GENERAL ROAD MANAGEMENT ISSUES: MANAGING ROADS LIKE A BUSINESS, NOT LIKE A BUREAUCRACY

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Objectives of the paper

Abstract

A growing number of countries have started to "bring roads into the market place, put them on a fee-for-service basis and manage them like a business." The fee-for-service concept differs from user-pay in a number of important respects.

The key differences are that: (i) only road user charges go into the road fund (i.e., there are no earmarked taxes); (ii) the fund is managed by a representative board with half or more members representing road users and the business community; (iii) members are nominated by the constituencies they represent and there is an independent chairperson; (iv) financing arrangements are designed to ensure that money is not diverted from other sectors; (v) funds are managed pro-actively by a small secretariat; (vi) there are published financial regulations governing the way funds are managed; (vii) charges are adjusted regularly to meet agreed expenditure targets; and (viii) there are regular technical and financial audits.

Key issues

- Most commercially managed road funds are managed through a separate road fund administration, funds are channeled to all roads (sometimes even to unclassified roads) and they are introduced as part of a wider agenda to commercialize road management. Some of these road funds have been set up as road public utilities under a board with powers to set their own tariffs.

Key topic areas

- Road commercialization
- Commercially managed road funds
- Technical and policy elements
- Operational questions

1. INTRODUCTION

The main idea underlying commercialization of roads is the “fee-for-service” concept – making road users pay for roads in the same way that rail users pay for usage of rail services. Roads have grown too large to be financed through the consolidated fund. So why not move them off-budget and make road users pay directly for the road services they consume. This is a modernized and extended version of the old “user-pay” principle which gained popularity during the 1950s. Under this system, users paid for road services by way of road user charges and taxes, the revenues were credited to a road special account (or road fund) and were managed independently of the government’s consolidated fund.

The driving force behind the user-pay principle was the recognition by some countries that their post-war road programs could not possibly be financed through the government’s consolidated fund (New Zealand in 1953, Japan in 1954 and The USA in 1956). A large number of other countries also set up road funds during the 1970s and 1980s (primarily in Africa, Asia and Latin America), and a number of similar road funds were set up in Eastern Europe during the early 1990s. These road funds had a different origin. They were nearly all set up during periods of fiscal stress and were primarily designed to deal with failed budgetary systems.

Nearly all these road funds were poorly designed, were primarily set up to “ring fence” the road sector from the vagaries of the government’s budgetary process, and were simply earmarking devices which channeled certain taxes and charges (including enterprise taxes and kerosene taxes) to the road sector (de Richecour and Heggie, 1995).

During the early 1990s, largely as a result of work undertaken under the multi-donor Africa Road Maintenance Initiative (RMI) and the PROVIAL (for roads) programs in Latin America, interest in road funds increased (Heggie, 1995; Schliessler and Bull, 1993), that led to the emergence of the concept of the “commercially managed” road fund.

This paper presents the main motives for restructuring first generation road fund to second generation or commercially managed road funds. It highlights the strategic, technical and operational elements behind the success of the commercially managed road funds. The analysis is based on recent and undergoing experiences of setting commercially managed road fund in developing countries.

2. THE CONCEPT OF THE “COMMERCIALLY MANAGED” ROAD FUND

The concept of the “commercially managed” road fund differed significantly from the concepts behind previous road funds, including those based on the user-pay principle. There were three main differences. The design of these road funds took full account of:

(i) the experience gained from operation of conventional road funds, particularly those set up during the 1970s and 1980s;
(ii) concerns expressed by Ministries of Finance and the International Monetary Fund; and
(iii) the need to combine any new financing mechanisms with parallel steps to ensure that the public gets value-for-money from any increased road spending.

The latter concern was of paramount importance, since the overall objective of these road funds was to strengthen financial discipline as part of an effort to commercialize the road sector. The idea was to bring roads into the market place, put them on a fee-for-service basis and manage them like a business. Road users then pay for roads and the ensuing revenues are used exclusively to finance the services they have paid for. Spending on roads then becomes dependent on users' willingness to pay and this helps to impose a hard budget constraint on the agencies supplying road services.

