

## Managing Capital Adequacy with Oracle Reveleus Internal Capital Adequacy Assessment Process (ICAAP)

Oracle Reveleus ICAAP provides CFOs and CROs an enterprise-wide view of risk integrated with a complete regulatory capital management process meeting all regulatory Basel II ICAAP requirements and offering optimal capital allocation

The current turbulence in the global financial marketplace has led to a serious credit and capital crisis. Senior management is faced with a rapidly increasing need for an enterprise wide view of risk that is integrated with robust capital management to address this and the tightening regulatory environment that mandates compliance with the Internal Capital Adequacy Assessment Process (ICAAP) of the Basel II Accord.

### KEY BENEFITS

- Provides robust capital planning to ensure that banks possess adequate capital to meet current & future regulatory and economic capital requirements under baseline & stressed scenarios
- Provides optimal capital allocation and Risk Adjusted Performance Measurement across various lines of business and legal entities
- Provides CFOs and CROs an enterprise wide view of risk simultaneously meeting all regulatory Basel II ICAAP requirements

### Management Excellence Born in Crisis and Compliance?

Continuing lack of an enterprise view at the senior executive management level of financial institutions has been identified as a key factor behind the recent financial crises. This episode, unprecedented in history, has underscored the need for a holistic and integrated view of risk of capital management process and highlighted the implications of the same for the very survival of an organization.

Clearly, enterprise risk management is crucial to optimal capital allocation and Risk Adjusted Performance Measurement.

Further, as a result of Basel II, financial institutions must now develop internal procedures and systems to ensure that they possess adequate capital resources in the long term, while accounting for all material risks they face. These procedures and systems are collectively known as the Internal Capital Adequacy Assessment Process or ICAAP.

The proposals for enhancement of the Basel II framework, published recently by BIS, also reinforce the notion that a thorough and comprehensive internal capital adequacy assessment process (ICAAP) is a vital component of any strong risk management program.

There is a definite need for a single comprehensive solution to handle risk identification, materiality assessment, risk quantification, stress testing & capital planning, instead of multiple legacy/vendor solutions resulting in problems related to synchronization, increased costs and barriers to achieve a consolidated view of risk.

**KEY FEATURES**

- Provides robust capital planning to ensure that banks possess Enterprise wide view of risk
- Addresses all ICAAP requirements around risk assessment, quantification, stress testing and Capital Planning
- Exhaustive set of dashboards and reports for regulatory compliance and risk management
- Robust modeling and stress testing capability
- Pre-configured economic capital models for each risk category
- Extensive templates for ICAAP Reporting
- Risk aggregation and allocation techniques and Risk adjusted performance measurement
- Modular and flexible risk architecture

**Oracle Reveleus Internal Capital Adequacy Assessment Process offering**

- Oracle Reveleus ICAAP offering enables institutions to identify, measure and manage risk across the organization, compute capital required to cover risk and comply with regulatory requirements under Pillar II. It provides a holistic enterprise-wide view of risk that enables both operational and strategic decision making.
- Provides an enterprise wide view of risk; simultaneously meeting all regulatory Basel II ICAAP requirements
- Enables robust capital planning to ensure that banks possess adequate capital to meet their current & future regulatory and economic capital requirements under baseline and stressed scenarios
- Provides optimal capital allocation and Risk Adjusted Performance Measurement across various lines of business and legal entities

