Basel II
Internal Ratings-based Approach
Journey to Risk Sensitive Models

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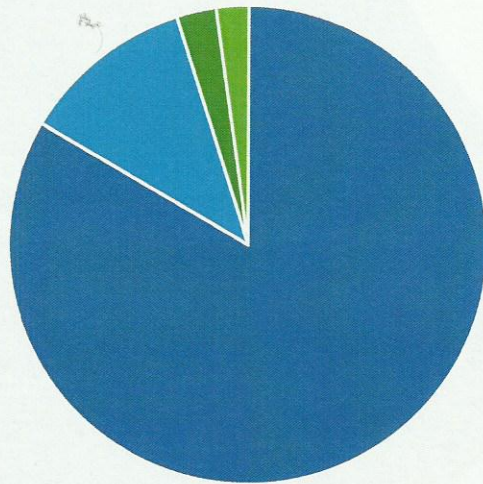Head of Credit, Risk Analytics

Nov 2014

Here for good

Retail Banking

Use of Internal Ratings-based Models

Retail Banking – Asset Composition

- Personal Mortgage
- Personal Unsecured Products
- Business Client
- Wealth Management

- The portfolio is diversified across products and customer segments.
- To optimize balance sheet to drive RWA efficiency, over 85% of the asset portfolio are fully secured.
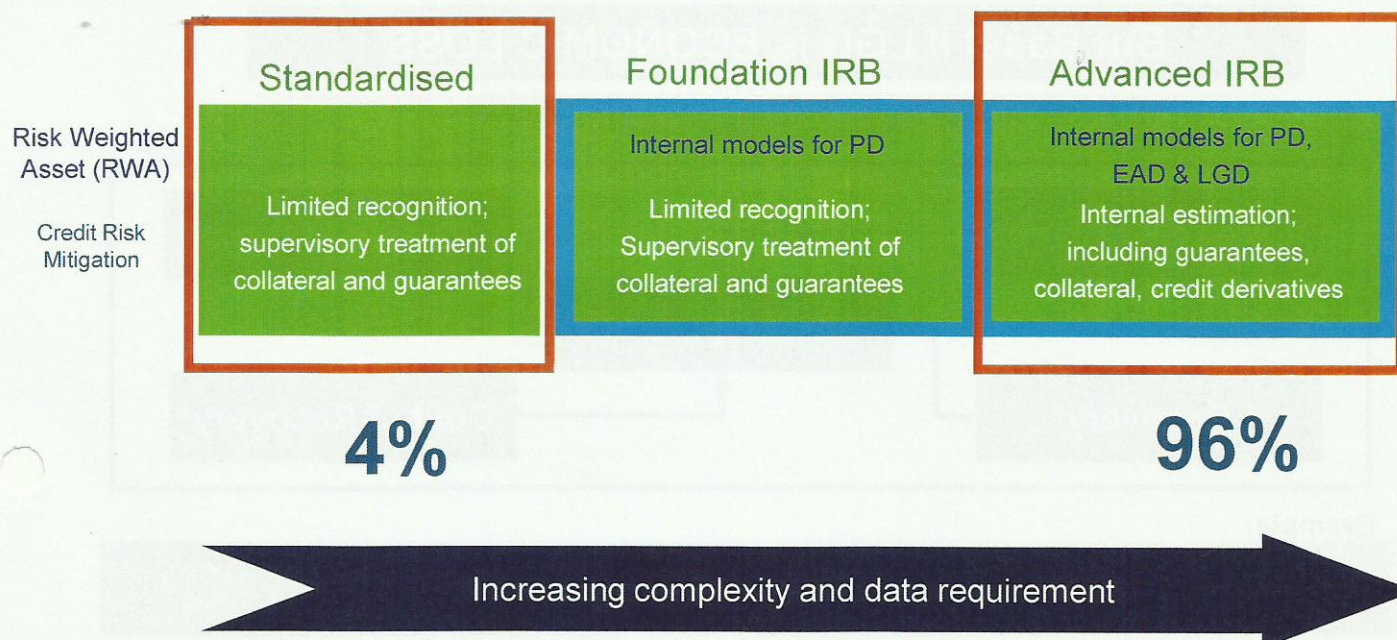
Standard Chartered

