percent of covered earnings. The market value of the total assets of the pension funds managed (but not insured) by SICOM amounted in June 2002 to MUR 6.2 billion.

While most occupational pension schemes are heavily funded with assets invested outside the sponsoring employer, the two funds of the Central Electricity Board (for manual and non-manual workers respectively) effectively operate on an unfunded basis. This is because the vast majority of their resources have been lent back to the CEB. For the two funds together, loans to the CEB represent 75 percent of total assets and housing loans to staff another 23 percent. The CEB pension schemes are in principle contributory schemes, with employees required to contribute 6 percent of covered earnings. However, since 1993, the contributions of employees have been paid by the CEB. The 2 pension funds of the Central Electricity Board are among a few funds of statutory bodies that are not managed by SICOM. The financial situation of the CEB pension funds is currently complicated by fact that the CEB is suffering losses, has accumulated a huge debt, and has plans under study for a major restructuring.

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[5] The terms and conditions of the new scheme and the benefits of greater mobility would need to be well communicated to members to minimize the risk of political backlash.

Private Company Pension Schemes

Most of the nearly 1000 private company pension schemes are non-contributory and operate as defined-benefit plans offering pensions equal to two-thirds of final salary on the last month of employment after 40 years of service (480 months). They are thus somewhat less generous than the civil service pension scheme or the statutory bodies pension funds. Moreover, annual pension increases are limited by tax regulations to no more than 3 percent per year.

Private company pension schemes tend to be paternalistic, operating on a non-contributory basis and offering several additional services, including in particular housing loans. Some funds extend housing loans to members at low, below-market, rates. However, sponsoring employers compensate their pension funds for the rate subsidy.

The high level of benefits of most private company pension schemes, especially because they involve the offer of deferred long-term annuities in the face of a serious dearth of long-term assets, should raise questions about the continued affordability of these schemes. This also underscores the importance of effective supervision to ensure the security of pension assets and the honoring of the pension rights of workers.

A recent exception to the prevalence of defined benefit plans is the Rogers Group, which converted its plan into a money purchase scheme (defined-contribution plan) in 1999. Another 100 small pension schemes, including that of Mauritius Union, a medium size insurance company, have also converted to DC plans.

The new Rogers Group pension fund offers a good example of the continuing paternalistic approach adopted by sponsoring employers. The Rogers Group covers all administration costs of the new DC fund. It has also offered a guarantee to all employees in service at the time of conversion, such that their pension benefits would be no lower than what they would have been entitled to had the conversion not taken place. This guarantee is of course on maintaining contributions to the scheme. The Rogers money purchase scheme is contributory and contribution rates increase with age.[6]

The conversion of company schemes from DB to DC plans may represent an early response to the high cost uncertainties of DB plans. However, DC plans transfer the investment risk to workers. As they proliferate, there will be a growing need for developing "protected" investment products, whereby employees benefit from protection against downside risk but have less than full participation in the upside potential. The modalities of "protected " investments are still evolving around the world. To be effective they require development of efficient risk-sharing facilities with specialized financial institutions. DC plans also require the development of an efficient and robust annuity market for fulfilling the objective of providing an adequate and secure pension to retired workers.

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[6] The no-worse-off guarantee may have set an expensive precedent since participating employees will reap the benefits of good investment returns, while employers will have to make any shortfall.

IV. Investment and Operating Performance

The various occupational pension funds appear to adopt different investment policies and are characterized by large variations in their asset allocations (Table 4). There are significant differences between large pension funds (those with more than MUR 100 million in assets), medium funds (those with between MUR 30 and 100 million under management) and small funds (those with less than MUR 30 million in assets). Most funds invest heavily in equities and also have substantial assets in foreign securities, but some focus more heavily on housing loans and real estate.

The Sugar Industry Pension Funds are heavily engaged in the latter two areas. Apart from the funds administered by SICOM and some of the smaller self-administered funds, the large occupational pension funds invest small amounts in government securities. Rather surprisingly given that they are managed by large insurance companies, the insured funds have a small proportion of their assets invested overseas. The CEB funds are predominantly invested in loans to the sponsoring employer and housing loans to members but several smaller funds also have large exposures to their sponsors. Some of the medium and small pension funds invest increasingly in mutual funds, which are classified as other assets in Table 4. The category "other assets" is relatively large for several pension funds and insurance companies. In addition to investments in mutual funds, it also includes "loans to shareholders", which are important for some insurance companies.

Table 4: Asset Allocation of Pension Funds, 2001

	Govt Sec	NonGvt Bonds	Comp Shares	Bank Deps	Hsng Loans	Loans Spons	Real Estate	For Assets	Other Assets
Large Pension Funds	0.4	0.6	24	9	23	25	6	11	1
Medium Pension Funds	11	17	26	12	8	4	2	13	7
Small Pension Funds	18	6	22	13	0.4	6	1	13	20.6
Total Registered	**3**	**4**	**24**	**10**	**19**	**20**	**5**	**11**	**4**
Sugar Industry		2	9	5	37		32	14	1
SICOM	43	2	11	1	26		2	15	
Insured	9	6	20	13	30		6	5	11
Total Occupational	**21**	**3**	**15**	**6**	**27**	**4**	**8**	**12**	**4**
NPF	58	5	7	11	8		2	4	5
Total Pension Funds	**43**	**4**	**10**	**9**	**16**	**2**	**4**	**7**	**5**
Insurance Companies	**15**	**8**	**17**	**9**	**24**		**6**	**9**	**12**
NSF	82		3	6	9				
Total	**34**	**5**	**12**	**9**	**18**	**1**	**5**	**8**	**8**
Double Counting	**32**	**3**	**13**	**5**	**28**		**3**	**12**	**4**
Grand Total	**35**	**6**	**12**	**10**	**17**	**1**	**5**	**7**	**7**

Source: Estimated on the basis of data collected by the FSC, NPF and Registrar of Associations.

Registered pension funds invest small amounts in government securities. This is especially true for the larger funds and is attributed to the short maturity of government debt. Insurance companies hold about 7 percent of outstanding domestic government debt while the NPF and NSF account for a combined 28 percent of total domestic public debt.

Thus, the asset allocation of self-administered funds differs substantially from that of the NPF. In some respects, this underscores the scope for further asset diversification by the NPF. However, it is important to note that many of the equity holdings of occupational pension funds represent locked-in positions. Some fund managers complain that the equity market is so illiquid that it moves against them whether they want to sell or buy.

The pension funds and insurance companies play an important part in housing finance (Table 5). They account for 36 percent of the market, a similar share to that of commercial banks (35 percent) and somewhat larger than that of the Mauritius Housing Corporation (29 percent). However, the share of housing loans declined from 30 to 24 percent of the total assets of insurance companies and pension funds between 1998 and 2001.

Housing loans are attractive to the large self-administered funds as well as the funds insured or administered by insurance companies because of their high return, low default rate and long maturity. Insurance companies and pension funds lend at fixed rates of interest whereas commercial banks provide variable rate loans. Developing markets for mortgage bonds and mortgage securitization would allow pension funds and insurance companies to support the housing finance market indirectly and thus avoid the high expense of mortgage loan origination and servicing. These markets would also enable commercial banks to avoid the interest rate risk they currently assume.

Table 5: Role in Housing Finance, 1998-2001

(percent of total housing loans)	1998	1999	2000	2001
Insurance Companies	28.48	27.23	28.28	29.13
Sugar Industry Pension Funds	4.56	4.51	4.34	4.18
Self-Administered Pension Funds	3.21	3.00	2.97	2.90
All Contractual Savings Institutions	36.25	34.75	35.59	36.22
Commercial Banks	32.37	36.33	35.18	35.21
MHC	31.38	28.92	29.22	28.58
Total	100.00	100.00	100.00	100.00
Total (MUR million)	15357	17294	18332	19213
Total (% GDP)	15.37	16.11	15.47	14.61

Source: FSC, Registrar of Associations, MHC, SIPF.

