

Leveraging Financial Analytics

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The packaged financial analytic application market is growing rapidly and presents confusion, challenges and opportunities for the enterprise. IT professionals must work closely with the finance group to understand the types of analytic applications and how they must fit into a holistic business intelligence (BI) and performance management (PM) framework.

Key Findings

- The most popular tool for financial analytics in organizations is Microsoft Excel. Many firms have used Excel to plug the gaps between actual and desired capabilities.
- Financial analytics target the office of finance with traditional corporate performance management (CPM) functionality, analytics focused on transactional applications, controls monitoring analytic applications and embedded analytics in core financial management transactional applications.
- Without careful coordination, a company can achieve a patchwork of financial analytic applications, which leads to data quality issues. There are many alternatives available, and single vendor stacks may be desirable, but organizations must ensure that targeted solutions are integrated and provide consistent results across the platform.

Recommendations

- The Gartner BI and PM framework provides a model platform on how financial analytics should be viewed, and how platforms for the office of finance should fit into the context of an enterprise platform.
- There are potentially many financial analytic applications that may be operational in your organization. IT and finance professionals must work together to ensure that each chosen application fits logically into an office of finance analytic plan, and that the chosen set of applications supports a "single version of the truth."

WHAT YOU NEED TO KNOW

Analytic applications, whether packaged or custom-developed, analyze and process data to deliver the information users need to make better business decisions. Financial analytics focus attention on the office of finance and provide insight into the financial performance of the organization. These applications digest volumes of finance and accounting data, typically based on historical enterprise financial transactions, to discover and understand patterns with an eye to predicting and improving business performance. Financial analytics are typically coupled with statistical analysis, forecasting and modeling, but tend to be based on modeling that includes extensive computation. Not all financial analysis requires complex models, and some financial analytic applications can provide significant value by merely improving the manner in which data is presented and made available. Developing an office of finance analytic plan that is based on an effective BI and PM foundation is a key requirement to ensuring consistency.

ANALYSIS

Although global competitive and economic pressures are now greater than they have been in prior decades, the office of finance's analytic capabilities are deeply rooted in manual processes aided by the use of Excel. Often referred to as "Excel hell," this web of spreadsheets has often been the direct result of a disconnect between the IT organization and the finance organization regarding the need to improve the critical information requirements to run, grow and transform the business. Most enterprises are still organizationally, functionally and technically disaggregated, which can impede business success and make it harder to comply with governmental regulations and enterprise governance requirements. As evidence, the finance department often obtains reporting without the involvement of the IT group, frequently creating a difficult position for the IT department as it tries to exercise control over the application portfolio. This tide must change, and the IT and finance areas, as well as other groups affected by regulations, must work to improve cooperation.

The absence of such coordination has caused the rise of the "Excel black belt," who is probably one of the most-valued employees in finance. This person uses Excel as a catch-all tool to collect data from multiple sources, clean/prepare/integrate it, enrich and analyze the data, and create timely analysis and visualizations. Some of this data is shared with hundreds of users and, in a way, creates an "underground BI." These folks are millions strong, spanning most global enterprises.

Organizations have many analytic alternatives to replace some of this over-reliance on offline and uncontrolled processes. If standard, repeatable analysis is required, then it may be time for a more formal approach to financial analytics for those areas. Excel should be pushed out for all but the most ad hoc of analysis; however, prohibition of Excel is not the answer, and, in many cases, it will function as the interface into the analytic application. Companies should follow a strategy to leave Excel as the client interface, which is quite comfortable and familiar to most financial analytic professionals, but the problem is that there is no server in a spreadsheet architecture; hence, an analytic application should be considered, to provide security, auditing, centrally defined metadata, business rules and calculations. The financial analytic application provides all that in a top-down, server-centric model.

Repeatable analysis should be done through analytic applications, and any modeling/forecasting should be done through CPM. Some organizations have built analytical models using tools, such as Panorama, or online analytical processing (OLAP) engines, such as Oracle-Hyperion Essbase, IBM Cognos TM1 or Microsoft Analysis Services. The primary advantages of such approaches are that applications can be custom-developed to focus on exactly what the user

wants, hopefully by using standard targeted platforms and technologies that are consistent across the enterprise. A disadvantage to this approach is that you may be able to buy something less expensive off the shelf, rather than build a new application.

