

Chapter 46

MANAGING CASH FLOWS

A balancing act...

Cash flow management is the traditional role of the treasury function. It handles cash inflows and outflows, as well as intra-group fund transfers. With the development of information systems, this function is usually automated. As a result, the treasurer merely designs or chooses a model, and then supervises the day-to-day operations. Nonetheless, we need to take a closer look at the basic mechanics of the treasury function to understand the relevance and the impact of the different options.

Sections 46.1 and 46.2 explain the basic concepts of cash flow management, as well as its main tools. These factors are common to both small companies and multinational groups. Conversely, the cash pooling units described in Section 46.3 remain the sole preserve of groups. In Section 46.4 we describe the products that the treasurer might use to invest the firm's residual cash in hand.

Section 46.1

BASIC TENETS

1/VALUE DATING

From the treasurer's standpoint, the balance of cash flows is not the same as that recorded in the company's accounts or that shown on a bank statement. An example can illustrate these differences.

Example *A*, a company headquartered in Amsterdam, issues a cheque for €1000 on 15 April to its supplier *R* in Rotterdam. Three different people will record the same amount, but not necessarily on the same date:

- *A*'s accountant, for whom the issue of the cheque theoretically makes the sum of €1000 unavailable as soon as the cheque has been issued;
- *A*'s banker, who records the €1000 cheque when it is presented for payment by *R*'s bank. He then debits the amount from the company's account based on this date;
- *A*'s treasurer, for whom the €1000 remains available until the cheque has been debited from the relevant bank account. The date of debit depends on when the cheque is cashed in by the supplier and how long the payment process takes.

There may be a difference of several days between these three dates, which determines movements in the three separate balances.

¹ Note that the concept of value date is not universal.

Cash management based on value dates¹ is built on an analysis from the treasurer's standpoint. The company is interested only in the periods during which funds are actually available. Positive balances can then be invested or used, while negative balances generate real interest expense.

The date from which a bank makes incoming funds available to its customers does not correspond exactly to the payment date. As a result, a **value date** can be defined as follows:

- **for an interest-bearing account**, it represents the date from which an amount credited to the account bears interest following a collection of funds; and the date from which an amount debited from the account stops bearing interest following a disbursement of funds;
- **for a demand deposit account**,² it represents the date from which an amount credited to the account may be withdrawn without the account holder having to pay overdraft interest charges (in the event that the withdrawal would make the account show a debit balance) following a collection; and the date from which an amount debited from the account becomes unavailable following a disbursement.

² Also called transactional account, current account, checking account.

Under this system, it is therefore obvious that:

- a credit amount is given a value date after the credit date for accounting purposes;
- a debit amount is given a value date prior to the debit date for accounting purposes.

Let us consider, for example, the deposit of the €1000 cheque received by *R* when the sum is paid into an account. We will assume that the cash in process is assigned a value date 3 calendar days later and that on the day following the deposit *R* makes a withdrawal of €300 in cash, with a value date of 1 day.

Although the initial account balance is zero, *R*'s account is in debit on a value date basis and in credit from an accounting standpoint.

	VALUE DATES		
	€1000 cheque paid in	€300 in cash withdrawn	Value date
	D	$D + 1$	$D + 3$
Account balance	1000	700	
Balance on a value date basis	-300		700

Although the account balance always remains in credit from an accounting standpoint, the balance from a value date standpoint shows a debit of €300 until $D + 3$. The company will therefore incur interest expense, even though its financial statements show a credit balance.

Consequently, a payment transaction generally leads to a debit for the company on a value date basis several days prior to the date of the transaction for accounting purposes. Value dates are thus a **way of charging for banking services** and covering the

corresponding administrative costs. Nonetheless, value dates penalise large debits, the cost of which is no higher from an administrative standpoint than that of debit transactions for smaller amounts.

2/ACCOUNT BALANCING

Company bank current accounts are intended simply to cover day-to-day cash management. They offer borrowing and investment conditions that are far from satisfactory:

- the cost of an overdraft is much higher than that of any other type of borrowing;
- the interest rate paid on credit balances is low or zero and is well below the level that can be obtained on the financial markets.

It is therefore easy to understand why it makes little sense for the company to run a permanent credit or debit balance on a bank account. **A company generally has several accounts with various different banks.** An international group may have several hundred accounts in numerous different currencies, although the current trend is towards a reduction in the number of accounts operated by businesses.

One of the treasurer's primary tasks is to avoid financial expense (or reduced financial income) deriving from the fact that some accounts are in credit while others show a debit balance. The practice of **account balancing** is based on the following two principles:

- avoiding the simultaneous existence of debit and credit balances by transferring funds from accounts in credit to those in debit;
- channelling cash outflows and cash inflows so as to arrive at a balanced overall cash position.

In the account balancing process, cash surpluses are pooled daily into a concentration account through interbank transfers and are used to finance accounts in debit.

Although the savings achieved in this way have been a decisive factor in the emergence of the treasury function over the past few decades, only small companies still have to face this type of problem. Banks offer account balancing services, whereby they automatically make the requisite transfers to optimise the balance of company accounts.

3/BANK CHARGES

The return on capital employed³ generated by a bank from a customer needs to be analysed by considering all the services, loans and other products the bank offers, including some:

- not charged for and thus representing unprofitable activities for the bank (e.g., cheques deposited by retail customers);
- charged for over and above their actual cost, notably using charging systems that do not reflect the nature of the transaction processed.

