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# Chapter 18 Budgeting and accounting

## 1. Introduction to budgeting and accounting

This chapter gives a brief introduction to budgeting and accounting requirements and associated methods in the context of field trials. For all but the smallest trials, a trained accountant should be part of the trial team, at least part-time. This chapter is not written for such accountants. Rather its aim is to help non-specialists, such as PIs or trial managers, understand the basics of what budgeting and accounting will be needed in the management of a trial, and why. Though this knowledge is essential for those conducting trials of interventions everywhere, well-qualified support staff who can do much of the checking of budgets and accounts are generally in short supply in LMICs, so the PIs and trial managers may need to do more of this themselves. The chapter does not attempt to cover what would be included in a full textbook on budgeting and accounting. For that, readers are referred to specialist textbooks, some of which are available free online (Walther, 2012). Most budgeting and accounting textbooks are written from the perspective of a profit-making business, but Mango's excellent *Financial management essentials: A handbook for NGOs* (Lewis, 2013) is designed specifically for non-governmental organizations (NGOs) and is also available free. With permission, this chapter summarizes many of the issues discussed in the *Mango handbook*, and those who want to know more are advised to consult the Mango website (<http://www.mango.org.uk/Guide>).

Like any specialist discipline, accounting has its own 'language'. The 2010 edition of a widely used dictionary of accounting runs to over 400 pages and has more than 3600 entries (Law, 2010). The definitions of some of the most important terms are given in Section 7, and every time a term that is defined in Section 7 is used in the chapter it is written in italics.

All too often, those planning a trial put a great deal of effort into the scientific aspects of trial design, but relatively less effort into ensuring that the *budget* for the trial is adequate. Yet the latter is critical for the success of the trial. Also, once the trial is funded, it is essential that the trial has a well-thought-through budgeting and accounting system, with sufficient checks and balances built into it to ensure that 'leakage' of those hard-won funds will not occur and that funds will be available when and where they are needed, so that the implementation of the trial can flow in a timely and efficient manner. PIs and other researchers do not usually need to do most of these tasks themselves, but they need to ensure that they will be done and know enough to be able to supervise them adequately.

There are four key principles of financial management of project grants:

- use funding for the purpose for which it has been given
- regularly monitor expenditure against the budget
- maintain accurate accounting records
- maintain a good filing and backup system for all financial information.

Keeping track of all purchases, donations, stores, and equipment is usually seen as a task for the accounting staff of an organization. These issues will not be dealt with in detail here, and those who want to know more about them are referred to the relevant sections of Lewis (2013). Monitoring and maintenance of clinical and laboratory supplies raise special issues such as needing to keep careful track of expiry dates and the rigorous use of the 'first in, first out' system of disbursement from the stores. Some of these are discussed in Chapter 17, and others are covered in accounting textbooks (Walther, 2012).

All organizations hosting trials should have a *financial manual* or a set of *financial regulations* that sets out all the financial policies and procedures to be followed. This may be developed from scratch, but usually it is possible to modify a manual from a similar institution. The manual should cover the procedures that will be used for the tasks listed in Box 18.1. Almost, but not all, of these issues are covered in this chapter. Readers are referred to accounting textbooks for further details (Walther, 2012).

Most trials will operate within an existing organization that already has its own *financial manual* and detailed methods for budgeting and accounting. Where this is the case, the PI, trial manager, and others involved in the trial should obtain a copy of these and make sure that they know the procedures and that they will provide all the information and necessary financial checks and balances. Occasionally, a trial will need to set up its own procedures, either because there is no pre-existing local organization involved in the trial or because the trial will need to be run from a new remote office. Here, the PI should seek professional help to set up suitable financial systems but should know enough to ensure that the results meet the standards of good financial practice. The rest of this chapter gives a brief introduction to what these should include.

In this chapter, the focus is on the costs of conducting an intervention trial. In Chapter 19, the focus is on the costs of the intervention itself, as they would be when the intervention is implemented in a public health programme. The time horizon for the research is generally well circumscribed, whereas that for provision of an intervention in a public health system is usually open-ended. This chapter is written from the perspective of accountants, whereas Chapter 19 leans more towards that of economists.

## 2. Budgeting

The trial *budget* should be prepared as part of the trial planning process and be used throughout the trial as a monitoring tool. Usually, the budget will need to be prepared as part of the grant application. The potential funder will usually have specific instructions for presentation of the budget, but the norm is to have a detailed *budget* and a *budget* justification as an annex to the application. In some cases, a summary *budget* may also be required within the main body of the application.

The costing of research is often an aspect of proposal development that gives inexperienced investigators considerable difficulty, and getting it wrong can have serious consequences. Overestimating the required budget will be viewed poorly by the reviewers and the funding agency and may lead to the proposal being rejected, while under-budgeting may result in resources being exhausted before the study is completed. Some funding agencies may be sympathetic to requests for supplementary funding if there are good reasons, for example, greater than expected inflation or unexpected currency devaluation, but are less sympathetic when investigators have not properly anticipated costs while preparing the original proposal.