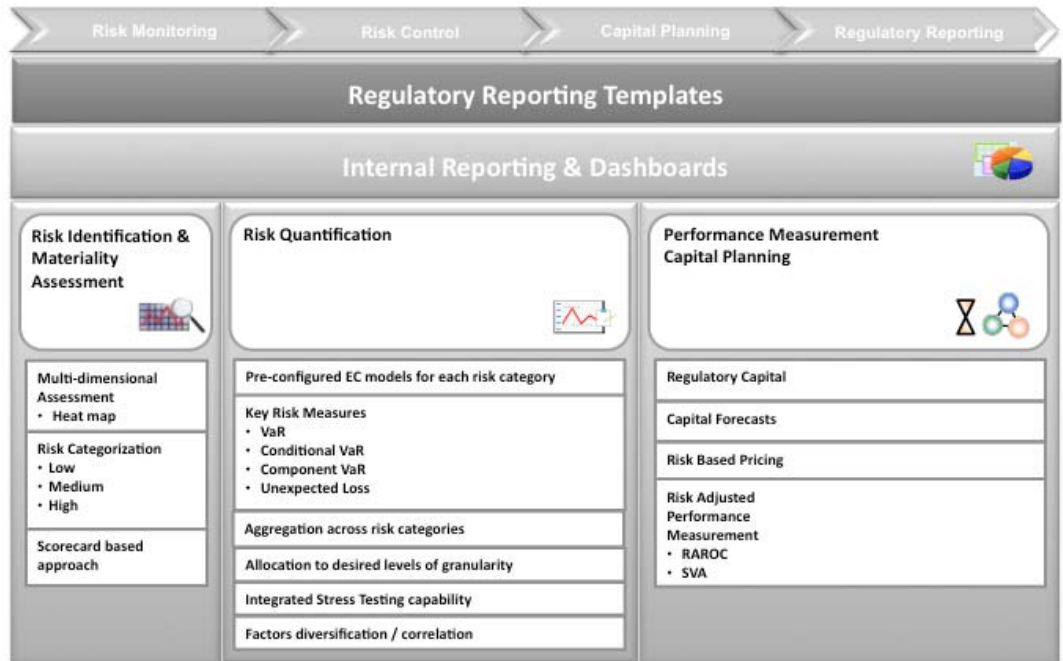


Figure : Components of Reveleus ICAAP Solution

**Comply with all ICAAP requirements**

In addition to providing guidelines for calculation of capital requirements, Basel II requires institutions to enhance systems and procedures to identify all material risks, develop models/methods to quantify identified risks with due attention given to their materiality, compute capital and monitor risk at multiple levels in the organization. Oracle Reveleus ICAAP enables institutions to manage risk across the organization by providing a robust solution that addresses all components of ICAAP including risk assessment, modeling, stress testing, risk aggregation and allocation, monitoring and regulatory reporting.

**Manage Risk Across the Organization**

Oracle Reveleus ICAAP enables banks to manage risk across different categories and across multiple levels in the organization. It estimates risk measures such as Value-at-Risk, Conditional Value-at-Risk, Unexpected Loss, etc., across risk categories and allocates this back to lower levels of granularity, including business units, exposures and product.

**Risk Identification and Materiality Assessment**

ICAAP mandates financial institutions to identify all the risks that they face. Since, the Bank for International Settlements (BIS) has not given a comprehensive list of all risks to be addressed under ICAAP, the responsibility of identifying perceived risks lies with the financial institution. Risk identification requires a thorough and structured analysis of the bank’s activities, business units, regulatory and market environments and historical scenarios.

Assigning materiality level(e.g. Immaterial, Low, Medium, High, and Very High)to each of these identified risks is a challenging task as this requires identifying a risk criteria (Key Risk Identifier) and assessing it across a combination of factors such as size, complexity of instruments, ratings and collateralization.

Oracle Reveleus ICAAP integrates a complete process and workflow for performing these two important components.



