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Are Cash Budgets a Cure for Excess Fiscal Deficits (and at what cost)?

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Abstract: This paper investigates the effect of recent reforms of budgetary institutions in Uganda and Zambia. We argue that cash budgeting has brought clear benefits in terms of improved expenditure control with regard to line ministries. However, contrary to what is often suggested, adoption of a cash budget has not provided a means for top politicians in either country to "tie their hands" with respect to intervention in fiscal policy decisions. In Uganda improved fiscal policy outcomes have, in fact, been achieved as a result of (and not in spite of) discretionary interventions by top politicians. In Zambia, a strict rule imposing a balanced budget on a monthly basis both ineffective as a commitment device and costly in terms of increased volatility of expenditures.

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1. Introduction

There has been increasing recognition in recent years that in order for governments to make sustained improvements in their fiscal balances, attention needs to be devoted not just to one-off expenditure reductions or tax increases, but also to changing the procedures used for formulating and implementing budgets. Some analysts have proposed institutional reforms which include delegating substantial powers to officials more likely to place a priority on maintaining aggregate fiscal discipline. Others have called for establishing fiscal policy rules in the form of numerical limits on the accumulation of debt and deficits. So far, the literature has largely ignored a recent institutional innovation, the cash budget, which involves increased delegation in fiscal policy and in some cases the creation of fiscal policy rules. This paper asks whether and how cash budgets have contributed to recent reductions in fiscal deficits in Uganda and Zambia. It also investigates the potential costs of cash budgets involving increased volatility of expenditures, a skewed composition of expenditures, and the marginalization of line ministries with respect to the budget process. The macroeconomics of cash budgeting has already been given substantial consideration in papers by Adam and Bevan (1997) and Bolnick (1997) on Zambia, and by Henstridge (1997) on Uganda. In this paper we concentrate on political economy issues, drawing on the literature on politics and fiscal policy and on budgetary institutions.

The list of countries which have adopted cash budget systems is diverse, including Peru, Bosnia-Herzegovina, Uganda, Zambia, and Tanzania. While the specifics of these arrangements differ from country to country, they have two general characteristics. First, monitoring of cash disbursements is the main expenditure control mechanism rather than monitoring of commitments entered into by line ministries. Second, there are provisions for planned cash disbursements to be reviewed at regular intervals in order to allow for swift fiscal policy adjustments in response to unexpected shortfalls in tax revenue or donor finance. In some cases cash budgeting is also accompanied by a rule prohibiting any monetary financing of government deficits. Because their cash budgets have been functioning continuously for the longest time span among the African countries which have adopted this institution, we concentrate on Uganda (1992-1997) and on Zambia (1993-1997). One key difference which makes a comparison between the Ugandan and Zambian cash budgets particularly interesting is that while Zambia has followed a rule-based system which prohibits any net borrowing by the Treasury from the central bank, Uganda's cash budget instead delegates authority for central bank borrowing to top Ministry of Finance officials.[1]

We find evidence that cash budgeting in both countries has reduced budget deficits primarily as a result of improved expenditure control with regard to line ministries. In Uganda and Zambia, in an environment where the capacity to operate a

[1] Another important aspect of cash budgets which we do not consider here is their use as a monetary policy instrument. As described in detail by Henstridge (1997), in contexts where governments lack appropriate indirect monetary policy instruments and where small changes in reserve money can swiftly translate into significant changes in inflation, they can opt to modify levels of monthly cash disbursements (with a knock-on effect on govt deposits at the central bank) in order to achieve desired reserve money targets.

commitments based budget system is limited, cash budgets have improved expenditure control by providing a low-cost means for monitoring line ministry expenditures and of preventing line ministries from exceeding their allocations. Contrary to what Bolnick (1997) and others have suggested, cash budgets in Zambia and Uganda have not provided a means for rulers to "tie their hands", and thus reduce their own discretion over fiscal policy. In Uganda, successful operation of the cash budget has in fact depended upon continued presidential support. For Zambia, we argue that adoption of a rule prohibiting monetary financing of government deficits has been ineffective in committing top politicians to fiscal discipline. Actions by top officials have, in fact, on several occasions lead to violations of Zambia's cash budget rule.

Evidence with regard to the costs of cash budgeting suggests that they can be substantial, but one needs to distinguish carefully between costs which derive from the cash budget itself and those which result from other budgetary institutions which pre-date the creation of a cash budget. For example, in terms of expenditure composition, in both Uganda and Zambia under cash budgeting there has been heavy re-allocation of expenditures between different ministries. Some ministries have received much more than they were originally budgeted, while others have received substantially less than originally budgeted. We present evidence that in both countries this problem pre-dates the implementation of cash budgeting and that it is attributable to the ease with which supplementary expenditure bills are approved. In both countries the first step to improve this outcome would be to reduce possibilities for the approval of supplementary expenditures.

Another potential cost of cash budgets, as we discuss in detail below, is that they can reduce expenditure efficiency by limiting possibilities for line ministries to provide information about the costs and benefits of different spending programs which fall within their remit. Like the situation with supplementaries, this problem existed in Uganda and Zambia before the adoption of cash budgeting. Cash budgeting may subsequently have exacerbated the tendency for line ministries to be marginalized, but it would in theory be possible to address this issue even within the constraints posed by a cash budget system.

Finally, we lack data to make a before and after comparison of volatility in each country, but a comparison between Zambia and Uganda since the adoption of a cash budget shows that Zambia has suffered from significantly higher month to month volatility of expenditures. This is one obvious disadvantage of pursuing a rule-based cash budget, as opposed to a more flexible mechanism based on delegation.

The remainder of the paper is as follows. Section 2 reviews the literature on the political economy of fiscal policy and details four hypotheses which we will evaluate. Section 3 then shows how the implementation of cash budgeting in Uganda and Zambia has led to a modification of pre-existing budgetary institutions. Section 4 evaluates our first three hypotheses regarding the effect which cash budgeting has had on aggregate fiscal discipline. Section 5 evaluates the potential costs of cash budgeting in terms of increased volatility, a skewed composition of expenditures, and the marginalization of line ministries in the budgeting process. Section 6 concludes and draws implications for policy.

2. Politics and fiscal policy

There are a number of reasons identified by the political economy literature why governments may pursue fiscal policies that depart substantially from optimal behavior.[2] We review several possibilities here which are particularly pertinent to countries like Zambia and Uganda. We then show how delegating or establishing fiscal policy rules can minimize these tendencies, but with the risk of a reduction in expenditure efficiency. We conclude by establishing four hypotheses about the potential effect of cash budgeting in our two study countries.

Political sources of excess fiscal deficits

While commitment problems are best known in monetary policy, they can also exist in fiscal policy. Take a situation where there are two groups in a country who favor spending on different public goods (say roads in the South of the country vs. roads in the North). To the extent these groups alternate in control of government, each may accumulate excessive debts in order to finance its preferred good and at the same time limit spending options for its successor. Over time this can lead to excessive accumulation of debt, and the problem will be more severe the more that politics in a country is polarized (groups have divergent preferences over spending), the greater the degree of political instability (the frequency with which governments are replaced), and the greater the extent to which political institutions favor "winner takes all" outcomes where one party controls both executive and legislature.[3] On the other hand, if both parties could somehow commit to pursuing more prudent fiscal policies this problem would be avoided.

Another type of commitment problem in fiscal policy involves the incentive for a government to sway voters before elections through temporarily increased spending.[4] This is a problem for a government seeking to reassure potential investors that it will not engage in excess fiscal expansions prior to future elections. Rulers will logically have the greatest ability to engage in such opportunistic behavior in countries where political institutions tend to give a single party majority the authority to set fiscal policy.

Common pool problems are a second factor which can lead governments to run excess deficits. These derive from the fact that while the costs of public spending programs tend to be funded through general taxation, their benefits may be concentrated on specific districts or interest groups. Individual representatives in parliament have incentives to bid for greater spending for their constituents, and to the extent that members of parliament have a tendency to make reciprocal deals agreeing to approve each others bids, this can lead to general overspending (Weingast, Shepsle and Johnsen, 1981). Common pool problems can also exist between different

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[2] Optimal behavior would be the tax-smoothing strategy as defined by Barro (1979).

[3] This scenario is derived from the model constructed by Tabellini and Alesina (1990).

[4] The reason why voting choices might actually be influenced by such behavior remain to be explained, since one might expect voters to discount any pre-election policy changes as being temporary in nature. There have been numerous attempts to develop models where opportunistic behavior of this sort might influence the voting choices of voters who are rational and forward-looking. One possibility is to assume that voters can observe policy choices, such as overall levels of spending, but they cannot directly observe the macroeconomic assumptions upon which these policy choices are based, and so it may be difficult to tell whether a pre-electoral boost in spending is "excessive".

ministries (von Hagen and Harden, 1996) and between different branches of government (McCubbins, 1991).[5]

Lack of expenditure control is a third problem which can lead governments to run excessive deficits. As emphasized in the public administration literature, regardless of what budget is agreed on by parliament, to the extent that a finance ministry is incapable of monitoring spending by line ministries and incapable of sanctioning expenditure overruns, then actual levels of public spending may exceed those originally budgeted (World Bank, 1998). When finance ministries lack control, common pool problems are, in effect, re-introduced, as individual ministries will have an incentive to overspend with the knowledge that they will the enjoy the totality of benefits from this overspending and suffer only a fraction of the costs.

Budgetary institutions

Recent analytical work suggests that the problems detailed above can be minimized by delegation of authority or by adoption of policy rules. Delegation of decision making power over overall spending limits can minimize common pool problems. Delegation can also improve expenditure control, but it is less likely to be effective in minimizing commitment problems. The alternative to delegation is for a country to adopt a rule placing a numerical limit on the accumulation of debt and deficits.