The operating and investment performance of occupational pension funds has varied considerably over time (Table 6). Data derived from the annual reports that self-administered funds submit to the Registrar of Associations show that over the period 1997-2001 reported operating expenses have been on a rising trend, relative to both annual contributions and average assets.

To some extent this may reflect a fuller reporting of costs. Many funds only include out of pocket expenses among the reported operating costs (for instance, professional fees for auditors and actuaries and levies paid to the Registrar). Other costs are incurred directly by the sponsoring employers. But an increasing number of funds report most expenses, even if the sponsoring employer covers the total costs.

Table 6: Operating Performance of Registered Pension Funds (1997-2001)

(percent)	1997	1998	1999	2000	2001
Operating Expenses/Contributions	3.82	4.81	6.47	7.56	5.86
Operating Expenses/Average Assets	0.53	0.56	0.61	1.06	0.66
Investment Income/Average Assets	8.66	9.09	7.24	9.61	4.71
Benefits/Contributions	42.3	46.0	54.4	46.1	45.3
Benefits/Total Inflows	26.1	25.8	30.3	11.8	31.4
Investment Income/Total Inflows	38.3	43.7	43.0	17.5	29.0
Growth Rate of Total Assets	19.2	22.9	12.6	15.4	7.8

Source: Estimated on the basis of date collected by the FSC and Registrar of Associations.

Table 7: Operating Performance of Occupational Pension Funds, 2001

	Oper Exp/ Contr	Oper Exp/ Aver Assets	Inv Inc/ Aver Assets	Inv Inc/ Tot Inflow	Net Flow/ Aver Assets
Large Pension Funds	4.24	0.49	4.27	26.5	10.3
Medium Pension Funds	11.40	0.97	5.75	40.1	7.6
Small Pension Funds	12.07	2.15	7.69	29.5	20.9
Total Registered	**5.86**	**0.66**	**4.71**	**29.0**	**10.3**
Sugar Industry PF	6.80	0.43	6.92	52.4	5.5
Registered & SIPF	**6.14**	**0.56**	**5.67**	**38.0**	**8.2**
NPF	**9.22**	**0.48**	**11.16**	**68.3**	**14.3**

Source: Estimated on the basis of data collected by the FSC and the Registrar of Associations.

Table 8: Comparative Operating and Investment Performance (1997-2001)

(percent)	1997	1998	1999	2000	2001	Average*
Operating Expenses						
Large Registered Pension Funds	0.39	0.41	0.44	0.97	0.49	0.56
Medium Registered Pension Funds	0.78	0.92	0.96	1.03	0.97	0.97
Small Registered Pension Funds	2.41	1.95	1.96	2.35	2.15	2.13
All Registered Pension Funds	0.53	0.56	0.61	1.06	0.66	0.72
National Pensions Fund	0.77	0.70	0.58	0.53	0.48	0.61
Investment Returns						
Large Registered Pension Funds	9.03	9.07	7.13	10.27	4.27	7.93
Medium Registered Pension Funds	6.87	9.23	7.37	7.81	5.75	7.40
Small Registered Pension Funds	9.04	8.72	8.58	8.94	7.69	8.59
All Registered Pension Funds	8.66	9.09	7.24	9.61	4.71	7.85
National Pensions Fund	10.00	14.26	10.57	10.56	11.16	11.30
Insured/Administered Pension Funds	10.88	13.38	10.94	10.21	9.49	10.97

* The average investment return is the compounded average for the five-year period.
All reported rates are weighted averages.

Source: Estimated on the basis of date collected by the FSC, NPF and Registrar of Associations.

In contrast to company pension funds, the operating costs of the NPF have fallen relative to its contributions and assets. However, both the NPF and the company funds report low operating expenses in comparison to the levels found in Chile and other Latin American countries or to personal pension plans in the United Kingdom. To a large extent this is explained by the absence of marketing and selling costs.

The investment performance of registered funds has fluctuated considerably over time, reflecting realized (and in a few cases, unrealized) capital gains and losses. In general, the investment performance of occupational pension funds has been inferior to that of the NPF over the second half of the 1990s (Tables 7 and 8). Although detailed data covering a longer period are not available, it is likely that the private pension funds outperformed the NPF in earlier periods when domestic and foreign equity market returns were much higher.

The operating and investment performance of occupational pension funds also varies considerable from fund to fund (Table 7). Data for 2001 show that large pension funds report lower operating expenses. This is explained by the presence of economies of scale. Nevertheless, the high level of operating expenses of small funds at over 2 percent of assets is worth noting. In contrast, small funds seem to earn higher investment returns, even though all company pension funds performed badly in 2001, especially relative to the NPF. The 3 Sugar Industry Pension Funds report better returns in 2001 than the registered pension funds. This probably reflects their greater investments in real estate and housing loans compared to company funds that are more heavily invested in company shares.

The differences in operating and investment performance of different types of pension funds over time are shown clearly in Table 8. Small funds consistently report high operating costs as well as slightly higher investment returns. As noted, part of the difference in operating costs may be explained by under-reporting of costs by large pension funds. Large employers are more likely than small employers to absorb various types of operating expenses, such as rent for premises and the salary cost of fund administrators and asset managers. On the basis of collected data, some self-administered funds that probably outsource the administration and investment functions to specialist providers tend to report full operating costs, while others clearly understate operating costs. In the calculation of these operating cost ratios, insurance premiums paid for various insurance services have been excluded as these do not constitute costs incurred for the administration and investment management of pension funds.

The good investment and operating performance of the NPF and of the funds insured and/or administered by insurance companies should be noted. For the NPF this is linked to the absence of prescribed investment limits and the strong performance of government securities in which the NPF invests more than half of its assets. Operating performance has clearly benefited from the presence of considerable economies of scale. The investment performance of insured funds has also benefited from the heavy allocation in government securities and housing loans.

While detailed data on the administration fees charged by insurance companies are not publicly available, market practitioners indicate a level of around 70 basis points, at least for the larger funds. The smaller pension funds are very likely to be charged higher fees. Insured pension funds pay death and disability insurance premiums, administration charges deducted from contributions before investments are made, and fund management fees. Comparison with the performance of self-administered funds would thus be difficult even if full data were available. Self-administered funds are able to seek better deals from specialist providers in each of these areas rather than rely on the same provider for all of them.

V. Regulation and Supervision

Pension fund regulation is currently fragmented among several laws and tax regulations, while supervision is non-existent. Occupational pension funds benefit from large tax incentives and must be approved by the Tax Commissioner. Self-administered funds must be registered with the Registrar of Associations or as trusts, while insured funds and funds administered by insurance companies must submit an insurance certificate to the Tax Commissioner. There are regulations on minimum vesting and portability provisions, fund governance, and publication of audited accounts. But pension funds are not required to hire qualified auditors, to use external custodians, or to observe limits on self-investing in sponsoring employers. However, sponsoring employers must comply with prescribed accounting standards on the valuation of pension liabilities (IAS 19/MAS 25).

Tax incentives follow the EET regime (Exempt contributions, Exempt investment income, Tax benefits). Contributions and investment income are in fact exempt without any ceiling or limit (except to the extent that pension benefits cannot exceed two-thirds of pensionable salary), while pension benefits are taxed, except for the amount of the pension that is commuted to a lump sum on retirement. This tax treatment is more generous that that of most countries with funded occupational pension schemes. To contain the tax privileges afforded to retirement saving, most countries limit the deductibility of contributions both by applying a limit on the contribution rate and an upper ceiling on eligible earnings (as well as having a limit on pension benefits). Investment income is also often subject to a reduced tax rate rather than benefiting from complete exemption (Davis 1995). However, the tax attractiveness of retirement saving is weakened in Mauritius by the low personal income tax rates and the very wide availability of personal deductions.[7]

The main law for pension funds established by private companies is the Employees Superannuation Fund Act of 1982 (as amended).[8] This provides that any employer may constitute a fund and make contributions for the payment of pensions and other benefits to directors or employees and their dependants (section 3). Pension funds

[7] This is especially true for approved personal pension schemes, retirement annuities, and retirement savings schemes that are available but apparently little used.