**Figure : Risk Identification & Materiality Assessment**

**Accurately Quantify Risk Across Categories**

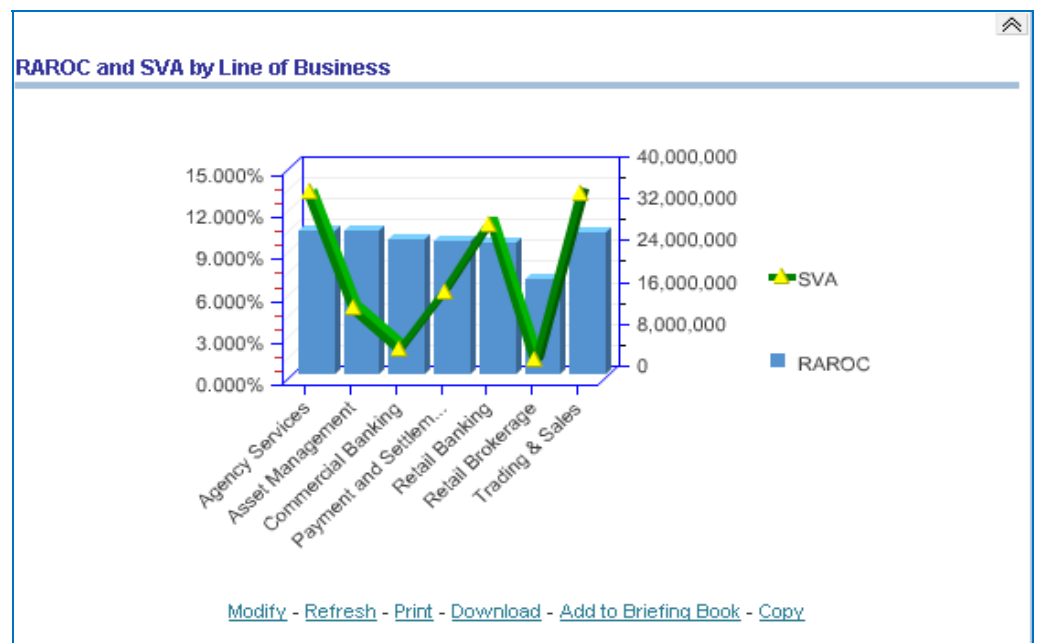
A key challenge under ICAAP is the quantification of risk for each risk category and aggregation across categories while factoring the effect of diversification. Oracle Reveleus ICAAP provides pre-configured Economic Capital models that use statistical techniques such as Time Series, Generalized Linear Models, Copulas, and Monte Carlo Simulation etc., for estimation of risk across risk categories.

**Robust Stress Testing Framework**

Stress Testing assesses the impact of extreme, but plausible, events on the risk and capital requirements front. Oracle Reveleus ICAAP delivers robust stress testing capabilities that enable institutions to assess the impact of adverse movements in variables on risk and capital. It supports multiple methods for shock specification such as parallel, twist and inversion and shock across multiple time points. It allows banks to build a repository of scenarios that can be used across risk categories, thereby supporting an integrated holistic approach to risk management.

### Enable Strategic Decision Making in the Organization

Regulators require integration of ICAAP in the strategic and operational decision making process of the firm. Oracle Reveleus ICAAP computes risk and risk adjusted performance measures, such as RAROC and SVA, at multiple levels in the organization thereby enabling the senior management to evaluate performance and take critical decisions on asset allocation and capital structure of the firm.



### Exhaustive Internal and Regulatory Reporting

Oracle Reveleus ICAAP provides pre-configured reports and dashboards that enable institutions to address needs of both regulatory and internal reporting to multiple stakeholders. It allows banks to analyze, monitor and control risk across the organization. These cover reports/dashboards for Risk Identification, Materiality Assessment, Risk Quantification, Capital Planning, Stress Testing and risk adjusted performance management (RAPM)

### COMPONENTS OF ORACLE REVELEUS ICAAP OFFERING

#### Oracle Reveleus Internal Capital Adequacy Assessment Process Analytics

Oracle Reveleus Internal Capital Adequacy Assessment Process Analytics provides an exhaustive set of pre-configured dashboards and reports through OBIEE, Oracle's industry-leading, business intelligence tool that provides the on-demand information designed to make the most informed risk and performance-based decisions by management. These dashboards provide unified access to all data and

information required for regulatory compliance. Standard features include the ability to slice and dice, drill through, drill down, drill across, roll-ups, sorting & filtering of the data. Also, the generation of different reports can all be scheduled for different times and the generated reports can be exported in a variety of formats such as pdf, csv, rtf, html, etc.