Delegation in fiscal policy frequently involves giving a finance minister the right to propose overall budget targets, in addition to strategic advantages in negotiations with line ministers. This is based on the presumption that finance ministers are more likely to have a strong preference for fiscal discipline. Under this system the parliament ultimately retains the authority to accept or reject overall spending proposals, but it has been shown theoretically and empirically that this delegation of "agenda setting" authority increases the likelihood of maintaining aggregate fiscal discipline (von Hagen and Harden, 1996). Delegation of agenda setting authority to the finance ministry will have less of an effect on commitment problems than on common pool problems, however, because executives generally have the prerogative of intervening directly in finance ministry decisions, and commitment problems derive from the incentives faced by an executive.

Delegation can also improve expenditure control by giving the finance ministry authority to see that budgetary accords are respected by line ministries. Von Hagen and Harden (1996) show that in the European budgetary systems with the tightest controls (France, Germany, and the United Kingdom), line ministries are required to obtain authorization for all disbursements either from a financial controller or direct from the finance ministry. In these countries line ministries are also subject to cash limits on their spending, and the finance ministry reserves the right to block expenditure allocations, line item by line item. What von Hagen and Harden take for

[5] A related possibility is that when multiple actors set policy, stabilization measures will be delayed by disputes over which group should bear the burden of adjustment. For a coalition government, if a shock occurs which requires stabilization through either cutting spending or raising taxes, different parties may succumb to a "war of attrition" where each side vetoes successive stabilization proposals in the hope of seeing its opponents bear most of the burden. Alesina and Drazen (1991).

granted is that systems for transmitting information about spending from line ministries to the finance ministry are effective. In developing countries this is not always the case, and so effective information systems need to be seen as a pre-requisite for delegation to improve expenditure control.

While delegation can bring benefits in terms of aggregate fiscal discipline, it can also have costs. When not only the size but also the composition of expenditures is determined purely by central authorities (such as a finance ministry), considerable inefficiencies can result. Ideally, line ministries should provide input into spending decisions, because they are likely to have better information about the costs and benefits of individual expenditure items than will the finance ministry (Campos and Pradhan, 1996).

The alternative to delegation of fiscal policy decisions is for politicians to adopt a rule establishing a numerical limit on the accumulation of fiscal deficits and/or debt. In theory, rules have the potential to minimize both common pool problems and commitment problems. The most common form of such limits is to adopt a balanced budget rule (as is the case in 49 out of the 50 US state governments) or numerical limits on fiscal deficits as is the case for EMU states. Indonesia since the 1960s has also followed a budget rule that in effect prohibits domestic borrowing to finance a fiscal deficit. Balanced budget rules have the obvious disadvantage of reducing possibilities for states to follow counter-cyclical fiscal policies, excepting cases where governments succeed in running significant surpluses during "normal" times. In cases where a government has a history of accumulating excessive fiscal deficits, however, one could claim that adopting a rule may be a necessary evil in order to restore fiscal balances.

The effectiveness of budgetary institutions

A key question with regard to both budget rules and fiscal delegation is why politicians who opt for either of these institutional solutions cannot simply reverse their decision as soon as it becomes politically inconvenient. One reason this might prove difficult is if multiple actors with different preferences are required to agree to any such reversal. Keefer and Stasavage (1998) argue that when the number of actors required to reverse a decision to delegate (or to adopt a rule) is greater than the number required to make ordinary policy decisions, then delegation (or a rule) is more likely to have an impact on policy outcomes.[6] Bohn and Inman (1996) provide partial support for this proposition by showing that among US state governments, balanced budget rules make more of a difference when they are more difficult to overturn than standard fiscal policy decisions.[7]

Another reason that budget rules in particular may prove costly to modify involves their signaling properties. For one, it might be easier for private sector

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[6] They also argue that rules and delegation will, under certain conditions, have an independent impact on policy even when the number of actors required to reverse a decision to adopt a rule or to delegate is equal to the number normally required to make a change in policy.
[7] In some US states with strictly defined balanced budget rules, the rule is inscribed in the state's constitution, meaning that it would at a minimum require a 2/3 majority to abolish it, while in other cases the rule is merely statutory.

operators to monitor respect for a balanced budget rule than it would be to monitor whether a discretionary fiscal policy is being set so as to preserve aggregate fiscal discipline. This ensures swifter punishment in the event that a government should renege on its promises. Another possibility is that a rule can convey information about a policy maker's "type" (Adam and Bevan, 1997). This would be the case if a budget rules necessitates "going overboard" by following fiscal policies which are so conservative that no government which was only mimicking conservative policies would adhere to them.

Four hypotheses about cash budgeting and fiscal policy

(1) Cash budgeting reduces budget deficits by solving commitment problems

In order to evaluate this proposition we first need to determine whether a government is likely to suffer from commitment problems in the area of fiscal policy. As mentioned above, this will be the case when there is political polarization, a history of instability, and when political institutions give a single party majority total control of fiscal policy decisions. Then, we need to determine whether the provisions of the cash budget such as Zambia's zero monetary financing rule have actually been respected over time. Finally, we need to demonstrate that in cases where cash budget provisions were respected, it would have been costly to override them.[8] An override will be costly if any of the following three conditions are satisfied. First, if it necessitates the agreement of a greater number of decision makers than would be necessary to make fiscal policy decisions under normal circumstances (for example a two-thirds majority in the legislature as opposed to a simple majority). Second, if it is easier for the private sector to monitor respect for the cash budget than to monitor respect for a prudent fiscal policy under normal circumstances. Third, if adherence to the cash budget has involved adherence to a fiscal policy that is stricter than that which would be optimal, if this policy has been announced in a very public manner so as to send a signal, and if parallel policy actions have not contrary signals about a government's "type".

(2) Cash budgeting reduces budget deficits by solving common pool problems in budgeting.

To evaluate this proposition, one first needs to demonstrate that a government suffered from a common pool problem previous to the implementation of cash budgeting, because its budgetary institutions gave individual ministers substantial authority to determine spending levels for their ministries. Cash budgeting will be effective in minimizing this problem to the extent that it involves either delegation of substantial agenda setting authority to the finance ministry or a balanced budget rule. In addition, the cash budget must be costly to override for one of the reasons outlined under proposition 1.

(3) Cash budgeting reduces budget deficits by improving expenditure control

To evaluate this hypothesis we first need to establish on the basis of documentary evidence whether expenditure control was a serious problem during the

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[8] More specifically, the cost of an override needs to be higher than the cost of reneging on a more simple pledge to follow a prudent fiscal policy in the absence of a cash budget.

pre-cash budget period. Then, we need to determine to what extent cash budgeting has involved a reform of systems for monitoring expenditures by line ministries and a reform of the payment system. To establish these facts we rely on documentary and interview evidence. Finally, to establish the effectiveness of the cash budget in this area, it needs to be shown that there have not been significant losses of expenditure control subsequent to the application of the cash budget.

(4) Cash budgeting imposes substantial costs in terms of excess expenditure volatility, skewed expenditure composition, and the marginalization of line ministries.

In order to evaluate this hypothesis we provide evidence on the volatility and composition of expenditures. When possible we establish whether expenditure inefficiencies pre-date the implementation of cash budgeting. We address the issue of the marginalization of line ministries with interview evidence.

3. Cash budgeting institutions in Zambia and Uganda

Previous to their adoption of cash budgeting, Uganda and Zambia were characterized by political and budgetary institutions which minimized common pool problems by delegating significant authority over the formulation of budgets to their ministries of finance. In contrast, they suffered from serious problems of expenditure control due to the inability of ministries of finance to monitor spending by line ministries. Because their political institutions have provided few checks and balances, Uganda and Zambia also had few safeguards against excess deficits accumulated as a result of commitment problems.[9] Cash budgeting institutions in each country can, in theory, help to address these problems.

Zambia's cash budget

Zambia's government has, since 1993, followed a cash budget based upon a rule that there can be no net monetary financing of government deficits. The effect of this rule should be to address an existing commitment problem in fiscal policy. In late 1992 the permanent secretary of the Ministry of Finance issued a standing order to the Bank of Zambia that funding requests from the Treasury should not be honored unless the Treasury's composite position on its accounts at the central bank was positive. This also applied to the individual accounts of line ministries at the Bank of Zambia. As subsequently applied, it has implied that at the end of each month central bank claims on the Treasury shall not show a net increase on the previous month.[10]

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[9] In Zambia one party with a large majority in parliament has controlled fiscal policy decisions. A no-party system technically exists in Uganda, since candidates in legislative elections are officially required not to declare a party affiliation. Nonetheless, such affiliations are publicly known, and for the period considered here the President's movement has held a majority in parliament.

[10] Out of necessity several exceptions have been made. The rule does not apply to the first two weeks of each year since Treasury and line ministry accounts are zeroed at the end of each year, and revenues for each month are normally concentrated towards the end of the month. Second, given frequent delays in disbursement of external assistance by donors, the central bank has provided bridging loans to cover for assistance which has been promised but which has not yet been received. Subsequently this bridge loan has also been used to cover more general intra-month irregularities in revenue. Finally, the zero monetary

In order to comply with the zero monetary financing rule, the Zambian Ministry of Finance has full authority to decide what percentage of budgeted funds will be released each month. It also sets the composition of expenditure since it decides how monthly releases are divided between different ministries and different line items. This delegation to the finance ministry is basically a codification of a situation which existed *de facto* before the cash budget was implemented. The annual budget process has always begun with line ministries preparing a proposal for their spending during the next year which then forms the basis for bilateral negotiations with the Ministry of Finance. The Ministry of Finance has always had considerable authority to alter original proposals, and it alone compiles the overall government budget proposal which is then submitted to parliament. In its consideration of the budget, parliament has had the authority to make amendments, although the government could technically call for a vote on the document without amendments. Finally, the Ministry of Finance has the sole right to propose supplementary spending bills to parliament.