[8] This Act mainly applies to the self-administered funds. Insured funds are covered for the most part by the Insurance Act. This is geared toward general protection of policyholders (in this case employers) and does not cover fully the interests of employees.

must be a body corporate and be registered with the Registrar of Associations (section 4). The rules of the fund must stipulate, *inter alia*, the rate of contributions paid by the employer and employees, the rate of accrual and method of calculation of benefits, the conditions of membership, the appointment of employer and employee representatives to the management committee of the fund, the security to be provided by officers of the fund, the appointment of auditors, the disclosure of information on the rules and performance of the fund, and the dissolution of the fund and disposal of its assets, including amalgamation with any other fund (section 6 and Second Schedule of the Act). The fund is managed by a management committee of no less than 5 persons, nominated by the employer and the employees (section 7). However, no parity of representation is required. The Act specifies that no member of the management committee shall be liable for any losses unless they have been caused by willful negligence or fraud (section 8). Payments to the fund by employers and employees are irrevocable (section 10). This implies that any surplus over and above the present value of actuarial liabilities belongs to the fund, although employers are not prevented from taking contribution holidays.

Audited accounts must be submitted to the Registrar within 3 months of the end of each financial year (section 11). The income and expenditure statement and the balance sheet must be audited by 2 auditors, one appointed by the employer and the other by the employees (section 12). However, the Act does not require the hiring of qualified auditors. The Registrar has broad powers of inspection and investigation, may cause an inquiry into the affairs of a fund, and may with the approval of the President strike off the Register a fund for reasons set out in its decision (sections 13 and 14). Such Registrar decisions may be appealed to the Supreme Court. On winding up, the assets of the fund are vested in the Registrar. They are first used to discharge all third party debts and liabilities and are then applied to the payment of the present value, as determined by an actuary, of the amounts due to pensioners and then to the accrued benefits of employees in active service (section 15). A fee is payable by each fund to the Registrar of Associations to meet its expenses (section 16). This amounts to 0.25 percent of the investment income of each fund.

The Income Tax Regulations 1996 (as amended) stipulate that pension schemes must be approved by the Tax Commissioner, who requires either an insurance certificate or registration with the Registrar of Associations (section 5(1)(b)(ii)). The Tax Commissioner must, *inter alia*, be satisfied that: employee contributions are reasonable; all members are treated equally; annual pension benefits, excluding NPF pensions, do not exceed two-thirds of final pensionable emoluments (section 5(2)(c)(vi)); commuted lump-sum payments do not exceed 12.5 times the amount commuted which, in turn, does not exceed 25 percent of the annual pension due (section 5(2)(c)(vii)); permanent disability and death benefits do not exceed twice final pensionable emoluments; dependent pensions do not exceed specified limits; eligibility and withdrawal provisions are reasonable; powers of investment of fund assets are reasonable; annual pension increases do not exceed same rank salary increases or 3 percent of the preceding year's pension; employees leaving after 5 years' service are entitled to preserve their accrued benefits in the fund of the old employer, or transfer the actuarial value of these benefits to the pension fund of their new employer, or transfer this value to an approved personal pension scheme (section 5(2)(c)(xvii)); and, employees leaving before completing five

years' service are entitled to a refund of their accumulated contributions, provided that the related actuarial value of the accrued retirement benefits from a previous employment has not been transferred to the superannuation fund established by the new employer.[9]

The regulatory framework is obviously very extensive. However, it has some important gaps. There are no explicit requirements: for maintaining a proper funding level to secure scheme benefits; for ensuring the safe custody of assets; for hiring qualified actuaries, auditors and custodians; for imposing on actuaries, auditors and custodians the responsibility to inform the supervisory authority of any material breaches of regulations; or for submitting regular reports to the supervisory authority.[10]

There are also no rules on investments and asset diversification. While the absence of minimum investment rules and the investment freedom enjoyed by fund managers mark a welcome departure from prevailing practice in most developing countries, failure to impose limits on self-investing in sponsoring employers and to require reasonable asset diversification may place pension fund assets at unnecessary risk.

Neither the Employees Superannuation Fund Act nor the Income Tax Regulations specify that pension funds must undertake periodic actuarial reviews. Sponsoring employers who must publish audited accounts are required to comply with the revised international accounting standard on pension liabilities (IAS19, adopted in Mauritius as MAS25). IAS19 specifies, *inter alia*, the AA corporate bond yields (or similar) as the discount rates to be used in valuing actuarial liabilities and requires employers to report in their accounts any shortfall in the pension fund they sponsor. Although there is no systematic monitoring of the shortfall situation of pension funds in Mauritius, it is estimated that on average pension schemes suffer from a 20 to 25 percent shortfall. Actuarial reviews are undertaken at regular intervals, mostly every 3 years. Local actuaries use investment return assumptions that are close to, or slightly higher than, projected rates of salary growth. Mortality tables are selected from the set that is produced by the UK Institute of Actuaries.

Pension funds with defined-benefit plans operate with a large duration mismatch of their assets and liabilities, since there is a shortage of long-term assets, other than equities and real estate. At present, this mismatch does not cause problems because interest rates on short-term instruments are high. But pension funds face a large reinvestment risk. They could find themselves in a situation of huge shortfalls as a result of a large and persistent fall in interest rates. Actuaries should be required to report on the exposure of pension funds to such an occurrence, however unlikely it may seem at present, in order to facilitate early preventive action.

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[9] The wording of this provision which was added in August 2000 is not clear. It appears to be stipulating that leaving employees who transferred the actuarial value of accrued benefits from a previous employment have the same portability rights as employees with more than 5 years of service.

[10] As argued further below, financial reports should be submitted in electronic form, preferably on a quarterly basis. The FSC should develop a capability for efficient analysis of financial reports and off-site surveillance.

There is clearly a strong need for a new comprehensive pension fund act to consolidate and modernize the regulatory framework. Modernization of regulation should cover: clear designation of a supervisory authority; fund governance; appropriate funding levels; vesting and portability standards; asset segregation and safe custody; asset valuation and diversification (including low limits on investing in their sponsors); actuarial, accounting and auditing standards (including the responsibilities of actuaries, auditors, compliance officers and custodians to report material breaches of regulations to the supervisory authority); financial reporting (through frequent submission of data in electronic form), disclosure and transparency; off-site surveillance and on-site inspection by the supervisors; and powers of intervention and remedial action (Vittas 1998).

A major shortcoming is the complete absence of any supervision. Most countries that have a large number of occupational pension schemes suffer from inadequate supervision that tends to be passive and reactive rather than proactive with the authorities responding to problems and abuses on an ad hoc basis. The usually large number of company pension funds makes proactive supervision more difficult to implement. Although there have been no reports of major scandal, the lack of supervision is a source of concern.

Pension funds should be supervised by the FSC. The FSC should be required to collect comprehensive data on a quarterly basis and publish periodic data on the performance of the sector and an annual report with a more comprehensive analysis of trends, achievements and challenges. The FSC should cooperate with auditors, actuaries and custodians to ensure that pension schemes are adequately funded and their assets are properly diversified and valued.

Proactive supervision needs to be promoted. It should include sophisticated off-site surveillance based on quarterly electronic financial reporting, use of an early warning system and, in the case of defined benefit plans, application of dynamic solvency testing. The regulator should be empowered to challenge and even vet the actuarial assumptions used by actuaries, such as discount rates and mortality tables, in calculating the present value of pension liabilities and the adequacy of funding levels.

