



PIC Solutions
profitable decisions

The evolution of customer affordability determination in the South African market

Thomas Maydon

“Affordability is essential to opportunity”

-Gaston Caperton

Affordability Background

- Affordability has played a significant part in credit originations since 2007 (SA's National Credit Act)
- Over-indebtedness and reckless lending was evident
- Affordability then became a crucial component in the originations process
- Affordability is now being utilised in other credit life-cycle areas



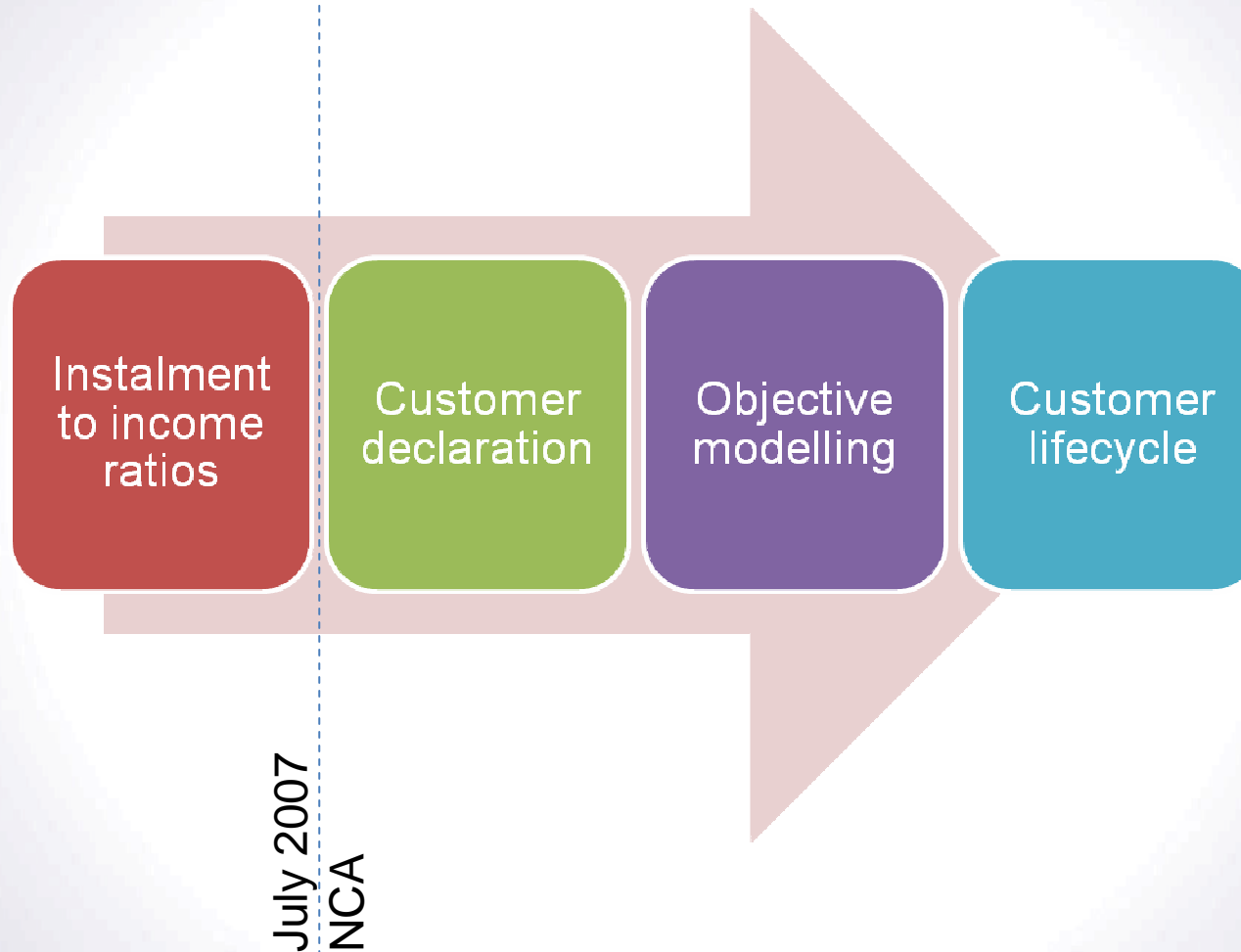
Affordability Background

- National Credit Act states that a credit provider must not:

*“... enter into a credit agreement without first taking **reasonable steps** to assess the proposed customer's existing financial means, prospects and obligations...”*

- The result of which was a *cooling down* of the market and a (arguably) cushioning from the sub-prime crisis
- Vague wording in the act has resulted in different approaches to affordability (unlike other markets)

Affordability Evolution



Declaration of Affordability

- Are customers accurate in what they declare?