The banking industry is continuously reorganising its system of bank charges. The current trend is for it to cover its administrative processing costs by charging fees and to establish the cost of money (i.e. the cost of the capital lent to customers) by linking interest rates

³ When a bank lends some money, it "uses part of the bank equity" because it has to constitute a minimum solvency ratio (equity/weighted assets).

to the financial markets. Given the integration between banking activities (loans, payment services and investment products), banks generally apply **flat rate charges**.

Section 46.2

CASH MANAGEMENT

1/ CASH BUDGETING

The cash budget shows not only the cash flows that have already taken place, but also all the receipts and disbursements that the company plans to make. These cash inflows and outflows may be related to the company's investment, operating or financing cycles.

The cash budget, showing the amount and duration of expected cash surpluses and deficits, serves two purposes:

- to ensure that the credit lines in place are sufficient to cover any funding requirements;
- to define the likely uses of loans by major categories (e.g., the need to discount based on the company's portfolio of trade bills and drafts).

Planning cash requirements and resources is a way of adapting borrowing and investment facilities to actual needs and, first and foremost, of managing a company's interest expense. It is easy to see that a better rate loan can be negotiated if the need is forecast several months in advance. Likewise, a treasury investment will be more profitable over a predetermined period, during which the company can commit not to use the funds.

The cash budget is a **forward-looking management chart showing supply and demand for liquidity within the company**. It allows the treasurer to manage interest expense as efficiently as possible by harnessing competition not only among different banks, but also with investors on the financial markets.

2/ FORECASTING HORIZONS

Different budgets cover different forecasting horizons for the company. Budgets can be used to distinguish between the degree of accuracy users are entitled to expect from the treasurer's projections.

Companies forecast cash flows by major categories over long-term periods and refine their projections as cash flows draw closer in time. Thanks to the various services offered by banks, budgets do not need to be 100% accurate, but can focus on achieving the relevant degree of precision for the period they cover.

An annual cash budget is generally drawn up at the start of the year based on the expected profit and loss account which has to be translated into cash flows. The top priority at this point is for cash flow figures to be consistent and material in relation to the company's business activities. At this stage, cash flows are classified by category rather than by type of payment.

These projections are then refined over periods ranging from 1 to 6 months to yield rolling cash budgets, usually for monthly periods. These documents are used to update the annual budgets based on the real level of cash inflows and outflows, rather than using expected profit and loss accounts.

Day-to-day forecasting represents the final stage in the process. This is the basic task of all treasurers and the basis on which their effectiveness is assessed. Because of the precision required, day-to-day forecasting gives rise to complex problems:

- it covers all the movements affecting the company's cash position;
- each bank account needs to be analysed;
- it is carried out on a value date basis;
- it exploits the differences between the payment methods used;
- as far as possible, it distinguishes between cash flows on a category-by-category basis.

The following table summarises these various aspects.

BANK No. 1

Account value dates

	Monday	Tuesday	Wednesday	Thursday	Friday
Bills presented for payment					
Cheques issued					
Transfers issued					
Standing orders paid					
Cash withdrawals					
Overdraft interest charges paid					
Sundry transactions					
(1) TOTAL DISBURSEMENTS					

BANK No. 1

Account value dates

	Monday	Tuesday	Wednesday	Thursday	Friday
Customer bills presented for collection					
Cheques paid in					
Standing orders received					
Transfers received					
Interest on treasury placements					
Sundry transactions					
(2) TOTAL RECEIPTS					
(2) – (1) = DAILY BALANCE ON A VALUE DATE BASIS					

Day-to-day forecasting has been made much easier by IT systems. Thanks to the ERP⁴ and other IT systems used by most companies, the information received by the various parts of the business is processed directly and can be used to forecast future disbursements instantaneously. As a result, cash budgeting is linked to the availability of **information** and thus of the characteristics of the **payment methods** used.

⁴ Enterprise Resources Planning.

3/THE IMPACT OF PAYMENT METHODS

The various payment methods available raise complex problems and may give rise to uncertainties that are inherent in day-to-day cash forecasting. There are two main types of uncertainty:

- **Is the forecast timing of receipts correct?** A cheque may have been collected by a sales agent without having immediately been paid into the relevant account. It may not be possible to forecast exactly when a client will pay down its debt by bank transfer.
- **When will expenditure give rise to actual cash disbursements?** It is impossible to say exactly when the creditor will collect the payment that has been handed over (e.g., cheque, bill of exchange or promissory note).

5 Written document, in which the supplier asks the customer to pay the amount due to its bank, a third party or him/herself, on the due date.

6 Electronic bill of exchange on a magnetic strip.

7 Written document, in which the customer acknowledges its debt and undertakes to pay the supplier on the due date.

8 Electronic promissory note on a magnetic strip.

9 Order given by the customer to its bank to debit a sum from its account and to credit another account

10 Payment method, whereby a debtor asks its creditor to issue standing orders and its bank to pay the standing orders.

From a cash budgeting standpoint, payment methods are more attractive where one of the two participants in the transaction possesses the initiative both in terms of **setting up the payment** and **triggering the transfer of funds**. Where a company has this initiative, it has **much greater certainty** regarding the value dates for the transfer.

The following table shows an analysis of the various different payment methods used by companies from this standpoint. It does not take into account the risk of nonpayment by a debtor (e.g., not enough funds in the account, insufficient account details, refusal to pay). This risk is self-evident and applies to all payment methods.

