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Introduction

If the financial services industry is to survive under the present challenging economic conditions, it will have to make the added value of its products and services more transparent than ever. At the same time, the sector will need to recognize the contribution of its products, services, channels and customers to value creation. These insights can help organizations actively manage the economic value of their portfolios.

In order to do so, it is essential that organizations have access to reliable, relevant and timely information on costs and profitability. In other words, implementing advanced Cost Management and Profitability Analysis (CMPA) is crucial. In this booklet we will underpin this point of view and explain our CMPA approach, including lessons learned based on practical experience. The main lesson is that the more CMPA is integrated into the decision-making process, the greater the need for an integrated approach and the more complicated the software requirements. At the same time this will strengthen the business case for using standardized CMPA solutions.

In Part 1, we will show you which challenges the financial services industry is facing and why CMPA is crucial for overcoming these challenges. In Part 2, we describe how CMPA can best be concretized in the business. This part includes an overview of the EY CMPA framework that has been developed to contribute to and/or facilitate the process of defining these objectives and requirements. It also provides an overview of the available software that can be used to automate the CMPA process. Finally, in Part 3 we present several case studies of client projects EY has worked on in the field of CMPA.

It is my great pleasure to present this publication. I would like to thank my colleagues who have executed the survey and developed this booklet: Diederik Ligtenberg and Daan Vredevoort. I would also like to thank the software vendors for participating by completing our extensive questionnaire and for the valuable discussions we had.

Please let us know your questions and feedback, as these are highly appreciated.

Rianne Vedder

EY Financial Services Advisory Partner



The financial sector is facing increasing challenges which force CFOs, managers and controllers to pursue cost reduction and profit growth objectives so as to create value. To that end they rely on business intelligence – a combination of managerial experience, business knowledge and financial information – to make decisions that will drive value creation. Responding to the global changes means that cost and profitability information must be reliable, relevant and timely for management to make the right decisions in order to sustain and maintain organizational performance. In Part 1 we will explain why cost management and profitability analysis (CMPA) is of increasing importance and why it is helping the financial services sector overcome the challenges confronting it. Before exploring these challenges in chapter 1.1, we will first elaborate on the increasing importance of CMPA.

CFOs play an important part in developing the appropriate methodologies, technologies, processes and organizational structures that measure and report information about costs and profitability. The cost management process and (IT) system should produce the required cost and profitability information that supports the decision-making process (see Figure 1).

Producing reliable, relevant and timely cost and profitability information requires a solid and carefully implemented CMPA process. Enhanced CMPA is necessary for financial institutions to shape and structure the organization. It will enable the Finance function to factor cost and profitability information into all management decisions and steer towards performance management.

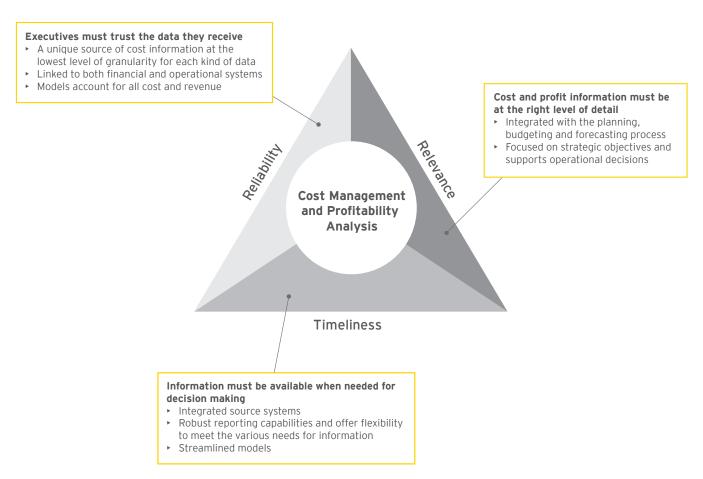


Figure 1

Part 1: CMPA is the answer to the increasing challenges facing the financial services industry

CMPA goes beyond calculating and reporting costs, as it focuses on the integration of CMPA information into the decision-making process. By contributing to enhanced management control, CMPA can help improve the overall performance and profitability of an organization. However, before providing such insights, there must be an understanding of the variety of costing needs. For instance, cost information is used to build, calculate and follow-up on key performance indicators

CMPA can help improve the overall performance and profitability of an organization (KPI) or to measure the efficiency of the operational processes or departments. Valuing and comparing costs that refer to business activities or departments' results in valuable information that will help managers understand the company's cost base. CMPA thus enables the Finance function to become a better business partner and to provide management with more reliable, relevant and timely information and reports.

Better analysis and reporting will help organizations gain more knowledge of and insights into their costs, achieve cost optimization, improve decision-making and thus apply performance management as a management tool. An important aspect of enhanced performance management is the improved understanding of the different value drivers and value-creating areas that enhanced CMPA will generate.

When the CMPA process matures, not only does it provide the organization with a better understanding of its costs, it also provides a better understanding of the profitability of the channel, product, customer and business unit concerned. An example of an organization's performance and profitability management analysis is shown in Figure 2, which addresses customer profitability.

Finally, improvement in cost and profitability results in enhanced performance and increased rewards. To achieve this, managers need to understand the value of information and how it relates to their day-to-day operations, and need to ensure that the information is available where and when decisions are made. Eventually, cost and profitability information will be factored into all management decisions.

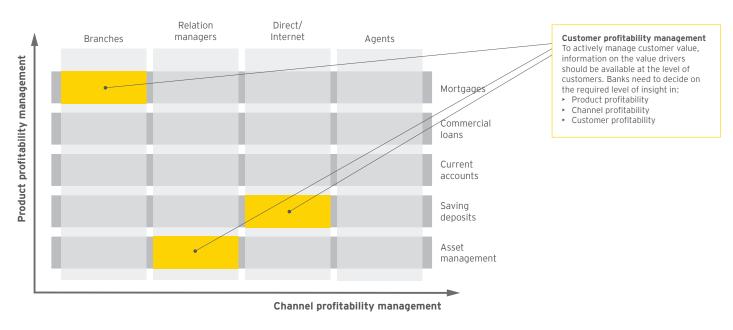


Figure 2

However, there are various challenges to overcome on the road towards enhanced CMPA. Managers find it hard to focus on cost control and have difficulty managing and controlling the cost base. Here are a few examples:

- Performance is not measured against budget-based standards nor aligned with management responsibilities;
- Capturing and pricing the costs of extra services is impracticable;
- Cost and profitability information does not provide visibility from products and customers back to resources;
- Lack of insight into non-value added activities;
- Lack of insight into the profitability of product, customer, channel and region.

These difficulties can be attributed largely to the lack of reliable, relevant and timely data and reporting. This makes it very hard for managers to make the right decisions and thus to enhance performance management. CMPA is not only relevant for decision-making purposes, but also in view of the increasing internal and external (regulatory) reporting requirements.

However, most cost center structures fail to support the need for better reporting systems and more accurate data. This is mainly caused by gaps in the knowledge required to leverage the leading technology of the reporting system. In addition, the pace at which reporting cycles have to be run is causing problems, as is exemplified by cost accounting systems that are unable to support a fast

close. Finally, data is often not up-to-date, inaccurate and/or not sufficiently granular to meet business intelligence and reporting needs.

A well-implemented CMPA process is ideally suited to help organizations eliminate these data and reporting obstacles

A well-implemented CMPA process is ideally suited to help organizations eliminate these data and reporting obstacles. Examples of cost information as a result of enhanced CMPA are product and service costing and profitability, inter-company charges and chargebacks, regulatory reporting requirements and pricing decisions. In terms of the pace of reporting, a well-implemented

CMPA process provides the ability to support fast closure and accelerated timescales in order to get updated cost and profitability information. Finally, enhanced CMPA enables organizations to implement a consistent global cost reporting process. This reduces the need for reconciliation and maintenance of data through multiple sources, resulting in more accurate and reliable cost and profitability data.

Better and faster decision-making with CMPA

CMPA focuses on integrating cost and profitability information into the decision-making process to improve an organization's profitability and overall performance. Following on better reporting standards, CMPA provides correct cost data to support better and faster decision-making. An important rationale is the ability to rely more on the financial and operational data provided by these tools. Secondly, CMPA tools enable cost and profit data through all complementary processes, which supports more accurate planning, budgeting and forecasting, and thus decision-making. Finally, CMPA tools enhance costs insights and provide concrete figures on the costs incurred by business units. With these insights, organizations can drive correct behavior by measuring performance of the business units on costs that they can control and influence, which will lead to improved decision-making.

Part 1: CMPA is the answer to the increasing challenges facing the financial services industry

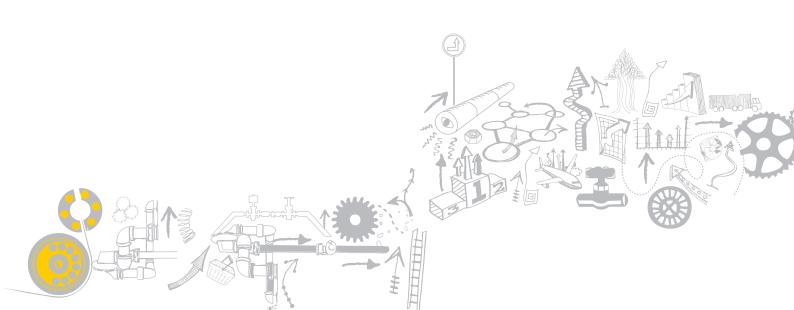
1.1 Challenges facing the financial services industry

Today's market for financial services organizations is extremely tough and competitive, characterized by price competition, overcapacity and new distribution models. Not only banks and insurers are faced with such challenges; pension funds and asset managers likewise have to enhance their understanding and the transparency of their costs.

Adding to the pressure on costs are the effects of intensified competition from niche firms, leaner rivals and emerging markets, which makes it even harder to meet the expectations of the shareholders and other stakeholders. At the same time, the introduction of new regulations such as MiFID 2, EMIR, Solvency, the Financial Assessment Framework, transparency in distribution and administrative costs, and the ban on commission payments, impose further demands on businesses, for example as regards increased granularity and the speed and volume of reporting. The need to increase sales remains an essential point on the agenda of financial service organizations, but filling this need in the current environment is a huge challenge. This has inspired CFOs to tap into new and potential growth areas like emerging markets or different segments on the one hand, and to meet the cost challenge in order to drive operational excellence on the other. The Finance function therefore plays an essential role in responding to these challenges and in shaping future strategies. In the market we can distinguish three main trends in which the Finance function has a leading role:

Trend 1 Meet the cost challenge: drive operational efficiency

The operating costs of the Finance function in financial services organizations are significantly higher than in other industries. This is a result of the complex nature of the sector and its products, and of the continuous and increasing regulatory pressure. Due to the constant – and continuously increasing – pressure on margins, the costs and budgets of each department within the organization are subject to increased scrutiny. This makes the question of why the business requires so many Finance personnel all the more urgent. At the same time however business and management keep imposing heavier demands on the Finance function, requiring it to provide better and more information in less time. The Finance function has to prove their added value to the business more than ever, while at the same time being pushed to cut costs and improve their performance.