Basel – Internal Ratings-based Approach

Credit Risk Models

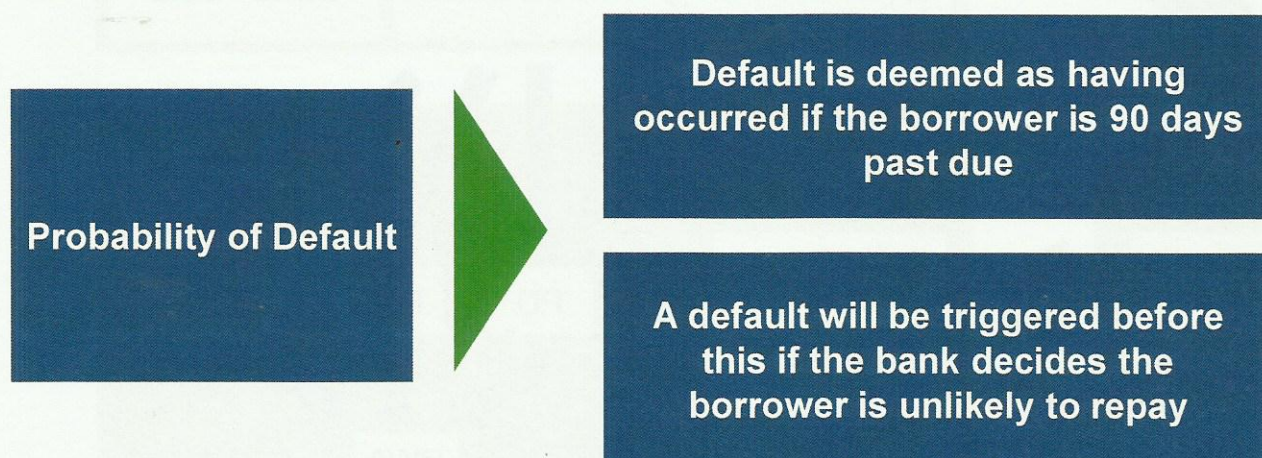|	Standardised	Foundation IRB	Advanced IRB
Risk Weighted Asset (RWA)		Internal models for PD	Internal models for PD, EAD & LGD
Credit Risk Mitigation	Limited recognition; supervisory treatment of collateral and guarantees	Limited recognition; Supervisory treatment of collateral and guarantees	Internal estimation; including guarantees, collateral, credit derivatives

Increasing complexity and data requirement

Standard Chartered

Basel – Internal Ratings-based Approach

Credit Risk Models Coverage in Retail Banking

	Standardised	Foundation IRB	Advanced IRB
Risk Weighted Asset (RWA)		Internal models for PD	Internal models for PD, EAD & LGD
Credit Risk Mitigation	Limited recognition; supervisory treatment of collateral and guarantees	Limited recognition; Supervisory treatment of collateral and guarantees	Internal estimation; including guarantees, collateral, credit derivatives

4%   **96%**

→ Increasing complexity and data requirement →

IRB Models Components – Probability of Default

Probability of default is defined as the likelihood that the borrower will default over a 12 month period

Probability of Default →
- **Default is deemed as having occurred if the borrower is 90 days past due**
- **A default will be triggered before this if the bank decides the borrower is unlikely to repay**

IRB Models Components – Loss Given Default

Simple recovery rate :	Loan value $100	Collateral value $90	LGD 10%

But Basel II LGD is ECONOMIC LOSS

Time to Recovery	→		Discount Rate
	All Components		
Recovery	→	←	Cost of Recovery
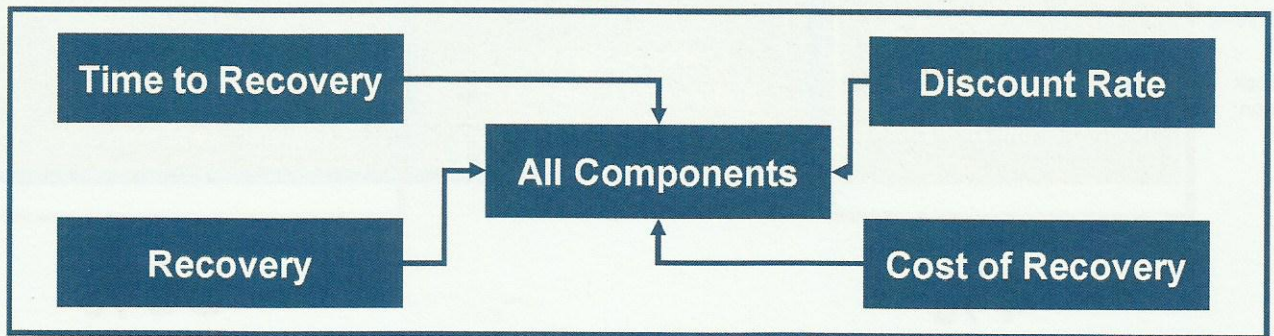
Example:

Loan value $100	Collateral value $90	Cost of Recovery $10	Time to recovery 2 years	Discount rate 5%	LGD 28%

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Retail Banking IRB Models Components

Data Sources

Application Data	Behavioral Data	Bureau Data

Scorecard Development

- Scorecard A
- Scorecard B
- Scorecard C

Basel Modelling

PD Alignment

Mapping scores to the Basel Default definition

→ PD | EAD | LGD

RWA

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IRB Models Use in Retail Banking

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                    Strategy

                   Risk Appetite

                   Capital Target

              Portfolio Management / Monitoring

        Acquisition          |        Monitoring
        Pricing              |        Collection
        Limit Setting        |        Provisioning
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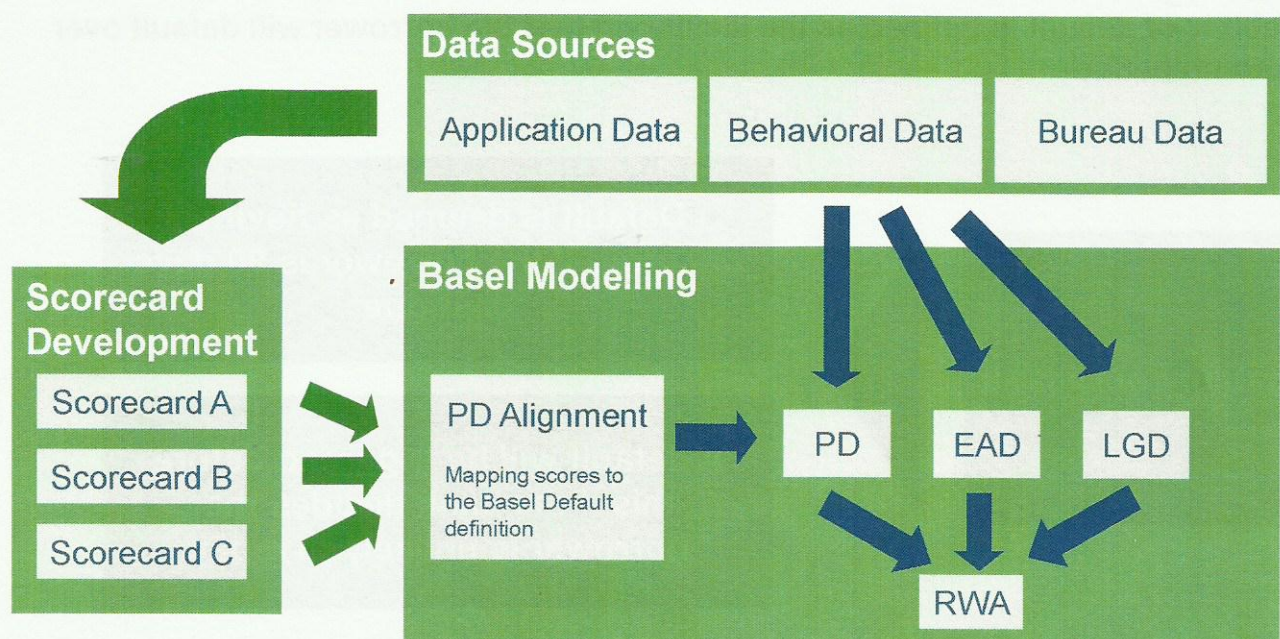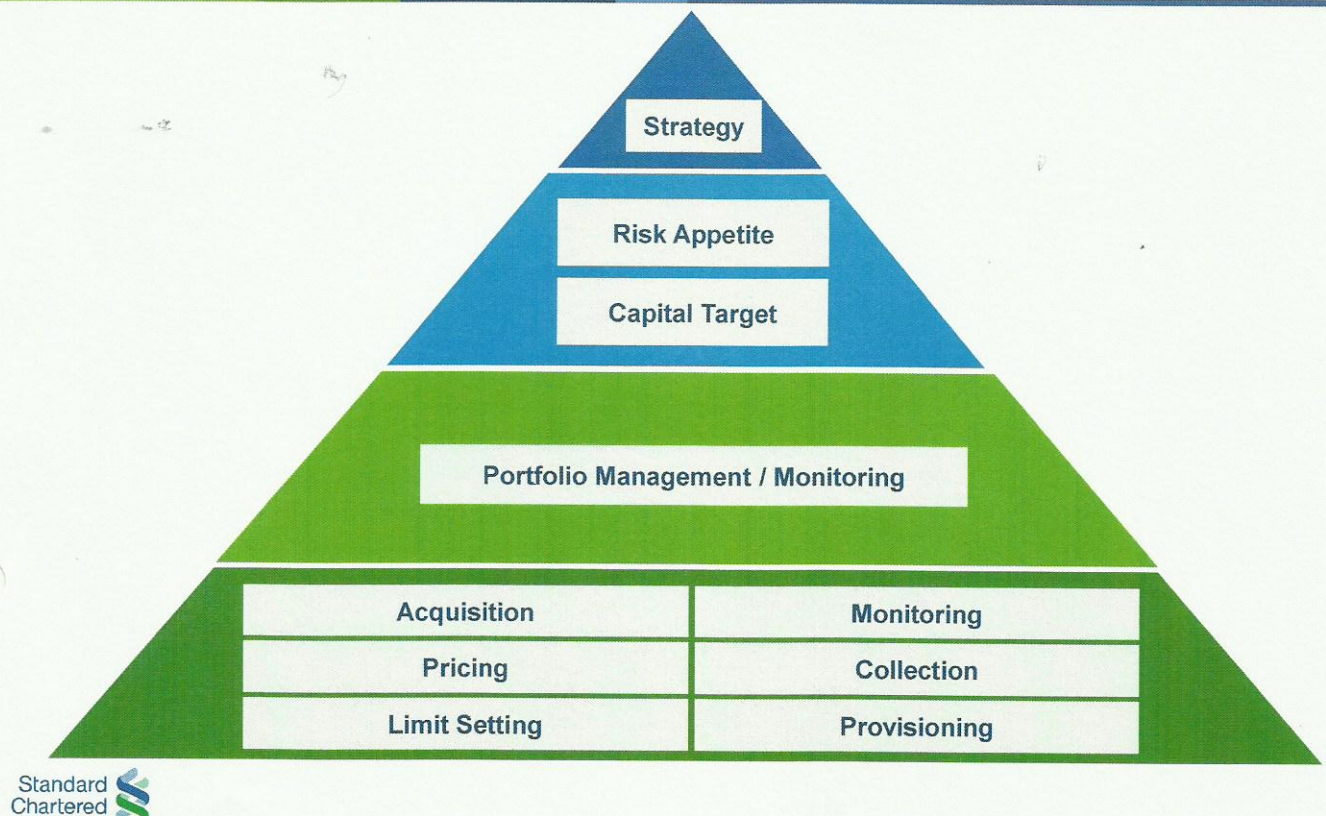
IRB Models Use in Retail Banking
- Risk Appetite Key Metrics

