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# Centralization of Treasury Management

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## **Preface**

**David C. Robertson**

**Partner, Treasury Strategies, Inc.**

This book arrives at a critical juncture in the evolution of Treasury Management. On the one hand, the most sophisticated multinational firms operate highly centralized Treasury units characterized by automation of basic processes and information flows, sophisticated risk management techniques and highly specialized functional competencies. Banks, solution vendors and industry consortiums such as SWIFT have assisted businesses in optimizing their Treasury units by producing a stream of innovation that has supported centralization, deepened analytical capabilities and strengthened cash visibility and controls. Best-in-class Treasury units are creating value not only by optimizing financial return relative to risk, but also by supporting business growth through the acceleration and integration of the financial supply chain.

Yet in contrast, many large multinational firms operate Treasury units that remain plagued by incomplete control and oversight over the financial value chain, fragmented information, and incomplete competencies. Furthermore, smaller firms typically lack the technology and people resources needed to optimize Treasury. These gaps in optimizing Treasury are particularly dangerous in today's environment due to tightened credit markets, rapid globalization, the accelerated pace of business, and the unprecedented levels of financial risk present in the markets. Today, more than ever, a well-run Treasury can be the difference between financial success and failure.

While the need for firms to identify and adopt appropriate Treasury management organization structures, processes, policies and technologies is more urgent than ever, the formal discipline of Treasury is relatively immature. In comparison to Accounting and Finance, two related fields, the discipline of Treasury Management has received relatively less academic attention. While numerous associations and periodicals are devoted to Treasury and provide valuable insights and knowledge sharing, their work tends to be anecdotal and not subject to the disciplined scrutiny and formal analysis characteristic of academic work. Few academics conduct research in the specific area of Treasury and while most of the major business Universities offer degree programs in Accounting and Finance, few if any major universities offer degree programs focused particularly on the field of Treasury. Against this backdrop, Dr. Polák is a pioneer, bringing academic discipline to the exploration of Treasury as a field of study.

Dr. Polák's book explores the drivers and dynamics of centralized Treasury centres, plotting their evolution and characteristics. The area of Treasury centralization is particularly rich because it lies at the intersection of several critical environmental and professional trends facing Treasury:

- ◆ Support for and responses to globalization – while globalization stresses Treasury by broadening its scope, it also highlights tax, legal, accounting, labor cost, infrastructure and human capital differences that present opportunities for Treasury to maximize its effectiveness by selecting optimal geographic locations for its centres.
- ◆ Centralized control and management of risks – environmental and regulatory factors have strengthened the mandate of Treasury to acquire centralized control over banking, financial and payment activities so as to ensure consistent and appropriate management.
- ◆ Consolidation and scaling of functional competencies – As Dr. Polák shows, centralization supports the consolidation of competencies and could ultimately fuel a wave of outsourcing, as the logical extension of the scaling and consolidation of functional competencies is their ultimate transformation into core competencies, utilities or outsourced solutions.

The work Dr. Polák has done in the field of Treasury centralization has brought greater clarity and empirical rigor to the factors governing Treasury centralization and will be of benefit to academics, practitioners and policy makers alike. Practitioners will find a practical and rigorous assessment of the arguments for centralization and the factors for consideration in the location of centres. While Dr. Polák's work in the field of Treasury centralization is rich, there is no shortage of areas for additional exploration. For example, academics can build upon this work by conducting additional empirical study as to the impact of the location factors – both individually and in concert. Finally, policy makers can gain deeper insights into how to attract and retain regional treasury centres.

## Introduction

Treasury managers in many multinational corporations currently face huge challenges in managing transactions across multiple locations and time zones while working with many outside banks. The greater the geographic reach of a company, the more difficult it is to access and track accurate and timely cash flow information. At the same time, medium sized companies that are growing in market value and size must decide how to implement the right solution for managing an increasing volume of transactions. Centralization of treasury activities offers corporations the ability to achieve higher efficiency, greater transparency and access to real time information across a broad geographical area and many entities.

The first shared service centres were developed by American corporations at the end of the 1980s with the objective to maximize the return on investments in enterprise resource planning solutions. Today, multinational companies, especially those based in Europe and North America, are increasingly recognizing the benefits they can gain from centralizing their treasury and liquidity management. As a shared service centre combines multiple tasks, processes and information technology infrastructures in one central location, one of the main advantages of the centralized treasury is the ability to deliver measurable, automated, unified, transparent, and efficient processes. Moreover, a centralized treasury pools highly qualified people, their skills and knowledge into one centre that allows management to monitor and grow treasury operations swiftly and efficiently.

Within the treasury function, cash management is an activity that clearly benefits from economies of scale and process reengineering. By centralizing its cash management operations, a corporation can achieve better management of internal cash flows, reduce its float and transaction fees, and, of course, pare its operating costs. By standardizing liquidity management processes, significant improvements can also be obtained in terms of control and security of cash.

In addition to measurable financial advantages of the centralization, such as “cost savings”, the centralization, standardization and automation inherent in shared service centres offer an opportunity to streamline control and management processes in treasury, increase visibility over all company’s cash flows, reengineer processes and build in desired efficiencies and controls. In most cases, firms must re-architect their technology platforms to realize the level of integration and automation necessary to achieve the benefits of centralization.



Corporations are increasingly aware of the financial risks they face, particularly in the area of foreign exchange exposure and interest rate risks – both on the investing and funding sides. Their awareness results from new regulatory pressures, such as Sarbanes-Oxley, other regulatory requirements, and a new emphasis on corporate governance. The improved transparency and control that result from centralization supports improved risk management, both in terms of financial and compliance risk. Exposures can be hedged and unnecessary losses reduced; at the same time, stop signs can be raised about transactions that may put the company at risk of Sarbanes-Oxley violations.

Technological advances and the solutions of banks and third party providers make centralized cash management and the operation of an “in-house bank” a reality for any multinational company. An in-house bank provides the most aggressive level of cash and centralisation, as a centralized Treasury unit maintains control and oversight of the internal accounts of individual companies and performs investing, borrowing, hedging and other treasury operations on behalf of the internal accounts of these companies. An internal settlement is usually processed on a bilateral net settlement basis. The in-house bank generally includes one or more primary concentration accounts for external settlement. However, larger corporations do not want to be dependent on one bank and try to optimize their banking costs by managing the external bank accounts as efficiently as possible. At the subsidiary level, it does not make a difference if one or more external accounts are maintained by the central treasury, because the subsidiary can manage its banking activities at a level of autonomy determined by Treasury – e.g., for collections and local disbursements – and is provided with short-term investment and borrowing through its interaction with the in-house bank.

This structure naturally minimizes costs for the whole administration of current accounts and payment orders by netting internal risk exposures and funding/investing requirements, consolidating investable balances for greatest yield, and potentially by consolidating payment execution. Of course, the centralized pooling structure is balanced with the efficiencies and needs of local banking systems. Relevant accounts exist for each currency and are situated in their home countries so that the best conditions for domestic payment relations and the best conditions for storage of excess or drawing loans are achieved. All in-house banking accounts are placed with a single worldwide financial institution so that the fastest possible international coverage of financial needs is possible. Multiple accounts may be used for some currencies if establishment of these accounts reduces costs. As only the in-house bank can transact with external banks, it necessarily requires the whole group to aggregate its requirements internally, and derive maximum economies of scale for external transactions.

As more companies expand operations across international borders, erratic behavior of the international financial market necessitates standardization of international payments, as the simplification of fund movements becomes the extended challenge for corporate treasury. Corporate treasury is required to be more aware of the volatility of the international financial market and conversant with current payment standards practiced by other corporate treasuries, in order to keep up with international trends. For example, the recent implementation of the Single Euro Payments Area (SEPA) has resulted in replacing myriad payment instruments across the European Union countries by the SEPA credit transfer. The SEPA credit transfer was introduced in January 2008, and current plans are that the SEPA direct debit is to be introduced before the end of 2009, once it has been adopted in all the European Union member states.

These challenges influence corporate treasury in determining the scope and coordination of centralized functions and the practicality of various organizational models. Despite the fact that some corporations have experimented with a single global treasury centre, most corporations have thus far preferred to consolidate to regional treasury centres, mostly because of language barriers and time zone issues.

Considering that most multinational companies have already centralized their treasury and cash management activities, one of the most important questions is: Where is an optimal location for our treasury activities to be conducted from?

There are many factors to consider when searching a location for RTCs. Our previous papers (authors Polák, Petr and Roslan, Rady Roswanddy) published in the *Journal of Corporate Treasury Management* ("Location criteria for establishing treasury centres in South-East Asia"), and *Management – Journal of Contemporary Management Issues* ("Regional Treasury Centres in South East Asia – The Case of Brunei Darussalam") offer a full description of the location criteria (LC) that must be assessed before establishing a regional treasury centre. Such criteria include tax, educational and banking system reforms, political and economic stability, comprehensive legislation, skilled labor force, strong regulatory and supervisory frameworks, central bank reporting requirements, low costs for business operations, etc.

But, of course, the above list of the LC is incomplete because although the LC utilized in the above study are significant for assessment, they are merely one means of assessing the suitability of a location and there are additional possible variables other than those mentioned and investigated in our recent paper that need to be

considered and are difficult to measure. These variables include city/country infrastructure (include availability, quality and cost of office spaces, access to transport links such as international airports, quality and cost of telecommunication networks), language barriers, availability of expertise, availability of outsourcing options, access to key financial markets and banking centres, stability of communication networks, time zone location, notional pooling considerations, cash concentration constraints and many more.

Unfortunately, in practice most of the existing treasury centres exploit “only” the cost savings. There are several reasons for that:

- ◆ Excessive focus on cost savings, to the point of ignoring other strategic benefits such as improved quality and scope of work.
- ◆ Multicultural and other barriers. In many countries where we do business, "custom and practice" is a very significant factor.
- ◆ An excessive level of “rationalization” which produces the problem of attracting and motivating of key specialists in the treasure centres.

Another phase of centralization is to remove the process out of the company entirely. Many, especially medium sized companies, opt to outsource some part or majority of their treasury operation. Among the main reasons for this are:

- ◆ to avoid expensive systems and IT investment;
- ◆ to acquire a skills set not available in the in-house treasury;
- ◆ to allow the company to concentrate on its core business, instead of treasury;
- ◆ to put a full treasury capability in place, where one does not exist.

To cite Eric Mueller from Deutsche Bank, many corporations are taking a new approach that has become known as “nearshoring” (instead of previous “offshoring” to low-cost countries such as, e.g., India). For European based companies the term “nearshoring” generally refers to the establishment of shared service centres in Central European countries (mostly Hungary and the Czech Republic, both countries with no legal restrictions to cash concentration and/or notional pooling) where “skills are high, cultural and language barriers are less pronounced, and costs are still relatively low.” And, indeed, for many such corporations, a location in these countries often comes with the benefit of being closer to existing manufacturing facilities.

Centralization of treasury activities offers companies the ability to achieve higher efficiencies, greater transparency and access to real time information across a broad

geographic area, multiple time zones, and many entities. There are different phases in the centralization of treasury management from the decentralized treasury towards fully centralized cash and treasury management. Many firms start with the centralization of foreign exchange and interest rate risk management as the first step towards centralization of treasury activities, and then proceed through cash and liquidity management up to fully centralized treasury.

**The book consists of five parts:**

1. Treasury management and its responsibilities (Chapter 1-4)
2. Decentralized treasury (Chapter 5)
3. Different phases of the centralization (Chapter 6-9)
4. Outsourcing (Chapter 10)
5. Regional treasury centres (Chapter 11)
6. Best practices in a bank (Chapter 12)

In the first part, the author describes the treasury management focusing on its three core responsibilities, such as assets and liabilities management, cash management, and financial risk management. The second part zooms in on decentralized treasury and decisions about the appropriate degree of centralization/decentralization of the treasury activities. Then we focus on the different phases of the process of centralization, from central interest rate and foreign exchange management through centralization of cash and liquidity management, then transaction processing up to fully centralized treasury. In part four we continue by discussing outsourcing as the next stage following centralization to achieve additional economic benefits. The fifth part contains especially a number of the location criteria, both tax and non-tax, that must be evaluated during consideration where to establish the regional treasury centre. The last part deals with banking best practices in cash pooling from the point of view of the author that works in one of the top banks in Central and Eastern Europe region.

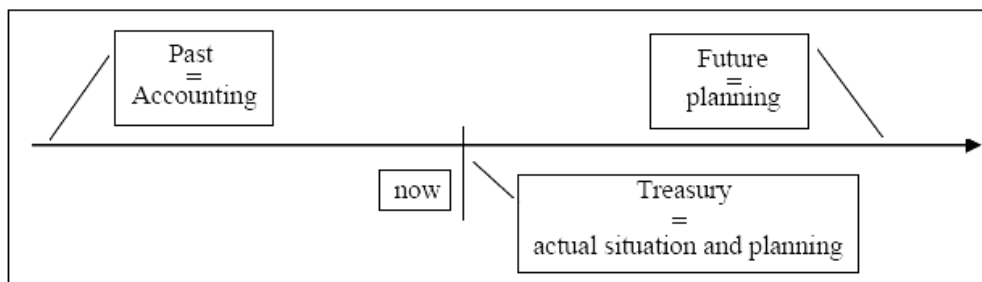
## **Chapter 1**

### **Introduction to treasury management**

Treasury and its responsibilities fall under the scope of the Chief Financial Officer (CFO). In many organizations, the Treasurer will be responsible for the treasury function and also holds the position of Chief Financial Officer. The CFO's responsibilities usually include capital management, risk management, strategic planning, investor relations and financial reporting. In larger organizations, these

responsibilities are usually separated between accounting and treasury, with the controller and the treasurer each leading a functional area. Generally accepted accounting principles and generally accepted auditing standards recommend the division of responsibilities in areas of cash control and processing. Accounting will create the entries for treasury to process payments, treasury will advise accounting of receipts of cash, so accounting can make the proper entries, and reconciliation of bank accounts under the control of treasury will be completed by accounting. The working relationship between the managers of these two financial functions must be very close and ethical.

Treasury management means financial management that is related to a future financial balance and cash flows of any corporation. That means that treasury management responsibilities are equal to those of financial management with the exception of inventory and non-financial investment management, plus financial and management accounting. By contrast to accounting, the treasury management is concerned with the present and future as expected by the corporation itself and financial markets.



**Fig. 1.1. Position of treasury management on a time axis**

High-level treasury responsibilities will normally include capital management, risk management and relationship management. Treasury is a staff service function that supports many different areas of the organization. As an internal consultant to the teams in the different functional areas, treasury provides advice in the areas of cost of capital, risk analysis and mitigation, and the effects of the teams' actions on vendors, customers or investors.

The specific tasks of a typical treasury function include cash management, financial risk management, and assets and liabilities management.

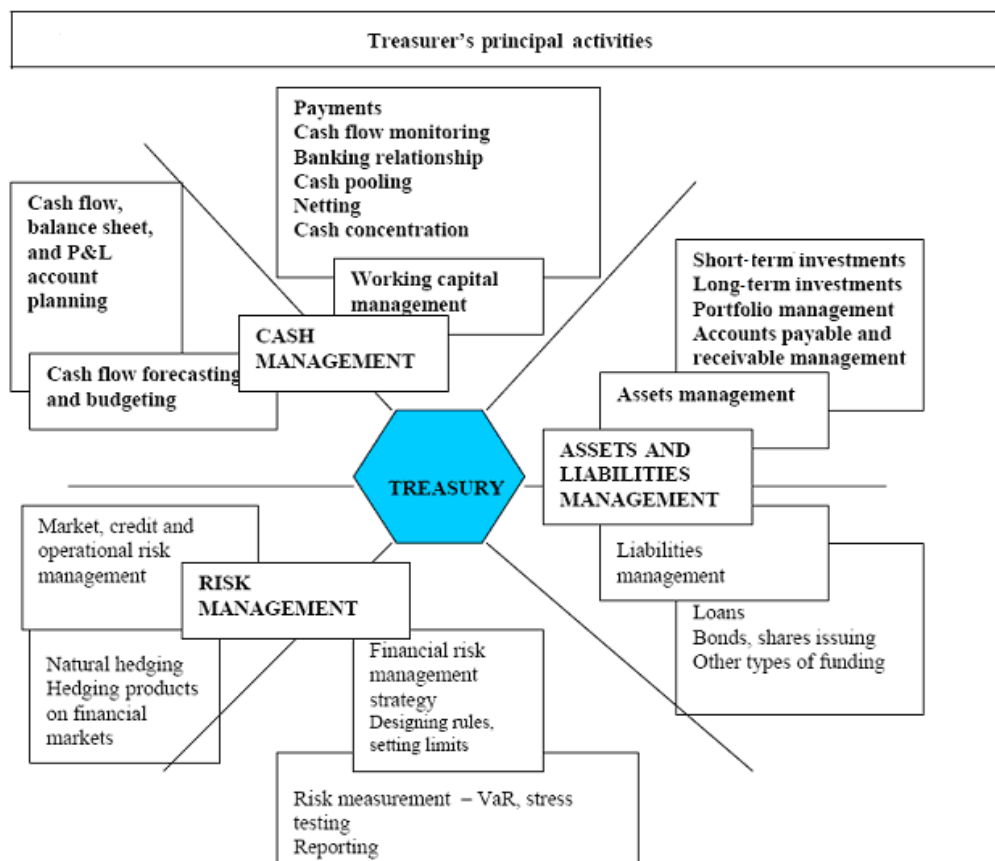


Fig. 1.2. Treasury management and its main responsibilities

## Chapter 2

### Assets and liabilities management

Assets and liabilities management includes the control and care of the cash assets and liabilities of the corporation and optimizing the balance sheet structure. That means use of short-term and long-term investment vehicles. Investment vehicles can include commercial papers, bonds, mutual funds, certificates of deposit and savings accounts. Of course, investment broker selection will depend on the investment vehicles they can provide, their bonding, technology provided to their customers and their service abilities.

For borrowing, the treasurer must first determine the period during which funding is needed, and required currency. Then the treasurer evaluates the available funding methods, such as debt securities (commercial papers, bonds, medium term notes) and bank loans (either committed or uncommitted). It is very important for the treasurer to match maturity and currency of funds with the company's assets. That means to finance fixed assets with long-term funds (long-term loans or corporate bonds), and current assets with short-term tools (commercial papers, overdraft and revolving credit facility, etc.). That means, borrowing will include the selection of lenders and borrowing vehicles that best serve the business and the lenders. Just as credit agreements will control the methods of borrowing, treasury must also develop an investment policy that discusses the level of risk taken through investments of excess cash. Information systems provided by the banks, investment brokers and other cash management providers must be integrated.

For multinational companies the daily cash flows from operational side of the company will result in daily balances in different currencies within different current accounts and possibly time zones in different regions. The main challenge for treasury management is to utilize all the accounts balances with the result to achieve the highest possible return on invested liquidity (or alternatively lowest possible funding cost on debits). Combining the individual account balances results in several short or long positions in different currencies. This can be achieved by automatic concentration structures provided by banks, or by manual transfers, currency conversions or physical swaps.

### **2.1 Assets management**

The surplus balances can be invested in different investment tools according to the profile of such balances. We need to distinguish between three different profiles:

- ◆ daily fluctuating cash;
- ◆ short-term cash (that can be invested for at least 2 working days and up to 3 months);
- ◆ long-term cash (that can be invested for more than 3 months).

Daily fluctuating cash can be invested in overnight deposits, or be left in open interest-bearing current accounts.

Short-term cash can be invested in the bank deposits with maturity up to 3 months, liquidity management funds, or bank's certificates of deposit.

Long-term cash can be invested in certificates of deposit, commercial papers, money market funds, “stub ends” of bonds, either fixed or floating that might be short-term as well as the maturity date approaches, medium-term notes and structured products, or the other money and capital market tools.