Beyond the zero monetary financing rule, the principal change brought about by cash budgeting in Zambia has been the potential for improved expenditure control due to enhanced information flows and a restructured payments system. Before 1993, the finance ministry lacked information regarding cash disbursements to individual line ministries and regarding the extent to which line ministries had entered into commitments beyond the sums they were originally budgeted.[11] Ideally, cash disbursements should have been monitored by the finance ministry's staff while commitments should have been monitored by accounting officers placed with each line ministry. In this way, at any point in time ministry of finance officials would have had an accurate picture of developments in public spending while line ministries would have retained the freedom to enter into commitments without having to repeatedly seek approval of central authorities. In practice, by the early 1990s this control system had seriously eroded.

Since 1993 the Zambian government has rebuilt systems for providing the Ministry of Finance with information about cash disbursements to line ministries. In order to monitor daily movements of key indicators, such as government tax receipts, reserve money, and cash disbursements to different ministries, a Joint Data Monitoring Committee was created and staffed by officials from the Ministry of Finance and the Central Bank. While much of the data which the committee initially received from different units was unreliable, Bolnick (1997) suggests that over several months and with strong support from top Ministry of Finance and Bank of Zambia officials, the quality of information improved significantly.

Improved possibilities for expenditure control in Zambia have also involved a reformed payments system, although there remain a number of flaws in this area. On the positive side, authorizations by the finance ministry for transfer of funds from the general taxation fund to a line ministry's account with central authorities are organized

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financing rule does not apply to service of domestic debt for which the government has a constitutional obligation of timely repayment (Bolnick, 1997).

[11] In addition to this, the Bank of Zambia has stopped publishing regularly audited accounts.

by a computer system which makes it difficult to override authorized allocations.[12] On the downside, individual line ministries retain their own bank accounts with commercial banks in Zambia.

Uganda's cash budget

Uganda's cash budget system is not rule-based. Instead of establishing a requirement that any deficits cannot be financed by the central bank, the Ugandan government leaves considerable discretion to the finance ministry to adjust monthly spending levels as it deems necessary and to borrow from the central bank. The finance ministry also determines the composition of expenditure by deciding how monthly releases are divided between different ministries and between different line items. This system has the potential to minimize expenditure control problems in fiscal policy. It should have less of an effect on commitment problems in fiscal policy, because Uganda's President retains the authority to intervene directly in finance ministry decisions. As in Zambia, the potential for common pool problems in Uganda was already dealt with before the creation of the cash budget.

The process for preparing the initial proposal for the annual budget in Uganda has, since before the adoption of the cash budget, involved substantial delegation of authority to the finance ministry. Individual ministries are given ceilings for their annual budget, and they are requested to prepare proposals for submission to the Ministry of Finance within this ceiling. This is followed by bilateral discussions between each respective line ministry and the Ministry of Finance. While there are significant discussions within cabinet during preparation of each year's budget, the finance ministry retains a significant strategic advantage in that it prepares the final budget proposal and the full details of this final proposal are not presented to cabinet until the morning of the Minister of Finance's presentation of the budget to parliament (Kitabire, 1996). The Minister of Finance also has the sole right to present supplementary spending requests to parliament. These requests can, in fact, be pre-approved by the Minister and then submitted to parliament within three months after closure of the financial year.[13]

The major change brought about by the cash budget in Uganda has been improved possibilities for expenditure control thanks to improved transmission of information regarding cash disbursements and due to changes in the payments system. Before 1992, systems for monitoring cash disbursements and commitments entered into by line ministries had eroded considerably, and in Uganda's case this was attributable not just to erosion of real wages for civil servants and to the general breakdown in efficiency in the bureaucracy, but also to years of civil strife which had

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[12] Transfers of funds have to correspond to a specific line item, and the computer is programmed to automatically refuse any transfers which exceed authorizations. The program can only be overridden by intervention of three senior ministry of finance officials. This system was put in place after the Ministry of Defense succeeded in exceeding its authorization for all of 1993 within the first three months of that year.

[13] This is according to article 156 of Uganda's 1995 constitution. Kitabire (1996) suggests that this made parliamentary scrutiny of supplementaries largely a formality since by the time parliament considered a proposal, the money had inevitably already been spent. Since 1997 an additional restriction to supplementary spending has been added in that the total of accepted supplementaries cannot exceed 3% of total expenditures.

drastically reduced the pool of qualified people for positions such as those of accounting officer in line ministries. Under these conditions, the Ministry of Finance often had very little idea where it stood in terms of cash disbursements and commitments entered into by line ministries. Potential problems would only be spotted when the Bank of Uganda notified the Ministry of Finance of a dramatic increase in government borrowing.

The cash budget has helped address monitoring problems through the creation of a Cash Flow Committee composed of Bank of Uganda and Ministry of Finance officials which meets monthly to monitor key figures such as government tax receipts, growth of reserve money, disbursements to different ministries, and underlying inflation. The committee harmonizes and reconciles data, and it also is charged with making recommendations to senior Ministry of Finance officials on whether the necessary cash for the following month's expenditure allocations to different ministries can be released in full, or whether some portion needs to be held back in order to avoid an excessive deterioration in the government's position with the banking system and/or an acceleration in inflation. It should be noted that while the Cash Flow Committee has dramatically improved monitoring of cash disbursements, there has not been a parallel improvement in commitments monitoring.

Possibilities for expenditure control in Uganda have also been improved through changes in the payments system. The system is archaic in that almost all payments are made by check, but it has the potential to be effective in that individual line ministries cannot print their own checks.[14] This is the sole privilege of Uganda Computer Services which is under the administrative control of the Ministry of Finance. In order for payments to be made, line ministries send requests to the Ministry of Finance which conducts a pre-audit to verify that the ministry has sufficient funds to cover the expenditure. If the expenditure is cleared, Uganda Computer Services prints a payment check, and its software will refuse to print a check if doing so will exceed a given ministry's release for the month. Alternative strategies to this system, such as sanctioning line ministries which enter into commitments beyond their allocations, have not yet proved feasible.[15]

4. Cash budgets and aggregate fiscal policy outcomes

Since the adoption of cash budgeting, both Uganda and Zambia have run significantly smaller annual fiscal deficits, and reduced monetary financing of fiscal deficits has led to lower inflation. However, to better judge the effect of cash budgeting on commitment problems and on expenditure control we need to look at monthly developments. Monthly data show that while the Zambian government has generally adhered to a rule prohibiting monetary financing of fiscal deficits, it has at several points violated its zero monetary financing rule. These overruns seem due more to decisions made by central authorities rather than to a lack of expenditure control with regard to line ministries. Subsequent to each of these episodes, the Zambian government has imposed severe reductions in expenditures. Violations of the

[14] In some cases payments are made by directly debiting line ministry accounts at the Bank of Uganda.
[15] One proposal was to make accounting officers in line ministries personally responsible for cases where their ministry entered into commitments greater than what it was budgeted. In practice this has not proved feasible as overruns have often been due to features beyond an accounting officer's control.

zero monetary financing rule provide evidence that cash budgeting in Zambia has failed to solve commitment problems in fiscal policy. This conclusion is reinforced by the observation that subsequent expenditure reductions have been primarily motivated by the need to meet IMF conditionalities (instead of cash budge provisions). In Uganda there have been no lapses of fiscal discipline under the cash budget comparable to those which have occurred in Zambia. However, while expenditure control has clearly been aided by the cash budget, there is less evidence that cash budgeting has solved an existing commitment problem. In fact, rather than serving as a means for the President to tie his hands, the effectiveness of the Ugandan cash budget is largely attributable to repeated presidential interventions in favor of prudent fiscal policy. The problem is that it the cash budget might not work as effectively under a different government.

Macroeconomic developments

As shown in table 1 and figure 1, primary fiscal balances, overall fiscal balances, and inflation have shown a consistent improvement in Zambia and Uganda subsequent to their implementing a cash budget. In terms of monthly developments, as one might expect due to its rule-based system , Zambia's levels of overall monthly expenditures have been more highly correlated with monthly revenues than is the case for Uganda, and this has been particularly true of capital and non-wage recurrent expenditures. Table 2 provides evidence for this based on OLS regressions.[16]

The results in Table 2 do not necessarily imply that Zambia's zero monetary financing rule has always been adhered to, however. Figure 2 shows the primary domestic balance in Zambia for each month between January 1994 and December 1997. According to the zero monetary financing rule, any primary domestic deficits which appear cannot be financed by increased liabilities to the central bank.[17] This rule has periodically been broken. In early 1995 the government borrowed from the central bank in order to help finance a primary domestic deficit which had appeared due to revenue shortfalls, increases in civil service wages, and higher than anticipated agriculture loans.[18] The government also appears to have increased net borrowing from the central bank at several times during 1996. This may have been provoked in part by electoral considerations, as a large domestic deficit appeared in October 1996, one month before Presidential and legislative elections. Agricultural loans for this period were higher than anticipated.[19] It is important to note that in most of the above cases, violations of the zero monetary financing rule were prompted by excess expenditures decided by central authorities (such as wage hikes) rather than being due to expenditure overruns by line ministries.

In addition to the episodes where the zero monetary financing rule has actually been violated, on other occasions the Zambian government has run sizeable primary domestic deficits which have been financed by increased holdings of government

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[16] Due to the small number of observations available for each country, we have not been able to use standard procedures to correct for any problems related to auto-correlation and cointegration in our data.
[17] The primary domestic balances is used because of the provision in the cash budget agreement that the government shall honor all domestic debt payments even on occasions where this necessitates net financing from the central bank.
[18] "Government Budget Performance: 1995", "Macroeconomic Indicators".
[19] The October 1996 deficit was, however, also attributable to several developments not tied to electoral considerations, such as court-ordered payments to owners of previously nationalized companies.

securities by commercial banks. This was true of several months during 1994 due to higher than anticipated expenditures on agricultural loans, excess defense spending, and an unbudgeted increase in civil service wages.[20] While non-inflationary and technically not a violation of the cash budget, this development has lead to a major increase in interest expenditures on domestic debt for the Zambian government. The provision that interest payments on government debt are not covered by the zero monetary financing rule appears to be something of a loophole which has been increasingly exploited. In some cases domestic debt issues have been used by central authorities to allow purchase of goods and services off-budget (Bolnick, 1997). It is worth noting that among US state governments with balanced budget rules no such exception is made for expenditures which service debt.