It is difficult to give firm guidelines of what may or may not be included in the trial budget. Funding agencies often give specific guidelines. The important points to bear in mind are first that all costs should be justified, in terms of project needs, and second, if it is not asked for, it is unlikely to be given! The essential characteristics of budgets are that they should be:

- *reasonable*. The costs shown should be appropriate for the purposes for which they will be used
- *well-researched*. Actual costs in the past provide a good guide for anticipating future costs for the same or similar equipment or procedures. Several independent quotations (three is the usual minimum) should be obtained for major items of equipment to ensure that the costs quoted represent the best value for money
- *detailed*. All significant costs should be given in detail. 'Fuel and servicing of vehicles $10 000' is inadequate! Even if the funding agency does not require the detail, the appropriate calculations should be done, in order to be able to arrive at an accurate final figure
- *well-justified and explained*. The necessity for each cost should be given. A good general rule is to justify all costs!

Most sponsors of research have specific forms for the *budget,* and they will usually specify what kinds of costs they will and will not cover. For example, some funders expect the institution in which the applicants are based to cover local telephone and postage costs and office accommodation and supplies, or to get the funds for these from the project's *indirect costs* (also called *overheads*) (see Section 2.2.7), while others are happy for these to be included in the *direct costs*. If it is not ruled out by the funder's guidelines, it is best to include as much as possible in the *direct costs*.

A common approach to categorizing costs is to separate them into *capital* and *recurrent* costs (Box 18.2).

Budgets for recurrent costs are usually done each year, whereas planning and budgeting for buildings, vehicles, and large equipment are often done for a 3- or 5-year period. It is critically important, however, to plan for the recurrent costs that will be required to maintain and use buildings, vehicles, and equipment. Generally, capital costs are discounted over the expected lifespan of the equipment or building and depreciated with use over time.

### 2.1. Capital costs

The purchase, construction, alteration, or renovation of a building is rarely needed for a single field trial, but, if this is required, the amount required would be included as a *capital cost* in the budget.

List each item of equipment required separately, and justify the need for each item. Sometimes, it might be possible to share equipment with another project in the same institution or a neighbouring institution, especially if the equipment is very expensive such as vehicles or major items of laboratory equipment. Estimates for the cost of equipment should be obtained from manufacturers or suppliers and should include shipping and associated insurance costs. Maintenance agreement costs should be included under ‘other expenses’. *Depreciation* of equipment must be allowed for, but there are wide variations in what is allowed by funders. Purchase of vehicles is often one of the major equipment costs in a large field trial. If a new vehicle is requested, reasons should be given why any existing vehicles cannot be used. In some places, it may be possible to rent a vehicle commercially, so the costs of rental should be compared with the costs of purchase, and any proposals for purchase should be justified on this basis. Even with a new vehicle, there will be costs to add for fuel, lubricants, servicing, and maintenance, with the maintenance costs increasing with vehicle age. These should be budgeted under recurrent costs.

### 2.2. Recurrent costs

#### 2.2.1. Personnel

Give details of the names (where known), positions, and roles of personnel to be engaged on the project. Indicate the proportion of time that each person, including the PI, will devote to the project, and calculate the salary cost on a pro rata basis. Estimates should be made separately for each year of the study and should include provision for annual increases in salary, where appropriate. Some grant agencies will not contribute to the salary of the PI but will still expect to know what proportion of their time will be spent on the project. Appropriate amounts should be added to cover staff benefits such as the employer’s pension contributions, staff health insurance, cost of living allowances, and housing and leave allowances. Internationally recruited staff usually receive specific additional benefits such as travel costs from their normal country of residence to the project site and back for themselves and their dependants. Staff benefits and allowances may be a considerable proportion (often 25%, sometimes more) of the total gross salary costs to the project. If staff will need to be recruited, or might need to be replaced if they leave before the end of the trial, make an allowance for their recruitment costs.

#### 2.2.2. Consultant or technical advisor costs

Sometimes, it is appropriate to buy in the time of a consultant or technical advisor, rather than hiring them as staff. The grant application should specify the number of days that will be spent on the project by each consultant, together with their daily rate of remuneration and any associated costs such as travel and per diems. The funding agency may have guidelines for the rates of remuneration that they are willing to pay for consultants to a project. The specific contribution that any consultant will make to the project must be justified.

#### 2.2.3. Supplies

Supplies should be itemized in separate categories (for example, stationery and office supplies, communications (such as Internet, postage, phone calls), fuel and lubricants, laboratory supplies) and should be justified in terms of the needs of the project (for example, numbers of each laboratory test to be performed). If the trial requires the use of experimental animals, the PI should seek specific advice in advance on whether the funder will allow this and the specific information they will need in the proposal.

#### 2.2.4. Travel and per diems

Specify the destination of each trip, the number of persons, the mode of transport, and the basis for the costs (most funders will only pay economy air fares). Justification should be given for all travel. Funders have different rules about travel to conferences (some do not allow any, while others allow one or more attendance per year).

Per diem (overnight allowance) costs may be a significant proportion of the budget in field trials, and the rates paid should be based on existing practice of the research institution. These costs should be justified for each member of the project staff to whom they will be paid, in terms of the necessity for spending the specified number of days away from the home institution.

#### 2.2.5. Patient care and participant costs

There are often patient care costs that may be incurred in a trial that are not directly related to the trial intervention. A frequent concern in field trials in LMICs is provision of adequate health care to those in the trial and the degree to which the research project should be responsible for these (see also Chapter 6, Section 3.4 concerning medical and other care offered to participants in a trial).

Reimbursement to participants in a trial for travel or loss of earnings should usually be listed under 'other expenses', but some funders suggest these are put under patient care costs or in a special section.