In choosing an investment possibility, we should consider three main factors which need to be balanced and traded off against each other:

- ◆ Security – the risk that the principal may not be recoverable through counterparty failure or adverse market conditions.
- ◆ Liquidity – the need to consider how quickly the investment tool can be realized for cash when required.
- ◆ Return – the need to make an adequate return.

The treasurer would usually advise that security is regarded as the primary concern, with liquidity and return as secondary and tertiary considerations, respectively. A company’s assets and its ability to meet its ongoing obligations must not be jeopardized for the sake of marginal improvement in return. Mostly, the promise of a higher level of return is indicative of a correspondingly higher level of risk.

With the development of the financial markets, there is now a wide range of short-term and long-term investment tools available to the treasurer, such as:

- ◆ Bank deposits.
- ◆ Money market tools – certificates of deposit, commercial papers, EDSs (eligible debt securities available in the United Kingdom), treasury bills, banker’s acceptances, etc. These offer an advantage that can be usually readily realized in the secondary markets prior its maturity.
- ◆ Money market funds – this is a specialized fund which invests in money market instruments on behalf of its clients. The funds must meet even the strictest credit criteria imposed by an investment policy.
- ◆ Reverse repo – under a reverse repo, readily realizable securities are purchased from a third party and simultaneously agreement is concluded to resell the security to the party at a later date at a pre-specified price.
- ◆ Medium and long-term investment tools that can be used for short-term investment – in addition to dedicated short-term investment vehicles, the treasurer also has an opportunity to invest in instruments with longer maturities and sell them in a liquid secondary market to realize cash as required. In addition to credit risk, treasurer should be also aware of any transaction costs,



delays in realizing cash and the risk that downward price fluctuations could occur just when a sale is required to generate cash. Longer-term investments include especially government bonds, MTNs, Eurobonds, etc.

## 2.2 Liabilities management

A primary objective for the corporate treasury is to maintain sufficient liquid funds to support current and potential needs. This objective could be addressed by maintaining surplus liquid funds to cover all possible shortfalls, but such a policy would destroy economic value, as short-term rates of deposits would rarely exceed the cost of capital paid to obtain these liquid funds. The optimal alternative is therefore to maintain access to potential sources of liquidity, such as bank overdrafts, commercial paper facilities, short-term loan lines, and so on.

Although reliance on bank finance has to an extent been reduced by the growth of the capital markets, loan finance remains a key component of corporate finance in most countries. This can be provided either intra-group from other related companies or from external banking and financing partners.

### 2.2.1 Types of loan finance

- ◆ **Uncommitted facilities** – include money market line, foreign exchange line, receivables financing line, and overdraft.

Uncommitted facilities typically are arranged for short-term purposes. For example, overdraft facilities or other forms of short-term borrowing. The name derives from the fact the bank has not committed to provide finance to a company. The bank has simply agreed that it probably will. However, there may still be some terms and conditions, even though there is no commitment.

From the company's perspective, uncommitted facilities are usually easier and cheaper to agree. Indeed, since the bank does not record it as a "commitment to lend", there is no need for the bank to allocate capital. This means that there is no need for a commitment fee (as there is no commitment). There is a tendency to assume credit lines will remain in place. Nonetheless, you should remember that an uncommitted facility can be withdrawn at any time. If the borrower (or the borrower's industry) has unexpected problems, you can expect the bank to withdraw, or temporarily suspend, uncommitted facilities.

This poses companies with a problem, as uncommitted facilities do not offer the certainty of funding which is sometimes needed. The treasurer therefore should

ensure uncommitted facilities are arranged to match the underlying funding requirement. For example, the maturity of a short-term loan should match, as closely as possible, the timing of receipts.

Overdraft facilities are normally uncommitted. They can, like any other uncommitted credit facility, be withdrawn at any time. An overdraft facility allows a company to make payments from an account when there are no funds available. This overdraws the bank account and creates debit balances, thus using the bank's funds. In recent years, a number of banks have started to offer overdraft lines committed for a period, but they charge for this sort of commitment.

- ◆ **Committed facilities** – include revolving credit facility, and medium and long-term bilateral/club/syndicated loans.

Committed facilities are generally available for longer periods than uncommitted facilities. Five years is a common period, but periods spanning the range from one to seven years are encountered. Because of their committed nature and longer maturity, committed facilities are subject to greater documentation requirements and are more expensive to arrange.

### *2.2.2 Debt securities*

A debt security is a debt instrument issued with a fixed or variable yield which matures at a certain date in the future. Debt securities may be used for short, medium, or long-term financing and may carry a fixed or a floating rate of interest or no interest at all (so called zero coupon – there are no periodic interest payments. The debt security is usually issued at a discount to its par value. On maturity, investors receive a payment comprising principal and interest). Generally, securities with a maturity not exceeding one year are referred to as a commercial paper, while securities with a maturity of more than one year are called bonds and notes.

Debt securities represent loans to a corporation in which the corporation promises to repay the bondholders or note-holders the total amount borrowed. That repayment in most cases is made on maturity although some loans are repayable in instalments. Unlike shareholders, holders of bonds and notes are not owners of an entity, but its creditors. In return, the corporation will usually compensate the bondholders or note-holders with interest payments during the life of the bond or note.

In comparison with loan financing, there is a number of advantages for a company in raising finance by the issue of debt securities. These include: tighter pricing,

diversified funding base, higher profile (an issue of securities is an opportunity for a company to raise its own profile), and less onerous terms (covenants and events of default are standardized internationally to a greater degree than in loan documentation and are nearly always less onerous for the company).

## Chapter 3

### Cash management

Cash management is defined as the management of bank accounts balances, either positive or negative, and cash flows of a corporation. The aim of cash management is to keep the cost of cash flows as low as possible, while minimizing interest expenditure and maximizing interest income. Cash management is a broad term that covers a number of functions that help individuals and businesses process receipts and payments in an organized and efficient manner. Administering cash assets today often makes use of a number of automated support services offered by banks and other financial institutions.

This will include the selection of banks and bank accounts, cash management information systems, and the development and compliance with cash and investment policy and processes. Bank selection can be based on geographical location, services provided (controlled disbursements, positive pay, lockbox processing, sweep account investing, trade finance, etc.), technology provided to customers, financial strength, covenants in the credit agreement and customer service provided by the bank. All of these pieces of the cash management puzzle need to be coordinated and documented in a procedural manual in order to control the risk associated with cash.

#### 3.1 Cash management functions

Cash management includes:

**Working capital management<sup>1</sup>**, within working capital management we distinguish between accounts receivable management, accounts payable management, and inventory management. Working capital management ensures a company has sufficient cash flow in order to meet its short-term debt obligations and operating expenses.

The composition and size of working capital largely determines the company's liquidity.

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<sup>1</sup> Working capital is the difference between current assets (cash, short-term investments and other quickly realizable assets) and current liabilities.

**Cash flow management** that is based on the estimation of inflows and outflows. It is a technique to hasten cash returns and delay payments. Cash flow management is the process of monitoring, reviewing and regulating a company's cash flows. Cash flow is to a business what oxygen is to human beings. Cash flow management helps a business survive and prosper and is the main indicator of a company's financial health. Cash flow management helps to strengthen a business through the timely estimation of overall cash inflows and outflows. Cash flow management also helps avoid cash shortages, and idle balances on the corporation's accounts.

In addition to those above mentioned, the cash flow management aims to reduce the number of payments, reducing the costs for payments, and support accounts payable and accounts receivable administration.

### **Liquidity management**

The main goal of the liquidity management is to achieve the highest possible return on invested liquidity, or lowest possible funding cost on debits. A reliable cash flow forecast is crucial to manage the corporation's cash balances for a long period.

Liquidity management can be classified into short-term (that means management of the company's current accounts on daily basis) and long-term (i.e. management of the corporation's cash position that involves cash positions that exist for a longer period of time, for example one week or more).

Every day the company's cash position changes, resulting in surpluses or deficits in one or more currencies. Optimal treasury management should avoid debit and credit positions in different accounts in the same currency, simply by shifting balances between different/same currency current accounts.

### **3.2 Automation of cash management**

Corporate treasurers continue to demand more automated solutions for the cash management function. This is certainly not a new development; over the past few years, corporate treasurers have pursued various automation initiatives. Early initiatives focused on streamlining of settlement processes, enabling many corporate treasury departments to settle transactions automatically via treasury workstations or direct interfaces with their banks.

A second wave of automation initiatives focused on automating the cash position and liquidity forecasting processes. Corporate treasurers asked their banks to build interfaces directly into their treasury workstation or ERP systems in order to provide timely cash positions and liquidity forecasts.

The next logical step for treasurers today is to tie in their investment processes as well. This ultimately means that once a treasurer knows his/her cash position, he/she is able to invest liquidity in real time – ideally through an automated trading platform which communicates with the present treasury system infrastructure.

## Chapter 4

### Financial risk management

Financial risk management includes customer credit management, vendor/contractor financial analysis, liability claims management, business disaster recovery, and employee benefits program risk. Customer credit management includes financial analysis, credit limit establishment and order control. Vendor/contractor financial analysis involves the advising of purchasing management of the viability and risk associated with those contractors and vendors that supply our organizations. From time to time, every organization must defend itself against some type of lawsuit. These suits can involve bodily injury, environmental issues, investor suits or even frivolous suits; treasury is the conduit for information to the insurance companies and attorneys that represent and protect the company. Some companies consider disaster recovery an IT responsibility, however, disaster recovery goes beyond computer systems; it involves the entire organization, and because of treasury's involvement with risk and insurance management, they should be considered the primary leader in this endeavor. There are many risks associated with employee benefit plans, and treasury should be an integral part of this process in order to mitigate and control this risk.

Many a responsible financial manager has mused upon the financial risk management dilemma: "To hedge or not to hedge, that is the question". This important question concerns a complex subject that often has conflicting answers.

Most financial managers and/or treasurers would consider that their primary role in the corporations they work for is the management of financial risk. This financial risk can be defined as the extent to which a corporation may incur losses as a result of:

- ◆ the adverse movement of money and capital markets prices or rates (foreign exchange rates, interest rates, commodity and securities prices, etc.), and/or
- ◆ adverse change in financial markets, e.g. the demand of lenders in certain markets changing as a result of which the company is no longer able to raise debt in any preferred financial market, or cost of its finance increases substantially.

For example, corporations that export their goods and services abroad can face excellent sales performance offset if their domestic currency is too strong. Or the uncertainty of

volatile interest rates can jeopardize the ability of a corporate debtor to raise finance at a reasonable cost, which enable it to provide its products and services.

#### 4.1 Why manage financial risk?

First of all, as you know from the financial management theory, the capital asset pricing model (CAPM) purports that shareholders require compensation for assuming risk. There is a direct proportion, the riskier a share, then the greater the return is required by shareholders to compensate for that additional risk. A security's risk is measured by the volatility of its returns to the investor over and above the volatility of return from the market overall. This volatility of returns is affected by 3 main factors, and the level of financial risk is one of them. The objective of managing financial risk is thus to reduce the volatility of returns of a security over and above that of the volatility of return from the financial market. This should increase overall return to existing shareholders.

Another reason why to manage financial risk is to **avoid financial distress** that is usually reflected in the inability of a corporation to raise finance for new projects, or to refinance existing financial liabilities.

The last, but not the least, reason is **to prevent an adverse impact on a company's chosen strategy**. Most Boards of Directors need to know that they can continue to pursue key strategies unhindered by unexpected financial losses. The non-financial corporations believe that they have no specific skills in financial markets, and therefore any risks arising from the company's involvement in these markets should be managed. Potential losses arising from adverse movements in financial markets can, especially if they are significant, require all or part of the company's strategy to be modified, or even cancelled.

#### 4.2 Principal finance related risks

Companies face a number of different financial risks. The following are probably the most common classifications of the principal financial risks that relate to corporate operations. **Market and credit risk are most important types of financial risk.**

##### 4.2.1 Market risk

**Market risk** is the risk that the value of an investment will decrease due to moves in market factors. Many texts use the term market risk interchangeably with price risk.

Market risk is the risk to earnings or capital arising from changes in the value of portfolios of financial instruments. This risk arises from market-making, dealing, and

position-taking activities for interest rate, foreign exchange, equity and commodity markets. The primary accounts affected by market risk are those that are revalued for financial presentation (e.g. trading accounts for securities, derivatives, and foreign exchange products).

Dealers are exposed to price risk to the degree they have un-hedged exposure relating to customer trades or proprietary positions. The degree of price risk depends on the price sensitivity of the derivative instrument and the time it takes to liquidate or offset (close out) the position. Price sensitivity is generally greater for instruments with leverage, longer maturities, or option features. In deep liquid markets the time it takes to close out a position is usually assumed to be at most one business day. In less liquid markets, it may take much longer.

### **Types of market risk**

The primary factors that affect the price of derivative contracts are interest rates, foreign exchange rates, equity prices, and commodity prices. In addition to the absolute changes in these factors, the volatility of those changes can influence the prices of derivative products that have option or leverage features. The four standard market risk factors are:

- ◆ equity risk,
- ◆ interest rate risk,
- ◆ currency risk,
- ◆ commodity risk.

### **Equity risk**

Manifestations include share repurchases, when a company is exposed to increase its own share price. It can also arise in mergers and acquisitions, due both to increases in share price of potential targets and, if a company is contemplating using its own shares to make a purchase, to falls in its own share price. Finally, companies which make use of share option schemes are exposed to increases in their share price. The difference between the market price of their shares when an employee or director exercises an option and the cost of such option represents a cost to the company.

### **Interest rate risk**

Companies with substantial borrowings or deposits will find that their borrowing costs or deposit returns will be affected by movements in interest rates.

In particular, for companies with high leverage ratios where much of the business is financed with loan capital, interest risks are major factor. In this case, it is urgent to manage these risks properly. Another key reason why companies need to devote attention to interest risk management is that lenders are increasingly alert to their interest coverage ratio. This ratio measures the relationship between the profit and interest charges of a company, expressed by the number of times the business earnings exceed its net interest paid. Many banks currently specify a minimal interest coverage ratio in their loan agreements.

The objective of interest risk management is to safeguard company earnings as well as the company's net worth against interest rate fluctuations. Companies with their borrowings at variable rates will be exposed to increases in interest rates, whilst those companies whose borrowing costs are totally or partly fixed will be exposed to a fall in interest rates.

The reverse is obviously true for companies with cash term deposits.

### **Currency risk**

Or foreign exchange risk. This risk is commonly analyzed as follows:

- ◆ Transaction-related risk: the risk that a company's cash flows and realized profits may be impacted by movements in foreign exchange markets. This risk occurs when goods or services are imported or exported and payment is made in foreign currency. Every company with international dealings in foreign currencies other than the home currency runs transaction-related currency risk.
- ◆ Translation risk: companies with overseas subsidiaries will find that the domestic value of the assets and liabilities of these subsidiaries will fluctuate with exchange rate movements. In addition, the domestic equivalent of the foreign currency earnings of the subsidiaries will also be affected by movements in exchange rates.
- ◆ Economic risk: companies may be exposed to foreign exchange movements not only through transactional exposure but also due to their competitive position. Consider a British manufacturer exporting to Australia, with its major competitor in Australia being an American company. Such British company has exposure not only to the Pound/Australian dollar exchange rate on its transactional exposure, but may also have exposure to AUD/USD. If the US dollar weakens against the Australian dollar, whilst at the same time Pound strengthens against the Australian dollar, that will clearly weaken the British company's competitive position vis-à-vis its American competitor.



**Commodity risk**

Commodity risk arises when a production process depends heavily on energy or raw materials. This may impact, for example, airline companies which purchase substantial amounts of fuel or jewelry companies which purchase gold as an input to their business or mining companies, whose revenues are linked to the open market price for the commodity produced.

*4.2.2. Credit risk*

Credit risk is the risk of loss due to a debtor's non-payment of a loan or other line of credit (either the principal or interest/coupon or both).

If a company uses derivatives it will find that its exposure to its counterparties will change as the market price of the underlying derivative changes.

Counterparty risk, otherwise known as default risk, is the risk that a counterparty does not pay out on a credit derivative, credit default swap, credit insurance contract, or other trade or transaction when it is supposed to. Even organizations who think that they have hedged their bets by buying credit insurance of some sort still face the risk that the insurer will be unable to pay, either due to temporary liquidity issues or longer-term systemic issues.

Large insurers are counterparties to many transactions, and thus this is the kind of risk that prompts financial regulators to act, e.g., the bailout of insurer AIG. On the methodological side, counterparty risk can be affected by wrong way risk, namely the risk that different risk factors be correlated in the most harmful direction.

*4.2.3. Other financial risks*

As companies begin to manage and increase their knowledge of treasury financial risk they may recognize other risk exposures to be managed, for example:

**Financing risk**

This is the risk that a company may either be unable to finance itself in its chosen financial markets, or to pay too high a price for its finance and hence reduce returns available to its shareholders.

**Liquidity risk**

Closely connected to financing risk, liquidity risk results from insufficient financial resources to meet day-to-day fluctuations in working capital and cash flows.

### **Operational risk**

Operational risk is a risk arising from execution of a company's business functions. As such, it is a very broad concept including, e.g., fraud risks, legal risks, physical or environmental risks, etc. The term operational risk is most commonly found in risk management programs of financial institutions that must organize their risk management programs according to Basel II. In Basel II, risk management is divided into credit, market and operational risk management. In many cases, credit and market risks are handled through a company's financial department, whereas operational risk management is perhaps coordinated centrally but most commonly implemented in different operational units (e.g., the IT department takes care of information risks, the HR department takes care of personnel risks, etc). More specifically, Basel II defines operational risk as the risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events. Although the risks apply to any organization in business, this particular way of framing risk management is of particular relevance to the banking regime where regulators are responsible for establishing safeguards to protect against systemic failure of the banking system and the economy.

#### **4.3 Management of financial risks**

There are a number of distinct steps in the management of financial risks:

- ◆ identify financial risk within the organization,
- ◆ measure these risks,
- ◆ define the company's risk management policies which will be enshrined in the company's financial policies,
- ◆ implement the financial risk program,
- ◆ report on the progress of risk management, and
- ◆ periodically re-evaluate the whole financial risk management process.

### **Chapter 5**

#### **The degree of treasury centralization**

Decisions about the appropriate degree of centralization/decentralization of the treasury activities will be made according to principles and evaluations in each of the following categories:

- ◆ What is the nature of your cash flows? You need to consider whether the following can be managed or monitored from one location:

- ◆ Volume of payments by amount and transactional volume – many payments may remain with the local subsidiaries but others will be centralized.
- ◆ Nature of the payments (domestic, cross border, currency).
- ◆ Type of payment – paper and cash transactions are more effectively managed on a decentralized basis.
- ◆ Geographical spread – how many countries' systems and time-zones are involved?
  - What is your company's structure? There needs to be a centralized structure in place across the company if a central treasury is to be cost-effective and efficient. This is due to infrastructure requirements and company culture. The cooperation of the local subsidiaries will be very important when obtaining up-to-date and accurate information.
  - What controls do you have in place? There needs to be a well established set of treasury controls in place to minimize the potential risks of centralizing treasury. While the treasury will need a large degree of autonomy in order to function effectively, its precise role and the scope of autonomy should be very clearly defined.
  - What information would the treasury have access to? A centralized treasury will need access to accurate and up-to-date information for all the companies it manages.
  - Bank relationships. What is the nature of the company's bank relationships? Are there lots of local bank accounts the treasurer will need to manage? Will the treasurer have access to real-time bank account information?
  - What systems and technology do you have in place? Are they reliable? Are they integrated with the rest of the company?
  - Do you have available staff that you can relocate to implement a treasury abroad? In order to implement a successful centralized treasury, the company may want to relocate some key staff. These staff can train new employees at the central location and oversee the set-up. They may also run the treasury for a short or a longer period.

