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THE EMPLOYEES PROVIDENT FUND OF MALAYSIA: ASSET ALLOCATION, INVESTMENT STRATEGY AND GOVERNANCE ISSUES REVISITED*

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Kumpulan Wang Simpanan Pekerja (KWSP) atau EPF menrupakan skim kumpulan wang simpanan yang paling tua di dalam dunia. Namun, prestasi pelaburan EPF dihadkan oleh strukturnya, oleh berbagai regulasi yang dikenakan terhadapnya dan pasaran kewangan yang masih belum membangun. Pengubahsuaian skim pension juga memerlukan reformasi pasaran kewangan. Oleh itu, artikel ini mengkaji dasar dan strategi pelaburan EPF dan mencadangkan beberapa perubahan yang boleh meningkatkan lagi prestasinya dan juga kadar pulangan para ahli.

INTRODUCTION

Malaysia's Employees Provident Fund (EPF), which is the oldest provident fund (PF) schemes in the world dating back to 1951, can also be considered as one of the most successful. The ratio of the EPF's assets to GDP is currently around 50% which makes it, in relative terms, one of the largest asset management companies in the world! It occupies this unique position because all employers, excluding own account workers and domestic households, are mandated by law to enrol their employees with the EPF. Both the employer and employee are required to contribute to the Fund, on a monthly basis, which then accumulates to become the worker's retirement fund. From 1996 this joint contribution rate stands at 23% of an employee's salary, of which the employer's share is 12% (see Table 2). Hence, it is a mandated defined contribution

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(DC) plan but not a defined benefit (DB) plan. It is based on mandated contribution levels and mandated investment portfolios. The fund is managed for the account of each individual contributor and contributors are allowed to withdraw from their accumulated fund on retirement.

The EPF also invests the accumulated funds and pays out a yearly dividend that is credited to the contributors' accounts. There is a pooling of the funds to minimise cost and specialised business risks within the limits permitted by the EPF's regulatory framework and markets. But the pooling arrangements do not protect a contributor against market or longevity risks. And in the absence of annuity products, the contributor is left to his own ingenuity to manage the accumulated fund so as to smooth his consumption over his remaining life in retirement (and make bequests).

The returns from EPF's investments have frequently been the subject of controversy that has surfaced again, in the face of declining dividends from the mid-1990s. This has led to calls from various sectors to revamp the composition of the EPF's investment panel, and it's investment strategy. In fact, the Malaysian Trade Union Congress (MTUC), the largest umbrella body of trade unions in the private sector, called for the entire investment panel to be fired![1]

In this paper, we will argue that the investment performance of the EPF is seriously constrained by the nature of the provident fund scheme, by the regulations imposed upon it and by financial markets that are under-developed. One of our key conclusions is that pension reform *per se* can drive capital market development only up to a point. Pension reform also requires a reform of capital markets. Thus, the paper hopes to contribute positively to this debate about the EPF's investment policies and

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[1] As outlined in this paper there are fundamental weaknesses in EPF's fund management activities. However, its critics, including MTUC, have focused their criticisms not on these fundamental weaknesses but on EPF's failure to continue to deliver high dividends (without relating the payment of these dividends to underlying market conditions) as well as EPF's increased investments in equities which has increased its exposure to market volatility (notwithstanding the fact that equities may be the best asset class for a long-term fund such as that of EPF).

strategies by going beyond generalities. More specifically, we will examine the following areas:

First, we discuss the asset allocation strategy of the Fund. During the 1980s, around 90% of the EPF's accumulated funds were invested in "safe" Malaysian Government Securities (MGS). This ratio has now come down dramatically because the Government has been running a surplus budget during much of the 1990s. While this has allowed the EPF to diversify its assets, it has also made the asset allocation and asset diversification strategy more challenging. We will therefore analyse the constraints and opportunities that face the Fund in this new environment. Second, we evaluate the investment management strategy of the EPF. In particular we focus on two concerns: (i) Is it advisable for the decision-making of a huge asset management company like the EPF to be so centralised? (ii) Does the EPF's arrangements for the pooling of its funds minimise cost and provide adequate protection against specialised market and longevity risks?

Third, and more fundamentally, we show that any reform of the investment strategy of the EPF must go hand in hand with a broader reform of the financial sector. We argue that in a very real sense, pension and financial market reforms depend on each other. The EPF will be used as a case study to highlight the problems and the specific reforms that are required.

Fourth, we discuss some key issues on the governance of the EPF and the role of the Fund (as an institutional investor) in corporate governance. Changes in governance will have a direct impact on the effectiveness of the Fund's performance and its duties to its contributors.

Accordingly, the paper is organised into four subsequent sections, each of which will deal with the objectives outlined above. The final section concludes the paper.

ASSET ALLOCATION ISSUES

The EPF was over-invested in Malaysian Government Securities (MGS) during the 1980s and even during the early 1990s. This was required by law[2], not only because the Government, which controlled the Fund, viewed it as a safe investment but also because it provided the Government with a captive and cheap source of funds to finance its development programmes. The over-investment in MGS led to under-investment in domestic as well as global equities and bonds, (whether sovereign or corporate). This has caused the Fund to under-perform, in comparison to the market returns earned by privately managed funds in the developed world.[3]

In the 1990s when opportunities for investment in MGS declined because of public sector budget surpluses, the Fund saw an increasing exposure to the money and equity markets. However, this coincided with a less favourable interest rate and market environment, which in turn, affected performance and has led to declines in the Fund' s dividend rate since 1995 (see Table 1).

Given the global experience, one way for the EPF to improve its performance and push up its long-run dividend rate to exceed past levels (or even beyond the double digit level) is by increasing its share of investments in equities. But this is attainable only on a long-term basis and for an investment time horizon of ten to twenty years. The return on

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[2] The law still requires 70% of the EPF's funds to be invested in MGS. Given the current size of the EPF's funds, even if it buys up all the outstanding MGS issues, it will still not comply with the legal requirement. The Government has been exempting the EPF from complying with this requirement on a year-to-year basis.

