Excerpt from *Optimizing Corporate Portfolio Management: Aligning Investment Proposals with Organizational Strategy*

Chapter 1

Overview of Corporate Portfolio Management

Mismanaging Your Corporate Investment Portfolio: The Seven (And A Half) Deadly Sins

The implications of mismanaging a corporate portfolio can be serious. These problems become more acute when you have a competitor or potential new entrant into your arena that is not making the same portfolio management mistakes. The following sections detail the seven (and a half) deadly sins of CPM. Some of these malignant practices have been alluded to earlier, but given their ability to torpedo an organization's corporate portfolio efforts, they are worthy of repetition. After reviewing these sins, do not worry if you find yourself committing one or more of them. Self-awareness is the first step. Once you take action, your organization will be on its way.

Sin 1: Narrowly Defining the Portfolio

A lot of companies focus much of their effort on optimizing their capital expenditures. And because these are often large, multi-year investments with major implications for future company growth, it makes sense that scrutiny is applied to these investments. However, a corporation's focus on CapEx often takes needed attention away from OpEx, which is often assumed to be steady-state or BAU when, in fact, much of it is truly discretionary in nature (e.g., marketing, IT, operations, sales force, etc.). By narrowly defining their view of which investments are worth optimizing, many companies are missing out on a huge opportunity to improve performance and accountability.

Another area in which companies have moved toward a portfolio-

management approach is information technology (IT). This appears to be driven mainly by the emergence of the project portfolio management (PPM) vendors, who seem to exclusively target IT, but again, this is a limited way of defining the portfolio, given that IT is only one of the large components of expense at many companies.

If the initial rationalizing of what is a portfolio, is due to a conscious decision to walk before one runs, then this is a prudent and pragmatic approach that makes sense. Show the applicability of CPM within one important arena and then use those results and support to introduce CPM in other parts of the organization. But if your view is that CPM applies only to CapEx or IT or just one particular area, you will not be able to realize the transformational benefits that CPM can afford your organization because of this narrow view.

Sin 2: Investment Decisions Are Like New Year's Resolutions

In their book, *Beyond Budgeting: How Managers Can Break Free from the Annual Performance Trap* (Harvard Business School Press, 2003), Jeremy Hope and Robin Fraser talk about the "annual performance trap" as it relates to budgeting and planning. Unfortunately, the same phenomenon seems to have entrapped many organizations, which view their investment decisions like New Year's resolutions—something you talk about at the beginning of the year but generally forget over time.

This is grossly counter to the way a company's portfolio should be treated. Given the previously mentioned dynamism of the world from both macro and competitive perspectives, this portfolio inertia is very dangerous. How do you respond to competitive threats? How do you know a product is launching when it should or delivering the short-term results that were expected? Where do you invest additional available money due to better than expected performance or some one-time extraordinary event? Viewing your investments and portfolio as a once–a-year event means you are not ready to react to such situations and hence the flexibility, adaptability, and accountability of your organization is minimized.

CPM requires that you are always updating your portfolio of investments with accurate and current information so that you can rebalance your portfolio dynamically over time as needed. It also forces you to determine which investments are flexible so that if negative events occur that require reducing investment spending, these investments can be turned off or scaled back. Negative events can be company specific (e.g., a need to reallocate funding to another market to take advantage of a new opportunity or to fend

off a competitor, a need to reduce funding for a marketing campaign in order to redeploy those funds to a compliance/mandatory project). Negative events can also be macro-oriented (e.g., country-specific risks such as political, currency, etc.) which require a rethinking of investments in a particular market. Currency devaluation in several Latin American countries, SARS, the September 2006 coup in Thailand, terrorist actions in London and/or Madrid are all potentially negative events that may change your investment portfolio even on a temporary basis.