To some degree, the process of centralization reflects the evolutionary nature of treasury management. It also reflects the differences in executing corporate finance and cash management activities. Developments in technology and the global financial markets have made it possible for funding and hedging requirements to be collected and executed centrally. Given the opportunities for cheaper and more effective management of these functions when handled centrally, most

multinationals employ a professionally trained corporate staff to execute the transactions for the entire company and then to distribute internally the required funds or hedging.

In comparison, it has not been as easy to centralize the daily operational tasks of maintaining bank accounts, monitoring cash inflows and outflows and investing short-term funds. There are external legal, tax and banking issues, and internal political/personnel issues that constrain centralization. Many established companies with existing financial operations in multiple countries find vested local interests that resist centralization efforts. As a result, up to this point, most companies have established regional centres – not global centres – to coordinate and perform international cash management activities. This has become most common in the Eurozone where the introduction of the euro since 1999 has led to the opportunity for concentration of euro-denominated funds. The concept of pan-regional cash management activities has extended especially to the Asia-Pacific region, however, the hurdles in these very heterogeneous regions are more pronounced.

### **5.1 Decentralized treasury**

One of the key challenges of maintaining a decentralized approach to treasury is the difficulty in producing an overall view of the company's cash position and exposure to risk on a timely basis. For example, different parts of the business involved in treasury will frequently have different systems and different ways of recording and reporting information. This can mean that it can take a long time to construct a global cash or risk position when combining information from different sources. Consequently, this information is often only produced monthly or even less frequently. It is impossible to make strategic decisions without access to timely, accurate information which is particularly significant during periods of economic volatility.

### **5.2 The risk of decentralized treasury**

In a typical decentralized environment, a company allows its subsidiaries to manage their own payables and payments processes. Each location uses its own staff and infrastructure to support the operation. While this offers flexibility, it can also result in poor visibility of cash and additional interest rate risks because of a lack of pooling mechanisms and a fragmented view of cash.

A lack of standardization in treasury systems across different subsidiaries and a lack of automation can lead to risks in transactions that are not processed straight-through (i.e. incorrect payments and data redundancy). As segregation of functions

is more complex within smaller group companies, combined with a limited central audit/control, the possibilities of fraud increase.

In a decentralized treasury, the subsidiaries remain responsible for their own foreign exchange and interest rate risk management. Proximity and knowledge of the local markets could be an advantage and help to select appropriate hedging instruments. Such a structure, however, might also trigger unwanted exposure for the group as a whole.

In decentralized companies, local and regional staffs take great pride in the fact that they manage all aspects of their business. It takes a great deal of education to convince local managers that the centralization of support activities such as tax, accounting, and treasury is more cost effective, will increase their profits, give them access to more consistent and professional thinking in these areas and free them up to focus on growing their businesses.

## **Chapter 6**

### **Centralized treasury**

Companies which have centralized their treasury activities have done so in various ways, depending on the culture and geographic spread of business activities. In some cases, companies will prefer a central treasury function in a single location from which all treasury activities are managed. In others, treasury may still operate as a single operation, but with locations in different parts of the world. These regional treasury centres may be responsible for regional cash management and also allow “round the clock” access to the financial markets. By using a single system, with the same database underlying it, the benefits of centralization can be achieved whilst still maintaining more local contact with business units and the local markets.

Centralizing business support functions such as treasury is a vital way in which a company can equip itself to build economies of scale and rationalize costs, particularly when acquiring new businesses, therefore increasing return on equity. Every part of the business is continually challenged to demonstrate how it adds value to the rest of the organization and treasury is no exception. Centralization is a key to achieving this by lowering the cost of debt, increasing investment return, providing expertise to business units, reducing financial risk and ensuring liquidity across the group.

By centralizing its payments processes, a company can achieve the significant efficiencies and maximum benefits of treasury management. We can distinguish the following phases of the process of centralization:

Centralization of Treasury Management

1. Centralized foreign exchange and interest rate risk management.
2. Centralized foreign exchange and interest rate risk management, plus cash and liquidity management.
3. Fully centralized treasury, including centralization of all incoming and outgoing payments.

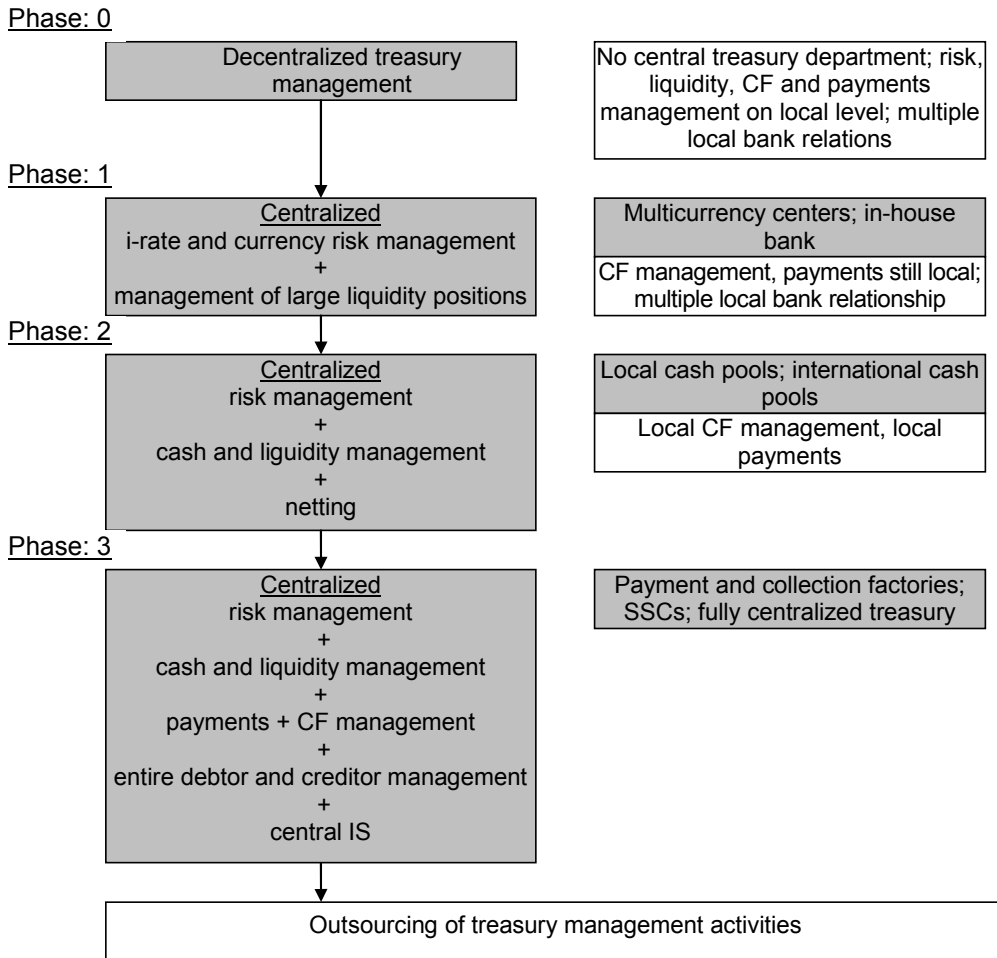


Fig. 6.1. Three phases of the centralization of treasury management

## Chapter 7

### First phase of centralization

**The first step towards the centralization of treasury** is the creation of one central treasury department that carries out a number of tasks (interest rate and foreign currency risk management) for the group. There are two typical types of central treasury departments: multicurrency centres and in-house banks.

#### 7.1 Multicurrency centres

The first step to a centralization is to set up the group treasury as a multicurrency centre. If necessary an overlay bank (see later in the book) can be used to transfer surplus cash to a central pool, with local bank arrangements remaining in place. Periodic manual funds transfers to and from central treasury can take place once a week (or month), or as and when cash is available. The multicurrency centre handles: short-term funding and investment, long-term funding, inter-company netting, foreign exchange exposure management and hedging. It allows for larger cash and foreign exchange positions to be managed on a central level.

Multicurrency centres are the treasury units that open central accounts in all relevant European currencies. These accounts are then used for the central collection of all balances from the European business units. After introduction of euro in 1999, the corporations expanding their businesses into the United Kingdom, Central Europe (Czech Republic, Hungary, Poland) or Scandinavia (Denmark, Sweden)<sup>2</sup> have much to gain from an automated service that brings local currency cash flows from these countries back into a centralized euro account. In the past few years, treasurers have succeeded in centralizing much of their euro-liquidity in Europe. They have established mechanisms to centralize and/or concentrate their euros with their primary cash management banks.

Since the introduction of euro the importance of multicurrency centres has been reduced, but still many currencies continue to exist alongside the euro in Europe. The euro has opened up more opportunities for cash balances management. That means that multicurrency centres are increasingly focusing on the creation of euro cash pools. Each operating company in any European country conducts most of its own cash management tasks. The local treasury managers are responsible for their

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<sup>2</sup> All the countries above mentioned – Czech Republic, Denmark, Hungary, Poland, Sweden – although they are the European Union members, still use their own currencies, not euro.

own bank accounts, and conclude some of the required money market and foreign exchange transactions as well as debtor and creditor management.

The advantages of the euro cash pools are obvious:

- ◆ Interest savings – estimated netting effect; improved interest conditions; better valuation rules.
- ◆ Lower cross border payment costs – lower fees through standardized pricing; possibility to convert cross border payment to domestic balance sheet reductions.
- ◆ Improved liquidity management – management of all liquidity in one place; more effective payment administration; better control of group liquidity; possibilities to a more efficient cash flow steering.

## **7.2 Another level of centralization: in-house bank**

A growing number of companies have implemented so called in-house banks. The in-house bank will provide all of the banking services that the subsidiaries require. Instead of transacting with their external banking partners, the subsidiaries do so through the accounts they hold with the in-house bank. As in-house bank holds all the accounts for all the participating subsidiaries, the central treasury can have accurate information on the level of cash, etc. within the group.

The highest level of cash management centralization is arrangement of the cash flow within the scope of an in-house bank, which maintains accounts of individual companies and performs operations on the internal accounts of these companies. The whole company has a single account for external relations. This naturally minimizes costs for the whole administration of current accounts and payment orders. Of course, the relevant account exists for each currency and is situated in its home country so that the best conditions for domestic payment relations and the best conditions for storage of excess or drawing loans are achieved. All company accounts are placed with a single worldwide financial institution so that the fastest possible international coverage of financial needs is possible. Of course, multiple accounts may be used for some currencies if establishment of these reduces costs (see, for example, the Single European Banking Market).

The problem of individual subsidiary companies or plants is resolved by a system of identification symbols for individual organizational components. The internal treasury system then maintains imaginary internal accounts for individual divisions or subsidiary (affiliated) companies and performs all in-company or in-group settlement simply by transfer to these imaginary accounts. Consequently, a



significant amount of bank fees for payment orders is saved. This concept is completely logical and truly maximally economic. On the other hand, it encounters legislative restrictions. In the case of one company this does not yet concern such a great problem. However, in the case of administration of accounts of independent subjects by an internal bank this centre has the attributes of a bank. It maintains accounts, accepts deposits, provides loans and performs spot, timed and other derivative operations. Consequently, according to most legislations, it should fulfill all the requirements of a bank including a license from the central bank. In this case it is necessary to establish or purchase a banking institution and create an in-company bank on this basis. This model is applied by some large global (Allianz insurance group) companies, particularly those that also provide financial services to clients.

An in-house bank manages the settlement of inter-company transactions on the in-house account and provides the subsidiaries with in-house account statements as a confirmation of the movements on those accounts, in the same way that an external bank would. By routing third party payments and inter-company payables and receivables through the in-house bank or a local payment centre and settling with the central treasury in its own currency, expensive cross-border payments are transferred into domestic payments. Adding to that the reduction in external banking fees and the number of external bank accounts, in-house banking clearly means cost savings for a corporate.

The in-house bank is the centre of any liquidity, financial, and risk management for the entire group and acts as a global hub, while your group companies operate their business locally.

The in-house bank is a powerful tool to centralize the group's financial activities and risks, and it adds tremendous value to the company. It frees up local operating management from cash management and foreign exchange activities, reduces interest expenses and bank fees for the entire group, minimizes idle cash, and centralizes foreign currency exposure management. The in-house bank preferably operates as a separate legal entity, controlled by company treasury. It is recommended that in-house bank should be managed as a service centre<sup>3</sup> rather than a profit centre. This

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<sup>3</sup> When the treasury function is centralized, it is necessary to determine how to distribute revenues and costs between the central treasury department and the operating companies. We need to distinguish between profit and cost centres.

Profit centre means that the treasury has its own profit plan. The treasury is allowed to take financial positions that are not related to the positions of the company's operating businesses.

Cost centre (or service centre) means that treasury centre has no profit target of its own.

results from the experience that most of the income originates from interaction with group companies and it eliminates the pressure of producing a profit either by “speculating” with currencies or adding margins on transactions.

The in-house bank can also act as agent for other group companies, effectively maintaining “mini” in-house bank structures as part of other entities. This might occur where it is determined that such a structure is desirable among entities within a particular country, but where the total country liquidity will be managed by the in-house bank. It might also occur where branches of the parent (for tax purposes) can pool with the parent without restriction. These types of structures complicate the daily processes because they are non-standard, but are easily accommodated by the software tool.

### **7.3 The in-house bank and risk management**

The in-house bank is a powerful tool to centralize a treasury's financial activities and risks. It frees up local operating management from daily cash management and foreign exchange activities, reduces interest-rate risks and bank fees for the entire group and minimizes idle cash. With the in-house bank concept, subsidiaries buy and sell in their own currency from the central treasury or in-house bank and foreign exchange risk is transferred to the in-house bank. As a result, foreign currency exposure management is fully centralized.

The in-house bank ideally operates as a separate legal entity, controlled by the treasury. The main benefit of the in-house bank is that it enables the company to centralize Sarbanes-Oxley processes, accounting, reporting and the control of tax compliant inter-company transactions. By doing this, an in-house bank enables interest-rate and in-house bank risk mitigation.

## **Chapter 8**

### **Second phase of centralization**

**The second phase** is the centralization of cash and liquidity management by creation of domestic cash pools, cross-border and multicurrency cash pools and replacement of bank accounts at local domestic banks with accounts in the global (or pan-European) bank. The process is called cash concentration.

#### **8.1 Cash concentration**

The following text details the most common approach to centralized European cash management: cash pooling and netting.

## 8.2 Cash pooling

Multinational companies usually have cash balances on different bank accounts, at different banks, in different currencies, and often even in the different time zones. The treasury management of the company is responsible for the use of excess cash and optimizing of interest payable for shortage of cash. That means the treasury manager tries to fund cash deficits internally and invest eventual net surplus position in the money market. To do so, the companies physically concentrate the cash balances in one account and one place, giving them optimal handle on liquidity position that were previously dispersed across the globe. The global banks have developed sophisticated methods to concentrate, offset, and convert cash balances automatically to achieve one balance position each day. Such methods are called “cash concentration” or cash pooling.

Globally, cash pooling is a bank product that enables a group to collect money and use it for either further investment or lending. The product is available to companies, which are part of a group of economically related parties. Related parties are business entities that are related by share ownership. For cash pooling business, it is necessary for them to sign a collective agreement to operate a so-called master bank account. Other bank accounts are settled toward this master account. There could be an overdraft agreement with a bank, but this is not possible for either a master account or the other bank accounts in the pooling system. Nevertheless, credit or debt interest rates have to be defined for all accounts. There has to be an agreed level of interest rates between the bank and the companies involved in the cash pooling system and between each of those companies, too.

Banks offer the companies various methods of cash concentration to automatically offset debit and credit balances on current accounts and the following types of cash pooling:

- ◆ real (zero-balancing) cash pooling,
- ◆ fictive (notional) cash pooling,
- ◆ multicurrency cash pooling,
- ◆ cross-border cash pooling.

### 8.3 Real cash pooling (cash concentration/sweeping)

Real cash pooling is based on a transfer from bank accounts to a master account, with balances on all bank accounts except the master account being zero at the end of the working day. This involves the levelling of positive and negative balances via

the physical movement of funds. Surplus funds in member accounts are physically swept to, and deficits are funded from a dedicated master account. A reverse sweep can then be effected on the following business day to reinstate the balances in the participating accounts.

Sweep transactions can happen in two ways: as upstream transactions and downstream transactions. Upstream transactions are automatic transfers of credit balances from operating accounts to the master account, and downstream transactions are automatic transfers of balances from the master account towards operating accounts.

Funds are automatically transferred into a master account daily according to the corporation's preferred position: zero, target, intraday and overnight. Intraday cash balancing helps to avoid many of the dangers involved in cross-border pooling while maximizing the opportunities to capitalize upon its advantages. Cash balancing or sweeping is the process by which a corporate "sweeps" the balances from its subsidiary and participating companies into the master account. The fundamental objective of a sweeping arrangement is to capitalize on excess balance and gain a maximum benefit on working capital while, at the same time, maintaining liquidity. With zero balancing, operating accounts are periodically swept to a zero balance. There are, in practice, two alternatives to zero balancing: target balancing and constant balancing. With target balancing, the value balances of the participating accounts are swept to the master account every day. Then, transfers are made in the opposite direction from the master account to the sub-accounts in order to maintain the target balances for the participating accounts. With constant balancing, the participating account balances are swept every day too, but the pre-agreed minimal balance always remains on the account. That means, only the surplus balance is swept, so the participating account always shows book and value balance equal to the constant balance amount. In the situation, when any participating account balance drops under the constant balance level, it is supplied from the master account using the downstream sweep transaction.

The most common cash management solution, the overlay structure is widely used to physically transfer cash across regional borders to be concentrated in a central cash pool.

## Real cash pooling, situation before and after sweeping

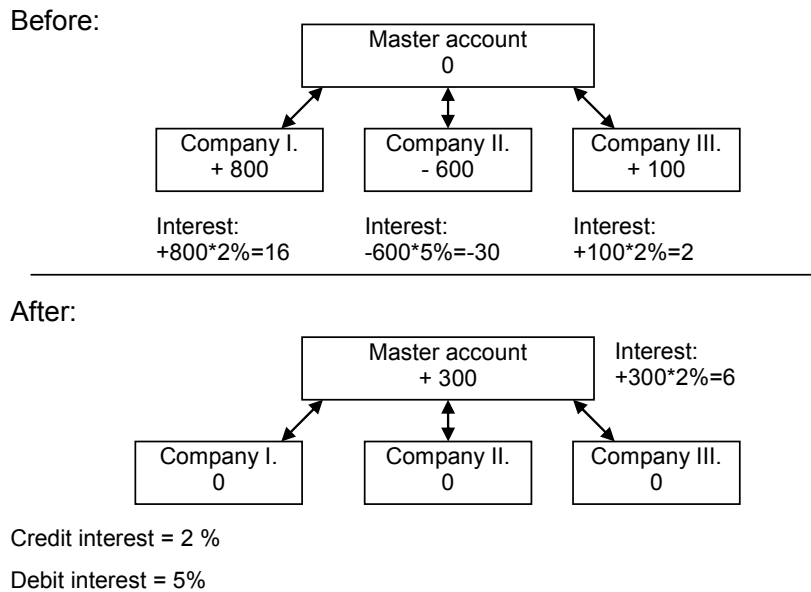


Fig. 8.1. Real cash pooling

**8.4 Overlay concentration structures – cash concentration centre**

With this structure corporations select a global, or pan-European banking provider to establish overlay bank accounts with the local branch of a network bank, while maintaining its existing bank accounts with the local bank in each country where the corporation operates. Each day the surplus cash from these accounts is automatically transferred across the border to the central cash pool where it can be strategically invested or used to zero balance any short accounts in the region. The primary objective of the overlay structure is to concentrate cash through the use of cash pools.

