Finance Analytics

Benchmarking the Analysis of Data To Gain Business Insight

Benchmark Research

White Paper

Aligning Business and IT To Improve Performance

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Ventana Research performed this research for a fee to determine attitudes toward and utilization of analytics and metrics in the office of finance. This document is based on our research and analysis of information provided by organizations that we deemed qualified to participate in this benchmark research.

This research was designed to investigate the finance analytics and metrics practices and needs of individuals and organizations and the potential benefits from improving their existing processes, information and systems. This research is not intended for use outside of this context and does not imply that organizations are guaranteed success by relying on these results to improve planning. Moreover, gaining the most benefit from improving the use of finance analytics and metrics requires an assessment of your organization's unique needs to identify gaps and priorities for improvement.

We certify that Ventana Research wrote and edited this report independently, that the analysis contained herein is a faithful representation of our evaluation based on our experience with and knowledge of planning and budgeting, and that the analysis and conclusions are entirely our own.

Ventana Research

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Executive Summary

Financial analysis dates back centuries, at least to the codification of double-entry bookkeeping in the 15th century. The analysis of balance sheets and income statements has long served as the basis of credit and lending decisions. The discipline of management accounting developed in the early 20th century as a way of using accounting data to keep corporate executives and managers informed about what happened or is happening and why.

The scope of data that finance departments have to work with has expanded considerably over the past two decades. Moreover, the discipline of management accounting has changed considerably to reflect business practices and the significantly broader availability of business data. Much of that change involves automating previously manual processes, with the positive results of reducing repetition and error, saving time and improving productivity. This is being aided by new information technology tools entering the market that enable finance professionals to support and manage a broad and deep range of business processes, collecting and analyzing more information in greater detail about the full range of corporate functions.

Among these technology advances are ones that provide greater analytic power to the office of finance. Open standards have made data far more accessible than it once was. In addition, increased processing power and the continued push to make sophisticated applications easier to use have enabled more managers to harness the power of analytic software. Predictive analytics borrow a variety of techniques from statistics, game theory and data mining to improve forecasts of future business outcomes, and these capabilities can be used with a richer set of operating and financial data to improve the quality, accuracy and timeliness of information to support business activities. The upshot is that technology has delivered to Finance the opportunity to play a more central, strategic role in its organization than ever before.

New applications enable corporations to collect more information in greater detail about the full range of functions.

The timing of these advances is fortuitous. Given the pace of business today, finance departments cannot stand still. If the organization is to maintain its competitive standing, they must take advantage of the widening range of data – especially more operating data – to provide deeper analysis of company results. The use of analytics also will be important in the emerging recovery, since companies will be challenged to maintain or improve their position in more competitive and volatile environments.

For example, corporations will need to pay increased attention to managing profitability. Analytics should be at the center of this effort. Having a clearer picture of the profitability of products and customers is critical to crafting strategies and establishing objectives; it's also essential for measuring results and providing the incentives necessary to ensure these objectives are met consistently. Today, operating units likely have only a vague idea of the impact their strategies will have on the bottom line, and much of the top-down financial analysis done in this area does not incorporate enough data from those operating units. That situation can change if Finance steps up to lead the efforts.

Ventana Research undertook this benchmark research to acquire real-world information about maturity, trends and best practices in how finance organizations use analytics. It explores how they do this now, how their people feel about the current processes and tools, plans they have to change or improve them, and benefits they hope to gain by doing so.

Many organizations participating in the research rely on traditional budget-related metrics and conventional types of analytics; the most important analyses their finance professionals perform involve income statements, financial planning, cash-flow planning and product profitability. Not many use innovative tools such as predictive analytics and fraud detection, nor do they analyze customer profitability. Yet they are not complacent: More than half of organizations said it is very important to their business goals to simplify making analytics and metrics available to people who need them.

More than half of organizations have stale or outdated data in the metrics and key performance indicators they use.

As well, the vast majority of organizations – almost nine out of 10 – said they can improve the way their company uses analytics, and those in senior roles most often said that use can be improved significantly. Roughly half of all organizations said they are satisfied with the processes used to create analytics, and the other half are not satisfied with them.

The research found that quality of data derived through analytics is not an area where many see a strong need for improvement; more than two-thirds said they are confident or very confident in the quality of the information generated by their analytics. Nor is availability of data a major issue: Organizations generally do not find it hard to get to the data they need to assemble metrics and performance indicators. However, the research also found that fewer than half of senior finance executives and just one-third of other senior executives always have analytics available when they need them. Organizations seeking to apply finance analytics as effectively as possible should take steps to evaluate the adequacy of the analytics and metrics available to executives and managers and address gaps uncovered by this investigation. Many may be able involve those leaders readily in the process: Almost half said that senior management and the head of their business unit are very engaged in establishing requirements for analytics.

Yet even if data is largely available and accurate, it is not necessarily fresh and timely, and the research found this to be an area of more concern. More than half of organizations have stale or outdated data in the metrics and key performance indicators (KPIs) they use, and half also require longer than one business week to provide important metrics and KPIs to people who need them. Lacking the latest metrics and KPIs, people at all levels find it harder to take advantage of opportunities, address issues or correct mistakes.

The analytics process itself is another area where improvement is needed: 40 percent spend most of their time here in unproductive activities including waiting for data, reviewing it for quality and consistency, and grappling with metrics that are not easily accessible. Analysis of the research using our Ventana Research Maturity Index determined that most organizations are immature in Process, one of the four categories in which we assess maturity. Taking an extended length of time to provide

important metrics and KPIs is an indicator of immaturity in the relevant processes, as is infrequency of formally reviewing them: 28 percent do this only quarterly, annually or not at all.