The above re-evaluation of the role of the road fund, has been accompanied by a change in the way Ministries of Finance and the International Monetary Fund view these road funds (Pennant-Rea and Heggie, 1995). This new attitude was succinctly captured in a speech recently delivered by His Excellency Suleiman Hafez, Jordanian Minister of Finance, at a seminar on road maintenance financing held in Amman on 3 June 1997. The speech also mirrors current views expressed by staff from the International Monetary Fund (Potter, 1997). The key points made by the Minister were as follows:

- the establishment of a road fund should be part of a longer term strategy to commercialize the road sector – it should not simply be a means of avoiding strict budget discipline;
- the road fund should be dedicated to maintenance –we must maintain what we have, before starting to build anything new;
- the road fund should be a purchaser, not a provider of services –it should be a separate agency with a clear mission statement, transparent objectives, physical output indicators and should ideally work within an envelope of total input costs;
- road fund revenues should come only from road user charges, not from any earmarked taxes – this would not prevent the government from topping up the road fund from the consolidated budget, but this would only be done on a discretionary basis;
- the user charges going into the road fund must not take revenues away from other sectors – there should be a clean break between the tax revenues which belong to the consolidated budget, and the user charges which belong to the road fund, and the only existing revenues which should go into the road fund must be confined to what is already allocated for roads through the annual budgeting process;
- the road fund should be managed by a strong and independent management board which should include private sector interests – both road users and the business community – and should be genuinely free from any vested interest groups;
- management of the road fund should be handled by a secretariat and they should employ commercial accounting systems and have annual performance targets;

- there should be a fair degree of cost recovery through the user charges – in the long term we want to have a road public utility which does not receive any government subsidy;
- we cannot escape from the fact that fuel is a convenient tax handle from the point of view of fiscal policy – that inevitably puts a burden on the road fund administration to explain to the public why all fuel price increases are not equal;

The minister concluded by saying that the ministry of finance was perfectly willing to actively help to get the above type of road fund established.

2.1 Commercially Managed Road Funds

Most countries with special road financing mechanisms either have simple earmarking arrangements, or first generation road funds. A number of these are in industrial countries, including Belgium, Luxembourg, Japan, Korea, Netherlands, Switzerland and USA, although most are in developing and transition economies. The commercially managed road funds are heavily concentrated in developing and transition economies. They have either recently been established (Honduras, Guatemala, Lesotho, Namibia, Sierra Leone, Yemen and Zambia), created by restructuring an existing first generation road fund (Ghana, Mozambique and South Africa), or are still in the process of being set up (Armenia, Colombia, Georgia, Jordan and Surinam).

The key elements responsible for the success of these commercially managed road funds can be grouped under three broad headings. First, the *strategic* elements:

(i) the scope of the road fund (i.e., which parts of the road network does it finance);
(ii) the legal basis;
(iii) the type of oversight arrangements;
(iv) how the funds are managed; and
(v) which expenditures it finances.

Second, the *technical and policy* elements:

(i) how funds are divided between different road agencies;
(ii) the source of revenues;
(iii) the way the road tariff is adjusted;
(iv) how non-road users of diesel are exempted from paying the fuel levy; and
(v) how funds are disbursed to each road agency.

Finally, the *operational* elements:

(i) how day-to-day management is organized;
(ii) the sort of financial rules and regulations that are used; and
(iii) how the road fund is audited.

3. STRATEGIC ELEMENTS

3.1 Scope of the Road Fund: What Does it Finance?

Commercially-managed road funds generally finance expenditures incurred on all public roads and some even channel funds down to the unclassified road network (e.g., Zambia). Most finance all qualifying expenditures on the national road network and either make grants to support maintenance and improvement of local government roads (e.g., Latvia), or finance local government roads on a cost-share basis (e.g., New Zealand). The arrangement under which the road fund provides grants for local government roads, has several attractions. It enables the road fund to limit the grants to what is affordable – this is particularly important when a road fund is just starting up – and also enables it to slowly raise the grants once the local government road agencies have shown that they can use the funds effectively. When the road fund channels funds to all roads, it generally does so on the basis of an approved national roads program, agreed cost-sharing arrangements, agreed procedures under which the local road agencies manage their share of the revenues, and appropriate financial and technical auditing procedures.

Less usual are the road funds, which only finance part of the public road network (e.g., in South Africa, the road fund only finances national roads, while the US federal highway trust fund – which is still a first generation road fund – only finances federal-aided highways). Such arrangements are difficult to defend. All road users contribute to the road fund – particularly when the main charging instrument is a fuel levy – and it is logical that the proceeds should be used to finance all roads. The narrow focus of the South African road fund is unusual and is due to an historical accident. It was set up in 1935 when there were very few roads and when the main concern was to develop a national road network to connect the provinces. It has remained like that ever since.