Concentrating cash in a single region extends obvious benefits in terms of centralized decision-making, improved control over cash flows, balanced regional entities and reduced operating costs. Similarly, because each day all the surplus cash for investment is in a single location, generally treasuries experience higher yields and are also able to do cash flow forecasts more accurately, that again can extend to greater investment opportunities.

A bank overlay structure consists of two layers. The lower layer is comprised of all in-country banks that are used for local cash transaction requirements. The higher layer is a group of regional banks, or even a single global bank, that maintains a separate bank account for each country or legal entity of the corporate structure. Cash balances in the lower layer of banks are zero-balanced into the corresponding accounts in the higher layer of banks on a daily basis (where possible, subject to cash flow restrictions). This approach allows funds to be consolidated on either a regional or global basis for greater visibility of cash positions, as well as for centralized management of cash flows.

In addition to all the short-term funding and investment for the group as well as foreign exchange and interest rate hedging, the cash concentration centre must have a centralized balance reporting system in order to be able to manage cash effectively on a daily basis.

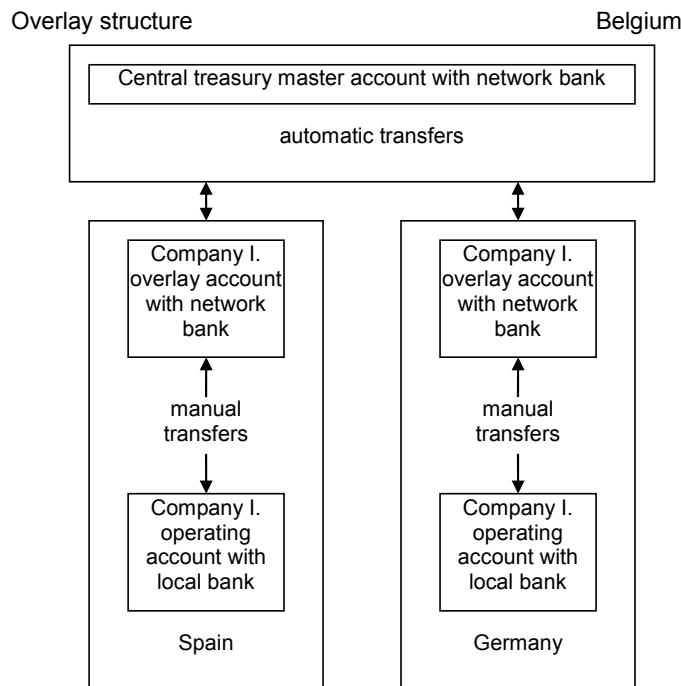


Fig. 8.2. Overlay cash concentration structure

### 8.5 Notional cash pooling

Notional or fictive – because money stays in operating bank accounts and the calculation of interest rates is based on fictive consolidated credit or debt bank balances. An interest compensation scheme that offsets the debit balances against credit balances of accounts in the same currency in a defined pool for interest computation. No physical movement of funds is involved.

Notional cash pooling is also known as interest compensation. No physical cash flows take place between the company accounts. The subsidiaries still maintain legal ownership of their funds and will have to account for the balances on their bank accounts as normal. For financial accounting purposes, the bank account balances are not replaced by inter-company loans. Zero balancing and notional pooling lead to an identical improvement of interest results, but there are some significant differences between them.

Interest payments are paid in different ways in different locations. In some cases, interest is received and paid as if there was no pooling arrangement in place. Then a rebate is calculated and paid back to the group. The rebate is calculated by offsetting the balances and seeing what is the net position was each day and calculating what the interest on this net balance would have been. The rebate which is paid is the difference between this amount and the sum of the interest applied to all the individual accounts (see Table 8.1). This rebate, which is a refund of interest, can be subject to VAT in some countries.

Alternatively, the bank pays or charges the net interest to the master account. This is similar to real cash pooling. But interest still needs to be calculated on the individual pool accounts as if they had not been netted and an internal method of interest relocation will need to be established for the participating accounts. The interest will have to be physically debited or credited to each account on a periodic basis (monthly or quarterly) or accounted for internally.

In order to make use of any surplus funds in the pool, the master account will need to be debited to the extent of the surplus balance (that means effectively bringing the pool to a zero balance). The funds can then be invested elsewhere or used to pay down debt. An overdraft facility of a sufficient size will need to be arranged on the master account so that the account can be overdrawn at any time to the extent of any surplus balances. Similarly any shortfalls must be funded or suitable credit arrangements put in place.

Table 8.1. The result of notional pooling

	Participating account # 1	Participating account # 2	Participating account # 3	Notional balance
Accounts balance	€ 6000000	-€ 3000000	-€ 4000000	-€ 1000000
Interest applied Cr 3% pa, Dr 6% pa	€ 180000	-€ 180000	-€ 240000	N/A
Interest applied on a notional balance	N/A	N/A	N/A	-€ 60000
Calculation of notional rebate of difference	* Sum of all Cr/Dr interests applied on participating accounts = -240000 * Interest applied on a notional balance = -60000 <b>Rebate, i.e. difference between -240000 and -60000 = +180000</b>			
Total of interest paid	is: -240000 + 180000 (notional rebate)			-€ 60000

### 8.6 Cross-border cash pooling

Cross-border cash pooling helps corporations avoid the bureaucracy intrinsic to transferring cash across countries and different clearing systems, as well as different legal entities and the headache associated with additional intercompany loan administration. While there is a selection of solutions in the marketplace, most of these operate on an interest enhancement basis where corporations are rewarded for servicing their liquidity thru their chosen bank, but the bank is unable to achieve balance sheet offset due to the complexity of multiple jurisdictional and regulatory barriers.

Multinational corporations that are looking for transparent reporting, inter-company loan tracking and segregated legal entity performance management will often choose this cash concentration technique.

In many countries a rule of **thin capitalization** has been introduced. That means, the intra-company loans have to observe thin capitalization requirements, that have been set to prevent companies avoiding tax liabilities when they fund their subsidiaries. Otherwise, the interests from inter-company loans paid to the headquarters located overseas can be re-classified as a dividend yield and therefore are not tax deductible. Interest rates between pool members should be based on market rates (depending on the currency and terms of the funding). There will be a range of possible borrowing/depositing rates and a mid-point must be found that is acceptable to all parties. In some jurisdictions there may be a benchmark interest rate (+/- base rate) for inter-company loans that tax authorities might seek to apply.

### 8.7 Multicurrency cash pooling

Bank account balances in different foreign currencies are swapped to one agreed currency, which is the base for the interest rate calculations. It is especially



convenient for export-oriented companies that have bank accounts in different currencies and periodically convert foreign currencies into agreed currency.

### **Multicurrency cross-border cash pooling**

In this case all foreign currency accounts are held in one international financial centre (typically London) with the advantage of all liquidity positions being held in one place. The cash pool is achieved through either a notional or inter-company loan cash pool (real or zero balance cash pooling) where in both cases the need to perform foreign exchange and/or swap transactions is eliminated. The cash pool bank can fully offset account balances in multiple currencies to calculate the net balance in the currency of choice without the customer having to execute a single foreign exchange transaction. This reduces the much sought after foreign exchange and bid/offer spread on interest applied to these cash balances and yet increases interest income as well as adding significant value to other liquidity management requirements, such as improved visibility and control of global cash.

### **8.8 Two viewpoints to assess the effectiveness of the cash pooling**

The first possible viewpoint is a viewpoint according to the type of company where the cash pooling system is to be used. The first case is use within the scope of one company with a number of individual organizational units (plants), where pooling enables effective management of financial means even during a requirement for decentralization of the organizational units. The second alternative is use within the scope of a holding company with independent accounting units – companies in the group. Here pooling makes management of finances more effective from the accounting and administrative aspect from the beginning of separated units.

The second viewpoint of the use of pooling is according to the initial purpose. From this aspect, it is possible to divide pooling into pooling for associating cash and into pooling for making financing more effective. The first use accents the improvement of the possibility of investing free financial means during a greater volume of these. The second alternative is the possibility to use the free resources of one unit for financing of other units without bank loan costs.

Which independent companies actually use cash pooling? These are any companies, which require that financial management of organizational units is kept separate and fully transparent. Also, such companies base their assessment on the realized cash flow of organizational units. An example would be the fast moving consumer goods (FMCG) companies, industrial companies within individual plants or financial

institutions with regional branches such as insurance companies for instance. Each such company must determine the degree of independence of its organizational units. Independence can be complete within the scope of an annual plan in the sphere of income and expenses. Or independence is limited in the sphere of expenses by a certain annual budget and in the sphere of income by the task of achieving the planned cash flow (the most usual case).

### **8.9 Pooling structures**

The used type of pooling structure is determined according to this differentiation. Within the scope of one company and one country the most effective system is zero balancing because it performs complete centralization of financial means. If the individual branches fulfill simply the income part of the budget and expenses are centralized, it is suitable to perform transfers in only one direction. Single-direction zero balancing is the system most used. With regard to the overdraft limit in this arrangement then this is not allocated on the level of individual accounts (organizational units) and usually serves only on the master account level for covering cash flow deviations. If the branches are not an income but a cost centre, it is suitable to enable either drawing of an overdraft limit from their accounts or to subsidize them by a certain sum each day. If costs are approximately the same every day it is appropriate to use dual-directional pooling with retroactive transfer of the defined amount of the daily budget. This arrangement can also be used during management of branches governing income and expenses, if expenses fulfill the requirement of stability. In this arrangement we do not allocate an overdraft limit on the level of the individual account. Management of branches issues from the determined daily budget. The overdraft limit on the main account serves for the purpose of the centre and for cases of non-coverage of expenses of a branch by income from elsewhere.

In cases of cost branches, which have variable expenses during a measure of days, but stable expenses within the scope of the month, it is possible to select from several various arrangements. One alternative is to transfer the whole volume of the monthly budget to a secondary account and monitor the volume of submitted payment orders in the centre (must be monitored by the company information centre). The second alternative is to enable the individual account to draw an overdraft of up to the sum of the monthly budget. And again the company information system must monitor either the volume of submitted payment orders (the more complicated alternative) or the volume of transfers from the top account

to the secondary account. This alternative is also offered by some banks within the scope of real pooling. Their system enables automatic monitoring of the cumulative volume of transfers between the top and individual account and if the overall cumulative limit for drawing is exceeded, does not allow drawing of an additional overdraft. If the branch expenses are various even from month to month, it is possible to resolve this problem by regular modifications to the sum of the overdraft limit month by month. In these cases the overdraft limit of the main account is delegated to individual accounts and its sum does not have to exceed the sum of limits of individual accounts. It is appropriate to modify the settings of the individual overdraft limits according to the updating of the annual plan of expenses.

In the event that the organizational unit governs income and expenses a combination of the mentioned approaches is necessary. The simplest method is the alternative of profit centres, when expenses must be covered by the own income of the unit. Subsequently, the most suitable solution is dual-directional pooling with retroactive transfer of the transferred balance. For better coverage of the cash flow the branch may be set an overdraft limit. If the branch has limited stable daily expenses, the already mentioned alternative of retroactive transfer of the target sum is appropriate. If we wish to limit the variable expenses and the branch also has a set income, then it is appropriate to plan the acceptable negative difference within the certain period between income and expenses and to enable cumulative drawing of an overdraft for this amount during the course of the period.

All the above given types of use of pooling allow for pooling in one currency. This is the most usual type because conversion operation costs do not exist. Pooling with conversion usually also brings such great expenses that it is not worth it for larger amounts. Consequently, it is better to divide organizational units so that they work with the smallest possible number of currencies (with a minimum of accounts). If they work with multiple currencies, it is appropriate to again structure each currency according to the responsibility and character of income and expenses of the given branch as was mentioned above.

### **8.10 Pooling within a holding structure**

Naturally, multinational companies use cross border pooling and associate liquidity in individual currencies in their nostro<sup>4</sup> accounts serviced by the central treasury of

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<sup>4</sup> Nostro accounts are usually in the currency of the foreign country. This allows for easy cash management because currency doesn't need to be converted.

the company. Use in the case of holding companies is more complicated, particularly as a result of greater decentralization of information and functions than in one company. On the other hand, the range of purposes for which cash pooling can be used is expanded by tax optimization, in-group financing according to the rules dictated by the owner and not the bank and in-group risk management thanks to netting positions in individual currencies.

Cash pooling used within a holding is based in the acquired controlling share in subsidiary companies. Individual participants of the pool may have, but do not have to have, mutual financial flows. However, their existence makes use of the pooling structure more effective, if mutual settlements are performed within the scope of one bank and one pooling. The central treasury may in such cases take two different standpoints.

Either it can completely omit management of in-house receivables and payables and monitor only external positions, because in-bank transfers do not change the overall position of the pool. Or the second possibility is decentralization of settlement of in-group items, when all in-group payments are initiated by a centre. This naturally also performs potential netting of payments by means of setting off.

### **Case study 1:**

#### **The application of cash pooling into business practice - ČEZ Group**

Based on the following paper:

**Polák, Petr and Ondřej Simon.** 2008. "The Application of Cash Pooling into Business Practice – ČEZ Group". *Investment Management and Financial Innovations*, Vol. 5 (4), pp. 32-38.

#### **The ČEZ Group**

Cash pooling itself brings many advantages for companies of a group arrangement. Going through the introductory process is more demanding financially and time-wise, and should not become a way of making the financing of company management easier, more transparent and more effective. The group mainly appreciates these advantages, in the terms of reducing work with a large number of companies with a large number of independent accounts. Following the cash flow of the entire group is very demanding and considerably badly arranged in such cases. That is why, they directly offer the use of cash pooling and it's not only for the reason of getting a better overview of financial flows of individual companies, but

mainly because of the possibility of better using monetary means in the group and for cost savings. On the Czech market one of such groups is, for example, the ČEZ Group (Skupina ČEZ), for which the conditions in the following text will be set out using real cash pooling and a pool structure.

The ČEZ Group is one of the biggest power trusts in Europe. In the Czech Republic, it is the main supplier of electrical energy, the operator of the distribution systems for most of the country and the most powerful subject on the wholesale and retail markets with electrical energy. In addition to its primary business activities, the ČEZ Group, which represents the production, distribution and sale of electrical energy, cooperates with groups likewise dealing with the production and sale of heating and the processing of secondary energetic products. It also has further activities in the areas of telecommunications, IT, nuclear research, design, the construction and maintenance of power equipment and the excavation of raw materials. Thanks to the expansion of foreign companies, the ČEZ Group serves almost seven million customers. Out of the total volume of electrical energy produced in the Czech Republic almost three quarters fell to the electrical energy produced by the ČEZ Group. Although a decisive part of electrical energy is determined for the domestic market, a considerable part of it is for export. After the French energy company EDF, the ČEZ Group is the second indirectly greatest exporter of electrical energy in Europe.

At the beginning of the 1990s, the company ČEZ provided only the production of electrical energy. The distribution of electrical energy in individual regions was dealt with by eight regional distribution companies that were in state ownership. In the year 2003, the state sold five of the eight regional distribution companies of the joint stock company ČEZ. In that way the ČEZ Group was established and the accompanying production of electrical energy distribution stopped. In this way the Czech energy companies adjusted themselves to the structure common in Western Europe. As the parent company the joint stock company ČEZ acted as an umbrella managing the whole trust. The centralization of decision-making brought significant synergetic effects to the group and the possibility of co-ordinating decision-making effects with the objective to obtain advantages for the whole group. Centralization dealt with, in particular, activities in financing, accountancy and controlling, human resource management, risk management, strategic management, trade management, internal control systems, the seeking out of group and acquisition possibilities and acquisition administration.

At the present time, the ČEZ Group works actively on the markets in Bulgaria, Romania and Poland. Trade representation of the ČEZ Group abroad is in Germany through the means of CEZ Deutschland GmbH, and also in the areas of Slovakia, Hungary, and former Yugoslavian countries.

### **Application of the cash pooling as an important part of cash management in the ČEZ Group**

From the company numbers, which are part of the ČEZ Group it is apparent that managing the Group will not be an easy matter. That is why, it is necessary to constantly look for methods on how to manage more easily, more transparently and mainly more effectively. In the areas of managing liquidity, space was also established for using the advantages of real cash pooling, whose introduction into a group company as ČEZ could be very beneficial for the group.

From the basic variants of cash pooling real cash-pooling was selected. In addition to the advantages of the real centralization of funds for individual accounts, which is not negligible for the volume of the financial parts of the ČEZ Group, it offers as well a higher valuation of financial means as a consequence of the non-existence of regulator costs. The following paragraphs will be devoted to the proposal of introducing real cash pooling in the ČEZ Group.

As pool leader, which is the owner of the pool account, the groups will rise from the parent joint stock company ČEZ. Its task will be to administer accounts connected with the company, re-account interest between pool participants and account for all.

The connected companies will identify with the proposed model with the process companies for which the model is possible to expand and for other companies which the parent company would like to join into the pool. With regard to planning the stoppage of the activities of the individual regional distribution companies, these companies will not be included in the proposal.

The transfer of balances between accounts will function on the basis of zero balancing, which means that the balances for connected accounts will be naught at the end of the day. The proposed variants are assumed to function on the basis of one-way cash pooling (which means that at the beginning of the second day a certain amount of financial means will not be transferred back to the connected accounts). According to the following expenditure, the individual accounts will set up technical limits into which an account amount can be in debit during the day. In the case of an exceptional need for higher expenditure than the set limit, it is possible to

operationally change this limit, whether it be transferable or permanent. In connection with the permitted debit balance for individual accounts, it will be necessary to settle with a bank for a pool account the possibility of current account credit and its maximal possible amount that is in a current account framework.

In regard to the close communication between process companies and the joint stock company ČEZ, cash pooling will be proposed in terms of a single banking institution, that is intra-banking pooling. This type of cash pooling is also the cheaper variant for reducing costs in the creation of an inter-bank pool.

#### **A proposal for account structures connected to cash pooling in terms of the ČEZ Group**

Many methods exist for pooling financial means to a group account. Each company connected to a pool can have many various amounts and set up of accounts depending on the need to follow some cash flows separately. It is possible to base a special account for keeping records on the individual activities of company performance or, for example, split off the accounts through various groups of customers. Account set-up in the group then depends on if the accounts are connected to the pool account directly or monetary means have been previously pooled in the company framework into the main account of the company and only then transferred to the pool account. In the following text, both variants will be worked out, that is the two-level cash pooling variant and the single-level cash pooling variant.

#### ***Variant No. 1 – A proposal for using multi-level cash pooling***

A more well-arranged variant from the cash flow viewpoint in terms of the individual companies shows the pooling balances of accounts on several levels. The proposed model will illustrate the possibility of pooling on two levels – on the level of the company and on the level of the groups. In arranging a suitable structure of accounts for individual companies, it is good to have an idea about the monetary flow which passes through it. The following lines will be devoted to a proposal for account structures in the individual process companies of the ČEZ Group and their pooling into the main account of the given company.

#### ***Cash flow and account structure in the process companies of the ČEZ Group***

Each of the companies of the ČEZ Group is oriented in various entrepreneurial activities. That is why, for each of them different amounts and account set-ups would be suitable. Some of them, for example ČEZ Distribution (ČEZ Distribuce) or ČEZ Sales (ČEZ Prodej), are specific in their own activities, and from which comes

that the proposed structure of the amount in the accounts has to be as “tailor-made”. For other companies it is possible to bring out certain common features. The character of their cash flow and therefore the necessary number and structure of accounts will be similar. Thanks to this fact it is possible to fundamentally simplify the proposed model and instead of ten various account structures in terms of the process company to suggest only three, which will be applicable to the individual process companies. This deals with the following types of account structures.