[3] If the EPF's investments in MGS were not captive and MGS yields were market-determined, its returns would have been more satisfactory. However, real returns have turned out to be satisfactory on account of several factors: the Government has used the funds reasonably prudently (e.g. for infrastructure development); the economy was an open one and maintained a high rate of growth; and formally, the government pursued generally sound macro-economic policies which also kept inflation low.

investments from equities is primarily in the form of capital gains. But the equity market is highly volatile. Therefore, any sizeable increase in the EPF's investments in equities can greatly destabilise its overall investment returns and, hence, its dividend rate on a year-to-year basis, or even over several years (especially if we are caught in a long bear market as has happened in global equity markets from time to time).[4]

The benefits of diversification, even within the domestic context, is clear but the problem is one of persuading contributors that investing in equities for the long haul is the best strategy, especially when there is so much popular misconception about the equity market, not only among laymen but even amongst journalists, trade unionists and politicians. One obvious way out is to give the choice to the contributor but we will have more to say about this in awhile.

A Goldman Sachs study (1995) for the period 1985 to 1994 showed that if the proportion invested in MGS had been reduced to 75% and that in equities and properties had been raised to 10% and 5% respectively, then the average returns on this more diversified portfolio would have been some 15% higher with a corresponding reduction in risk of about 12%. A more balanced portfolio with 50% in MGS, 25% in equities, 10% in cash and 15% in properties would have increased returns by about 35% and lowered risk by 10%, as compared to the EPF's historic portfolio with 90% invested in MGS and 10% in cash.

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[4] There are differences in the risk-return profile between a portfolio of money market instruments, fixed income securities and equities. The general presumption was that return and risk was the lowest for the portfolio of money market instruments and the highest for the portfolio of equities. However, an authoritative study by Professor Jeremy Siegel (1994) based on US data for the period 1802 to 1992 has demonstrated that if the investment time horizon is twenty years, and if one takes into account real and not nominal returns, then equities have the highest returns as well as the lowest risk of any rolling twenty year holding period. The returns ranged from 1.2% to 12.6%. The corresponding returns were –3.1% to 8.8% for bonds and –3.0% to 8.3% to T-bills. This critical finding demonstrates the importance of investing in equities, both local and overseas, for pension and provident funds whose time horizon is indeed very long.

The EPF's under-performance, relative to the market return from a privately managed pension fund in the developed world, can be attributed to its under-investment in equities and the lack of international diversification of its portfolio. We can refer to the same Goldman Sachs study to see what we have missed by not investing part of our portfolio in global equities and global bonds. The study shows that if the EPF had invested up to 30% of its funds in global equities and global bonds, would have increased its returns by 25% and reduced its risk by one-third relative to the results it achieved from having its funds wholly invested in Malaysian assets.[5]

The EPF is currently running a large duration mismatch between its pension fund assets and liabilities.[6] Although a duration number is not available for the liabilities, it is probably between 8 and 12 years. This is in comparison to an asset duration that is unlikely to be greater than 4 years. This relatively low duration is an inescapable result given the lack of supply in long maturity RM *(ringgit* Malaysia) papers, and by the fact that the EPF has been confined to investing in papers from the local market. Essentially, this duration mismatch means that if interest rates decline by 1% for an extended period, the dividend that the EPF would be able to declare will fall significantly.

Although the supply of longer maturity RM bonds will continue to increase in the future, it will take a number of years for the supply to be sufficient for the EPF to reduce its exposure to falling rates. This is simply because the EPF's portfolio is extremely large when compared to both current and prospective issuance.

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5 This under-investment in global equities and bonds cannot be rectified over-night as it can expose the EPF to market risk. It is best to rectify it on a phased basis over the medium or long-term.

6 I owe this point to Mr Charles Berg, a US money manager, who had worked in Malaysia in 1995 and 1996. But as pointed out by Dr Arun Muralidhar of JP Morgan, there will be a duration mismatch only if there is a guaranteed annuity (but not with a lump-sum payout with no target). Duration mismatch has been highlighted as a problem in this paper because many expect the EPF to earn and declare a nominal annual dividend of 8%, based on the record of the Fund in the 1980s and early 1990s.

Until as recently as mid-1997, the one alternative for reducing the exposure to falling rates involved using US Treasury zero coupon bonds as a surrogate for long maturity RM papers. Its viability derived from the significant correlation between RM and US rates, the depth and liquidity of the market for these long duration instruments as well as the active market that existed in long-dated cross-currency swaps (CCS). With the decoupling of the USD (US dollar) from the Asian currencies (including the ringgit), as a result of the regional financial crisis from which many countries in Asia have not recovered, as well as the banning of the offshore market in CCS, other solutions may have to be found for this large duration mismatch between the EPF's assets and liabilities.

INVESTMENT MANAGEMENT ISSUES[7]

The EPF retirement scheme is based on a defined contribution (DC) plan, not a defined benefit (DB) plan.[8] The fund is managed for the account of each individual contributor who is allowed to withdraw his accumulated fund on retirement. There is a pooling of the funds to minimise cost and specialised business risks within the limits permitted by regulation and markets. But the pooling arrangements do not protect a contributor against market or longevity risks.

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7 This sub-section has benefited enormously from a reading of the illuminating works of Franco Modigliani and Arun Muralidhar (1998a, 1998b) and Modigliani et al. (1999).

8 Under a DE plan, the retiree is assured of a stable income during his retirement period. Any shortfall in investment returns from the guaranteed payout has to be made good by the plan sponsor i.e. the Government or by the employer. On the other hand, in a DC plan, the investment decision is the responsibility of the beneficiary and for a given contribution rate, the risk of any divergence between the actual investment return and the expected payout, is borne entirely by the contributor and not the sponsor. In a provident fund arrangement, the contribution is mandatory and therefore akin to a DC plan. However, the investment decision is exercised by the provident fund but the contributor bears the risk. This is a potentially explosive arrangement.

As a provident fund, the EPF has attempted to operate as a portfolio investor and not as a promoter or a major shareholder in individual businesses. The EPF should be taking portfolio risk and not business risk based on the time-tested principles of portfolio management. Also, the skills and resources at its disposal are better at managing portfolios (either directly or indirectly through fund managers) than at managing a diverse range of operating businesses. However, as domestic financial markets are under-developed and given the restrictions on international diversification, the EPF has been facing a serious constraint on the extent to which it has been able to invest in marketable securities. The relatively high share of its portfolio invested in direct loans is due, for instance, to the inadequate supply of marketable securities. This increases the reliance of the EPF on an investing model that is based on a relationship system than one that is based on market prices or contracts and hence on a system which may not be arms-length or transparent.