Proactive supervision should also involve adoption of effective on-site inspection programs, focusing on the adequacy of fund governance, internal controls and risk management systems. Auditors, actuaries, custodians and compliance officers should all be required to report to the regulator any material breaches of regulations, irregularities in financial accounts and instances of misconduct that come to their attention. The authorities should also develop efficient crisis response policies to ensure that corrective measures are taken early to prevent failures that might cause large losses to participating workers.

In strengthening the regulation and supervision of pension funds, care should be taken to avoid any disruption to the good overall performance of the larger schemes. Proactive supervision should not be accompanied by the imposition of intrusive investment limits. While clear limits should be imposed on self-investment, no attempt should, otherwise, be made to direct the asset allocation of pension funds. Pension funds

should be expected to adopt a "prudent expert" approach and hold diversified investment portfolios. When the NPF is converted to a DC scheme and merged with the NSF, the financial aspects of its operations should also come under the supervision of the FSC.

VI. Future Prospects and Policy Issues

Before discussing the future prospects and main policy issues of occupational pension funds it would be useful to evaluate their structure and performance against a set of economic criteria, such as coverage, affordability, security, investment performance, operating efficiency and transparency.

Employer-sponsored pension funds, especially those based on defined benefit plans, have several advantages and disadvantages compared to other forms of pension provision. At one level, they have the ability to overcome the shortcomings of underdeveloped financial and insurance markets by pooling the mortality risks of their employees and avoiding the adverse selection problems that bedevil annuity markets. At another level, they offer the potential of professional investment management with a better risk/return profile and lower transaction costs than non-employer-based schemes that incur high marketing and administrative costs. In countries with underdeveloped financial and insurance markets, employer-based schemes are well placed to provide retirement income insurance to their workforce (Bodie 1990).

But employer-based schemes also suffer from several disadvantages. They are notoriously less transparent than the pension accounts offered by specialized pension institutions.[11] They often impose vesting and portability restrictions that penalize early leavers.[12] They rely on the solvency and integrity of sponsoring employers. The security of worker benefits depends on the creation of a segregated pension fund, maintenance of an adequate funding level and a well-diversified portfolio as well as proper valuation and safe custody of assets. This implies the existence of robust regulation and effective supervision. Because of the cost and complexity of administration, employer-based funds tend to be established by large employers with a stable and skilled labor force. Tax incentives support the creation of pension funds, although these are also available to other forms of retirement saving.

A major shortcoming is that employer-sponsored schemes are often seen as an extension of corporate financial and personnel management functions. In this sense, they do not meet the primary objective of pension funds which is to provide retirement benefits to covered workers. Employers almost invariably retain the right to terminate pension plans and often change terms and conditions to suit their requirements, paying secondary regard to the needs of their workers. Nevertheless, and despite these shortcomings, properly regulated employer-based pension funds still have a major role to

[11] This is generally true of DC-based schemes operated by specialized institutions in most Latin American countries. Employer-sponsored DB schemes that are insured with insurance companies also lack transparency.

[12] Early employer pension schemes operated on the so-called tontine principle of insurance whereby benefits were paid only on retirement (Williamson 1992). The costs of pension schemes were low but at the expense of workers who left or were fired before reaching the age of retirement.

play in pension provision, especially in countries where financial and insurance markets are underdeveloped.

How do Mauritian company pension funds rate with regard to these considerations? They provide deferred long-term annuities to covered workers on terms and conditions that most likely are more attractive than those available in the local annuity market. They seem to operate with relatively low operating costs, except for the smaller funds that suffer from high expense ratios. This is in line with international experience. Their investment performance has not been fully satisfactory in the 1990s, probably reflecting the poor returns of the local and foreign equity markets.

The security of retirement benefits has improved in recent years. Vesting and portability rights have been strengthened and now look reasonable, providing better protection to early leavers. Accounting and actuarial standards require an adequate level of funding and a reporting of shortfalls. However, funding levels are not monitored closely and are estimated to suffer from a 20 to 25 percent shortfall. Actuarial assumptions look sensible and realistic at present but increasing longevity and the reinvestment risk faced by pension funds because of the large duration mismatch of their assets and liabilities suggest potential difficulties in the future. If investment returns were to fall and stay at low levels for a prolonged period, large increases in contributions would be required to maintain appropriate funding levels.

The regulatory framework is extensive and covers many aspects that are important for enhancing the security of retirement benefits. However, some important elements are missing. These include the need for safe custody of assets and for adequate asset diversification, especially imposing limits on self-investment in sponsoring employers. Supervision and transparency require considerable strengthening (Vittas 1998).

In terms of coverage, funded occupational pension schemes cover about 10 percent of the labor force in Mauritius. Adding the unfunded civil service pension scheme brings the total to 20 percent. This is low by comparison to levels prevailing in leading high-income countries, such as Australia, Denmark, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States where coverage exceeds 70 percent and reaches beyond 90 percent of the labor force (World Bank 1994). But taking into account the offer of the universal BRP and the operation of the NPF as well as the structure of the local labor market the current level of coverage looks reasonable.

Long-term affordability is a different story. The promised benefits, which usually are not integrated with the BRP (although a large proportion are integrated with the NPF), result in high replacement rates at relatively young ages. The growing longevity of the population, which is likely more pronounced among high-income people, implies a continuing increase in cost. The recent trend toward DC schemes is likely to accelerate if companies are constrained by growing competition in their product markets from increasing employer contributions to the levels that would be required to maintain the financial soundness of their schemes. The comparative advantage of employer-based DC schemes would then depend on their ability to achieve high investment returns with low

operating costs and offer attractive but non-guaranteed annuity options at retirement. As in most countries, this is likely to be accompanied by a growing demand for protected investment products.

The future role of occupational pension funds in the Mauritian multi-pillar pension system will also be shaped by decisions regarding the continued affordability of the BRP and especially the restructuring of the operations of the NPF.

For instance, a gradual increase in the normal entitlement age for the BRP coupled with an application of some means testing would not only ensure its long-term affordability but would also argue for converting the NPF into a DC scheme, merging it with the NSF, and introducing greater competition with well-run and transparent private pension funds. The latter would be achieved by allowing employers who sponsor such private pension funds to contract out of the NPF.[13] An even greater degree of competition and individual choice would be encouraged by granting workers the right to choose between the NPF and the pension fund established by their employer.

These measures of reform would ensure that the NPF continues to operate efficiently and does not end up by dominating the local financial system. They would also strengthen the multi-pillar structure of the Mauritian pension system. Their success would require, however, a considerable strengthening of the regulatory framework of occupational pension funds and especially implementation of an effective system of proactive supervision. With better regulation and supervision, workers would enjoy greater choice and stronger protection of their pension savings, while the financial system would benefit from greater plurality among institutional investors, intensified competition and expanded innovation.

Pluralistic pension funds can have a major impact on the development of the financial system and the financing of the economy. They can stimulate the development of the long-term government bond market (including inflation protected securities and zero coupon bonds) as well as the growth of company debentures, mortgage bonds and asset-backed securities. They can also increase the liquidity and efficiency of equity markets. Realization of these benefits requires effective regulation and supervision of both primary and secondary securities markets.

Experience from the United States and other high-income countries suggests that they can play an important part in "symbiotic" finance, acting as a countervailing force to the dominant position of commercial banks, supporting the financing of independent leasing, factoring and venture capital companies, and promoting alternative sources of financing expanding SMEs. The promotion of these other markets would require the removal of regulatory and tax obstacles and the creation of a robust and effective framework of financial regulation and supervision.

Mauritian pension funds (and other institutional investors, such as insurance companies) have a huge demand for long-term assets. At present, they are forced to

[13] The terms of contracting out would need to well specified. If all schemes are based on DC plans, switching between the NPF and employer schemes would be much easier.

engage in a significant amount of reverse maturity transformation, investing a large part of their long-term funds in short-term treasury bills as well as medium term bonds and bank deposits. Their long-term assets include corporate equities, real estate and housing loans. Corporate equities are illiquid and volatile, while real estate has performed well over the long run but is also illiquid and often produces low yields. Housing loans have for the most part performed well, although it would be more efficient for pension funds to invest in mortgage bonds and mortgage-backed securities rather than engage in the origination and servicing of housing loans.