Sin 3: Decibel-Driven versus Data-Driven Decision Making

There is an old business adage that says "If it's not being measured, it's not being managed," and with reference to optimizing CPM, there is definitely not a more appropriate comment. CPM is about data-driven, objectives-based decisions. It is about removing the decibels from decision making (i.e., the non-objective, personality-driven reasons projects happen). This does not mean that every investment will have a rigorous cost/benefit analysis underlying it as it is difficult if not impossible to always quantify the impact of an investment, but the majority of investments should have measurable and defined metrics or milestones associated with them. But many times this type of metric- or milestone-based accountability is hindered by several types of characters (people or groups) who drive decibel-driven decisions. Some of the main proponents/characters of decibel-driven decisions are:

- The closer. This is the charismatic salesperson within an organization who through a combination of charisma, relationship management, and pretty PowerPoint presentations receives funding for projects without a solid underlying business case, metrics, milestones, and so on. This is likely a person who has significant credibility within the organization based on past performance and, therefore, can leverage those results to generate ongoing belief in his or her business acumen. Irrespective of your past successes, a good CPM process will require rigor in all investments being evaluated.

The screamer. This is the person (or group) who most forcefully declares the need for funding—the person who literally drives decibel-driven decisions.

The end-arounder. This is the person (or group) who will get a request for funding denied by the people facilitating CPM but will then approach the CFO, CEO, or CIO directly and use those relationships with senior decision makers to make a case and receive funding.

The strategist. Strategy is important and, as discussed, it is inherently tied to portfolio management, but many times, strategy is the rationale for an investment that you cannot convey the benefit of. *Q*: "Why do we need to make this investment where there are no return data?" *A*: "For strategic reasons." Undoubtedly, there will be instances where an investment cannot be quantified, and so one's business instinct and strategic considerations need to be relied upon, but be careful of having too many investments fall into the "it's strategic" category. This is a catch-all for people who have difficulty conveying the benefit of their investments.

The doomsdayer. Doomsdayers do not have rigorous milestones or metrics associated with their investment but instead rely on fear as a justification for their investments. One example within many organizations is in IT investments around security (i.e., "If we don't do this $10 million investment, our customer data may become available or vulnerable"). It is also a favorite when looking at competitive threats (e.g., "Although the economics of this product make it a loss-leader, not launching such a product will cause us to lose market share to our competitor."). These fear-based rationales can have some validity, but the thesis supporting an investment should not be solely fear based.

The optimist. This is the person who has not grasped the idea of sunk costs and is consistently guilty of taking ill-advised projects entirely too far. Some projects are "doomed to completion" as the CFO Executive Board has explained, and the optimist is guilty of running these projects. The optimist will contend, "We've already invested so much in this project over the last two years, and although late, we are only one year away from realizing the benefits." Past investment of money, effort, and resources are not a reason to complete a project, no matter how positive the project sponsor is of the project's benefits. Organizations must take a long hard look
at such projects and determine if the benefits and risks are still reasonable and worth bearing as well as deciding on the merits of these updated expectations. Using resources for such projects saddles the organization's portfolio with losers that take resources away from better initiatives. Opportunity cost and opportunities lost are important to consider when funding the initiatives of an optimist.

Even with this colorful cast of characters promoting decibel-driven decisions, it is important that subjective, intuitive elements of investment selection not be omitted, but just balanced. Generally, organizations heavily rely on instinct and intuition, but an organization looking to improve portfolio performance must embrace a data-driven culture to bring balance to the analytical versus intuitive decision-making process. The motivation for doing this is simple—data-driven decisions work.

To demonstrate that data works, there are numerous examples where data has prevailed over conventional, intuitive, decibel-led decision making. Following are three diverse and somewhat surprising applications of data

that show how decision-making capabilities are improved.

Example One: Improving the ability of a doctor to determine whether a patient is having a heart attack The following example is detailed excellently in Malcolm Gladwell's book, *Blink*,[2] and is summarized as a great example of the power of data. In 1996, Dr. Brendan Reilly became the chairman of Cook County Hospital's Department of Medicine. The hospital was in disarray with inadequate funding and facilities and was overwhelmed by patient inflow as it was the "place of last resort for the hundreds of thousands of Chicagoans without health insurance."[3] In his efforts to improve Cook County, Dr. Reilly changed the method its doctors used to diagnose patients coming to the emergency room complaining of chest pain. On average, 30 people came into Cook County Hospital per day complaining they were having a heart attack. And since these 30 used an inordinate share of resources (e.g., beds, doctor and nurse time, etc.) and stayed around for longer than other patients, it was important to ensure that these patients were treated appropriately but also expeditiously, especially in cases where they were not having a heart attack. But this was not the case. "Chest-pain patients were resource intensive. The treatment protocol was long and elaborate and—worst of all—maddeningly inconclusive."[4]