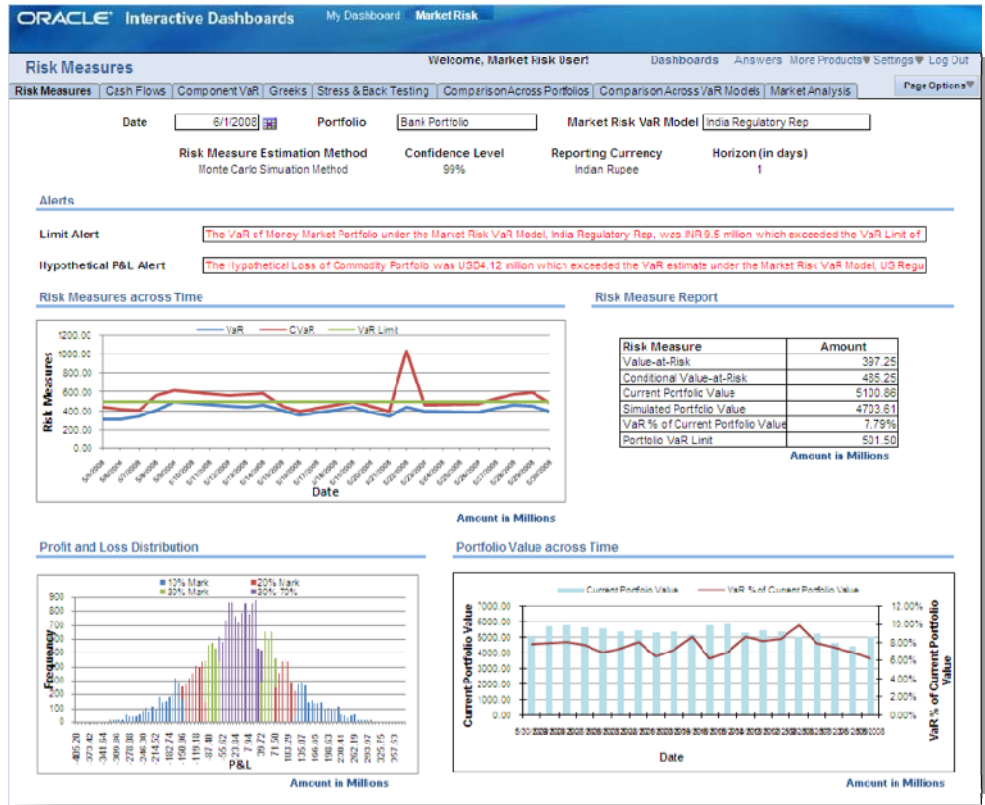


Figure : Dashboards & Reporting

### Oracle Reveleus Economic Capital Advanced

Oracle Reveleus Economic Capital Advanced application offers the most advanced computation of economic capital—extending economic capital calculations to drive the computation of the risk-adjusted performance measures and enable risk-based pricing. Economic Capital Advanced includes correlations in individual portfolios (credit and market) while providing for the diversification benefits across various risk types.

### Oracle Reveleus Market Risk

Oracle Reveleus Market Risk provides robust computational capabilities to effectively evaluate and manage market risk across the enterprise. Institutions can calculate key risk measures such as Value at Risk (VaR) and Conditional Value at Risk (CVaR) based upon user-defined parameters, including confidence level, time horizon, and decay factor.

### Oracle Reveleus Operational Risk Economic Capital

Oracle Reveleus Operational Risk Economic Capital is an integrated operational risk solution covering loss data capture, factoring external and scenario loss data, statistical modeling, and capital estimation.

It comes with pre-configured models for estimating key risk measures (VaR & CVaR) and complies with the Advanced Measurement Approach (AMA) requirements of Basel II for capital estimation.