ANR	**= Average assets (nominal value)**
RWA	**= Risk Weighted Asset (Regulatory, includes Credit and Operational Risk)**
Risk Adjusted RoRWA	**= Risk Adjusted Return of Risk Weighted Assets** **= (Revenue – Expected Loss) / Risk Weighted Asset**
Recession Loss Multiplier (RLM)	**= Recession Loss / Revenue** **Measures number of years earning that would be at risk in recessionary conditions i.e. 1 in 25 years**

RLM

● Stratgic

● Transform

● Maximize

Risk Adjusted RoRWA
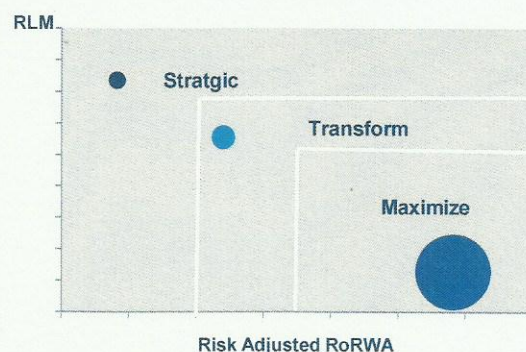
Impact of this on portfolios

Maximize : Grow subject to credit and earnings quality

Transform : Identify and grow sub-segments with better risk-return profile and implement better risk based pricing

Strategic : Develop strategic portfolios supported by business case or critically review to downsize or exit.