#### 2.2.6. Other expenses

This section should contain items such as rentals and leases, equipment maintenance (service contracts, repairs), computer charges (if there is not a separate claim for purchase of computers under 'equipment'), publication costs, fees for services related to the project (for example, library searches), office supplies, postage and telecommunication charges (telephone, telex, fax, e-mail), and possible patient care costs (see Section 2.2.5).

For trials of drugs and vaccines and some other interventions, it is strongly advised to include indemnity insurance costs, i.e. insurance for claims against the sponsor for damage that might be done to participants in a trial through the trial procedures.

Not all costs listed above may be allowed by a funding agency, but, if in doubt, it is better to include them in the application (even though the agency may subsequently disallow them!).

#### 2.2.7. Indirect costs (institutional overheads)

There are 'hidden' costs associated with all research. Someone must administer the grant, pay salaries, order supplies, supply heat or air conditioning and light to offices, supply the offices themselves, have them cleaned and maintained, provide security, etc. These costs, called *indirect costs* or 'institutional *overheads*', may be substantial. Such costs may amount to between 20% and 90% or more of the direct costs of the research project, depending on exactly what is included in the direct costs. These *indirect costs* should be added on to the *direct costs* of the research when a grant is submitted to a funding agency. Many institutions in LMICs have been lax about claiming such costs, with the result that scarce core institutional budgets have effectively subsidized specific research projects.

Some funding agencies refuse payment of *overheads* (for example, most United Nations (UN) agencies and charitable foundations), while others will pay them in their own country, but not outside (for example, US Public Health Service). Often, it is possible to directly budget for many of these items (to be listed in the direct costs as rental of office space, cost of utilities, administrative staff support, cost of library searches, etc.), and it is usually advantageous to do so.

It is common for an investigator to underestimate, rather than overestimate, the final costs of a trial, especially if it lasts several years. Though some funders may accept requests for an additional allocation when increases in costs could not reasonably have been foreseen, even this cannot be guaranteed, let alone if something has been forgotten or underestimated in the costing. Whenever possible, avoid cutting corners on a budget in order to fit it to a pre-specified total amount, as underfunding may result in many stressful months in trying to conduct the trial on an insufficient budget. It may be better either to not apply for the grant or to rethink the trial question and design, rather than knowingly under-budgeting the trial from the start.

## 3. Accounting

All money that is received and spent for the trial must be accounted for in a way that is both truthful and transparent, so it can be checked by an outsider (an 'auditor').

Accounts can either be maintained on an *accruals* or a cash basis. In the *accruals* method, *income* and *expenditure* are attributed to the month they are 'incurred'. For example, an item of equipment may be acquired during February, and so the expenditure for that equipment has been incurred in February, even if the *invoice* is not received and/or the payment made until April. Under the *accruals* accounting method, the cost would be accounted for in February, whereas, under the cash accounting method, it would be accounted for in April, i.e. when the invoice is paid. Some funders require one or the other method, while many leave it up to the grant holder. Clearly, a mixture of both methods should never be used within a single set of accounts.

Accounting records should include four main types of documents: *supporting documents*, *books of account, reconciliations*, and a list of *cost codes*. These will each be discussed briefly in this section, but a fuller description can be found Lewis (2013).

### 3.1. Supporting documents

These are the original documents that show how the money has been received and spent. They should all have a brief written explanation (a voucher), which has a unique sequential reference number that corresponds to an entry in one of the *books of account* (see Section 3.2).

They include:

- *receipts and receipt vouchers* for all money received. Every *receipt* should be given its own receipt voucher, which should be assigned its own unique sequential reference number, along with the date of the receipt, the name of the person or organization that gave the money, a description of what the payment was for, the amount received, and the accounts or *cost code* (see Section 3.4)
- *receipts and payment vouchers* for all money paid out. These are the equivalent of the *receipts* and receipt vouchers for all money received and should have similar information on them
- *invoices* provided by other organizations or individuals requesting payment. These should be certified and stamped as paid
- *pay-in vouchers* for all money paid into the bank
- *bank statements*
- *journal vouchers*. These are vouchers that record adjustments, for example, if a payment or *receipt* has been entered incorrectly or allocated to the wrong *cost code*. They therefore relate to transactions where no actual cash changes hands, but they explain a change that has been made after an original entry into the accounts was made.

With the above documents on file, it will always be possible to (re)construct a full set of accounts, and they form the basis for the *audit trail*.

Other useful supporting documents include:

- *local purchase orders*. These are vouchers requesting that something be purchased
- *supplier's waybill*. This is a list of goods sent by a carrier (see Glossary, Section 7)
- *delivery notes* (or goods received notes, goods receipt advice). These are vouchers that record any item received by the project such as a piece of equipment or a box of pencils
- *stores requisition vouchers*, bin cards (tally cards), and stores issue notes. These are documents that record all the incomings, outgoings, and the balance of all items kept in the *stores*
- *approvals*. These are specific notes or vouchers approving payments
- *petty cash vouchers*. In order not to have to go to the bank every time a relatively small expenditure is made, it is useful to have *petty cash* in the office. The initial amount (*petty cash float*) for this comes from the bank account, and, under the commonly used 'fixed float method', the *petty cash* is topped up to the same amount when it falls below a preordained threshold. For example, if the *petty cash float* is $100, then it may be reasonable to top it back up to $100 whenever the balance falls below $50. A maximum limit for a single *petty cash* payment should be fixed, with any payments that are larger than this needing to come directly from the bank (for example, be made by cheque). Each payment from the *petty cash* should be backed up by a receipt and a *petty cash* voucher which records similar information to that on a payment voucher. Money that is paid into the project should not be paid into the *petty cash*, but directly into the bank. This is to ensure that it does not just 'disappear' but passes through an externally recorded system.

