

Unmasking True Performance Through Corporate RAROC

The present downturn has highlighted some of the serious flaws in traditional accounting based metrics used to assess performance. This is encouraging more and more businesses to seek out improved performance measures. The metric many are turning to is corporate risk-adjusted return on capital (RAROC).



Where traditional metrics fail

The major drawback of traditional performance metrics – such as return on equity (ROE), return on assets (ROA), or return on invested capital (ROIC) – is that they fail to take account of the potential risks inherent in existing business operations, capital expenditures, and reinvestment opportunities. This results in all returns being treated as having the same potential downside, however risky the venture. As the COO of an energy conglomerate said to us, “Measures like ROI and NPV treat long shots and sure things the same way – we need something more.”

The metric companies are turning to is corporate RAROC

Traditional metrics fail to produce an adequate picture of corporate performance because they:

- Do not account for the impact of risk: No account is taken of the potential impact of risk on cash flow, earnings, and value within financial statements, even though this could undermine the leverage and interest coverage ratios typically used as indicators to establish loan covenants
- Lead to inadequate loss provisions: With no clear picture of the potential downside, companies often hold inadequate funds to protect against near-term foreseeable losses and to cover the full economic cost of risks
- Are unduly influenced by one-time adjustments: Current metrics often report extraordinary or unusual items “above the line”, allowing these one-off events to distort the true underlying returns
- Result in inappropriate book capital levels: Rather than being determined by a bottom-up assessment of what is required to secure the organization’s desired credit rating, capital structures are all too often driven largely by outside-in requirements and constraints
- Focus on a single historical outcome: Accounting data are necessarily backward looking, as they report actual financial performance, but these fail to indicate whether the historical outcomes were the result of luck or of business acumen

An increasing number of company executives are aware of many of these shortcomings. The task of upgrading to a performance metric that can reveal the true economics of their business, product lines, and capital projects has been made all the more urgent by the present capital constraints in the financial markets.

RAROC – the best comparative performance metric for risk-return tradeoffs

Just such an approach has been under development over the past two decades. Oliver Wyman is one of a select group of firms that pioneered the concept of risk-adjusted return on capital (RAROC) in the latter 1980s. Corporate RAROC was specifically developed to measure profitability from a true economic, risk-adjusted standpoint, providing transparency on a firm's true value. Today, this metric is at the forefront of how organizations are thinking about their capital allocation.

Though its underlying concept is simple, corporate RAROC is very effective in providing a robust economic and risk-based performance metric. It is able to answer many of the important concerns of executive management, the board of directors and shareholders – addressing such questions as:

- Which of our businesses and product lines are creating, as opposed to destroying, shareholder value?
- How are we integrating the likely risks within our existing decision making processes?
- What are the key volatilities that could impact our financial performance?
- Are we effectively communicating the true value of our business to rating agencies?
- Are employee incentives properly aligned with the creation of economic value?
- Are we charging customers and counterparties appropriately for the risks they pose to our business?

RAROC case study

How a global agribusiness got a handle on risk vs. return

In June of 2007, the US spot price for hard winter wheat was just under \$5 per bushel. Eight months later that price had climbed to over \$12, only to drop back just as quickly to below \$5 once more. This unprecedented volatility (mirrored in most grains) rocked the global agribusiness sector and challenged the traditional understanding of market fundamentals.

One firm's newly appointed management team felt the need to enhance their risk management practices in the wake of these shocks, their recent acquisitions, and changing regulatory pressures. Crucially, they needed the ability to allocate capital and measure performance across trading, shipping, financing, and retail divisions, each of which had differing risk characteristics, balance sheet structures, and funding requirements. In addition, management was faced with a mix of existing risk models and lacked any ability to measure non-financial risks.

RAROC application: After reviewing numerous options, the team chose corporate RAROC as the best means to provide comparable performance data and (using economic profit) to evaluate major portfolio changes. The team's long-term vision also included linking corporate RAROC to incentive compensation. The methodology was first implemented at the group and division level, and then at the more granular trading book level.

Given the data gaps, the business adopted a range of top-down approaches to make initial estimates of the risk capital requirements for credit, operational and business strategy risks. For example, counterparty credit exposures were aggregated, and market-adjusted comparables were used for setting operational risk capital levels.

Impact: The first calculation of corporate RAROC provided the agribusiness with a comparison of division performance over the prior three-year period. While some of the results were not surprising, the analysis highlighted the drivers of poor performance and yielded the basis for an initial restructuring that targeted greater profitability over short- to medium-term. The corporate RAROC results (specifically, the risk capital requirements) also permitted the Treasury team to compare the organization's current versus desired risk taking levels. The insights gained by comparing the adequacy and liquidity of book capital catalyzed the development of a plan for paying out losses and replenishing the balance sheet, should major losses occur.

