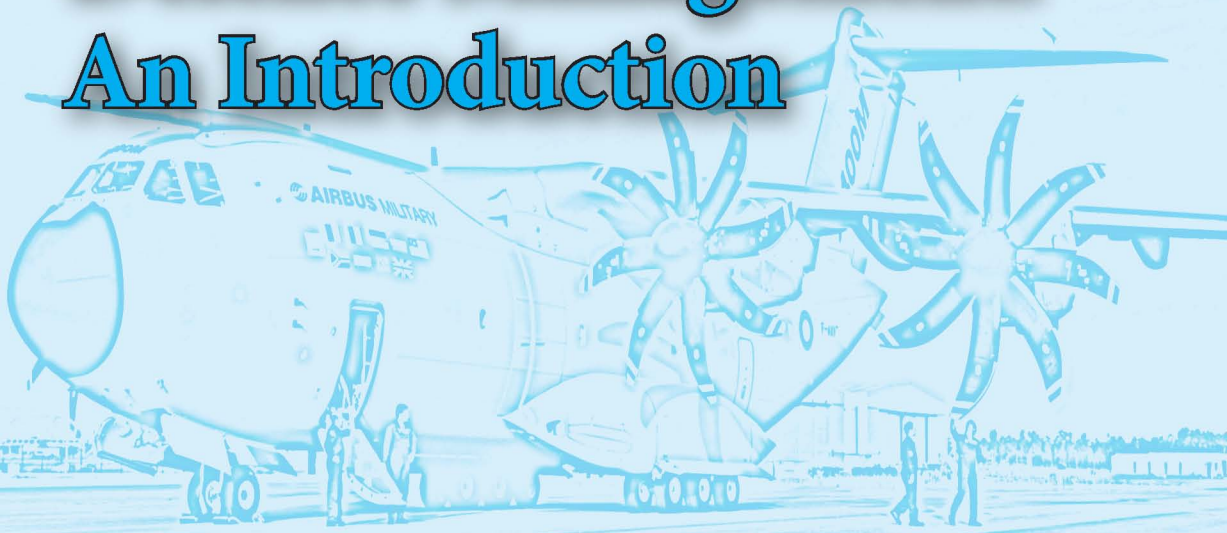


# Defence Management: An Introduction



Hari Bucur-Marcu  
Philipp Fluri  
Todor Tagarev (Eds.)



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## Chapter 4

# Managing Finances

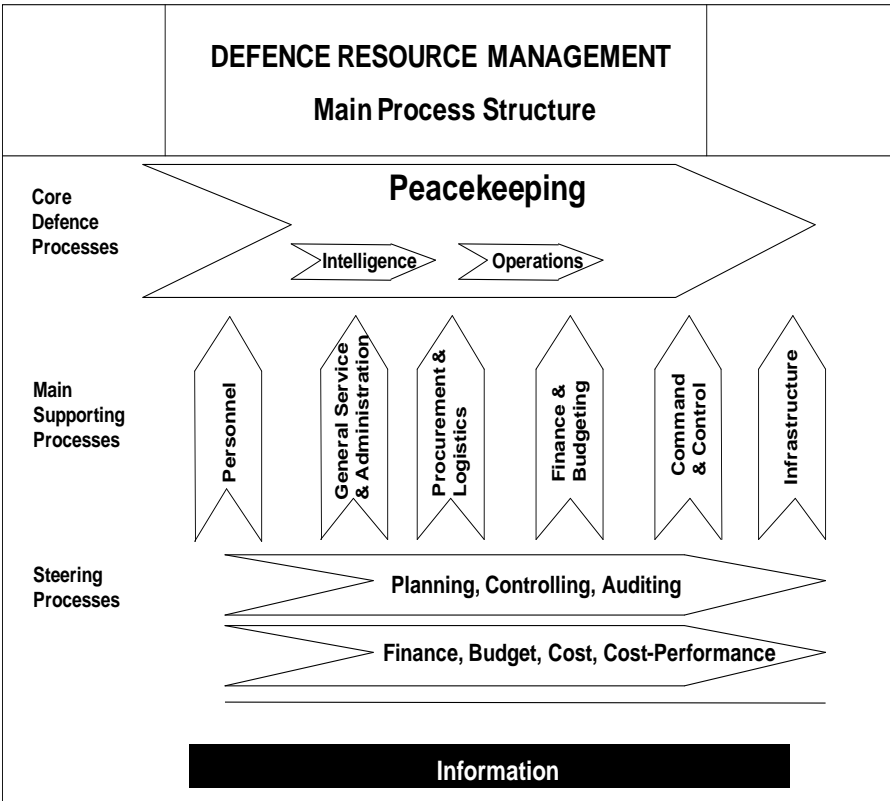
**Gerd Frorath**

### **Introduction**

The management of finances for defence has to be examined as part of defence resource management, which is embedded in the overall resource management of a country. This is the basic premise in our examination herein.

More than any other budget allocation in a country, the budget for defence is considered by politicians, taxpayers, the media, the economy and industry, the military and security sector and, last but not least, friendly or unfriendly neighbouring countries and international organisations.

In principle, the national defence budget should be derived from the security and threat situation. In fact, due to the limited resources of a country, the budget is designed not based on threats but on the availability of resources. Since the end of the Cold War, the reduction or the seldom increase of defence and security budgets became a spectacular game for decision-makers on all governmental levels. On one hand, the lobby for defence or security in democratic countries is usually not very strong vis-à-vis oligarchies. Democracies do not need defence forces to keep their power. What follows from this is that budget cuts or reduction of forces are often very popular political means readily accepted by voters. In oligarchies, related budgets are placed under the veil of governmental secrecy and thus it is outside any public scrutiny. On the other hand, one has to take into account that today the threat and security situation in Europe has drastically changed and reforms are more than necessary. Hence, the focus should not be placed on defence only, but on security in general.



**Figure 1: Defence Resource Management.**

Consequently, when discussing the management of defence finances, we need to examine all financial aspects of providing internal and external security of a country.

It is important to underline and to explain to citizens that security—both internal and external, including defence—is a public good that is absolutely necessary for existence, freedom and for the positive development of the economy, culture and prosperity of the country. Hence, the public must pay for security and defence.

The security budgets—mainly the defence budget and part of the budgets of the interior, treasury, finance and others—have to be analysed, investigated and understood in their interdependencies. The next section contributes to this understanding (complicated to an extent by the fact that different countries have different definitions of defence, its management and its finances).

In this chapter, the reader will find several lists and specifications intended to make the content easily understood. They may further serve as a sort of ‘checklist.’ The

chapter is based on the author's own research and experience in both European and American countries in the public sector, particularly in defence, as well as in the private sector. Solutions and recommendations offered here reflect this rich personal experience. The focus is on defence and the management of financial resources as a particular type of defence resources.

## Financial Management for Defence and Security

### Parameters, Constraints and Critical Factors

This chapter is dedicated to defence examined as a part of national (internal) and international (external) security.

Figure 1 shows the typical structure and interdependencies in the management of defence resources. Defence is defined as a 'core process' and a number of 'main supporting processes.' The 'steering processes' are necessary to provide coherence and keep all the other processes running.

In most cases, the parameters, constraints and critical factors are different in each country examined and define a unique framework for financial management. Nevertheless, each country has to find ways to provide transparent, reliable, flexible and efficient financial management. In the respective search, one has to consider the implication of the political, economic and social situation and the level of development of the country. On the other hand, financial management needs to guarantee stability in the overall process of defence management and efficient utilisation of limited resources.