	Initiative for setting up transfer	Initiative for completing the fund transfer	Utility for cash budgeting
Cheque Paper bill of exchange ⁵	Debtor Creditor	Creditor Creditor	None Helpful to both parties insofar as the deadlines are met by the creditors
Electronic bill of exchange ⁶ Paper promissory note ⁷ Electronic promissory note ⁸ Transfer ⁹ Debit ¹⁰	Creditor Debtor Debtor Debtor	Creditor Creditor Creditor Debtor	Debtor

From this standpoint, establishing the actual date on which cheques will be paid represents the major problem facing treasurers. Postal delays and the time taken by the creditor to record the cheque in its accounts and to hand it over to its bank affect the debit date. Consequently, treasurers endeavour to:

- process cheques for small amounts globally, to arrive at a statistical rule of thumb for collection dates, if possible by periods (10th, 20th, end-of-month);
- monitor large cheques individually to get to know the collection habits of the main creditors – e.g., public authorities (social security, tax, customs, etc.), large suppliers and contractors.

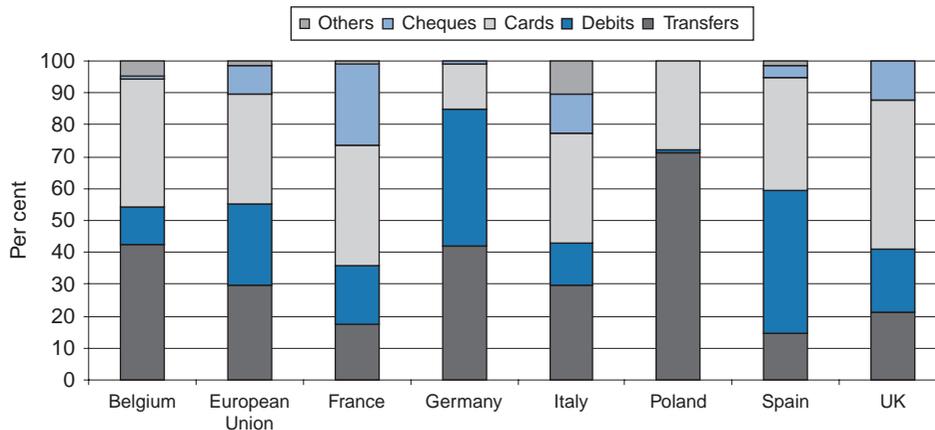
Large companies negotiate with their banks so that they are debited with a value date of $D + 1$ for their cheques, where D is the day on which the cheques arrive at the clearinghouse. As a result, they know in the morning which cheques will be debited with that day's value date.

Although their due date is generally known, domiciled bills and notes can also cause problems. If the creditor is slow to collect the relevant amounts, the debtor, which sets aside sufficient funds in its account to cover payment on the relevant date, is obliged to freeze the funds in an account that does not pay any interest. Once again, it is in the interests of the debtor company to work out a statistical rule of thumb for the collection of domiciled bills and notes and to get to know the collection habits of its main suppliers.

The treasurer's experience is invaluable, especially when it comes to forecasting the behaviour of customers (payment dates) and of creditors (collection dates for the payment methods issued).

Aside from the problems caused by forecasting uncertainties, payment methods do not all have the same flexibility in terms of domiciliation – i.e. the choice of account to credit or debit. The customer cheques received by a company may be paid into an account chosen by the treasurer. The same does not apply to standing orders and transfers, where the account details must usually be agreed in advance and for a certain period of time. This lack of flexibility makes it harder to balance accounts. Lastly, the various payment methods have different value dates. The treasurer needs to take the different value dates into account very carefully in order to manage his or her account balances on a value date basis.

BREAKDOWN OF PAYMENT TOOLS IN 2006 (CASH EXCLUDED)



Source: European Central Bank.

Each country has its own history and payments habits. In Europe, these are far from being unified.

[@
download](#)

At the initiative of the European Central Bank, harmonisation of payment methods is under way in the euro zone (Single Euro Payment Area or SEPA), allowing companies or individuals to transfer money as easily and as quickly and at the same cost as if the transfer were between two towns in the same country.

4/ OPTIMISING CASH MANAGEMENT

Our survey of account balancing naturally leads us to the concept of **zero cash**, the nirvana of corporate treasurers, which keeps interest expense down to a bare minimum.

Even so, this aim can never be completely achieved. A treasurer always has to deal with some unpredictable movements, be they disbursements or collections. The greater the number or volume of unpredictable movements, the more imprecise cash budgeting will be and the harder it is to optimise. This said, several techniques may be used to improve cash management significantly.

(a) Behavioural analysis

The same type of analysis as performed for payment methods can also yield direct benefits for cash management. The company establishes collection times based on the habits of its suppliers. A statistical average for collection times is then calculated. Any deviations from the normal pattern are usually offset where an account sees a large number of transactions. **This enables the company to manage cash balance on each account to “cover” payments forecast with a certain delay of up to 4 or 5 days for value date purposes.**

Optimising forecasts using behavioural studies directly leads to the optimisation of cash flow management.

In any case, payments will always be covered by the overdraft facilities agreed with banks, the only risk for the company being that it will run an overdraft for some, but limited, period and thus pay higher interest expense.