- ◆ **several banking institutions/several bank accounts** – a company with a dominating connection to external clients – the company has one main account and some accounts divided according to the purpose for which they were established;
- ◆ **one banking institution/several bank accounts** – the company has one main account and one account divided up for specific purposes;
- ◆ **one banking institution/one bank account** – a company has only one main account, which serves for all direct debit relations.

Ondřej Simon, Head of Group Financial Operations, ČEZ, a.s. says: “During the implementation process, it is important for a company of our size and profile to maintain an ongoing, active dialog with the bank chosen to implement and run the cash pooling structure. By so doing, the risk of a mismatch between our requirements and the system’s capabilities is significantly reduced. At the outset, it is crucial for both sides to really understand what the company is requesting on the one hand and what the bank is capable to deliver on the other. In our case, we decided to engage Komerční banka (KB), a leading Czech bank and core financial partner of our group, esp. for CZK-denominated domestic payments. Establishing an interdisciplinary team of specialists dedicated to the project according to its demands for expertise can go a long way to ensure a smooth transition from conceptual phase to implementation. And as it turned out, the transition from notional pooling to real cash pooling unfolded smoothly without serious incident. The process took only 6 months to complete, thanks in no small part to the professional and cooperative approach of our partners from KB. The following post-implementation support and operational “trouble shooting” is available from KB’s highly-trained, professional staff, meeting the needs of all our group members connected to this pool structure to their full satisfaction.”

#### ***Interest settlement for two-level cash looping***

It is connected with the idea that a group pooling account has two account levels under itself and a bank has to work on the individual levels in calculating interest. The first step of the bank in accounting interest consists in settling the pool on a



company level that is determining the balance for the main account of a company. The bank then transfers the credit balance from the individual connected accounts to the main account and the debit balances are settled from the main account so that the final state of the connected accounts would be zero. In other words, a “cleaning transaction” is carried out. In this way, the financial means from the main account will be raised to the credit balance or reduced to the debit balance of the connected accounts. Adding up all transferred balances with the income and expenditure of the main account itself of the company gives the bank a final main account balance. In the following step there will be carried out, in the case of a credit balance on the main account, its transfer to the pool account or, in the case of a debit balance on the main account of the company, a transfer of financial means from the pooling account so that no financial means stay on the main account of the company.

This process will be repeated for all companies connected to the pool. Adding up all net transfers, whether to or from the pooling account, will determine the final balance of the pooling account, which will be given interest according to its character with either a credit or debit rate. The interest rate for a given interest to the balances for the pooling account is settled in the contract between the pool leader and the bank. The amount of interest derives from the reference interest rate, that is the rates used for the inter-banking market and from the amount of margin of a given bank. The credit balances are given interest through the PRIBID rate from which the bank subtracts its margin. The rate for debit balances is understandably higher and its size is set according to the PRIBOR relation + bank margin.

***Variant No. 2 – A proposal for using a single-level cash pooling***

It differs from the two-level cash pooling for which a kind of pooling of monetary means in the framework of the company on the main account in that it does not take place. The credit balances of all accounts existing in a given company are transferred to the pooling account. The debit balances are financed as opposed to the pooling account. The proposal of structuring accounts in the framework of a single-level cash pooling will come out of the cash flow going through the individual process companies just as the way indicated in the chapter about two-level cash pooling, the only difference being that the individual accounts will not be pooled into the company’s main account, but will be directly connected to the pooling account.

***Settling interest for single-level cash pooling***

Just like in the case of two-level cash pooling the bank gives interest to the balance of the pooling account according to its character whether it be with a credit or debit

rate. The difference, as opposed to two-level cash pooling consists only in the fact that the balances of the individual accounts of the connected companies are transferred to the pooling account. The bank then first finds out the balances for the individual accounts of the process companies and a clearing transfer is carried out to the pooling account. The individual transfers are summed up in this account and the balance is obtained from which, according to its character, a credit or debit rate comes about.

### **Comparing of two proposed variants**

It is possible to reach the same results for the group using both methods. Both methods are then well used in the same way. Naturally, there exist certain differences which after consideration could lead to the conclusion that one of the variants is just a little more suitable. The basic difference exists in the following parameters: The difficulty of determining the net position of a company in a pool, the number of transfers from connected accounts to the pooling account and the accessibility of a given type of cash pooling on the banking market.

The facility of determining the net position of a company in the framework of the pool is a great priority for multi-level cash pooling. Thanks to the pooling of balances into the main account the company has information about the amount transferred to the pooling account available at once. In the example introduced in the chapter about settling interest for two-level cash pooling, it is suitable to have a net position of the individual companies with a clearing transfer from the company's main accounts to the pooling account, because the cash flows indicated are carried out in the framework of one day. The net position of a company in a pool, however, changes every day. Its updated amount is calculated by adding up the net position from the past and an updated clearing transfer. This parameter shows how much money of a given company is deposited in the pool account and it is important in particular for re-budgeting pool revenues.

As opposed to this, single-level cash pooling gives a company information about the amount of means, which are taken out of the pool account and is rather more difficult. The balance transfers of all accounts connected to the pool have to be added up. For a small number of accounts in a company this disadvantage is rather negligible. If it would be, for example, the company ČEZ Prodej (Sales), a decision would be made to differentiate the accounts more for keeping records of its own customers and could make it easier to find mistakes in determining the net position of the company than in using two-level cash pooling.

From the single-level cash pooling plan, it is evident that there are many more transfers to the pooling account in comparison with multi-level cash pooling. It is possible to chalk another point up for multi-level cash pooling. Although a greater number of transfers for single-level cash pooling can seem at first glance as a banal and negligible matter, it is applicable in that it can determine a net position. In the greater number of accounts in a company, many more transfers to a pool account are established, which has a fundamental influence on the overview of cash flows also coming from the connected companies. Pooling on many levels not only ensures an overview, but at the same time helps to eliminate the possibility of mistakes in settling pooled revenues and interests on the part of the pool leader.

A considerably important parameter for deciding between introducing single-level or multi-level cash pooling is the availability of these types on the banking market. Although it comes from the previous number of arguments that two-level cash pooling is more suitable, a basic obstacle can arise during its introduction. Some banks do not offer two-level cash pooling at all. A group can repeatedly change its bank, but has to thoroughly consider if its choice is really advantageous. For example, it was shown that results for the group will be suitable in both proposed variants. There exists then the possibility of substituting two-level cash pooling with something less overseen that functions just as well for single-level cash pooling.

Result summary of comparing both variants is illustrated in Table 8.2:

Table 8.2. Comparing the proposed variants of cash pooling

Evaluation criteria	Single-level cash pooling	+/-	Multi-level cash pooling	+/-
Results in the framework of the group	same		same	
Overview of company cash flow	less	-	more	+
Determining net position	more difficult	-	easier	+
Availability on the banking market	same		same	

### 8.11 Netting

Netting is a service that allows companies to settle their obligations (payables or receivables) through a designated netting centre, usually managed wholly by the parent company. The service enables the netting centre to do netting computation and derive the final amount (net payable or receivable) that must be settled by each company to the centre.

Netting is a tactics that multinational companies use to consolidate fund flows between their subsidiaries across the globe and themselves to enable efficient cash management. There are two types of netting – bilateral netting and multilateral netting.

Bilateral netting involves netting several transactions among two of the company's subsidiaries such that the net balance is calculated and transferred periodically. Multilateral netting works similarly, however, it involves multiple subsidiaries. For large multinational companies, a multilateral netting system would be necessary to effectively reduce administration and currency conversion costs. Such a system is normally centralized so that all necessary information is consolidated.

Multilateral netting system requires a certain degree of administrative structure. At the minimum, there must be a netting centre manager who has an overview of the interaffiliate cash flows from the cash budget. The netting centre manager determines the amount of the net payments and which subsidiaries are to provide or receive them. Existence of the netting centre does not mean that the multinational company has one central cash management, however. If the company uses a centralized cash management system, all the intra-company payments flow through the central cash depository.

Both these netting forms minimize the number and frequency of the transactions between the parent company and its subsidiaries and enable better management of risks related to foreign currencies. Netting mechanisms facilitate the companies to use leading and lagging devices efficiently; these devices ensure payments before schedule (leading) or after schedule (lagging), ensuring smooth transactions. In the event of currency depreciation (relative to the receiver's currency), leading yields benefits and in the event of its appreciation, lagging. By implementing adequate netting mechanisms the companies can also improve their cash flows, as the mechanisms necessitate proper planning of funds.

## Chapter 9

### Third phase of centralization

**The third and final phase** towards fully centralized treasury involves the centralization of transaction processing – that means, first of all, the centralization of all incoming and outgoing payments. In some cases, the documentary payments are also centralized. The centralization of transaction processing consists of the following steps:

- ◆ Centralization of all incoming and outgoing payments = payment factories.
- ◆ Centralization of the entire debtor and creditor management = shared service centres.
- ◆ Outsourcing of treasury management activities.

## 9.1 Payment factories

The first step towards the centralization of debtor and creditor management is the centralization of all incoming and outgoing payments relating to these debtors and creditors. The company establishes a new central business entity, the payment factory. By using a payment factory, a company can consolidate standard accounts payable files from the operating units and prepare the respective payment instructions in one process, enabling a single payment transmission to banks.

The payment factory could be a function carried out within a shared service centre that is also providing other services to a corporate group. Often the payment factory is linked to a corporation's in-house bank or group treasury centre and provides a service for processing payments, and often collections (that means its name could be the payment and collection factory), from one central location. In most companies, the payment factory also includes the accounts payable, accounts receivable and reconciliations areas. It may also handle the settlement of inter-company transactions by running netting, re-invoicing or in-house factoring operations for the group.

Some corporations may prefer to set up a virtual payment factory instead of that one physical shared service centre for handling the accounts payable and receivable functions. In such a case it would mean files of payments being sent electronically into one centre where either a cash management engine or a suitable ERP module would validate and process them and pass them to the appropriate banks.

By utilizing software to connect in-house systems (such as ERP – Enterprise Resource Planning<sup>5</sup>, and TMS – Treasury Management System) to banks, the payment factory can act as a centralized operating centre for multiple locations (using a payment hub). The payment factory maintains full control over payments, cash flows and operational issues through embedded workflow and approval procedures. As a result, a centralized treasury organization along with a payment factory enables companies to improve liquidity and risk management and introduce control around security, thanks to the greater transparency. The most important operational risk factor in the payment factory concept is that the in-house systems are directly connected to the bank. This involves issues around authentication, access and

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<sup>5</sup> The SAP ERP treasury and risk management module is meant.

delivery of files to the banks. To fully protect themselves against fraud, corporations need to implement end-to-end controls to guarantee integrity of payment files.

Among the main advantages of the payment factory are:

- ◆ Less disruption to subsidiaries – do not need to set up new external bank accounts. The operating company (subsidiary) no longer needs to maintain electronic interfaces with local banks. This can create significant savings because the operating companies do not have to adapt their systems to changes in electronic banking systems to ensure straight-through processing, and they will avoid electronic banking and service fees.
- ◆ Each operating company has its own internal account to simplify reconciliation.
- ◆ Conversions for foreign currency payments and receipts are handled centrally. This simplifies the transactions for the operating companies, and enables the whole group to achieve more control of foreign exchange exposures while minimizing the external costs of the currency conversions.
- ◆ The payment factory can handle central bank reporting on behalf of all subsidiaries.
- ◆ Reduction of transaction costs. Given the large volumes of transactions, the payment factory is in a position to negotiate competitive transaction fees with the bank. And, the payment factory is able to execute the payments through the optimal channel, for example, non-urgent payments through the lowest cost clearing system, and urgent payments via a real time gross settlement clearing system<sup>6</sup>, etc.

Another challenge firms face in centralizing payment factories is the need to integrate multiple local remittance formats into a single global ERP. On the other hand, with the payment and collection factory, it may still be necessary to keep local bank accounts to handle tax issues, ad hoc payments and payroll separately. Payroll is regarded as confidential, and tax is time-critical payment.

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<sup>6</sup> Real time gross settlement system (RTGS) is a funds transfer mechanism where transfer of money takes place from one bank to another on a "real time" and on "gross" basis. Settlement in "real time" means payment transaction is not subjected to any waiting period. The transactions are settled as soon as they are processed. "Gross settlement" means the transaction is settled on one-to-one basis without bunching with any other transaction. Once processed, payments are final and irrevocable.

## The payment factory

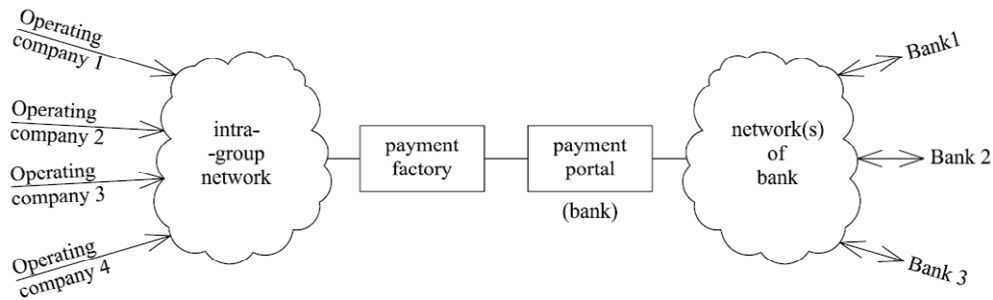


Fig. 9.1. The payment factory

## 9.2 Shared service centres

A shared service centre (SSC) acts as a single business unit in which common finance and administrative functions of multiple subsidiaries are centralized. The SSC allows routine tasks to be carried out with the appropriate skilled staff and the technical infrastructure to support it. While payment factories traditionally dealt only with payment processing, the SSCs are taking additional responsibilities, such as collection processing, reconciliation and the settlement of transactions between different companies of the same group. The key tasks that are usually carried out by the SSCs are the accounts payable and receivable administration, that means all the accounting and administrative tasks are centralized, not just the payments.

For some companies, setting up the SSC may require more investment than they will ever get back in cost savings, so instead they may look at centralizing payment execution through a payment factory. While a payment factory does not provide all the benefits of the SSC, it can lead to a reduction in transaction costs.

Setting up the SSC has certain requirements in order to achieve maximum efficiencies:

- ◆ treasury management and/or payment system;
- ◆ ERP – Enterprise Resource Planning system or at least a fully integrated accounting system in the group; and
- ◆ centralized group cash management.

In setting up SSC, the most efficient process would be to implement the ERP/accounting system first, and then the SSC. Once the infrastructure has been implemented, an appropriate cash management solution can be identified and

implemented. Notwithstanding, it is likely that any company embarking on implementing the SSC has already centralized its cash management function. Usually, the companies progress from a centralized cash management structure to a payment factory and then onto shared service centre establishment.

Whether operating from a centralized or regional shared service centre, companies will be able to gain control and visibility over their cash out-flows (payments processing) and cash in-flows (receivables management) which, in turn, offer treasurers greater control over their operational risks. As a result of centralized control of the groups' currency position, the foreign exchange risk and overall group exposure therefore decreases.

A centralized treasury will involve substantially higher values and volumes of its cash flows, centralized transaction processing and often single platform IT infrastructures and thus results in different kind of risks, such as system failures.

### *9.2.1 Why companies move to SSC*

All high volume and repeatable activities such as customer orders, operations planning, receivables, indirect purchasing, payables, fixed assets, bank reconciliations, tax, statutory and management accounting can be managed within the same building for the whole region. Such centralization of financial centralization and information helps in cash flow forecasting as well as large savings that can be achieved on internal operating costs.

Establishing shared service centres for centralizing financial activities such as payments and collections is a desirable activity from a shareholder's perspective. However, their introduction can inevitably result in concerns and dissent in other parts of the business, where local responsibility may appear to be eroded and business functions moved to remote locations. From a treasurer's point of view, centralizing financial processes should bring a variety of benefits in terms of financial supply chain management, working capital optimization and forecasting. Without close integration of the financial shared service centre into corporate treasury, many of the benefits as below mentioned can be lost. In most companies, the shared service centres are part of corporate treasury, but in others there can be little or zero interaction between the two, so treasury department is losing out on leveraging these benefits.

The creation of SSC can take place in various steps. From the beginning, the SSC can operate as a payment and collection factory, then it can take a responsibility for the entire accounts payable and accounts receivable management. Later, additional



responsibilities can be added to the SSC's range of tasks, such as centralized purchasing, group bookkeeping, career planning, etc.

The main advantages of the central execution of tasks through the SSC are as follows:

- ◆ Cost minimization – create economies of scale. Major areas for cost reduction include headcount, site related expenditures, and process related improvements.
- ◆ Enabling companies to focus on core competencies, more easily apply functional best practices for continual improvement.
- ◆ Improving employee accessibility to information.
- ◆ Ability to outsource selected administrative processes.
- ◆ Better opportunities for cash and liquidity management.

On the other hand, companies often fail to retain key specialists as they centralize operations into a shared services model. There can be various reasons for this. In some cases, multinational companies do not budget for bonuses to retain key staff during the transition from local finance departments into the SSCs, resulting in a loss of expertise and lack of trained staff to support new personnel in the centres. In others, there is little or no transition period and there is no continuity of staffing between the previous business organization and the SSCs. And implementing change across embedded cultures and managing the transition to shared services are a formidable task in many companies. There needs to be a sound appreciation from the beginning about the impact of the SSCs on each individual employee, which needs to be clearly communicated.

While cost reduction was an initial driver for many SSCs, the objectives have expanded to include strengthening compliance, managing risk in the financial supply chain and enhancing working capital. Since the financial crisis, these factors have become even more significant. By ensuring greater visibility over our cash, control over payments timing, reduced operational costs and faster collections of cash, the positive impact on working capital can be considerable.

### **9.3 What else to consider when centralizing the treasury operations?**

Even there is a decision, and steps are taken, to centralize the treasury functions, additional factors must be considered, such as:

- ◆ Existing bank relationships – the participating companies may think they enjoy good terms and conditions from their current banks.

- ◆ Lack of control over funds – there may be a concern that if funds are transferred to the treasury centre they may not be returned as and when required.
- ◆ Additional administration required to track inter-company loans.
- ◆ Culture – for example, in Southern and Central/Eastern Europe countries, companies may be used to have banking relationships with more than one bank. That means it may take some time for these companies to make the cultural change to work with one bank system on a pan-European basis.
- ◆ Treasury management system upgrade requirements and its integration with the ERP system.

## **Chapter 10**

### **Outsourcing**

Another phase of centralization is to remove the process out of the company entirely. If a process can be taken away from the participating company, then it might be more efficient to find a third-party administrator to handle the task. Similarly, there may be head office treasury and finance functions that can be outsourced. Companies can realize substantial cost savings by centralizing their cash management activities. As at a certain point, the opportunities for cost savings through internal centralization are exhausted, further cost reductions can only be achieved by outsourcing a number of treasury functions.

Outsourcing is often seen as the next stage following centralization to achieve additional economic benefits. Once processes have been standardized, it is much easier to outsource certain functions.

#### **10.1 Why to outsource?**

Many companies, especially medium sized ones, opt to outsource some part or majority of their treasury operations. Among the main reasons for this are:

- ◆ to avoid expensive systems and information technology investment;
- ◆ to acquire a skills set not available in the in-house treasury;
- ◆ to achieve better performance from more professional approach;
- ◆ to achieve more efficient treasury operations;
- ◆ to increase speed to market;
- ◆ to allow the company to concentrate on its core business, instead of treasury;
- ◆ to achieve best practice control;

- ◆ to reduce risk as markets, competition, government regulations, financial conditions and technologies all change extremely quickly. Outsourcing is a vehicle that enables the organization to share these risks with the outsourcing provider; and
- ◆ to put a full treasury capability in place, where one does not exist.