This analysis found that organizations are most mature in the Technology category and least mature in Process and Information. Yet in every category most organizations do not get the fullest benefit from finance analytics; in none of them do as many as one in five reach the top Innovative maturity level. And even in Technology, more than half rank at the two lowest of four levels of maturity, and spreadsheets are the tool most commonly used, by more than one-fourth of participating organizations; we consider spreadsheets inadequate for complex analytics. Spreadsheets are designed for individual, ad-hoc analyses and are poorly suited to other enterprise-wide tasks. To get maximum benefit from applying analytics to finance, we advise organizations that use spreadsheets for repetitive analyses and reports or to collaborate in ongoing analysis and decision-making processes to replace them with analytic databases and warehouses, and software for planning and forecasting and business intelligence.

Almost half said that senior management and their business unit head are very engaged in establishing requirements for analytics.

To reach the Innovative level of maturity, organizations should add tools for performing predictive analytics as well. They also should determine what analytic capabilities are most important for their business, ensure that data used for metrics is timely and that people who use analytics have what they need, and modify the process of using analytics to facilitate productive effort.

We also must note that the research found that while only one-fifth are satisfied with their current analytics efforts and a majority recognize the need to make changes, only one-third are planning to make any in the next 12 to 18 months. We attribute this reluctance to several factors. Organizations mostly use Traditional finance metrics – most prominently, for controlling operational expenses, managing budgets and keeping tabs on cash flow – and are able to handle them reasonably well. But for Finance to take a more robust role, it will have to expand beyond the narrow viewpoint of budgeting to help the business plan ahead, anticipate opportunities and risks, and determine and execute strategy. It needs to include a broader set of data beyond budget variances in its periodic reviews. These activities will require tools and metrics that can spur enterprise-wide performance improvement, such as predictive analytics and profitability.

The research shows that the three most significant barriers to making changes are a lack of resources and budget for the change, a business case that is not strong enough and low priority given to the issue. These factors indicate that most in Finance do not see a driving motivation to reach the highest level of excellence in this area. But as the economic recovery gathers momentum, we expect more finance organizations to consider enhancing their finance analytics processes and capabilities in order to compete more effectively.

About This Benchmark Research

Methodology

Ventana Research conducted this benchmark research over the Web from March through June 2010. We solicited survey participation via e-mail blasts, our Web site and social media invitations. E-mail invitations were also sent by our media partners and by vendor sponsors.

We presented this explanation of the topic to participants prior to their entry into the survey:

> There isn't an aspect of business today in which people don't claim they use analytics to generate information, typically in the form of metrics and key indicators. But there is much confusion about their usefulness and value to the business and about how best to select and implement historical, root-cause, real-time and predictive analytics. The uncertainty this causes poses a challenge for organizations.
>
> Management and managers need advice on how to select the measures most useful for them and guidance about best practices and common mistakes in choosing business and operational measures, metrics and key indicators. They also need more reliable information than is currently available about integrating historical and predictive analytics into systems and processes so they can make better use of existing investments and plan new ones that provide deeper insight from multiple systems using more sophisticated analytical methods. This benchmark research is designed to generate that advice and guidance by examining the use of metrics across the entire business. It also will determine the maturity distribution of organizations in their use of analytics.

We included the following definitions:

> Analytics – Programs or algorithms that derive meaning from data
> Metric – A measure of business performance
> Performance indicator – A specific metric chosen to measure the performance of an organization or some component of it.

The following promotion incented participants to complete the survey:

> All qualified participants will receive a report on our research findings that you can apply to your organization's efforts and a quarterly membership to the Ventana Research Community valued at US$125 or €92. In addition, all qualified participants will be entered into a drawing to win a benchmark research report of your choice valued at US$995 or €732. Thank you for your participation!

Qualification

We designed the research to assess the use of and plans for deployment of finance analytics and metrics across organizations and industries. Qualification to participate was presented as follows:

> The survey for this benchmark research is designed for business and IT managers who develop, deploy or use analytics or are involved with

the purchasing of analytics technology. Others such as consultants and systems integrators may participate in the survey but are not eligible for incentives and will be used in the analysis only if they meet the qualifications. Incentives are provided to qualified participants in the research and also are conditional on provision of accurate contact information including company name and company e-mail address that can be used for fulfillment of incentives.

Further qualification evaluation of respondents was conducted as part of the research methodology and quality assurance processes. It entailed screening out responses from companies that are too small, questionnaires that were not materially complete, or those where the submission is from an inappropriate submitter or appears to be spurious.

Demographics

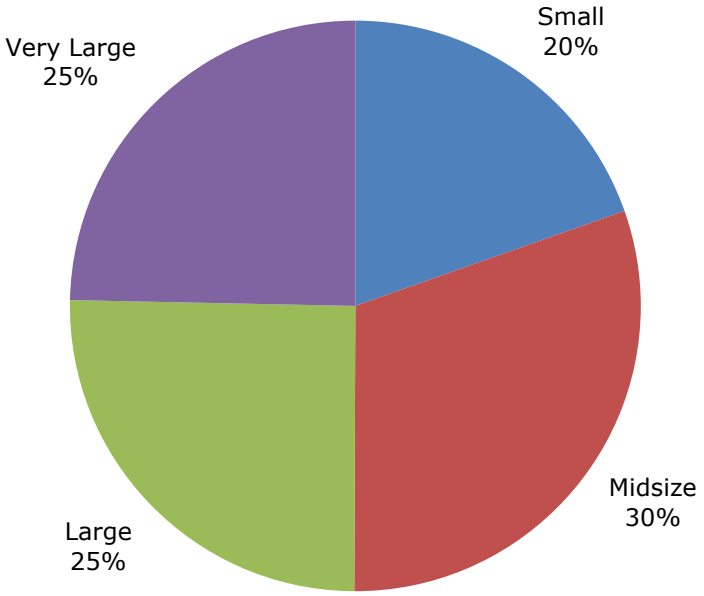
We designed the survey used for this research to be answered by executives and managers across a broad range of roles and titles working in organizations. We deemed 847 of those who clicked through to this survey to be qualified to have their answers analyzed in this research. In this report, the term "participants" refers to that group, and the charts in this section characterize various aspects of their demographics and qualifications.