Non-optimal regulation (e.g. with regard to the restriction on international diversification), under-developed markets and the use of an incorrect performance evaluation criteria (one which is not, due to a regulatory constraint, measured relative to market performance and one which does not require marking the portfolio to market) have also biased the style of investment management in the EPF towards more active management.[9] This leads to higher costs, higher risks and increases its vulnerability to external influences on its decision-making. This is certainly true with respect to its investments in non-marketable securities. But this also applies, to an extent, to its investments in marketable securities.[10]

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[9] Where performance is based on a target return and not measured relative to market performance, and where a portfolio is not marked-to-market, it requires more active management and the selling of winners and a hoarding of losers. An efficient market requires some investors to invest on an active basis.

[10] Let us take the case of the EPF's investments in quoted equities. The EPF is under-invested in equities and its accumulated balances owing rapidly. Therefore, it must be in a position to increase its exposure to equities in a timely manner and at least cost and risk. The much higher cost of transaction in the cash market (because it is still cartelised), and restrictions on arbitrage activities between the cash and futures markets (because short selling, for

It is well understood that it is almost impossible for any investor or fund manager to pick the stock market lows and highs. Even the most astute investor or fund manager who is actively managing his position in the stock market will end up invariably working for his broker, even in the more inefficient emerging markets where brokerage commissions are still high and illiquidity can make for wide spreads between bidding and asking prices. The time-tested and empirically proven method is to invest for the long haul and on a passive basis. So long as management of the funds is passive, it is market volatility and not poor management that will lead to weak performance in the short or medium term. The potential for attaining market returns (or close to it) in the long-run is also not likely to be jeopardised. The case for a sizeable portion of its funds to be managed on a passive basis is enhanced when one considers the hiring and firing constraint under which a public sector institution such as the EPF has to labour.

Given that the size of the EPF in relation to the market capitalisation of the domestic stock market is large, that its management is over-extended, and that the state of the fund management industry is under-developed, it is best for the bulk of the EPF's funds to be managed on a passive basis. It has to decide on the benchmark index on which its passive investment programme and its performance evaluation are to be based.

As a passive investment programme is on auto control, the EPF's investment decisions will be freed from external pressures. This will be especially so if the choice of whether to opt for the passive programme is made by the contributor himself. It will also support the market, as the importance of the EPF grows as a stock market investor and so long as its investible funds continue to grow. A passive approach may also reduce market volatility.

We have noted that the fund managed by the EPF is for the account of each individual contributor who is allowed to withdraw his accumulated fund on retirement. The pooling of funds as practised by the EPF enables

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instance, is prohibited in the cash market), makes it more costly and more risky for the EPF to put in a position in a timely manner.

it to minimise cost and specialised business risks within the limits permitted by its regulatory framework and the markets. But the pooling arrangements do not protect a contributor against market or longevity risks.

Let us take the case of market risks. The EPF's contributors are of various age groups. The younger contributors have a much higher risk-bearing capacity *vis-a-vis* the older contributors. But no distinction is made in the investment plan or programme for each age group. The same programme applies to all age groups irrespective of their risk preferences or risk-bearing capacity. The young end up with an investment plan that bears too little risk and the old with a plan that bears too much risk. This anomaly must be rectified.

The minimum the EPF should do is to come out with a separate investment plan for at least three broad age groups; one for the young, a second for the middle-aged and a third for the old. Every effort can then be made to persuade contributors from each age group to participate in the plan for their respective age group but without making this a mandatory requirement.

To come out with separate investment plans for different age groups, the Fund has to be reorganised. To ease the transition, choice can be given to the individual contributors to decide on which plan or what mix of plans they wish to opt for. The fund management under each plan can be contracted out to external fund managers for actively managed funds. On the other hand, the funds for passive management can be managed in-house, where necessary, by engaging external consultants to assist the EPF on such matters as the choice or construction of the benchmark, or on how best the rebalancing of the portfolio can be effected.

This shift in the approach to fund management will require the marking-to-market of portfolios. In respect of the EPF's existing investments, there will be some (e.g. straight loans) that may not lend themselves readily to be marked-to-market. This should not pose any problem as each contributor can be allotted his proportionate share of the investment. In respect of funds held in the housing account but which a contributor has not withdrawn for housing, the contributor may choose to have them invested on a low risk plan aimed at protecting the principal. Even if he had chosen for it to be managed on a more risky

basis, so long as he has reconciled himself to withdrawing a diminished amount to provide for any market volatility, there is no reason why the funds cannot be invested on a decentralised or a more aggressive basis.

This shift in the approach to investment management will also require substantial changes in the EPF's back office operations. Reliance on a custodian can greatly assist the EPF in making the shift towards marking-to-market its portfolio and in facilitating the transition as well as in minimising any dislocation. The accounting and reporting for individual accounts can also be contracted out. Certain banks have already developed systems for handling operations based on the defined contribution plan that is akin to that in existence in the EPF. Therefore, a tie-up with such banks to provide these services makes a great deal of sense.

The protection of a contributor's retirement fund from market risk can be addressed by investing it in less volatile assets as one nears one's retirement age. There is still the problem of smoothing his income or consumption during his retirement period. Here the contributor will face both market as well as longevity risks. Well-developed markets in annuity products can address these risks. But thanks to the over-regulated and over-protected insurance and fund management industries there are still no signs of a market developing in annuity products. Even where there is an active market in annuities, the arrangement is likely to be more optimal in hedging against market and longevity risks when the number of participants who participate in the pool is large.

The role of the EPF is to ensure that adequate investment choices are offered to contributors on a competitive basis. The choices are between different asset classes (including domestic and international), between different management styles (including passive and active management) as well as between different providers of annuity products so that each contributor can exercise his choice based on such considerations as expected return and risk, cost, risk preferences as well as his risk-bearing capacity. This will be the complete opposite of the current practice of a common investment plan, irrespective of the age profile or risk-bearing capacity of the contributor.

A more far-reaching reform of the EPF is to provide a mix of the DB and DC schemes to a contributor. A DB scheme is exposed not only to market and longevity risks[11] but also to salary growth and inflation risks. As a result, the size of the annuity to be achieved from the DE scheme should be modest and aimed at ensuring that the contributor retires above the poverty line. For the balance of his contributions, the contributor should be given greater latitude on the arrangement he wishes to opt for.