In addition, inside the treasury department itself, outsourcing of treasury management allows the corporate treasurers to concentrate on the strategic aspects of the job, leaving the operational issues completely to be taken over by the service providers.

Flexibility is an important overall benefit is. A company can have an up-and-running treasury very quickly without having to build and commit over a period of time. Apart from the corporate benefits, there is also the human dimension. There is a view that outsourcing presents a threat to the treasurer and the treasury functions in a company. This view was stronger in the early years, when the concept and its scope were not fully defined. Experience has shown that this view is misplaced and, like many things, outsourcing can be a threat or an opportunity depending on how it is approached. It certainly can be taken as an opportunity to streamline treasury and focus on the kernel of the job, buying in the required service and expertise to enable this happen.

The available option on treasury outsourcing is not only to outsource it to treasury service providers, but to hire professional treasurers for in-house management.

### **10.2 What to outsource?**

There is a lot of discussions as to what aspects of treasury can be outsourced. In reality, any aspect can be outsourced and indeed this does happen in practice. However, it is not considered best practice to outsource to the extent that the company has no in-house capability whatsoever. It is advisable that a company retains a treasurer in-house to handle whatever elements of the treasury the company considers most critical or as a minimum to manage the service provided by the outsourcing service partner and to protect the company's interests.

It is often debated that core processes of treasury cannot be outsourced. These treasury activities are where most added value can be generated by the treasury for the company.

The definition of a non-core competency is any process that does not generate income or help your organization increase its market share. Non-core processes

should be outsourced, allowing the organization to realize financial and competitive advantages by reallocating internal resources to focus on core competencies.

To help identify treasury functions that are core competencies, ask:

- ◆ Does this process create or defend a unique competitive advantage for the organization?
- ◆ Is this process contributing directly to business growth or expansion?
- ◆ If the organization were a start-up, would we build this capability internally?
- ◆ Would other companies hire us to do this for them?

Cash management and reporting, among the others, are non-core business competencies that have blazed the outsourcing trail. As the outsourcing of those activities has matured, other business competencies have jumped on the outsourcing bandwagon.

Simply, if you can't measure it, you can't outsource it. In other words, using outsourcing as a response to organizational difficulties will only compound the problems. For successful outsourcing, you need to have mapped your treasury policies and procedures, understand your workflows and know the touch points where treasury can add value (as opposed to simply adding processing). Then, you can choose which parts of your activity should be handled by the outsourcing company according to your policies, and where you want to act yourselves.

In practice, the functions that are often outsourced include cash pools and netting, foreign exchange dealing, short-term investments, payments and collection processing, and provision of the treasury management systems.

### **10.3 Choosing a provider of outsourcing**

Various companies currently offer transaction processing services, and they fall into two main categories:

- ◆ bank service providers, and
- ◆ bank-independent, specialist companies.

These two categories are obviously quite different and the treasurer has a fundamental decision to make in choosing which route to take. In making the selection, credit risk is generally not an issue in relation to the independent service provider; being a non-bank, no transactions are undertaken with that entity. All transactions are in the company's name with its nominated relationship banks.

In making the choice between a bank service provider and an independent specialist, the main considerations include:

- ◆ the basic philosophy of the company and its desire for bank independence;
- ◆ the nature of what is being outsourced and likely future requirements, e.g., bank service providers are more focused on services that match their core competencies in the areas of transaction processing, payments and so on;
- ◆ the need to customize the service; the specialist providers by definition can more readily tailor a solution to meet specific requirements.

For treasury corporation selecting an outsourcing service provider is a critical step as once selected, the treasurer must live with the outsourcing service partner for a long time and will be reliant on this partner for essential services. So the selection has to be well made.

A decision to outsource is, by nature, long-term. Neither the treasurer nor the provider of the outsourcing service will wish to terminate the outsourced arrangement after a short timescale – too much effort and investment having been expended by both. The selected outsourcing service provider must therefore be regarded as a strategic partner and the selection process must be thorough.

Most evaluations would include at least one of each category, i.e. one independent and one bank. Generally, short lists would be kept to three, sometimes two in reality with a third “just in case” but not fully considered. It really is not feasible to manage a longer shortlist; the amount of discussion and due diligence on the precise offering is quite high.

**During the selection process, tough questions need to be asked, like:**

- ◆ Is there opportunity for growth? Can the relationship – and its benefits – be expanded?
- ◆ Are your business circumstances fully understood and appreciated by the service provider company, and does it proactively work with you to devise the solution which is best fit for you?
- ◆ Is there good chemistry between your organization and the provider? Are your corporate cultures compatible?
- ◆ Are your precise needs being met, including those non-routine higher end needs, such as policy and strategy support and advisory support for group entities, if these are required?

- ◆ Have you absolute comfort with the partner's service philosophy, its ability to deliver and its control and security arrangements?
- ◆ Does the outsourcing provider have the technology environment needed to support world-class service?
- ◆ Have you met the staff that will actually work on your behalf? What is their level of experience and expertise?
- ◆ Does the outsourcing provider have in place a management team capable of delivering best-in-class services?
- ◆ Do existing reference clients testify that, in their experience, your expectations will be met by the provider partner?
- ◆ Track record and commitment to your needs and to the long-term relationship.

From the author's personal point of view, a direct management and control of cash flows through the company would be preferred, especially during these contemporary difficult times.

## **Chapter 11**

### **Regional treasury centres**

Considering that most multinational companies have already decided to centralize their treasury and cash management activities, one of the most important questions is: Where is an optimal location for our treasury activities? If a new central treasury company is going to be formed to perform the international financing activities, the corporation needs to consider the optimum location from an organizational, as well as legal and tax point of view.

Regional treasury centre (RTC) can be defined as a centralized treasury management function that is legally structured as a separate group or branch and is usually located in a tax-efficient environment. Depending on the structure of the group and the functions to be performed by the treasury centre, operational issues should be considered as well.

The functions of regional treasury centres are fourfold: asset and liability management, sales and trading of currency, credit and derivatives products in capital markets, and financial risk management. Fundamentally, regional treasury centres provide financial management and transaction services for the other group entities, that is, the subsidiaries located in different regions than the headquarters. When considering the set-up of a regional treasury structure, a key issue is to validate what its role will be in driving and managing core treasury functions. If a company already has an active group treasury, it is likely that this group function will

be the one driving and establishing the company' s strategy and policies regarding most of the above. In that regard, the role of the regional treasury centre becomes one of execution, essentially acting as a hub for the group treasury function.

As more and more companies expand operations across international borders, international financial market erratic behaviour entails standardization of international payments to simplify fund movements becomes extended challenges for corporate treasury. Corporate treasury is required to be more aware of the volatility of the international financial market and conversant with current payment standards practiced by other corporate treasuries in order to keep up with international trends. These challenges are key influencers of corporate treasury to the extent of provision of functions and practicality of management organization.

When considering the set-up of a regional treasury structure, a key issue is to validate what its role will be in driving and managing core treasury functions. If a company already has an active group treasury, it is likely that this group function will be the one driving and establishing the company' s strategy and policies regarding most of the above. In that regard, the role of the regional treasury centre becomes one of execution, essentially acting as a hub for the group treasury function. On the other hand, the regional treasury centre has a key role to play in ensuring that the company maintains an appropriate knowledge of local issues and local peculiarities and therefore is in touch with the local markets. It also needs to ensure that these local issues are duly reflected and understood by the group treasury function. A possible segregation of tasks between the regional and global treasury centre is around the front, middle and back office functions as seen in the following example where all the tasks relating to execution are maintained within the regional treasury centre whilst the corresponding accounting work and risk control remain centralized at a group level.

	Global treasury centre	Regional treasury centre
Front office		<ul style="list-style-type: none"> <li>• Regional foreign exchange</li> <li>• Regional cash and liquidity management</li> <li>• Regional banking relationship</li> </ul>
Middle office	<ul style="list-style-type: none"> <li>• Accounting and risk control related to regional operations</li> </ul>	
Back office		<ul style="list-style-type: none"> <li>• Confirmations and settlements</li> </ul>

Source: HSBC

**Fig. 11.1. Segregation of operational duties between regional and global treasury centre**

Corporate treasuries face problems with treasury functions to undertake and degree of management to organize i.e. degree of centralization and decentralization, and decision making here is greatly influenced by these associated challenges. The complexities of treasury centres organizations are of crucial importance for understanding different structures and models developed by other studies based on common practice by multinational corporations.

As mentioned previously, perhaps the most important factor when considering the location of a regional treasury centre is the tax environment. In this context, it is important to focus not just on taxes on profits, such as corporate tax, but also on the total tax contribution the company makes to the state. That includes:

- ◆ Withholding tax on interest, dividend and royalties.
- ◆ Corporate tax on profits allocated to the treasury centre and its capital.
- ◆ Thin capitalization rules.
- ◆ Stamp tax – the establishment of a subsidiary may trigger stamp tax consequences.
- ◆ Value-added tax – in most countries, the value-added tax is not payable on certain financial transactions.
- ◆ Double tax treaty agreements.

The location of the treasury centre of an international grouping is a very strategic and hence important matter. The decision depends on numerous factors, such as the corporate tax treatment in the hands of the treasury centre itself, the applicable withholding tax rates and corresponding eligibility to foreign tax credits. Compliance with the transfer pricing rules and documentation requirements of all jurisdictions involved also needs to be considered, as does the appropriate management of thin capitalization rules to make sure a full interest corporate tax deduction in all jurisdictions is safeguarded.

The second consideration has to be whether any proposed central site will serve as a global or a regional centre. That having been decided, there are a number of major criteria.

- ◆ Political stability and legal environment. Are regulations and reporting requirements favourable?
- ◆ Geographical criteria, especially possibility of performing operations to all subsidiaries within the same (or close) time zones. This is the reason why



companies with global operations often create the regional treasury centres in three key time zones: Europe, America and Asia-Pacific.

- ◆ Availability of well educated and trained staff.
- ◆ Liberalized financial markets and optimally important/existing treasury centre in the region.
- ◆ Easy access to important financial markets.
- ◆ Macroeconomic indicators, including prevailing corporate culture and development of the banking sector.
- ◆ Currency environment.
- ◆ Ratings – this measures the business climate and financial situation of a country in comparison to other countries.
- ◆ Highly developed infrastructure and communication network.

There are many factors to consider when searching a location for regional treasury centres. For further reading, see our papers ("Location criteria for establishing treasury centres in South-East Asia" (authors Polák, Petr and Roslan, Rady Roswanddy) published in the *Journal of Corporate Treasury Management* and "Regional Treasury Centres in South East Asia - The Case of Brunei Darussalam" published in *Management – Journal of Contemporary Management Issues*. These papers offer a full description of the location criteria that must be assessed before establishing a regional treasury centres. Both papers are available for downloading through the internet, e.g. at <http://www.ssrn.com>.

Unfortunately, in practice most of the existing centres exploit “only” the cost savings. There are several reasons for that:

- ◆ Excessive focus on cost savings, to the point of ignoring other strategic benefits such as improved quality and scope of work.
- ◆ Multicultural and other barriers. In many countries where we do business, "custom and practice" is a very significant factor.
- ◆ An excessive level of “rationalization” which produces the problem of attracting and motivating of key specialists in the regional treasury centres.

## Case study 2:

### Location criteria for establishing treasury centres

Based on the following paper: **Polák, Petr and Rady Roswanddy Roslan**. 2009. "Location Criteria for Establishing Treasury Centres in South-East Asia". *Journal of Corporate Treasury Management*, Vol. 2 (4), pp. 331-338.

## **Location criteria**

### **1. Monthly banking fees – LCn 1**

Banks provide services for personal and commercial/enterprise/business/corporate purposes. In the present study, the prices for the services provided for commercial purposes are the focus. The monthly banking fees are the charges for maintaining business accounts as set up by the banks. The target locations for RTCs are to incur lowest monthly banking fees as possible.

### **2. Bank transaction fees – LCn 2**

Bank transaction fees usually refer to the prices per transaction of the top 5 banks set up for businesses, corporations or enterprises. The charges or prices are for moving funds from the business accounts to other banks or business entities. The lower the prices or fees are, the better it is for companies in terms of minimizing banking costs.

### **3. Price of foreign incoming payment – LCn 3**

LCn 3, the price of foreign incoming payment, includes the prices set up by banks for providing services to move funds across international borders. This LCn in particular is charges for payments made from overseas to a domestic party. It is in the form of inward remittances services such as Telegraphic Transfer (TT) and demands draft charges handling fees and these fees account for LCn 3.

### **4. Price of foreign outgoing payment – LCn 4**

This LCn, the price of foreign outgoing payment, has a similar character as LCn 3, but instead of incoming payments it is outgoing. Payments made by banks towards international based parties incur charges. Similar to LCn 3, the lower the charge for this LCn, the more favorable the location LC 4 is making for RTCs.

### **5. Price of foreign urgent payments – LCn 5**

LCn 5, the price of foreign urgent payments, deals with making swift payments including converting one currency into another and transferring (to make payments) into another account in another bank domestically or internationally. This type of payment is normally charged more expensively than a usual outgoing payment. It is in the form of an outward remittance service provided by banks. Foreign urgent payments have a value date of T+1 in Europe. Value date (T) is the banking day on which banks transfer the fund for the making the payment to its correspondent

bank. The lower the prices for these services set up by the banks, the more favorable the location is for RTCs.

#### **6. Withholding tax – LCn 6**

Withholding tax is the percentage of payment (e.g., interests, dividends, royalties) payers make to resident or non-resident persons that will be withheld under the domestic law for the local tax authority. The lower the percentage withholding tax, the better it is for businesses or companies, thus the more favorable the location for RTCs.

#### **7. Corporate tax – LCn 7**

Corporate tax is that imposed on earnings made by companies by local authority. For example, the Inland Revenue Authority of Singapore (IRAS) is Singapore's tax authority, while Hong Kong is the Inland Revenue Department of Hong Kong and the Ministry of Finance monitors tax related activities in Brunei. The lower the percentage corporate tax, the better it is for businesses or companies, thus the more favorable the location for RTCs.

#### **8. Important existing treasury centres – LCn 8**

This LCn, important/existing treasury centres, involves identifying the approximate number of important RTCs set up by MNCs already located in/around the nominated locations. The greater the number identified, the more appealing the location is to MNCs when considering establishing an RTC. Having existing RTCs indicates that the location is able to accommodate the complexities of treasury functions and this provides less assessment for the location considered compared to a location which has zero RTC.

#### **9. Reporting requirements – LCn 9**

We can describe this criterion, reporting requirements, as certain large amounts of funds transferred by RTCs or MNCs domestically or internationally that need to be reported to the central bank and/or monetary authority of the country. The less stringent the reporting requirements to the central bank or monetary authority, the more favorable the location will be.

#### **10. Currency environment – LCn 10**

The possibilities of transactions in different foreign currency domestically also make a location favorable for RTCs. Possibilities of transaction in important currencies such as US dollar, pound, euro, yen, Australian dollar, and the others, make it

possible for MNCs from these regions to not only operate there but also make cash pooling possible. These transactions (foreign to domestic) must be converted to local currency first before the transaction is executed, therefore, incurring some charges although these charges will not be a major part of this LCn. The major part is the range of foreign currency transaction possibilities. The bigger the range of foreign currency transaction possibilities (especially the important ones such as USD, GBP and euro), the more favorable the location will be. The availability of foreign currency accounts and services provided by the banks will be investigated as well as the charges involve.

### **11. Ratings – LCn 11**

LCn 11 deals with the risk associated with investing in a country assessing the overall liquidity and solvency (Coface n.d.). Basically, it is measuring the business climate of a country by setting rates compared to other countries to reflect the financial situation of the country. Rating company Coface (Cofacering.com) offers a worldwide country rating system. The ratings fall on a scale with seven levels (A1, A2, A3, A4, B, C and D) in increasing order of risks where A1 represents the least risks (Coface n.d.). For example, New Zealand is given a rating of A1 (Country @ating 2007). Coface interpreted that “New Zealand has a very good political and economic situation. This country has quality business environment with positive influence on corporate behavior and corporate default probability is very low on average” (Country @rating 2007).

Main global commercial banks serving the RTCs usually add to the above mentioned criteria the others:

- ◆ political: political stability, legislative, level of education;
- ◆ geographical: especially considering the time zones; and
- ◆ macroeconomics indicators, including the existing corporate culture and development of the banking sector.

There are many factors to evaluate when considering a location for the RTCs. The study offers a description of the specific needs of a multinational company, summarized in so called Location Criteria. But this text is still, of course, incomplete because although the LC utilized in this paper is significant for assessment, it is merely a one means of examining a location. It is one of the methods to assess a location, despite there being additional possible variables – other than those mentioned and investigated in this present study – that need to be considered and are difficult to measure. These include the language barrier (considering English as a

prominent language in Finance), availability of expertise, availability of outsourcing options, access to key financial markets and banking centres, stability of communication networks, time zone, notional pooling, cash concentration and many more.

Wherever possible, regional treasury centres are located in locations with friendly and tax-efficient business environments, especially if they include an in-house bank, and with highly developed infrastructure. In Europe, popular cities are London, Zurich, Dublin, Brussels, Amsterdam, Budapest, and Prague; in Asia-Pacific, Singapore, Shanghai, Mumbai, Hong Kong, and Sydney.

The criteria for locating new regional treasury centres are changing continuously. Early regional treasury centres were mostly located in high-cost countries of Western Europe, in the United States, or in Singapore, with their skilled workforce, high level of English proficiency, and highly developed infrastructure to support pooled financial service centres for corporates.

Today, while all these locations remain popular, many companies are looking at regions such as the European Union members of the Central Europe region (the Czech Republic, Hungary, etc.), where the cost structure is still relatively favourable, language skills and education levels are high, and tax incentives exist. Often these can be linked to production sites that companies have already set up in those countries.

In Asia at the moment, many companies are choosing to locate their treasury centres in low-cost bases on the Indian subcontinent, in China and the Philippines. China and India are also providing important locations from both cost and strategy perspectives. The English language hubs in Asia, such as Singapore and Hong Kong, continue to be popular. Although they do not have the cheapest cost base, they have the necessary infrastructure and skills to support pooled financial service centres for corporations. Some companies are also splitting larger treasury centres across several locations, with a regional centre in Singapore or Hong Kong and distributed operations in low-cost places such as Shanghai or Manila.

To compete with existing centres in attracting regional treasury centres, state administrations must remain vigilant about regulations applicable to overseas investors. Sometimes they may have to make changes to improve the current environment. They must examine current tax regulations imposed on both local and international companies. For example, at the end of the 1990s Nokia chose Singapore for its regional treasury centre because of unattractive tax regimes in Hong Kong, Malaysia and Australia, which it considered and rejected. In fact, by

improving its tax environment, Singapore has attracted more than 4,000 regional headquarters from just 49 in 1993. Since local tax regulation is the primary factor when considering a location for a regional treasury centre, other jurisdictions would do well to regulate their tax systems as competitively as Singapore and Hong Kong, which have enjoyed great success in attracting regional treasury centres.

An effectively functioning banking system is another key factor in attracting regional treasury centres. That means, a pressure on the effective functioning of the banking system as good and modern banking sector and a presence of a competitive, level playing field for all banking institutions, domestic and foreign, are the key factors to attract regional treasury centres. As well as financial markets require a suitable regulatory, legal and judicial framework that establishes, with the highest degree of certainty possible, the rights and obligations of parties to financial transactions and provides appropriate disclosure and other requirements.

And, finally, by increasing the number of students majoring in finance at tertiary level educational institutions, countries can attract multinational companies and their regional treasury centres, which require trained specialists in the finance area and will be attracted to regions with an abundance of treasury related expertise.