3.2 Type of Legal Basis

A number of the commercially managed road funds have been set up under existing legislation, or by passing a Ministerial or Presidential decree (or equivalent). Lesotho set up its road fund by publishing a legal notice in the government Gazette. The notice simply stated that a special road fund account was being opened, while a separate Gazette notice spelled out the financial regulations governing the way it would be managed, what it would finance and where the revenues would come from. Yemen, on the other hand, set up its road fund using a Presidential decree (which was then submitted to Parliament for ratification). The decree stated that a special road fund account was being opened, why it was being opened, the source of revenues, and how the account would be managed. The Yemen decree is also supported by detailed financial regulations.

The above procedures have some drawbacks. The main disadvantage is that the road fund revenues continue to be collected under the government's tax-making powers and this generally means they must first be credited to the government's consolidated fund and then transferred to the road fund. This has frequently caused problems. The Ministry of Finance sometimes diverts part, or all, of the revenues for other purposes and there may be long delays before the funds collected from road users are finally deposited into the road fund. Some countries have nevertheless managed to solve this problem. The Ministry of Finance sometimes agrees to handle the deposit into the consolidated fund as a paper transaction and deposits the cash directly into the road fund bank account. Sierra Leone has set up such an arrangement and Lesotho is in the process of doing the same. Some of the road funds set up under decrees also provide for direct deposit of the revenues (e.g., Yemen, the former Ghana road fund and some of the West African road funds), although this does not necessarily prevent the Ministry of Finance from diverting the road fund revenues for other purposes.

A growing number of commercially managed road funds are being established under new legislation. This puts them on a firmer legal basis and enables the road fund administration to be set up as a separate public enterprise. The revenues can then be collected from road users in the form of a road tariff, rather than as part of the government's tax revenues, and the proceeds can be deposited directly into the road fund bank account without having to transit – whether as cash or a paper transaction – through the government's consolidated fund. Malawi and Namibia have already legislated to collect the road fund revenues in the form of a public enterprise tariff and several other road funds are planning to do the same.

3.3 Type of Oversight Arrangements

The oversight arrangements are what mainly distinguish commercially managed road funds from their predecessors. They all have oversight boards which either advise the Minister on management of the road fund, or manage the road fund directly (the Zambian arrangement is unusual, in that the National Roads Board was constituted as an advisory board, but manages the road fund in an executive capacity). It is the composition of these boards which makes them work. The most successful boards tend to have the following characteristics:

(i) They have 9 to 12 members, have sub-committees to help with their work, and invite outsiders to attend board meetings to advise on special topics. Minutes of meetings are made public and meetings are often open to the public.

(ii) They are made up of people with a strong vested interest in well-managed roads. They usually include representatives from the ministries of works, transport, finance, agriculture and local government, together with representatives from the chambers of commerce, road transport industry, farmers (both commercial and small-holder), and the professions (e.g., Institute of Engineers). Local government may also be represented on the board. Half or more of the members generally represent the private sector or local government. Members are generally nominated by the constituencies they represent.

(iii) The chairperson is independent. The procedure in Zambia, where the board elects its own chairperson, is unusual, although it has worked well and Jordan has now adopted the same procedure. Normally, either the Minister appoints one of the existing members of the board as chairperson (as in Malawi and New Zealand), or appoints an outsider after consultation with the board. Ex officio chairpersons (as in Ghana and Latvia) are becoming rare.

(iv) The board has a published terms of reference which spells out the role of the board in relation to: (a) winning public support for more road spending (i.e., its public relations functions); (b) which types of expenditures the road fund can finance; (c) how they are expected to manage the road fund; and (d) the relationship between the board and the Minister.

3.4 Managing the Road Fund

Some commercially managed road funds are managed by the board which manages the main road network (as in Sierra Leone and, until recently, New Zealand), or by a sub-committee of that board (as in South Africa). This does not cause a conflict of interest when the board is responsible for managing the entire road network (Sierra Leone), or manages all roads financed by the road fund (South Africa). Otherwise, there is likely to be a conflict of interest. The other agencies entitled to receive money from the road fund will worry that the board might attend to its own needs first and only channel "left-overs" to the other road agencies. Most commercially managed road funds are therefore managed through a separate road fund administration to ensure that the revenues are handled in an even-handed way. This is one of the main concerns which led to the restructuring of the New Zealand road fund in 1996 and creation of Transfund as a separate road fund administration. Recent road funds set up in Ghana, Jordan, Lesotho, Malawi and Zambia, were therefore all set up as separate road fund administrations.