Trend 2 Meet the regulatory and reporting challenge: fix reporting processes

Due to increased reporting requirements, both internal and external, the Finance function is now lumbered by its time-consuming and inflexible reporting process, especially due to extensive usage of spreadsheets and other costly manual proceedings. The rapid evolution of technology has resulted in a significant increase in (big) data, which also has had a tremendous impact on the speed and flexibility of reporting. These increasingly stringent reporting requirements are a huge challenge for the Finance function. It clearly needs the capacity to meet both regulatory requirements and business requirements to support decision-making and explain performance figures to multiple stakeholders.

Customers, supervisors, shareholders and other stakeholders require more insight and transparency when it comes to the cost and performance of their organizations

Finally, organizations need to become more cost transparent. Customers, supervisors, shareholders and other stakeholders require more insight and transparency when it comes to the cost and performance of their organizations. However, transparency has never been the primary focus before and organizations have to make a huge turnaround to achieve it. The level of analysis also needs to improve, with single relationship analysis being replaced by multi-dimensional analyses to enhance insights into the relationship between sales, costs, FTEs and seasonal effects for example. In the move towards these multi-dimensional analyses and increased costs, transparency remains a burden due to a lack of knowledge, non-supporting systems, and often a lack of required data.

Trend 3 Meet the growth challenge: become a real business partner

Competition is increasing, ROIs are declining and demand for capital is becoming more competitive. To take on these challenges, management needs more timely and relevant information about factors including costs, performance and profitability. Enhanced information will provide management with more and deeper insights into aspects such as customer, channel and product profitability, which will help to create more robust analysis and strengthen the grounds for strategic decision-making.

In order to achieve this, CFOs not only have to deal with process inefficiencies but will have to change the role of the Finance function as a whole. They will need to evolve and transform the Finance function, and thus the Finance professional, into a real business partner. Earlier attempts to achieve this often failed due to lack of the right training, planning, process efficiency, systems or software to support that journey of change. Time has now come for CFOs to forge Finance professionals and functions into a more client-oriented and service-minded team, with the right tools and enablers, to support the business in better, smarter, and more efficient decision-making.



Part 1: CMPA is the answer to the increasing challenges facing the financial services industry

1.2 Sub-sector specific challenges for the financial services industry

The complexity of the financial services industry and the vast amount of specific legislation and regulatory pressures results in different challenges for the different sub-sectors. Our EY service offerings distinguish three sub-sectors: Banking & Capital Markets, Insurance, and Wealth & Asset Management (incl. Pensions). The following paragraphs describe the specific challenges for each sub-sector.

1.2.1 The banking & capital markets industry has changed and is facing new market realities

Over the last decade, global banking has had to deal with tremendous pressures. The financial and sovereign debt crisis set the scene for a fundamental reconsideration of the role of modern banking and has prompted profound regulatory and business model changes. In the context of this worldwide trend, central banks are demanding ever more (cost) transparency and increased levels of granularity in their data requests. Although the consequences of these changes are still far from clear, there is no doubt that the business models of today are no longer fit for tomorrow. The main challenge is to adapt towards more customer-oriented strategies, while ensuring compliance with regulatory, transparency and sustainability requirements.

New market realities require fragmented profitability data to be aligned and integrated

This dynamic environment drives complexity in traditional decision-making processes, while taking the right decisions is now more important than ever given the current strategic reorientation of the banking sector. Managers in the banking industry are facing questions such as:

- Which products, channels and customers are capable of generating a sustainable value contribution, given the new regulations and volatile market conditions?
- ► How can banks transform their cost bases, and hence core processes, to align their business models to the new normal?
- What is a bank's future fundamental value proposition and what are its core service offerings going to be?
- How to differentiate customers in a way that provides insights into the value creation potential per customer segment?

To answer these questions, managers need information that adequately considers the balance sheet interdependencies, cost and revenue levels, risk components and customer characteristics. Banks more than ever depend on actionable profitability insights to support the crucial decisions to be made.

End-to-end cost and profitability management enables future-proof value management

The increased interdependencies between the commercial side and the finance & risk side of banking require an end-to-end view on cost and profitability management. Data on funds transfer pricing, cost allocations, risk and capital charges are crucial to understand the value contribution per product group, channel and customer segment. CMPA helps to design and align the underlying elements that drive cost management and value creation. The EY approach involves cross-functional collaboration and has enterprise-wide business impact, by:

- Providing adequate incentives and transparent profitability insights;
- ► Enabling fast response to changing market conditions;
- Allocating resources and efforts to the right activities, products, channels and customers;
- ► Implementing effective cost allocation measures.

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1.2.2 Insurance: new regulations require a change of business model

In recently years, new legislation has been introduced banning commission payments (for example in the UK, Australia and the Netherlands) and enforcing transparency of specific costs. The current limited transparency and insights are forcing insurers to enhance the transparency of their complex financial products as well as their costs. The commission ban implies that financial service providers and intermediaries are now obliged to make their advisory and distribution costs transparent. They are no longer allowed to include these costs in the premium for any transaction involving complex products, but instead will have to invoice them separately to the client.

As many insurers are currently making significant investments in upgrading systems and processes to implement Solvency II, there is a greater sense of urgency to understand and address the connection with CMPA

As many insurers are currently making significant investments in upgrading systems and processes to implement Solvency II, there is a greater sense of urgency to understand and address the connection with CMPA. Liabilities have to be valued using a best estimate, whilst future costs should likewise be included using the best estimate. Overhead costs represent the cost of managing the business and are expected to be covered by profits as they emerge. Solvency II requires these costs and insurance contract management costs to be included in the liability measurement. This will impact cost models and identification, as well as future profitability. Separate cash flows will be required within the underlying actuarial and cost models to concurrently identify and measure maintenance and overhead costs. Appropriate systems will also be needed to identify these costs within the general ledger to ensure appropriate treatment and inclusion in the best estimate.

Regarding cost transparency, the regulator has put considerable pressure on the insurers. For all the various insurance segments, ranging from Property & Casualty to Life and to Health, cost transparency and insights are no longer a competitive advantage but a necessity.

Finally, due to increasing activity within the direct sales channel, digitization and the rise of discounters within the insurance business, consumers are becoming more conscious of price differences than ever, which is putting considerable pressure on the margins of insurance products. In order to stay competitive and be able to cope with these pressures, insurers need to have a better understanding of their costs so as to optimize them.

Part 1: CMPA is the answer to the increasing challenges facing the financial services industry

Data and technology present the biggest challenge for Finance within Insurance

EY's annual CFO Insurance study defines the top priorities for CFOs within the insurance sector as follows:

- ► Achieving growth, expanding into markets and/or expanding through M&A activity;
- Relieving pressure on costs and margin/improving profit;
- Responding to regulatory change.

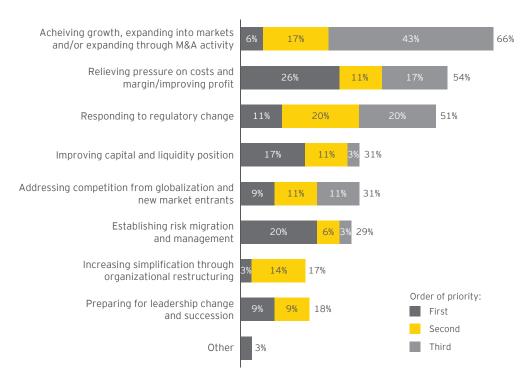


Figure 31

Furthermore, the survey shows that data and technology present the biggest challenges for Finance to become a true business partner. In order to enhance the added value of Finance for the business, the deployment of more analytical skill sets and resources and driving commercial awareness through timely and relevant management information are crucial. According to the CFOs participating in this study, such management information should be linked to strategic objectives and performance insights like revenue drivers and cost drivers.

Moving towards cost transparency by implementing CMPA

In order for an insurer to have a better understanding of its costs and revenues, meet regulatory requirements and enhance transparency, a well-developed CMPA process needs to be put into place. Data and technology are identified as the biggest gaps to bridge. The same holds true for the CMPA processes. Cost management and profitability analysis are traditionally divided between the finance, risk and actuarial functions within an insurer. An integrated structured CMPA approach is necessary to crunch the data and present insightful analysis. CMPA tooling can be a facilitating element in this process of providing reliable, relevant and timely insights in order to enhance transparency and steer towards value creation.

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¹ Global Insurance CFO Survey 2014

1.2.3 Asset managers and pension funds: a call for more cost transparency

The world in which asset managers and pension funds & administrators operate has changed dramatically. Both the financial crisis and the growing life expectancy of pensioners have undermined the financial resilience of pension funds, resulting in insufficient funding ratios, pension deductions and higher premiums. On top of this, new pension legislation has been adopted and the fiscal pension framework has changed drastically. In the nearby future the 'change' agenda in the pension system will again be filled and these changes will follow in rapid succession. An EY study on trends in this sector shows seven key challenges:

- ► Need to rebalance benefit expectations with financial resources;
- ► Local financial markets need to evolve in line with growth in pension assets;
- ► Acceptance of new levels of regulation, supervision, governance and transparency;
- An increasing focus on operational excellence;
- ► A recalibration of investment function and investment management;
- Find simplicity in complex systems;
- ▶ Need to connect and become customer-centric.

In addition, and in line with the latter challenge, confidence in the financial and pension sectors, which have suffered serious reputational damage, needs to be restored. Restoring confidence in the pension system requires more openness: openness about governance, execution and policies. Another important element, if not the most important one, is openness on costs and substantiating those costs. As a consequence, over the past few years the pension funds industry has been subject to large-scale scrutiny concerning costs by both the regulator and the government. In 2011, the Dutch Authority for the Financial Markets (AFM) published a report titled 'The costs of pension funds deserve more attention'. The most important findings of this report are the following:

- Costs are a major influence on the size of the retirement pension;
- ► The costs, especially administration costs, of equal size pension funds differ significantly;
- Particularly small to medium-sized pension funds can save costs by exploiting economies of scale and simplifying arrangements;
- ► The actual investment costs are higher than the reported costs;
- ► Investment returns stay far behind compared to other years.