Company Size by Number of Employees

We require participants to indicate the size of their entire company. Our research repeatedly shows that size of organization as measured by number of employees is a useful means of segmenting companies because it correlates with the complexity of processes, communications and organizational structure as well as the complexity of the IT infrastructure.

In this research, participants represented a broad range of organization sizes in rather even distribution: one-fourth work in very large companies (having 10,000 or more employees), one-fourth work in large companies (with 1,000 to 9,999 employees), 30 percent work in midsize companies (with 100 to 999 employees), and one-fifth work in small companies (with fewer than 100 employees). This distribution is consistent with prior benchmark research and our research objectives and provides a suitably large sample from each size category.

Figure 1
Participants by Company Size (Number of Employees)

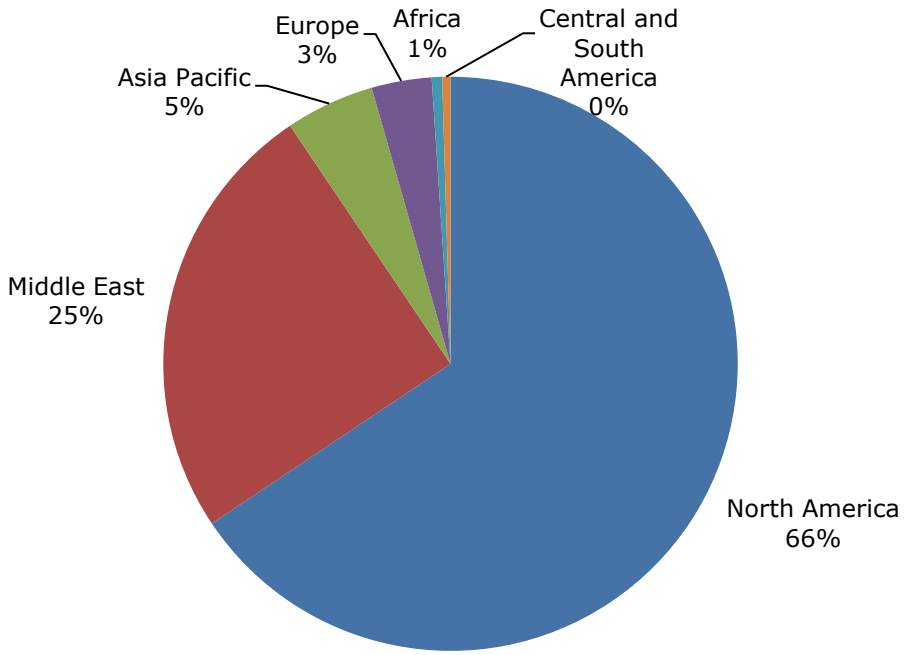


Source: Ventana Research

Geographic Distribution

About two-thirds of the participants were from companies located or headquartered in North America. Those based in the Middle East accounted for one-fourth, in Asia Pacific for 5 percent, in Europe for 3 percent, in Africa for 1 percent and in Central and South America for less than 1 percent. This result was in keeping with our expectations at the start of this investigation, since organizations participating in our research most often are headquartered in North America. However, many of these are global organizations operating worldwide.

Figure 2
Participants by Region

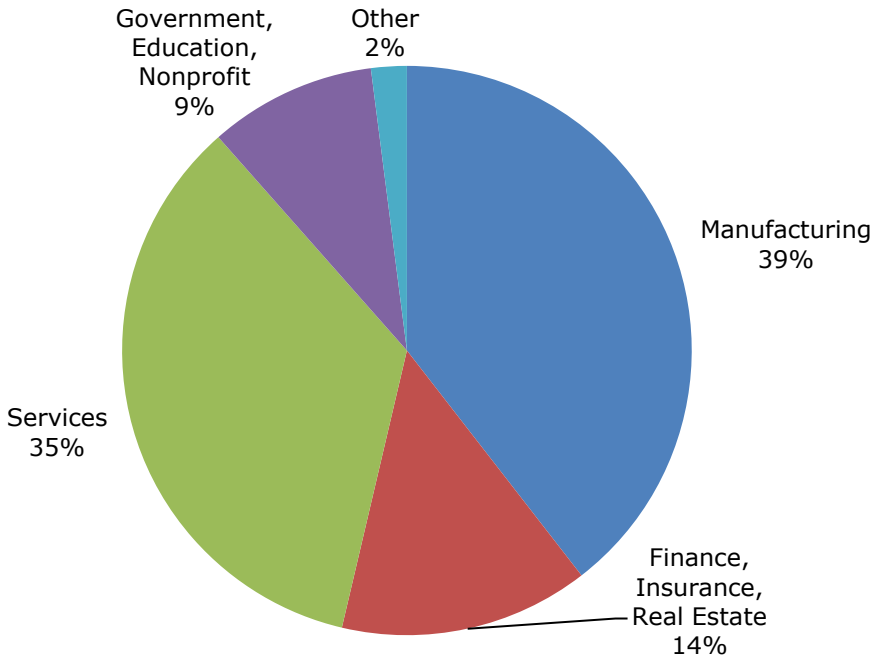


Source: Ventana Research

Industry

The companies of the participants in this benchmark research represented a broad range of industries, which we have grouped into four general categories plus Other, as shown below. Companies in manufacturing accounted for the largest share of participants (39%), followed by those that provide services (35%) and finance, insurance and real estate (FIRE, 14%). Government, education and nonprofit and others accounted for the balance.