Few staff are required to manage these road funds. The staff normally collate the road programs prepared by the various road agencies, review them and consolidate them into the "approved" national roads program, define the financial procedures to be followed by the various road agencies entitled to receive money from the road fund, allocate funds to support the approved programs, disburse funds to the road agencies and then audit the results *ex post*. Staff may also audit the systems and procedures used to prepare the road programs and to control expenditures. They also manage the day-to-day affairs of the road fund. Transfund employs 25-30 staff to manage annual road fund revenues of US$580 million, South Africa uses 10-12 staff to manage annual revenues of US$150 million, while Latvia and Ghana both use 3 staff to manage annual revenues of about US$60 million.

3.5 Which Expenditures does the Road Fund Finance?

Most of the commercially managed road funds have been primarily set up to finance routine and periodic maintenance. Indeed, some countries have been so concerned that spending on new works might drive out maintenance, that they have set up road conservation funds which can *only* finance spending on road maintenance (e.g., in Latin America). Most countries nevertheless deal with this issue by making maintenance the highest priority and then either write into the road fund legislation – or the accompanying regulations – that maintenance shall have first claim on the road fund revenues and that, only after all maintenance requirements have been fully-funded, may the balance be spent on rehabilitation and new works. First claim on the revenues may also include spending on road safety and administration of the road fund. Furthermore, spending on administration is sometimes subject to a cap (5 percent of road fund revenues in Zambia) to prevent the road fund from simply becoming an employment agency. Most road funds also finance road rehabilitation, or provide counterpart funding for rehabilitation programs financed by donors. A number of road funds also finance new investment, although this is by no means universal (e.g., South Africa). Some finance new investment subject to a cap (e.g., Malawi), while others state quite explicitly that new investment will be financed through the government's development budget (e.g., Lesotho and Zambia).

4. TECHNICAL AND POLICY ELEMENTS

4.1 Dividing Funds Between Different Road Agencies

Nearly all commercially managed road funds provide some funds for local government roads. There are two basic ways of doing this. They either:

(i) divide the funds up on the basis of formulas; or
(ii) divide them up based on an assessment of needs (i.e., condition of the road network and cost of remedial work), combined with an assessment of what the local government can afford to pay from its own resources.

The procedures used are usually spelled out in procedures developed by the oversight board, are regularly amended in light of changing circumstances, and are published as part of the road fund's legal regulations.

The formula-based systems often start by initially dividing up the funds between the different types of road agency – main, urban and rural – and then go on to sub-divide each allocation between the individual road agencies within each type. Most countries use fairly crude formulas when dividing up the funds between the different types of road agency. For example, Latvia allocates 27% of the annual vehicle tax and 30% of the fuel levy to municipalities, while Zambia nominally allocates 25% to rural district councils and 15% to urban district councils. One of the advantages of initially dividing up the funds, is that it ensures that each road agency gets a fair share of the revenues available. This is an important consideration when strong urban councils are bidding against weak rural councils for the same funds. Another reason for initially dividing up the funds, is that different types of road agency may use different criteria for establishing priorities, reflecting their differing technical capacities. Finally, initially dividing up funds provides each road agency (or group of agencies) with an indicative guideline upon which to base their spending plans.

The next step is to divide up each allocation between the various road agencies in each group. There are two main ways of doing this:

(i) each road agency competes for the available resources; or

(ii) they are divided up on the basis of network and traffic characteristics.

Zambia uses the first system. All district councils are invited to submit a list of proposed works for which they require road fund money. A sub-committee of the board evaluates the bids and decides who should get what. Some districts may end up being fully-funded, while others may get little or nothing. This is not a particularly good way of dividing up the funds, although it does have the merit of encouraging the local authorities to put a lot of effort into planning and justifying their road programs.

Most commercially managed road funds therefore use the second system and divide up the funds using formulas based on parameters like length of road, traffic volume and ability to pay. For example, Latvia uses weighted road length to divide up funds between the municipalities, where the weights reflect estimated maintenance costs. Though not a commercially managed road fund, the US Federal Highway Trust Fund divides funds for maintenance of the inter-state network between individual states using the simple weighted sum of relative lane-miles and relative vehicle miles, subject to a pre-determined minimum allocation. Korea uses a similar formula to divide up funds between the provinces, although it also includes a term reflecting ability to pay.