This led to multiple recommendations by regulatory bodies like the Dutch Pension Federation (in 2011 and 2014) concerning transparency of administrative and asset management costs. Since 2011, the Dutch pension funds industry has made an effort to enhance the transparency of their

administrative costs. In the UK and Germany regulators have launched similar initiatives.

Regulators are still putting pressure on the process of improving cost transparency

However, despite these initiatives and the work done by pension funds to improve cost transparency, the regulators are still putting pressure on the process of improving cost transparency. In addition to regulators, investors (in this case pension funds) have become extremely price sensitive and far more

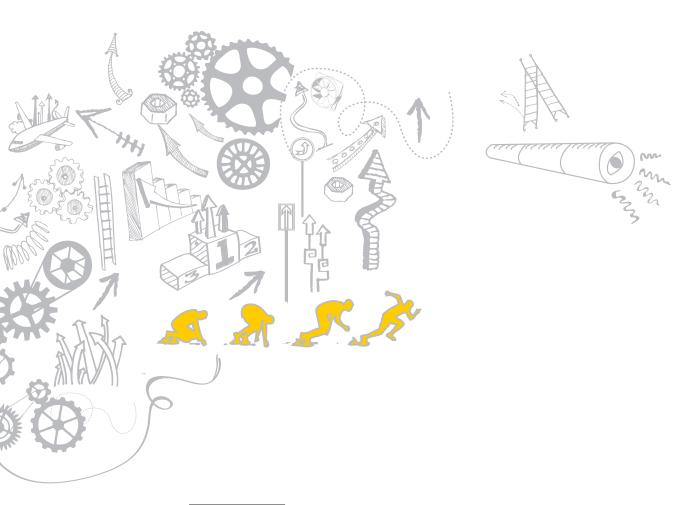
knowledgeable about costs, benchmarking, alpha versus beta and risk management. Firms will realize they can no longer successfully compete by charging excessive fees for a beta-like product. At the very least, investors will demand – and, to some extent, regulators will impose – far more transparency on pricing, including disclosure of all fees, expenses and associated costs.

Part 1: CMPA is the answer to the increasing challenges facing the financial services industry

These findings are supplemented by benchmark studies, performed by EY in 2012, 2013, 2014 and 2015, among the 25 largest Dutch pension funds. The results of these studies clearly showed that the cost transparency / reporting requirements imposed by the Dutch Pension Federation have generated tremendous improvements, although there is still a lot of room for further improvement.

Insights into operating costs and expenses by implementing CMPA

A well-developed CMPA process can significantly help pension funds enhance their insight / understanding and the transparency of their administrative and investment costs and expenses (e.g. TER²). Confronted with the new norm of aggressive cost management, comparable with standard management practices in the airline, fast-food or hardline retail industry, asset managers and pension service providers have moved CMPA up the priority list of their Finance functions. Meaningful insights into cost and expense drivers are on the table as key competitive advantages that they need to be able to cope with regulatory and competitive pressures.





In Part 1 we argued that CMPA is essential for the entire financial services industry. In this part, we will show how to work with it, in five steps that each will be elaborated in the chapters to come:

- ► Getting the basics right (2.1)
- ► Using the EY CMPA framework (2.2)
- ► Automating CMPA by using standardized software (2.3)
- ► Exploring the CMPA framework and the related software functionalities (2.4)
- ► Implementing CMPA in four phases (2.5)

Finally, Part 3 will give examples of case studies EY performed in the field of CMPA processes and CMPA software implementation.

2.1 Getting the basics right

To determine the potential for CMPA-driven improvement, EY experience shows that it is a good idea to start with a maturity analysis. Figure 4 shows an example of a maturity analysis which can be used to establish the current and future state.

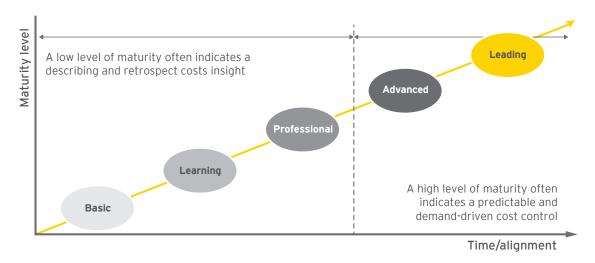


Figure 4

The higher the level of CMPA maturity, the more advanced the processes, methodologies and analyses. On the next page you will find an overview of the characteristics of the various maturity stages.

	Basic	Learning	Professional	Advanced	Leading
		Improved features of the basic level and additional	Improved features of the learning level and additional	Improved features of the professional level and additional	Improved features of the advanced level and additional
Capture	▶ Data is captured in MS Excel spreadsheets and manually loaded	► Updates and maintenance of the process / system are manual and time consuming	► Automated MS Excel spreadsheets or basic tools / systems	 Insights into data quality Advanced CMPA tooling is used to calculate and present insight 	 Advanced and integrated profitability tooling is used Customer data is included in cost management and profitability analysis
Assign	▶ Allocation of direct costs	 Allocation of indirect costs by using simple allocation techniques 	 Allocation of indirect costs by using combination of cost center method and Activity Based Costing (ABC) ABC on the basis of push allocations 	► Time-driven ABC and profitability analysis by customer, products and channels	► Time-driven ABC on the basis of push and pull allocations
Report and Analyze	 Very limited reporting functionality Cost and profitability management is not aligned with management reporting Cost and profitability information is not explicitly used in the strategic planning process 	Basic reporting functionality: few standard reports and limited ability to create ad-hoc reports	 Manual input is needed to create the desired reports Limited automation of the process, significant user intervention is needed Insights into price and utilization results 	 ► Insights into fixed, variable, direct and indirect costs ► Insights into capacity 	 Insights into direct and indirect fixed cost and into direct and indirect variable costs Simulations and predictions on the basis of scenario analysis Drill-down functionality that allows backward and forward reporting
Plan, Control and Manage	Cost and profitability information is only understood / used within the Finance function and available at departmental level Management performance evaluation does not include cost and profitability metrics	➤ Cost and profitability metrics are reported but are only used to a limited extent in performance evaluation ➤ Limited alignment between planning, budgeting and forecasting and the cost management and profitability analysis process ➤ Strategic focus in profitability management to optimize gross margin	 ▶ Both senior management and middle management understand and use the cost and profitability information ▶ Integrating performance management and strategy ▶ Alignment between planning & budgeting and cost management and profitability analysis processes. Cost and profitability information is a required input for the strategic planning process ▶ Cost and profitability metrics are included in employees' objectives and goals and incentives on cost and profitability are set at the level of business units ▶ Product - channel combination strategy to optimize profitability 	 ▶ Business case driven ▶ Cost management and profitability analysis is linked to existing scorecards and provides reliable inputs for KPI calculations ▶ Compensation and incentives are aligned to growth and profitability targets and to support cost optimization ▶ Single management accounting process ▶ Cost and profitability information is integrated with planning, budgeting, forecasting and scenario analysis, to understand the impact of different strategic options 	➤ Customer segmentation strategy is used to optimize customer value ➤ Cost and profitability information is used for both retrospective analysis as well as forward-looking decision-making (e.g. pricing) ➤ The system is integrated with related management processes and automated with clearly defined updates ➤ Established training program and a center of excellence for cost and profitability management ➤ All key users clearly understand the principles of the cost management and profitability analysis process and take ownership of their results

Part 2: How to work with CMPA

Each stage imposes special requirements in terms of integration, standardization and business-specific customization across processes, structures and technologies. The level of added value provided by each stage is different and is related to other key processes in the performance management framework. Regardless of the starting point, moving forward on the maturity scale provides incremental benefits, but should always be weighed against the additional costs.

An important step towards increasing maturity is the recognition of responsibility centers

A clear responsibility center structure is essential for effective CMPA An important step towards increasing maturity is the recognition of responsibility centers. It is important, therefore, to review the responsibility center structure when implementing a CMPA process. Recognition of responsibility centers goes beyond CMPA and defines how accountability and responsibility of costs and revenues within an organization is assigned.

A responsibility center is a part or sub-unit of a company for which a manager has authority and responsibility. The most common responsibility centers within a company are the different business units such as Operations or Sales, and support departments such as IT, Finance, HR. Recognizing those units as responsibility centers will enhance the understanding of how their decisions will influence costs. Next, ownership and accountability of costs must be assigned to each unit. This will drive correct behavior by measuring each unit's performance on costs that it can control and influence. The degree of accountability and ownership depends on the maturity level of the responsibility center concerned.

There are five types of responsibility centers:

- **Expense center**: is a responsibility center based on the quality of its activities, mostly policy services where the input is difficult to relate to the output. There is little or no incentive or control mechanism for an expense center. The only way to steer an expense center is by budget and periodical benchmarking to challenge the total costs. Examples of expense centers are actuarial or legal services, HR and communication departments.
- **Cost center**: is a responsibility center whose manager is responsible for the cost inputs. The input can be related to the output of the center. Cost centers are triggered to work as efficiently as possible. Often cost centers offer (internal) clients a Service Level Agreement which includes prices for products and services. In this way, the client pays a fee based on the amount or quantity (q) and a standard price (p). Examples of cost centers are IT or facility departments.
- Revenue center: is a responsibility center whose budget performance is measured and steered based on the ability of the center to generate revenue. This means that revenue centers are triggered by sales. Additional sales (Q) at a constant price (P) will benefit the revenue center. Examples of revenue centers are sales departments and some branch offices.
- ► **Profit center**: is responsible for the difference between revenues and costs. The financial and performance measure of a profit center is usually a (net) profit understanding. Examples of profit centers are asset management divisions, fiduciary management divisions and retail banks.
- ► Investment center: is a profit center that also bears responsibility for the invested capital, both current and fixed assets. The management of an investment center has a certain degree of power to invest. The financial measure of an investment center is ideally a measure of value, such as EVA™, ROI, Economic Profit or RARORAC.

EY market experience shows that the responsibility center structure is not always clearly defined. A typical CMPA project therefore should always encompass clarification of this structure, to ensure the appropriate approach for CMPA.

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2.2 Using the EY CMPA Framework

The EY CMPA approach is supported by a CMPA framework, consisting of four sub-processes (Figure 5). These CMPA sub-processes allow the decomposition of complexity by addressing CMPA using a structured approach. This approach allows global teams working on the same ideas in various parts of a company to speak the same language and understand each other. The four sub-processes are based on the information flow within the organization – from capturing data to the development of the cost price model. Subsequently from assigning the costs to the correct cost objects to analyzing and reporting information, and finally to achieving enhanced cost management and profitability analysis.