A fuller appreciation of their investment needs and of their potential for stimulating financial innovation would promote the development of efficient and liquid markets for all kinds of long-term securities. A simplification of the complicated system of taxation of financial institutions and instruments and greater boldness on the part of both issuers and investors would accelerate the process of development.

Occupational pension funds in Mauritius have a satisfactory record of performance. They face many serious challenges that could transform their structure and mode of operation. But with the right policies regarding the extent of public provision of pensions and the creation of robust regulation and effective supervision, their role can be expanded considerably with beneficial implications for financial sector development and economic growth.

Public Provision of Pensions

The public sector in Mauritius plays an important part in the direct provision of pensions. It offers a universal basic retirement pension to all elderly residents. This is financed from general tax revenues. It operates two compulsory schemes, the National Pensions Fund that covers most private sector employees, and the National Savings Fund that covers most private and public sector employees (including civil servants). Both of these schemes accumulate long-term funds through regular contributions by employers and employees. And it operates the Civil Service Pension Scheme, an unfunded scheme that is financed from general tax revenues as part of the government budget.

Basic Retirement Pension (BRP)

The BRP is a universal pension paid to all people aged over 60 years and financed from general taxes. Introduced in 1951, the BRP amounts to 20% of the average wage. The benefit increases to 75% of the average wage for those between 90 and 100 years of age and to 85% for those over 100. This pillar reaches all poor households and its cost currently amounts to 3.1% of GDP (2000). But in view of rapid demographic aging, the cost of an unchanged BRP is projected by a recently completed World Bank report to reach 5.9% of GDP by 2020 and 10.9% by 2050 (World Bank 2001).

The government is considering various options for containing the cost of this scheme. These essentially include raising the retirement age and introducing means tested benefits. Two variants of the means test are under consideration:

- a subsistence (or poverty) test that would include in the BRP only those people with incomes or wealth below specified levels; or
- an affluence test that would exclude from the BRP those people with income or wealth above specified levels.

Special emphasis is also placed on developing an efficient way of administering the means test in order to both keep its costs down and improve its targeting effectiveness. According to estimates contained in the recently completed World Bank report, applying an affluence test with an increase in the retirement age to 65 would contain the projected cost to 3.2 percent of GDP by 2020 and 4.5 percent by 2050. A combination of the two tests, with gradual benefit clawbacks, is also under consideration.

National Pensions Fund (NPF)

The NPF is a contributory compulsory pillar that covers employees of private sector firms. It was introduced in 1978 and is a defined benefit scheme operating on the French point system. Almost all private-sector employees are required to participate in the NPF. Exceptions include very low-paid workers and those sugar-industry workers who, when the NPF was introduced, elected to remain within the already established Sugar Industry Pension Funds (SIPF). Civil servants and employees of local-government and statutory bodies are also exempt. Membership of the NPF stood in 2001 at 301,000

out of a total workforce of a little over 500,000. Beneficiaries are still less than 50,000, resulting in a support ratio of over 6 active contributors per beneficiary. This is very much in line with the overall demographic support ratio (Table A1). However, because of aging, the support ratio is projected to fall to 2.5 by 2040. In 2000, there were a total of 454,000 people that had accumulated points in the system. This underscores the fact that the ratio of active contributors to affiliated workers is not a good indicator of effective coverage.

Table A1: Participating Employers, Employees and Beneficiaries of the NPF (end June)

	1997	1998	1999	2000	2001
Employers	15,100	15,200	15,400	15,400	15,100
Employees	242,000	265,000	287,000	301,000	301,000
Beneficiaries	37,945	40,201	43,031	45,719	48,035
Support Ratio	6.38	6.59	6.67	6.58	6.27

Source: NPF

Contributions are paid by both employers and employees and amount respectively to 6 and 3 percent for a total of 9 percent of covered earnings (for the sugar industry, contributions amount to 13.5 percent, 9 percent paid by employers and 4.5 percent by employees). Contributions are assessed on earnings once they exceed a Lower Earnings Limit but subject to an Upper Earnings Limit. The LEL and UEL are adjusted every other year.

Contributions result in the accumulation of points on the basis of the declared cost of a point at the time of contribution, while pension benefits depend on the accumulated points and the declared value of a point at the time of retirement. The cost and value of points have been set a ratio of close to 11 to 1, implying an annuity conversion factor of 9.09 percent (Table A2). The ratio was initially set at 10.8 to 1 and may have been influenced by the life expectancy at retirement that was probably close to 11 years in 1978 when the NPF was introduced. The ratio was increased above 11 in the early 1980s and reached 12.45 in 1982 but has been kept close to 11 since 1984.

In a world with no inflation and wage growth, contributions at 9 percent per year for 40 years would accumulate total balances equal to 360 percent of covered annual earnings. At a conversion factor of 9.09 percent, these would produce a pension equal to just below 33 percent of covered pre-retirement earnings.

Initially, the cost and value of a point lagged inflation by a significant margin (Table A3). As a result, the real level of the cost and value of a point fell to 75 percent of the original level. However, since 1989 the cost and value of a point have been adjusted in line with price inflation. The lower and upper earnings ceilings and the value of pensions in payment have also been adjusted in line with price inflation (see paragraphs 1.6, 2.4 and 5.5 of the last actuarial review of the NPF completed by the GAD in December 2001).

Table A2: Operating Features of NPF
(Contributions, Benefits, Cost and Value of Points, Lower and Upper Earnings Limits)

	1997	1998	1999	2000	2001
Contributions (MUR mn)	774	846	893	984	1055
Contributions (% GDP)	0.88	0.85	0.83	0.83	0.80
Benefits (MUR mn)	175	214	245	282	315
Benefits (% GDP)	0.20	0.21	0.23	0.24	0.24
Lower Earnings Limit (MUR)	612	699	699	800	800
Upper Earnings Limit (MUR)	4,625	5,100	5,100	5,535	5,535
Cost of Point (MUR)	43.72	46.54	50.10	52.66	
Value of Point (MUR)	3.99	4.23	4.55	4.80	
Ratio of Cost to Value	11.0	11.0	11.0	11.0	

Source: NPF

Table A3: Evolution of the Cost and Value of Points, 1978-2000

Year	Inflation	Inflation Index	Cost of Point	CoP Index	Value of Point	VoP Index	CoP UnderInd	VoP UnderInd	CoP/ VoP
1978-79			10.80		1.00				10.80
1979-80	33.0%	1.3300	12.53	1.1602	1.10	1.1000	0.8723	0.8271	11.39
1980-81	26.5%	1.6825	13.91	1.2880	1.16	1.1600	0.7655	0.6895	11.99
1981-82	13.4%	1.9079	16.06	1.4870	1.29	1.2900	0.7794	0.6761	12.45
1982-83	7.5%	2.0510	17.35	1.6065	1.49	1.4900	0.7833	0.7265	11.64
1983-84	5.6%	2.1658	17.70	1.6389	1.61	1.6100	0.7567	0.7434	10.99
1984-85	8.3%	2.3456	18.15	1.6806	1.64	1.6400	0.7165	0.6992	11.07
1985-86	4.3%	2.4465	18.69	1.7306	1.68	1.6800	0.7074	0.6867	11.13
1986-87	0.7%	2.4636	19.25	1.7824	1.73	1.7300	0.7235	0.7022	11.13
1987-88	1.5%	2.5006	21.18	1.9611	1.96	1.9600	0.7843	0.7838	10.81
1988-89	16.0%	2.9006	23.76	2.2000	2.16	2.1600	0.7585	0.7447	11.00
1989-90	10.7%	3.2110	26.18	2.4241	2.38	2.3800	0.7549	0.7412	11.00
1990-91	12.8%	3.6220	28.80	2.6667	2.62	2.6200	0.7362	0.7234	10.99
1991-92	2.9%	3.7271	30.24	2.8000	2.75	2.7500	0.7513	0.7378	11.00
1992-93	8.9%	4.0588	32.96	3.0519	3.00	3.0000	0.7519	0.7391	10.99
1993-94	9.4%	4.4403	36.09	3.3417	3.29	3.2900	0.7526	0.7409	10.97
1994-95	6.1%	4.7111	38.33	3.5491	3.49	3.4900	0.7533	0.7408	10.98
1995-96	5.8%	4.9844	40.48	3.7481	3.69	3.6900	0.7520	0.7403	10.97
1996-97	7.9%	5.3782	43.72	4.0481	3.99	3.9900	0.7527	0.7419	10.96
1997-98	5.4%	5.6686	46.34	4.2907	4.23	4.2300	0.7569	0.7462	10.96
1998-99	7.9%	6.1164	50.10	4.6389	4.55	4.5500	0.7584	0.7439	11.01
1999-00	5.3%	6.4406	52.66	4.8759	4.80	4.8000	0.7571	0.7453	10.97