The needs-based systems are generally based on a road management system. For example, in New Zealand, all road agencies are required to prepare their road maintenance programs on the basis of a standardized road management system and prepare their investment programs on the basis of benefit-cost analysis. Staff from Transfund advise the transport authorities on how to operate the road management system and how to compute the benefit-cost ratios. They carry out regular audits to ensure that each authority is applying the maintenance management system correctly and is achieving minimum maintenance standards and service levels (i.e., the audit checks to ensure that the allocated funds are actually spent on maintenance and that the maintenance is carried out to agreed standards). In the case of investments, staff from Transfund audit a sample of benefit-cost calculations, including those for all schemes over US$700,000. Once the overall road program has been agreed, Transfund then finances the local authority road programs on a cost-share basis. The proportion financed is standardized to ensure it covers 50% of all local authority expenditures.

4.2 Source of Revenues

Commercially managed road funds go to great lengths to ensure that road fund revenues are strictly confined to road user charges. They usually include vehicle license fees, supplementary heavy vehicle fees, international transit fees, a levy on gasoline and diesel fuel, fines for overloading and any charges imposed to internalize the costs of road congestion (parking charges, cordon charges, etc.). They do not include any earmarked general taxes (e.g., enterprise taxes, import duties, and sales and excise taxes) which are still a common feature of many East European road funds. Miscellaneous sources of revenue – including bridge and ferry tolls, donor funding and contributions from the consolidated fund – are also sometimes channeled through the road fund. The fuel levy is usually specified as a discrete amount (e.g., x cents per liter), or as a percentage of the ex refinery or wholesale price of fuel (or equivalent). When first introduced, the charges are studiously set to ensure that they do not abstract revenues away from other sectors of the economy. In other words, if the consolidated fund can only afford to finance 20% of road maintenance requirements, then that 20% – and no more than 20% – is converted into the initial license fees and fuel levy and transferred to the road fund. All additional revenues come from extra payments by road users.

4.3 Adjusting the Road Tariff

All commercially managed road funds have a formal mechanism for adjusting the road tariff to ensure that revenues keep pace with inflation and that the fund generates sufficient revenues to meet approved expenditure requirements. Some oversight boards have been given powers to set the level of the road tariff on the same basis as the railways set the rail tariff. Under this arrangement, the road fund board decides on the required level of the road tariff based on: (i) the amount of revenue required to finance the approved road expenditure program; and (ii) an assessment of road users' willingness to pay. They submit their recommendations to the minister of works and, provided the minister is satisfied that their proposals are reasonable and consistent with the government's overall fiscal targets, the tariff is published in the government Gazette and becomes effective on the date specified in the Gazette. To date, Malawi and Namibia are the only countries which have passed legislation to set up a public-utility style road financing mechanism. However, they have not been operating for long enough to judge how well the arrangements will work in practice.

In most cases, the road fund still sets the level of the road tariff under the government's tax-making powers. The board recommends the revised charges to the minister of finance (or Cabinet) and, once the revised charges have been approved, they are included in the annual budget statement. When changes in the road tariff are recommended by a representative board, the ministry of finance is inclined to automatically include the changes in the annual budget statement, on the assumption that the public has been consulted by the board and has shown willingness to pay the increased charges.

When a new road fund is set up, the tariff is usually raised gradually over a period of 3 to 5 years. The slow build-up enables the board to show results to its constituents before having to ask for further increases in the road tariff. That is why many boards operate extensive outreach programs to demonstrate to their constituents that they are getting value-for-money from the road tariff. Several roads boards publish their accounts in the press (e.g., Latvia and Zambia) and/or have signs stating that these road works are being financed by your money managed by the National Roads Board (e.g., Zambia and

Yemen). In the interim, while the road fund is building up its revenue base, the balance of the required revenues may come from donors, or the consolidated fund.