(b) Intercompany agreements

Since efficient treasury management can unlock tangible savings, it is normal for companies that have commercial relationships to get together to maximise these gains. Various types of contract have been developed to facilitate and increase the reliability of payments between companies. Some companies have attempted to demonstrate to their customers the mutual benefits of harmonisation of their cash management procedures and negotiated special agreements. In a bid to minimise interest expense attributable to the use of short-term borrowings, others offer discounts to their customers for swift payment. Nonetheless, this approach has drawbacks because, for obvious commercial reasons, it is hard to apply the stipulated penalties when contracts are not respected.

(c) Lockbox systems

Under the lockbox system, the creditor asks its debtors to send their payments directly to a PO box that is emptied regularly by its bank. The funds are immediately paid into the banking system, without first being processed by the creditor's accounting department.

When the creditor's and debtor's banks are located in the same place, cheques can easily be cleared on the spot. Such clearing represents another substantial time saving.

(d) Checking bank terms

The complexity of bank charges and the various different items on which they are based makes them hard to check. This task is thus an integral part of a treasurer's job.

Companies implement systematic procedures to verify all the aspects of bank charges. In particular, treasurers are keen to get their banks to ensure that all payments are credited or debited with a value date of $D + 1$, with any gains or losses being set off against the corresponding cash volumes on a monthly or quarterly basis. The conditions used to calculate interest payments and transaction charges may be verified by reconciling the documents issued by the bank (particularly interest-rate scales and overdraft interest charges) with internal cash monitoring systems. Flat-rate charges may be checked on a test basis. The most common bank errors occur when standard conditions are applied rather than the specific terms negotiated. In addition, failure to meet the counter opening times (which determine the day, on which a transaction is deemed to have been executed) and mistakes in credit and debit interest are also the source of potential bank errors.

Section 46.3**INVESTMENT OF CASH**

Financial novices may wonder why debt-burdened companies do not use their cash to reduce debt. There are two good reasons for this:

- Paying back debt in advance can be costly because of early repayment penalties, or unwise if the debt was contracted at a rate that is lower than rates prevailing today.
- Keeping cash on hand enables the company to seize investment opportunities quickly and without constraints or to withstand changes in the economic environment. Some research papers¹¹ have demonstrated that companies with strong growth or volatile cash flows tend to have more free cash than average. Conversely, companies that have access to financial markets or excellent credit ratings have less cash than average.

¹¹ Opler et al. (1999).

Obviously, all financing products used by companies have a mirror image as investment products, since the two operations are symmetrical. The corporate treasurer's role in investing the company's cash is nevertheless somewhat specific because the purpose of the company is not to make profits by engaging in risky financial investments. This is why specific products have been created to meet this criterion.

Remember that all investment policies are based on anticipated developments in the bank balances of each account managed by the company or, if it is a group, on consolidated, multicurrency forecasts. The treasurer cannot decide to make an investment without first estimating its amount and the duration. Any mistake, and the treasurer is forced to choose between two alternatives:

- either having to resort to new loans to meet the financial shortage created if too much cash was invested, thus generating a loss on the difference between lending and borrowing rates (i.e. the interest rate spread); or
- having to retrieve the amounts invested and incur the attendant penalties, lost interest or, in certain cases such as bond investments, risk of a capital loss.

Since corporate treasurers rarely know exactly how much cash they will have available for a given period, their main concern when choosing an investment is its liquidity – that is,

how fast can it be converted back into cash. **For an investment to be cashed in immediately, it must have an active secondary market or a redemption clause that can be activated at any time.**

The corporate treasurer's first concern in investing cash is liquidity.

Of course, if an investment can be terminated at any time, its rate of return is uncertain since the exit price is uncertain. A 91-day Treasury bill at a nominal rate of 4% can be sold at will, but its actual rate of return will depend on whether the bill was sold for more or less than its nominal value. However, if the rate of return is set in advance it is virtually impossible to exit the investment before its maturity since there is no secondary market or redemption clause, or if there is, only at a prohibitive cost.

The treasurer's second concern – security – is thus closely linked to the first. Security is measured in terms of the risk on the interest and principal.

When making this tradeoff between liquidity and security, the treasurer will, of course, try to obtain the **best return** taking into consideration **tax issues**, since various investment products may be subject to different tax regimes.

1/ INVESTMENT PRODUCTS WITH NO SECONDARY MARKET

Interest bearing current accounts are the simplest way to earn interest on cash. Nevertheless, interest paid by banks on such accounts is usually significantly lower than what the money market offers.

Time deposits are fixed term deposits on an interest-bearing bank account that are governed by a letter signed by the account holder. The interest on deposits with maturity of at least 1 month is negotiated between the bank and the client. It can be at a fixed rate or indexed to the money market. No interest is paid if the client withdraws the funds before the agreed maturity date.

Cash certificates are time deposits that take the physical form of a bearer or registered certificate.

Repos (repurchase agreements) are agreements whereby institutional investors or companies can exchange cash for securities for a fixed period of time (a securities for cash agreement is called a “reverse repo”). At the end of the contract, which can take various legal forms, the securities are returned to their original owner. All title and rights to the securities are transferred to the buyer of the securities for the duration of the contract.

The remuneration of the buyer of the securities can be determined at the outset according to how the contract will be unwound. The agreement can be adapted to various requirements. The only risk is that the borrower of the cash (the repo seller) will default.