To prove this, Reilly conducted a bit of an experiment. He "put together twenty perfectly typical case histories of people with chest pain and gave the histories to a group of doctors—cardiologists, internists, emergency room docs, and medical residents—people, in other words, who had lots of experience making estimates about chest pain. The point was to see how much agreement there was about who among the twenty cases was actually having a heart attack. What Reilly found was that there really wasn't any agreement at all. The answers were all over the map. The same patient might be sent home by one doctor and checked into intensive care by another." Although doctors and staff would try to make reasoned, evidence-led decisions, Reilly determined that their decisions appeared to be more like guesses than based on well-constructed logic. "We asked the doctor to estimate on a scale of zero to one hundred the probability that each patient was having an acute myocardial infarction [heart attack] and the odds that each patient would have a major life-threatening complication in the next three days. In each case, the answers we got pretty much ranged from zero to one hundred. It was extraordinary, "Reilly commented.[5]

And since between 2 to 8% of the time in U.S. hospitals a patient gets sent home who is truly having a heart attack, doctors err on the side of caution by collecting all of the information they can. But, as mentioned, the caution exhibited by Cook County Hospital doctors led to the hospital's

resources being utilized on patients who might not actually be having heart attacks and hence could be sent home.

How did Dr. Reilly tackle the inconclusiveness of the doctor findings and develop a more rational approach to making heart attack diagnoses? Reilly turned to the work of a cardiologist, Lee Goldman, and a group of mathematicians who compiled hundreds of heart attack cases and evaluated them from a mathematical perspective. And he took this formerly highly qualitative and subjective analysis and synthesized it into an algorithm that he felt would remove much of the indecision and inconclusiveness of the process. "Doctors," he concluded, "ought to combine the evidence of the ECG with three of what he called urgent risk factors: (1) Is the pain felt by the patient unstable angina? (2) Is there fluid in the patient's lungs? and (3) Is the patient's systolic blood pressure below 100?"

"For each combination of risk factors, Goldman drew up a decision tree that recommended a treatment option." Reilly embraced Goldman's approach and conducted a "bake-off" at Cook County. "For the first few months, the staff would use their own judgment in evaluating chest pain. . . . Then they would use Goldman's algorithm, and the diagnosis and outcome of every patient treated under the two systems would be compared. For two years, data were collected, and in the end, the result wasn't even close. Goldman's rule won hands down in two directions: it was a whopping 70 percent better than the old method at recognizing the patients who weren't actually having a heart attack. At the same time, it was safer .... Left to their own devices, the doctors guessed right on the most serious patients somewhere between 75 and 89 percent of the time. The algorithm guessed right more than 95 percent of the time." Data wins.

Example Two: Picking Oscar-winning films without reading scripts JP Morgan's John Miller has financed many recent Oscar-winning movies including *Million Dollar Baby*, *Gladiator*, and *American Beauty*, to name a few. Largely, because of his movie-picking prowess, JP Morgan is the dominant player in the movie financing business with 80% of the market. Miller's ability has given JP Morgan a competitive advantage that has led to share gain, but it has also led to the bank's being able to charge a premium over others. Miller is able "to charge interest rates of up to three percentage points over the rate that top banks pay to borrow from each other. That's on top of fees of up to 3% of the loan commitment. It makes for a lucrative profit center: Miller says margins for the business can reach 80% of revenues."[6]

So has JP Morgan found a movie aficionado with an uncanny, intuitive

eagle's eye for picking winning movies? Actually, the bank found the exact opposite. As *BusinessWeek* reported on Miller, "He's strictly a numbers guy. Although he often goes to the movies, he doesn't read scripts, doesn't care about plots, and doesn't worry about which stars have signed on—unless they threaten to bust the budget. He relies instead on a sophisticated financing model fueled by data on how more than 300 films performed at the box office. It allows him to tune out the noise and focus on what really counts in a movie's success: its business plan, especially its budget, release date, genre, and distribution schedule."

If Miller can utilize data to make decisions in what is arguably one of the most haphazard and historically gut-instinct businesses in the world, data-driven decisions are validated once again.

Example Three: Managing the evaluation and selection of baseball players for the major leagues In Michael Lewis's book *Moneyball: The Art of Winning an Unfair Game*,[7] Lewis explores how the general manager of the Oakland Athletics utilizes an atypical yet highly effective new approach to running his team in order to produce outstanding results.