Zambia's several lapses in fiscal discipline under the cash budget have invariably been followed by temporary drastic cuts in expenditure and by efforts to improve revenue collection. Non-wage recurrent expenditures and capital expenditures have suffered the largest reductions. Following the deficit month of February 1995, recurrent departmental charges were cut by over 70% in March 1995. Following the November 1996 elections, recurrent department charges were cut by 54%. These cuts helped to lead to substantial monthly surpluses for March 1995 and for December 1996.

Uganda's record with respect to aggregate fiscal policy outcomes has been quite different than Zambia's. Since Uganda does not follow a rule-based cash budget, one cannot draw a sharp distinction whether the system is being adhered to or not being adhered to. Nonetheless, there is less evidence of excess government spending in the months preceding the presidential and legislative elections of May and June 1996. While it ran primary domestic deficits during several of these months, the Ugandan government was a net saver with the Bank of Uganda during the period April-June 1996, reducing its net liabilities with the Bank of Uganda by 33bn shillings.[21] During much of the period considered here the Ugandan government has, in fact, dramatically increased its saving with the central bank, in part as an effort to sterilize the effect of a growth in foreign exchange reserves. Between December 1994 and March 1997 the Ugandan government regularly exceeded IMF quarterly targets for the change in net claims of the banking system on government, and it did so by substantial amounts.[22]

Despite improvements in annual fiscal policy performance, in both Zambia and Uganda it should be noted that this positive result has been accompanied by efforts to circumvent the constraints imposed by cash budgeting. In Zambia, some of these efforts have been made by central ministries, as in one notable case where a Ministry of Finance department issued treasury bills off-tender in exchange for goods and services (Bolnick, 1997). In both countries line ministries have used arrears as a *de facto* financing mechanism. Accumulation of arrears in each country has been significant but

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[20] "Government Budget Performance: 1994", "Macroeconomic Indicators", IMF June 1994.

[21] This suggests substantial restraint, even if non-wage recurrent expenditures were slightly above the mean for the year in the month preceding the May 1996 presidential election (27.4 bn shillings vs. 24.3 bn shilling) and in the month preceding the legislative election of June 1996 (32.2 bn shillings vs. 24.3bn shillings).

[22] The government missed its IMF target only once during this period, and this seems to have been attributable more to an increase in claims by commercial banks rather than an increase in net claims by the monetary authorities.

should be kept in proper perspective. In Zambia there have been increasing accumulations in each year since the cash budget has been introduced (from 0.6% of GDP to 1.5% of GDP in 1997).[23] In Uganda, while average annual accumulation of arrears was 0.4% of GDP during the period 1988-92, during the period 1993-96 this average rose to 1.1% per year.[24] The Ugandan government has established a policy of issuing promissory notes as a way of regularizing arrears once discovered, but these have on certain occasions been open to abuse, as on occasion they have been issued to cover new expenditures. Finally, in Zambia line ministries have exploited a loophole in the existing payments system in that they can run overdrafts on commercial bank accounts, and the Zambian Ministry of Finance inevitably winds up assuming responsibility for these debts.

What effect have cash budgets had on aggregate fiscal discipline?

For Uganda, evidence suggests that improved monitoring of cash disbursements has been a key factor behind improvements on aggregate fiscal discipline. Failures in monitoring of cash disbursements were the principal stimulus to Uganda's adopting a cash budget in early 1992.[25] This led to the development of improved structures for monitoring disbursements and for regulating payments, as noted in section 3. By all accounts these structures have continued to produce regular and accurate statistics, allowing Ministry of Finance officials to make more informed decisions about monthly cash releases.[26]

The fact that the Ugandan Ministry of Finance has been able to take better informed fiscal policy decisions does not explain why in making these decisions it has been able to resist political demands for cash releases which would jeopardize macroeconomic targets. The cash budget arrangement has in fact come under periodic criticism by cabinet ministers dissatisfied with the releases granted to their ministries.[27] One reason for this might be that while only a handful of ministers are likely to complain about the cash budget in any given month, it would take the agreement of the entire cabinet to override the Ministry of Finance's decision regarding cash releases. This may be true, but a more important reason for the Ministry of Finance's freedom of decision in this matter involves strong support for fiscal discipline on the part of Uganda's President. Numerous interviewees among ministry of finance officials remarked that when pressured by line ministries for increased disbursements, they often had the option of suggesting that the minister plead his or her case directly with President Museveni, knowing full well that the response would usually be negative.[28] As such, rather than imposing fiscal discipline by tying the president's hands, Uganda's cash budget has succeeded thanks to continued presidential support.

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[23] Data from Ministry of Finance monthly economic reports.

[24] Bank of Uganda data.

[25] According to Ugandan officials present at the time, in December 1991 the Bank of Uganda informed the Ministry of Finance that government spending, financed by advances from the Bank due to a shortfall in donor support, would lead to a dramatic acceleration in inflation unless curtailed. In January the Ministry of Finance began monitoring its disbursements, but it was unable to reconcile its own records of disbursements with figures from the Bank of Uganda which showed a 50bn shilling discrepancy. After several weeks it was revealed the checks were being printed without the Ministry of Finance being aware.

[26] interviews in Kampala, April 1998

[27] *The New Vision*, Kampala, 10 March 1998.

[28] This tendency has not been universal, however, as President Museveni has on occasion supported requests from certain ministries for increased allocations. interviews in Kampala, April 1998.

Presidential support for disciplined fiscal policies in Uganda has also been clear in other developments. The adoption of a cash budget in mid-1992 occurred simultaneously with several other moves by President Museveni to replace the Minister of Finance and to place blame on top ministry officials for not cutting expenditures adequately in response to shortfalls in donor import support. According to a number of officials interviewed, this sent a strong signal that future policy failures would be sanctioned in a similar manner.[29]

In Zambia decisions made by top political authorities have had an effect opposite of those in Uganda. Unbudgeted wage increases and increased agricultural loans are examples of expenditure decisions made by top politicians which have placed extra strains on the budget, in some cases resulting in primary domestic deficits which have been financed by the central bank. Top government officials in Zambia have also failed to sanction one notable effort by a finance ministry department to circumvent the cash budget by issuing government securities in exchange for goods and services off-budget. Following discovery of these practices, the officials responsible were initially removed from office but subsequently re-instated.

While decisions taken by top politicians have led to the zero monetary financing rule occasionally being circumvented, each of these episodes has been followed by a swift fiscal adjustment. It seems unlikely that these adjustments have been prompted by Zambia's commitment to follow a zero monetary financing rule, because none of the conditions identified in section 2 for a rule to be effective have been present in Zambia.

First, it would not take the agreement of a large number of decision makers to override the cash budget. The cash budget was created by an announcement made by the Minister of Finance, and presumably it could be repealed in a similar manner.

Second, private sector actors have not been able to monitor adherence to the zero monetary financing rule with greater ease than they would monitor a discretionary fiscal policy. In the Zambian case there is considerable room to circumvent the cash budget without this being immediately observable, such as the case where government securities were issued directly for off-budget expenditures. In other cases the cash budget has been more directly violated, but even so private sector actors are not likely to be privy to data on changes in central bank claims on government, and even if they were, the exceptions made in the rule for import support shortfalls and repayment of government debt would further complicate the task of monitoring.

It is also unlikely that the other signaling properties of Zambia's zero monetary financing rule can account for fiscal policy developments. It is true that the cash budget and in particular the zero monetary financing rule was introduced with a great deal of public fanfare in 1993, with parliamentary discussions and debate on television programs.[30] This public signal of the government's intentions was costly to the extent that zero monetary financing represented a tighter policy than that which would actually be optimal. As a consequence, it may help to explain Zambia's initial success in dramatically reducing inflation as private agents adjusted their demand for money balances. However, subsequent actions by the Zambian government have sent a very different signal. Unbudgeted wage hikes, unbudgeted retirement packages for civil

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[29] interviews in Kampala, April 1998.
[30] interviews in Lusaka, July 1998.

servants and other spending decisions announced by the President have periodically placed strains on the cash budget. It seems likely then that even if the introduction of the cash budget prompted the Zambian private sector to believe that the government was truly committed to fiscal discipline, subsequent actions would quickly have led to a reassessment of this belief.

Ultimately, the most convincing explanation for the fiscal policy outcomes observed in Zambia may be the simple need to meet IMF government savings targets. In fact, corrective measures taken after the emergency of monthly deficits in Zambia have frequently coincided with months at the end of which IMF targets for the change in net claims of the banking sector on government need to be met. As shown in figure 4, overall monthly domestic balances have tended to be significantly higher in Zambia in months when quarterly IMF government savings targets are due. Based on a simple t-test, we can massively reject the hypothesis that the mean values of overall domestic balances for target months and non-target months are equal.[31] In contrast, figure 5 shows that in Uganda there has not been an appreciable difference between overall monthly domestic balances in target and non-target months. A t-test confirms that in this case we cannot reject the null hypothesis that the mean values are equal.[32]

5. The costs of cash budgeting

One of the potential costs of cash budgeting is increased volatility of expenditures. While we lack data for our two countries on expenditure volatility during the pre-cash budget period, we are able to conclude that rule-based cash budgeting has been associated with substantially higher expenditure volatility in Zambia than in Uganda. This suggests that Zambia's zero monetary financing rule has been not only ineffective (as argued in the previous section) but also costly. Another potential cost of cash budgets can involve distortions in the composition of expenditure. One such distortion particularly present in both Zambia and Uganda has been for certain ministries to receive disbursements far in excess of what they were originally budgeted, while other ministries receive significantly less than originally budgeted. For both countries we provide evidence to show that while this problem may be exacerbated by cash budgeting, its primarily cause has been frequent resort to supplementary spending bills. Finally, in both countries there is evidence that cash budgeting has been accompanied by a marginalization of line ministries with respect to the budget process, contributing to inefficiencies in expenditure. As is the case for supplementaries, however, we suggest that the marginalization of line ministries is a phenomenon which pre-dates the cash budget in both countries, and in theory it should be possible to address this issue even within the constraints of a cash budget.