Repo sellers hold equity or bond portfolios, while repo buyers are looking for cash revenues. From the buyer's point of view, a repo is basically an alternative solution when a time deposit is not feasible, for example for periods of less than 1 month. A repo allows the seller to obtain cash immediately by pledging securities with the assurance that it can buy them back.

Since the procedure is fairly unwieldy, it is only used for large amounts, well above €2m. This means that it competes with negotiable debt securities, such as commercial

paper. However, the development of money market mutual funds investing in repos has lowered the €2m threshold and opened up the market to a larger number of companies.

The principle of **securities lending** is similar to that of repurchase agreements. It enables a company with a large cash surplus or listed investments to improve the yield on its financial instruments by entrusting them to institutional investors. These investors use them in the course of forward transactions while paying to the original owner (the company) the income arising on the securities and a borrowing fee. No cash changes hands in the course of the transaction. The incremental return thus stems from the remuneration of default risk on the part of the institutional investors borrowing the securities.

2/ SECONDARY MARKET INVESTMENT PRODUCTS

Treasury bills and notes are issued by governments at monthly or weekly auctions for periods ranging from 2 weeks to 5 years. They are the safest of all investments given the credit-worthiness of the issuer (governments), but their other features make them less flexible and competitive. However, the substantial amount of outstanding negotiable Treasury bills and notes ensures sufficient liquidity, even for large volumes. These instruments can be a fairly good vehicle for short-term investments.

Certificates of deposit are quite simply time deposits represented by a dematerialised negotiable debt security in the form of a bearer certificate or order issued by an authorised financial institution. Certificates of deposit are issued in minimum amounts for periods ranging from 1 day to 1 year with fixed maturity dates. In fact, they are a form of short-term investment. CDs are issued by banks, for which they are a frequent means of refinancing, on a continuous basis depending on demand. Before the financial crisis of 2008, their yield was very close to that of the money market, and their main advantage is that they can be traded on the secondary market, thus avoiding the heavy penalties of cashing in time deposits before their maturity date. The flip side is that they carry an interest-rate risk.

We described the main characteristics of commercial paper and medium-term negotiable notes on p. 513.

Money-market or cash mutual funds are funds that issue or buy back their shares at the request of investors at prices that must be published daily. The return on a money-market capitalisation mutual fund arises on the daily appreciation in net asset value (NAV). This return is similar to that of the money market. Depending on the mutual fund's stated objective, the increase in net asset value is more or less steady. A very regular progression can only be obtained at the cost of profitability.

In order to meet its objectives, each cash mutual fund invests in a selection of Treasury bills, certificates of deposit, commercial paper, repos, variable- or fixed-rate bonds with a short residual maturity. Its investment policy is backed by quite sophisticated interest-rate risk management.

The subprime crisis has been a healthy (but costly!) reminder for some treasurers that an increase in return cannot be obtained without an increase in risk. Some money-market funds, nicknamed “turbo” or “dynamic”, had invested part of their portfolio in subprime securities to boost their returns. During the summer of 2007 and thereafter, their performances suffered severely and most of them have lost most of their customers. We can only hope that they have learnt their lesson!

Securitisation vehicles are special-purpose vehicles created to take over the claims sold by a credit institution or company engaging in a securitisation transaction (see p. 514). In exchange, these vehicles issue units that the institution sells to investors.

In theory, **bond** investments should yield higher returns than money market or money-market indexed investments. However, interest-rate fluctuations generate capital risks on bond portfolios that must be hedged, unless the treasurer has opted for variable-rate bonds. Investing in bonds therefore calls for a certain degree of technical know-how and constant monitoring of the market. Only a limited number of treasurers have the resources to invest directly in bonds.

The high yields arising on investing surplus cash in the **equity** market over long periods become far more uncertain on shorter horizons, when the capital risk exposure is very high, well above that of a bond investment. Treasurers must keep a constant eye on the secondary market, and sharp market swings have rendered the few treasurers still investing in the equity market extremely cautious. However, treasurers may be charged with monitoring portfolios of equity interests.

Section 46.4

CASH MANAGEMENT WITHIN A GROUP

Managing the cash positions of the subsidiaries of a group is akin to managing the individual bank accounts held by each subsidiary. Prior to any balancing between subsidiaries at group level, each subsidiary balances its own accounts. Consequently, managing the cash position of a group adds an additional tier of data processing and decision-making based on principles that are exactly the same as those explained in Sections 46.1 and 46.2 for individual companies (i.e. group subsidiaries or SMEs¹²).

¹² *Small- and Medium-sized Enterprises.*

1/CENTRALISED CASH MANAGEMENT

The methods explained in the previous sections show the scale of the task facing a treasury department. It therefore seems natural to centralise cash management on a group-wide basis, a technique known as cash pooling, since it allows a group to take responsibility for all the liquidity requirements of its subsidiaries.

The cash positions of the subsidiaries (lenders or borrowers) can thus be pooled in the same way as the various accounts of a single company, thereby creating a genuine internal money market. The group will thus save on all the additional costs deriving from the inefficiencies of the financial markets (bank charges, brokerage fees, differences between lending and borrowing rates, etc.). In particular, cash pooling enables a group to hold on to the borrowing/lending margin that banks are normally able to charge.

Cash pooling balances the accounts of a group's subsidiaries, thereby saving on the interest expense.