Figure 3
Participants by Type of Industry

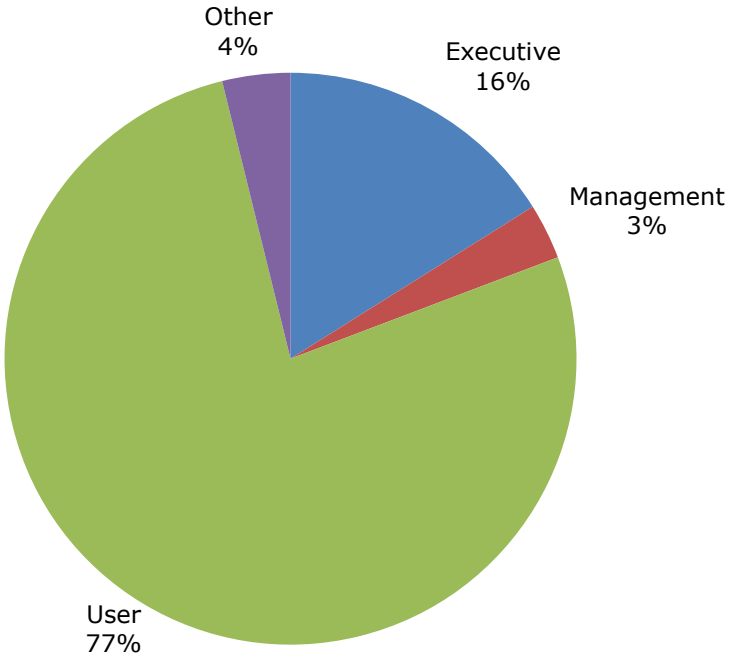


Source: Ventana Research

Job Title

We asked participants to choose from among 15 titles the one that best describes theirs. We sorted these responses into four categories: executives, management, users and others. More than three-fourths identified themselves as having titles that we categorize as users, a grouping that includes senior manager or manager (28%), director (8%), analyst (25%) and staff (10%). Less than one-fifth are executives, of which most are CFOs or heads of Finance (14%), and the balance are vice presidents or others.

Figure 4
Participants by Job Category



Source: Ventana Research

This is how we aggregated the 15 title response options:

Executive
CEO, President
COO or Head of Operations
CIO or Head of Information Technology
CFO or Head of Finance
Other CxO

Management
EVP or SVP
VP

User
Director
Senior Manager or Manager
Analyst (Business, Financial, etc.)

Staff

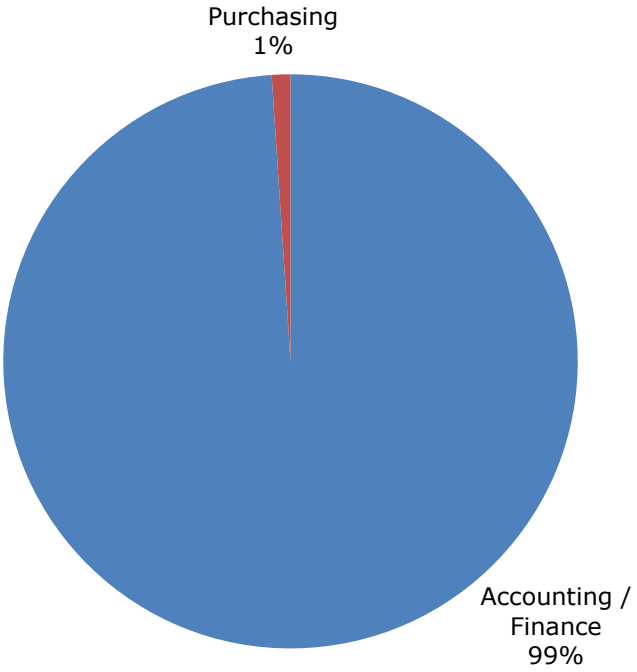
Other
Consultant
Professor or Teacher
Student
Other Title

We concluded after analysis that this response set provided a meaningfully broad distribution of job titles.

Role by Functional Area

We asked participants to identify their functional area of responsibility as well. In this research the areas they cited were quite specialized, which was not surprising. Nearly all of the participants identified themselves as having responsibilities within the finance or accounting organization; 1 percent said they work in purchasing.

Figure 5
Participants by Functional Area



Source: Ventana Research

Key Insights

Our benchmark research yielded the following important general findings and key insights regarding the use of analytics in the finance function. (We discuss maturity levels in the Maturity Index portion of the full research report; the actual questions asked in our survey are in the Appendix to the research report.)

Organizations are maturing slowly in their use of finance analytics.

This benchmark research found that organizations are advancing in their ability to apply analytics to finance, but there is substantial room for improvement. The research shows that they tend to rely on traditional budget-related metrics and conventional categories of analytics; not many use innovative tools such as predictive analytics (just 35% say they use them) and fraud detection (16%) or business metrics such as customer profitability (33%). We also detected a significant degree of complacency: Only a few more than half of participants said it is very important to their business goals to simplify making analytics and metrics available, and most are not planning to make changes in the near future. Applying the Ventana Research Maturity Index methodology, we found that organizations are most mature in the Technology category and least mature in the Information and Process aspects. Thus we conclude that they need to improve the data on which they perform finance analytics and adapt their processes to adopt more metrics that track business performance and results.

The analytics used broadly in the finance function are traditional ones.

Because the finance role is numbers-oriented and accounting data has been used for centuries to assess the performance and health of businesses, it's not surprising that analytics are important here. Finance managers use a range of finance-related metrics focused on profitability, revenue growth, accounting accuracy and budget variances. On average they pointed to five areas they analyze regularly. The most important analyses they perform involve income statements (cited by 80%), balance sheets (70%), financial planning (67%) and cash-flow planning (64%). Although the focus on traditional areas is understandable, this benchmark research reveals that finance organizations pay too little attention to more advanced types – predictive analytics and leading indicators (35%), for example, as well as customer profitability (33%) and market data and trends (28%). Each of these is critical to enhancing the finance function's ability to look forward strategically; in the aggregate they enable it to sharpen plans and budgets and to be able to spot important deviations that signal the need to make changes to plans or their execution.