The central premise of *Moneyball* is that the collected wisdom of baseball insiders (including players, managers, coaches, scouts, and the front office) over the past century is subjective and often flawed. Statistics such as 40-yard dash times, RBIs, and batting average, typically used to gauge players, are relics of a 19th-century view of the game and the statistics that were available at the time.

Since then, real statistical analysis has shown that on-base percentage and slugging percentage are better indicators of offensive success and that avoiding an out is more important than getting a hit. This flies in the face of conventional baseball wisdom and the beliefs of many of the men who are paid large sums to evaluate talent.

By reevaluating the strategies that produce wins on the field, the Athletics, with approximately $55 million in salary, are competitive with the New York Yankees who spend over $205 million (in 2005–06) annually on their players. Oakland is forced to find players undervalued by the market, and their system for finding value in undervalued players has proven itself thus far.

Baseball traditionalists, in particular some scouts and media members, decry the sabermetric revolution and have disparaged *Moneyball* for going against traditional thinking. Nevertheless, the impact of *Moneyball* upon major league front offices is undeniable. In its wake, teams such as the New York Mets, New York Yankees, San Diego Padres, St. Louis Cardinals, Washington Nationals, Arizona Diamondbacks, and the Toronto Blue Jays have hired full-time statistical analysts."[8]

The *Moneyball* example is among the richest examples of data-driven decisions as it underscores several important themes. Most obviously, the ability of Billy Beane (general manager of the Oakland Athletics) to look past conventional, go-with-our-gut instinctive decisions to player choices based on data-driven analysis is a great lesson in the power of analytical decision making. Just as important, Beane's ability to do this shows how organizations with significantly less in the way of resources (the Athletics in this example) can compete with the big boys within their industry (e.g., the New York Yankees). From an upstart or emerging company perspective, the Athletics demonstrated that resource optimization can and will level the playing field with much larger, more resourced competitors. If every dollar you spend is more efficient (i.e., produces greater returns—in a quantitative and qualitative sense) than your larger rivals, you will close the gap over time. For larger, established companies, this is an opportunity and warning. If you can optimize your resource allocation, you can catch up with or extend your lead on players of all sizes—large and small. If, however, your resource utilization is not efficient, you will be eclipsed by a competitor. The question is when, not if. Unfortunately, your organization will probably not have as easy a management scorecard as a baseball team—wins and losses. As a result, the need for CPM becomes even more acute.

Sin 4: Too Many Metrics, Not Enough Time

So data-driven, analytical decisions are essential for CPM, but can you have too much of a good thing? While the data drivers and metrics associated with an investment can help guide your business, an organization must be careful not to "boil the ocean" when it comes to determining which pieces of data are important and which are not. The main problem with too many metrics is that although most do not have significant impact on investment performance or how to manage the company, they take significant time to create, compile, and analyze. But by having a long list of drivers and metrics, companies often are lulled into a sense of accomplishment. "We have a management dashboard which tracks the 73 most important drivers of our business." This is not good management. It is confusion. So, one of the primary objectives your organization should have is determining which investment drivers and result metrics really impact how you run your business and how your business performs.

Hopefully, these drivers and metrics map well against one another. Performing sensitivity or other statistical analyses of your various drivers can help you distill down what really impacts the CBAs you put together in your organization. By determining the appropriate drivers, you can also

ensure that people within the organization are using acceptable assumptions when building business cases. By refining the output metrics that are going to be looked at, you can help guide investment owners to focus on what is important and increase accountability for actual results that matter. If you have 50 different output metrics you determine to be important, the message to people putting forward investment proposals is ambiguous. An example of where the wrong metrics are being looked at can be seen in the current craze for innovation. The metrics companies look at to determine their progress against innovation include number of patents filed or number of opportunities reviewed and killed or dollars spent on innovative projects. Do these metrics really tell you how innovative your company is? Does the number of patents just incentivize people to patent everything and anything? Does looking at number of opportunities killed give you any insights into the quality of the ideas that have come into the process? Does the amount of dollars invested in innovative projects tell you whether those ideas are good ones, whether the projects are progressing as they should, or, more fundamentally, does it tell you if people within the organization are defining innovation in the same way?