This is not the only benefit of pooling. It gives a relatively big group comprising a large number of small companies the option of tapping financial markets. Information-related costs and brokerage fees on an organised market may prevent a large number of subsidiaries from receiving the same financing or investment conditions as the group as a whole. With the introduction of cash pooling, the corporate treasurer satisfies in

the markets the financing needs of the group. The treasurer then organises an internal refinancing of each subsidiary on the same financing terms that the group receives.

Cash pooling has numerous advantages. The manager's workload is not proportional to the number of transactions or the size of the funds under management. Consequently, there is no need to double the size of a department handling the cash needs of twice the number of companies. The skills of existing teams will nevertheless need to be enhanced. Likewise, investment in systems (hardware, software, communication systems, etc.) can be reduced when they are pooled within a single central department. Information gathering costs can yield the same type of saving. Consequently, cash pooling offers scope for genuine "industrial" economies of scale.

The compelling logic of having such a unit sometimes masks its *raison d'être* because, although the creation of a cash pooling unit may be justified for very good reasons, it may also lead to an unwise financial strategy and possibly even management errors. Notably, cash pooling will give rise to an internal debt market totally disconnected from the assets being financed. Certain corporate financiers may still be heard to claim that they have secured better financing or investment terms by leveraging the group's size or the size of the funds under management. But such claims do not stand up to analysis because the level of risk associated with investments alone determines their financing cost in a market economy. If the integration of a company within a larger group enables it to secure better financing terms, this improvement will be to the detriment of the overall entity's borrowing costs. We recommend that any readers still tempted to believe in financial economies of scale take another look at the analysis in Chapter 31.

In theory, once a company has achieved the critical mass needed to give it access to the financial markets, any economies of scale generated by cash pooling are "industrial" rather than financial.

This said, rating agencies estimate that diversification of activities is good for lenders. You might cry foul at seeing the remuneration of a diversifiable risk! That's the way it is. Cash pooling may create a mass effect leading certain banks concerned solely with their market share to overlook the link between risk and profitability!

A prerequisite for cash pooling is the existence of an efficient system transmitting information between the parent company and its subsidiaries (or between the head office and decentralised units). The system requires the subsidiaries to send their forecasts to the head office in real time. The rapidity of fund movements – i.e. the unit's efficiency – depends on the quality of these forecasts, as well as on that of the corporate information system.

Lastly, a high degree of centralisation reduces the subsidiaries' ability to take initiatives. The limited responsibilities granted to local cash managers may encourage them not to optimise their own management, when it comes to either conducting behavioural analysis of payments or controlling internal parameters. Local borrowing opportunities at competitive rates may therefore go begging. To avoid demotivating the subsidiaries' treasurers, they may be given greater responsibility for local cash management.

2/ THE DIFFERENT TYPES AND DEGREES OF CENTRALISATION

Looking beyond its unifying nature in theory, there are many different ways of pooling a group's cash resources in practice, ranging from the outright elimination of the

subsidiaries' cash management departments to highly decentralised management. There are two major types of organisation, which reflect two opposite approaches:

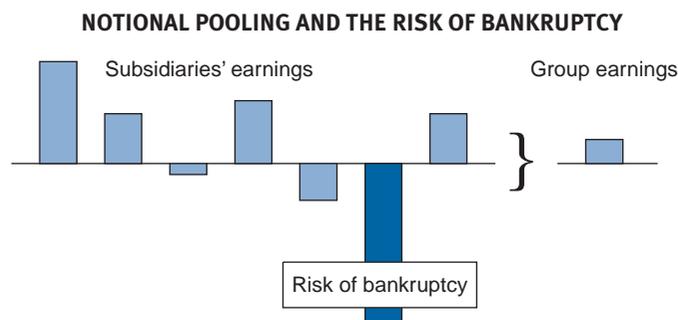
- Most common is the centralisation of balances and liquidity, which involves the group-wide pooling of cash from the subsidiaries' bank accounts. The group balances the accounts of its subsidiaries just as the subsidiaries balance their bank accounts. There are a number of different variations on this system.
- Significantly rarer is the centralisation of cash flows, under which the group's cash management department not only receives all incoming payments, but may also even make all the disbursements. The department deals with issues such as due dates for customer payments and customer payment risks, reducing the role of any subsidiary to providing information and forecasting. This type of organisation may be described as hypercentralised.

The centralisation of cash balances can be dictated from above or carried out upon request of the subsidiary. In the latter case, each subsidiary decides to use the group's cash or external resources in line with the rates charged, thereby creating competition between the banks, the market and internal funds. This flexibility can help alleviate any demotivation caused by the centralisation of cash management.

In addition, coherent cash management requires the definition of uniform banking terms and conditions within a group. In particular, fund transfers between subsidiaries should not be subject to value dating.

Notional pooling provides a relatively flexible way of exploiting the benefits of cash pooling. With notional pooling, subsidiaries' account balances are never actually balanced, but the group's bank recalculates credit or debit interest based on the fictitious balance of the overall entity. This method yields exactly the same result as if the accounts had been perfectly balanced, **but the fund transfers are never carried out in practice**. As a result, this method leaves subsidiaries' some room for manoeuvre and does not impact on their independence.

A high-risk subsidiary thus receives financing on exactly the same terms as the group as a whole, while the group can benefit from limited liability from a legal standpoint by declaring its subsidiary bankrupt. Notional pooling prevents a bank from adjusting its charges, thus introducing additional restrictions and setting reciprocal guarantees between each of the companies participating in the pooling arrangements. This network of contracts may prove to be extremely complex to manage.