Finance analytics should be more accessible.

Making analytics more accessible is a priority for finance departments: Almost nine in 10 research participants regard making it simpler to provide analytics and metrics to those who need them as important or very important. The implication of this finding is clear: Companies must focus on making it easier for employees to access useful and relevant analytics and metrics. Those who have job titles in management most often said this is very important (63% vs. 56% overall).

Satisfaction with analytics varies.

Those in the finance organization have mixed feelings about the adequacy of the processes used to create analytics, with about the same proportion saying they are satisfied with them as those saying they aren't. Those who are dissatisfied cited multiple reasons: They said it takes too long to produce the analytics they need (52%), analytics are hard to build and maintain (49%), once in place they are not adaptable or flexible enough to accommodate change (44%) and, finally, the results of the analysis often aren't readily actionable (40%). This research makes clear that for analytics to deliver full value, companies must find ways to provide timely, relevant and actionable analytics and metrics and address the root causes of the shortcomings they find.

There is strong support for improvement in how analytics are used.

There is room for improvement – in some cases, considerable improvement – in the way companies use analytics. Almost nine out of 10 finance organizations in this research said they can improve their use significantly or somewhat. Moreover, those in more senior roles are most likely to say that use can be improved significantly. These results suggest that efforts to improve analytic processes are likely to be perceived as valuable. Those advocating an analytics project therefore should show how it will support such improvements.

Even others who said they have few issues with data quality or their ability to access the data needed to support their analytics efforts asserted there is both opportunity and need for significant improvement. This finding points to flaws in one or more aspects of the analytics: The design and/or scope of the analysis performed, the metrics and key performance indicators management chooses, and the way these metrics and KPIs are applied are sources of dissatisfaction.

Today, the finance department focuses on expenses and budgets.

Perhaps reflecting today's short-term business emphasis on cost control, the participants' use of analytics and metrics focuses first on controlling operational expenses, managing budgets and keeping tabs on cash flow. Similarly, they identified operational expense (76%) and adherence to budget (65%) as the most important metrics they use, while ranking customer profitability (31%) among the least important. We think this in part reflects the traditional role of this department in controlling spending and in part is a cyclical phenomenon. In recessions and periods of weak business activity, corporations focus on costs; when the economy is growing, attention shifts to increasing revenue and customer-related matters. It's important that as the cycle advances and the focus changes, analytics capabilities are available to support the change in emphasis.

Data must be fresh and assessments timely.

Timeliness of the data used in analytics and metrics is important, yet in more than half of the organizations participating in this research, stale or outdated data is present in the metrics and performance indicators they use. These same companies review their data less frequently than do companies that have real-time or nearly real-time data available. Similarly, the research uncovered an even split when it comes to the timeliness of the important metrics and key performance indicators that people receive: Nearly half get this information within one business week (which we view as acceptable performance), while the rest must wait more than a week, which we assert is too long. A delay of this magnitude is detrimental to an

organization's performance because it delays people's ability to take advantage of opportunities, address issues or correct mistakes. In addition, those receiving outdated information may question its accuracy or relevance. Organizations that do not have timely data therefore should address the root causes of the delay in the availability of data. For example, those that take more than one week to close their books must find ways to accelerate their accounting cycle.

Not all analytics are available to executives and managers.

Analytics are not always at hand when needed. Fewer than half of senior finance executives and just one-third of other senior executives have them always available whenever they need them. Only about one-fourth of vice presidents, directors and managers have them always available. While it is true that a large majority of executives have most of what they need, this is insufficient for optimally effective performance. Organizations pursuing this level of excellence need to have programs and processes in place to continuously evaluate the adequacy of the analytics and metrics available to executives and managers and to quickly and efficiently address gaps uncovered by this process.

The technology landscape rests on spreadsheets.

The technology that participants told us their finance organization uses to support analytics, metrics and KPIs conforms to our expectations. Spreadsheets are ubiquitous, and along with business intelligence technologies (for querying, reporting and performing analysis) and analytic warehouses and databases, they are the instruments most commonly used to generate the analytics. Typically, the warehouses and databases provide the basic data that people copy into a spreadsheet for further analysis and the creation of final reports. Finance professionals cited accounting systems, spreadsheets and budgeting and planning systems as their main data sources. Often, spreadsheets provide digested information drawn originally from various areas of the business, with the sources being a mix of enterprise systems and other spreadsheets.

This finding leads us to repeat one of our most persistent admonitions: While spreadsheets are appropriate for ad-hoc analysis and for information used by a limited number of people, organizations must limit their use of them as data stores and for repetitive analyses, particularly in cases where the results are reported to and used by more than a few people. Using relational or multidimensional databases as data stores and enterprise systems to perform analyses and provide reports ultimately saves time, reduces errors and therefore costs less and performs better in the long run than does relying on spreadsheets.

Despite acknowledged shortcomings, most organizations aren't planning to make changes in their analytic capabilities.

A majority of organizations recognize the need to make changes, but only one-third are planning to make them in the next 12 to 18 months. Another 35 percent acknowledge the need to make changes but don't view them as a sufficiently high priority to lead them to take action. Only one-fifth (22%) are satisfied with their current analytics efforts. Those planning to change want to improve their business and decision-making processes and their cost efficiency. The most significant barriers to making changes in analytics cited by participants are a lack of resources, no budget for the change, a business case that is not strong enough and too low a priority. In our experience these

barriers are interrelated; failure to provide a compelling business case results in a project having a low priority and therefore not being allocated the resources or budget to implement the changes.

