



EMPIRICAL CREDIT RISK MANAGEMENT

ECM

Measuring and Managing Credit Risk in Instalment Lending



Key Features

- *Reduces loan losses*
- *Measures, Manages and Forecasts Instalment loan losses*
- *Comprehensive analysis – from Macro to Micro/Account level*
- *All calculations based on lenders' own experience*
- *Complies with Basel II and IFRS Credit Risk reporting requirements*
- *Three leading bank installations*

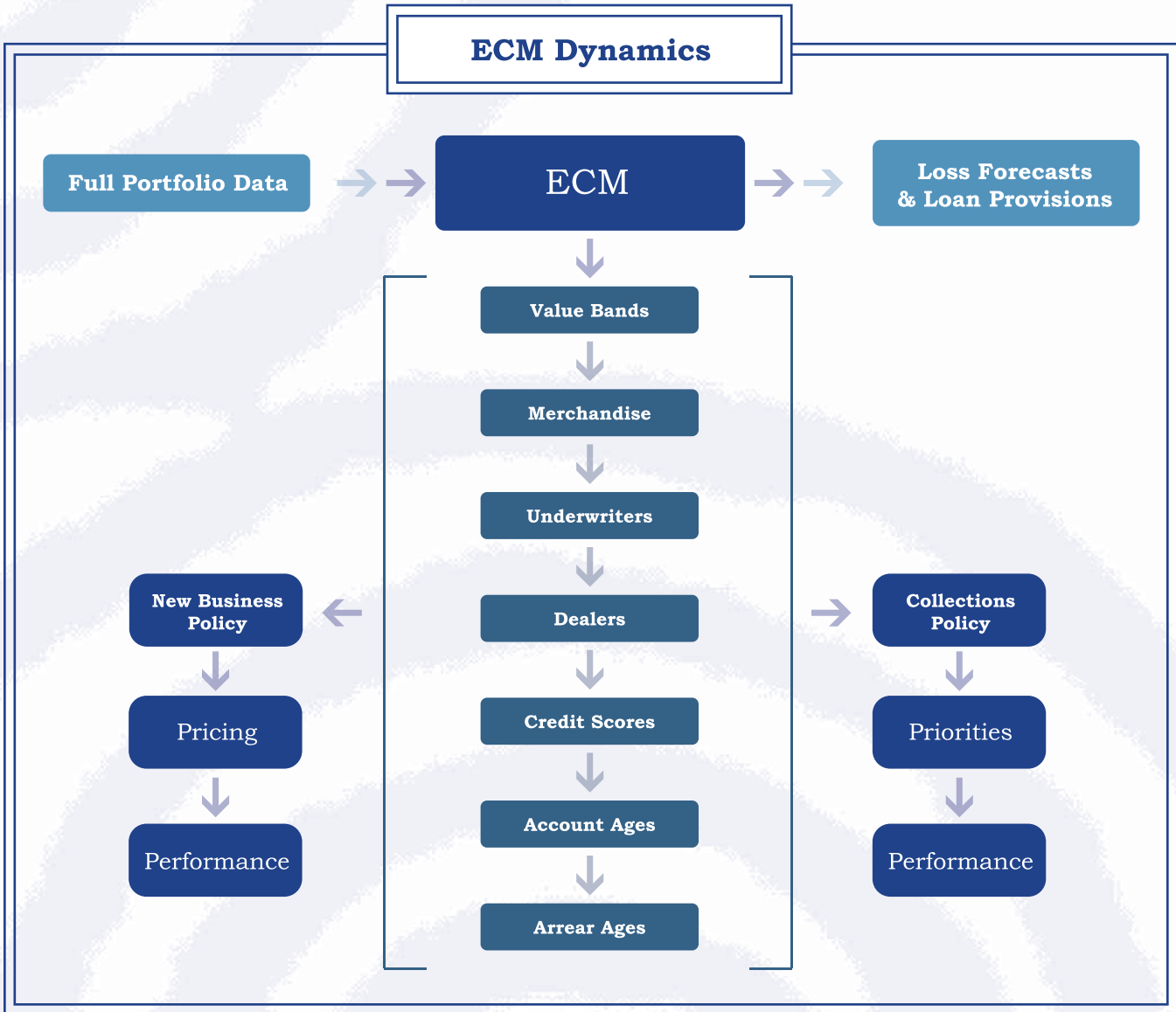
Benefits

- *Reduces Loan Losses*
- *Macro-level Forecasting and Provisioning*
- *Analysis by Loan Type, Credit Score band, etc*
- *Evaluates Performance of dealers, underwriters, product types, etc*
- *Account level forecasting*
- *Basel II and IFRS reporting compliant ***
- *Facilitates securitisations*
- *Bank capital management*
- *Calculations are driven off net write offs*
- *Operationally self-financing*