4.4 How Non-Road Users Are Exempted From Paying the Fuel Levy

When significant amounts of gasoline and/or diesel are used for non-transport purposes – and the fuel levy is perceived to be high (i.e., more than 3-5 cents per liter) – efforts need to be made to ensure that non-transport users do not have to pay the fuel levy (this problem mainly applies to diesel). When there are a few large users (e.g., mining companies, power stations, etc.), it may be possible to exempt these users without encouraging too much avoidance and evasion, although the experience is not encouraging. For small users (e.g., farmers), the only realistic options appear to be:

(i) coloring non-transport diesel, testing to ensure it is not being used on the road and applying stiff penalties for infringements (although used in UK and USA, this system is difficult to administer);
(ii) allowing non-transport users to apply for rebates based on invoiced consumption for non-transport uses (although used in New Zealand, this system requires extensive auditing and is also difficult to administer);
(iii) compensating non-transport users for having to pay the fuel levy.

The latter is one of the simplest systems to administer. For example, In Latvia, farmers are entitled to receive annual compensation equivalent to 120 liters of diesel fuel for every hectare of land under cultivation (this being the estimated amount of diesel used to cultivate one hectare of land) A similar compensation scheme applies to the railways and the fishing industry. Mozambique uses an even simpler method to compensate farmers. 20% of the diesel levy is paid into a special fund which provides financial support for agriculture.

4.5 How Funds Are Disbursed to Each Road Agency

Commercially managed road funds generally use their disbursement procedures to strengthen financial discipline. Typically, the road funds either:

(i) disburse funds directly to the road agencies on a regular basis and then audit use of the funds ex post,
(ii) issue approval for the work to be done and then reimburse the road agency after the work has been completed; or
(iii) pay contractors directly, but only after certification that the work has been completed according to specification.

The first method is used when there is good governance, competent road agencies, and a highly decentralized system of road administration.

The second system operates like a line of credit (Federal Highway Administration, 1992). The road fund first of all defines the systems and procedures to be followed by each road agency as a condition of being able to receive money from the road fund.

The third method involves more oversight by the road fund. The method starts with the same approved expenditure program but, instead of transferring funds to the road agencies (as under both other options), the road fund pays contractors directly, but only after certification that the work has been completed according to specification.

The first two methods provide incentives to introduce effective financial systems and procedures, while the regular auditing ensures that they are applied consistently. The third method imposes strong ex ante discipline on each road agency by only disbursing funds against evidence that the work has been done and carried out according to specification. The only drawback in the latter case, is that it increases the work of the road fund and requires extensive certification by consultants. All three methods nevertheless strengthen financial discipline and encourage high quality, cost-effective road works.

5. OPERATIONAL QUESTIONS

5.1 Day-to-Day Management of the Road Fund

The staff employed by the above road funds:

(i) collect the revenues attributable to the road fund and manage the cash balances;
(ii) establish withdrawal procedures;
(iii) oversee use of funds by the different road agencies; and
(iv) prevent unauthorized withdrawals from the road fund (i.e., preventing raids on the road fund).

In addition, they organize meetings of the board and keep proper accounts to ensure that the road fund can be audited.

A number of commercially managed road funds, including those in Mozambique, New Zealand and Yemen, are collecting much of their revenues under contract. This applies to the fuel levy (New Zealand and Yemen), international transit fees (Mozambique), fines for overloading (Yemen and, shortly, Zambia) and license fees (New Zealand). This helps to reduce evasion, avoidance and leakage (Bahl, 1992). The contracts normally spell out:

(i) the procedures for collecting the revenues;
(ii) how the funds are to be deposited into the road fund bank account (or deposited in the consolidated fund for onward transmittal to the road fund);

(iii) the information to be supplied to the road fund staff to show how much was collected and when; and
(iv) the agency fees payable to the agency collecting the revenues.

The road fund staff track movements in the chargeable base (e.g., sales of diesel and gasoline, together with the base price when the fuel levy is expressed as a percentage of the ex refinery or wholesale price), estimate how much revenue should have been collected, adjust the figures for exemptions and rebates, and then reconcile the figures against the amount actually credited to the road fund bank account during the period concerned.

Procedures for withdrawing funds from the road fund are usually made as simple as possible. Some road funds have such complex procedures, that it takes months to approve a withdrawal application. For example, before the Ghana road fund was restructured, withdrawal of agreed sums had to be authorized by the accountant general on joint instructions from the ministry of roads & highways and the ministry of finance. It often took months to authorize withdrawals. Many of the above road funds simply have each cheque signed by one member of the board and the senior road fund accountant. Alternates are appointed in case any of the nominated signatories are away.

The road fund staff also oversee the use of funds by each road agency. They have to develop procedures for preparing maintenance and investment programs, lay down the way in which application of these procedures will be audited, how the program submissions are going to be evaluated, and the way in which application of road fund resources are to be audited.