The DB scheme clearly shifts the risks from the contributor to the scheme sponsor. The scheme sponsor, who can be the government or an insurer-cum-fund manager, must have a wide coverage to enjoy the law of large numbers to hedge itself against the relevant risks. Modigliani and Muralidhar (1998a: 2) contend that the government is in a far better position to absorb these risks, "because of its size and because, with infinite life, it can redistribute the risk of a single cohort over a large number of cohorts". Given the uncertainties in asset and labour markets, they also suggest that governments be permitted to change the guaranteed annuity for future contributions (1998a: 18-19). The obvious question is how do we protect ourselves against expropriation by an irresponsible government whose tenure in office is far shorter than the life of the retirement fund it is entrusted to manage? The best protection is to require it to invest on a passive basis and mark its portfolio to market at fixed regular intervals. Large private sector insurers-cum-fund managers should also be encouraged to compete with the government in the provision of this annuity scheme. The role of the government or the EPF, in this instance, is to identify and set prudent guidelines and regulate the private sector providers of this service.

THE INTER-RELATIONSHIP BETWEEN PENSION AND FINANCIAL MARKET REFORMS

Where financial markets are under-developed, a pension fund cannot be managed and evaluated primarily on a portfolio basis i.e. with reference to the principles of portfolio management. Unbundling risk, taking a

[11] A DB scheme will not be exposed to market and longevity risks if the credit standing of the scheme sponsor is undoubted.

position and hedging will be more complicated. The pension fund may even have to invest in projects or businesses or become a direct lender (as opposed to investing in quoted equities or rated debt issues). This complicates performance evaluation and will increase the demand on scarce skills as well as increase the scope for external interference in decision-making. Exit routes may not be readily available and cutting positions may be difficult or more costly.

Constraints Imposed on Pension Reform by Underdeveloped Financial Markets

Where financial markets are under-developed, and in particular where the market infrastructure is weak with respect to the pricing and execution of trade, clearing and settlement, we also cannot rely on the exit route to further corporate governance best practices.[12] Inactive and illiquid markets make exits more difficult and costly. Therefore, minority shareholders (including institutional investors) cannot rely on the exit route to protect themselves against the risk of expropriation or against controlling shareholders who are not maximising shareholder value, but are instead maximising their private benefits of control. This is a problem an institutional investor will encounter in an environment of concentrated shareholding and where there is no market for corporate control.

Where markets are not well-developed, and portfolios are not marked-to-market, a policy of holding a portfolio to maturity or of holding it indefinitely will become commonplace with little or no incentive for a change in this habit. This may encourage unhealthy practices and non-optimal investments as well as cause under or over-payment whenever a contributor makes withdrawals from his accumulated fund. By marking

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[12] For a shareholder to rely on the exit route to protect himself and to recover his investments, the regulatory regime must ensure that all material information that investors need to make decisions are disclosed on a full and timely basis, and that there are safeguards against anti-competitive behaviour and other forms of abusive behaviour by market participants (who may play a key role in regulation and enforcement), that investors are protected from the insolvency of financial intermediaries and that there are adequate controls for systemic risk.

a portfolio to market, we ensure its transparency, proper valuation and accounting, and reduce the incentive of the manager to sweep things under the carpet or to delay actions until it is too late.

Where markets, institutions and hence annuity products are under-developed, prospective retirees will be less well placed to smooth their consumption over their retirement period. This is especially so under a provident fund scheme where contributors end up withdrawing a lump sum on retirement. If contributors are unable to swap their lump sums into annuities, or invest optimally, they run the risk of squandering their retirement fund. The DC plan of a provident fund can be supplemented by a DB plan, provided the DB plan is fully funded, the investment management is optimal and financial markets are well-developed. In sum, pension reforms require financial market reforms. We now turn to the nature of the reforms required in certain key financial markets.

Reforms for Promoting Capital Market Development and Potential Spin-offs For Pension Reforms

The discussion here is confined to a review of the fund management industry and the debt markets. These are amongst the most under-developed financial markets and activities in the country. Their continued under-development will severely constrain the agenda for pension reforms. A case in point is that the short supply of fixed income products has been a contributory factor in the EPF's under-investment in marketable securities and in constricting the development of a market in annuity products. This section dwells at length on the factors that are holding back the development of an active and liquid market in fixed income products. There is no discussion of the equities market in this section because it is fairly well developed in Malaysia. It is primarily the restriction on the EPF's investment in equities, and the adoption of an incorrect performance evaluation criterion, that have led to the EPF's under-investment in equities. We note in passing, however, that the much higher cost of transaction in the cash market and restrictions on arbitrage activities between the cash and futures markets (because short selling, for instance, is prohibited in the cash market) make it more costly and more risky for the EPF to take a position in a timely manner.

Fund Management Industry

Asia's chronic over-dependence on banking, one which is based more on a relationship-based system and less on market prices or contracts (and this is partly because of its weak legal infrastructure), has increased the risk profile of its economies. This over-dependence on banks has been caused by the over-protection of banks and the over-regulation of capital markets. This has led to the under-development of the fund management industry[13], of financial markets, of risk management products, of risk intermediaries as well as of trading and "market making". It had also led to the under-investment of the EPF in marketable securities and its sub-optimal approach to asset allocation decisions and investment management.

There are several reasons for the under-development of the fund management industry and hence of financial markets in Malaysia. Firstly, this under-development is due to the capture by the EPF of a sizeable portion of national savings through its forced-savings scheme and the centralised investment of these savings by the EPF.[14]

Secondly, restrictions on the entry of foreign fund managers as well as on investments (including investments in overseas assets) have curbed the development of the funds management industry. And finally, the guarantee of bank deposits and the favourable tax treatment of interest income on bank deposits have discouraged investments in money market funds as well as in bond and equity issues. However, the incentive

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[13] The fund management industry has emerged in the Anglo-Saxon world as the biggest mobiliser of savings, on the one hand, and as the biggest investor, on the other. And securitisation has made this eminently possible.

[14] The problem of over-centralisation in savings mobilisation and investment management can be addressed not by breaking up the EPF but by reviewing its asset allocation mix, investment management approach and changing its contribution rate. We have noted that the EPF is under-invested in domestic equities and is not invested in global equites or bonds. Given the benefits of diversification, the problem of persuading the Government and the contributors to adopt the right asset allocation mix has to be addressed as a matter of priority. The role of the EPF is to ensure that adequate investment choices are offered to contributors on a competitive basis.

structure for the pooled management of funds has improved substantially in recent years, thanks to the decartelisation of the broking industry and the liberalisation of brokerage commissions.