### 3.2. Books of account

Various books of accounts should be maintained, covering different aspects of income and expenditure, as follows:

- *cash book* (sometimes called the *bank book*). Rather confusingly, the *cash book* records all transactions that pass through a bank account, but, although '*bank book*' would be the more logical name, '*cash book*' is much more commonly used. Some of the transactions may relate to actual cash, while others will be based on cheques, for example. Every entry in the *cash book* should have a unique transaction number which corresponds to a specific receipt or payment voucher, and the entry itself should also appear on the bank statement, thus allowing cross-checking
- *petty cash book*. The *petty cash book* records all transactions related to the *petty cash* and is the *petty cash* equivalent of the *cash book*. Any *income* to the *petty cash book* should match an *expenditure* in the *cash book*
- *advances ledger*. This records all payments that have been made to anyone in advance. This may be a down payment on a large item of equipment, for example. However, the commonest recipients are members of staff receiving an *advance* on their salary, for example, as a *loan* or to allow them to pay their rent in advance. Usually, the staff member must pay these advances off in monthly instalments by deductions from their pay. The simplest way to keep a record of these *advances* and their repayment is to allocate a page in the *advances ledger* for each person or organization who receives an *advance*, and then the accountant enters each repayment until the *advance* has been fully paid off
- *assets register* (also often known as the *fixed assets register*). The *assets* of the trial are all the buildings or items of equipment that have been purchased by, or been donated to, the trial. The *assets register* should list all of these, along with identifying details such as their make, model, and serial number. Each *asset* should be physically tagged with a unique reference number for identification purposes. The *asset register* should also, at a minimum, include the date and purchase price of each item. It is useful to split the list into major and minor *assets*. Major *assets* are items that are worth more than a specific amount when new (often between $500 and $1000) such as buildings, vehicles, and major items of laboratory equipment. Many funding agencies will want to decide on the disposal of items at the end of the trial that cost the grant more than a certain amount, so, if there are such restrictions, it is sensible to fix the threshold for 'major *assets*' to that amount
- *taxes withheld ledger*. This is a record of any taxes that the project has withheld, in order to pay them to the tax authorities. Examples include staff income tax and other national insurance payments.

## 3.3. Reconciliations

*Reconciliations* are undertaken to ensure that the *books of account* and *supporting documentation* are consistent. All too frequently, *reconciliations* either are not conducted or are not carried out frequently enough. Yet this can mean that errors, either due to mistakes or fraud, go unnoticed until a major problem has accrued. *Reconciliations* should be reviewed by a different staff member from the one who did them, in order to provide a check on their validity. This can be a challenge when the number of staff who are either qualified or senior enough to do this are few and over-stretched, but it is asking for trouble not to follow the rule of separation of duties in this regard.

### 3.3.1. Bank reconciliation

The *cash/bank book* is checked against the bank statement. This should be done at least once a month. In practice, there will almost always be a difference because of delays such as:

- money banked by the project has not yet been shown in the bank's records
- cheques issued by the project have not yet been presented to the bank
- bank charges and interest may have been applied
- errors may have been made by the bank or in recording entries in the *cash/bank book*.

The reasons for any discrepancies should be listed in the *bank reconciliation* report prepared by the project accountant.

### 3.3.2. Petty cash reconciliation

*Petty cash* should be counted and reconciled at least weekly (and also on an unscheduled basis from time to time) by someone who is not responsible for handling the petty cash.

#### 3.3.3. Trial balance

Every month, or at least once a quarter, two lists of balances should be drawn up, one of the *debit* balances and the other of the *credit* balances, on all the accounts that relate to the trial. The totals of each list should match. If they do not, then checks need to be made to explain the differences, which should be resolved.

### 3.4. Cost codes

*Cost codes* (sometimes called *analysis codes*) identify specific budget lines for each transaction. They allow the accountant to summarize *income* and *expenditure*, according to these budget lines such as personnel costs, travel, or laboratory consumables. It is important to give careful thought to the *cost codes* before the accounts are set up and, if in doubt, to subdivide the cost codes using a tree system, as any later changes to the *cost codes* will require the accountant to go back and recode the relevant vouchers and entries in the *books of account*. For example, if there is only one *cost code* for all travel, but later information is required on how much has been spent for international travel, as opposed to travel within the country, this will not be possible without going back to re-code all the travel *expenditures*.

## 4. Budget monitoring

Once the budget has been finalized and the necessary funds have been received, the budget acts as the basis for all future *expenditure* and financial reporting for the trial. The *expenditure* should be compared against the *budget* on a frequent and regular basis, such as every 3 months for a trial that lasts more than 1 year, and every month for a trial of a year or less. This process is known as *budget monitoring*. This is an activity that is frequently given too little attention—sometimes with disastrous consequences for the trial. *Budget monitoring* should include *variance analysis* where the difference (*variance*) between the *actual* (past) and *forecast* (future predicted) *expenditure* is compared with the *budget* to see whether there have been, or are predicted to be, any over- or under-spends, either overall or on specific budget line items.