Finally, the road fund staff must help to prevent unauthorized withdrawals from the road fund. This is unfortunately a constant pre-occupation for many road funds in countries where governance is weak and where ministers and senior civil servants frequently attempt to use money from the road fund to finance other government programs, or to promote their own private interests. Some road fund staff have developed ingenious ways of discouraging raids, including judicious leaks to the press, hiding revenues in provincial bank accounts, and even issuing a cheque, calling an emergency meeting of the board and then canceling the cheque. To discourage raids, most road funds try to keep a minimum amount of cash in their bank accounts.

5.2 Financial Rules and Regulations

The financial rules and regulations governing management of the road fund are usually published as a legal notice in the government Gazette, or are published by the road fund board. Published regulations tend to cover:

- The purpose of the road fund – which types of expenditures it can and cannot finance.

- The details of the cost-sharing arrangements which apply to the financing of urban, rural and community roads, or the way in which the board is expected to establish such arrangements.
- Methods for disbursing funds to the different agencies entitled to receive money from the road fund.
- The terms of reference for the organization which manages the road fund.
- The procedures for nominating and appointing members of the board and for resignation and termination of board membership.
- Arrangements for meetings of the board and for the calling of extraordinary meetings of the board.
- The appointment of sub-committees and appointment of co-opted members to assist with the work of the board.
- The functions of board members and the relationship between the board and the Executive Secretary or General Manager.
- The terms of reference for the Executive Secretary or General Manager and how he/she is to be appointed. Commercially managed road funds generally have such persons appointed by the board.
- The role of the secretariat, including its size, terms of appointment, and other conditions of service.
- Procedures for dividing funds between the different road agencies, or the procedures to be followed by the board in establishing such procedures.
- Procedures to be followed when withdrawing funds from the road fund.
- The scope of the annual report and accounts.
- The powers of the Minister in relation to the board of the road fund.

5.3 Auditing Arrangements

Commercially managed road funds are always subjected to regular audits. The accounts may be audited by independent auditors appointed by the board, by the auditor general's office, or by an independent firm of auditors selected by the auditor general. The audit normally includes: (i) examining the records of third parties responsible for collecting the revenues attributable to the road fund to ensure that all the revenues have been collected and promptly paid into the correct road fund accounts; (ii) auditing payments made from the road fund to ensure they are supported by adequate documentation and are in accordance with the purposes allowed in the legislation and supporting legal regulations; (iii) verifying to the extent possible that the work financed from the road fund was carried out according to specification; (iv) auditing the transactions and balances of the various bank accounts maintained by the road fund; (v) review the accounting and internal control procedures used by the road fund to determine their adequacy; and (vi) undertaking a review of the accounts, files, records and reports of the road fund to determine their adequacy.

6. CONCLUSION

The advent of second generation, or commercially managed road funds, has made a major contribution towards sustainable road financing. The key concept behind these road funds is to "bring roads into the market place, put them on a fee-for-service basis, and manage them like a business". This is not the same as old fashioned earmarking. The main differences are that: (i) only road user charges go into the road fund; (ii) the fund is managed by a representative board with half or more of the board members representing road users and the business community; (iii) the members are nominated by the constituencies they represent and there is an independent chairperson; (iv) the arrangements are designed to ensure that money is not diverted from other sectors – extra spending on roads is financed through extra payments by road users; (v) funds are managed pro-actively by a small secretariat with the aim of strengthening financial discipline; (vi) charges are adjusted regularly to meet agreed expenditure targets; and (vii) the road fund is subject to regular technical and financial audits.

The above road funds have usually been introduced as part of a wider agenda to commercialize road management. Such restructuring typically involves moving towards a more autonomous, arms-length agency, which focuses on planning and management of the road network, operates as a white collar agency paying market-based wages, adopts modern management systems and procedures, and operates under a performance contract with the parent ministry. Most of the road funds are managed through a separate road fund administration, since these road funds are increasingly attempting to bring all roads under regular maintenance and have to channel funds even-handedly to several different road agencies at both central and local government levels. Although many of the above road funds have been set up under existing legislation, or under decrees, the trend is increasingly towards establishing them under legislation which sets them up as a road public utility under a board which has the power to set its own tariff. These road funds are nevertheless a relatively new idea and their performance needs to watched carefully to ensure they do indeed deliver the benefits expected of them.

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