**RELATED PRODUCTS**

- Oracle Reveleus Economic Capital Advanced
- Oracle Reveleus Market Risk
- Oracle Reveleus Operational Risk Economic Capital
- Oracle Reveleus Operational Risk
- Oracle Reveleus Basel II
- Oracle Reveleus Asset Liability Management
- Oracle Reveleus Advanced Analytics Infrastructure
- Oracle Reveleus Enterprise Risk Infrastructure

**Oracle Reveleus Asset Liability Management**

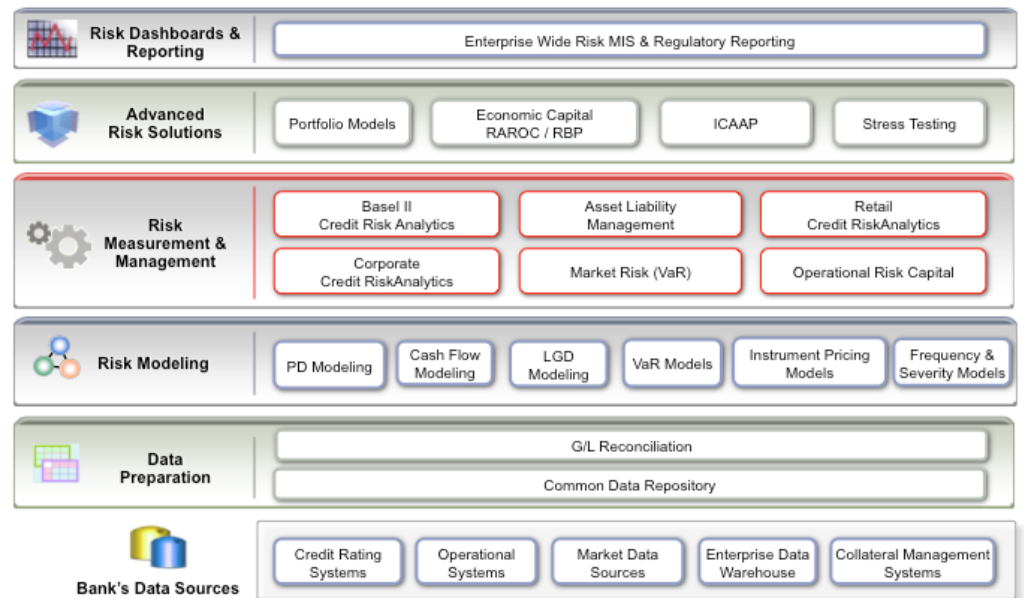
Oracle Reveleus Asset Liability Management allows organizations to formulate, implement, and monitor their asset liability strategies and comply with asset liability policies and regulations. Covering interest rate risk and liquidity risk, banks can calculate net interest incomes and margins, durations, and advanced measures such as earnings at risk and cost of capital.

**Oracle Reveleus Advanced Analytics Infrastructure**

Oracle Reveleus Advanced Analytics Infrastructure is a state-of-the art, comprehensive and flexible modeling framework covering extensive statistical techniques including regression techniques, time series, Monte Carlo simulation, copulas, ANOVA, etc. Analysts can build their own models or customize the existing ones using the modeling framework. An advanced stress testing framework that enables enterprise-wide stress testing capabilities and scenario management is an integral part of the Advanced Analytics Infrastructure. It allows analysts to specify and execute historical and hypothetical scenarios across all risk categories.

**Oracle Reveleus Enterprise Risk Infrastructure**

Oracle Reveleus Enterprise Risk Infrastructure is rules driven and readily adapts to change. Unlike other propriety solutions, Oracle Reveleus Enterprise Risk Infrastructure provides both pre-built rules and the capability to create and modify rules. This flexibility allows financial institutions to easily create custom rules for their own analytical requirements and cost-effectively address ever-changing compliance regulations. Forms can be designed and workflows created by business users which can support risk identification processes, materiality assessment and others across the organization. Oracle Reveleus Enterprise Risk Infrastructure is an integrated platform that supports all risk categories across the organization.



**CONTACT US**

For more information about Oracle Reveleus ICAAP, please visit [oracle.com/financialservices](http://oracle.com/financialservices) or email us at [financialservices\\_ww@oracle.com](mailto:financialservices_ww@oracle.com).