A reform of the financial sector, including the EPF, is necessary to ensure the balanced development of the fund management industry vis-à-vis the banking industry. For a balanced development of the financial services industry, increasing reliance has to be placed on financial and capital markets to price, mobilise and allocate savings between competing debt and equity market instruments. The financial and capital market must also price and allocate risks (in the new environment of increased market volatility) between different market players, based on their willingness and capacity to bear the risks. This will, in turn, require the liberalisation and deregulation of financial markets so that traders will be able to hedge and take position or make markets without unnecessary restrictions and without incurring high transaction costs.

With the balanced development of financial markets and adherence to best practices in performance evaluation, the EPF will have the means and the incentives to invest in marketable securities and manage its investments on a portfolio basis.

The Bond Market

The market for bond trading in Malaysia is under-developed because of over-regulation and the pursuit of incorrect policies. The market infrastructure, with respect to trading, clearing and settlement is, however, quite sound. The impact of over-regulation and incorrect policies on bond market trading is set out below.

An improved trading environment is not sufficient for stepping up bond issuing activity. We also require a satisfactory infrastructure for contracting i.e. we require good laws and effective enforcement of these laws. These issues, which are discussed in Thillainathan (1999), are not discussed here, as the primary market in bonds is large. The development of debt markets has also been held up by an overlap in mandates. In the developed world, the securities regulator is responsible for regulating the debt markets. In Malaysia, Bank Negara (the central bank) was the main regulator. Bank Negara's anti-inflation goal and over-reliance on credit control can conflict with the goal of developing a

bond market. To remove this conflict the Securities Commission has now been appointed as the sole regulator of the bond market.

The captive demand for, and the shortage of MGS (Malaysian Government Securities), an illiquid cash market and the lack ofa futures market in Malaysia (as elsewhere in Asia), has resulted in an under-developed secondary market in MGS. Thus the problem of determining the risk-free interest rate cannot be separated from the problem of pricing credit risk. This has curbed the level of issuing and trading activity in PDS (private Debt Securities).

If the measures discussed in this subsection for the liberalisation and deregulation of the domestic bond market are implemented, they will boost the level of issuing and trading activity in PDS. There will also be less reason for the EPF to be under-invested in debt securities.

If the Government does not have a need to borrow, it may still have to issue MGS papers periodically as a benchmark for the pricing of fixed rate papers. To serve this purpose better, there is also a need for consolidating existing MGS issues into fewer, larger issues. If *Khazanah* (the Government Investment Corporation) becomes a regular issuer and its issues set the benchmark yield curve, then the best way to utilise the issue proceeds is to build up a portfolio of foreign assets.[15] As *Cagamas* (National Mortgage Corporation) bonds are near *riskless* papers, freeing up the market for these papers offers the best solution for the generation of benchmark yields.

To develop an active secondary bond market, it is necessary to free yields, reduce or eliminate reserve and liquidity costs and reduce interest rate risk premium. Liberalisation of the liquid asset requirements[16] will have the effect of freeing yields and reducing liquidity costs. Reserve costs can be reduced by reducing reliance on statutory reserves as a tool

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[15] This is preferred to its current practice of using its funds as seed capital for picking potential winners.

[16] Liberalisation has been implemented under Bank Negara's new liquidity framework. It is still too early to judge the extent of the liberalisation that is likely to materialise.

of monetary policy or by exempting financial institutions from holding reserves against their inventories of fixed rate papers. Improving opportunities for hedging can reduce the interest rate risk premium.

The development of an active and liquid bond market also requires the creation of an institutional framework for the borrowing and lending of securities and the removal of existing restrictions on repo (repurchase) and reverse repo transactions or agreements.[17]

If the cash and futures markets are well developed, investors and speculators will be able to trade based on their views on interest rates, the shape of the yield curve, the spread between MGS and PDS yields and the spread in yields between the cash and futures markets. This will boost trading volume and market liquidity.

To accelerate the growth in the PDS market the restriction on the issue of speculative grade bonds has been removed, the shelf registration rule has been introduced to remove the interest rate risks associated with debt issues and the time required for the approval of such issues has also been reduced. But there is also a need for the interest income on debt issues to be exempted from withholding tax, or for cross-currency swaps to be more freely to shift risk and thereby minimise the foreign currency exposures of Malaysian borrowers. The broadening of the investor base for private debt issues is most welcome but to ensure the necessary disclosure of information and due diligence, there should be a requirement for filing of the placement memorandum for such issues with the relevant authorities, as is the case in the US (but without it being subject to their approval). A neutral tax and regulatory regime is also necessary to ensure the balanced development of the debt and equity markets.

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[17] Under a repurchase agreement or "repo", an institution enters into an agreement with a buyer to sell a security for cash and buy it back at a pre-agreed price after a specified period of time. The seller is in fact using the "repo" transaction to finance its investment in the security on a collateralized basis. In a reverse repo transaction, an institution is in fact lending against the collateral of a security. A reverse repo transaction can in fact be used by an institution to borrow a security against the collateral of cash for the purpose of short selling the security.

Securitisation [18]

The securitisation of debt can reduce the asset-liability mismatches and capital requirements of a bank. It also increases the supply of private debt securities for those wishing to invest in such papers such as the pension funds. To boost securitisation of mortgage loans, which is well developed in Malaysia, the purchase of such loans can now be done (effective from March 1999) on a non-recourse basis to the banks. The restriction on securitisation of loans in respect of houses costing more than RM150,000.00 has also been lifted (effective from the same date). Approval has been given, effective from December 1998, for the securitisation of other kinds of debts, such as auto loans, lease receivables and credit card payments. The instrument used in the transfer of assets (backing a traditional loan) was exempted, as per Budget 2000, from stamp duty and real property gains tax for a limited period. An indefinite exemption is preferable for the promotion of securitisation. The need for over-collateralisation with respect to the securitisation of auto loans and credit card receivables can cause difficulties with the Bankruptcy Act, as well as the tax status of a special purpose vehicle. This aspect requires remedial measures.

Cross Currency Swap (CCS) Market

In the absence of a well-developed and liquid domestic bond market, the yield curve generated by the cross-currency swap (CCS) market can be used as the benchmark yield curve for issuing and trading PDS and for boosting their supply. A more active and liquid CCS market will make for a narrower bid-ask spread and a higher transaction volume for each price quote. And the lower the level of capital controls, the higher will be the level of activity and liquidity.