Unless already implemented in transition countries, the following state interventions and actions by the government with direct influence on the financial management are strongly recommended:

<i>Restructuring</i>	<ul style="list-style-type: none"> <li>○ the defence and security concept as part of the overall political concept, taking into account the actual political situation</li> <li>○ the public administration and tax sector and the consequent execution</li> <li>○ the industry, trade and bank (finance) system</li> </ul>
<i>Fixing</i>	<ul style="list-style-type: none"> <li>○ the portion of the GDP (Gross Domestic Product) spent on defence</li> <li>○ the size and structure of defence and security forces and their tasks</li> </ul>
<i>Supporting</i>	<ul style="list-style-type: none"> <li>○ public-private partnerships</li> <li>○ private initiatives in defence conversion and procurement</li> <li>○ privatisation of state property and state industry</li> </ul>
<i>Establishing</i>	<ul style="list-style-type: none"> <li>○ external and internal audit and controlling systems in the public sector</li> </ul>

The following facts and constraints have a direct influence on defence finance management:

- Clearly defined roles of the Parliament and its committees for defence, security, foreign affairs, etc.
- Existing financial, budgeting and administrative laws, regulations and procedures and their consideration and application
- Distinctive definitions and responsibilities in the finance and defence management processes
- Changing international commitments and contributions in the processes of planning, budgeting and controlling
- The enlargement or reduction of the forces and their structure
- Short-term budget cuttings (e.g., resulting from a smaller income from taxes than anticipated)
- Unforeseen state expenditures arising as a consequence of catastrophes, disasters and major damages
- Inflation rates, wage increases
- Available information technology and communication systems
- Obligation for international competitive bidding (e.g., EU and NATO regulations)<sup>1</sup>
- The skills, attitude and mentality of the personnel (working morale, career perspectives, professionalism, corporate identity, no system change desired, loss of privileges, corruption, ethnic problems).

## **Difficulties and Problems in Managing Defence Finances**

### *Administration, Bureaucracy and Financial Management Systems*

The effectiveness and efficiency of any administration is to a large extent contingent on the methods used or its 'bureaucracy,' if we use popular terminology. This term often has negative connotations as a result of the fact that, over decades or sometimes centuries, administrative bodies have been known for imposing at their own discretion rules, laws, regulations and management methods on other community members. Sometimes the bureaucracy acquires privileges and advantages, which are kept by the concerned personnel even when hampering the efficiency of business management. In this case, chances are that administrative staff, often underpaid, easily apply certain

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<sup>1</sup> For example, NATO-AC/4-2261 or EU-Regulations.

management procedures to improve their own financial status to the detriment of public interest and money.

To create and establish an efficient financial management system and to 'cut red tape,' the legislators have to impose an obligation to evaluate administrative and management procedures on the executive in order to:

- Adapt the system to the actual political, economic and social situation and to allow flexible adjustments to changes in the environment
- Adhere to international standards and regulations<sup>2</sup>
- Apply the rules of the 'new public management'<sup>3</sup>
- Focus on the introduction of new economic methods<sup>4</sup>
- Use modern information technology (IT) and communications systems
- Provide information on actual (daily) expenses and revenues on the different accounts
- Facilitate, simplify and accelerate the provision of budget information through enhanced data management and data access
- Improve transparency, reliability, accountability and flexibility
- Construct a lean and transparent financial management organisation
- Describe and apply clear rules of responsibility of the concerned personnel, including job descriptions and missions of all organisational elements
- Define decision-making powers that correspond to job descriptions and avoid the case when everybody is informed, but nobody makes decisions
- Create clear financial laws, understandable regulations and secure their consideration and application
- Prove the importance of each business transaction and assess the time used, the lines of communication and the abilities of the personnel involved
- Reduce cash payments in the whole finance system
- Establish organs for internal and external financial control and audits

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<sup>2</sup> Among the most important are the International Public Sector Accounting Standards (IPSAS), the International Accounting Standards (IAS) and the International Financial Reporting Standards (IFRS).

<sup>3</sup> A management philosophy used by governments since the 1980s to modernise the public sector, see for example [http://en.wikipedia.org/wiki/New\\_Public\\_Management](http://en.wikipedia.org/wiki/New_Public_Management).

<sup>4</sup> For example, the Input-Output-Outcome philosophy. Controlling and others are briefly addressed in the next sub-section.

- Define clearly the responsibilities of the Ministry of Defence and the procedures for its interaction with other ministries, in particular with the ministries of finance, treasury, economy, and the interior, as well as demand the use of common IT-systems
- Involve experienced economic advisers, personnel and experts in the related processes.

The public services of some countries and many civilian companies gain experience by involving their personnel in this evaluation and renewing process and using their creative potential to find better solutions. The people in the organisation have to be encouraged to make recommendations and proposal for improvements, in particular as related to increase of efficiency or quality of working conditions and cost saving. To facilitate such involvement, it is important to have a central organ or an institution with responsibilities to assess the ideas and their possible realisation in a very short time and to reward the people that have made proposals regardless of whether they have been implemented or not. The following merit awards and incentive schemes are conceivable: incentive payment, days off, material gifts, official commendation, promotions and stay in recreation facilities.

The countries in transition economies must be very careful, critical and not in a hurry when taking over 'western defence finance systems' partly or in whole. An intensive stocktaking of their situation, resources, aims and abilities should occur at the beginning of the process leading to an eventual decision to revamp their system. Sometimes countries are fascinated by the gratis support offer and are not able to foresee future financial consequences. In some cases the offers are oversized in respect to the actual dimension of the defence organisation. The practice has shown that very often the implementation of proposals from 'system and support provider countries' caused a lot of problems or failed later on.

### **Definition and Limitation of the Defence Tasks and Budget**

Without any doubt, the resource allocation of a country is one of the most difficult missions and decisions of the Executive and the Parliament. Most nations have limited resources and, consequently, the problem is to distribute these resources—mainly money and, indirectly, personnel, material and infrastructure—to meet overarching priorities, necessary demands and deficits and, last but not least, to keep the voters satisfied. From fiscal year to fiscal year, decision makers are challenged to keep the appropriate resource allocation balance in the country. Derived from that, the defence budget must be seen under the same constraints: balanced allocation of limited resources to fulfil security and defence tasks.

It is necessary to define 'defence' and, respectively, 'defence tasks' because most of the nations worldwide use different definitions deduced from their individual histori-



cal and political situations. It is worth mentioning that international organisations such as the UN, NATO, the Organization for Security and Co-operation in Europe (OSCE), the Stockholm International Peace Research Institute (SIPRI), the World Bank, and the International Monetary Fund (IMF), which also use defence figures in their work and missions, have different definitions of 'defence task' and of 'defence budget.' Consequently, their reporting criteria are different and this causes some problems for reporting nations. In this context, the consideration of the principles of transparency and reliability serves to satisfy various international as well as national requirements and builds confidence internationally and nationally. Even NATO, through its Defence Review Committee, annually takes a deep look into the budgets of all NATO members to determine whether all NATO countries share an appropriate portion of the total NATO burden to guarantee that Article 5 of the North Atlantic Treaty can be complied with at all times.

Transparency and reliability allow demonstrating to the public, the media and national and international partners the monetary value of defence to the effect that freedom is not obtained at zero cost: public funds are well spent for this purpose and spending is carefully controlled.

But there are limits to transparency due to security concerns and the necessity to classify defence-related information in some instances. Some parts of the defence budget, for example, relate to certain secret missions that are known to a very limited circle of people (e.g., the members of the Security and Defence Committee of the Parliament and the main players of the ministry involved). In this case, a 'Secret Annex' to the budget can solve the problem and the respective amount can appear camouflaged in the defence budget or in a separate state budget.

