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MANAGING THROUGH THE COVID19 CRISIS

III PHASE APPROACH

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Key messages:

1. DO NOT THROW AWAY YOUR MODELS
2. ADJUST AND APPLY MANAGEMENT JUDGEMENT
3. AGREE WORKING ASSUMPTIONS
4. ESTIMATE IMPACT FOR DIFFERENT SCENARIOS: BEST CASE THROUGH TO WORST CASE
5. CREATE NEW BUDGETS / EXPECTATIONS

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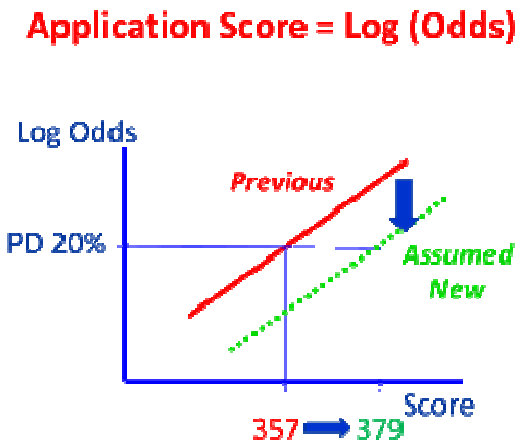
Starting point:
Set assumptions and estimate impact for different scenarios: best case through to worst case.

Phase I: No Data (Educated Guesswork)

Do not throw away your models; adjust and apply management judgement; create new budgets / expectations

Actions:

Adjust scorecard model expectations:
Expect worse risk at each score / risk node in your models
Offset score-odds line. Most likely relative risk will remain unchanged so focus on calibration.



Reinforce affordability and policy rules:
Which groups will have most / least stability: sustainability of income; ability to repay; cash flow (SMEs)?
Which lending sectors are most at risk: asset backed lending, higher mortgages; LTVs, BTLs, ripple effects?

Apply management judgment:
How much adjustment is needed?
As a guide, look at 2008-09, BUT assume at least 3 times faster …
Look for signals across financial markets, especially treasury bonds. Will this lead to systemic failures later?

Adjust risk appetite objectives:
Review RA expectations. Are current levels sustainable? Reset parameters for credit policy.

Adjust decision parameters:
Using the adjusted model, policy and RA expectations, implement new cut offs and policy parameters for acceptance, limits / loan amounts, pricing, LTV etc……NOW

Translate into new budget:
Create a new budget, with your assumptions and parameters, to create a new "expectation" against which subsequent performance can be measured.

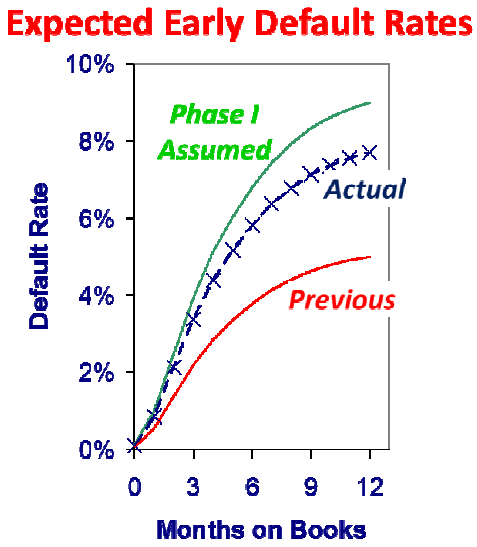
Phase II: Headline Delinquency (after ~ 3 months)

Use early data and react fast. Adjust assumptions, as necessary.

Actions:

Set assumed monthly arrears emergence patterns:

Use Phase I assumptions and budget estimates to create estimates of arrears emergence life cycle curve / assumed monthly defaults.
Use current 2+ payment in arrears as delinquency measure.



Make comparisons:

Compare actual arrears emergence with assumed patterns from Phase I and the pre-crisis curves after 3 months for unsecured; 6 months for secured – adjusted for payment holiday deals.
Which of the scenario parameters identified at Phase I are closest to the actuals?

Apply statistical tests:

Measure distance from expectation and use certainty tests, especially where samples of arrears cases are small.

Make adjustments - quickly:

Update business assumptions, budgets and operational decision parameters – QUICKLY. Survival depends on speed of reaction.
Update scenarios identified at Phase I.

Phase III: Refine Models and Policy (after ~ 100 recession bads)

Review and update models: Keep models in line with best data, guided by business judgment.

Actions:

Measure actual vs expected results:

Identify behaviour patterns that have changed. Which component is wrong? Model OR Strategy OR BOTH

Validate scorecards and models:

Analyse each model characteristic to identify global information value and marginal information values.
Where only one characteristic is mis-aligned, calculate and apply delta scores for a quick correction.
Where several characteristics are mis-aligned, use mother-child scorecard approach and generalisation of delta scores.
Pay particular attention to characteristics reliant on bureau data and generic scores when validating models (see below). Use balance movement to identify true payments?

Validation Process

Characteristic	Global IV	Marginal Analysis - 12 months outcome MIV	Chi²	DF	p-level
CurBal	0.032	-0.017	4.291	1	3.83%
CurCTO	0.185	0.039	7.395	6	28.59%
CurDaysXs	**0.616**	**0.072**	**13.591**	**6**	**3.46%**
CurDTO	0.215	0.025	6.458	4	16.75%
CurValXs	0.515	0.045	12.153	7	9.56%
ToB	**0.692**	**-0.019**	**6.219**	**7**	**51.44%**
MthsInact	0.012	-0.003	0.675	1	41.13%
MthsNoCTO	0.077	0.006	1.217	2	54.42%
NetTO	0.074	0.009	0.319	3	95.64%
DaysDbL3m	0.055	0.016	2.159	2	33.98%
DaysXsL6m	**0.856**	**0.027**	**11.278**	**9**	**25.71%**
CurMxBal	0.033	0.003	0.268	2	87.46%
DishL1m	0.291	-0.010	1.398	2	49.71%
DishL3m	0.292	0.011	2.29	5	80.77%
SinceDish	**0.810**	**0.025**	**13.703**	**8**	**8.98%**
InterCTO	0.017	-0.001	0.421	2	81.02%
InterDTO	0.003	-0.002	1.1	1	29.43%
AutoCr	**0.209**	**-0.013**	**7.37**	**4**	**11.76%**
ValDishL6m	0.468	0.017	4.051	6	66.98%

Evaluate model risk:

Estimate model risk vis-a-vis credit bureau components in scorecards and models. Calculate impact of missed payments not being recorded in payment profile.
Can some model characteristics be substituted with more reliable data?
Alert model risk management and take corrective action.

Validate strategies:

Analyse performance outcome by sub-populations. Identify groups where policies / parameters are too lax / too stringent. Measure using budget vs actual defaults (by scenario identified at Phase I). Apply statistical tests for distance and certainty.

Review and reset:

Review / reaffirm risk appetite and policy expectations and parameters.
Using the adjusted model, strategy outcome analyses, policy and RA expectations, implement revised cut offs and policy parameters for acceptance, limits / loan amounts, pricing, LTV etc.

Translate into revised budget:

Create a revised budget, with your assumptions and parameters, to create a revised “expectation” against which subsequent performance can be measured.
Update scenarios identified at Phase I.