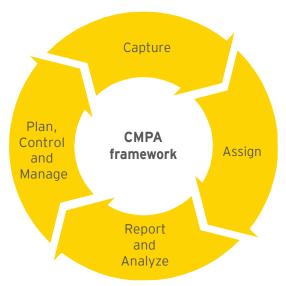


Figure 5

The four sub-processes of the CMPA framework are:

Capture

Review and design of the cost reporting structure with cost component level of detail. This sub-process includes an analysis of collection of actual financial and operational data including e.g. general ledger data and quantities and efficiency measures. The sub-process closes with a review of the corporate data integration approach.

Assign

The assignment sub-process includes the design of the cost allocation methodology. On the basis of a Cost Allocation Model (CAM) and the appropriate methodology (e.g. traditional costing, activity-based costing, marginal costing) a blueprint for the cost model is developed. The design and development of this model includes an approach for costing of products, customers, distribution channels and geographic areas. The assignment phase could also encompass a tax perspective by taking transfer pricing issues into account.

Report and Analyze

The reporting and analyzing sub-process is aimed at the design of cost analytics including business process analysis, cost simulations, inventory valuation (e.g. IT hardware), variance analysis, value/non-value added analysis, target costing and internal benchmarking of costs. This sub-process includes the development of basic profitability analytics including product, customer, channel and geographic profitability. Moreover, management accounting and cost and profitability reports are designed. Finally the results of the cost and profitability models on the basis of different data sets (e.g. actuals, budget, forecast) are shared with all different stakeholders.

Plan, Control and Manage

The last sub-process within the CMPA framework is aimed at performance management by interpreting the results and using these in the planning and control cycle of the organization.

- Plan Review the sales budgeting and forecasting process and its integration with costing data.
 Budget and forecast financials and operational data are collected and processed for CMPA purposes.
- **Control** Review and develop the reconciliation process for actual and budgeted/forecasted costs and revenues.
- ► **Manage** Define and develop an integrated process linking decisions to actions.



2.3 Automating CMPA by using standardized software

The role of the Finance function is changing as the focus is shifting from processing financial transactions towards supporting management in making operational and strategic decisions. This shift in focus will also have an impact on the cost management (IT) system that supports the organization in measuring and managing costs. Standard reporting templates in e.g. MS Excel do not always provide all the requested insights and required information, which increases the need

CMPA focuses on the integration of cost and profitability information into the decision-making process, which helps improve an organization's overall performance

for advanced software. Such software does not exist in isolation. It facilitates a CMPA process and, in the view of EY, it is therefore one of the key enablers of CMPA. CMPA goes beyond calculating and reporting costs. It focuses on the integration of cost and profitability information into the decision-making process, which helps improve an organization's overall performance.

CMPA software may be viewed as an analytical application that models business processes to gain insights into the organizations' costs and profitability, as well as the cost drivers. Activity Based Costing (ABC) is the main theory behind CMPA software.

Three categories of CMPA systems can be distinguished. The first category is spreadsheet and database software. This refers to generic calculation or data-processing software for the development of 'hands-on' specific cost management functions. Examples of spreadsheet and database software are MS Excel and MS Access. Depending on the maturity of the business, calculations can be made in spreadsheets or database software as long as the cost model is kept simple. However, even if the cost model is simple, when complex analyses need to be produced, more advanced software is required.

The second category is dedicated CMPA software. The continuous increase of the amount of data needed and the probability of errors inherent in the use of spreadsheets makes professional CMPA software indispensable for organizations that take cost management seriously. This software is developed specifically for the realization and use of costing models. According to the software vendors it includes all functions needed for cost management and profitability analysis. Dedicated CMPA software products included in the survey are those of Acorn Systems, MyABCM, Prodacapo and QPR CostControl.

The third category covers both Business Intelligence (BI) Systems and Enterprise Resource Planning (ERP) software. An ERP system is an organization's company-wide transaction system, which is used for processes such as entering orders and invoicing for them. A BI system periodically collects data from other systems in a separate environment, on the basis of which reports (including management reports) can be produced. The financial modules of both systems typically include a range of cost management functions. Software vendors which participated in the survey and fall into this third category are Oracle, SAS, SAP and Tagetik.

The software vendors differ in terms of size, the size of their customer bases and the diversity of software products they offer. QPR CostControl, MyABCM, and Acorn Systems focus entirely on supplying cost management software and profitability analysis. Conversely, Oracle Hyperion, Prodacapo, SAP, SAS and Tagetik offer a broad range of other software applications, such as ERP, Customer Relationship Management (CRM) and Performance Management (PM).

2.4 Exploring the CMPA framework and the related software functionalities

The CMPA framework encompasses four sub-processes to support the CMPA implementation process. Firstly, the data needs to be 'captured'. Secondly a Cost Allocation Model and cost price model have to be developed and costs need to be 'assigned'. Thirdly, when these two sub-processes have been performed the required cost management & profitability reports and analysis can be produced. Those reports and analyses will enable the business to 'plan, control and manage', which is the fourth and final sub-process of the framework. However, as each sub-process is derived from the previous one, it is crucial to ensure the quality and consistency of each of these processes. All sub-processes in the framework are outlined in the following paragraphs. The survey results are presented in each section accordingly. Each paragraph concludes with an outline of EY's practical experience.

2.4.1 Capture

In this phase, organizational and financial data are being captured. An inventory will be made to clarify which data is desired and which data is available. Each cost price model starts with the collection of the right data, which makes it essential to determine which data is desired and available.

Collection of the data

Before designing the Cost Allocation Model, the first step is to collect the data, and especially to identify the desired data. There are three main issues to consider when collecting data: the definition of the required data, the availability of the data, and the quality of the collected data.

Definition of data

Agreement needs to be sought about the definition of the required data in order to make the right reports, analysis and decisions. For example, when analyzing premiums of products, do you need gross or net premium data, and do you include surcharge or not? It is important to make sure that the required data are properly defined.

Availability of data

After defining the required data, it must be determined whether this data is available, and where it can be found. Next, the available data must be aligned with the defined data. An example of a misalignment is when the desired data is FTE, and the only available data is the headcount.

Quality of data

Finally, if the required data is available it is important to assess its quality. To a large extent it is the quality of the data that determines its usability and reliability. Data quality issues can arise when e.g.:

- ► Data is entered manually in the systems;
- ► Data needs to be consolidated before it can be used:
- Data needs to be transformed into other formats or translated into other variables e.g. from headcount to FTE.

One example of such a data issue concerns the general ledger of an organization. The source of all costs is the input from the general ledger. The amount of detail in the general ledger (i.e. the breakdown of certain ledger accounts) largely determines the amount of detail that can be imported into the CMPA tool. Without a clear breakdown or specification of certain ledger accounts, more general allocation keys will be used to distribute these costs, which will lead to ambiguous insights. One possible way of specifying these costs when they cannot be extracted from the general ledger is to use a manual allocation / distribution table. However, this is time consuming and requires ongoing manual updates.

Taking control of your costs and improving performance management starts, therefore, with the basics of getting your data right (in this instance general ledger data).

EY's practical experience



Data – especially in terms of its reliability, relevance and timeliness – is becoming more important in the Finance function. Managers must be able to rely on data, which means it must be relevant and accurate. Data must be presented in a timely manner, and the software that provides it needs to be further integrated. The latter clearly marks the need for more flexibility in the application landscape of Finance functions, where redundant actions need to be eliminated.

2.4.2 Assign



- Designing the Cost Allocation Model (CAM)
- Modelling the CAM into a cost price model in the CMPA tool
- Assigning costs in the cost price model to cost objects

Designing the Cost Allocation Model (CAM)

An important step in developing a cost price model for an organization is to design a Cost Allocation Model (CAM). In a way, the CAM is the blueprint for your cost price model. The core components of a Cost Allocation Model make it possible to track the products and services a department offers and to identify the departments which consume these products and services. In this manner the costs are distributed throughout the organization along with the products and services being offered and consumed. To that end, the costs are allocated to the activities performed by the business unit concerned, based on resource drivers (e.g. hours). Finally, these activities are allocated to products / services and customers on the basis of activity drivers (e.g. volumes). Figure 6 shows a high-level overview of a Cost Allocation Model.



Cost Allocation Model (CAM)

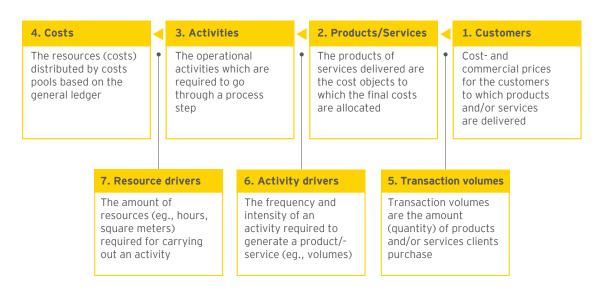


Figure 6

Steps in designing the CAM

The design of the CAM is the most important step in cost modelling. It is crucial to spend enough time and resources, and involve all key stakeholders in designing the CAM. Whereas the Finance function traditionally starts cost allocation with the general ledger (i.e. costs), EY experience shows that the most effective CMPA model is designed with existing and potential clients as a starting point. After all, the existence of an organization ultimately depends on the demand of its customers. Starting the design of the CAM from a customer perspective not only helps to determine the cost and value drivers, but also contributes to end-to-end profitability management.

- 1. **Customers:** establishing the customer base, or in some cases customer portfolios, is the first step in designing the CAM. Considering the different types of customers, or segments, will make it easier to define the products and services offered to these customers. In this phase, it is also important to reflect on future profitability insights, as the level of detail in the customer layer is a determining factor for profitability metrics.
- 2. Products and Services: as this layer of the CAM describes the product and service offerings of an organization, it is very important that those products and services are clearly defined and understandable for all (internal) customers. The products and services will be 'bought' by the customers and, depending on the type of responsibility center, determine the internal budget allocation or billing. An important aspect, therefore (and one which is often neglected), is the creation of a product and service catalogue, which facilitates the cost allocation to and comprehensibility for customers.
- **3. Activities:** these are the operational activities that need to be performed in order to deliver and develop the defined products and services. Activity Based Costing is all about allocating costs to different products and services through the activities which are required to complete a process step. When defining the activities, it is important to strike a balance between the number of defined activities, the required insight and the manageability of these activities.

4. Costs: the costs form the basics of the Cost Allocation Model and are sourced from the general ledger. Costs imported into the Cost Allocation Model can be both actuals and budget costs. In this way, more insights can be generated by comparing multiple periods as well as producing forecasts.

After clearly defining the products, services, activities and costs, the next step is to allocate the costs to the activities and then to move from the activities to products / services and customers. These allocations are done by resources and activity drivers.