The next problem in managing defence finances is the allocation and appropriation of revenues and income to the defence budget. If the defence sector has earned money by a certain performance, it should be credited to the defence budget because the defence establishment has utilised its resources to 'produce this performance.' In financial practice this means that besides the expenditure account, revenue accounts also have to be opened. If the amount of the revenue cannot be estimated in advance, the account has to be set to zero and filled in with the appropriate figures later on. The main state budget-holder, in most cases the Minister of Finance or Treasury, tries to credit this money to his accounts.

Examples for defence revenues could be:

- A military unit working for or supporting a civilian company in road or bridge construction
- A defence unit supporting the organisers of an international sports event with personnel and transportation
- A useless storage room in a barrack rented to a civilian firm

- A military unit engaged in an international fire-fighting mission or in a UN mission.

In principle, profit-making is not the aim of defence. Such employment of defence units should be very limited and exercised only as an exception. The tendency seen in some eastern countries to provide for non-military missions and production should be eliminated or significantly diminished. The defence forces have to concentrate on the real defence missions, although certain—potentially profit making—military capacities are available in peacetime. If such defence capacities of potential dual purpose are still wanted, this has to be considered in terms of both budget revenues and expenditures.

### **New Economic Management Philosophy and Procedures**

The limited resources for public sectors worldwide invite new thinking on conventional resource management, new ways of planning and execution. Supported by science, experts in public service are looking for new solutions. The 'new public management' has to define performance measures in product, programme, project or similar terms. The cost for the 'product' is estimated in advance and managers have to keep the 'cost' of the respective performance within set limits.

The orientation from the so called 'input-' to the 'output-' or 'outcome-philosophy' is the basis for the new public management, functioning in a free market economy. The extensive growth of IT and the opportunities it provides opens new approaches for the public sector, including defence, to realise new management rules and procedures.

Management systems that are 'output-' and 'outcome-oriented' are finding wide acceptance in the public sector. Their implementation amends or supersedes the cameralistic system that has been in use since the late middle-ages. The cameralistic 'input-oriented' system is based on the fact that the sovereign/the government spends a certain amount of money for a fiscal year (FY). It is expected that the money is spent in full within this period (FY), and there is no control on the results.

However, if defence is to be transparent, it is necessary to know whether goals and objectives have been achieved by spending the allocated money. The aim of the Public Sector, which includes the defence sector, is to control the input by checking the output (the quantity of the products) and the outcome (the quality and efficiency).

The whole construction can be covered by controlling systems. Prerequisites for this procedure are the definition of performance and procedures in place to measure that performance.

But what does 'performance' mean? In English, German and French the term has different meanings. Derived from the natural sciences, the following formula and definition could be applied to the economic sphere and, consequently, to the defence sector as well:

**Performance** = Work per Time

**OR**

Workload related to other measurable factors

Performance is the desired result in a production process, or service in the service sector, that can be determined by a measurable factor or a product (or service) definition.

In the defence sector, the determination of performance figures and performance data is sometimes difficult and complicated, but feasible.

The aims to develop such performance figures are:

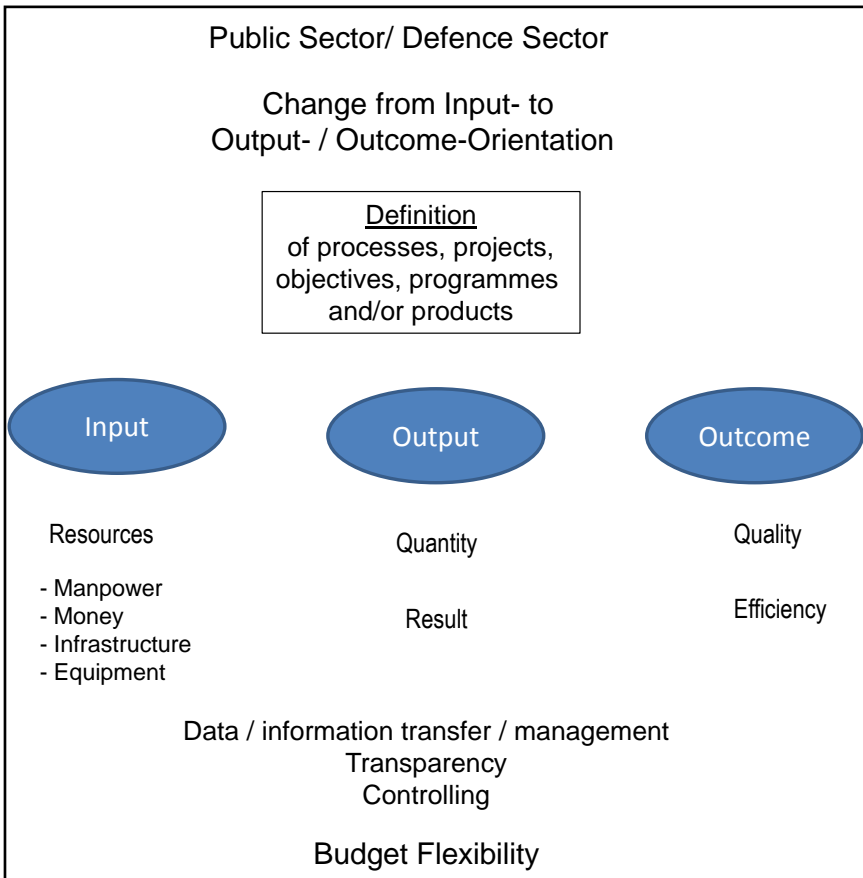
- The possibility to compare the performance of different units, agencies or products, processes, etc.
- Apply benchmarking: internal comparison and orientation to the best case
- Calculate the cost or the price
- Support finance planning and execution
- Make external comparison with civilian companies and bidders as basis for outsourcing or insourcing decisions
- Conduct economic assessments
- Support internal and external controlling systems
- Provide actual information to management bodies
- Support management change.

Experience in both business and public organisations clearly shows the advantages of modern and efficient finance management that utilises performance data and figures. Numerous public services and defence sectors are successfully applying these systems. But it must be emphasised that such fundamental change must be carefully prepared and realised step by step, starting with a few 'pilot' activities to gain experience.

### **Founding New Enterprises/Agencies by the Government; Outsourcing**

Of increasing popularity in the cooperation between government and industry in free markets is the creation of agencies or enterprises to perform defence missions and/or functions that can be:

- owned by the government;
- partially owned by the government (with more or less than 50 percent in private hands); or
- fully private.



**Figure 2: The 'New Public Economy' and Interdependencies.**

The reasons for adopting such an approach may be economic or a consequence—intended or not—of force reductions. It is important to understand that such new cooperation models can have a negative effect on defence financing and, possibly, on the price that has to be paid by the defence establishment. In considering this approach, the following issues must be clarified in advance:

- Do the enterprises/agencies have to pay taxes?
- Is there an expectation for profit and a shareholder value?
- Who receives the profit (government or other shareholders)?
- What is the new status of personnel (soldiers, civil servants) taken over by the new organisation, e.g., will it be a civilian company?

- Who will cover severance packages in case of reduction of personnel?
- Who controls the enterprise/agency and who makes decisions?
- What are the effects on related state and defence infrastructure?

The respective basic options also touch on the question of in- or out-sourcing activities and their financing.

Before an outsourcing decision is made, it is recommended to start with optimising the concerned organisational element or service and/or mission. Consequently, the 'optimised option' can be compared in terms of cost with offers by civilian bidders. A prerequisite for any decision is that the defence sector has calculated and assessed their price and performance. The assessment of offers by a civilian company should include performance issues as well, and account for taxes, insurance rate, profit, special fees, risk fees, short-notice fees and, probably, maintenance of reserves, which creates an additional burden for the defence budget. In most cases, companies are not willing to provide a very detailed invoice, but only a total amount.