The overall and future *budget* should be reviewed at least once a year to check whether it will still be adequate. If not, it is best to approach the funder early, rather than leaving it till towards the end of the trial when the money is about to run out.

### 4.1. Analysis of expenditure

Regular analysis of expenditure by *cost codes* is very useful to allow the detection of excessive expenditure on one or more *cost codes*. For example, if the laboratory seems to be getting through an excessive amount of laboratory supplies, this might be because the supplies of another project are being erroneously charged to the trial's account or because the laboratory staff or storekeeper are stealing them. The level of detail provided by the *cost codes* is not usually needed for the summary accounts sent to the funding agency, but it is relatively easy to collapse the *cost codes* down to major budget line items such as all personnel costs or all travel costs.

Funders often have specific rules about *virement* of expenditure between budget line items. Many allow no more than 10% *virement* out of, or into, any budget line item, and some will not allow any *virement* into personnel or into equipment, for example.

### 4.2. Balance sheet

The balance sheet summarizes the current financial position of the project by showing all its *assets* and *liabilities*. It and the *cash flow forecast* are needed for *budget monitoring*. The *assets* include both *fixed assets* (tangible and likely to last more than 1 year) and current assets (cash or something that could be converted into cash within a year such as a savings account at a bank). *Liabilities* include current or short-term *liabilities* (to be paid within year) and long-term *liabilities* (long-term commitments).

### 4.3. Cash flow forecast

This shows the expected income and expenditure of the project into the future and is essential to be able to predict when there might be a shortage of funds to be able to meet future expenditure and to take steps to avoid this.

## 5. Accounts summaries and auditing

Once *expenditure* on the trial has started, the *income and expenditure accounts* will show the *actual* (past) *income* and *expenditure* within the *cash book*, and this should then be summarized periodically (ideally once a month, but at least once every 3 months) by major line items. The *income and expenditure accounts* can then be put into an income and expenditure statement, which will show *actual* (past) and *forecast* (future) *income* and the equivalent for *expenditure*, broken down by period (for example, monthly or quarterly) and by line items. This is used for *budget monitoring*. It is useful to include a column showing the percentage by which the budget has been over- or under-spent (known as a *variance analysis*). The *income and expenditure accounts* and statement are the most useful summary accounts for most time-limited projects such as a trial.

The *balance sheet* summarizes the overall current financial position of a project or institution, taking into account the current market value of *assets*—fixed (for example, buildings, vehicles) and current (cash or savings that are likely to be converted into cash within 12 months). However, for a specific trial, a *balance sheet* is likely to be less useful than the *income and expenditure accounts*, an income and expenditure *forecast*, a list of (major) *assets*, and a *cash flow* report and *forecast* showing when *expenditures* can be expected relative to the *income*, in order to highlight potential periods when there may be a shortfall or when cash may need to be spent to avoid it being lost back to the funding agency.

It is essential that all accounts are subjected to *external audit*. Ideally, this should be done annually as soon as possible after year-end, based on the *annual accounts*. *External audit* is relatively expensive and needs to be included in the budget. Sometimes, the institution has arrangements in place that all their accounts are externally audited each year. Where this is the case, this is usually sufficient, but it is essential that this is checked with the funding agency, which may require a separate project-specific external audit.

Box 18.3 gives a checklist of questions to ask when reviewing financial information in a trial.

## 6. Prevention of fraud and other losses

One of the duties of the PI in a trial is to ensure that there are systems in place to try to prevent or expose *fraud*. Preventing *fraud* is far better than exposing it after the event, so it is best to put systems in place in advance to check for potential *fraud* and to ensure that all relevant staff know that such checks are going to be carried out, in order to dissuade them from committing *fraud*.

One key mechanism for preventing *fraud* is through the separation of duties. This includes ensuring that a different person has custody of *assets* and cash from the person who does the recording of the related accounting entries. This provides a safeguard against any misuse of funds but also protects the individuals involved from any unfounded or malicious allegation of misuse. Separation of duties may be difficult to achieve where there are a limited number of personnel, but wherever possible:

- staff responsible for ordering goods or services (procurement) should not also have the power to authorize payment for the goods
- staff who raise cheques should not have the authority to sign them
- the *reconciliation* of the bank statement to the *cash/bank book* should be carried out by a different person from the one who writes up the *cash/bank book*. It must always be checked and authorized by a senior member of staff
- staff responsible for selecting and engaging new staff should not also operate the payroll system
- *petty cash* and banking should be checked by a member of staff who does not normally have access to the cash and bank records.

Areas where *fraud* is particularly common include purchasing, *debtors*, and cash payments.

### 6.1. Purchasing

In many countries, it is possible for the purchasing officer to arrange with the supplier whereby the supplier increases the price of the goods or services and the supplier and the purchasing officer share the mark-up between them. Insisting on three quotations may help avoid this but does not get round the problem if the purchasing officer has a similar arrangement with all three suppliers. A standard way that is used to try to get around this problem is the institution of a Tender Committee which is responsible for the evaluation of tenders from the potential suppliers prior to procurement. However, it is very rare that the members of a Tender Committee have insider information on the real minimum costs of items, and so they usually have to accept the information provided to them by the purchasing officer and can only spot obvious problems such as the purchasing officer recommending a supplier known to be unreliable simply because they have given the lowest quotation. An effective way to get round this problem is to periodically ask a trusted person (for example, from a different organization) to also price out some of the items, and the quotations can be compared with those obtained by the purchasing officer.