Source: NPF

But with positive real wage growth, the resulting pensions have been a lower percentage of pre-retirement earnings. The above mentioned World Bank report estimated that the replacement rate of full-career average-wage workers amounted to only 26 percent in 1998/99. In a fully mature system and on a continuation of past indexation practice, the replacement rate would fall to 12.5 percent.[14]

The ceiling on covered earnings, the Upper Earnings Limit, was initially set at a very high level (175 percent of average earnings). However, its level has been allowed to fall over time and presently it amounts to 80 percent of average earnings. This has left more scope for the development of occupational pension schemes. It can be argued that the original level of the ceiling was unduly high and that failure to index it has resulted in an economically more appropriate level. In fact, the level of the ceiling should be kept relatively low, no more than 120 percent of average earnings, if occupational pension schemes are to be encouraged to play a more active part in the Mauritian pension system. Alternatively, the ceiling on contributions and benefits could be reset at its original level, but employers operating approved occupational pension schemes could be allowed to contract out of the NPF.

The Lower Earnings Limit has also fallen over time in relative terms from its original level of 25 percent of average earnings to about 11.5 percent in 2001. This fall has widened the number of covered workers. However, in the presence of the BRP, it is arguably an unwelcome development since it may be forcing low-income people to over-save and have pension income in retirement that exceeds their income in active life. It is also raising the cost of hiring unskilled workers and may thus contribute to the rise in unemployment. A policy of maintaining constant the relative level of the lower and upper earnings limits would be advisable.[15]

The NPF has been established under the National Pensions Act and is administered by the Minister of Social Security, who also appoints a 13-member National Pensions Board, which has an advisory role on all policy issues relating to national pensions. Eight NPB members represent employers and employees, equally divided between the sugar and non-sugar sectors, while five represent the Ministries of Finance, Health, Labor and Social Security (2). The private sector appointments are made on terms and conditions determined by the Minister. The NPF is required to undertake an actuarial valuation at intervals of not more than five years and to publish audited annual accounts.

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[14] Under the provisions of the NPF scheme, the pension points of members who were over age 40 in 1978 (and so retired before 1998) were doubled, while for members who were aged between 20 and 40 in 1978 (and thus due to retire over the 20 years from 1998) their pension points are increased on a pro-rata basis as if they have been contributing for 40 years. It can be argued that failure to implement full wage indexation has enabled the NPF to finance the doubling of benefits to the first generation of workers. However, this has adverse implications for the replacement rates of the subsequent generations.

[15] Switzerland applies a lower and upper earnings limit in connection with its compulsory second pillar. These limits were initially set at the more reasonable levels of 40 and 120 percent of average earnings (when the second pillar was introduced in 1985) and they have been held constant relative to average earnings since then (Queisser and Vittas 2000). Switzerland has also applied a minimum conversion annuity factor of 7.2 percent in its compulsory second pillar, aiming for a replacement rate of 36 percent. It was recently forced to lower the conversion annuity factor to 6.8 percent, because of lower investment returns and increased longevity.

The last actuarial review was conducted by the Government Actuary's Department (GAD) of the United Kingdom in 2001 (GAD 2001a).

There are no legally imposed investment limits on the assets of the NPF, but a 9-member Investment Committee, comprising for the most part senior civil servants, sets the investment objectives and guidelines of the NPF, including limits on investments. The Investment Committee includes among its membership a trade union and an employer representative, but its majority consists of ministerial representatives. A member of the NPB is represented on the Investment Committee and may transmit advice from the Board. However, the Investment Committee has ultimate authority and responsibility for the determination of investment policy and the investment process. Currently, the following limits are applied (Table A4).

As it can be seen, the investment limits are eminently reasonable. Unlike so many other developing countries, there are no minimum investment requirements in government securities or any other assets, while the limits on international investments are reasonably high. However, there are no upper limits on holdings of treasury bills and as shown by the data in the preceding table, actual asset allocations deviate considerably from the levels that would be compatible with optimal risk diversification. The NPF, like other public sector institutions, is a major investor in large state-owned companies (such as the SBM, SICOM, and Mauritius Telecom) as well as the numerous state investment funds.

Table A4: Investment Limits of the NPF

Type of Asset	Percent of Assets
Government stocks (bonds)	50
Treasury bills	100
Housing sector loans	20
Loans to Mauritius Housing Corporation	15*
Loans to Development Bank of Mauritius	15
Loans to local authorities, per case	MUR 25 million
Loans to other organizations	10
Investments in the Stock Exchange of Mauritius	10
International investments	25

* included in overall housing loan limit

Source: NPF

The NPF has accumulated significant financial resources. These amounted to MUR 21.8 billion in June 2001, corresponding to 17 percent of GDP. NPF assets grew by an average annual compound rate of over 15 percent between June 1996 and June 2001. NPF assets have been invested prudently and have generated a reasonably high and stable real rate of return. However, the efficiency of asset management could be further enhanced by judicious diversification in company shares and foreign assets. Government securities, including all types of bonds and treasury bills, absorbed 58 percent of total assets in 2001, up from 49 percent in 1997 (Table A5).

In contrast, foreign assets fell from 13 percent in 1998 to 4 percent in 2001. It is not clear what prompted the relatively large fall in the holdings of foreign assets. Some market sources suggest that it was linked to a decline in official reserves and a request to the NPF to repatriate some of its foreign assets. This would imply a less than arm's

length relationship between the government and the asset management of the NPF. Investment performance did benefit, however, from the fortuitous fall in the share of foreign assets since the NPF has avoided the large losses suffered by foreign stock markets in recent years.

Holdings of treasury bills have increased significantly in recent years. These tend to have a two-year term, but even so their growth implies a rise in reverse maturity transformation: the long-term resources of the NPF are invested in relatively short-term assets.

Table A5: Asset Allocation of National Pensions Fund (end June)

Percent of total assets	1997	1998	1999	2000	2001
Fixed Assets	4.4	3.7	3.1	2.7	2.1
Government Securities (Market Value)	32.7	32.1	26.3	25.1	26.4
Independence & Republic Bonds	9.8	8.4	7.2	5.3	
Treasury Bills	6.7	10.0	25.3	23.5	32.0
All Government Securities	49.2	50.5	58.8	53.9	58.4
Listed shares	4.1	3.1	2.8	2.7	3.4
Unlisted shares	5.7	4.9	4.5	3.9	3.4
Listed debentures	0.2	5.4	4.8	4.2	0.3
Bank deposits	8.8	6.0	8.1	9.9	11.0
Foreign Investment	11.4	13.3	5.0	4.6	4.4
Loans (Various Institutions)	3.7	3.1	2.7	4.6	4.9
Loans (M.H.C)	9.4	7.5	6.0	7.6	7.7
Current Assets	3.2	2.7	4.1	5.9	4.5
Total Assets	100.0	100.0	100.0	100.0	100.0
Total Assets (MUR million)	12,174	14,266	16,464	18,899	21,771
Total Assets (% of GDP)	13.78	14.28	15.33	15.95	16.56

Source: NPF

The operating performance of the NPF is reasonably efficient, with low operating costs and high investment returns (Table A6). Total operating expenses, which include all administrative expenses plus depreciation allowances and provisions for bad debts and cover all the operations of the NPF including those relating to the administration of the BRP, have been on a declining trend. In 2001, they amounted to 9.2 percent of contributions or 48 basis points of average total assets. This performance is superior to that of the average private sector pension fund for that year.