## **Chapter 12**

### **Banka´s best practices in cash pooling**



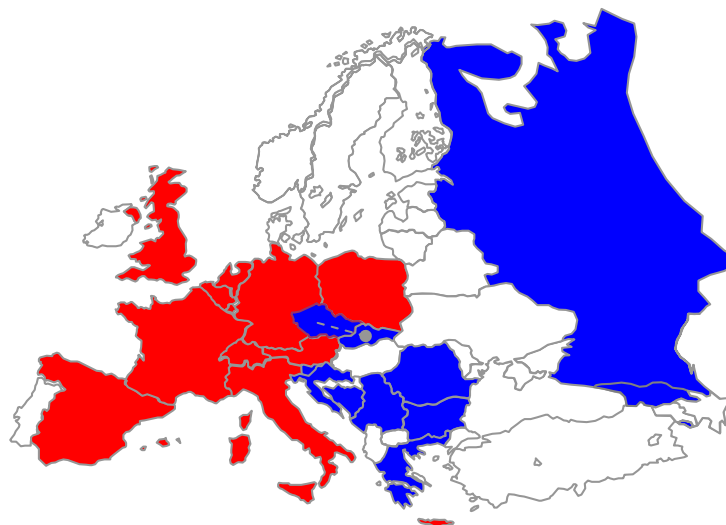
#### **12.1 Introduction**

Komerční banka (KB) stands among the most prominent banking institutions both in the Czech Republic and in the region of Central and Eastern Europe. Companies of Komerční banka Financial Group offer further services such as pension insurance, building savings, factoring, consumer financing and insurance. Since 2001, KB has been a member of the Société Générale Financial Group, which is one of the largest banking groups in the euro zone.

#### **12.2 Komerční banka in a glance**

Komerční banka was established in 1990 as a state institution, and in 1992 it was transformed into a joint-stock company. In 2001, the state's 60% holding in

Komerční banka was purchased by Société Générale that is one of the largest financial services groups in the euro zone. Strong group regional coverage through the Europe (Figure 12.1) and the main financial centres allows KB's corporate customers to use highly standardized banking services.



**Fig. 12.1. Société Générale's branches and subsidiaries in Europe**

Following privatization, KB began to significantly develop its activities for individual customers and entrepreneurs, in addition to building on its traditionally strong position in the enterprises and municipalities market.

Nowadays, Komerční banka is a universal bank providing a wide range of services in retail, corporate and investment banking. The Bank's almost 1.63 million clients can access to its banking services through 394 branches across the Czech Republic, as well as via electronic banking channels. Its business model is built on 3 main pillars: (i) retail banking; (ii) corporate and investment banking, and (iii) other financial services.

Through Komerční banka Bratislava, the Group is also active on the Slovak banking market providing specialized services for the corporate customers.

Specialized cash management services are dedicated for medium and large corporation, that are, according to its turnover, divided into two segments, namely Corporate and Top Corporates. In these segments KB plays traditionally leading role servicing more than 70% of all medium and large corporations present on the Czech market.

Cash management products portfolio, suitable for corporate customers, includes overall products and services like current account maintenance, electronic banking, payment cards, liquidity management service, checks, etc.

### **12.3 Liquidity management services provided by Komerční banka**

Liquidity management products have been offered by KB from the late 90's. In that time, this product was dedicated (and selected) mainly for large corporations. Also, the clients were satisfied with basic functions that the product offers. Since that time we could see a dramatic increase of interest from all segments. The main drivers are, according to our opinion, arrival of multinational groups that have acquired or built, e.g., a new plant or subsidiary and are already using some of the liquidity management products, increase of know how of the treasurers or just a pragmatic consideration about company liquidity management optimization. Such increasing demand for additional services pushes the bank to offer more sophisticated and complex solution. Today we can see in our clients portfolio corporations from different sectors, municipalities, universities and state institutions that are frequently using some of the cash pooling services.

In this business, KB concentrates on three main areas:

1. Real cash pooling (domestic and cross border)
2. Domestic notional cash pooling
3. Cross border cash management

The clients may pick up either single service or combination, e.g., 1 and 3 or 1 and 2.

### **12.4 End users of the products**

Who are the end users looking for optimization of their liquidity management? According to the Czech legislation, there are not any obstacles that would restrict who may or may not implement and use some of the pooling structure. As mentioned previously, the legal framework for setting up the pooling structure is only Czech Commercial Law Code. Therefore, any legal entity – e.g., corporate, municipality, university as well as economically connected group etc. – may implement and use some of the above stated liquidity management optimizing tools. Just perhaps the foundations are not included in the pool structure.

The structure of clients using liquidity management products and services according to their business activities is displayed in the following figure:



Clients using Cash pooling according to the sector

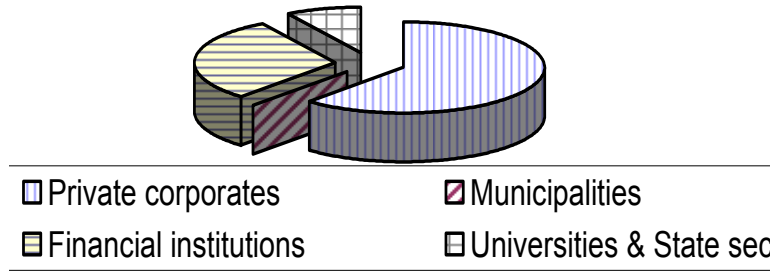


Fig. 12.2. Structure of customers using the pool

### 12.5 Bank selection process and cash pooling implementation

Implementation means for the bank an intensive communication with customer on the topics that determine the future design and functionality of the service.

The bank is usually involved in this process in very early stages in order to help to create and subsequently deliver what is requested and expected.

The implementation process can be structured into four main parts where three of them are directly linked with the bank:

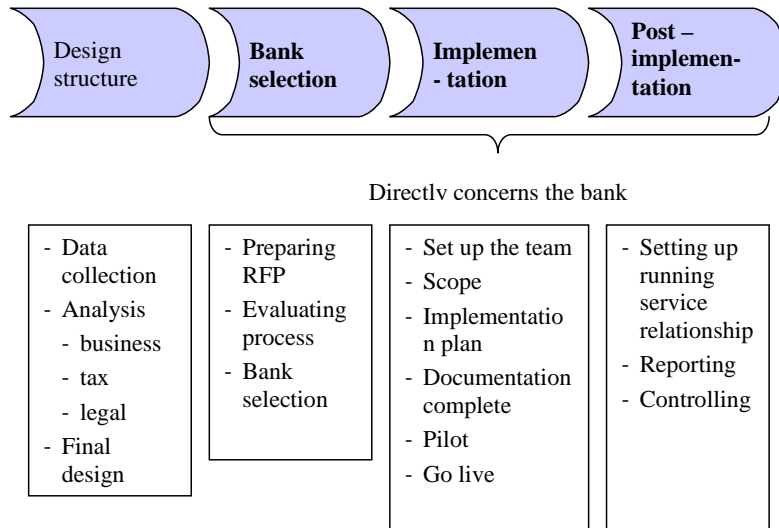


Fig. 12.3. Implementation process

### **Bank selection process**

Potential implementation process starts for the bank in the moment of receiving the RFP. As it can be seen from the bellow examples, this document is complete summary of information that the customer needs to take into consideration. Nevertheless, the final design may be still open question at the beginning of this process until the corporate collects and evaluates all relevant information (bank capabilities, tax and legal aspects, pricing, central bank reporting, etc).

There might be several ways of how the customers decide to implement cash pooling within the company or the group. One option is that the company that has strong relationship with the bank simply asks for the liquidity management products or services. More complex option is that the company organizes a tender that includes request for wide range of products and services. Such tender is called "Request for Proposal (RFP)" that may be preceded by more formal "Request for Information (RFI)".

Request For Proposal is a complex list of cash management services and conditions that the company expects to receive from the banks having a relationship or strong position on the market. RFP is frequently used in case that the company is present in several countries and the main goal is to harmonize the level of cash management services and prices on the international level. The other option is that the RFP may be also used only on the local level, just within one country. In any case, the result of such Request is to optimize the number of products and level of fees and commissions, standardize the portfolio of services and last but not least to reduce the number of cooperating banks.

The form of RFP that the bank receives is different case by case. It may be either text free format questionnaire where the bank has a chance to describe in detail its capabilities including the prices in the separate table.

The examples of two most frequently used methods are displayed bellow.

Questionnaire form:

- ◆ What is the presence of your financial group in the region? How extensive is your branch network?
- ◆ What account opening documentation is necessary?

- ◆ Is the bank member of a deposit guaranty fund? Are there any central bank or tax regulations (minimum reserve requirements, withholding tax, etc.) to be considered?
- ◆ What is the organization and processes of your project management (conditions, contracts, implementation, service, etc.)?
- ◆ Do you have a customer service or hotline for each country?
- ◆ Which kind of pooling structures (notional, zero-balancing, conditional, etc...) do you support?
- ◆ What are the legal, tax and/or central bank regulations on cash pooling?
- ◆ What is the pooling process (structure, transfers, etc.)?
- ◆ What would be the conditions for a global facility (credit/debit interest rates and conditions for short-term loans/deposits)?
- ◆ What are the names of at least two reference customers for the recommended or a similar pooling solution?
- ◆ What are the cash pooling related services fees?
- ◆ How does your bank deal with interest re-allocation to participating accounts (calculation methodology, reporting, etc.)?
- ◆ Which national and international clearing systems are you involved in?
- ◆ What are the cut-off for the different transactions and currencies etc?

Structured table form:

Type of operation	Unit price	Cut-off time	Value date	Definition
<b>DOMESTIC</b>				
<b>Outgoing transactions</b>				
<b>Paper form:</b> - Outside the bank - Within the bank - Express (incl. intra-company payments) <b>Electronic form:</b> - Outside the bank - Within the bank - Express (incl. intra-company payments)				

Type of operation	Unit price	Cut-off time	Value date	Definition
<b>DOMESTIC</b>				
<b>Incoming transactions</b>				
From outside bank				
Within the bank				
<b>INTERNATIONAL</b>				
<b>Outgoing transactions</b>				
<b>Electronic Standard payments (1):</b> - In favour of other banks , type SHA <i>EUR</i> <i>USD</i> - In favour of bank´s clients <i>EUR</i> <i>USD</i> <b>Paper-based Standard payments (1):</b> - In favor of other banks, type SHA - In favour of bank´s clients Accounting items processing				
<b>Electronic Express payments (2):</b> - In favor of other banks, type SHA <i>EUR</i> <i>USD</i> - In favor of bank´s clients <i>EUR</i> <i>USD</i> <b>Paper-based Express payments (2):</b> - In favor of other banks, type SHA - In favor of bank´s clients Accounting items processing				

As a result of collecting RFP forms, there is a need to decide about the future partner bank(s). If the decision should be done on the international level, the corporate group has an option to go for three offers where each brings a different aspect for cooperation:

- ◆ a global bank
  - worldwide networks
  - full services branches
  - direct access to local clearing
  - standardized approach

- accounts maintained in a single network
- ◆ a banking club
  - association of local banks
  - one bank per country
  - limited coverage
- ◆ regional bank with an international network
  - high and middle market
  - good regional coverage
  - using a partner banks in delivery of services

The final decision of customer represents a multicriterial analysis that takes number of aspects into consideration. Therefore, the deciding and implementation are very time consuming. The process of deciding may take several months (4-8) whereas the implementation itself may take up to the year depending on number of countries where the pool structure should take place. Usual practice is to divide the whole project into several parts and go step by step.

Selecting the bank(s) means either to strengthen an existing relationship with the bank or create a new one. In any case, when the company decides about setting up a pool structure this brings, among all other effects, reduction in number of banks that the company deals with. To be successful the company shouldn't only offer competitive and transparent prices but also top quality service with a high added value.

Creating such relationship has to be a "win-win deal" for both sides. Reduction costs of in terms of fees on one hand is compensated for the bank by establishing a strategic partnership with the companies across the whole group (acquisition potential), increasing the volumes, cross selling, etc.

Jan Juchelka, Komerční banka Senior Executive Director Top Corporations explains: "Liquidity management services today are a standard part of the product offering of any leading bank. Each bank striving to be a successful partner for corporate clients must have the ability to offer such services". Mr. Juchelka adds: "Our aim is to align the client's requirements with the bank's technical capabilities in an optimal way. Toward this end, we have managed to build, in close cooperation with our clients, a modular system featuring a range of configurations answering specific client needs. Komerční banka offers bespoke, tailor-made solutions complying with the highest reliability and security standards while eliminating operational risks on bank's and the client's side without manual interference".

## Implementation

When the RFP is evaluated and the bank is selected, a common implementation process can begin.

It is necessary and highly recommendable to establish the teams on both sides that are responsible for the successful and smooth implementation with agreed scope and time schedule. Each team has a leader who coordinates the activities across the institutions (bank and corporate). According to our experience, it is quite common that the corporate group members that become also a participating company in the pool structure are informed about this strategy after the RFP is finished, i.e. at the beginning of the implementation itself. It is very useful to organize a common meeting with all group members and inform about the plan and the upcoming steps.

Table 12.1. List of activities to be completed - scope

Item no.	Activity	Estim. time	Responsible
1	Decision making		Client (Head office/pool leader)
2	Information meeting with the Group		KB
3	ZBA C/P & SWIFT multilanguage Agreement Comments		KB, Group
4	Setting up the implementation team		KB, Group
5	Collection of financial data		KB, Group
6	Credit file approval/modification (analysis and approval)		KB, Pool leader
7	Signature of the agreements for accounts opening and maintaining and accounts opening (current acc.-s, Pool Account, Compensation acc.-s)		KB, Group
8	Signing Cash-pooling contract		KB, Group
9	Signing O/D Frame Agreement		KB, Pool leader
10	Signing the SWIFT Agreements*)		KB, Pool leader
11	Specification of installation requirements, training KB e-banking, implementation of KB e-banking*)		KB
12	C/P technical set up		KB
13	C/P launch		KB

Note: \*) means optional.

## Documentation

To prepare and complete documentation is one of the most time consuming activities within the whole plan. It may include cash pooling agreement (multilateral), new or redesigned credit line contract, opening and maintaining current accounts, etc. Because

the bank has to follow different internal, legal and central bank requirements (e.g., anti-money laundering rules, “know your customer” principle, etc.) the company has to provide the bank with further additional information.

### **12.6 Real cash pooling**

This represents an optimal solution for the customers who need to concentrate physically their funds. KB may offer two options:

- ◆ Real domestic C/P (monocurrency)
- ◆ Cross border C/P (monocurrency)

### **12.7 Real domestic cash pooling**

What type of customers is this solution suitable for? A typical customer that picks up this solution is a company or group with a strong and centralized financial centre. All payment operations as well as liquidity and cash management are managed from one point. Financial autonomy of individual subsidiaries became limited.

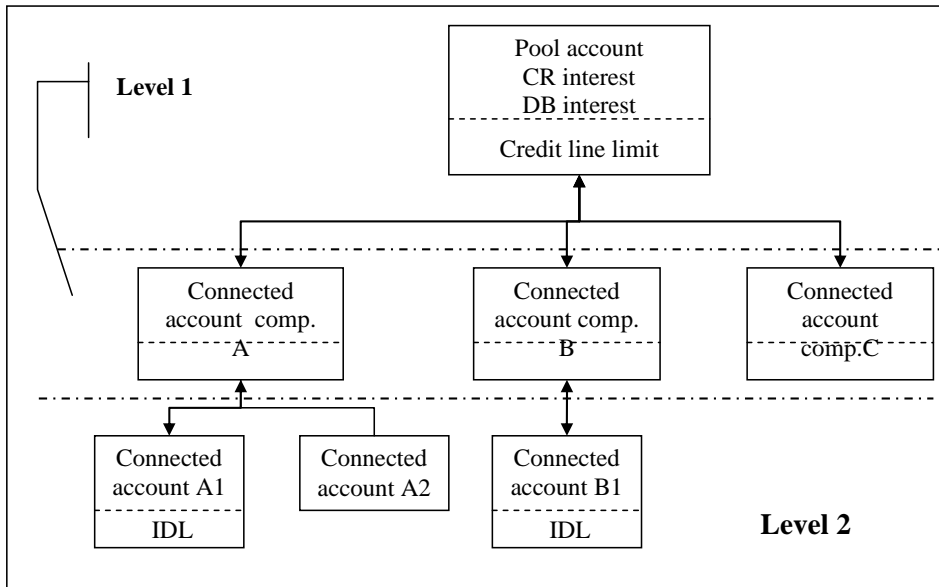
The client can choose whether the end of day balance on the connected account should be brought to zero or to a target amount. From this point of view, we can speak about a Zero Balance Cash Pooling (“ZBA C/P”) or a Target Balance Cash Pooling (“TBA C/P”). In all KB’s cases the customers prefer ZBA form of cash pooling.

It is necessary for the future member of the Real Cash Pooling structure to keep in mind that the pool leader company acts as the “bank” to the group for funding participating companies. The way of financing is perhaps one of the biggest changes in the group companies life.

The basic concept of this product is usual, i.e. end of day surpluses from the connected accounts are physically swept to, and the deficits are founded from the dedicated master account in order to meet requested final balance on those connected account. Also, the sweeping transfers can happen in two ways: either as upstream transaction moving the credit balance only or upstream and downstream transaction that moves the positive balance to the master account or balance from the master account to the connected accounts. Besides the basic parameters, Komerční banka always looks for a tailor made solution, that meets client’s needs and expectations as much as possible. This can be realized thanks to the various parameters and options that are available to the client in the dedicated cash pooling system. The KB’s Real Cash Pooling is built based on 5 milestones:

- ◆ Dedicated pool account designed only for the cash management transaction, not for the commercial payments and for evaluation of concentrated funds.
- ◆ Automatic same day value transfers set up between the master account and participating accounts.
- ◆ Intra Day Limit (IDL) set up on the connected account. This limits allows to execute the payments even if there is zero balance on the connected account after execution of the last funds transfer.
- ◆ Flexibility in possibility to select best fitted scenario allowing optimal using of funds within the account in the pool.
- ◆ All accounts included in the pool are maintained in the same currency (e.g., CZK, EUR, USD, etc.).

How the pooling structure may look like and work is described on the following scheme.



**Fig. 12.4. Functional scheme of real cash pooling**

- ◆ Pool account: Current account that belongs to the Pool leader. It does not allow cash and non-cash operation. It is meant for the cash pooling transfer and funds evaluation. We believe that such design gives the client a transparent overview of pooling transfers that are not commingled together with standards of commercial payments and protects the pool from being overdrawn.