Consequently, cash balances are more commonly pooled by means of the daily balancing of the subsidiaries' positions. The **Zero Balance Account (ZBA)** concept requires

subsidiaries to balance their position (i.e. the balance of their bank accounts) each day by using the concentration accounts managed at group or subgroup level. The banks offer automated balancing systems and can perform all these tasks on behalf of companies. The use of ZBA requires a set of legal agreements between the parent company and each subsidiary (cash management agreements) which must be negotiated at arms's length so as not to raise any legal or tax issue.

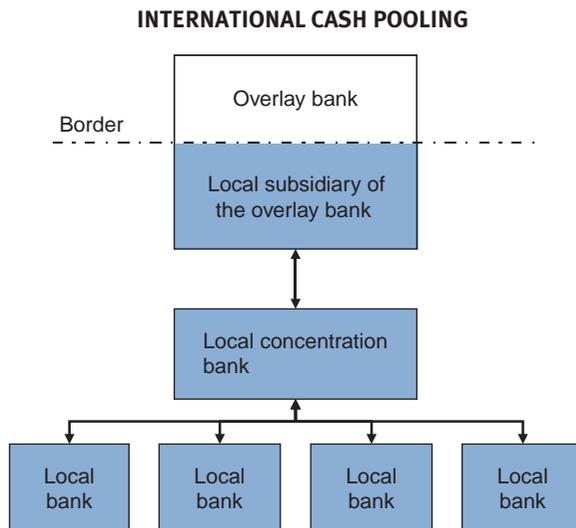
To sum up, the degree of centralisation of cash management and the method used by a group do not depend on financial criteria only. The three key factors are as follows:

- the group's managerial culture – e.g. notional pooling is more suited to highly decentralised organisations than daily position balancing;
- regulations and tax systems in the relevant countries;
- the cost of banking services. While position balancing is carried out by the group, notional pooling is the task of the bank.

3/INTERNATIONAL CASH MANAGEMENT

The problems arising with cash pooling are particularly acute in an international environment. This said, international cash management techniques are exactly the same as those used at national level – i.e. pooling on demand, notional pooling, account balancing.

Regulatory differences make the direct pooling of account balances of foreign subsidiaries a tricky task. Indeed, many groups find that they cannot do without the services of local banks, which are able to collect payments throughout a given zone. Consequently, multinational groups tend to apply a two-tier pooling system. A local concentration bank performs the initial pooling process within each country, and an international banking group, called an overlay bank, then handles the international pooling process.



¹³ For currencies that are freely convertible.

The international bank sends the funds across the border,¹³ as shown in the above chart, which helps to dispense with a large number of regulatory problems.

At the local level, centralisation can be tailored to the specific regulatory requirements in each country, while at a higher level the international bank can carry out both notional pooling and daily account balancing. Lastly, it can manage the subsidiaries' interest and exchange rate risks (see Chapter 47) by offering exchange rate and interest rate guarantees. The structure set up can be used to manage all the group's financial issues rather than just the cash management aspects.

Within the Eurozone, the interconnection of payment systems under the aegis of the European Central Bank has made it possible to carry out fund transfers in real time, more cheaply and without having to face the issue of value dating. In the Eurozone, cash pooling may thus be carried out with the assistance of a single concentration bank in each country with cross-border transfers not presenting any problems.

Some groups have created a payment factory which pays off all the group's suppliers on behalf of all the subsidiaries, which reduces the number of transfers when subsidiaries have common suppliers.

4/ CASH MANAGEMENT OF A GROUP EXPERIENCING FINANCIAL DIFFICULTIES

We ought to mention that all of the techniques and products discussed in this chapter work best for a group in good financial health and which accordingly has easy access to the debt market.

The treasurer of a group whose finances are stretched also has to manage its cash, with as much if not more care and attention, although the goals of such a treasurer will be obviously be a lot different from those of the treasurer of a more financially sound group. Instead of seeking to optimise financial expenses, the treasurer will want to secure the group's financing.

Accordingly, she will maximise the amount of loans granted, even if this means taking out more short-term debt than is actually needed to meet short-term requirements.

When the going gets tough, the group will be able to draw on all of its credit lines as long as it is still meeting its financial covenants¹⁴ and place the funds in short-term investments. So, if the situation gets worse, the group will not run the risk of having its credit lines cut off by the banks. The banks will be forced to work with the company in order to turn it around financially.

Looking after a company's cash turns out to be more of an operational monitoring job than an optimisation one. In fact, and paradoxically, the treasurer succeeds in managing the company's cash only thanks to its short-term investments.

This situation could raise the cost of debt for the company, but this additional cost is no more than a form of insurance against a liquidity risk!

¹⁴ See p. 519

Section 46.5

THE CHANGING ROLE OF THE TREASURER

Technological developments have resulted in greater integration and automation in the management of a company's cash, and have also facilitated the centralisation of the process.

Large groups appear to be centralising cash management as much as they possibly can (which has no impact outside the group). However, this was just a start, and many groups have now also started centralising trade payables. In the near future, we could see the centralisation of both payables and receivables. This would be rather more difficult to set up as it requires the cooperation of customers who will have to send their payment, not to the company that has supplied it with the goods or services it has ordered, but to another company.