There is a common-sense correlation between the degree of satisfaction with existing technology and the desire for change. Participants who are satisfied or very satisfied with their current analytics technology were far more likely to say that they are not contemplating making changes in the way they generate and apply analytics in the next 12 to 18 months compared to those that are less satisfied (43% vs. just 7%). Yet even where improvement is a need, inertia prevails: Companies in which participants are somewhat satisfied or not satisfied are evenly split as to whether they will be making changes.

The IT function doesn't fund improvements in finance analytics.

Funding for analytics-related technology improvements in the finance organization is most likely to come from the general business budget and least likely to be part of the IT budget or part of a shared services effort. This is the case regardless of the degree of centralization of the accounting function. However, in this case size matters – very large companies are less likely to use the general business budget (30% vs. 47% for all sizes) and more likely to get funding from the business IT budget (32% vs. 19%), while small business are more likely to get it from the general business budget. We attribute these differences to the greater specialization of budget categories in larger companies.

Searching and drilling down are the most important analytic capabilities.

The ability to search for specific answers to standard business questions (as opposed to exploratory data mining) and drilling down and around to find the reasons behind the numbers are the two most important capabilities cited, followed by the ability to collaborate in reviewing analytics and to publish results. In assessing software, they said usability, the ability of analytics to meet business needs, is the most important capability, followed closely by functionality, reliability, manageability and adaptability. The least important factors (albeit still considered important or very important by three-fourths of the participants) are vendor viability and return on investment.

In deciding on analytics investments, saving money is at the top of the list, followed by speeding up decision-making and reducing errors. Companies that want to implement changes thus must develop a broad-based set of reasons addressing perceived efficiency and effectiveness criteria and demonstrate their positive impacts if they want to get approval.

Larger organizations use analytics most often.

When it comes to analytics, size does matter. Larger organizations rely more heavily on formal analytic processes and need more formal communication of the results of these analyses. This is because of their greater operational complexity and their needs to have formal financial and operational control systems and to synchronize plans and actions among departments, business units and locations. Larger companies also have more resources to devote to the task. Specifically, we found these indicators:

- Time spent on analytics correlates to an organization's size. Larger companies spend about one-third more time working with analytics than small businesses.
- Larger companies conduct much more frequent formal reviews; on average, the largest meet twice as frequently as the smallest.
- The ability to drill down into underlying data is especially important to very large organizations, probably because of their greater complexity, as is the ability to publish analytics and metrics.
- Larger companies more often cited as important the need to achieve budget accuracy and control as well as to use analytics for financial planning, product profitability, predictive analytics, relevant economic or market data and fraud detection.
- Large businesses are more likely to want to simplify the process of providing analytics.
- Larger companies are much more likely to be satisfied with their current technology for handling analytics, probably because their investment in these capabilities is greater.

Industry-specific analytics are important to Finance.

The research uncovered different characteristics in the use and deployment of finance analytics as well as attitudes and preferences that vary depending on the industry. Here are some of the most revealing.

- Financial services companies spend somewhat more time than average working with analytics. They are more likely to use analytics for balance sheet analysis, customer profitability and fraud detection but far less likely to use them for product profitability. They are more likely to be satisfied with the performance of their analytics systems, probably because on average they invest more in IT than other industries.
- Manufacturing companies focus most on measures of company and product profitability.
- Government entities spend less time than others working with analytics and are less likely to want to drill down into underlying data. They also are less likely to believe the data they use is accurate. Understandably they are much less focused on issues such as competitive advantage or return on investment and not nearly as concerned with the time it takes to prepare management reports, develop product operating metrics or close their books.
- Services companies are notable for how average they are in this regard; the research uncovered no major significant differences compared to the average of all organizations.

What To Do Next

This research found mixed feelings and intentions regarding the use of analytics in finance. Almost 90 percent of participants said they can improve their use of them. About half the participants said they are satisfied with the processes used to create analytics, but the other half said they are not. Those who are dissatisfied cited multiple reasons: It takes too long to produce the analytics they need, they are hard to build and maintain, once in place they are not flexible enough to accommodate change and, finally, the results of the analysis often aren't readily actionable.

Yet we also found that although a majority of participants recognize the need to make changes to their financial analytics, only one-third are planning to make them in the next 12 to 18 months. Another 35 percent also acknowledge the need to make changes but don't view them as a sufficiently high priority to lead them to take action. Based on this research, we conclude that for analytics to deliver full value, companies must provide more timely, relevant and actionable analytics and metrics and address the root causes of shortcomings they find. But the organization must have a will to undertake a project to make these improvements. For those that have it, and for those still uncertain about the need as well, we offer the following recommendations.

Assess the maturity of your organization's deployment and use of finance analytics.

This benchmark research found that organizations are advancing in their ability to apply analytics to finance, but most have substantial room for improvement. They tend to rely on traditional budget-related metrics and conventional, "rearview mirror" types of analytics; not many use innovative tools such as predictive analytics to make assessments more forward-looking or customer profitability to optimize margins, and not many use proactive tools such as fraud detection. However, it is a sign of maturity that more than half of participants said it is very important to their business goals to simplify making analytics and metrics available. Applying the Ventana Research Maturity Index methodology, we found that these organizations are most mature in the Technology category and least mature in the Information and Process aspects. We advise you to evaluate your own capabilities in these four areas and in particular determine whether you need to heighten awareness of the benefits of advanced finance analytics, supply more timely, complete information and adapt processes to use it.

There is strong support for improvement in how analytics are used.

There is room for improvement – in some cases, considerable improvement – in the way companies use analytics. Almost nine out of 10 finance participants in this research said they can improve their use significantly or somewhat. Moreover, those in more senior roles are most likely to say that use can be improved significantly. These results suggest that efforts to improve analytic processes are likely to be perceived as valuable. Even participants who said they have few issues with data quality or their ability to access data for analytics asserted there is room for improvement. This finding points to flaws in one or more aspects of the analytics: the design and/or scope of the analysis performed, the metrics and key performance indicators (KPIs) management chooses, and the way these metrics and KPIs are applied. We advise those advocating an analytics project to show how it will support

improvements. Examine each of these aspects to determine where problems lie, and craft a project proposal that addresses fixing them.