Table A6: Operating Performance of NPF (year ending in June)

(percent)	1997	1998	1999	2000	2001
Operating Expenses/Contributions	11.42	11.20	10.05	11.52	9.22
Operating Expenses/Average Assets	0.79	0.72	0.58	0.64	0.48
Investment Income/Average Assets	10.00	14.26	10.57	10.56	11.16
Benefits/Contributions	22.6	25.2	27.5	28.7	29.8
Benefits/Total Inflows	9.2	7.8	9.8	9.9	9.5
Investment Income/Total Inflows	59.1	69.0	64.5	65.5	68.3
Growth Rate of Total Assets	19.1	17.2	15.4	14.8	15.2

Source: Estimated on the basis of NPF data.

The NPF reports relatively small contribution arrears. These amount to less than 0.25 percent of average assets. In 2000, there was a large provision for bad debts of the order of 2 percent of contributions or 0.11 percent of assets but in most other years such provisions are very low, absorbing less than 0.01 percent of assets. In conjunction with a system support ratio of contributors to pensioners that is close to that of the population as a whole, this implies an effectively operated system with little evasion.

Investment income, which probably excludes unrealized capital gains, fluctuated between 10 and 14.3 percent in the period between fiscal year 1997 and fiscal year 2001, averaging 11.3 percent. This compares with an average inflation rate of 6.2 percent over the same period, implying a real rate of return of 4.8 percent. Investment income represents a growing share of total inflows, amounting to 68 percent in 2001. This is a reflection of the growing size of total assets. Benefits absorb an increasing share of contributions, having reached nearly 30 percent in 2001, but at less than 10 percent they are low as a share of total inflows.

The investment performance of the NPF has been analyzed in the recent actuarial review that was conducted by GAD. Table A7, which is extracted from this review, shows the average nominal investment return of the NPF to have amounted to 11.3 percent over the 1990s. Except for 1998, this showed remarkable stability. Price inflation averaged 7.2 percent over the same period, implying a real investment return of 3.8 percent.[16] As nominal earnings grew by an annual average of 10.3 percent or at real rate of 2.9 percent, the real investment return of the NPF exceeded real earnings growth by almost 1 percentage point. This performance is reasonable but not impressive by international standards. Pension funds in some high income countries have earned much higher real returns relative to real wage growth over the 1990s, although it remains to be seen whether such stellar performance can be sustained over long periods.

Table A7: Rates of investment return, price increases and earnings increases

Year ending 30 June	Rate of return	Price increases	Earnings increases
1991	11.1%	12.8%	15.0%
1992	11.2%	2.9%	8.7%
1993	11.8%	8.9%	6.8%
1994	9.9%	9.4%	17.3%
1995	10.3%	6.1%	11.4%
1996	11.2%	5.8%	7.0%
1997	10.4%	7.9%	11.0%
1998	15.2%	5.4%	8.0%
1999	10.9%	7.9%	8.6%
2000	10.9%	5.3%	8.8%
Average	11.3%	7.2%	10.3%

Source: GAD 2001a.

[16] The returns reported by the GAD review are slightly higher than those shown in Table A5, probably because they are calculated on the basis of investment assets alone, whereas Table A5 is based on total assets.

The financial performance of the NPF is generally satisfactory by comparison to public pension funds in most developing countries. While its operating cost ratios are higher than those of the national provident funds of Singapore and Malaysia (reflecting among other things the greater economies of scale enjoyed by the much larger Singaporean and Malaysian funds), its assets are better diversified than such funds in Malaysia, Singapore, Sri Lanka and most other developing countries in the region. Public pension funds in developing countries are often required to invest preponderantly in non-traded government securities, a feature that is absent in Mauritius. The real investment returns of the NPF have been higher than those of most public pension funds, including the national provident funds of Singapore and Sri Lanka (though not Malaysia, where the Employees' Provident Fund has achieved comparable real returns).

This satisfactory financial performance of the NPF over the 1990s was marred by the discovery in February 2003 of a fraud that had been ongoing for five years and involved a time deposit of MUR 500 million with the Mauritius Commercial Bank (MCB), the largest and oldest commercial bank in the country. The NPF accounts are audited by the Director of Audits, but usually with a lag of at least two years. This incident underscores the importance of commissioning external audits by private international firms as well as the need to strengthen internal audit and control systems.

Despite its satisfactory financial performance, the NPF faces two major challenges. First, there is a need for greater diversification of assets in non-government securities as well as in foreign assets. The NPF has selected one foreign asset manager after a competitive bidding process, but it should consider awarding mandates to one or two additional foreign asset managers to lessen its total reliance on the investment advice and performance of only one manager. Relations with the external manager and all international investments are effected through the Treasury Foreign Currency Management Fund (TFCMF), a unit that appears to be a relic of the times when exchange controls were imposed on capital flows. The TFCMF is clearly redundant and its role should be re-examined with a view to its elimination.

Investing a greater proportion of assets in local company shares and debentures and perhaps also in mortgage bonds or mortgage-backed securities would require the creation of a more transparent, professional and independent fund governance and asset management structure. Such a change in fund governance would be necessary to reassure private sector companies that increased holdings of company shares by the NPF would not result in increased influence of the state in company management. When state institutions become major holders of company shares, there is always the risk or fear of effective "nationalization through the back door".

With appropriate changes in its membership to reflect the changing structure of the economy (for example representation of the sugar industry should be reduced) and ensure presence of professional experts, the National Pensions Board could be transformed into an independent Board of Trustees of the NPF. It could become its governing body with a direct role in managing its affairs and proper accountability to the Minister and the Assembly.

In this context, the role and functions of the Investment Committee should also be changed. It should have a majority of private sector members with high professional expertise, including Certified Financial Analysts (CFAs) and other professionals, and should report and be accountable to the Board of Trustees. Both the Board of Trustees and the Investment Committee should be issued with clear mandates and should be insulated from political interference by the establishment of safeguards along the lines recently adopted in Canada and Ireland.

The second challenge is to enhance the transparency of its operations and simplify the link between contributions and benefits. The authorities are considering a move from the opaque point system, that has not worked very well, to a defined contribution system with individual capitalization accounts and crediting of net investment returns to workers' accounts. On retirement, workers could use their accumulated balances for purchasing a real annuity from the NPF, that would reflect the market-determined term structure of interest rates and life expectancy at retirement. But they could also be given the option to adopt a program of scheduled withdrawals, with the monthly payment determined once a year on the basis of remaining life expectancy, or buying an annuity from a private insurance company.

To protect workers from the volatility of financial market returns, the NPF could also develop and offer products that aim at protecting the principal value of workers' contributions, either in nominal or in real terms. Such products would need to be carefully priced to avoid the creation of distorted incentives that could cause trouble in the longer run.

Any changes in the structure and operations of the NPF would need to be studied carefully and implemented cautiously. Pension systems involve very long-term contracts spanning more than sixty years and have far-reaching social, economic and financial implications. Protecting the interests of workers is of paramount importance. However, it is also essential to ensure that the NPF continues to operate efficiently and does not grow so much that it ends up by dominating the local financial system. One option for avoiding the latter risk would be to allow private sector employers who establish well-run and transparent pension funds to be exempt from participating in the NPF. Effectively, this would involve extending to such private sector employers the exemption already enjoyed by the various statutory bodies. An even more promising option would be to give individual workers the right to choose between the NPF and the pension fund established by their employer.