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[31] The mean value for overall domestic surpluses in target months was 12.8bn kwacha and -2.5bn kwacha in non-target months. Based on a two tailed t-test assuming unequal variances between the two samples we reject the hypothesis that the means are equal (no. observations 16 in IMF target sub-sample, 32 in non-IMF target sub-sample; t-stat=4.72; two-tail p-value ≤ .00005 Overall surpluses are used here rather than primary surpluses, because IMF targets do not make an exception for these as does Zambia s zero monetary financing rule. Figures for average primary surpluses show similar trends.

[32] no. observations=15 in IMF target sub-sample 30 in non-IMF target sample; t-stat=-0.83; two-tailed p-value ≤ 0.42.

Excess expenditure volatility

We follow Adam and Bevan (1997) by measuring the monthly volatility of different categories of expenditure in terms of mean absolute deviations and standard deviations. It is clear from Table 3 that since adoption of the cash budget, the volatility of expenditures has been much higher in Zambia than in Uganda. This is true for both average deviations and standard deviations of monthly deviations, and it conforms with the regression evidence presented earlier.[33] The fact that the Zambian cash budget in theory rules out short-term monetary financing is one obvious explanation for this high volatility. The likely reason is that on most occasions the Zambian government has set expenditures close to revenues, and what's more, monthly levels of revenue are more volatile in Zambia than is the case in Uganda. In addition, discretionary action taken by the Zambian government has contributed to this volatility, as the periodic violations of the zero monetary financing rule have taken the form of temporary increases in expenditures followed by drastic cuts.[34]

Distorted expenditure composition

One way to look at expenditure composition is to compare figures for original budget estimates and actual out-turns by broad type of expenditure: wage, non-wage recurrent, and capital. The percentage figures in Tables 4 and 5 reflect the percentage deviation of out-turns from the original budget estimates presented by the Ministry of Finance to parliament.[35] The deviation from 100% can be due to supplementary spending bills, expenditures withheld by the Ministry of Finance, overspending by line ministries, and unanticipated inflation. The figures in normal type show total spending for each category as a percentage of GDP. In Zambia there has been considerable re-allocation from non-wage recurrent and capital expenditures to wage expenditures. This is due to the numerous un-budgeted wage hikes announced by the Zambian government (as referred to above), and to subsequent efforts to make adjustment efforts in order to meet overall fiscal targets. It should be emphasized that if lack of expenditure control over line ministries were the main problem here, positive deviations would appear for non-wage recurrent expenditures in particular. In Uganda there has been very little deviation between original estimates and actual out-turns.[36]

A second way to view the composition of expenditures involves examining how original budget estimates have compared with actual out-turns by ministry in each country. As can be seen in figures 6 and 7, below, there has been a tremendous amount of reallocation of non-wage expenditures between different ministries in both countries. In Zambia, ministries and bureaus associated with the office of the President have, along with the parliament, been the principal agencies to receive budget out-turns significantly in excess of original estimates. While allocations to these offices are

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[33] The one exception here is the standard deviation of capital expenditures in Uganda.

[34] In other words, violations of the cash budget rule have not been used to smooth out the effect of major revenue shortfalls.

[35] To an extent these official figures may for both countries understate the size of wage expenditures and overstate the size of non-wage recurrent expenditures, due to the practice of funding certain public sector salaries out of block grants which sometimes fall within the non-wage recurrent section of the budget.

[36] Since 1990, in an environment where total government spending as a share of GDP has increased significantly, domestic contributions to capital expenditures have been the one category to decline during the cash budget period (1992-96). This relative decline has, however, been more than compensated for by increased external financing of capital expenditures.

a small share of total spending, the effect of the overruns has been to increase pressures for cuts elsewhere. In the case of the four agencies listed here which are part of the office of the President, these over-runs accounted for only 1% of total expenditures in Zambia during 1994 and 1995, but this relatively small amount can nevertheless have a significant impact. For example, the overrun by presidential offices in 1994 was roughly equal to the Ministry of Health's 12% shortfall of 7bn kwacha.

Interviewees in Zambia suggested that problems of reallocations between ministries pre-date the cash budget and that their principal cause has been the passage of supplementary spending bills for some ministries, followed by offsetting cuts for other ministries, as decided by the Ministry of Finance. This is supported by the fact that major deviations occurred in 1992, previous to implementation of the cash budget (as shown in figure 6). Figures on median deviations by ministry do not show a dramatic difference between the pre and post cash budget periods. Under the cash budget the median negative deviation has increased only slightly under the cash budget (from -22% to -29%), and the size of average positive deviations has dropped slightly (from +31% to + 21%). Interestingly, the correlation coefficient between a ministry's rank in terms of outturn performance (outturn/estimate) during the pre-cash budget period and the cash budget period is also quite high (0.70). In other words, ministries which were winners in terms of receiving extra allocations after 1993 also tended to be winners in terms of receiving extra allocations before 1993.

Data on deviations between out-turns and estimates by ministry in Uganda show the same pattern seen in Zambia.[37] Figure 7 shows the percentage deviation of actual out-turns from original estimates by ministry over the period 1995-1997. As in Zambia, the State House (part of the office of the President) and the National Assembly have been major sources of spending overruns. Apparently, while Uganda's President has protected Ministry of Finance officials against pressure from many line ministries, this has not been accompanied by success in minimizing spending overruns in all areas. In contrast, several line ministries for which adequate funding is a priority for future growth have not been authorized to spend the full amount of their original estimate. This includes the Ministries of Education and Agriculture in particular. In 1996 the overrun by the state house alone was only slightly smaller than the combined shortfall in the ministries of agriculture (-51%) and education (-29%).[38] As is the case for Zambia, one should not be too quick to make the argument that these ministry by ministry deviations are a direct product of the cash budget. While pre-1992 data on original budget estimated and actual out-turns by ministry were not available for Uganda, officials remarked that there was already a major problem with supplementary spending bills previous to 1992.[39]

In both Zambia and Uganda an additional cost of the current situation with supplementaries in both countries is that the ease with which supplementary spending requests can be approved has created a situation where instead of giving great importance to the formal budget process, line ministers and others use their political capital throughout the year in attempting to increase their spending allocations. As

[37] This data for Uganda covers only non-wage recurrent expenditures, and thus we may overlook disparities due to reallocations of capital expenditures.
[38] The principal line items responsible for this overrun in the state house were travel, vehicles, and contributions to local organizations.
[39] interviews in Kampala, April 1998.

noted above, supplementaries can be approved unilaterally by the Minister of Finance in Uganda, and parliament is only required to be consulted *ex post*. In Zambia, parliament must be consulted before funds from a supplementary request are spent, but in practice it tends to operate as a rubber stamp for finance ministry requests. A major effect of this situation is to increase transactions costs compared to a situation where budget disputes were limited to a well defined period. Ministries are unable to plan expenditures over anything but the shortest of time horizons given that their budget may quickly be revised upwards or downwards.

Marginalization of line ministries in the budget process

For the reasons outlined in section 2's description of the common pool problem, line ministries have an incentive to spend excessively. However, Campos and Pradhan (1996) argue that line ministries are also more likely than central ministries to have accurate information about the potential benefits of different spending programs within their remit. In both Uganda and Zambia this informational advantage of line ministries has been ignored, as they are instead largely marginalized with respect to the budget process.

One major reason for this marginalization is that ministries of Finance in both Uganda and in Zambia have considerable authority not only to set aggregate spending levels at monthly intervals and the distribution of spending between ministries, but also to determine the distribution of spending between different line items for a ministry. In addition, insufficient information is being solicited from line ministries about the potential benefits of different spending items. In Uganda, by all accounts, pre-budget discussions between line ministries and the Ministry of Finance are very perfunctory in nature.[40] In Zambia, serious attempts were made beginning in 1993 to have line ministries formulate detailed budget proposals which would "go back to basics" and justify individual programs in terms of expected outputs. Due to a perceived lack of responsiveness from the Ministry of Finance, however, Zambian line ministries have in more recent years limited themselves to issuing budget proposals that simply reflect the previous year's proposal corrected for inflation.[41] In both countries cabinet ministers representing line ministries also have very little influence on the formulation of the initial budget document.[42]

In both Zambia and Uganda it would seem possible to allow line ministries more freedom to determine priorities between spending on different line items without necessarily compromising the discipline imposed by the cash budget system. It would also seem possible to improve the quality of consultations between line ministries and the Ministry of Finance during the budget preparation stage

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[40] The blame for this state of affairs seems to lie with both sides since Finance may have an excessive tendency not to consult line ministries before preparing the budget, but line ministries too have been criticized for failing to prepare adequate reports in their initial budget requests each year. Interviews in Kampala, April 1998.

[41] Interviews in Lusaka, July 1998.

[42] As noted above, in Uganda while cabinet is briefed on the broad contours of the budget in advance of its submission to parliament, the cabinet is not presented with the actual budget document until the morning before the Minister of Finance s budget speech.