Consider using advanced as well as traditional analytics in the finance function.

Many finance managers use a range of finance-related metrics focused on profitability, revenue growth, accounting accuracy and budget variances. The most important analyses they perform involve income statements, financial planning, cash-flow planning and product profitability. Although the focus on traditional areas is understandable, this benchmark research reveals that finance organizations pay too little attention to more advanced types such as predictive analytics and leading indicators as well as relevant market data and trends and customer profitability. Each of these is critical to enhancing the finance function's ability to look forward; in the aggregate they enable it to sharpen plans and budgets and to be able to spot important deviations that signal the need to make changes to plans or their execution. Thus we advise finance departments that don't yet use forward-looking analytics to evaluate the ways in which they can help them anticipate trends, plan better and prepare to respond quickly when changes occur in the financial landscape.

Appeal to concerns about expenses and budgets, but look forward as well.

Perhaps reflecting today's business emphasis on cost control, the research participants' use of analytics and metrics focuses first on controlling operational expenses, managing budgets and keeping tabs on cash flow. Similarly, they identified operational expense and adherence to budget as the most important metrics they use, while ranking customer profitability as well as sales and revenue-related analytics among the least important. We think this in part reflects the traditional role of the department in controlling spending and in part is a cyclical phenomenon. It's important that as the cycle advances and the focus changes, analytics capabilities are available to support the change in emphasis. Finding ways to improve analytics for budgetary issues is a good way to generate support for a project. Following that, open discussion on analytics for improving profitability and other business results.

Focus on making finance analytics more accessible.

Making analytics more accessible is a priority for finance departments: Almost nine in 10 research participants regard making it simpler to provide analytics and metrics to those who need them as important or very important. The implications of this finding are clear: Companies must focus on making it easier for employees to access useful and relevant analytics and metrics. Those who have job titles in management most often said this is very important (63% vs. 56% overall). A prominent part of any initiative should be to make analytics easier for users to access; this also may include providing them to people in roles who currently lack access (see below).

Make more analytics available to executives and managers.

Analytics are not always at hand for everyone who needs them. Fewer than half of senior finance executives and just one-third of other senior executives have them always available whenever they need them. Only about one-fourth of vice presidents, directors and managers have them always available. While it is true that

a large majority of executives have most of what they need, this is insufficient for optimally effective performance. To profit fully from analytics, you need programs and processes to continuously evaluate the adequacy of the analytics and metrics available to executives and managers and to quickly and efficiently address gaps uncovered by this process. This effort may include making analytics easier to work with for users who are not very skilled technically.

Work to provide fresh data and timely assessments.

Timeliness of the data used in analytics and metrics is important, yet more than half of organizations have stale or outdated data in the metrics and performance indicators they use. These same companies review their data less frequently than do companies that have data available in real time or nearly real time. The research uncovered an even split when it comes to the timeliness of the important metrics and key performance indicators that people receive: Nearly half get this information within one business week (which we view as acceptable performance). The rest take more than a week, which we assert is too long and is detrimental to an organization's performance because it delays people's ability to take advantage of opportunities, address issues or correct mistakes. In addition, those receiving outdated information may question its accuracy or relevance. If your organization does not have timely data, address the root causes that delay availability. For example, if you take more than one week to close the books monthly, investigate processes and tools that can accelerate the accounting cycle.

Find out whether data quality and availability are prominent issues.

There is good news about data availability and quality. (Note that this is a different issue than availability of analytics.) Those in finance roles do not find it hard to get to the data they need to assemble the desired set of metrics and performance indicators. They also are generally happy with the quality of the information generated by their analytics, with more than two-thirds saying they are either confident or very confident in the answers. Those in executive or senior management roles are much more likely to describe their data as accurate than are those in lower echelons.

We draw from this finding two separate, important implications, both of them consistent with other research we have done on this topic over the past five years. Regardless of who is correct in their assessment, senior management is less likely to see the need to correct data accuracy and therefore less likely to invest in projects designed to enhance accuracy. It's equally important to recognize that when using spreadsheets data quality is often gained at the expense of a significant investment of time to check for mistakes and correct them – time that could be spent better on more productive tasks. Assess the extent of spreadsheet use for analytics among employees below the executive ranks. If it is extensive (and therefore time-consuming), use that impact on productivity to make a case for adopting more suitable tools, both to the actual users and to those who approve purchases.

Expose the issues spreadsheets create and present alternatives to them.

Along with business intelligence technologies (for querying, reporting and performing analysis) and analytic warehouses and databases, spreadsheets are the instruments finance organizations most commonly use to generate analytics. Typically, the

warehouses and databases provide the basic data that people copy into a spreadsheet for further analysis and the creation of final reports. Finance professionals cited accounting systems, spreadsheets and budgeting and planning systems as their main data sources. Often, spreadsheets provide digested information drawn originally from various areas of the business, with the sources being a mix of enterprise systems and other spreadsheets.

This finding leads us to repeat one of our most persistent admonitions: While spreadsheets are appropriate for ad-hoc analysis and for information used by a limited number of people, organizations must limit their use of them as data stores and for repetitive analyses, particularly in cases where the results are reported to and used by more than a few people. Using relational or multidimensional databases as data stores and enterprise systems to perform analyses and provide reports ultimately saves time, reduces errors and therefore costs less and performs better in the long run than does relying on spreadsheets. As we advised above, make a business case for replacing spreadsheets based on core business benefits like these.

Assess your organization's willingness to make changes to its analytic capabilities.