A purchasing plan should be made well ahead of time to try to ensure that all purchases are made according to plan. This is both to avoid delays due to late availability of key items, but also to avoid last minute purchases where it is not possible to check for the lowest possible prices. This is particularly important for items that are much cheaper if bought in a large city or imported.

Purchasing of fuel is a specific area that is a common source of *fraud*. Often, it will be a driver who has to purchase the fuel, rather than a professional purchasing officer. In some places, it is possible to get a receipt for more fuel than has actually been put into the vehicle, and the purchaser shares the mark-up with the supplier. Alternatively, some unscrupulous drivers have been known to siphon fuel out of the tank. One way of trying to avoid both of these problems is to allocate each vehicle to a specific driver and insist that the vehicle tank is always, or at least once per month, filled to its maximum capacity. It is then possible to monitor the fuel consumption accurately, i.e. from full tank to full tank. If the driver is made aware that this is going to be done and is given feedback on their vehicle's fuel consumption each month, this can make such *fraud* less likely.

### 6.2. Debtors

Some of these may be staff who have been given *loans* or *advances*, so that they can make payments on behalf of the trial (such as for overnight accommodation, travel expenses, cash payments to local assistants in the field, etc.). It is sometimes difficult for the accountant to insist on repayment by their friends (or relatives) on the staff, including the accounts staff themselves, or to resist the temptation to do a deal, so that the *loan* is accounted for as an *expenditure* and never recovered. To avoid this, each *debtor* should have a separate account within the *advances ledger*, in which all debts and their repayment are entered. These should be monitored by the accountant and checked by someone else at least once a quarter, so that action can be taken to follow up on debt retrieval.

As far as possible, staff should only be given *advances* or *loans* for specific and exceptional reasons, such as so that they can pay their rent in advance, since many landlords require a deposit that is only returned at the end of the rental period. Unless the *advances ledger* is kept up to date and checked against the payroll each month, *advances* can be very difficult for the accounts department to keep track of, and their repayment makes preparation and checking of the payroll complicated. Outstanding *advances* are difficult to recover at the end of a staff member's contract, especially if the staff member leaves at short notice. Staff have been known to deliberately get as many *advances* as possible just before they leave without notice, knowing that it will probably be too much trouble to pursue them. Where an *advance* is given to cover the purchase of a large item, such as a vehicle or for a rental down payment, it is advisable to require the original receipt for the item or rental agreement to be deposited with the trial office where it must, of course, be stored in a secure place such as in a safe. Where other *advances* are given to staff, it is rarely a good idea to allow these to exceed 1 month's net salary, as this is likely to be recoverable, even if someone leaves their post without giving notice.

### 6.3. Cash payments

These must always be signed for. Even so, it is relatively easy to either get a friend to sign or to fabricate a signature. It is important therefore that checks are made, such that payments are reasonable and reflect the activities carried out. Many projects insist that all cash payment vouchers are countersigned by a senior member of staff.

Box 18.4 gives a checklist for good financial practice.

## 7. Glossary of financial terms

Accruals

*Expenditure* incurred in an accounting period that has not yet been paid or *invoiced*. Opposite of *pre-payments*

Actual

*Income* earned and *expenditure* incurred over a given time period

Advance

Funding provided for future *expenditure*, which must be either accounted for or be repaid

Analysis code

Also known as *cost code*. A coding structure which specifies clearly and consistently the type of *income* being received and the type of *expenditure* being incurred

Annual accounts

The financial statements at year end (or each month or quarter) which include an *income and expenditure account* and *balance sheet*. The financial statements require external audit

Asset

Anything that is of value to its owner. Also see *assets register*, *fixed asset*, *fixed assets register*

Assets register

Shortened name for the *fixed assets register*. A list of the *fixed assets* of the organization, usually giving details of value, serial numbers, location, purchase date, etc.

Audit

An independent check on the accounts of the project or organization. An *external audit* is done by a person who is independent of the organization, while an *internal audit* is done by someone from the project's own organization, but by a person who is independent of the management of that particular project

Audit trail

The ability to follow the course of any reported transaction through an organization's accounting systems and *supporting documents*

Balance sheet

Summarizes the current financial position by showing *assets* and *liabilities*

Bank book

Also known as *cash book*. A record of all transactions passing through a bank account

Bank reconciliation

The process of agreeing the entries and balance in the *cash/bank book* to the bank statement entries and balance at a particular date. Acts as a check on the completeness and accuracy of *cash/bank book* entries

Books of account

These detail all financial transactions and normally consist of, as a minimum, *cash/bank book* for each bank account, *petty cash book*, and *assets register*

Budget

Describes an amount of money that a project/organization expects to receive and spend for a set purpose over a given period of time

Budget monitoring report

A report showing actual performance against the *budget* for *income* and *expenditure*, with explanations provided for any significant *variances*. *Budget monitoring* reports are usually prepared at more than one level of detail

Capital expenditure

*Expenditure* which creates a *fixed asset*

Cash flow

The difference between cash received and cash spent in a period

Cash book

Also known as *bank book*. A record of all transactions passing through a bank account

Chart of accounts

A list of all the *cost codes* that are used to analyse transactions in an organization’s accounting system