Several operational features of the NPF depend on decisions regarding the overall structure of the pension system. For instance, the question of whether the ceiling on contributions should be restored to its original level is indicative of the complexity and inter-relatedness of pension issues. If the NPF were to be converted to a DC plan and a contracting-out option given to employers and employees, then restoration and even elimination of the ceiling could be desirable. But if the NPF were to continue as a compulsory DB plan without any contracting-out option, then restoration of the ceiling to its original level would not be advisable. This is because a high ceiling would substantially restrict the scope for occupational pension schemes while also resulting in

much higher contributions and a much larger NPF, increasing the risk of market domination by a state-run institution. Similar considerations argue against an increase in the contribution rate (the current low level of payroll taxes is an attractive feature of the Mauritian pension system). Rather than increasing payroll taxes, a better alternative would be to lower the level of promised benefits to a more realistic level, increase the normal retirement age, or enhance further the investment performance of the NPF. However, given the continuation of a reformed and affordable BRP, a better alternative would be to convert the NPF to a DC scheme and allow contracting out to both employers and employees.

National Savings Fund (NSF)

The NSF is a defined-contribution scheme that offers workers a lump sum on retirement. It started operating in 1994/5 and had an estimated 340,000 participating workers in 2001 (Table A8). All employees are required to participate in the NSF, including civil servants and employees of statutory bodies. However, contributions are assessed on earnings above the lower earnings limit that applies to NPF contributions and thus low-paid workers are not covered. As in the case of the NPF, contributions are not assessed on earnings that exceed the upper earnings limit. The contribution rate amounts to 2.5 percent of covered earnings and is paid by employers.

Benefits are given in the form of lump sums on normal or early retirement. Lump sums are equal to the contributions made in individual accounts plus credited interest income. According to the wording of the relevant act, employees are entitled to receive as a minimum the total nominal value of their contributions. This implies a guarantee that the accumulated lifetime interest income will not be negative. Operating costs are covered by an administrative charge that cannot exceed 2.5 percent of contributions and is deducted from investment income. An actuarial review of the NSF was also carried out by GAD in 2001 (GAD 2001b).

Table A8: NSF: Participating Workers and Financial Data (1997-2001)

	1997	1998	1999	2000	2001
Employees (000s)	313	316	306	336	340
Contributions (MUR million)	282	305	306	375	389
Assets (MUR million)	948	1366	1825	2385	2849
Assets (% GDP)	1.07	1.37	1.70	2.01	2.17

Source: NSF

The NSF accumulated resources amounting to MUR 2.8 billion in June 2001 (2.2 percent of GDP). The largest part of assets (82 percent) is invested in government securities (18 percent in government bonds and 64 percent in treasury bills). 6 percent is placed in bank deposits and 10 percent is lent to various organizations, mostly to the Mauritius Housing Corporation. The conservative investment portfolio is partly linked to the offer of the nominal guarantee but it also reflects a strong preference for government paper and other public sector securities. The NSF, like other public sector institutions, invests in the various state companies and investment funds.

The NSF does not play a major part either as a pension fund or as a financial institution. Rather than developing a separate infrastructure to enhance its efficiency and direct its investments toward the private sector, a more promising alternative would be to merge its activities into the reformed NPF, when the latter is converted into a defined-contribution system.

The Civil Service Pension Scheme (CSPS)

The last component of public provision of pensions covers the CSPS. This is often characterized as overly generous in comparison to the benefits offered by the NPF. This is because it is a non-contributory scheme that offers a pension equal to two-thirds of the salary of the last month of employment after 400 months of service (33.3 years). Moreover, pensions are indexed to same rank earnings (this is a major element of cost that, together with the use of the salary of the last month of employment, exposes the CSPS to huge outlays, especially toward senior civil servants who benefit from large promotions at the end of their active careers). In contrast, the NPF is contributory and promises a one-third replacement rate of covered earnings after 480 months of service (40 years). As noted, indexation of the cost and value of points to prices rather than earnings has lowered the effective replacement rate of the NPF to 26 percent at this juncture and to a projected 12.5 percent when it reaches full maturity. Moreover, NPF benefits are at most adjusted for price inflation.

However, this characterization, though accurate, is incomplete. The CSPS is both a general and a supplementary occupational scheme. Though still more generous, its benefits are not overly so by comparison to occupational pension schemes operated by large private sector employers. (The benefits of the pension schemes operated by various statutory bodies are similar in structure to those of the CSPS.) Private sector schemes also offer a two-thirds pension based on the last salary but after 480 months of service. Pensions in payment benefit from ad hoc adjustments to compensate for inflation but they are not linked to same rank earnings. In fact, tax regulations limit annual increases in private sector pension payments to no more than 3 percent. Thus, private sector pensions suffer a significant erosion of their real value over time. Nevertheless, the CSPS should be seen as part of the total remuneration package of civil servants. It may compensate for a lower level of remuneration during their active life by comparison to employees of large private sector companies[17].

Like most defined benefit schemes anywhere in the world, retiring civil servants are entitled to commute to a tax-free lump sum up to 25 percent of their pension. The capital sum is equal to 12.5 times the converted amount of the pension. The same benefit is extended to members of the schemes of statutory bodies and private companies and the same limit and formula are applied to them.[18] While use of a fixed formula, irrespective

[17] Civil servants have other unorthodox benefits ostensibly to compensate them for their allegedly low salaries. For example, they are entitled to purchase duty-free cars every four years and to retain any gains made in selling their old cars in the second-hand market. Senior civil servants also derive considerable benefits from serving on various committees and boards.

[18] Local experts indicate that in the private sector the commutation factor is often significantly lower, taking into account mortality experience, interest rates, and intended pension increases.

of life expectancy and prevailing level of interest rates, is open to criticism, the multiple of 12.5 is not generous.

Because of progressive aging of the covered population, the cost of the CSPS is projected to increase from its current level of 20 percent of the total salaries bill to 30 percent in 15 years time and 50 percent by 2050. At that time, benefits paid could correspond to between 3 and 3.5 percent of GDP. The civil service scheme has 50,000 active members and about 30,000 beneficiaries. (Local government schemes that are similar in structure cover about 5,000 employees.)

The CSPS faces several critical policy issues. The first concerns the establishment of an appropriate basis and level of funding in order to protect benefits from future budgetary pressures. The second is a need to harmonize its terms and conditions with those offered by private sector entities in order to facilitate labor mobility between the civil service and the private sector. However, in addressing these challenges it is important to examine the whole compensation package of civil servants to ensure that the civil service continues to be able to attract, train and retain high caliber staff. Nevertheless some aspects of the scheme that tend to distort incentives and cause large increases in expenditures (such as continuing use of the last salary for calculating pensions, early retirement with generous benefits, and indexation to same rank earnings) would need to be revisited.

As in many other countries around the world, one feasible reform option would be to create a defined-contribution scheme for new recruits to the civil service, while continuing the defined-benefit scheme for existing civil servants. A DC scheme would be both funded and fully portable and would not pose any obstacles to labor mobility. Establishing a fund to cover the actuarial liabilities of the existing scheme would pose a much greater challenge, given the large size of these liabilities (already estimated at 33 percent of GDP) and the budgetary pressures currently faced by the public sector. Moreover, a fund that is not invested in non-government securities would be of little value. It might therefore be advisable to continue with the current policy of unfunded benefits for existing civil servants, at least for as long as budgetary pressures persist. Over time, a buffer fund could be created to cover part of the unfunded liabilities, depending on the budgetary situation. But the difficulty of funding a previously unfunded but mature system should strengthen the argument for creating a fully funded DC scheme for new staff.

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