- ◆ Credit line limit: Owned by the Pool leader based on the loan agreement concluded between the bank and the Pool leader. The master account holds the credit facility that may be shared by all pool participants. All individual Credit limits that have been used by the pool participants before cash pooling implementation are replaced by one common limit. This gives to all pool members an opportunity of accessing funds based on favorable conditions. On the other hand, it also means for the bank less complicated credit files monitoring due to reduction in number of credit limits.
- ◆ Automatic Cash Management transfers: These transfers are very last transactions carried out on the accounts at the end of the business day. The purpose is to bring the balance on the connected account to zero, or requested target amount. The bank settles all incoming and outgoing transactions at first and after it executes upstream transfers that sweep the credit balance to the master account or downstream transfers that settle up negative balance on the connected account. The transfers are also displayed on the client's current account statement.
- ◆ Intra day limit (IDL): This, so called "technical" limit is very important parameter for the real cash pooling. It allows to client the execute payment transactions on the Connected account even if there is zero balance as a result of last night automatic transfer. The level of IDL is updated automatically, daily based on the available balance on the master account.
- ◆ Connected accounts: those are the current accounts that have been used by the pool participants before their entering into the pool structure. They are meant for standard, commercial operations. Nevertheless, even though they become part of the pooling structure their utilities remain unchanged from the customer's perspective – i.e. they still may be used for cash withdrawing, payment card operations, direct debit, permanent transfer, etc. Given that the end of the day balance is zero those accounts do not bear any interest (neither credit or debit).
- ◆ Further option which client can choose to enhance his liquidity management is, e.g., the ability to decide whether limited or unlimited access to funds within the pool should be applied online or offline

### **12.8 Intercompany interest and possible impacts**

Before the pool structure starts to operate, the members of the pool have to decide the issue of interest. As arises from the nature of this product, the only account that

bears the interest is the master account owned by the pool leader. Who will compensate lost interest to other pool participants? From the legal point of view, all money that are concentrated on the pool account at the end of the day belong to the owner of such account, i.e. to the pool leader. As the funds are transferred among the accounts of members of the pool, the mutual rights and obligations between the members of the pool apart from rights and obligations towards the bank shall be settled in a separate agreement between pool members (e.g., the credit agreement between pool members, agreement on mutual funding of pool members. These agreements are often subject to decision and approval of general meeting pursuant to the Commercial Code).

Calculation of intercompany (or intra group) interest may be carried out by the company itself or it may be outsourced by the bank that may also post these interests on the account.

In our case, where no transfers back are realized the intercompany interest is calculated from so called "net position" which means cumulative sum of all transfers that take place between the master account and the connected account. According to the interest rate for the credit and the debit net position that is set up by the customers, the bank carries out the final calculation of the interest and posts them at the end of the month. It is not necessary to follow the interest rates set up on the master account but the pool participants must keep in mind some tax rules that have to be observed.

Intercompany interest reporting produced by the bank includes all necessary information for the control and reconciliation – i.e. the date, transferred amount, net position, interest rate, interest, etc.

Further tax and legal impacts that relate to the implementation and using the real cash pooling should be discussed between the customer and his tax advisor or auditor. The key tax issues that the client should pay his attention to are deduction of interest expenses, following especially the thin capitalization rule, transfer pricing, withholding tax, VAT aspects, etc.

### **12.9 Real cross border cash pooling**

Real Cross Border Cash Pooling stays one level above the real domestic cash pooling. This service is of course selected by the company that is also present in other countries. KB provides this service mainly within Société Générale group either on the way to concentrate the funds on the accounts held in KB or on the way to concentrate the funds on the master account held by the Société Générale branch abroad.

Cross border pooling structure (or just a Cross Border Cash Concentration) is built on the SWIFT communication between the banks that keep the accounts involved in the pooling structure. The most frequently used types of SWIFT messages used for such type of service are SWIFT MT 940, SWIFT MT 101 and SWIFT MT 103 messages.

- ◆ MT 940 – Customer Statement message. This is end of day account report that informs its receiver about all transactions that happened on the account and the end of day balance. It is produced automatically and it may be generated, e.g., on daily basis, only with movement on the account.

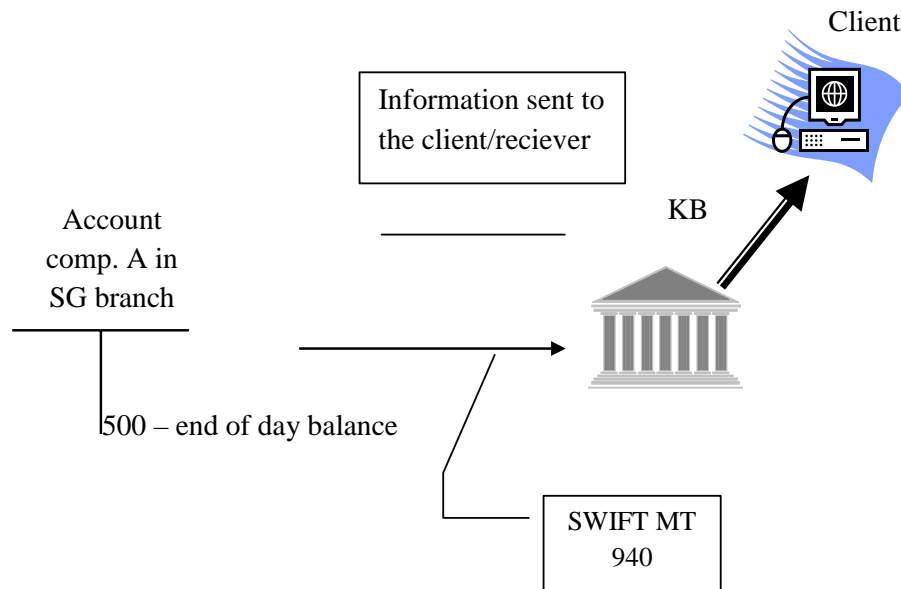
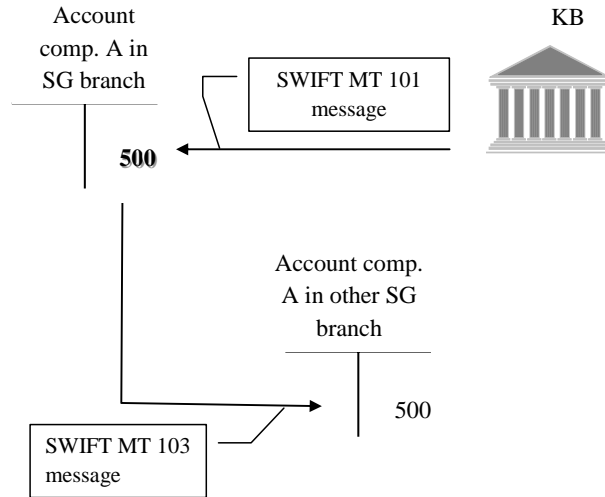


Fig. 12.5. SWIFT MT 940 processing

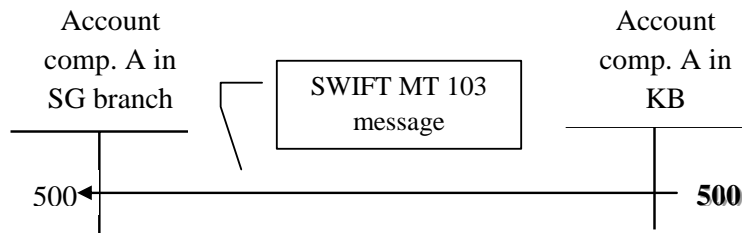
Based on the information included in the MT 940 about the end of day balance the bank that receives MT 940 generates one of the following orders:

- ◆ MT 101 – Request for the transfer of funds. This means that the positive end of day balance on the reported account should be swept on other account based on the MT 103 SWIFT message. This receiving account maybe either the account kept in a bank that issued MT 101 message or it may be the account kept in other bank, as shown in figure 12.6 bellow



**Fig. 12.6. SWIFT MT 101 and 103 – request for transfer and transfer of funds between different banks**

- ◆ MT 103 – Transfer of funds. In the event that end of day balance on the reported account is negative, receiving bank may generate order that transfer money in order to disburse the balance or as mentioned above



**Fig. 12.7. SWIFT MT 103 – transfer of funds between different banks**

Described types of SWIFT messages are the milestones that allow to manage relatively complicated cross border cash pooling structure among different banks that keep accounts included in the pool. Sophisticated system that is able to receive the SWIFT message, monitor balances on the accounts, react accordingly, generate reports for the client etc. is heart of such sophisticated service. Possible Cross Border C/P Structure is shown in the following figures.

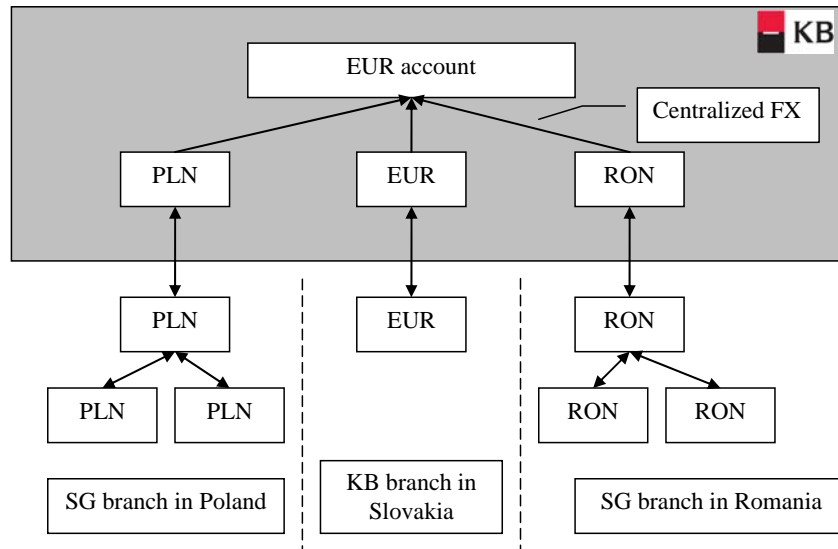


Fig. 12.8. Cross border pooling structure with local currencies and centralized foreign exchange

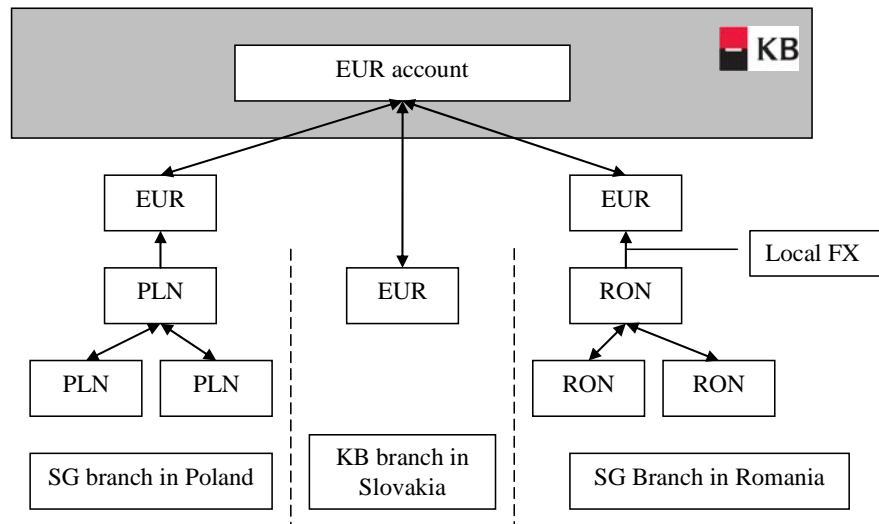


Fig. 12.9. Cross border pooling structure with local FX and centralized currency

### **12.10 Notional domestic cash pooling**

This solution is suitable for corporate clients and very often used by municipalities either for single entity or economical group. As mentioned in chapter 8 of this book, notional pooling is a mechanism of calculating the interest on the combined credit and debit balances on the same currency accounts participating in the pool and held in bank. If this scheme is implemented in the framework of group the participating companies do not lose their financial autonomy compared to real cash pooling.

Individual Connected accounts, of course, do not bear either credit or debit interest. The only account that evaluates the funds is the master account, which in this case is represented by the internal account. The credit and debit interests are posted on each connected account or they may be posted on one dedicated account.

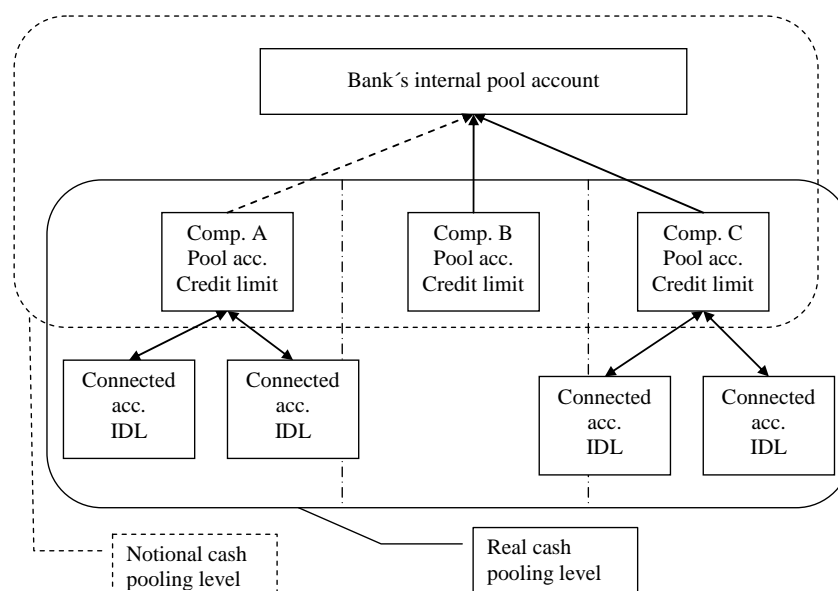
As concerns the credit line, each of the pool participants (assuming the pool for the group) keep their own credit lines as before the pool implementation. It means that there is no one common credit line and as such no cross guarantees are requested by KB.

From the client operational point of view, we can say that this solution does not bring any changes, especially on the payments standard side.

Notional cash pooling does not have, in our view, any additional tax implications not mentioned above for the zero-balancing pooling. Although it could be argued that notional pooling is not, in substance, a provision of loan, and therefore, thin capitalization rules should not apply in case of notional pooling. There is a hypothetical risk that the tax authorities may challenge the tax deductibility of interest costs in accordance with thin capitalization rules also in the case of notional pooling. Therefore, consultancy with a tax advisor or auditor is highly recommended also in this case.

Combination of real and notional cash pooling is very interesting tailor-made solution for the group that combines advantages of both solutions. Such scenario could be designed on the single currency accounts held by KB.

On the company level, it brings the advantage of concentration of the cash on one master account whereas on the group level, it maintains financial autonomy of group participants and, moreover, they can participate on group's favorable loan conditions.



**Fig. 12.10. Combination of the real and notional cash pooling in CZK**

### 12.11 Notional vs. Real cash pooling – a comparison

From all above written we can now make a short comparison of both core cash pooling products. It is not possible to say what cash pooling is better to use.

It always depends on the individual situation and condition of client taking into consideration number of aspects said before.

Cash pooling has become a part of a standard cash management products portfolio that the treasurers have used in nowadays. For any bank that wants to be a partner for corporates it means necessity to be able to offer such complex and sophisticated service. It impacts very large scale of different activities, from account maintenance, to payment cards operation, cash transaction, e-banking, etc. After the lesson we have all learned during last several months that concerned the accessibility to liquidity these products play important role for the company's financial life. They will help to corporate, beside the other benefits, to discover its own cash reserves and to be more independent from external financing.

(valid only for KB)	Real C/P	Notional C/P
Transfer of funds	Yes	No
Currency	Mono-currency	Mono-currency
Setup of Intra-day limits on the Connected a/c	Yes	No
Consolidated Overdraft limit (only for ECGs)	Yes	No
Intra-group interest (only for ECGs)	Yes	No
Pool Account/Processing payments on Pool Account	Pool leader/No	Internal bank account/No
Internal group cash management agreement	Yes	No
Connection of cash pooling into cross-border cash pooling structure	Yes	No
Cross guarantees	No	No

**Fig. 12.11. Comparison of different types of cash pooling**

## Conclusion

The book discusses the centralization of treasury function, and special attention is given to the topics of multicurrency centre, in-house bank, cash pools, multilateral netting, payment factories, shared service centres, outsourcing of the treasury function, and regional treasury centres. Case applications are used to show the benefits of centralized treasury management.

Perhaps the biggest challenge facing chief finance officers and treasurers today is how to develop a robust and efficient treasury infrastructure that supports the needs of a constantly evolving and developing business. The key challenges here are reducing operational costs, creating disaster-tolerant infrastructures and establishing scalable operations that will grow with the business. At the same time, this infrastructure is faced with external pressures from regulators, auditors and shareholders for greater financial transparency and timelier reporting.

Centralization of treasury activities offers companies the ability to achieve higher efficiencies, greater transparency and access to real time information across a broad geographic area, multiple time zones, and many entities. There are different phases in the centralization of treasury management from the decentralized treasury towards fully centralized cash and treasury management. Many firms start with the centralization of foreign exchange and interest rate risk management as the first step towards centralization of treasury activities, and then proceed through cash and liquidity management up to fully centralized treasury.



The first step of the centralization of group treasury is a creation of one central treasury department that is responsible for foreign exchange and interest rate risk management and management of large liquidity positions. Such central treasury department is either in the form of multicurrency centre, or in-house bank. A growing number of companies have implemented so called in-house banks. The in-house bank will provide all of the banking services that the subsidiaries require. Instead of transacting with its external banking partners, the subsidiaries do so through the accounts they hold with the in-house bank. As in-house bank holds all the accounts for all the participating subsidiaries, the central treasury can have accurate information on the level of cash, etc. within the group.

The second step is the centralization of cash and liquidity management by creation of domestic cash pools, cross-border and multicurrency cash pools and replacement of bank accounts at local domestic banks with accounts in the global bank. The process is called cash concentration. Multinational companies usually have cash balances on different bank accounts, at different banks, in different currencies, and often even in the different time zones. The treasury management of the company is responsible for the use of excess cash and optimizing of interest payable for shortage of cash. That means the treasury manager tries to fund cash deficits internally and invest eventual net surplus position in the money market. To do so, the companies physically concentrate the cash balances in one account and one place, giving them optimal handle on liquidity position that were previously dispersed across the globe. The global banks have developed sophisticated methods to concentrate, offset, and convert cash balances automatically to achieve one balance position each day. Such methods are called “cash concentration” or cash pooling.

The third and final phase towards fully centralized treasury involves the centralization of transaction processing – that means, first of all, the centralization of all incoming and outgoing payments. In some cases, the documentary payments are also centralized. The centralization of transaction processing consists of the following steps:

- ◆ Centralization of all incoming and outgoing payments = payment factories.
- ◆ Centralization of the entire debtor and creditor management = shared service centres.

Another phase of centralization is to remove the process out of the company entirely – that means outsourcing. Outsourcing involves a company contracting a specialist third-party provider of the treasury function to undertake part of a

business function on its behalf, rather than undertaking all of that function in-house. Outsourcing is not a universal solution for all but it is now proven to meet the needs of certain, especially medium sized, companies in specific circumstances. As further successful examples of outsourced solutions are put in place, more companies will begin to consider outsourcing as a strategic alternative to existing arrangements. And more providers will be entering the marketplace. Banks see outsourced treasury solutions as an essential component of the offering to their corporate customers and more of them are preparing to develop this offer.

Outsourcing is also a good option for companies that have a regional or decentralised approach to treasury, or those that want to set up an operation in a new territory without investing in treasury funding, exposure management and banking relationships.

As more companies expand operations across international borders, erratic behaviour of the international financial market necessitates standardization of international payments, as the simplification of fund movements becomes the extended challenge for corporate treasury. Corporate treasury is required to be more aware of the volatility of the international financial market and conversant with current payment standards practiced by other corporate treasuries, in order to keep up with international trends. These challenges influence corporate treasury in determining the scope and coordination of centralized functions and the practicality of various organizational models. Despite the fact that some corporations have experimented with a single global treasury centre, most corporations have thus far preferred to consolidate to regional treasury centres, mostly because of language barriers and time zone issues. Such regional treasury centres perform the treasury operations of all subsidiaries in the relevant time zone. Wherever possible, the regional treasury centres are often located in a "tax efficient environment". A "tax efficient environment" is essentially a location that offers multinational companies a more beneficial tax regime compared with another location. Very typical example of "tax efficient environment" is Ireland or Switzerland in Europe, and Singapore in South-East Asia. Although the regional treasury centres are often located in a different part of the world than the multinational company headquarters, they form a critical functional part of the company.

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