There was an active and liquid CCS market in RM (for tenures of up to seven years) from the last quarter of 1994 until mid 1997 because there were no restrictions on the offer or bid side of a swap or forward

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[18] Asset Backed Securities (ABS) is a type of bond that involves asset securitisation, that is the conversion of the asset that is, for instance, backing a traditional loan into a tradable instrument. The asset concerned has to be transferred from the owner to a special purpose vehicle established to issue and sell the ABS.

transaction. On the other hand, there was a restriction on the offer side (which is equivalent to an outflow control), from 1989 until August 1994, and on the bid side (which is equivalent to an inflow control), from June 1992 until August 1994. Accordingly, the bid-ask spread was around 150 bp (basis points) or 1.5% in 1993, whereas the spread was at or below 25 bp in 1996, and even during the first half of 1997. With the outbreak of the regional financial crisis in mid-1997 and the imposition of an outflow control on the offer side from August 1997, the spreads widened once again to over 100 bp. But during the second quarter of 1998 the spreads narrowed and traded between 50 to 100 bp. With the imposition of the new exchange control regime in September 1998, the CCS market based on deliverable contracts has been shut down.

The yields generated by the CCS market were used as the proxy yields during the mid-1990s for issuing and trading activities in the onshore PDS market. There were restrictions on the extent to which a resident could access the CCS market. However, non-residents could deal freely with the onshore banks during the 1994-1997 period. Their arbitrage activities between the onshore PDS market and the offshore CCS market were adequate to ensure a narrowing of the onshore and offshore yields thus enabling more widespread use of the latter as indicative yields for activity in the onshore PDS market.

The international rating of certain Malaysian corporations and the active trading of their debt issues in the global bond market generated valuable information on their risk premiums or credit margins. The domestic rating of the same corporations and of many others, as well as the increasing acceptance of these domestic ratings by both local and foreign institutional investors, have made it easier for these investors to compare and price the debt issues of the various corporations.

It is apparent from the preceding discussion that during the mid-1990s, the CCS market generated the indicative benchmark yields, and the increasing acceptance of ratings by issuers and investors generated the risk premiums for the pricing of credit risk. With the two sets of data and available information on US Treasury yields and swap spreads from the global market place, the pricing of *ringgit* debt issues during that period became less intractable in spite of the absence of a well-developed and liquid domestic government bond market.

So long as the domestic bond market remains under-developed (as is the case in most Asian economies) reliance can be placed on the CCS market to generate a proxy yield curve.

This makes it essential for the Malaysian Government to remove restrictions that have led to the shut down of the *ringgit* CCS market. Unless these restrictions are removed, the lack of a proxy yield curve can curb the level of issuing and trading activity in the private debt securities market.

The removal of this capital control is also necessary to enable investors and borrowers to hedge their interest and exchange rate risks more easily and at lower cost through the CCS market. This will increase overseas interest in investing in Malaysia and reduce the risk of Malaysians who have overseas exposures. This is more necessary where the value of the *ringgit* is market-determined.

The existence of an offshore CCS market can also give opportunities for market players to seek unique solutions[19], arbitrage between the onshore and offshore markets in interest rates and credit spreads (thereby making each market more efficient), as well as take positions or hedge exposures. For instance, after the outbreak of the regional financial crisis, the credit spreads on Malaysian sovereign and quasi-sovereign issues ha1tte touched a high of 1,200 bp. They are now trading around 200 bp above US Treasuries, compared to the domestic *ringgit* issues that command much lower spreads over their equivalent benchmarks. If the CCS market had not been shut down and if the EPF had been permitted to invest in and swap these foreign currency issues into RM, then it would have enjoyed a sizeable yield pick-up by investing in these synthetic *ringgit* assets. At the same time, it would have played a useful role in narrowing spreads on Malaysian risks to more realistic levels.[20]

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19 See the earlier discussion on the EPF's duration mismatch and the unique solution that was feasible if a CCS market had continued to exist.

20 During the height of the Asian regional crisis in 1998, there was a collapse in bond prices of quasi-sovereign borrowers, e.g. Petronas (the national oil corporation), with an unprecedented widening in their credit spreads over USTs. There was little or no change in the perception of the domestic credit standing of these borrowers. Therefore, there was a big divergence in the

THE EPF AND GOVERNANCE ISSUES

In this section we examine the issues related to the governance of a provident fund such the EPF, as well as the role that the Fund, as an institutional investor, can play in corporate governance. The goal of a provident fund must be clearly articulated to avoid a conflict between the interests of the contributors and that of the government as the regulator. It is important to note at the outset that a government's development goals can often constrain the investment choices of a provident fund. These constraints must be minimised by reference to the efficiency and equity criteria. To align the interests of fiduciaries and contributors, a case is also made for a pension or provident fund to be managed on a portfolio basis with increased reliance on markets.

Issues Related to the Governance of the Employees Provident Fund

It is now generally accepted that the activities of the EPF should be geared to further the interests of contributors and not to promote "development". It is also accepted that there should be no disparity in the treatment of contributors. The EPF's regulator and fiduciaries were not as clear of its goal even as recently as the late 1980s.

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credit spreads of Petronas. This should have led to an arbitrage activity i.e. domestic investors who are happy with the credit of Petronas would have been better off buying its USD bonds, and then swapping them into a *ringgit* exposure, thereby enabling the domestic investor to earn onshore and in *ringgit* the spread that is available on Petronas papers in the offshore market. For this arbitrage activity to take place, what is necessary is a CCS market. And there should be no restrictions on the prudent activities of domestic investors such as the EPF to enter into a swap trade. By doing so the EPF is not assuming an foreign exchange exposure. Neither does it have to take a credit risk that it is not happy with. However, in practice, there were restrictions of one form or another, which prevented or reduced the extent of arbitrage activity that can take place. Therefore, the offshore credit spreads remained at a higher level than it need have been if the domestic investors had the opportunity to arbitrage away the wide differential in the credit spreads between the onshore and offshore markets.

There has always been a "conflict of interest" between the Ministry of Finance (MOF) as the EPF's regulator, and the government, as the biggest borrower from the EPF.[21] There is a conflict of interest to the extent that government spending benefits all Malaysians but only private sector employees are mandated by law to contribute to the EPF's pool of "forced" savings.