As Gladwell stated in *Blink*, it is important for the sake of expediency and good decision making to use what psychologists refer to as the "power of thin-slicing," which says that as human beings we are capable of making sense of situations based on the thinnest slice of experience. Data is required, but an over-reliance on it will slow you down and ultimately cause bad decisions or, even worse, indecision. Your intuitive ability to thin-slice is necessary and valuable when used appropriately. When used in conjunction with analytics, it makes for a very powerful symbiotic relationship.

Sin 5: One-Size-Fits-All Portfolio Management

Often, companies undertaking the deployment of CPM aim to optimize a metric or use a framework to determine how they should be allocating their resources. In short, if a single framework or metric could help you determine how to make resource allocation decisions, your individual talents would not be needed. Let us take a look at an example of a fictitious metrics-oriented organization, MetricsCo, Inc. MetricsCo initially determined that return on investment (ROI) would be the main metric it would choose to optimize and that it would fund only investments with an ROI of over 100%. In essence, all MetricsCo has to do to pick where to allocate resource is to compile a list of its investments, sort it in Excel by ROI, draw a line at 100%, and action the investments that have an ROI of over 100%. Quite simple, right? Yes

indeed, and wholly inadequate and ineffective. Doing this does not consider risk, strategy, the validity of assumptions driving these investments, or the most basic idea of a portfolio that says that you probably want to have a mix of investment types (i.e., those that are low risk where you are fairly certain of your returns coupled with those that are more innovative or riskier where the results are more uncertain but that you want to do in order to enable organizational growth).

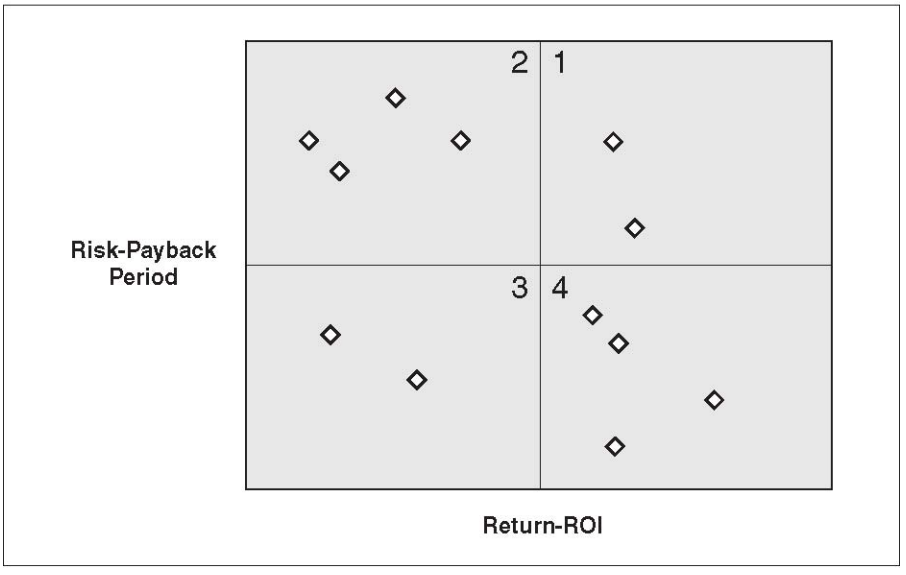
Let us assume MetricsCo realizes the inadequacy of its ROI-oriented portfolio and moves to an investment-scoring methodology according to which it will consider various return characteristics to give each investment a score that can be used to compare across investments. With its new, more "rigorous" evaluation technique, MetricsCo weighs ROI 33%, net present value (NPV) 33%, and five-year revenue growth 33% to develop this investment score. Again, this technique, while a modest improvement over using just ROI, fails to consider risk, strategy, the validity of assumptions driving these metrics, and investment mix.

After realizing the fallacy of this investment scoring method of picking investments, MetricsCo decides to develop a more rigorous resource allocation framework that considers risk and returns. The company determines that payback period is the risk metric and ROI is the return metric to look at in its resource allocation framework and puts together the following 2×2 (see Exhibit 1.5) on which they plot their investments.

This framework would then "tell the organization" to fund those investments that are in quadrant 4 (i.e., high ROI, short payback period). Again, the same issues arise. While this may be a useful diagnostic to determine whether the company should be doing more or less of certain types of investments or to spur questions about certain investments, organizations must prevent the urge to use their CPM process as a "black box" to make investment decisions.