Later on, it is possible for one civilian company to develop a monopoly position that may then lead to a dependence of the defence sector regarding price and availability, as well as performance. The provider of services could also encounter problems, e.g., in cases of tension and war, or in supporting operations in regions far away from the homeland. Some examples are:

- Service is not available at short notice
- The contractor's personnel have non-combatant status
- Transportation means are not available
- The price is increasing to cover additional risk, etc.

Sometimes companies start with a low offer and then increase their prices.

It is worth mentioning that between 60 and 70 percent of the defence budget, spent in the country, comes back to the state in the form of direct and indirect taxes and social contributions. This is indeed a major fact in the decision-making process regarding contracts with foreign companies.

Closely related to the options outlined above is the need for the finance manager to think about new ways of financing, governmental changes of the monetary policy and, possibly, changes to laws and regulations.

There are several possibilities:

- To loan money from the market (the bank sector)
- To loan money from the contracted company
- To loan additional funds from the Ministries of Finance, or Treasury, and pay interest

- To establish a reserve fund for spending later in the fiscal years
- To sell state property (materiel, infrastructure) and credit the revenue to defence accounts.

Limited resources, the reduction of public administration and defence forces, combined with the application of new economic methods, the spread of modern IT, public-private partnerships, outsourcing and a greater transparency and adaptation to international finance standards in world-wide networks force governments, communities, public organisations and the defence sector to develop new solutions.

## Defence and Security Tasks

Now we will turn back to the questions posed in the previous section: “What is to be considered as a defence and/or security task?” and “How to define defence?” A possible answer could be found through an analysis of defence and security tasks and missions by concerned ministries and use of practically-orientated terms. The experience of the Ministry of Defence of Germany provides the following example in defining tasks:

- *Core task*, e.g., military operations and exercises
- *Supporting task*, e.g., logistic support, education and training
- *Neutral task*, e.g., installation of an IT-system, provision of military housing or infrastructure.

This differentiation can lead to an answer on the appropriate size of combat and supporting forces, on the tasks that could be performed by civilian personnel in public (defence) service, as well as on tasks that could be transferred to an ‘outsourcing arrangement’ – to governmental or partly-governmental agencies, public-private partnerships or civilian companies.

Corresponding to the results of the analysis and the decisions determining different defence tasks, we need to consider which ones are typical defence tasks and, hence, which tasks have to be covered by the defence budget. The following are examples deserving such consideration:

- Social care and the health system
- Recreation system and facilities
- Housing for soldiers and civil servants
- Peacetime/administrative transportation
- Pension system
- Insurance system

- Pre-military organisation
- Para-military organisation
- Civil defence system
- Production of non-military goods
- Logistics and service support
- Support to civilian authorities in disasters and catastrophes
- Human, material and infrastructure conversion, disarmament
- State security and intelligence systems.

Other governmental budget-holders as a rule try to avoid payments for such expenditures from their budgets.

## Changes in Budget Allocation

Now we will examine briefly the consequences and interdependencies in financial planning and budget management processes when decisions on defence budget appropriations are re-examined. Decisions that relate to spending indirectly often have similar consequences.

If, for example, a decision is made to terminate free housing for military personnel, it would mean that a higher salary has to be paid to allow the soldiers to cover the costs of leasing their housing. As a consequence, personnel costs in financial plans are increasing, housing infrastructure has to be sold or outsourced and the organisational structure of units or agencies that deal with housing has to be adapted. Respectively, their budgets also have to be adapted.

Likewise, the government (or the responsible agency or ministry) often has to consider whether to allocate expenses to the defence budget for:

- international missions (UN missions, other peacekeeping missions, peace enforcement, humanitarian interventions, disaster relief operations, etc.);
- rent or interest to finance military investments;
- increase of personnel costs, like wage increases, etc.;
- support to the development of key technology by civilian organisations;
- environmental damage caused by the armed forces; and
- social payments for:
  - active and reserve personnel (veterans);
  - clubs/organisations;
  - military privileges; and

- sports and culture, etc.

The government, that is the politicians, supported by expert planners, has to decide very carefully what sort of tasks and missions should be assigned to the military and what should be outsourced to the civilian sector, performed by other ministries/ agencies, neighbouring countries or international organisations.<sup>5</sup> This implies that costs and performance have to be estimated prior to the start of the decision-making process.<sup>6</sup>

Additionally, experts conduct risk analysis and develop alternatives, including 'worst-case' options. The planner and financial manager have to react on or resolve the following difficulties and problems:

- The industry has no capacity available to provide budgeted items
- Avoiding dependence on other countries, unemployment and loss of tax income by keeping core defence industries in country
- Inflation rates, market- or production bottlenecks
- Obligations for international bidding
- Reliability and expense data
- Budget cuts
- Lack of central data collection and access to necessary financial data
- No flexibility in planning and budget execution.

## Structure of the Defence Budget

One of the basic issues in defence finance management is the budget structure. The budget structure of a country is defined by laws and regulations and cannot be changed easily even if a good proposal to enhance the defence finance system is made. In some cases, it is the resistance of acting personnel that hampers necessary changes.

The following types of defence budget structures are commonly applied, with the respective—exemplary—budget categories:

- *Structure along Cost Groups:* Military and Civilian Personnel, Operating and Maintenance, Procurement, Infrastructure, Research and Development, Administration
- *Structure along Organisational Lines:* Army, Air Force, Navy, Reserve Forces, Interior Security Forces, Railway and Construction Forces, Police /Border Police/ Coast Guard, Intelligence Service, Customs Authorities

<sup>5</sup> In interim options, a mission or task would be performed jointly by two or more organisations.

<sup>6</sup> The section on cost accounting below provides details.



- *Structure Combining Appropriations and Organisational Aspects:* Federal Ministry of Defence Offices; General allowances (including revenues); Military commands (personnel and administration); Civil administration and personnel; Military spiritual, welfare and medical services; Provisions and clothing; Accommodation/ infrastructure; Communications and information technology; Quartermaster and army equipment/ordnance; Ships and naval equipment; Aircraft, missiles and Air Force equipment; Military research, development and testing; Allowances, contributions to NATO and other international organisations
- *Structure along Projects, Programmes, Processes and Products (Examples):* Force reduction; Social programme; Air Defence; Infrastructure maintenance/ housing; Coastal protection, search and rescue (SAR); Training military reserves; International contribution and commitments; New transport aircraft; New Headquarters; Communication and information technology
- *Mixed Budget Types:* Often, defence budgets are structured as a mix of two or more of the types presented above. Each type has advantages and disadvantages. It is not that important which type of budget structure is selected as long as the demands of defence are met.

## Planning, Programming and Budgeting

### Accountability, Flexibility and Transparency

Both accountability and transparency are the main factors for an efficient and flexible defence finance management that corresponds to demands of the general public, taxpayers, legislative bodies and the international community.

The following objectives are pursued in this context:

- Enhancing defence planning, programming and budgeting to guarantee reliability, sustainability, accountability
- Determining actual costs and expenses to secure reliable budget forecasts
- Heeding the principle of economic efficiency to provide cost minimisation and increase of efficiency
- Deciding on insourcing and outsourcing in areas of joint support, whereas purely military and sovereign core tasks are retained by the armed forces.

The experience of Germany provides an example for transparency. The final Annual Defence Budget has to pass the legislature. It is approved as a law consisting of approximately 180 pages. It is available for everybody and can be bought in book-

shops. In this way, the public has access to the most important data of this budget and the democratic rule of transparency is fulfilled.