- **5. Transaction volumes:** the transaction volumes are the quantity of products and/or services purchased by clients. In the design of the CAM an organization should consider the level of detail available of transaction volumes.
- **6. Activity drivers:** the activity drivers determine how the activity costs are to be distributed amongst and allocated to the various products and services being offered. It is important to determine which and how many drivers will be defined. However, the determination of the drivers depends on the available data. As a final point, it is important to weigh the impact of the chosen driver on the allocation of the costs, i.e. does the driver distribute the costs in a fair manner?
- 7. Resource drivers: the resource drivers determine how the costs are to be distributed amongst and allocated to the various activities. It is important to determine which and how many drivers will be defined. However, the determination of the drivers depends on the available data. Lastly, it is important to weigh the impact of the chosen driver on the allocation of the costs, i.e. does the driver distribute the costs in a fair manner?

EY's practical experience



The Cost Allocation Model should be seen as a blueprint for the organization on which other and/or future models can be built. Therefore, the model and its process should not be unnecessarily complex. The appropriate mix of details, accuracy and value must reflect the needs of the business. Insight into cost and profit information is powerful, but an excess of detailed data will lead to information overkill, which does not facilitate management decisions. The organization's objectives and goals drive the required level of detail and complexity. The approach should be based on a 'back to basics' view: providing simple, transparent cost information. The CAM should therefore be designed on the basis of design principles that include 'simplicity' as a criterion. Finally, it should be borne in mind that the CMPA process and (IT) system should also be maintainable and aligned with the available technology and human resources.

When the CAM has successfully been designed, all stakeholders will have to agree with the defined costs and cost pools, resources, activities, products / services, customers and allocations. Only after validating the CAM with all relevant stakeholders, will it be operationalized through conversion into a CMPA tool. Typically, the results of the calculations are presented after validating the design of the model, to ensure that the discussion will focus on the design rather than the outcomes of the model.

Part 2: How to work with CMPA

Modelling the CAM into the CMPA tool

A cost price model consists of three basic components: the layers (e.g. cost objects), the elements (e.g. products) and the attributes (e.g. customers). Each of these components is discussed below.

The ability to create multiple layers improves the flexibility of the tool to fully customize towards and align with the specific organizational structure

Layers

Each model consists of various layers for allocation. Four basic layers for ABC are resources, activities, products and/or services and customers, as also shown in Figure 6. The number of layers largely determines the flexibility of a CMPA model. For example, some software tools only allow elements within those layers while others give users the flexibility to define the allocation layers themselves. The ability to create multiple layers improves the flexibility of the tool to fully customize towards and align with the specific organizational structure.

Elements

Various elements can be defined for each layer. The cost objects layer may consist of the products, customers and distribution channels elements. Examples of elements are general ledger, accounts, cost centers, resources, organization units, processes, operational tasks, regions, (sub-)products, channels, customers, companies and sales.

Attributes

Finally, attributes are included to further specify the elements. Examples of attributes are FTEs, square meters or hours spent. The possibility to connect these attributes or adding up a certain type of attribute for all elements can provide useful information for calculation or management insights.

Generic versus specific parts and the consolidation of models

A cost management model can consist of several parts. The generic part of a model is the main model, which covers all sub-models, whereas the sub-models can reflect e.g. different periods within the model or different business units within the organization, such as the IT department. This can be useful to highlight specific departments and increase the level of detail for the model concerned. Consolidation implies that separate models are combined into a single larger model (i.e. combine all the models of the business units to create a company-wide model), which is available in all CMPA tools (see Table 1).

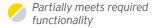
Finally, the flexibility of a model is an important criterion. Some software tools provide dedicated industry-specific templates. These templates have predefined layers, elements and attributes e.g. templates for airline, banking, government, health, insurance, IT, logistics, manufacturing, retail or the telecom industry. Choosing a software vendor that offers a standard template can therefore speed up the modelling process.

Comparison of the CMPA tools

The survey shows that all CMPA tools support the process of converting the CAM into a cost price model. The most important functionalities of modelling are mentioned in the table below. The key areas of the modelling process are the standard templates, layer flexibility, multi-dimensionality and types of allocations or assignment of costs.

Modelling	Acorn	МуАВСМ	Oracle	Prodacapo	QPR CostControl	SAP	SAS	Tagetik
Standard templates for specific industries								
Flexible functionality of defining layers								
Possibility to include risk-specific characteristics in the allocation methodology								
Possibility to add the following attributes: numeric, alphanumeric, logical, formula, date/time								
Possibility to include customer-specific characteristics in the allocation methodology								
Possibility to build small models that consolidate to one large model								
Possibility to have both general and specific parts in one model								
Possibility to model multi-dimensional cost objects								
Possibility to trace under and over-allocations and capacity usage								
Support for time-driven ABC								
Possibility to include step-costs and non-linear costs functions								
Possibility to graphically model elements and import to the ABC model								
Possibility to integrate seasonal effects in the model								
Possibility to differentiate between product costs, client costs and distribution channel costs								
Possibility to import a complete model								





Does not meet the required functionality

Table 1

EY's practical experience



Considering the above, all tools support the important functionalities necessary to develop and build a cost price model. One of the most important functionalities is the flexibility of the tool to align the model with the structure of the organization. Especially in the case of complex organizations or complex departments within an organization, such as IT. The tools appear to have the same capabilities for almost all the functionalities, except for the flexibility of defining layers. The layers indicate each step, level or department in an organization, which implies that the more layers you can add, the more detail can be shown, and therefore the more flexible the tool is.

Part 2: How to work with CMPA

Assignment

After the model is structured, the next step is to define the relationships between the various layers and objects within the model through the multiple drivers (e.g. resources and activity drivers). This is known as assignment, which is in fact the allocation of costs within an ABC model. The assignment sub-process includes:

- Assignment processes including traditional costing and activity-based costing;
- Design and development of associated cost and profitability models;
- ► Costing of products, customers, distribution channels and geographical areas.

Costs of resources are firstly allocated to activities through resource drivers and subsequently from activities to final cost objects (customers, products, distribution channels etc.) through activity drivers. Assignments in cost management models can take place according to either the *push* principle or the *pull* principle. When the *push* principle is used, costs are allocated using given numbers or percentages. Norms following the push principle stay the same. In models using the *pull* principle, norms are explicit and recognizable. Factors are defined which form the basis of cost allocation, such as the number of FTEs. Under the pull principle, changes in factors automatically processed into the model and its outcomes.

There are multiple ways of assigning costs from one layer or element to another. The differences in assigning costs largely determine the level of detail in analyses and reports. The tools offer multiple types of assignments:

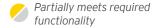
- Standard assignment: assignment takes place from resources to activities and subsequently to final cost objects;
- Reverse assignment: assignment starts with final cost object and ends at the resources;
- Assignment to multiple levels: assignment takes place both to main element (e.g. main activities)
 and lower levels (sub-activities);
- Assignment at the same level: assignment within a single layer in the model (e.g. from activity to activity);
- Reciprocity assignment: mutual assignment of costs between two departments (e.g. assignment from IT to HR and vice versa);
- Multi-dimensional assignment: costs are assigned first to e.g. products and subsequently to customers with multiple drivers;
- Matrix assignment: costs of an activity are assigned to multiple dimensions (e.g. products and customers) based on one driver;
- Over and under-assignment: indicates the option to identify under and over-capacity, for example at certain activities. This refers to the push and pull principle within a cost price model. Through a pull allocation in the model, calculations will show the capacity required to perform a certain activity and at the same time the potential over or under-capacity.

Comparison of the CMPA tools

The ability to assign costs in multiple ways determines the level of insight a cost price model can offer. These different types of cost assignment place high demands on software tools to support this. The survey has shown that the tools support most of the defined and necessary assignments. However, some tools have limited multilevel and multidimensional allocation functionalities.

Assignment	Acorn	MyABCM	Oracle	Prodacapo	QPR CostControl	SAP	SAS	Taggetik
Reverse assignment								
Assignment to multiple levels								
Assignment at the same level								
Reciprocity assignment								
Usage of more than one driver on the assignment								
Matrix assignment								
Over and under-assignment								
Possibility of push and pull assignment								
Usage of user-defined attributes to calculate on the assignment								





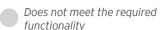


Table 2

EY's practical experience



Cost assignment or allocation is very important in order to produce the right cost management information and profitability analysis and to enable effective performance management. The different possibilities in assignments therefore determine whether a software tool is able to provide all the required and desired insights. Due to the turbulence that has characterized the financial sector in recent years, the agenda of CFOs has shifted towards sensitivity and the ability to plan and forecast scenarios. Based on different assignments, especially the pull functionality offered by the tools, scenario planning is possible. The survey shows that almost all tools are able to create a pull assignment in the cost price model and are able to forecast scenarios.

2.4.3 Report and Analyze

After converting the CAM into a cost price model in the CMPA software, multiple analyses and reports can be produced to provide management with the insights required for effective performance management.

Report

The software tools generate reports which can be used by management. This includes the presentation of (parts of) the models. Combinations of flow charts, textual components and matrices highlighting connections between various parts of the models can be shown. The reports can be numerical as well as graphical. Below are some examples of reports:

- Reports that show a breakdown of a cost object;
- Reports regarding information relating to defined attributes (e.g. fixed and variable);
- ► Figures per period, forecast, year-to-date, last year, a period from last year or a number of periods:
- Reports regarding budgeted, actual and standard costs;
- Profit & loss per customer.

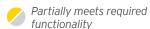
One important option the software tools offer is comparison of various periods and scenarios. These 'period' or 'time' analyses can be aggregated and trended in some CMPA tools. In some instances variances can be compared and mean values of selected periods can be produced.

Reports can be presented in multiple ways. The first option is on-screen reports. For those reports, it is useful to know whether users can customize them and whether they are interactive (in which case drilling down and rolling up is possible. The second method is delivering reports onto the web (web-based reports). Each individual manager can have a personal (web-based) report adjusted to their level of responsibility and authority. In this way, reports can easily be interpreted and result in swift action. Web-based report modules offer a lot of flexibility in the rapid digital transforming business environments (e.g. on tablets). In addition to generating reports in the CMPA tool, the CMPA tools can export the reports to MS Excel and/or external (third-party) reporting tooling.