The impression on the behalf of initiative owners that CPM is a means for some central body to make decisions for their area and the organization overall can lead to needless conflict within the organization. Moreover, it is unrealistic to expect a central body to make decisions for the entire company based on a framework. A central body reviewing investments across an organization should be able to raise provocative ideas and questions about portfolio investments and force transparency and accountability, but it cannot be solely charged with optimizing the portfolio.

EXHIBIT 1.5 METRICSCO SAMPLE RESOURCE ALLOCATION FRAMEWORK



Sin 6: If We Install This Software, We Will Be Able to Optimize Our Corporate Portfolio

A whole host of vendors may try to sell you on the proposition that a software solution is required for a CPM discipline. Technology exists that can help with the aggregation, reporting of, and analytics of your organization's portfolio, but there is no technology tool that will optimize your organization's portfolio for you. Many of the currently available tools lack the ability to actually model your investments; instead, they capture data on investments with no ability to determine whether these inputs are realistic or valid with historical performance. Simplistically viewed, this means that initiative owners can type in their investment details and come up with the result that its ROI is 10,000% with some rudimentary checks at best. A driver-based approach would help mitigate some of these issues, but not all.

While many vendors do clearly articulate the benefits of portfolio management, their software's value proposition in realizing these benefits is conceptual at best, although they will point you to results that their tools have delivered. In this case, correlation does not imply causation (i.e., the results delivered are more a function of a committed organization that happened to have a tool versus a tool that has really driven these benefits). Gartner analyst, Matt Light, probably has most eloquently stated the over-

emphasis on a technology tool as a solution with his comment at the Gartner Symposium/ITxpo 2006, “A fool with a tool is still a fool.” Some industry studies have actually found that 80% of the functionality available in off-the-shelf portfolio management tools is utilized by only 20% of customers. So the question is why invest time, significant money, and resources on a large-scale enterprise deployment of a tool when much of it will not even be utilized? Technology, thoughtfully applied, can help you enable the process with greater efficiency, accountability, and transparency, but it is not the solution or even one of the most essential components of the solution. In fact, adopting a technology tool after you have built a CPM capability and worked through some of the cultural and behavioral elements is beneficial in that you actually have some experience with CPM and can now better articulate to a technology provider what issues you need to solve for or what functionality you would like in the tool. As a result, adopting a technology tool at the outset of implementing a CPM discipline is not advisable.

Sin 7: It Is All about the Projections

If your plan to deploy a CPM discipline across your organization does not include a means to capture actual investment returns, its value is significantly minimized. The ability to compare promise (projections) versus performance (actuals) is a basic underpinning of successful CPM in that it enables accountability within the organization and helps future performance by improving and constantly refining drivers and assumptions used in investment projection creation.

That said, this “closing of the loop” is the single hardest part of CPM. Many organizations do not even have tracking systems or the infrastructure and instead rely on ad hoc methods to track in Excel or access databases, if at all. Many organizations may capture actuals, but they are contained within unwieldly legacy systems. Often enough, those actuals are captured at a more aggregated or disaggregated level than at which an investment projection is created, so truly comparing promise versus performance at an investment level becomes difficult. But this is not required. Even capturing actuals at some aggregated level so that many investments can be aggregated and compared for promise versus performance is of immense value.

As you embark on your path to enabling CPM, keep the closing of the loop in mind as an objective as it is the only way to turn data about investments into knowledge over time.

Sin 7.5: Portfolio Management Is a Tunnel—Not a Funnel

If every project submitted gets reviewed and ultimately funded, an organization's CPM process is not an investment decision-making discipline; rather, it is a bureaucratic exercise that adds little to no value. CPM processes require constructive conflict and discussion and ultimately require that some projects get killed. The funnel analogy means that if 100 investment proposals are submitted, only 75 get funding, for example. This ability to stop projects when proposed or sometime during their delivery if they are not achieving expectations is a key element of keeping your CPM discipline relevant and part of the organization's DNA. It is not the number of projects accepted or killed that is important; people must know that managing the corporate portfolio is serious business, and rejecting bad business cases or ideas is a surefire way to let people know that the organization is serious about funding investments on a meritocratic basis.