However, even in such cases planning and budget figures are not always easy to comprehend and interpretation by an experienced budget planner may be necessary to understand what the respective figures stand for. Sometimes figures are camouflaged, sometimes they are faked, sometimes they are not precise because of lacking empirical data and sometimes figures may even be missing. Such cases make the work of financial managers, and even more so of outside observers like the media, more challenging.

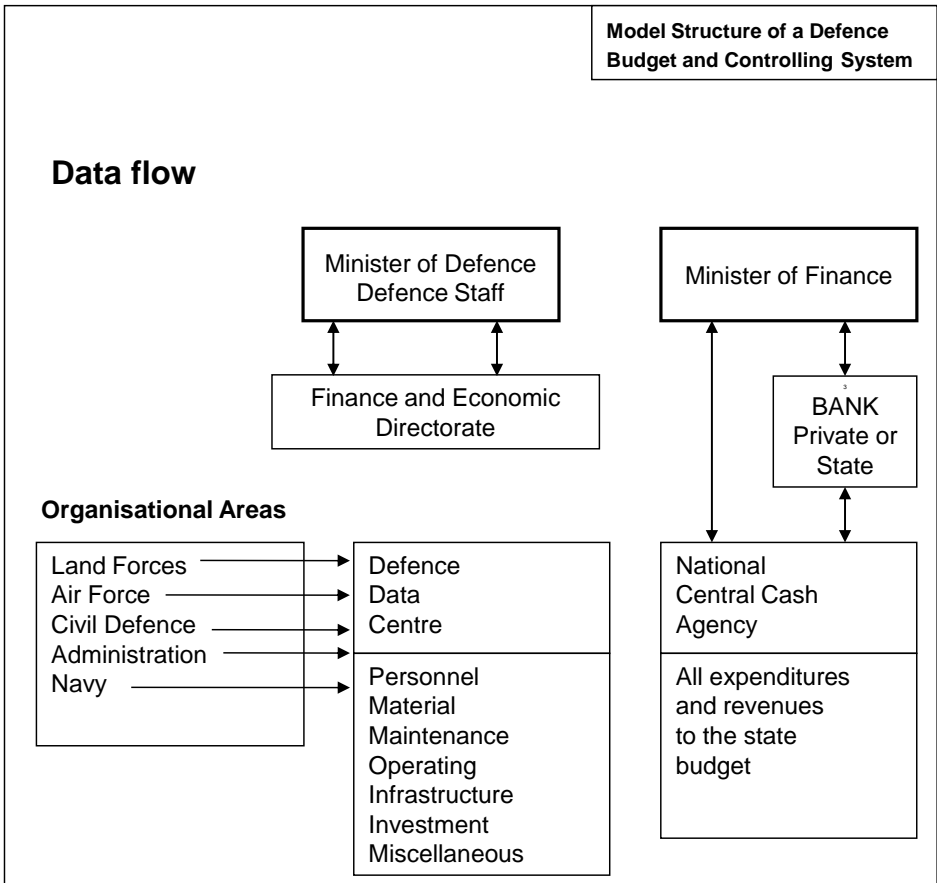
### **Budget Planning Cycle**

In democracies, the government and the parliament develop the political concepts and aims and carry the budget responsibility. Consequently, they determine the planning and programming cycle. The planning and programming cycle is always dependent on the fiscal year and the fiscal cycle (e.g., two, three, five years). The differentiation of the cycle is in terms of its duration: it may be a short-, mid- or long-term cycle. A mid-term cycle—three years and more—gives some stability to the financial planning and programming process but also increases the risks of disturbances in case of unanticipated financial changes. The long-term cycle implies many financial uncertainties and can only be done very roughly. In most cases, this can imply higher cost and delays in the execution and results in further financial management problems.

Some defence concepts include programmes, projects, objectives, etc. The inclusion of programming challenges the so called 'cost-performance calculations' to gain the correct figures. In parallel to the planning cycle, Germany and some other countries have developed a procedure called 'ability analysis.' Such parallel procedures are used in case of very limited resources to provide efficiency and response to quickly changing demands, especially for international missions, through definition of 'ability gaps,' prioritisation, planning and realisation in a relatively short timeframe. But this parallelism may have a great impact on the short- and mid-term planning, programming and financing/budgeting, and requires considerable additional coordination.

### **Cost Accounting**

The weakest links in the chain of finance management involve cost and expense data. In practice, the value and effectiveness of financial forecasting, finance planning, programming, budgeting and controlling are mainly dependent on the available data. The best systems and procedures cannot work efficiently if the underlying data is wrong, out of date or if it is not reliable, transparent and recognisable.



**Figure 3: Cost Accounting Application and Data Flow.**

**Application of Cost Accounting**

Cost accounting is the main prerequisite of efficient resource management and finance management in the private, as well in the public and defence sectors. It should be mentioned that the public/defence sector has recognised the value of cost accounting but is still far behind developments in the private sector.

In some cases, even the terms ‘cost’ and ‘expenses’ are incorrectly applied. The general definitions are as follows: Costs are estimated monetary resources consumed in a certain time period. Expenses cause money to be paid out (in cash or otherwise), spent and to be booked in a budget account. The application and the use of cost data are necessary in the following fields:

- Resource management, including budget and finance planning
- Accountability for defence expenses and revenues in parliamentary control
- Provision of information to the citizens, the media, the international community (as confidence building measures), audit and controlling organisations, the defense ministry and defence organisations and the main budget-holder, e.g., the Ministry of Finance/ Treasury
- Economic analysis and evaluations
- Price calculation and cost comparison for in- and out-sourcing decisions
- Privatisation and public-private partnerships
- Assessment of cost-performance and life-cycle-costs
- Invoicing for national and international reimbursement, cost-sharing and financial support.

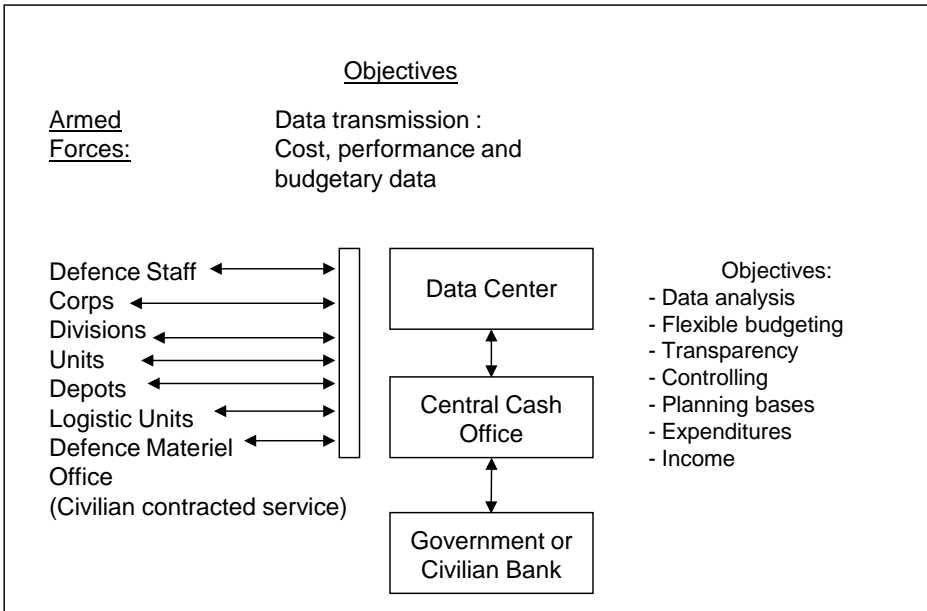
Figure 3 shows the possible data flow in the defence organisation with a common data centre. The units and services are the main data provider, whereas the 'main players' have clearly defined access rights to the generated data.