Reporting	Acorn	MyABCM	Oracle	Prodacapo	QPR CostControl	SAP	SAS	Tagetik
Web based reporting and customization on screen								
On-screen interactive reporting								
Rolling up cost elements, accounts and activities visible/graphically shown in the model								
Breakdown of a cost object								
Comparing figures per period, forecast, year-to-date, last year, a period last year, a number of periods								
Budgeted, actual and standard costs								
Profit & Loss per customer								
Numerical and graphical reports								
Possibility to generate a graphical overview of the model								





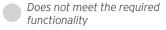


Table 3

EY's practical experience

The demand for detailed financial information keeps growing. In response, reporting processes will need to be faster, more robust and more integrated – capable of providing multiple reporting views to satisfy the business teams, regulators, the board, shareholders and analysts. However, the frequency of reporting, the possibility to automate standard reports (per period) etc. are also high on the agenda of the Finance function. CMPA software tools enable and support finance to achieve these requirements and demands from the business.

CMPA software tools offer have two different types of reporting capabilities, namely internal and external. Internal reporting refers to the possibility to create reports within the tool; external reporting refers to the possibility to export to MS Excel, third-party report writers and the external reporting format of the CMPA tool. The results of the survey show that all tools are able to provide the most common and useful types of reports. Although all tools are able to develop and generate internal reports, there are some differences between the tools in terms of the type of reports and reporting method. These differences mainly concern the virtualization of reporting.

Not only the Finance function, but other business units too are important stakeholders in the CMPA process. The business might have other reporting requirements in addition to those of the Finance function. In order to meet all these different reporting needs, it is important that the CMPA tool supports the Finance function to deliver these reports. The different CMPA tools vary widely on this point in terms of user interface, visualization and customization options, the ability of stakeholders to develop their own reports and the accessibility of the reports (e.g. Explorer versus apps, or on a



laptop or tablet).

Part 2: How to work with CMPA

Analyze

The different CMPA tools produce different types of analyses, with each tool also offering a standard set of reporting options. The reporting and analysis sub-processes include:

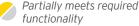
- Review and design of cost analytics, including business process analysis, cost simulations, inventory valuation, manufacturing variances, value added analysis, target costing and internal benchmarking of costs;
- Comparison of actual output values with standard values;
- Development of basic profitability analytics, including product, customer, channel and geographical profitability;
- ► Definition of management accounting and cost and profitability reports.

The following types of analysis are the most common and offered by all CMPA tools.

- Trace-back reports assist the user in understanding and relying on the information in the model. If full traceability is offered, the CMPA tool shows the entire path from a product, customer or distribution channel via activities and resources all the way back to accounts in the general ledger.
- Capacity usage refers to the amount of a certain factor that can be used for an activity, e.g. the capacity of FTEs to perform the activity. It is important to know whether you can predefine maximum capacities within the tool and whether the tool can check for these capacities.
- Efficiency and price variances can be analyzed if the tool offers the option of comparing several data sets (e.g. various periods).
- 'What if' or 'scenario' analyses provide interesting information about the consequences of various situations. The range of options for what-if analyses within the software is important, relating to the variables that can be changed and the analysis of the consequences of changes. This will support the decision-making process.
- Profitability analysis concerns the manner in which revenues are treated in the software tool.
 Analysis can relate to customers, products, segments, distribution channels or countries/areas.

 For customer profitability, information about the cost categories cost to acquire, cost to provide, cost to serve and cost to retain provides insight into customer value.
- Segmentation analysis can be based on customer profitability. It enables the user to make a strict
 selection of information for the analysis e.g. exact costs of a specific product supplied to a specific
 customer. This is known as multidimensional analysis.
- Total lifecycle analysis indicates the profitability of a customer during the entire lifecycle within a company (for the entire duration of the customer relationship). This information can be useful in addition to the profitability per customer for certain periods.

Analyses	Acorn	МуАВСМ	Oracle	Prodacapo	QPR CostControl	SAP	SAS	Tagetik
Target costing								
Trace-back report								
Efficiency and price variances								
'What-if' analysis								
Reporting profitability per customer, product, segment, distribution channel and country/area								
Segmentation analysis based on customer profitability								
Total lifecycle profitability								
Activity-Based Budgeting								



functionality

Table 4

EY's practical experience

The traditional focus of the Finance function has shifted enormously, where the emphasis is now much more on 'driver-based analysis and planning'. The analysis allows managers to set up multiple scenarios and enables them to steer and control the organization and departments more accurately. Driver-based planning enables the Finance function to develop more accurate budgets, which are based on planned and expected results, and all costs associated with these results. Non-financial drivers like resource consumption or application numbers are used to estimate expenses per business unit. In this manner, driver-based planning enables managers to speed up the budget process and make it less subjective, which allows them to make more frequent forecasts. Part of driver-based budgeting is activity-based budgeting, in which budgeting is based on the relationship between activities and costs. The activities are tied to strategic or organizational goals, so that the costs to be incurred to perform those activities can be used to establish a budget. The starting point of activitybased budgeting is the results followed by the activities needed to achieve these results. Therefore, driver-based analysis and planning allows managers to:

- Level the playing field and enhance objectivity in budget and costs discussions;
- Anticipate future costs variances;
- Improve short and medium-term operational cost planning;
- Discuss the gap between budget and actual results.



If management is to steer the organization based on accurate and driver-based control, planning and budgeting, it will need to be able to use software tools that support this. CMPA tools are extremely suitable to provide the insights that are needed. The survey has shown that all CMPA tools are able to provide the required data, especially for the OPEX side of the budget.

Part 2: How to work with CMPA

Input and output of data and reports

For the import and export of data and reports it is relevant to know to what extent the interface between the CMPA tool and/or other databases is automated. Data can be imported and exported manually or by using copy-paste functionality. However, it can also be done in a more automated manner, e.g. using templates or even performing a fully automatic data import.

It is important to know for which programs the CMPA tool can provide interfaces. An important aspect of interfaces is the number of records that can be exported or imported, and whether a maximum record number applies. Systems that can be used to import data from or export data to the model are MS Word and MS Excel, ERP software, Customer Relationship Management (CRM) software, Business Intelligence (BI) software and Campaign Management (CM) software.

Data	Acorn	MyABCM	Oracle	Prodacapo	QPR CostControl	SAP	SAS	Tagetik
Manual data entry								
Copy-paste from MS Excel and MS Word								
Import assignment paths								
Import records without limit								
Possibility of exporting profitability analysis per individual customer to BI, CRM and Campaign Management (CM) environments								
NISTIVA TUNCTIONSUITV	es not me actionality		equired					

Table 5

EY's practical experience

The import and export functionalities of the CMPA tool largely determine the ease of building a cost price model, design reports, dashboard and cockpits, and the possibility to meet business requirements. When the output from the software tool can be directly integrated into certain BI tools, manual intervention is not needed. This can save a lot of time and enables managers to build their own reports without the intervention of the Finance function. However, this is only possible if new or existing software tools are able to integrate their inputs and outputs with other software tools. This implies the ability to import from and export to multiple data sources and formats.



According to the survey results, all tools are able to import from and export to all main sources and formats. In terms of the reliability and accuracy of the data, it is important to determine to what extent raw data can be imported and exported directly from and to other sources. When manual intervention is required in order to import and export data from and to other sources, the quality and reliability of the data decreases. It is important, therefore, to consider the extent to which certain software can be fully aligned / integrated with the existing IT infrastructure.

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2.4.4 Plan, Control and Manage

The final sub-process is the integration of CMPA information into performance management. This should contribute to motivating responsible individuals to review potential profitability results when making decisions. Failure to proactively understand and manage costs will make it impossible to reduce them, which will impact the financial health and growth potential of any business. This is why the last sub-process focuses on the consistency of analysis for decision-making purposes. This means that all analyses should be performed using the same set of cost and profitability data. Shadow cost systems will produce different 'answers' and time will be wasted debating over the 'right' costs. This explains why consistency between managerial responsibility, reported financial results and outcomes is crucial.

Failure to proactively understand and manage costs will make it impossible to reduce them

To best understand the relationships between output volume and resource consumption, CMPA enables activity-level analysis. This affords insight into (statistical) relationships between input and output, which is useful in the departmental budgeting process.

Plan

The planning step enables management to adapt operating costs and expenses to changes in output volumes. The CMPA models support the implementation of a volume-based budget (activity-based budgeting) both as for capacity management and resource supply management purposes. Management can evaluate the potential impact of decisions and establish targets/goals for each area the individual or the organization can influence during the measurement period (revenue-cost results, utilization, etc.). It is conditional, therefore, that the responsibility center structure is clear.

Control

The control step supports management in proactively steering the organization towards value creation. The ability to analyze different scenarios and prevent costs by identifying the optimal scenario is one of the characteristics of an effective CMPA process. This will also enable an organization to identify deviations from the established roadmap and will help management to rapidly react to those deviations. Control elements of CMPA also encompass the linkage of rewards to achieved results (compensation, bonuses etc.) by applying flexible measures. Examples of such flexibility include budget overspending due to increased volumes, and focus on variable KPIs rather than static measures (i.e. spend/customer as opposed to total spend on a customer).

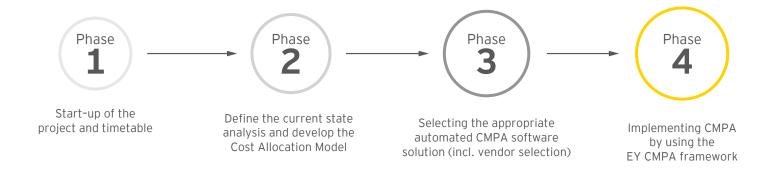
Manage

CMPA information potentially supports management in make versus buy decisions, internal transfer price implementation, customer/product/channel mix management and performance management. It also helps management to prepare 'what-if' analyses and calculate budgets on the basis of different costing methodologies. This allows management to make the right decisions by delivering the right cost and profitability information to the right people/organizational unit at the right time.

2.5 Implementing CMPA

This chapter provides a brief description of EY's approach for supporting financial service organizations in implementing effective CMPA. That approach draws on sector knowledge, a deep understanding of all the various aspects of costing and our experience with a wide range of CMPA tools. An important component of our methodology is our knowledge of underlying (financial) processes and issues. The technological capabilities in terms of system, process and data source alignment (i.e. import and export functionalities), as well as the user interface and familiarization of certain software are important factors in the search for the most appropriate CMPA tool.

Implementing CMPA software may be considered a separate phase, as implementation strongly depends on the choice of supplier and system. For various CMPA tools, EY and/or software suppliers have already developed custom-made implementation plans. To prevent decisions from being made during the selection phase that negatively impact system implementation, it is essential that the integrated approach, presented in Part 2, is followed. Below in an example of a project including implementing CMPA software using an integrated approach. This approach includes vendor selection, which will not always be part of a CMPA project.



Phase 1 Start-up of the project and timetable

The project starts by setting up a project plan for implementing enhanced CMPA. As a minimum, the project plan must contain the following items: project staffing, a clear scope, timetable with milestones and deliverables, and the responsibilities of the project participants.