Another approach is to pursue targeted analytic applications that have built-in functionality that is matched or configurable to more-standard financial management best practices. These include predefined data extraction, transformation and loading (ETL) capabilities to get financial data from specific sources, such as ERP systems; predefined data models that are in a codified set of entities and have set relationships between them (such as a financial model that has an integrated income statement, balance sheet and cash flow statement); and predefined business content, such as standard industry reporting for transactional applications, including cash flow and banking analyses (see "Understanding Packaged Analytic Applications"). To be considered an analytic application, it must have at least two of the previously noted three attributes.

Business Requirements That Can Be Supported By Financial Analytics

Analytic applications can support many requirements, including:

- **Aggregate financial information:** Organizations need an effective process to consolidate financial results from multiple solutions, including ERP. These processes often must include ETL and financial master data management processes that translate into standard charts of accounts and product codes, because many companies are the results of mergers and acquisitions. This aggregation must enable the appropriate detail level to ensure financial audit and external reporting.
- **Create flash reporting prior to month's end:** This capability provides a review of results prior to month-end consolidation. Flash reporting (the processing of accounting interfaces at routine intervals during the accounting month and for reporting) is valuable because it enables CFOs to identify potential errors before the critical month-end closing of the books, when there may be limited time for analysis and correction.
- **Identify out-of-tolerance conditions and alerts:** This highlights key areas for analysis to help understand performance to predefined targets and tolerances associated with a financial or operational metric, taking into account forecasting, trending and modeling capabilities. If a metric falls out of range of a trend, budget or plan, then the appropriate alert is raised, along with the workflow process to get the investigation started. This includes analyzing transactions that exceed certain criteria and proactively managing budgets by looking for out-of-tolerance variances.
- **Model business events:** Through budgeting, planning and forecasting (BP&F) and strategic financial modeling capability, business plans based on the likelihood of potential business scenarios can be provided. This includes the capability to provide business plans that reflect multiple sets of assumptions, such as revenue/sales forecasts.

Navigating Financial Analytic Application Offerings

The market has responded with an array of tools focused on many facets of financial analytical requirements. Most of these can provide significant value to the enterprise; however, a plan must be in place so as to not create multiple, unmanageable stovepipes of information that are not built on a solid foundation. Gartner has identified three major categories of analytic application models: strategy-driven, analyst-driven and process-driven. (See Note 1 for a discussion on how financial analytic applications map to these categories.)

CPM Suites

The leading area of investment has been in CPM, a market we estimate at more than \$1.5 billion per year, as of 2006. CPM includes the processes used to manage corporate performance, such as strategy formulation; budgeting and forecasting; the methodologies that drive some of the processes, including the balanced scorecard or value-based management; and the metrics used to measure performance against strategic and operational performance goals. The technologies used to execute CPM are in the CPM suite (see "Magic Quadrant for CPM Suites, 2007"). The CPM suite comprises a series of analytic applications that provide the functionality to support these processes, methodologies and metrics, targeted at the CFO and finance team, senior executives, and corporate-level decision makers (see "Understanding CPM Applications"), including BP&F, profitability modeling and optimization, dashboard and scorecard applications, financial consolidation, and financial, statutory and management reporting.

Also included in the CPM market is strategic planning. This includes creating strategic plans on a "base case plus," or initiative-based, approach, along with scenario modeling to compare the financial outcomes of various strategies. Strategic planning also includes long-term financial planning, which creates a high-level perspective of revenue, expenses, balance sheet items and cash flows to show the financial impact of different strategic alternatives. These solutions typically include prepackaged modeling and forecasting capabilities covering higher-level financial modeling, including support for mergers and acquisitions, divestitures, debt restructuring, alternative strategy evaluation, building contingency plans, and understanding the impact of those strategies and plans on the company's longer-term performance. Strategic-planning solutions differ from the typical CPM BP&F applications by supporting longer-term time frames with more-summary-level detail. These products can support complex simulations and may be highly statistical in nature. They attempt to connect strategic and operational planning to determine the most profitable way to make decisions, including simultaneously linking business processes, constraints and financial hierarchies. Sample vendors include Oracle and IBM Cognos (through its strategic finance blueprint).