### **Cost Accounting Organisation**

A cost accounting organisation may consist of commands, units, agencies, data centres, institutions, etc. It deals with cost accounting with the following objectives:

- To collect and process all relevant data in support of effective and efficient cost accounting
- To ensure high-quality data in terms of actuality, relevance, transparency, reliability, differentiation and accuracy
- To shorten the lines of communication for data transfer, thus gaining time
- To avoid the collection of too much data, which can not be used or analysed (in other words, to avoid turning the data into a so-called 'data cemetery')
- To establish data centres (data-processing centre, a data warehouse) and centralise data collection and data processing
- To train and motivate the personnel involved in the cost accounting organisation
- To ensure quick access to data at different levels on a 'need-to-know basis' while considering the rules of secrecy.

For countries with relatively small armed forces, a single cost-accounting and data-processing centre may suffice. Such an arrangement will simplify the collection, evaluation and processing of cost data. This centre may further serve as a neutral cal-



**Figure 4: Example of Data Transmission.**

culator and provide economic analysis to parliament, the government audit office or internal audit authorities.

A larger force size may require the establishment of regional data centres on different levels, while communication and data processing are facilitated by advanced communications and information technologies.

**Cost Accounting Methodology and Procedures**

The estimation of cost is based on real historical and empirical expense figures. Consequently, a link between the budget with the expense figures and the cost data is of importance and must be provided in the organisation. Several differentiations of costs are used in economics and should be used in the defence sector as well:

Full costs	Partial costs	Special costs	
Direct costs	Indirect costs		
Fixed costs	Variable costs		
Operating costs	Running costs	Maintenance costs	Labour costs
Cost-plus	Overhead costs	Administrative costs	Investment costs

Before using these terms, they have to be clearly defined, describing also their constituent elements. In the framework of the NATO-Russia Council, the NATO Economic Committee launched an initiative at standardising these definitions but so far has not achieved the anticipated results.<sup>7</sup>

In most nations that apply cost accounting, the following three cost groups are commonly used in defence:

#### *Full Costs*

The full costs include all cost elements and are calculated for comparison with public sector and civilian companies for the purposes of economic analysis, for price-building and invoicing for services and products given or offered by the defence organisation to the public sector or another requesting entity.

#### *Partial Costs*

'Partial costs' exclude some cost elements. They are calculated for national or international agencies, e.g., the United Nations (UN) and institutions and foreign ministries of defence—on the basis of an agreement—to simplify the calculations and build a certain level of confidence. Usually, this approach is used in order to define and declare the additional costs arising for the service provider, e.g., in cases of support in natural disasters, provision of air transportation or any other support to other ministries.

#### *Special Costs*

Special costs are defined depending on their purpose. For example, costs for operations and maintenance (based on real consumption and related expenditures) and for procurement, etc., form the basis to calculate forecasted cost data used by the Ministry of Defence in budget planning.

These costs are based on empirical data. That means the average costs for previous years are used to form the basic value. On that basis, cost planners generate new costs taking into consideration all future-oriented views, parameters and intentions. These forecasted costs are fairly difficult to calculate and should be amended in the planning phase if necessary.

To ensure a simple and transparent calculation, a special 'standard schemata' that includes the different costs or cost elements must be developed for different 'cost groups' and subordinate costs. The German experience provides a practical example. Annually, the Cost Accounting Centre publishes a 160-page book (and a CD-ROM with

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<sup>7</sup> NATO-Russia Council AdHoc Working Group Programme 2004, Annex 1, Conclusions of the "linguistic workshops on economic and financial terminology in the field of defence." The reader may find useful these two studies: SAS-028 "Cost Structure and Life Cycle Costs for Military Systems" and SAS-054 "Methods and Models for Life Cycle Costing." Both reports, in full text, can be freely downloaded from [www.rta.nato.int/panel.asp?panel=SAS&topic=pubs](http://www.rta.nato.int/panel.asp?panel=SAS&topic=pubs).

the same content) with cost figures and guidelines for their application. To provide for optimisation and feedback, the users are asked regularly to assess the quality and the serviceability of this 'cost guideline.' These same cost figures are available throughout the defence sector and have to be used as a common and equal basis in several financial management purposes including forecasting, budget planning, for controlling and audit purposes, individual cost-performance calculations and for economic investigations. The Centre is obliged to send the published guideline to the Ministry of Finance, to the Federal Audit Organisation, to the Parliament, defence units and agencies and to other relevant public authorities.

A number of additional cost accounting problems are commonly encountered:

- To estimate overhead costs (the costs from the producing unit all way up to the Minister of Defence)
- To take into account inflation and currency convergence rates
- To mix calculations of costs and expenditures
- To change the relation between fixed and variable costs and, in particular, to estimate common costs.

An efficient cost accounting system solves these and other problems.

We will use an example to show how the requirements for an effective cost calculation may be achieved: The payments to personnel should be fully centralised and, importantly, not made in cash but via transfers to personal bank accounts. All payment information has to be transferred to the data centre without delay. Consequently, the data processing system is able to deliver actual personnel expenditure data on short notice. At any time the cost accounting centre can receive up to date data and calculate the cost figures for current and forthcoming fiscal periods – that is for budget execution, planning, controlling and other purposes mentioned above.

The most essential measures in establishing a useful database and data bank are:

- Standardisation, e.g., procedures and cost calculation rules
- Centralisation, e.g., central collection of data by the data-centre
- Actualisation, e.g., daily bookkeeping of expenses and fast transmission
- Transfer of information/ data, e.g., by existing electronic-mail systems
- Common standard software (for all agencies in defence and other ministries)
- Training of personnel (to provide the skills necessary to manage the systems)
- Establishment of cost-performance calculation in all larger units and agencies (step by step, starting with the most important units, possibly as 'pilot action' cases)
- Securing data maintenance, data protection and security.

## Cost Performance Accounting

When a cost accounting system is established, the next step is to introduce a cost-performance accounting system. The basis for the realisation of intricate cost-performance accounting is a functioning cost accounting system and expert determination of different performances (see Figure 2).

In the past, there was no control over the output (the quantity) or the outcome (the efficiency or quality) of the utilisation of resources in defence organisations. Accounting systems in the private sector found the way to fulfil respective measurement and control requirements. In the defence sector, that means that performance, work, service, productivity, programmes, processes, projects, objectives, missions and tasks have to be determined and related to costs. Then, once the respective activity has been accomplished, we should be able to answer the question: "Was the efficiency objective achieved and, if necessary, can we make a comparison with the private sector for benchmarking, outsourcing and other purposes?"

Output/outcome controlling based on cost-performance accounting will be a valuable tool for the responsible commander or person in charge at all levels of the defence organisation to prove whether he or she has achieved the expected objective or mission efficiently. It is very important to note that for performance, e.g., social service, motivation, combat readiness of soldiers or weapon systems or skill/training level, for which a monetary value cannot be calculated, we still need to develop 'standard value figures.'

Cost-benefit accounting is examined along the same lines, although the definition of 'benefit' can be complicated. It can be applied preferably to defence procurement, infrastructure development and the training and material sector. Cost-benefit accounting figures express utility in relation to cost. The determination of benefit or utility figures is based on subjective valuations and assessments.

## Technical Realisation

In times of limited defence resources, most defence establishments cannot expect to receive additional funds to build, for example, a modern communications and information system as would be necessary to support advanced budgeting and cost-accounting, within a short period of time. Therefore, it is important to start by analysing the available systems and investigating how—step by step—a new or optimised data processing system can be installed.