6. Conclusions

Cash budgets can be a partial institutional remedy to excessive fiscal deficits, in particular by allowing finance ministries greater expenditure control over line ministries. It seems less likely that cash budgets as applied in Zambia and Uganda have served as a mechanism for rulers to "tie their hands" and thus solve commitment problems in fiscal policy. In Uganda the opposite seems to be the case as cash budgeting has succeeded in large part because of the active involvement of the President. In Zambia a strict, rule-based cash budget has not succeeded in tying the hands of a government which has continued to make decisions which have periodically led to violations of the zero monetary financing rule. Adjustments following these violations in Zambia seem attributable primarily to the role played by the IMF. Cash budgets also have important costs in terms of expenditure volatility, distortions in the composition and volatility of expenditures, and other expenditure inefficiencies, but the sources of these problems need to be carefully separated out from those which exist due to budgetary institutions which pre-date cash budgeting.

An inevitable policy question for countries which establish a cash budget and which then succeed in improving their fiscal balance is what possibilities are there for "graduation" or movement to a system of budgetary institutions which would facilitate fiscal discipline with less cost in terms of expenditure inefficiency. Our results cannot provide a firm answer to this question, but they do suggest at least one observation. Adopting a rule-based cash budget such as Zambia's is likely to make it much more difficult for graduation to occur progressively, because of the discontinuous aspect of a rule. In countries with a more flexible cash budget system, such as Uganda, graduation could occur as a result of lengthening the time horizon for cash releases, with an initial move to releases on a quarterly basis.

References

Adam, Christopher and David Bevan (1996) "CSAE Macroeconomic Report",

Adam, Christopher and David Bevan (1997), "Fiscal Restraint and the Cash Budget in Zambia", forthcoming in Paul Collier and Catherine Pattillo (eds.) *Risk and Investment in Africa*

Alesina, Alberto and Allan Drazen (1991), "Why are Stabilizations Delayed?", *American Economic Review.*

Barro, Robert (1979), "On the Determination of Public Debt", *Journal of Political Economy*, 87:940-71.

Bohn, Henning and Robert Inman (1996), "Balanced Budget Rules and Public Deficits: Evidence from the US States", *Carnegie Rochester Series on Public Policy*, vol.45, pp.13-76.

Bolnick, Bruce (1997), "Establishing Fiscal Discipline: the Cash Budget in Zambia", in Merilee Grindle (ed.), *Getting Good Government in the Public Sectors of Developing Countries*, Harvard U. Press.

Campos, Ed and Sanjay Pradhan (1996), "Budgetary Institutions and Expenditure Outcomes: Binding Governments to Fiscal Performance", World Bank Policy Research Working Paper #1646.

Collier, Paul (1995), "The Role of Agencies of Restraint in Africa" in M . Lundhal and B. Ndulu (eds.), *New Directions in Development Economics*, New York, Praeger.

Hallerberg, Mark and Jürgen von Hagen (1997), "Electoral Institutions, Cabinet Negotiations, and Budget Deficits Within the European Union, CEPR Discussion Paper #1555, January.

von Hagen, Jürgen and Ian Harden (1996), "Budget Processes and Commitment to Fiscal Discipline", IMF Working Paper 96/78, July.

Henstridge, Mark (1997), "Implementing Fiscal Adjustment: Uganda's Cashflow", CSAE Working Paper, May.

International Monetary Fund, "Zambia: Selected Issues and Statistical Appendix", IMF Staff Country Report, no.97/118.

Keefer, Philip and David Stasavage (1998) When Does Delegation Matter? Central Bank Independence and the Separation of Powers", paper presented to the annual meetings of the American Political Science Association.

Kitabire, Damoni (1996), "The Budgetary Process in Uganda: the Legal Framework, Institutional Arrangements, and Implementation", paper prepared for the AERC Budget Process Project, March.

McCubbins, Mathew, "Government on Lay-Away: Federal Spending and Deficits under Divided Party Control", in Cox and Kernell (eds.), *The Politics of Divided Government,* Westview, Boulder, 1991.

Poterba, James (1994), "State Responses to Fiscal Crises: the Effects of Budgetary Institutions and Politics", *Journal of Political Economy*, vol.102, no.4.

Weingast, Barry, Kenneth Shepsle and Christopher Johnsen (1981), "The Political Economy of Costs and Benefits: a Neoclassical Approach to Distributive Politics", *Journal of Political Economy*, 89:5.

World Bank (1998), *The Public Expenditure Handbook*.

Table 1 - Fiscal balances in Zambia and Uganda (%GDP)

	1990	1991	1992	1993	1994	1995	1996
Uganda							
primary balance	-4.0	-2.4	-6.7	-1.2	-3.1	-1.6	-1.0
overall balance	-4.7	-3.5	-10.2	-3.1	-4.2	-2.7	-1.8
Zambia							
primary balance	-0.5	1.5	6.1	6.8	5.4	4.6	4.0
overall balance	-8.3	-7.2	-2.5	-5.6	-6.8	-4.6	-3.8

Sources: IMF, Bank of Uganda. Overall balances are on an accrual basis

Table 2 - Testing the relationship between monthly expenditures and revenues

Zambia (n=55)	log expend.	log capital expend.	log non-wage recurrent expend.
log revenue	0.64 *(0.06)*	0.71 *(0.27)*	0.75 *(0.18)*
constant	3.68 *(0.67)*	0.25 *(2.99)*	0.64 *(2.00)*
R^2	.67	.13	.24
p-value for F statistic	0.00	0.01	0.00

Uganda (n=36)			
log revenue	0.49 *(0.12)*	0.54 *(0.32)*	0.29 *(0.13)*
constant	5.43 *(1.29)*	2.93 *(3.41)*	6.94 *(1.37)*
R^2	.33	.08	.14
p-value for F statistic	0.00	0.10	0.03

OLS regressions. Standard errors reported in parentheses.

Table 3 - Monthly volatility of revenues and expenditures

	Zambia				Uganda		
	1994	**1995**	**1996**	**1997**	**1995**	**1996**	**1997**
Revenues							
average deviation	22%	17%	11%	10%	9%	5%	6%
standard deviation	82%	62%	65%	64%	80%	115%	89%
Total expenditures							
average deviation	11%	16%	18%	7%	10%	9%	14%
standard deviation	127%	81%	107%	151%	125%	109%	61%
Wages							
average deviation	25%	23%	7%	9%	10%	9%	3%
standard deviation	106%	147%	54%	133%	89%	68%	48%
Non-wage recurrent							
average deviation	13%	22%	26%	14%	15%	12%	12%
standard deviation	104%	76%	102%	142%	106%	93%	80%
Capital (domestic)							
average deviation	49%	43%	32%	44%	19%	18%	31%
standard deviation	90%	113%	127%	122%	162%	211%	91%

Sources: Uganda Ministry of Finance and Zambia Ministry of Finances.
"standard deviations" are standard deviations of monthly deviations

Table 4 - Composition of expenditures in Zambia (% GDP)

(deviation from original targets in italics)

	1990	1991	1992	1993	1994	1995	1996
Wages and salaries	5.3	6.1	6.0	4.8	5.4	6.3	5.4
deviation			*+88%*	*+34%*	*+13%*	*+32%*	*+3%*
Non-wage recurrent	13.6	14.7	12.7	9.2	11.8	10.2	8.0
deviation			*+18%*	*-2%*	*-12%*	*+2%*	*-10%*
Capital (domestic)	6.2	5.4	3.8	3.2	4.2	5.5	5.7
deviation			*-19%*	*-57%*	*-36%*	*-37%*	*-55%*
Interest	7.8	8.5	8.5	12.3	12.3	9.2	7.9
Total expenditures	**32.9**	**34.7**	**31**	**29.4**	**33.7**	**31.2**	**27.0**

Source: IMF (1997)

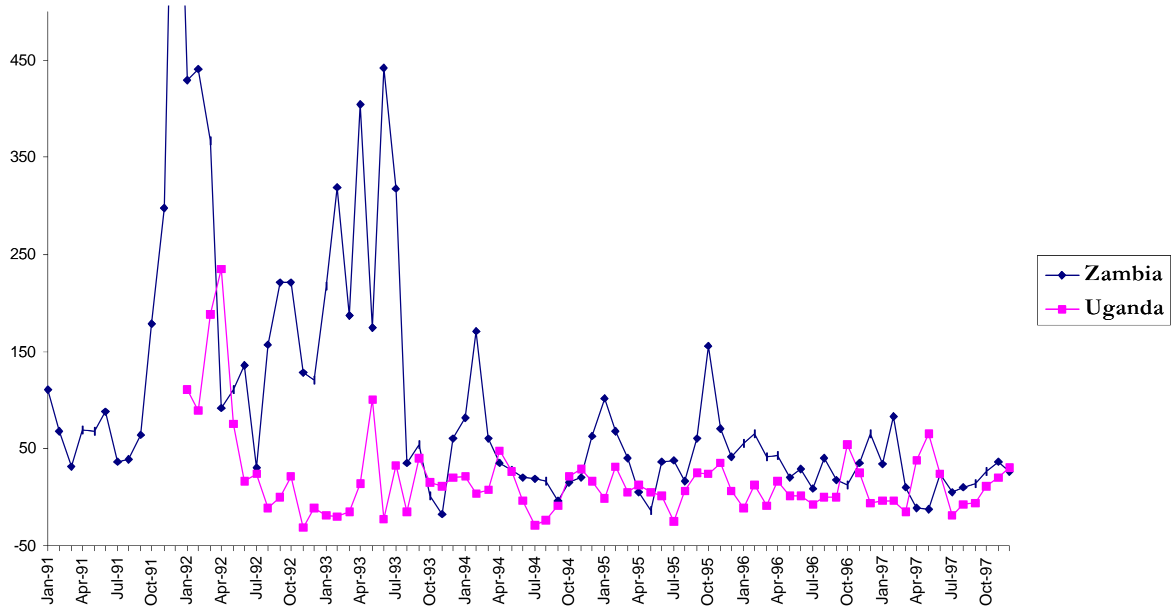
Table 5- Composition of expenditures in Uganda (% GDP)