Phase 2 Define the current-state analysis and develop the Cost Allocation Model

The second phase of implementing enhanced CMPA concerns the identification and development of the current-state analysis and Cost Allocation Model. The outcome of the current-state analysis is a level of maturity regarding CMPA (see Figure 7). These maturity levels are described in detail in the introduction of Part 2.

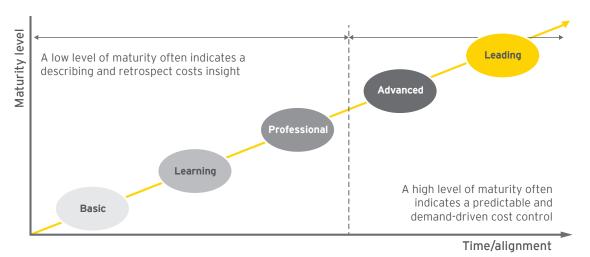


Figure 7

By analyzing the current state and defining a future state, a GAP analysis can be conducted to provide insights into which steps the organization has to take during the CMPA project. The future state is often defined by means of guiding principles, an example of which is presented in Table 6.

After completing the GAP analysis, the CAM can be designed with due regard for the guiding principles. The following elements need to be identified and analyzed in order to design the CAM:

- Identify and define the desired outcomes (i.e. which reports and insights does the tool need to produce) as guidelines for designing the CAM;
- ► Structure of the organization (i.e. resources, activities, products and services);
- ▶ The resource and activity drivers in order to allocate the costs to the cost objects;
- ► The data that needs to be imported into the CMPA tool.

In order to streamline the development process, EY created an assessment framework in order to support the current-state analysis (Figure 8). The framework is based on the seven design principles of the CAM, providing a clear overview of how the CAM needs to be developed and where the potential challenges may be.

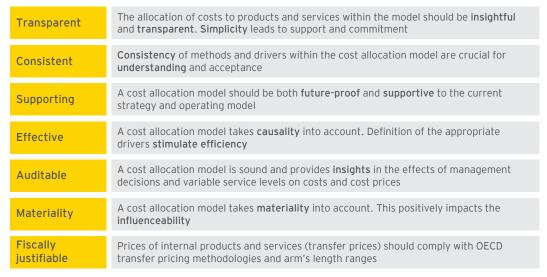


Table 6

Phase 3 Selecting the appropriate automated CMPA software solution (incl. vendor selection)

When the CAM has been designed and validated, the next step towards CMPA implementation concerns familiarization with an automated CMPA solution. Rather than preparing a long list of software suppliers, our approach allows a shortlist to be compiled immediately, using technical and functional specifications and EY's knowledge of and experience with certain systems. The shortlisted suppliers are requested by the client to provide specific information based on the latter's relevant and distinguishing characteristics. Only highly specific questions will be put to software suppliers, which will accelerate the selection process. In addition to requesting information, software suppliers will often be asked to organize a workshop using a demonstration script (demo case). This process can be accelerated by providing examples of agendas, demonstration scripts, questionnaires and management summaries.

IT systems alignment, user interfaces and pricing are key determinants when selecting the CMPA software solution Every company has its specific information needs and expectations concerning the output of the software. If the software tool fails to meet these needs, the role of cost management is undermined. Therefore, in the software selection process, a company has to take into account the standardized reports and the options for customizing the output the software delivers. In this way, a company can be certain of selecting a software tool that meets its needs. Overall, it is essential that companies consider CMPA software functionality before selecting a specific vendor.

The survey has not shown any significant differences between the eight vendors of CMPA software and that the functionalities (i.e. modelling, assignments, analyses and reporting) of the different tools are comparable. However, the differences that do arise are based around three key elements which will determine the best fit for the organization. These three elements are:

1. The alignment and interaction between the IT systems

In CMPA software implementation it is important to assess the alignment of the different systems that must be interlinked. In order to streamline the reporting and analysis process as well as facilitating the import and export of data from multiple sources, it is essential that the software can be aligned with the current systems. For example, if the current ERP system and other software tools are from a certain vendor, selecting CMPA software from that same vendor may help to streamline the implementation and guarantee ease of use.

2. The user interface

The user interface largely determines the degree of user-friendliness. This implies that the user's current systems, familiarization, preferences and skills set are of great importance when selecting a certain tool. Each tool is designed in its own way and differs from others in terms of the skills required to work with it.

3. The price of CMPA software and implementation

CMPA software tools fall in different price categories. There is a large variation in the pricing of the different automated solutions. To make full use of all the surveyed CMPA functionalities, in some cases additional modules or licenses of the vendor have to be purchased. For the specialized CMPA software vendors, all functionalities are available in their cost management solution. Other price variances relate to aspects such as the type of organization, performance and interface differences, training and implementation support, and pricing mechanisms. There is not one good or one bad tool: as it all depends on the type of organization, type of user, requirements, etc.

These are the three main issues that will influence the software selection process. A 'one size fits all software tool' does not exist, as each organization has different demands and software requirements, which requires customized and tailored recommendations. CPMA software should be selected, therefore, on the basis of a deep-dive analysis and thorough research, whereby all demands, requirements and preferences are brought to the surface. At the end of this phase, it should be clear which software supplier and which CMPA tool best fit the client's specific situation.

Following the selection of the CMPA tool, contract negotiations can begin. In addition to the price of the software, the contract must specify the level of support the software supplier provides. During this phase, the technical implementation plan is drawn up, which forms part of the contract.

Phase 4 Implementing CMPA by using the EY CMPA framework

After selecting the appropriate automated solution, the design of the CAM will be operationalized in the selected software. Using the EY CMPA framework presented in chapter 2.2 (see also Figure 9), the data for different periods (e.g. costs, budgets, volumes, productivity) is loaded into the model. As a result of the carefully devised and agreed upon CAM, the organization is now able to build different cost price models for different purposes and periods. The use of a generic CAM will make it possible to compare the different cost price and tariff models.

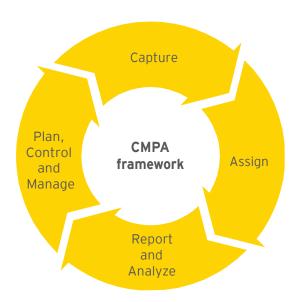
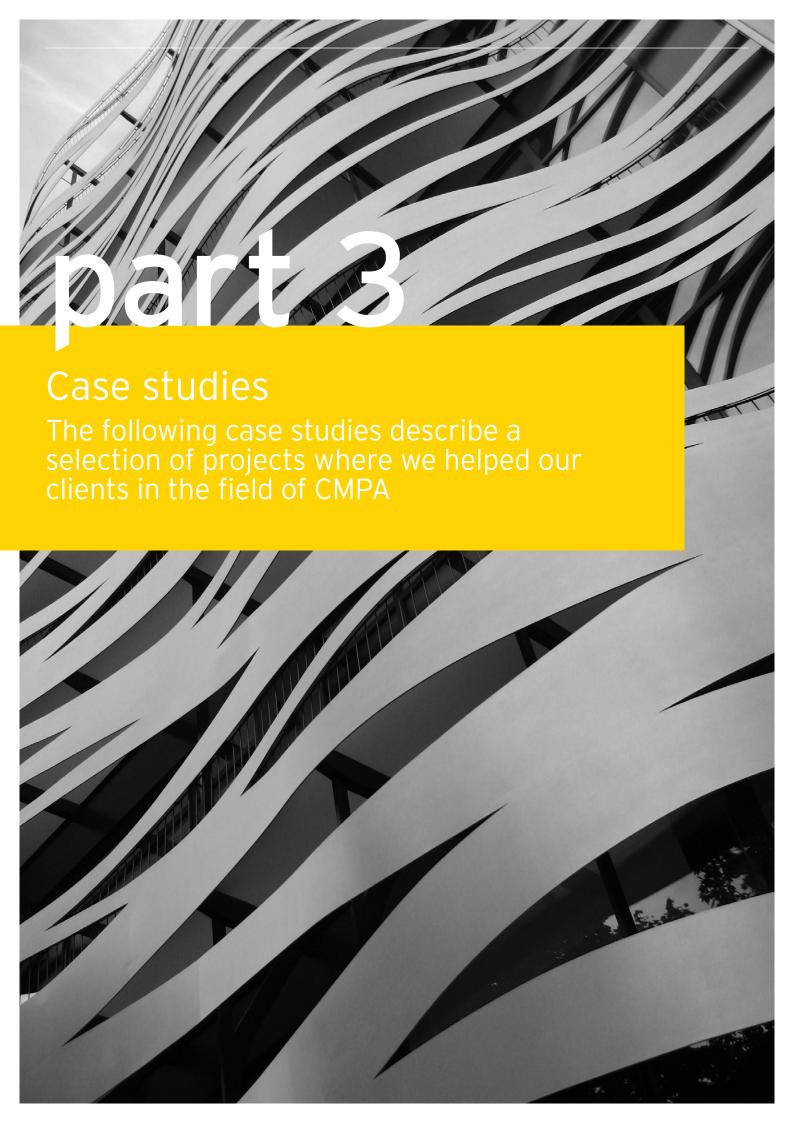


Figure 9





3.1 Case study 1

Design and implementation of a Cost Allocation Model to calculate the costs of back-office processes. These cost prices were used to set commercial prices for external parties who wanted to make use of back-office services.

Background, objectives & key challenges

- A subsidiary of an international bank wanted to offer a new service, in which they would facilitate all back-office processes for the sale of consumer credits by other financial institutions. The service included acceptance and realization of new consumer credits, contract administration, dealing with possible defaulters et cetera.
- Although the client was able to provide this service, they did not know how much it would cost and at which commercial rate they should position themselves in the market.
- ► The goal was to develop a Cost Allocation Model that defined each activity of this service and made it possible to calculate the cost price for selling the service on the market.

EY's approach and role

EY took the leading role in shaping and delivering the project, and in managing the successful design prior to implementation. EY provided an overall method and approach for the assessment and design of the Cost Allocation Model and had a supporting role in implementing CMPA software in order to calculate cost prices for new services. The key areas of focus included:

- Assessing the current Cost Allocation Model including charging and costing models, processes and systems, and identifying areas of improvement;
- Re-designing the current waterfall of costs between functions, business and products, and proposing a revised Cost Allocation Model aligned to Finance and business requirements;
- Managing key stakeholders across all business units, to provide an agreed solution prior to implementation;
- ► A vendor selection to help the client select an automated solution, in this case QPR CostPerform by QPR CostControl;
- Providing robust project management disciplines to ensure adherence to objectives and deadlines.