As the Malaysian Government Securities (MGS) issues could only be used to finance development, and not operating expenditure, and since the government has generally been responsible in its financing and spending decisions, the safety of the EPF's investments in MGS was seldom in question. However, the captive demand for MGS by the EPF and other financial institutions have led, from time to time, to artificially low yields for MGS and hence to lower returns for the EPF. With the shortage of MGS, the MOF has been prepared to grant a waiver to the EPF from the requirement that 70% of its funds be invested in MGS. But the law has not been changed and such waivers have been given on an annual basis. There have been periods when yields on new issues of MGS were significantly below equivalent corporate bond yields and of the EPF having or required to invest in such issues nonetheless.[22]

Restrictions on international diversification, the bias towards investments in domestic assets, and the propensity for doing businesses with domestically controlled companies or banks can all increase risk exposures or weaken risk controls. This is a problem in Malaysia to the extent that the government's development goals constraints the EPF's investment choices. The new regime of exchange control is likely to increase these biases.

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21 The law still requires 70% of the EPF's funds to be invested in MGS, though the Government was running a surplus budget for much of the 1990s.

22 A glaring conflict of interest between the MOF (as the regulator) and the government (as the borrower) may have been reduced in recent years by MOF's Secretary-General ceasing to be the EPF's Chairman as well as with the increase in the number and tenure of office of the independent members.

As argued previously, the existing regulations and the under-developed financial markets has prevented the EPF from investing on a portfolio basis. It is thus vulnerable to undesirable external influence on its decision-making powers. Its portfolio is not required to be marked-to-market and its performance is not evaluated with reference to the performance of the market. This can lead to a disparity in the treatment between contributors and to non optimal investments (and under-performance).[23]

There are special problems that crop up in governance and performance when the EPF is not a portfolio investor. To illustrate these problems, let us see what would have happened if the EPF had ventured into the business of property development.

Given the success of Singapore's Housing Development Board (HDB) and its Central Provident Fund in promoting housing development and home ownership, there were calls on the EPF to create a Malaysian HDB either directly, or through its subsidiary, MBSB.[24] Fortunately, both the government and the EPF have not responded to these calls. By not promoting or setting up an HDB-type of organisation, the EPF has been able to serve its interest better. It was able to deal with a more competitive industry in housing development.[25]

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[23] The EPF (along with the central bank) extended special loans, at below market rates, to its subsidiary, Malaysia Building Society Berhad (MBSB) to finance MBSB's low cost housing programme. As MBSB had other shareholders and as only a few of the EPF contributors were fortunate to be beneficiaries of MBSB's low cost housing programme, there was no justification, on efficiency or equity grounds, for the EPF to extend such loans to MBSB at below market rates. Accordingly, such subsidized loans have been discontinued from the 1990s.

[24] The EPF took over controlling interest in the Malaysia Building Society Berhad (MBSB) from the Federal Government in the 1970s.

[25] If the EPF had promoted an HDB-type of organisation through its investing and lending policy, it may then have been biased to lend to the few who have a demand for the houses it developed. It will then be taking not only a lending risk but also a business risk. The alternative is a competitive situation where the EPF can lend to the many who are free to buy from any developer or in any location. This will expose it only to the lending risk.

It is now in a better position to maximise returns, minimise risks and minimise its vulnerability to undesirable external influence because the funds it plans to allocate to housing are lent to house buyers who are free to buy houses from any developer. By channelling its funds to buying loans that originate from many financial institutions without regard to who the developer is (as is being done by *Cagamas Berhad* which is a mortgage corporation), or by investing in *Cagamas* bonds, it is stronger and safer than if it were to engage directly in property development or to only lend for the purchase of houses it has developed. As a pension/provident fund it is right that the EPF remains as a portfolio investor and not as a direct investor in property development activities, as it should be taking portfolio risk, not business risk.

In a provident fund arrangement, the contribution is mandatory and therefore it is akin to a defined contribution plan. However, the investment decision is exercised by the fund but the contributor bears the risk. This is a potentially explosive arrangement. The government has addressed this problem by guaranteeing a minimum return of 2.5% p.a. and by mandating the portfolio in which the funds can be invested. But this need not produce an optimal arrangement.

The composition and tenure of the EPF's Board & Investment Panel can minimise the extent of external influence by government. The greater the number of government appointees or the shorter the tenure of members, the greater the external influence exerted by government. The incidence of such external influence may have declined as the number of independent representatives has increased and tenure has been lengthened (from 2 to 3 years).[26]

The Role of the EPF in Corporate Governance

An institutional investor has to rely normally on the exit route for its investment in equities. Only then can it further corporate governance best practices. When shareholding is concentrated, as in many Asian countries, there is no market for corporate control. If the exit route is

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[26] Members have accepted their position not for pay but for its prestige value. A tenure of this length is therefore not likely to undermine the independence of a member.

poor because of weak market infrastructure, there is an increased risk of expropriation of minority shareholders by the controlling shareholders, and of controlling shareholders not maximising shareholder value. There will therefore be a reduced incentive among institutional investors to invest in equities. A fairly well developed market infrastructure and the availability of an exit route have enabled the EPF to look at equity investment as a serious option.

We first examine whether we can rely on institutional investors to playa role in corporate governance and whether they suffer from distorted incentives and conflicts of interest. In an environment of dispersed shareholding with no large institutional investors, we cannot rely on shareholder voting to limit managers' discretion because of the "collective action" problem and the "free rider problem". On the other hand, in an environment of concentrated shareholding, we cannot rely on the market for corporate control (whether it is through hostile takeovers, mergers or acquisitions) to limit managers' discretion because no such market may exist, given the existence of large controlling shareholders.

However, where there are large institutional investors and proxy by mail is allowed and cumulative voting for directors is also allowed, it may be possible to rely on shareholder voting to limit managers' discretion. Of course, this also assumes that institutional investors do not suffer from a conflict of interest.

Most institutional investors (e.g. corporate pension funds, bank trust funds and insurance funds) will suffer from a conflict of interest between their desire to maximise shareholder value (which may then require them, where necessary, to vote against corporate managers) and their desire to retain or solicit business from corporate managers (which may then induce them to vote with the managers).[27]

On the other hand, public pension funds (and this would include the EPF), and mutual funds (to an extent), do not solicit business from corporate managers and therefore face no constraints on how they can

[27] The institutional investors are managed by money managers who are themselves imperfectly monitored agents. They have imperfect incentives at best and significant conflicts of interest at worst.

vote. Their incentives tor maximum effort on their beneficiaries' behalf are still limited, since the beneficiaries get the upside,[28] but at least those incentives are not perverted by direct conflicts. But public fund managers do have conflicting incentives between the need to be good political operators or good money managers and can be subject to public pressure to support social responsibility proposals or invest in local enterprises at the expense of investment returns. Such conflicts will be minimised to the extent that these funds are accountable to individual contributors but will be enhanced to the extent that their returns are government-guaranteed.