In recent years, some defence and finance management sectors established, in line with rapid IT developments, numerous data processing systems and now face the problem of unifying or replacing all these different systems. The 'golden solution' would be to equip all ministries and the whole finance and business management organisation with the same system. The technical equipment should be standard, from the pri-



vate market, and should encompass—besides the finance sector and accounting—the fields of logistics, personnel management, procurement, infrastructure and controlling and administration, with some of these added or adapted later on. Taking into account the orientation to international accounting standards, in the future it might be possible to select and introduce globally available software that is successfully used in the private sector.<sup>8</sup> Countries with relatively small forces and very limited financial, human and material resources can find their solution in using existing online or telephone systems for simple data transmissions. The IT system in use should be applied as long as feasible, with a step-by-step transition to one ‘standard’ system. Planners need to consider the need to parallel use of the old and the new system for a certain—possibly long—period without interrupting the main financial management services. This is a real challenge.

Parallel to the installation of the system, procedures and regulations of the whole financing/accounting system have to be amended and adapted. The experience of foreign defence experts could be of use here.

## Budget Execution

One of the major problems in budget execution is the fact that budget figures, which have been defined maybe one or more years before the start of the fiscal year, are not definite due to the relatively long and complicated process of planning and approval by the respective organisations, e.g., the Ministry of Finance, the Parliament, the Audit Office, etc. One solution is to amend and update the data through a last minute list of options to be approved by the Parliament at the end of the ‘budget reading period’ and shortly before budget execution starts.

Another possibility is considering the actual financial situation and solving problems to allow certain flexible transactions in the budget. Some problems may be resolved by establishing budget flexibility rules, e.g., to allow transfer of money from one chapter/appropriation item to another, from the current fiscal year to the next one, from one project/programme/objective to another and from one ministry to another ministry.

Such flexible budgeting could be applied at nearly all levels of budget-holders. When one organisational unit has saved money in providing an item, it should be allowed to use that money for another item or purpose within certain limits. This will increase the responsibility of authorised personnel to spend money sparingly and will give them the motivation and the understanding that the transfers undertaken bring personal or organisational benefits. A prerequisite is the trust between superior and subordinate levels and these financial transactions should not breach that trust. In the units, flexibility during budget execution should be related to resource-saving and rec-

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<sup>8</sup> Of the type of SAP R3, IBM and similar.

ommendation-programmes (described briefly above). Some nations achieved very positive results through the use of such flexible budgeting procedures.

In some transitional countries, the time for the transfer of financial data from the lowest level unit through the organisational hierarchy up to the Ministry of Defence may take from between four to six months. Such delays make some of the most important information for adaptive decision making—the financial figures in budget execution—practically useless.

One example in this context is the so-called ‘December fever.’ In the past, a certain amount of resources (or so-called ‘inputs’) were available for either the fiscal year, for a defined period of time or for a mission. It was—and still is—a favourable game to report officially that all resources for that period have been used and thus convince the provider (budget-holder) of resources to dedicate the same amount or more money for the next period. At the end of the fiscal year—in most countries that is the end of December—the defence organisation suffers from ‘December fever’ trying to spend all remaining money, sometimes for useless things, just to avoid cut backs for the upcoming year. Hence, the flexibility to transfer money from one fiscal year to the next creates conditions that discourage useless spending.

## Controlling and Auditing

### Financial Controlling

Controlling and auditing are elements of the democratic, efficient and responsible handling of a budget and, hence, have to be examined as essential elements of the financial management system. The interdependencies of financial controlling and auditing are so intense that a clear differentiation is not always possible. Control over finances is an integral part of the whole controlling system (see Figure 2 and the text describing it).

In defence management, the term auditing stands for control over the mathematical calculation of financial figures, avoidance of bookkeeping errors, black money business and corruption, avoidance of wasteful expenditures and following clear finance procedures and responsibilities. Controlling is intended to guarantee that taxpayers’ money is spent efficiently and economically, in a highly responsible manner, using a running control mechanism.

The following prerequisites have to be in place to carry out financial controlling:

- Time period (fiscal years)
- Transparency, correct accounting
- Specialisation and exclusiveness, identification of budgeted amount per title/number and specific description of the purpose or the programmes

- Comprehensiveness of all expected expenditures and revenues
- Special identification of mid- and long-term planning items and the expected cost, expenses, revenues
- Seriousness, accuracy and reliability of financial data.

Internal and external controlling and auditing bodies have to be established. The following description will show a near ideal solution for controlling and audit management.<sup>9</sup>

The cycle of parliamentary control starts with the budget planning process and is closed with the submission of a final audit report of the Governmental Audit Office (GAO) or similar institution, controlled by the parliament. The parliament will discuss the audit findings in the Parliamentary Auditing Committee in the presence of an Undersecretary of the Ministry of Defence or Ministry of Finance, the Budget Director and the Chief of Armed Forces. Any other responsible individuals may be directed to report to this committee. When a case is ended with grave concerns of the committee, corrective actions will normally be requested by the parliamentarians. The implementation of this corrective action may be overseen by GAO. It is important that members of parliament (MPs) and their staff are skilled in budget rules and procedures to fulfil their audit missions. Sometimes, these persons might feel that this is too time-consuming but they have always to acquire the necessary expertise as money is the most important resource. This difficult business can be supported in the parliament by experienced staff officers (with the rank of Lieutenant Colonel, Colonel, or civilian employees with corresponding expertise) who work for two to three years with the parliamentary staff and serve as links between the parliament and the ministries. Close cooperation with the ministries and GAO is also necessary.

Political directives and personal intentions can influence the process. The audit can be blocked or steered in a certain direction by the parties or by influential MPs. Sometimes, international, national, regional, lobbyist, military, security, industrial, private or other interests cause attempts at avoiding consequent auditing. It is important to know that this does not relieve the personnel from the obligation to inform and consult the decision makers on the possible results and consequences.

The Audit Office assists the parliament in fulfilling the oversight of budgetary expenses and revenues: The Governmental Audit Office is responsible to the Parliamentary Budget Committee—and respectively to its subordinated Budget Audit Committee—on the basis of the Constitution. So it acts either on behalf of the parliament or on its own. This neutral institution can only perform its constitutional duties of auditing expenditures, revenues and savings on the basis of transparent budgets. The mem-

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<sup>9</sup> These arrangements are derived from the German experience in controlling and audit management in defence.

bers enjoy independence like judges. They propose ideas and measures for improvement of resource management. On the other hand, persons responsible for wasted funds may be directed to compensate for the damage which they have caused by gross negligence. Thus, the audits by GAO have proved to be a very useful tool in the control of all budget and financial matters.

### **Internal Audit and Controlling Organisation**

All principles and procedures with regard to the control and the management of the defence budget will not be very helpful unless there is a strict control performed at the end of the chain, where money is spent. This final control is executed by the Budget Directorate, different finance offices and budget and controlling branches, internal auditors and an internal revision at various levels of the organisation subordinate to the ministries. This includes the audit of correctness in bookkeeping, of cashiers and financial transactions on the lower level (e.g., a battalion) and, in addition, control of economically efficient spending at higher levels (e.g., military divisions, large agencies, schools, procurement offices and maintenance facilities). An advisory role of the auditors is always included and wanted.

The Ministry of Finance as the main state budget-holder is in a continuous auditing process to support both the executive and the parliament with the following aims and responsibilities:

- To impose a full or partial budget freeze, cuttings or increases within a fiscal year, if necessary
- To approve the expenditures in excess of budget accounts up to e.g., five million Euros (per title, subhead, project, programme) and inform the parliament
- To approve commitments for major construction projects
- To approve requests prior to new commitments to international organisations, e.g., UN, NATO, EU or for international government commitments
- To decide in cooperation with the concerned ministry how the budgets are structured and what revenues can be credited.