Some groups view cash management as a strategic function. Others see it has a complex administrative function that generates additional risks. Some large groups have quite simply outsourced the cash management function, either to banks or to consulting firms offering turnkey solutions for outsourced cash management. However, since the early 2000s, there has also been an increase in the number of groups centralising their cash management.

With the development and greater security of the Internet, SMEs that do a lot of business on the international market have been able to set up efficient systems at a lower cost.

A treasurer's job is to perform the following tasks:

- forecast trends in the credit and debit balances of the company's accounts;
- keep dormant funds to a minimum;
- invest excess cash as efficiently as possible;
- finance borrowing requirements as cheaply as possible.

Cash balances for treasury purposes are not the same as the balances shown in a company's accounts or the accounting balance of its assets held by the bank. In particular, treasurers must take account of value dating. The value date is the date from which a credited amount accrues interest when paid into an interest-bearing account or becomes available when paid into a demand account.

The aim of the cash budget is to determine the amount and duration of cash requirements and surpluses. The cash budget shows all the receipts and all the disbursements that the business expects to collect or make. Day-to-day forecasting, which takes into account value dating, requires paying considerable attention to the payment methods used. Forecasts are more reliable, when the treasurer has the initiative both for setting up a payment and for carrying out the fund transfer.

Account balancing is the final stage in the liquidity management process. It eliminates the additional costs deriving from differences between borrowing and investment rates. Lastly, optimised cash management entails the acceleration of the collection process and the extension of suppliers' payment deadlines.

Cash pooling – the centralisation of subsidiaries' account balances within a group – is comparable to the process of balancing all of a subsidiary's accounts. Pooling is generally backed up by an integrated information system and a group-wide agreement concerning banking terms and conditions. At international level, regulatory difficulties concerning cross-border transfers prevent the direct balancing of subsidiaries' accounts. Instead, the

SUMMARY

[@
download](#)

initial pooling process is carried out by a local bank in each country, and then the resulting balances are pooled by an international banking group.

The corporate treasurer's first concern when investing cash is liquidity. The treasurer's second concern – security – is thus closely linked to the first. Security is measured in terms of the risk on the interest and principal. Products that can be used can be split between products with a secondary market (treasury bills, money market funds, ...) or without (time deposit, repos, ...).

QUESTIONS

@
quiz

- 1/What are the three key objectives of a corporate treasurer?
- 2/What are the three cash positions for a company?
- 3/What is a value date?
- 4/What is a concentration account?
- 5/What is the main difference between national group pooling and international group pooling?
- 6/Does perfect daily balancing of accounts cost more or less than perfect notional pooling?
- 7/Is the risk of bankruptcy of a subsidiary an obstacle to cash pooling for a group which balances its accounts daily?
- 8/What is the main argument against full cash pooling for a group?
- 9/What sort of cash organisation is generally in place for highly decentralised groups?
- 10/What common practice is the principal of value dates based on?
- 11/Is an investment that can be quickly sold on a vast market without risk?
- 12/Can an investment yield more than a debt? What is then the consequence?
- 13/Why do treasurers avoid investing their cash in shares?
- 14/In 2006, ABN Amro created a new financial product, the Constant Proportion Debt Obligation, rated AAA by Standard & Poor's and yielding 1% to 2% more than a AAA rated bond. What do you think?

ANSWERS

- 1/*To reduce dormant funds to the minimum, to optimise the cost of financing and investing, to optimise the cost of risk management.*
- 2/*Value dating accounts, financial statements, company's bank accounts.*
- 3/*The date from which a credit amount starts to bear interest and a debit amount ceases to bear interest.*
- 4/*An account used for balancing cash positions.*

- 5/ The level of pooling.
- 6/ In both cases: no financial expenses.
- 7/ No.
- 8/ Lower levels of accountability for subsidiaries.
- 9/ Cash pools that can be used upon request.
- 10/ Clearing cheques.
- 11/ No, as the liquidity risk does not erase all the other risks which may result in a change in value.
- 12/ Yes, but its risk is higher.
- 13/ High short- and medium-term risk.
- 14/ It was either a fabulous arbitrage opportunity or an investment with a higher risk than apparent. In early 2008, CPDOs were valued at 40–75% of face value. Their risk, counterparty of their return, had been severely underestimated.

www.treasurers.org: Website of the Association of Corporate Treasurers

General:

- W. J. Baumol, The transactions demand for cash: An inventory theoretic approach, *Quarterly Journal of Economics*, **66**, 545–566, November 1952.
- E. Detragiache, P. Garella, L. Guiso, Multiple versus single banking relationships: Theory and evidence, *Journal of Finance*, **55**(3), 1133–1161, June 2000.
- M. Faulkender, R. Wang, Corporate financial policy and the value of cash, *Journal of Finance*, **61**(4), 1957–1990, August 2006.
- European Central Bank, *Payment and Securities Settlement Systems in Europe*, Blue Book 4th edn., 2007.
- J. Graham, C. Harvey, The theory and practice of corporate finance: Evidence from the field, *Journal of Financial Economics*, **60**(2–3), 179–185, May–June 2001.
- L. Van den Wierlen, *International Cash Management*, 2nd edn., Riskmatrix, 2006.
- R. Cooper, *Corporate Treasury and Cash Management*, Palgrave Macmillan, 2003.
- T. Opler, L. Pinkowitz, R. Stulz, R. Williamson, The determinants and implications of corporate cash holdings, *Journal of Financial Economics*, **52**, 3–46, 1999.

BIBLIOGRAPHY