Results







Activity catalog



Vendor selection

Value added

- Our experience in cost allocation, activity-based costing and leading practice toolkit enabled us to challenge the existing process and accelerate the definition of requirements.
- ► Providing an experienced team and a relevant approach for design purposes.
- ► Presenting findings and design to all stakeholders at all levels across the organization.
- ► Managing the implementation of the design.
- ► Our market knowledge and experience regarding cost management vendors and their tools.
- ► This resulted in a clear cost price model that enabled the organization to determine the cost price for the services it intended to offer in the consumer credit market.

Part 3: Case studies

3.2 Case study 2

Design and implementation of Cost Allocation Model for an IT department which needed to be integrated into the overall Cost Allocation Model.

Background, objectives & key challenges

- A bank wanted to gain more insight into and control over their IT costs, which consistently exceeded the yearly budget. The existing Cost Allocation Model provided no insight into the division of IT costs among the different business units.
- ► The client wanted to enhance their current Cost Allocation Model by designing and implementing a separate Cost Allocation Model for their IT department.
- ► The goal was to design and implement an IT Cost Allocation Model in order to improve the quality of management information. Finally, the model had to be integrated into the overall Cost Allocation Model.

EY's approach and role

EY took the leading role in shaping and delivering the project, and in managing the successful design prior to implementation and integration. EY provided an overall method and approach for the assessment and design of the Cost Allocation Model and had a supporting role in integrating the two cost price models. The key areas of focus included:

- Assessing the IT department by defining cost pools, resources, activities, services and the internal customers of the IT department;
- Developing a full product / service catalogue in order to clarify which products and services the IT department was actually offering to its clients;
- Designing a waterfall of costs between the functions within the IT department and proposing a Cost Allocation Model aligned to Finance and IT requirements;
- Managing key stakeholders across all business units, to provide an agreed solution prior to implementation;
- Providing robust project management disciplines to ensure adherence to objectives and deadlines.

Results



Cost allocation model



Activity catalog



Reporting structure

Value added

- Our experience in cost allocation, activity-based costing and leading practice toolkit enabled us to challenge the existing process and accelerate the definition of requirements.
- ► Our knowledge and experience regarding IT cost allocation within banks.
- ► Providing an experienced team and a relevant approach for design purposes.
- ► This has resulted in a clear cost price model that enabled the IT department to determine the cost price of its products and services.
- ► The cost price model provided clear MI information about the usage of IT by other business units. The model also enabled the IT department to create awareness within the business about IT costs and spending.

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3.3 Case study 3

Design and implementation of cost allocation methodology, the underlying processes and governance framework.

Background, objectives & key challenges

An international universal bank wanted to redesign the group cost allocation and cross-charging process to create greater transparency and accountability for the cost base.

- The main objective of the project was to redesign the processes underlying cost allocation and to identify a clear business rationale in the allocation of costs to improve insight into the profit contribution of products and activities.
- The scope of the project included all the components related to cost management: transfer pricing & contracts, key performance indicators & management information, invoicing & accounting and planning & budgeting.

EY's approach and role

EY conducted a deep-dive analysis of the current cost allocation methodology, including the underlying processes, design principles and assumptions. Within our approach an activity-based costing concept was key to ensure profitability insights were delivered that supported customer and product portfolio management. Key areas of focus included:

- Developing a process and methodology hypothesis based on leading practice;
- Developing a multi-dimensional data model to include management unit, product, customer, channel, region and legal entity characteristics in the allocation processes;
- Defining a new activity catalogue to provide greater cost transparency and meet requirements for more detail to support divisional profitability modelling;
- Building a group Cost Allocation Model within Hyperion HPCM to support the budget process and actual reporting;
- ► Defining requirements for divisional onward allocations and tax transfer pricing;
- Engaging stakeholders actively during the change process and implementing a prototype as prerequisites for successful pilot roll-out.

Results



Cost allocation model



Activity catalog



Data model

Value added

- Our experience in cost allocation and activity-based costing within the banking sector and leading practice toolkit enabled us to challenge the existing process and accelerate the definition of requirements.
- ► EY provided support throughout the whole project lifecycle, including methodology, process design, activity catalogue and system development. Client feedback indicated that our focus on change management and stakeholder engagement had been key to success.

Part 3: Case studies

3.4 Case study 4

Building a Cost Allocation Model for allocating a company's operating costs to various business activities.

Background, objectives & key challenges

- A large life insurer had been pricing their products based on pricing assumptions derived from industry / past experiences. The pricing of the products was not linked to the cost of origination, issuance, servicing, claims settlements and closure.
- ► The client had difficulties in accurately assessing the profitability of the products, which led to cross-subsidization of non-profitable products from more profitable products.
- The client engaged EY to create an activity-based model which could allocate operating costs to various activities and then to products to ascertain the costs of various products. The required model had to be developed in MS Excel due to ease of use and compatibility with data sources and MIS, which was challenging due to the limitations of MS Excel software.

EY's approach and role

EY conducted a current-state analysis of the client's cost allocation methodology, including the underlying processes, design principles and assumptions. Key areas of focus included:

- Discussion and validation of the cost baseline based on the latest financial statements;
- ► A re-allocation of costs to the appropriate and agreed upon responsibility centers.

EY assisted the client in the following ways in order to adapt its allocation model:

- Establishing and documenting an activity dictionary including a process walk-through of all
 activities across the entire product lifecycle. The activity dictionary included operational data such
 as time measurement for operational activities;
- A thorough analysis of the client's cost drivers. The cost impact and drivers of all (operational)
 activities were assessed in relation to the agreed upon responsibility centers, resulting in a list of
 cost drivers for all activities;
- Designing the Cost Allocation Model based on the activity dictionary and cost drivers. EY then used of this blueprint the CAM was modeled into a MS Excel solution which was compliant with the agreed upon business requirements for the model.

Results







Activity catalog



Improvement initiatives

Value added

On the basis of its deep costing expertise, EY delivered a comprehensive activity dictionary encompassing 21 processes, 400 activities and >1200 sub-activities.

- ► EY built an exhaustive Cost Allocation Model spanning 400 activities across 28 products.
- ► Using the developed reports, which were designed on the basis of client requirements, the client was able to analyze true product costs.
- ► EY leveraged Global Talent Hub (GTH) skills to develop the model in MS Excel
- ► EY identified various process improvement initiatives to enhance operational effectiveness and optimize operating costs.

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3.5 Case study 5

Assessment of the current cost price model and recommendations for a future CostPlus pricing model for a large pension administrator and asset manager.

Background, objectives & key challenges

- ▶ A large pension administrator and asset manager in the Netherlands asked EY to review the suitability of their current Cost Allocation Model for future CostPlus pricing purposes.
- The client also asked EY for advice on different aspects of the new pricing model (CostPlus pricing).
- ► EY was asked to coordinate the whole project, chair the steering committee and provide expertise in the project teams and work streams.
- ► The customers of this client are large pension funds, of which the largest ones also hold shares in the client. This implies tax-related aspects and requires transfer pricing at arm's length.

EY's approach and role

In collaboration with the client EY defined several research questions to establish the current state, define the future state and determine the gaps between current and future pricing. The EY approach was received well and included:

- Setting up clear project governance by chairing a steering committee encompassing C-level representatives from all stakeholders. The members of the project group mirrored the steering committee and were supplemented by experts from EY;
- ► Starting with a current-state assessment and definition of design principles. This eased the tensions and helped to build confidence in the existing Cost Allocation Model and methodology;
- Providing deep costing expertise and bringing in peer insights. The problem had been unsuccessfully addressed by other external consultants before, but EY's deep costing knowledge provided the insights all stakeholders were looking for.

Results



Cost allocation model



CMPA manual



Assessment of ABC model

Value added

EY provided the pension administrator and its customers with transparency and insights into the current cost price model and the impact of alternative cost methodologies like full costing, direct costing, contribution margin and marginal costing at customer level.

- ► EY delivered an expert opinion on the client's current Cost Allocation Model, including a detailed description of its design, its strengths and weaknesses and the most important areas for improvement translated into an action plan.
- ► EY laid the foundation for a future-proof CostPlus pricing model for all stakeholders by clarifying the impact of various costing and pricing scenarios.
- ► EY defined agreed upon design principles for the pricing model and helped explain the gaps between current and future pricing.
- ► EY helped document the model including activities, products and services, cost and resource drivers and helped substantiate the underlying assumptions.

What now?



Take action

Cost pressures, reporting demands and business needs already exist. Finance must start the process of implementing effective CMPA now. Consider the responsibility center structure and start thinking about the transparency and cost- and value drivers of your business.



Ask questions

Board members and senior management need to ask how finance can support all business needs in the new normal environment in which financial services organizations compete. Finance has to enter into a dialogue with the business to understand the drivers.



Set goals

Set goals

Aspirations may not necessarily be fully achieved in the short-term, but they draw an important line in the sand. When there is a complete and full understanding of the cost drivers, how far can the operating costs be reduced? What resources are necessary to realize these reductions? How can organizational value be optimized?



Begin planning

Implementing effective CMPA requires careful planning. CFOs need a roadmap to move finance from its current state to the desired CMPA maturity level. This will involve identifying priorities and developing the business case, before creating a detailed plan for achieving this change.



About EY Advisory and contacts

A broader perspective

Amid sweeping regulatory change, today's financial services institutions must grapple with capital management, business risks and global growth – all while meeting greater demands for transparency.

Our 35,000 global wealth & asset management, banking & capital markets and insurance industry professionals are located in major geographic hubs, a unique structure that allows us to rapidly mobilize and dedicate them to the right assurance, tax, transaction and advisory-related projects across the Americas, Asia-Pacific, EMEIA and Japan.

From vision and business case to detailed design and delivery, our professionals deliver significant performance improvements across the organization. We stay ahead of our competition by differentiating ourselves on four key aspects.

Industry/subject matter knowledge and team

- Our depth of global experience, including extensive research and analysis, provides strong subject matter resources and insights to our clients
- Our team integrates advisory capabilities across our multidisciplinary service lines to deliver the full range of recommendations to address client needs

Consistent service delivery execution

- We leverage leading practice project management techniques to track benefits delivery and manage organizational change
- Our integrated service delivery approach includes benefits management, starting with an individual project and ending with financial impact

Rapid and efficient

- We are able to identify and deploy rapid improvement initiatives that fund the assessment, rationalization, and review and realization phases of an improvement program
- We work closely with all stakeholders to agree a common vision of success to shape a project that is commercially compelling and realizable

Drive sustainability

- We understand the psychology of cost sustainability is the key focus from the outset and embedding costoptimization behaviors in the organization
- We frame CMPA improvements in terms of a desirable end-state, encouraging motivation to "take the pain of change" out of the process

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