(deviation from original targets in italics)

	1990	1991	1992	1993	1994	1995	1996
Wages and salaries	1.0	1.4	0.4	1.7	2.1	2.6	2.9
deviation						*+13%*	*+9%*
Non-wage recurrent	5.9	5.0	7.1	5.3	7.0	6.5	6.3
deviation						*+8%*	*-1%*
Capital (domestic)	2.6	3.0	1.4	1.0	1.1	1.5	1.2
deviation						*+2%*	*+9%*
Interest	0.7	1.1	3.5	1.9	1.1	1.1	0.8
Total	**13.5**	**15.6**	**21.0**	**19.8**	**20.9**	**18.7**	**18.0**

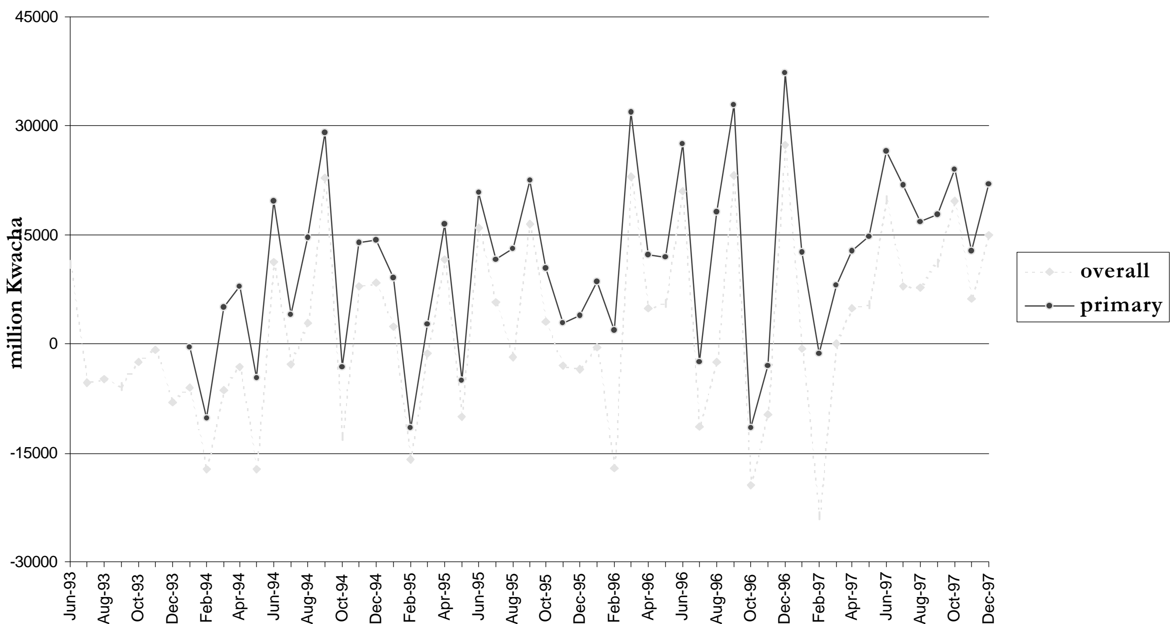
Source: Bank of Uganda

Figure 1 - Monthly annualized inflation in Uganda and Zambia (in percent)



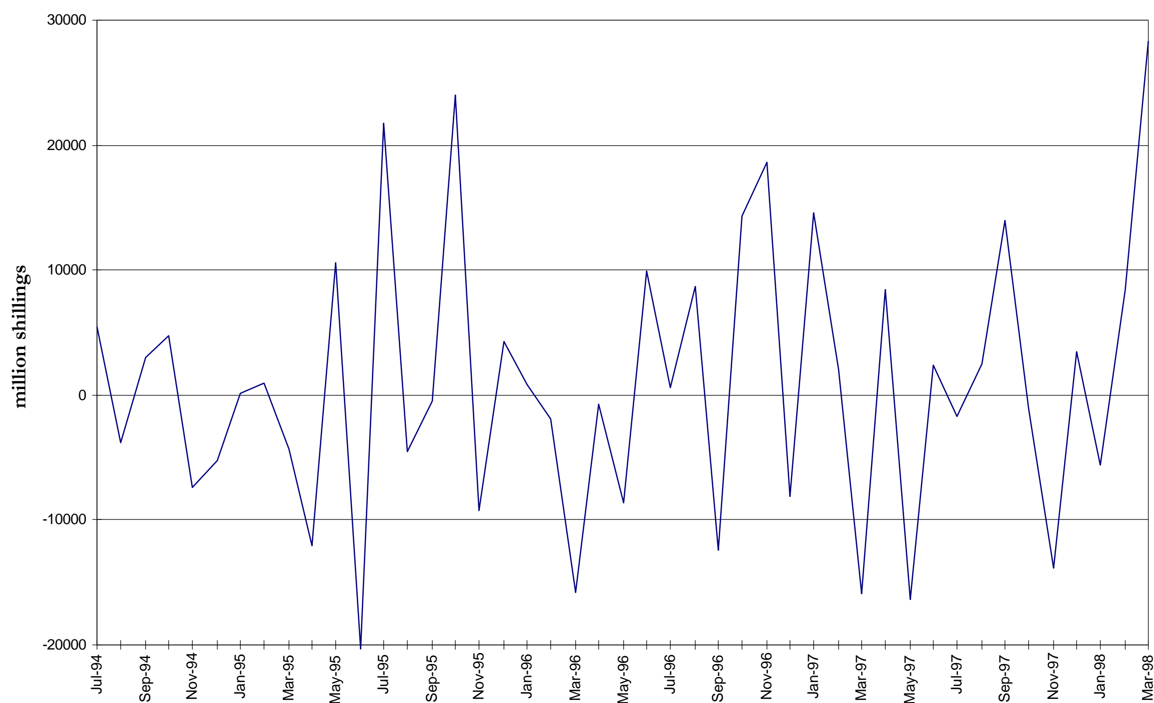
Sources: Zambia Ministry of Finance, Uganda Ministry of Finance

Figure 2: monthly fiscal balances in Zambia



Source: Zambia Ministry of Finance. Overall monthly domestic fiscal balance = (domestic expenditures – domestic revenues. Primary monthly domestic fiscal balance = (domestic expenditures – domestic interest payments – domestic revenues).

Figure 3: monthly overall domestic balances in Uganda



Source: Uganda Ministry of Finance. Overall monthly domestic balance = (domestic expenditures – domestic revenues)

Figure 4: overall monthly balances in Zambia: are they different when IMF targets are due?

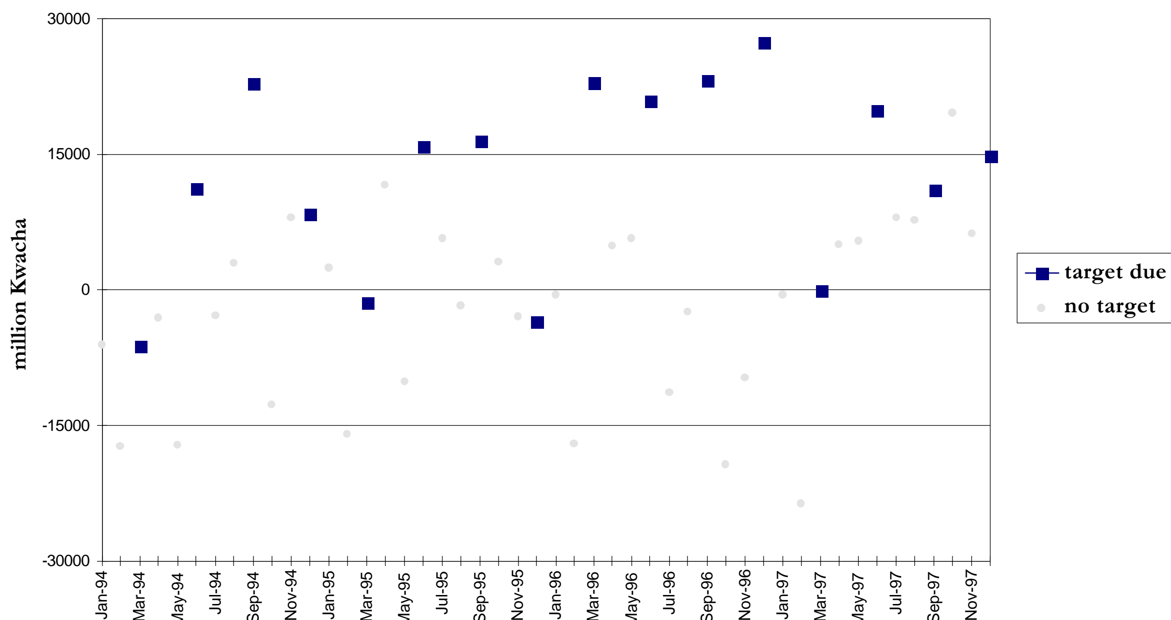


Figure 5: overall monthly balances in Uganda at end of IMF target and non-target months