Although only one-fifth of participants are satisfied with their current analytics efforts, two-thirds of organizations do not have plans to make changes in the next 12 to 18 months. The most significant barriers to making changes in analytics cited by participants are a lack of resources, no budget for the change, a business case that is not strong enough and too low priority. In our experience these barriers are interrelated; failure to provide a compelling business case results in a project having a low priority and therefore not being allocated the resources or budget to implement the proposed changes.

There is a common-sense correlation between the degree of satisfaction with existing technology and the desire for change. Participants who are satisfied or very satisfied with their current analytics technology were far more likely to say that they are not contemplating making changes in the way they generate and apply analytics in the next 12 to 18 months compared to those that are less satisfied (43% vs. just 7%). Yet even where improvement is a need, inertia prevails: Companies in which participants are somewhat satisfied or not satisfied are evenly split as to whether they will be making changes. Your first step should be to survey users regarding their satisfaction with current analytics. Based on the results you can decide whether a proposal stands a reasonable chance of being approved at this point. Participants who said they are planning to change want most to improve their business and decision-making processes and their cost efficiency. Include these aspects of analytics in your satisfaction survey.

Determine who is responsible for funding improvements in finance analytics.

The research found that funding for analytics-related technology improvements in the finance organization is most likely to come from the general business budget and least likely to be part of the IT budget or part of a shared services effort. This is the case regardless of the degree of centralization of the accounting function. However, in this case size matters – very large companies are less likely to use the general business budget (30% vs. 47% of all sizes) and more likely to get funding from the business IT budget (32% vs. 19%), while small business are more likely to get it from the general business budget. We attribute these differences to the greater specialization of budget

categories in larger companies. Knowing who has to pay for an initiative will inescapably affect the grounds on which to justify it. In most companies business and productivity benefits will trump purely technical improvements. Be prepared therefore to base your case on reasons that will appeal to those whose budget it will impact.

Compile a list of the most important analytic capabilities.

The ability to search for specific answers to standard business questions (as opposed to exploratory data mining) and drilling down and around to find the reasons behind the numbers are the two most important capabilities cited by participants, followed by the ability to collaborate in reviewing analytics and to publish results. In assessing software, they said the ability of an analytic application to meet business needs is the most important capability, but it is followed closely by functionality, reliability, manageability and adaptability. The least important factors (albeit still considered important or very important by three-fourths of the participants) are vendor viability and return on investment.

In deciding on analytics investments, saving money is at the top of the list, followed by speeding up decision-making and reducing errors. To gain approval to implement changes, develop a broad-based set of reasons addressing the efficiency and effectiveness criteria most often cited by your potential users and demonstrate how adoption can have positive impacts on them.

Learn what matters most in your industry.

The research uncovered different characteristics in the use and deployment of finance analytics as well as attitudes and preferences that vary depending on the industry. Here are some of the most revealing.

- Financial services companies spend somewhat more time than average working with analytics. They are more likely to use analytics for balance-sheet analysis, customer profitability and fraud detection but far less likely to use them for product profitability. They are more likely to be satisfied with the performance of their analytics systems, probably because on average they invest more on IT than other industries.
- Manufacturing companies focus most on measures of company and product profitability.
- Government entities spend less time than others working with analytics and are less likely to want to drill down into underlying data. They also are less likely to believe the data they use is accurate. Understandably they are much less focused on issues such as competitive advantage or return on investment and not nearly as concerned with the time it takes to prepare management reports, develop product operating metrics or close their books.
- Services companies are notable for how average they are in this regard; the research uncovered no major significant differences compared to the average of all organizations.

As well as surveying your own constituents, look for evidence of what competitors and those in parallel industries value most. Reputable vendors and journalistic sources can provide indications. Then compare those with your internal perceptions.

Look for solutions appropriate for the size of your organization.

When it comes to analytics, size does matter. Larger organizations rely more heavily on formal analytic processes and need more formal communication of the results of these analyses. This is because of their greater operational complexity, and their needs to have formal financial and operational control systems and to synchronize plans and actions between departments, business units and locations. Larger companies also have more resources to devote to the task. Specifically, we found these indicators:

- Time spent on analytics correlates to an organization's size. Larger companies spend about one-third more time working with analytics than small businesses.
- Larger companies conduct much more frequent formal reviews; on average, the largest meet twice as frequently as the smallest.
- The ability to drill down into underlying data is especially important to very large organizations, probably because of their greater complexity, as is the ability to publish analytics and metrics.
- Participants from larger companies more often cited as important the need to achieve budget accuracy and control as well as to use analytics for financial planning, product profitability, predictive analytics, relevant economic or market data and fraud detection.
- Large businesses are more likely to want to simplify the process of providing analytics.
- Larger companies are much more likely to be satisfied with their current technology for handling analytics, probably because their investment in these capabilities is greater.
- Smaller businesses are more likely to use spreadsheets and less likely to have a formal data store in which to amalgamate enterprise data.
- Smaller businesses are less likely to be going to make changes to their analytics and metrics, possibly because of more stringent budget and resource constraints.

Availability of resources, complexity of technology infrastructure and the extent of formal controls vary with the size of the organization. Understand how these and other size-related issues affect you. Look for products and processes appropriate to your needs.

How Ventana Research Can Help

Ventana Research helps organizations develop, execute and sustain business and technology programs that align people, processes, information and technologies essential for success. As an objective and trusted advisor, we are your insurance that your business and IT initiatives deliver both immediate and long-term improvements to your business.

We offer a variety of customizable services to meet your specific needs including workshops, assessments and advisory services. Our education service, led by analysts with more than 20 years of experience, provides a great starting point to learn about important business and technology topics from compliance to business intelligence to building a strategy and driving adoption of best practices. We also offer tailored assessment services to help you connect the business and technology phases of your project by leveraging our research foundation and methodologies. And we can provide Ventana On-Demand access to our analysts on an as-needed basis to help you keep up with market trends, technologies and best practices.

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