Cost code

Also known as *analysis code*. A coding structure that specifies clearly and consistently the type of *income* being received (for example, grant from the funder) and the type of *expenditure* being incurred (for example, salary costs, vehicle running costs)

Credit

A payment into the account

Creditor

A third party that has provided goods or services but has not yet been paid

Debit

A payment out of the account

Debtor

A third party that has been *invoiced* for goods or a service rendered but has not yet paid. Hence, a ‘bad debtor’ is a third party from whom a debt is very unlikely to be recovered

Delivery note

A voucher recording receipt of an item (i.e. that it has been delivered)

Depreciation

An *expense* recorded in the accounts to reduce the value of a long-term *fixed asset* to reflect the fact that it will be worth less, the older it gets

Direct costs

A cost that is directly attributable to an activity, service, or capital item (for example, purchase of a computer or a flight)

Expected income and expenditure

Expected *income* is usually from the funder. Expected *expenditures* are the anticipated running/recurrent or capital costs. These expected costs will help with *forecasting* at year-end

Expenditure

Money paid out; an amount of money spent

External audit

Check on the accounts by a person who is independent of the organization, usually an accountant with special training to be an auditor

Financial manual (or financial regulations)

A manual containing a full set of financial policies and procedures. These will support financial management

Fixed assets

Items (such as equipment, vehicles, or buildings) that are owned by an organization and are intended for use on a continuing basis in the organization’s activities. In practice, this means for more than one accounting period. The cost is usually apportioned (or *depreciated*) over the asset's useful life

Fixed assets register

Sometimes shortened to *assets register*. A list of the *fixed assets* of the organization, usually giving details of value, serial numbers, location, purchase date, etc.

Forecasting

The estimation of the (future) year-end (or next month/quarter) position with regard to *income* and *expenditure*

Imprest

There are two alternative definitions of this term, so it is best avoided. It is sometimes synonymous with *petty cash float*, but it is also sometimes used to mean an *advance*

Income

Money paid in

Income and expenditure accounts

The income and expenditure account includes all *income* generated and *expenditure* incurred over the accounting period and shows the resulting surplus or deficit achieved by the organization for the period. These accounts are usually broken down by *cost codes*

Indirect costs

Also known as *overheads*. A cost which cannot be directly allocated to a specific activity, service, or capital item but which is more general in nature (for example, to cover the utility, insurance, infrastructure, general administrative, management, and governance costs, etc. for the running of an organization)

Inflation

A general increase in prices and consequent decrease in the purchasing power of money

Internal audit

An *audit* that is carried out by the organization that holds the account

Invoice

A written request for payment received from a supplier for specific goods or services

Journal voucher

A voucher that records an entry in the accounts that relates to a non-monetary transaction, for example, for recording a donation in kind or depreciation or to correct a previous error in the accounts

Ledger

A collection of accounts of a similar type such as an *advances* ledger or a 'taxes withheld ledger'

Liability

An amount owed by your organization to others, including *loans*, *accruals*, grants received in advance, and outstanding *invoices*

Loan

Funding provided, which must be repaid

Overheads

Also known as *indirect costs*. A cost which cannot be directly allocated to a specific activity, service, or *capital* item but which is more general in nature (for example, to cover the utility, insurance, infrastructure, general administrative, management, and governance costs, etc. for the running of an organization)

Petty cash

Money kept as cash for making small payments below a certain threshold to save needing to go to the bank to withdraw funds too frequently

Petty cash book

The day-to-day listing of *petty cash* paid in and given out

Petty cash float

A sum of money, set at an agreed level, which is topped up by the exact amount spent since it was last reimbursed, to bring it back to its original level. See also *petty cash* and *petty cash book*

Receipt

A formal record received from a supplier that confirms that a specific amount of money was paid for certain goods or services. Also given to anyone who buys goods or services from the trial

Reconciliation

Checking mechanism which verifies the integrity of an accounting system by comparing account balances to an independent source (for example, a bank statement) or by identifying the individual balances which make up a total account balance (for example, comparing the total of individual *asset* balances to the total of the *fixed asset* account)

Storekeeping

The process for managing *stock*

Stores

A generic term either for *stock* or for the place where the *stock* is kept when not in use

Supporting documents

Original documents to support *income* and *expenditure* (for example, *receipts*, *invoices*, bank statements, *journal vouchers*, purchase orders, *delivery notes*, approvals, etc.)

Tender

An offer made in writing by one party to another to execute specific work, supply certain commodities, etc. at a given cost

Trial balance

A listing of the balances on all the accounts that relate to this specific account, with debit balances in one column and credit balances in another. The totals of each column should match

Variance

Difference between the *budget* and actual amount of *income* and/or *expenditure*. Variances are often described as 'adverse' or 'favourable'

Variance analysis

Part of budget monitoring, looking at the significant variations between the *budget* and *actual income* and *expenditure*, and seeking to explain why they exist and what can be done to rectify the position

Virement

Transfer of funds from one *budget*/budget line to another. If a virement exceeds the threshold that has been pre-agreed with the funder, this will require formal approval from the funder, usually in advance

Waybill

A list of goods sent by a carrier, such as a courier, road haulage, railway, or air-freight company, that states the route that the goods will follow

## References

Law, J. 2010. *A dictionary of accounting*. Oxford: Oxford University Press.

Lewis, T. 2013. *Financial management essentials: a handbook for NGOs* [Online]. Oxford: Mango (Management Accounting for Non-governmental Organisations). Available at: <http://www.mango.org.uk/Guide>.