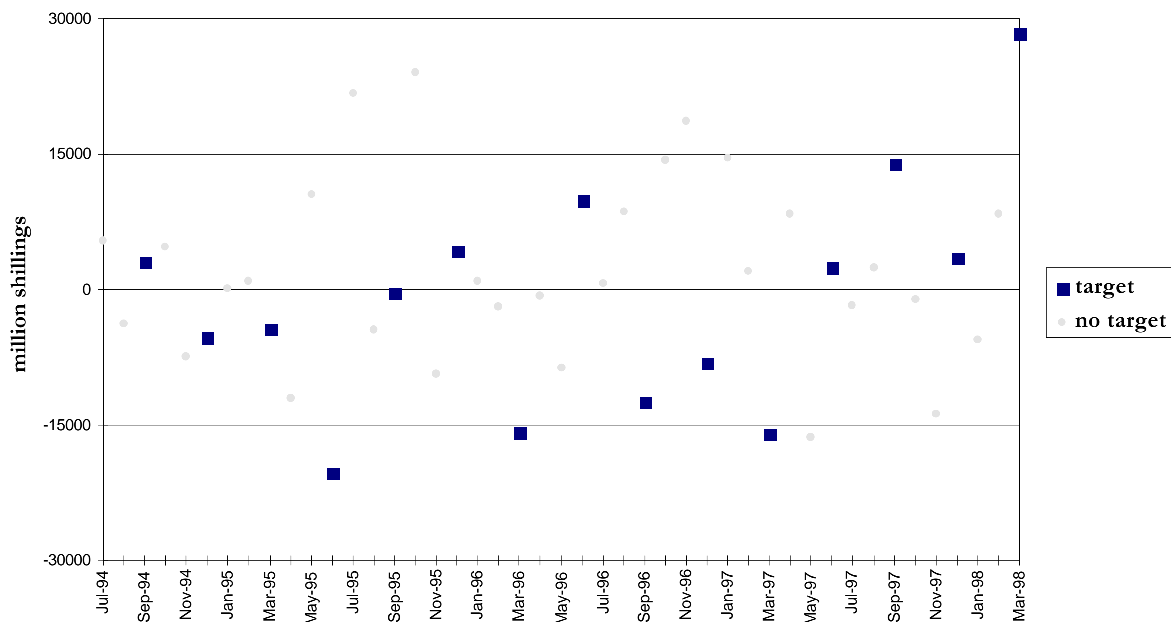


Figure 6: Estimates vs. Outturns by Ministry in Zambia

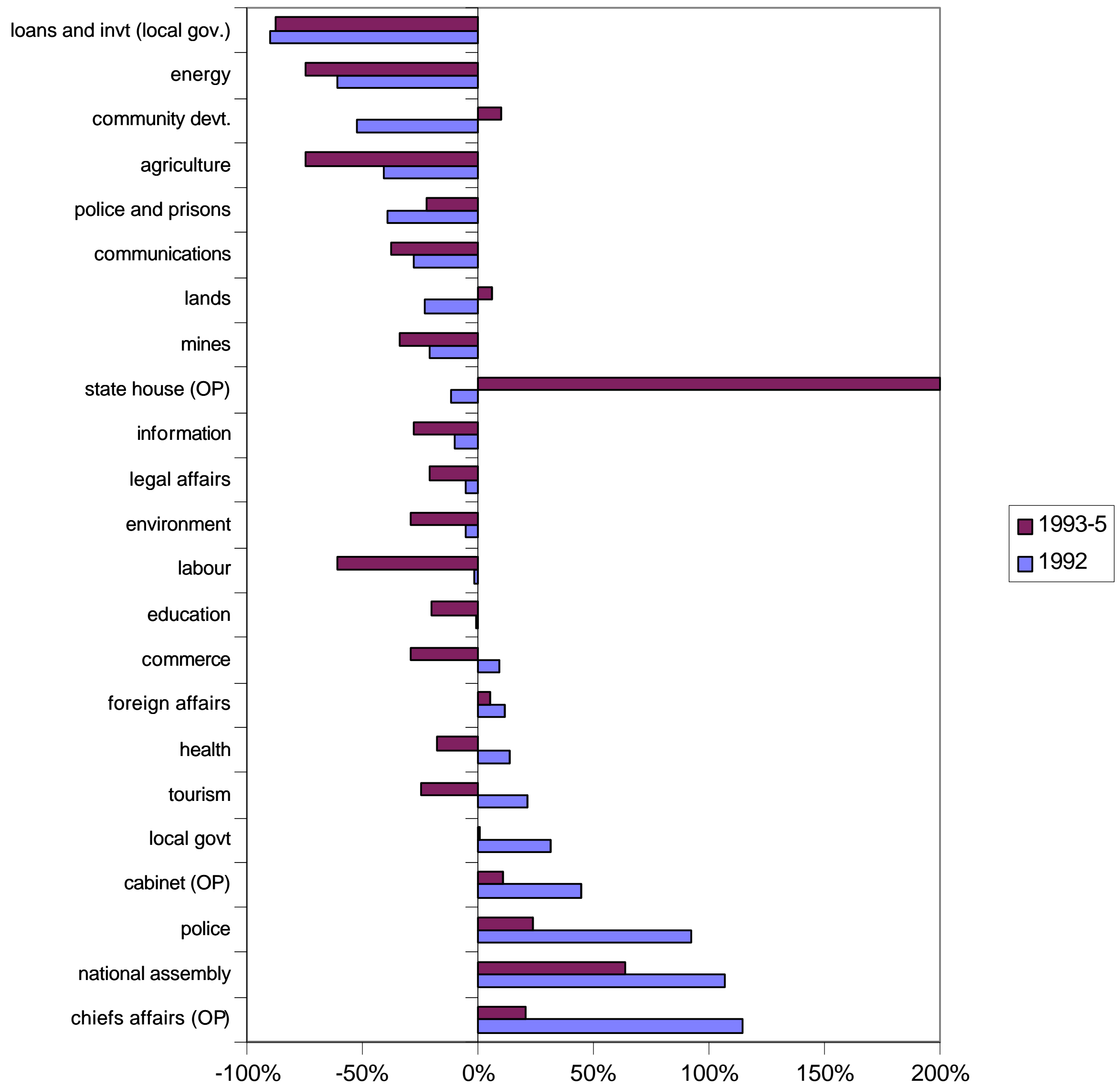
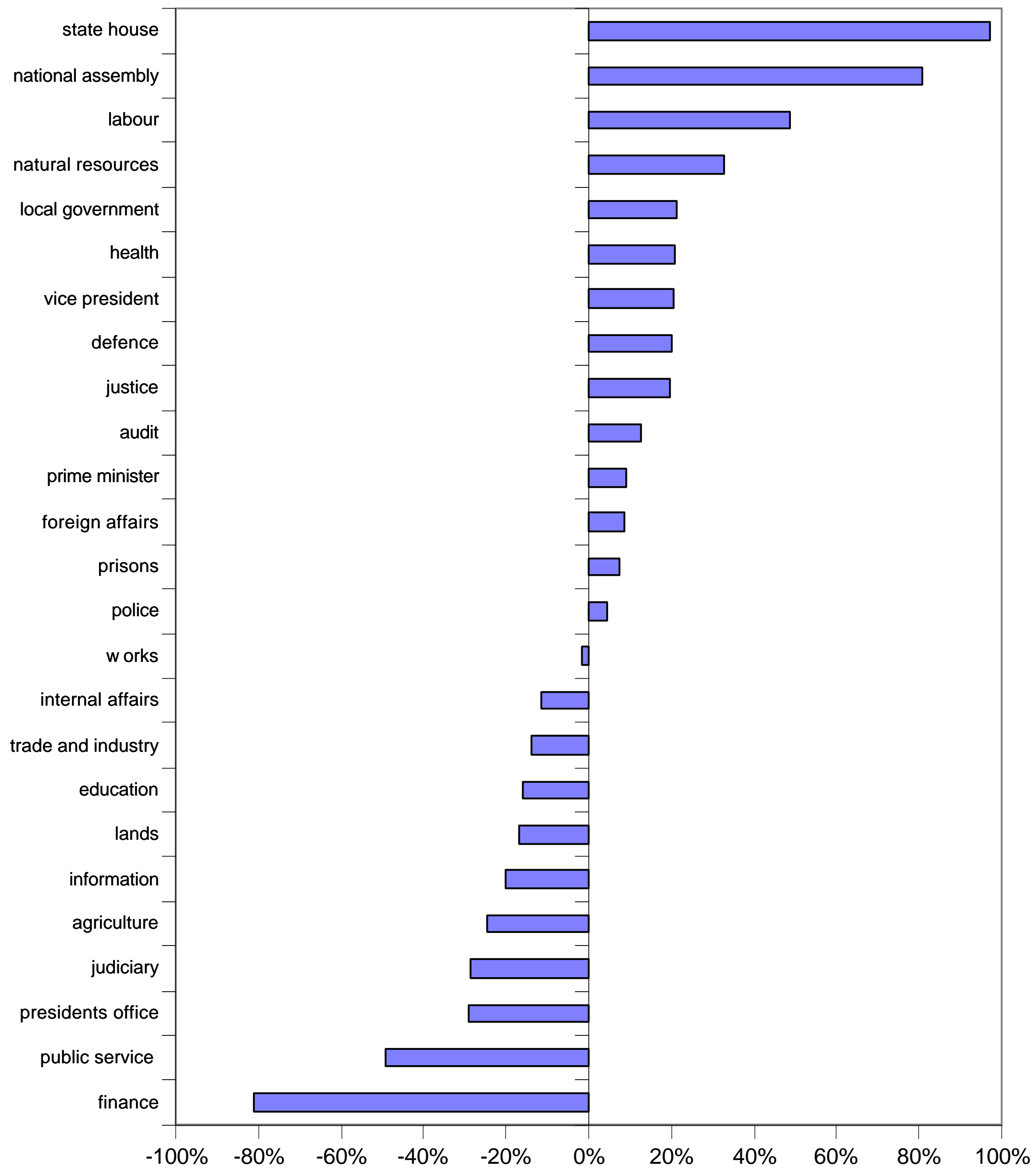


Figure 7: Estimates vs. out-turns by ministry in Uganda: (non-wage recurrent expenditures, 1995-97)



Source: Uganda Ministry of Finance