***ECM reviewed and approved by PwC, KPMG and the Revenue Authorities*

ECM Clients

- *Bank of Ireland*
- *Permanent TSB*
- *Friends First Finance*
- *ECM consulting studies completed for 4 other leading Irish banks*



ECM Overview

ECM is an innovative, patented methodology and software product designed for banks and other instalment lenders, facilitating the **measurement, forecasting and management of Credit Risk in Instalment lending.**

Mathematically constructed and actuarially certified, **ECM** analyses credit risk at the portfolio level - calculating loss forecasts and provisions on a rolling basis - and then at the account level - for loan pricing and arrears management.

Each loan is viewed as an amalgam of risk arising from many loan characteristics.

ECM first calculates the *Macro Level* forecast (for accounting and tax purposes) then, by data mining and characteristic analysis, it calculates the next lower *characteristic level* risk (Basel II compliant). Finally, by characteristic correlation, it calculates *account level* risk (IFRS compliant).

ECM's precise measurement of credit risk delivers a critical input in the assessment of new business quality and provides a value-at-risk focus for the collections efforts, thereby reducing both arrears and write-offs and improving profit margins significantly.

ECM meets Basel II and IFRS Credit Risk Management requirements.



ECM Reporting Features

Portfolio Level Loss Forecast & Provisions

ECM distinguishes between the lender's forecast of *ultimate loss*, at any time, and the associated *provision requirement*.

Portfolio Trend Analysis

ECM tracks the growing, changing portfolio and analyses and reports fully on changes in the *Probability of Default*, in the *Exposure at Default* and in the *Loss Given Default*.

Sub-Portfolio Loss Forecast Trends

Using ECM it is possible to distinguish and to compare trends in e.g. various *loan maturities*, in *merchandises* and in *loan vintages*.

Performance League Tables – All Characteristics

Using ECM it is again possible to distinguish and to compare the performance of e.g. different *referral sources* (e.g. dealers), of loan *underwriters* and of the *collections teams*.

'Early Alerts' on Risk Hot-Spots

Where specific characteristic cohorts are suspect (e.g. for possible fraud) it is possible to interrogate for the precise performance of these risk cohorts.

Account Level Loss Forecasts and Provisions – for Collections and for Loan Pricing

ECM analyses portfolio risk down to the level of the individual account, where it provides critical *loan pricing* and *collections priorities*.



Installation & Support

Installation and Support

Current bank users of ECM, Bank of Ireland, Irish Permanent TSB and Friends First, use the current most advanced version of ECM.

Ease of Download

As virtually all bank lenders capture the same key fields on their loans, the ECM software is capable of downloading *all* bank client data and providing an immediate analysis and loss forecast

The time required by Finalysis for installation, with staff training, is two weeks. Alternatively, data may be supplied to Finalysis, with relevant analysis and reporting being outsourced.

ECM can be purchased, or leased annually. Pricing is subject to the following user requirements:

- The size of the overall loan book;
- The number of constituent portfolios and sub-portfolios;
- The number of ECM users.



ECM Status and Benefits

Status:

- ECM is the product of research undertaken into the lending portfolios and best practices of 6 leading Irish banks and of other academic research.
- The ECM product has been installed in three leading banks over 4 years where, with progressive enhancements, it has been providing accurate reporting for management and for regulatory compliance.
- ECM has been reviewed and approved by KPMG (on behalf of Permanent TSB) and by PwC (on behalf of Bank of Ireland) and by the Irish Revenue Authorities.
- Research into the risk models of UK and other foreign banks indicates that ECM offers greater versatility and a higher level of discrimination.
- All ECM forecasts are driven off the *npv* of the lender's own write-offs and net recoveries, thereby ensuring full market sensitivity and facilitating stress testing.

Benefits:

- Reduced loan losses
- Accurate loss forecasting
- Reporting compliance
- Performance analysis at all levels
- Vintage analysis, facilitating securitisation



Finalysis - Who We Are

- *A specialist treasury and banking consultancy advising banks and corporates on all aspects of risk, liquidity and treasury with over 300 major corporate clients*
- *Established in 1990 at University College Dublin's Innovation Centre*
- *Offices in Ireland, the United Kingdom and South Africa*
- *Designer and developer of ECM Credit Risk Management Software*
- *Member of Irish Association of Corporate Treasurers and of the Institute of Bankers of South Africa*

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