Transaction-Oriented Financial Analytic Applications

These packages are mainly used to understand financial activity, and the summary, mid- and lower levels of transaction details. These solutions are used to understand in-period and period-to-period analysis of financial information, including a drill-down into transactional data to understand varying results. Transaction-oriented financial analytic applications are different from CPM applications. CPM largely operates on aggregated period balances by account, while these analytics look at transaction data by functional area (for example, monitoring receivables in accounts receivable to discern day's sales outstanding, payment trends, and outstanding balances by currency). The big difference is that the source data is the transaction data. Many companies are embarking on projects leveraging these applications to ensure accuracy in their financial activities, to understand potential costly anomalies, to determine trends and to ensure compliance. Packaged financial analytic applications are available from several vendors, including SAP, SAS, IBM Cognos, Oracle, The GL Company, Teradata and Emagia.

The focus of these applications is to provide a quick path to value by using ETL tools with preconfigured data extractors, data marts/data warehousing for all required data, prepackaged discipline-specific analytics (such as general ledger, accounts payable and accounts receivable), and industry-specific analytics for core financial management applications. The attraction of these packages is that, initially, they appear easy to use; however, in practice, implementations have not been so straightforward, particularly if there are multiple ERP systems involved. Also, industry-specific content may not be usable if a company has not adopted industry best practices (see "Customer Experiences With Packaged Analytic Applications").

Controls-Monitoring Analytic Applications

This set of financial analytical applications focuses less on results and more on data quality and consistency, with the goal of finding and repairing anomalies prior to them becoming a permanent fixture in the results. These include controls monitoring applications, which are concerned with how data is passed from one application to the next and which may be considered part of an organization's financial governance approach. Vendors in this area include Approva, ACL Services, Infogix and Oversight Systems.

Embedded Analytics

Increasingly, analytics are being bundled in financial business applications (for example, collections management, credit decisioning and travel expense management solutions) to monitor the activities that are in focus in the specific application. These capabilities are sometimes like business activity monitoring, in that they provide critical information about a financial business process at specific intervals, or when business conditions create an escalation or a need to know. These embedded analytics are typically time-sensitive and less periodic in nature.

The Pitfalls

We have seen the following conditions contribute to a failed financial analytic strategy:

- Stovepipe strategy to financial analytics, where applications are acquired with little thought to how they link holistically across BI, PM and other analytics in place in the organization (see Note 2)
- No communication regarding the official system of record; the timing of extracts for analytical applications is critical to ensure that they are consistent with the official system of record
- Finance group does not coordinate with the IT organization on software selection
- Oversimplification of requirements when selecting a solution, particularly with respect to the assumption that industry-specific functionality can be used in a given solution
- No consistent approach to managing master data, leading to inconsistent aggregations of financial data in different analytic applications

Note 1

Mapping Financial Analytic Applications to Gartner's Analytic Application Model

In "Understanding Packaged Analytic Applications," Gartner has categorized three types of packaged analytic categories. Following, we will map some of the key financial analytic applications to these categories:

Strategy-driven analytic applications — These are used mainly to measure and manage performance against plans and objectives. They provide capabilities for defining, integrating, and managing plans and alignment across multiple functional/process areas. Examples of these applications include strategy management; dashboards and scorecards that are linked to strategy management; strategic finance applications that provide an integrated financial model; and BP&F solutions (focused on enterprise and unit levels).

Analyst-driven analytic applications — These provide in-depth analysis and delivery of information (using combinations of capabilities, including ad hoc queries, OLAP cubes, data mining, statistics and dashboards/reporting, and portals) across multiple information sources

and/or processes to multiple user types on an ad hoc and/or schedule-driven basis. Examples of these applications include profitability management and optimization applications; BP&F solutions (focused on financial analysis, such as forecasting); transactional financial analytic applications; and predictive analytics.

Process-driven analytic applications — These applications are primarily process- and/or event-driven, provide insights to operational managers and users at the point of work, and are typically embedded into transactional applications. Examples of this functionality include analytics embedded into operational finance applications, such as general ledger, collections management, and analytical solutions managing cash inflows and outflows.

Note 2

Linking Financial Analytics to Gartner's BI and PM Framework

With the increasing focus on consistency, financial analytics must not be evaluated in isolation from BI platforms and other PM applications. IT strategists should use Gartner's BI and PM framework (see "Gartner's Business Intelligence and Performance Management Framework") to define how financial analytic applications should form part of the analytic application layer. Financial analytics should be considered components of the BI and PM vision and plan. To ensure consistency across all financial analytic applications, these applications need to draw data consistently from source systems and data marts/data warehouses.

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