What then is the role of the EPF in corporate governance and what changes are required to enable the Fund to play its role effectively?

The EPF has captured a large chunk of national savings and its investment management is centralised. Conflicts and perverse incentives from its funds management and corporate governance activities can be minimised not by breaking up the EPF, but by parcelling its funds for management on a passive and active basis, with the passive portfolio managed in-house and the active portfolio managed (largely, if not wholly), by external fund managers. It should be readily apparent why passive management will minimise conflicts and perverse incentives. The operation of its externally managed funds will not cause any conflicts or perverse incentives only if the mandate for such management is based strictly on commercial considerations. This is more likely if the external funds are managed for the account of individual contributors.

Presently, the EPF's decision to invest its funds is on a portfolio basis and it does not seek any board positions. This stance cannot be faulted. If it actively seeks a position on the boards of companies in which it invest and monitors its nominees, then it runs the risk of becoming an insider thus adversely affecting its short-term trading opportunities in these companies.

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[28] "Institutional fiduciaries have strong incentives to avoid legal risks, because they face personal exposure if the risk comes to pass, while their beneficiaries get most of the upside. They care less about the conduct that legal rules, read narrowly, might permit, than about what those rules, read broadly, might prohibit" (Black, 1990: 523).

The EPF can, of course, choose to exercise its voting rights on related party transactions. This can have a telling effect where only non-interested parties are allowed to vote as is the case now in Malaysia. It can also have a significant impact on the election of directors who are independent of the controlling shareholders, provided cumulative voting is permitted. But presently cumulative voting is not permitted in Malaysia. Minimising on conflicting objectives or perverse incentives will always remain a major challenge in the exercise of such voting rights.

The EPF has to be ever vigilant against abuses of minority shareholder rights by the insiders. Although it held 10% of the shares in UEM (United Engineering Malaysia) and 14% of the shares in KFC (Kentucky Fried Chicken Corporation), it did not initiate any action against the insiders in these companies whose apparent disregard of minority interests led to a steep fall in the shareholder value of these companies during the Asian financial crisis.

A case can be made for the setting up of a Minority Shareholder Watchdog Group. Its role will be to monitor and combat abuses by insiders against minority shareholders. The EPF, as the major institutional investor, has taken the initiative, along with certain other institutional investors and on the strong encouragement of the Securities Commission, to set up and organise such a Watchdog Group. Representatives from the Malaysian Institute of Corporate Governance, and the Malaysian Association of Asset Managers are also participating in the Group. As the growth of the fund management industry in Malaysia gathers momentum through a decentralisation of the EPF's investment activities, these fund managers can also playa more active role in this Watchdog Group.

If institutional investors take actions against insiders who have violated the trust that ought to be accorded to minority shareholders, this will send a clear signal and insiders are likely to engage less in dealings that are detrimental to minority shareholders.

CONCLUSION

Malaysia's Employees Provident Fund (EPF), which is a funded scheme, can be considered as one of the most successful provident funds in the world, taking into account the constraints within which it has to operate. Nevertheless, there is considerable dissatisfaction with the returns it has provided to contributors through the management of its assets.

As a provident fund, the EPF has attempted to operate as a portfolio investor. However, as domestic financial markets are under-developed and given the restrictions on international diversification, the Fund has been facing a serious constraint on the extent to which it has been able to invest in marketable securities and on a portfolio basis.

In this paper we have reviewed and suggested changes in the Funds asset-management and investment strategies. We have also demonstrated that reform of capital markets is essential if pension reforms are to yield their full benefit. Furthermore, we have shown that improvements in corporate governance will also strengthen the EPF and help it return to its first priority of serving the interests of its members.

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Table 1: The EPF: Real Rates of Dividend

	Dividend * Rate	Rate of ** Inflation		Real Dividend Rate	
		Annual	5 Years Average	Annual	5 Years Average
1952	2.50				
1953	2.50				
1954	2.50				
1955	2.50				
1956	2.50	1.0		1.5	
1957	2.50	5.1		-2.6	
1958	2.50	-1.0	= 0.4	3.5	= 2.40
1959	2.50	-2.9		5.4	
1960	4.00	-0.2		4.2	
1961	4.00	-0.2		4.2	
1962	4.00	0.1		3.9	
1963	5.00	3.1	= 0.5	1.9	= 4.25
1964	5.25	-0.4		5.65	
1965	5.50	-0.1		5.6	
1966	5.50	1.4		4.1	
1967	5.50	4.1		1.4	
1968	5.75	-0.2	= 1.4	5.95	= 4.29
1969	5.75	-0.4		6.15	
1970	5.75	1.9		3.85	
1971	5.80	1.6		4.2	
1972	5.85	3.2		2.65	
1973	5.85	10.5	= 7.4	-4.65	= -1.3
1974	6.60	17.4		-10.8	
1975	6.60	4.5		2.1	
1976	7.00	2.6		4.4	
1977	7.00	4.7		2.3	
1978	7.00	4.9	= 4.5	2.1	= 2.75
1979	7.25	3.6		3.65	
1980	8.00	6.7		1.3	
1981	8.00	9.7		-1.7	

1982	8.00	5.7		2.3	
1983	8.50	3.7	= 4.66	4.8	= 3.84
1984	8.50	3.9		4.6	
1985	8.50	0.3		8.2	
1986	8.50	0.6		7.9	
1987	8.50	0.3		8.2	
1988	8.00	2.5	= 1.96	5.5	= 6.24
1989	8.00	2.8		5.2	
1990	8.00	3.1		4.9	
1991	8.00	4.4		4.0	
1992	8.00	4.7		3.4	
1993	8.00	3.6	= 3.96	4.4	= 4.04
1994	8.00	3.7		4.3	
1995	7.50	3.4		4.1	
1996	7.70	3.5		4.2	
1997	6.70	2.7		4.0	
1998	6.70	5.3		1.4	
1999	6.84	2.8		4.0	

Sources:
* 1991 Annual Report
** BNM (1989) (For data from 1956-1985)
BNM, *Annual Reports*

Table 2: The EPF: Rates of Contributions

	Employee	Employer	Total
1952 - 1974	5%	5%	10%
July 1975 - 1979	6%	7%	13%
Dec 1980 - 1992	9%	11%	20%
1993 - 1995	10%	12%	22%
1996 -	11%	12%	23%

Source: EPF Annual Reports