Corporate RAROC data also encouraged several divisions (most notably, trading) to focus on immediate steps to lower their measured risk levels while seeking to maintain attractive levels of return. The methodology created strong incentives for the businesses to improve the quality and availability of their risk measurement data. The CEO immediately began moving to embed these activities within the senior leadership KPIs, in order to strengthen the overall risk culture and communication of the group.

RAROC captures the risks other metrics mask

The key strength of corporate RAROC is that it provides meaningful performance comparisons between individual businesses, segments and product lines that have diverse risk characteristics. It is an ideal performance metric for assessing the capital efficiency of holding companies that have a mix of industrial (asset intensive) and financial (asset light) businesses. It is equally applicable to both multiline industrial and financial entities. Corporate RAROC achieves this by virtue of its foundations within the economic P&L calculation, which contains critical differences from a traditional approach (see Exhibit 1).

Exhibit 1: Traditional vs. economic P&L

Traditional P&L	Economic P&L
Operating revenues	Operating revenues
- Cost of goods sold	- Cost of goods sold
Operating income	Operating income
- Depreciation and amortisation	- Depreciation and amortisation
- Provisions	- Expected loss (EL)
± Non-interest revenue/expense	± Non-interest revenue/expense
- Tax expense	- Tax expense
	± Significant terms and adjustments
	± Funding credit/charge
= Net income	= Risk-adjusted income
÷ Invested capital	÷ Risk capital
= ROIC	= Corporate RAROC

■ Indicates P&L line items that differ when translating a traditional (accounting) P&L to an economic (corporate RAROC) P&L

Corporate RAROC and the economic P&L approach provide companies with better information regarding:

- Financial planning and budgeting: Increasing transparency, and ensuring that all the risk-return objectives, expectations and levels of uncertainty are clearly understood
- Capital allocation: Providing a common risk currency for determining alpha and allocating incremental capital, and identifying which businesses are likely to produce the greatest return for each unit of risk

The strength of corporate RAROC is that it provides meaningful performance comparisons

- Portfolio management: Enabling the company to manage its business portfolio at optimum efficiency and reduce the organization’s aggregated level of risk exposure by recognizing inter- and intra-business risk correlations
- Performance management: Providing the incentives which drive the risk-taking behavior of employees within the organization
- Liquidity management: Ensuring the company maintains adequate capital levels by establishing the quantity of liquid assets required to manage working capital and debt covenants after payouts for losses and the replenishment of book capital on the balance sheet
- Pricing of products, services and contracts: Enabling the company to allocate the cost of risk back to the original source, thereby ensuring correct pricing

Corporate RAROC improves decision making

All of these robust and consistent insights from corporate RAROC metrics combine to reveal the true economics of the business, enabling management to compare different operations, product lines, customers, and transactions on a common basis (see Exhibit 2). This improves decision making, as reported by the Treasurer of a multinational business: “Our corporate RAROC data revealed which units deserved more capital, so I know we’re now growing the right areas.” Over time, these advantages translate into differentiated performance.

Exhibit 2: Sample corporate RAROC calculations

	BU1	BU2
Profit measure	50	50
Invested capital	500	500
Risk capital	400	600
ROIC (%)	10.0%	10.0%
RAROC (%)	12.5%	8.3%

Five corporate RAROC implementation issues

In order to implement corporate RAROC, companies need to think about how to integrate the metric with their existing management processes. The starting point is to examine the risk profile of each of their businesses.

These risk profiles can vary considerably. Risk is inherent in any transaction or business decision where the results are uncertain, and each element of uncertainty contributes to the volatility of the organization's profits. There are two primary types of risks:

- Financial risks: Driven by any direct exposure to financial markets (commodities, foreign exchange, and interest rates), and also by variations in market liquidity and exposure to counterparty credit
- Non-financial risks: Driven by either operational risks (e.g. in terms of processes, people, and technology) or business strategy risks (e.g. in terms of the business profit model, competitive situation, regulation, and impact of national economic performance).

While the risk exposure varies by business and product line, the overall risk profile of a company needs to be considered in its entirety when a corporate RAROC metric is implemented. There are five salient issues with significant bearing on how the corporate RAROC framework is structured.

1. The right risk measurement approach: The method for deriving risk capital (i.e. economic capital) needs to be adapted to match the level of sophistication of the firm's risk measurement practices. The method selected should have sufficient rigor, ensure risk capital calculations are consistent across businesses and product lines, provide sufficient transparency, and be derived from a combination of quantitative data and expert judgment. In practice, it is sensible to use existing risk measurement approaches wherever possible, as these have usually been honed to the particular circumstances of the firm. Where it is not practicable to use an existing practice, top-down approaches can be utilized, at least as a starting point.