	% variance from Bureau Instalments	% Population
Over- Estimating	>100%	13%
	50%-100%	5%
	25%-50%	4%
	0-25%	6%
Under- Estimating	0-25%	10%
	25%-50%	13%
	50%-75%	19%
	75%-100%	30%

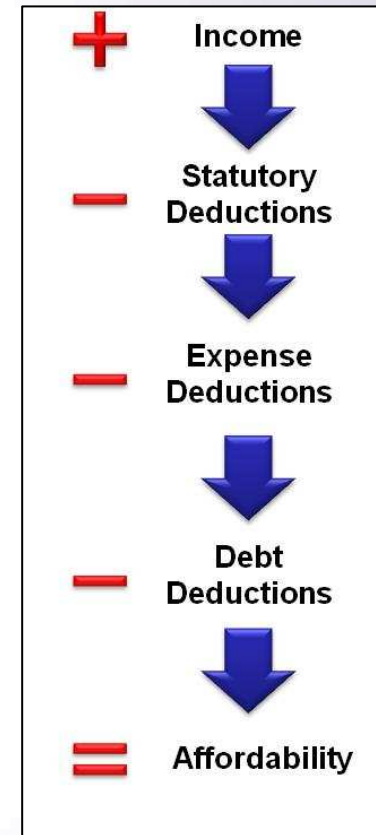
- Capturing of declared expenses found problems in:
 - Accuracy,
 - Protracted process,
 - Manipulation by consultants

Motivation for an objective approach

Modelling approach

- Basic concept requires 4 major inputs for the model
- Individual/household expenses can be determined from
 - Current account information (where available)
 - External data surveys
- Model provided better compliance....but

...the risk benefits soon became evident too.



Impact analysis from a risk perspective

- Retrospective test done on a secured-lending product.
- Customer went through:
 - Scorecard vetting (application and bureau information)
 - Behavioural scoring (for existing customers)
 - Asset vetting
 - Policy rules
 - Manual under-writing (for certain accounts)
- The affordability model was then applied

Group	Bad Rate	% Pop
Affordability Sufficient	9.3%	83.8%
Down Sell	16.5%	10.0%
No Affordability	19.1%	6.2%

Versatility

- The model can be used as a “stand-alone” model or as a safety-net model (with declared affordability)
- The model can be utilised across multiple credit industries:
 - Clothing retail, furniture retail, credit card, home loans, overdrafts, vehicle finance and micro-loans
- What about other areas in the customer life-cycle?
 - Acquisitions (direct marketing)
 - Account management
 - Collections

Account Management

- The affordability of a population can be calibrated into a score.

“Disposable Income Index”

- This index can be used as a decision key within account management strategies:
 - Limit increase/decrease
 - Authorisations
 - Cross-selling and up-selling
 - Vouchers and incentives to encourage spend
 - Pre-delinquency (lazy payers and distressed payers)

Account Management

- Customers scored through:
 - Behavioural score
 - Bureau score

- Affordability classification:
 - R500+ (€50+) DI → “with affordability”
 - <R500 → “no affordability”

- Joint-odds matrix split into two matrices based on classification

Metric (good/bad odds)

Total population		Bureau Score Bands				
		1	2	3	4	5
Behavioural Score Bands	1	1.5	2.5	2.8	2.9	3.5
	2	2.2	2.8	3.4	5.2	6.2
	3	2.5	3.8	4.8	5.2	6.4
	4	2.9	4.1	5.1	6.0	11.2
	5	2.6	4.0	6.2	9.1	17.8

Affordability		Bureau Score Bands				
		1	2	3	4	5
Behavioural Score Bands	1	1.8	3.0	3.6	3.6	3.7
	2	2.3	3.3	4.3	5.8	8.6
	3	2.8	3.9	6.0	6.9	7.7
	4	2.8	4.5	5.4	6.6	14.4
	5	2.9	4.1	6.7	10.6	21.2

No affordability		Bureau Score Bands				
		1	2	3	4	5
Behavioural Score Bands	1	1.2	2.0	2.2	2.3	3.4
	2	2.1	2.3	2.5	4.3	4.1
	3	1.8	3.5	3.1	3.3	4.5
	4	3.2	3.1	4.1	4.6	6.4
	5	1.7	3.8	4.7	5.9	10.7

Further Considerations

- Utilising the affordability in account management:
 - Unlocks opportunity
 - Allows for more accurate risk-tilting of strategies

- Model can be used in:
 - Limit Management
 - Cross-selling and up-selling
 - Authorisations

- Affordability declaration does not afford the same benefit

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Opportunities for affordability

Acquisitions and Originations

- Marketing lists
- To determine estimated affordability
- Affordability “safety net”
- Risk decision key

Account Management

- Credit-limit/facility management
- Authorisations
- Marketing: cross and up selling
- Marketing: vouchers and utilisation incentives

Collections

- Pre-delinquency
- Arrangements
- Decision key in collections prioritisation

Further Considerations

- Double counting
- Income estimator accuracy
- Determining household/individual affordability
- Lower income market:
 - Complexity of income and outgoings
 - Accuracy of survey information
- Using credit balances or credit limits
- Accuracy of credit bureau information

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