When a controller or a respective controlling element exists in the structure of the organisation, they are directly subordinated to the member of the organisational leadership who is responsible for resource management.

### **Other External Auditors**

In certain cases, external auditors and consultants are asked to support defence organisations, mostly when issues of economic solutions and decisions are under consideration. International organisations such as the UN, NATO, OSCE, EU, the World

Bank and others are auditing national and international budgets in cases when they consider making a financial contribution to a country or an institution.

### **The Importance of Controlling and Auditing**

Internal and external security and defence are among the most important issues for a country and its people and, consequently, they have to spend considerable resources to guarantee security. This process, on the other hand, has to be audited and controlled. The use of resources and the necessary auditing and controlling have to contribute to the following tasks:

- To achieve the goals of political security and the defence concept
- To keep the balance between security and other missions of a country, e.g., social life, education, economy
- To control the state budget following not only input, but also—and even more importantly—its output and outcome orientation
- To freeze, unfreeze, cut or increase parts of the budget
- To provide the ‘public good security’ or the product ‘security’ while following the principles of economy and good governance
- To fix clear regulations, including auditing, in a ‘Budget Code’ and other state laws and regulations
- To define responsibilities in the budgeting and the overall defence resource management process
- To provide a transparent, serious, reliable budget to the public, the parliament, the national ministries, the security forces/agencies and international partners
- To build a level of confidence and improve cooperation with partners
- To educate, train and motivate financial management personnel to fulfil the described obligations and missions.

If these prerequisites are met and certain elements exist—even if only up to a certain degree—it would be possible to establish efficient auditing and finance controlling. The finance manager and the management are at the core of these processes.

### **International Norms, Standards and Cooperation in Financial Management**

Enormous differences exist among countries and organisations in terms of financial management, which hinders the implementation of common norms and standards. The

ministries in one country often use different procedures and tools to manage finances, without much consideration of the necessary compatibility. Very often the defence sector in a particular country is not allowed to change and adapt its financial management system if that would lead to deviation from the common state budget regulations.

In addition, international organisations such as NATO, the European Union, the OSCE, SIPRI and others apply different interpretations of the defence and security budget and planning processes. This causes a broad variation of data interpretation, increasing the risk of different international organizations using non-comparable figures that may lead to political misunderstandings. Therefore, there is a considerable need to work towards creation and/or improvement of common norms and standards in financial management.

### **NATO Standardisation**

NATO and other international institutions are trying to develop common accounting and finance rules and regulations and to encourage nations to support this effort. Numerous NATO and non-NATO countries cooperate on financial issues. There are some NATO agreements, treaties, and bi- and multilateral memorandums of understanding—mostly based on mutual concessions and balance—that prescribe performance, supporting and financial rules between the partners in such agreements. Among the examples are:

- The use of an exercise area and facilities in a NATO member country
- Participation in courses offered by foreign countries
- Use of harbour facilities and services by naval ships, provision of support in emergencies, etc.<sup>10</sup>

In these cases, full costs are not included in the invoice. Most likely, only the individual consumption by the respective persons or units is reflected.

Another example of financial cooperation is provided by the European Air Group, which regulates the mutual air transportation capacity support. This Group has created a regulation for converting figures for different aircraft to avoid complicated reimbursement arrangements. The converting figures are based on the different partial costs and performance calculation of the countries and simplify the invoicing process for the finance personnel involved. In case of mutual air support, a balance record is

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<sup>10</sup> Examples from the following agreements have been used to create this list: Germany-Russia Memorandum of Understanding (MoU) on Naval Ship Visits, Germany-France-Poland MoU on the Use of Land Exercise Areas, the multinational MoU on Eurocorps and the multinational MoU of Baltic Sea littoral states on Search and Rescue.

set up between the countries. The debt in this converting-figure balance must be settled by the country every two years, thus avoiding invoicing for each item.

### International Standardisation

Other international arrangements also contribute towards commonality and standardisation in finance management. European and North American countries sponsor international organisations such as the *International Accounting Standard Board (IASB)* and the *International Public Sector Accounting Standards Board (IPSASB)*. Their main task is to develop international financing, accounting and public sector regulations, rules and norms in order to make the financial arrangements transparent, comparable and, in some cases, feasible.

These boards have issued the following sets of regulations:

- IAS – International Accounting Standards
- IFRS – International Financial Reporting Standards
- IPSAS – International Public Sector Accounting Standards.

These standards are accepted and applied by the European Union and several Western European nations, including in their defence sectors.

The activities of IASB and IPSASB are supplemented by the *International Auditing and Assurance Standards Board (IAASB)* and the *International Federation of Accountants (IFAC)*, which also contribute to the development of international regulations and recommendations for finance management.<sup>11</sup> All such regulations derive from good practices in financial management in the private sector and contribute to the transparency and the opportunities for international comparisons. In particular, they provide for a comprehensive picture of:

- accounting balances;
- assets, equity, property and financial statements;
- the value estimation of all assets and liabilities; and
- the whole financial situation and trends.

A relatively recent challenge is the application of the so-called ‘double-entry book-keeping’ and the respective financial management and accounting system. It was developed in international free market accounting. This system has the potential to support the above mentioned financial standardisations but an intensive change of the paradigm of the accounting and finance business would be necessary.

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<sup>11</sup> The website of the International Federation of Accountants at [www.ifac.org](http://www.ifac.org) provides links to information on all Boards and series of standards referred to in this section.

## Solutions and Recommendations for Implementing Reforms

Reforms in the defence finance sector can only be implemented in line with economic, social, labour/financial market and public administration reforms, and after taking account of the evolving security environment.

A general concept, equally and adequately representing both security and defence matters, must be developed by the government. Only few governments have predetermined such a concept. It remains more often than not a piecemeal or patchwork effort without a continuous pattern. This, however, does not relieve each one from the obligation to review his or her areas of responsibility in terms of their suitability for reform. The analysis of the finance management processes—briefly introduced here—will reveal gaps, weaknesses and the modifications required. A selected group of experts, which should be free in the way it thinks and works, should be entrusted with the task of analysing and developing options. The group can consist of both military and civilian experts, of international personnel and even business consultants. Existing, well established and familiar systems and procedures, privileges, work processes, etc., must be placed under scrutiny and should be critically but also constructively evaluated.

It is important to gain the backing of the political and military leadership, as well as of all personnel. A fully transparent functioning of the group and flow of information may contribute to getting such support. It is also important, based on my personal experience and point of view, to start with what I call a ‘convincing campaign.’ If reforms and changes are to be successful, the acting personnel must be convinced that the reform will bring common and individual benefits like constant salary, career prospects and no risk of unemployment. The guiding principles should be ‘no criticism of the past, look forward, and improve the future.’

The creative potential of the people should also be fully utilised in the reform process as ‘local experts’ frequently develop outstanding ideas that can be extremely useful in the implementation of a reform. Using a ‘creative improvement programme,’<sup>12</sup> financial or other incentives could be provided to acknowledge and motivate the work of the staff. Resources must also be provided in order to implement new options. Organisations very often make the mistake that people on staff are supposed to participate full-time in the reform process while continuing with their original duties. Moreover, the necessary material and infrastructure is missing but the reform must be implemented – for the sake of political success.

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<sup>12</sup> Such creative improvement programs are applied in few institutions of the public sector, e.g., the Ministry of Defence of Germany, the City of Cologne and in many companies of the free market such as Siemens, Mercedes, BMW, Volkswagen and RWE.



A number of countries have already determined the gaps and deficiencies in their defence financial management systems but the resources needed to reform these systems are very limited or even unavailable. This fact, however, cannot serve as an excuse for leaders of defence and senior management not to carry out necessary reforms for the benefit of their country.