Walther, L. 2012. *Principles of accounting* [Online]. Available at: <http://www.principlesofaccounting.com/>.

## Boxes

### Box 18.1 Financial manual

The manual should include instructions and notes relating to the items listed:

- financial accounting
- the *chart of accounts* and *cost codes*
- *budget* preparation and monitoring
- management accounting routines and deadlines
- managing internal risk, for example, delegated authority rules (i.e. who can do what), separation of duties, reconciliation, cash control, physical controls
- procurement and *tendering*
- expense claims
- *storekeeping*
- *asset* management, including vehicle management
- bank and cash handling
- management of exchange rate variations
- payroll procedures and staff *loans/advances*
- staff benefits and allowances
- *internal* and *external audit* arrangements
- how to deal with fraud and other irregularities.

It should also include:

- standard forms
- organization charts (organogram)
- job descriptions.



### Box 18.2 Division of costs into capital and recurrent

*Capital costs*—relate to investments in items that last for more than a year such as:

- buildings
- vehicles
- equipment
- basic training

- land.

*Recurrent costs*—relate to those used up in the course of a year and needing regular replenishment such as:

- personnel and other labour (wages, salaries)
- supplies
- building operating and maintenance costs (electricity, water, etc.)
- in-service training (in-service courses for specific skills and knowledge)
- information, education, and communication (IEC) costs.

## Box 18.3 Questions to ask when reviewing financial information

### General

- Do the accounts make sense? Do the various figures add up correctly? Do the amounts given in different parts of the accounts match each other?
- Are the amounts given backed up by *supporting documents*?
- Do spot checks of some of the original *supporting documents* match the amounts given in the accounts?

### Funding and expenditure

- Are funding and *expenditure* broadly in balance?
- Is there a significant increase or decrease in activity levels from the previous reporting period?
- What is the balance of direct project costs vs administrative and *indirect costs*?
- Is expenditure reasonable for the size and nature of the project?
- Are there any large bills outstanding which could substantially affect the figures shown?
- Are bills paid in a timely manner? If not, *creditors* may refuse to supply the project or the institution as a whole in the future.
- What is the projected year-end balance? Is this satisfactory? If not, what steps need to be taken to change things?

### Variances and virement

- Is the *expenditure* broadly in line with the *budget* (for example, ± 10%)?
- Is the *income* broadly in line with the *budget* (for example, ± 10%)?
- Are there any significant *variances* (for example, under-spending as a result of delayed activity plans, or overspending due to *inflation* or unexpected salary increases)? If so, have they been explained satisfactorily?
- What action is being taken to correct significant *variances*? This might include going back to the funder to get permission for the *budget* to be changed.
- Are all *virements* within the permitted range? If not, will it be possible to rectify this before the end of the project? If not, has the funder been approached to give their permission?

### Cash flow

- Is the project owed any large sums of money? Are the project funds expended, borrowed, pledged, transferred, or otherwise used for reasons that are not directly associated with the project? What is being done to retrieve them?

- Are there any unbudgeted expenses that may occur later in the financial year?
- Is *income* still expected to come through on time?
- Are spare cash balances invested to produce the best return? Is any interest being properly accounted for?
- Has the *income* or *expenditure* been affected by exchange rate movements? Will the funder compensate for these if they were in a negative direction?



### Box 18.4 Financial good practice checklist

#### Budget management

- At least annual *budget* preparation/review.
- Monthly (or at least quarterly) *budget monitoring*, including:
  - *variance analysis*
  - *forecast*, *balance sheet*, *cash flow* report.
- Process to manage exchange rate movements.

#### Accounting records

- Maintain and keep original *supporting documentation* for all financial transactions.
- Maintain *books of account* recording all financial transactions, comprising as a minimum:
  - *cash/bank book* for each bank account
  - *petty cash book*
  - *assets register*.
- Undertake monthly bank *reconciliations*, and investigate any inconsistencies.
- Undertake weekly *petty cash book reconciliations*, and on a surprise basis from time to time, and investigate any inconsistencies.
- Regularly summarize records to feed into *budget monitoring*.
- Use a *cost codes* system.

#### Financial and related policies and procedures

- Have a written *financial manual* that details the budgeting and accounting procedures that will be used.
- Use standard forms, such as payment vouchers, *receipt* vouchers, *petty cash* vouchers, purchase order forms, travel and subsistence expenses claims, *assets register*, vehicle logs, bank *reconciliations*, *journal vouchers*, *advance/loan* applications, *storekeeping* forms such as stock cards/bin cards, goods received vouchers, and stock taking forms.

- Have clear procedures for managing internal risk, including:
  - delegated authority
  - separation of duties
  - cash control
  - physical controls such as having a safe, adequate security, and insurance cover
- Have clear rules and procedures for:
  - procurement and *tendering*
  - expense claims
  - *storekeeping*
  - *asset* management (including vehicle management)
  - payroll
  - tracking for *loans*, *advances*, and repayments
  - *audit* arrangements.

#### Other policies and procedures

- Governance arrangements, such as a constitution for the organization hosting the trial, with a governing body that meets on regular occasions, procedures for declaring and handling potential conflicts of interest, etc.
- Staff management arrangements, including for:
  - recruitment and selection
  - induction
  - discipline and grievance
  - contracts of employment.



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