2. Level of risk appetite: The amount of risk capital required is driven by the organization's ability and willingness to assume risk. In practice, this can be defined as the level of capital that is required by the business or product line to meet its financial targets, such as the solvency requirements that correspond to a desired credit rating (e.g. an 'A' rating is assumed to be equivalent to holding risk capital to cover annual losses at a 99.97 per cent level of confidence) and/or to provide the headroom necessary to maintain key performance indicators (e.g. net debt/EBITDA or EBITDA/interest expenses).
3. Business and product-line risk interactions: The risks inherent in various operations, markets, and industries all interact with each other in complex ways and can significantly shape overall corporate RAROC performance. These relationships need to be included in the corporate RAROC calculations in order to reflect the true risks and returns of individual businesses and of the firm as a whole. Once available this will provide a full understanding of the potential benefits and risks of any growth or diversification initiatives.
4. Balance sheet structure adjustments: These are typically more necessary for large corporations than for financial institutions, due to the less developed funds transfer pricing and the commonly larger mismatches between book capital and risk capital. If either of these are the case, it will be necessary to make interest expense adjustments to the economic P&L so that the interest payments reflect the specific borrowing reality of the individual businesses and operations.
5. Required rate of return: Unified hurdle rates must be adopted across the organization for purposes of calculating economic profit. Different approaches can be used for setting an organization's required rate of return, ranging from those reliant solely upon the management's experience and judgment to those derived from quantitative betas and a weighted average cost of capital (WACC). Regardless of the approach, the selected hurdle rate needs to reflect the organization's risk appetite, applicable constraints, strategy, and operations requirements.

Corporate RAROC can also be used as a key risk-return input in broader decision-type measures, such as risk-adjusted economic profit (see Exhibit 3). Risk-adjusted economic profit is seen as more relevant for project and investment decisions, since it reflects total value rather than rate of return; just as net present value (NPV) does in contrast to internal rate of return (IRR).

RAROC case study

Improved decision making at an integrated power and gas utility

Sustained regulatory pressures from the EU in the late 1990s forced a dramatic transformation of the European energy sector, with the goal of encouraging more liberalized, transparent, and competitive power and gas markets. Those developments had a number of significant implications for traditional integrated utility firms, including the necessity for them to develop new means of managing commodity price risks across the value chain.

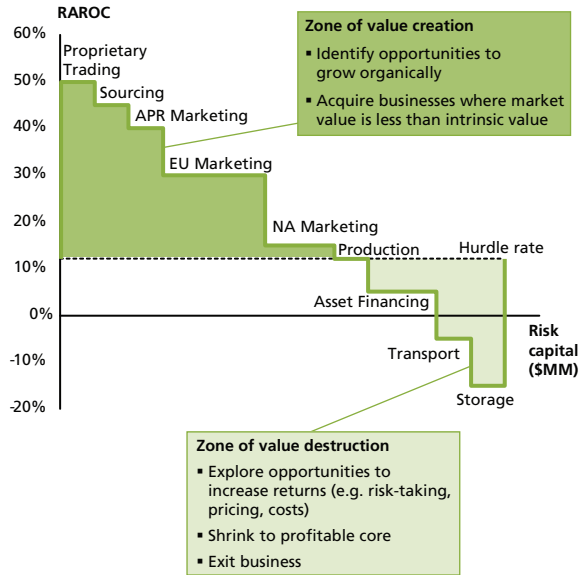
In response to this transformation, one major integrated utility restructured its organization in order to position its trading entity more centrally within its business model. This enabled the firm to transfer all liquid market risks to a single entity, which was tasked with optimizing the return on risk capital in the short-term. The traditional generation and sales business units continued to manage the long-term commodity risks. This redesigned business model necessitated a review of the utility's traditional performance management framework and increased the business focus on risk-adjusted return on capital across the group. Per the head of Risk Control: "Our primary goal was to extend the existing commodity risk limit framework to cover all risk-taking activities, including strategic risks beyond the trading horizon."

RAROC application: The utility first defined its risk bearing capacity, based on key financial parameters related to its ability to refinance (notably, the target net debt factor). From this basis, the required level of risk capital was established for all the key business units and used to produce a set of relevant risk-adjusted return metrics.

The new metrics were subsequently adapted to support analysis of the overall portfolio risk-return across all generation technologies, for both existing and planned investments, as well as for all key trading and sales markets. These metrics also enabled enhanced guidance of overall strategy and future investment decisions.

Impact: The newly established risk control framework is now central to the utility's management approach. It was later integrated into the annual strategy and planning processes where it had an immediate impact on capital allocation and investment decisions. As the CFO stated, "The new framework will enable us to take better informed decisions more quickly and to deliver enhanced returns to shareholders on our invested capital."

Exhibit 3: Corporate RAROC applied to economic profit



Corporate RAROC unmask risk-adjusted performance

Corporate RAROC drives overall business profitability in several ways. First, it allows scarce risk capital to be devoted to those activities that use it most efficiently to create returns (and conversely to be taken from those activities that squander it). It also fosters transparency and aligns the organization’s expectations with regard to risk taking and return generation. In addition, it creates consistent incentives at all levels to both mitigate and take risks in ways that maximize expected profits.

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Oliver Wyman is an international management consulting firm that combines deep industry knowledge with specialized expertise in strategy, operations, risk management, organizational transformation, and leadership development.

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