

The Incongruence amongst the Exercises of Consumer Credit Risk Management

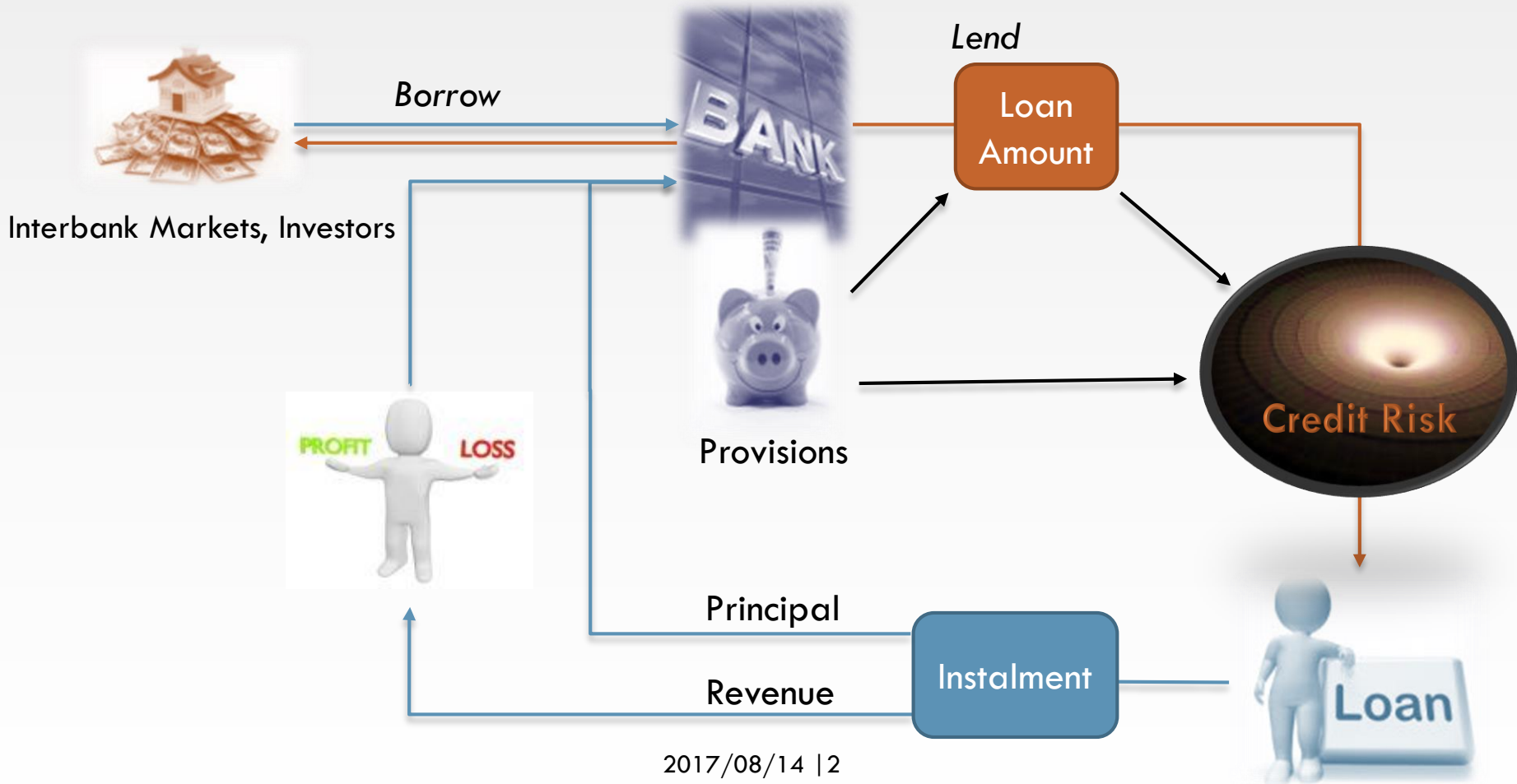
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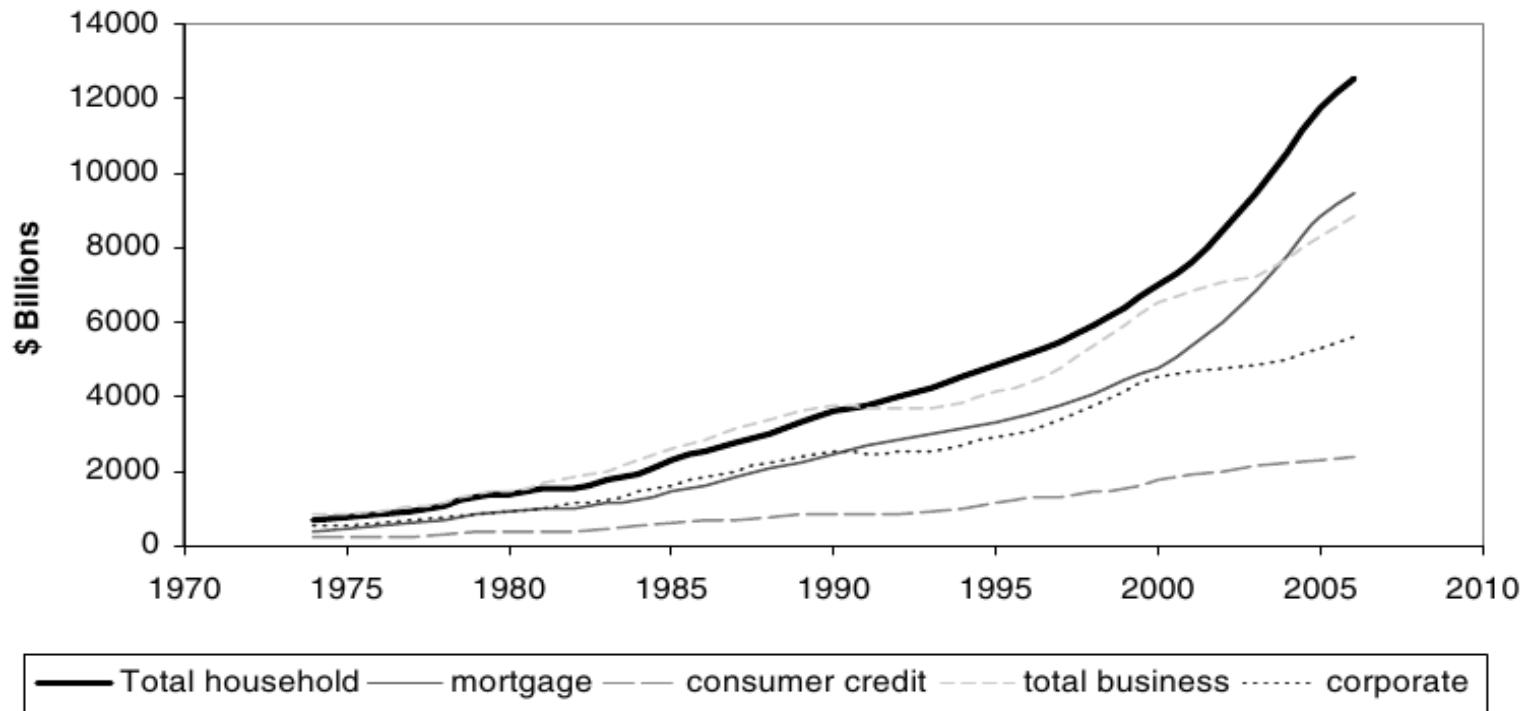
ASSA: Banking and Finance Sessional Meeting



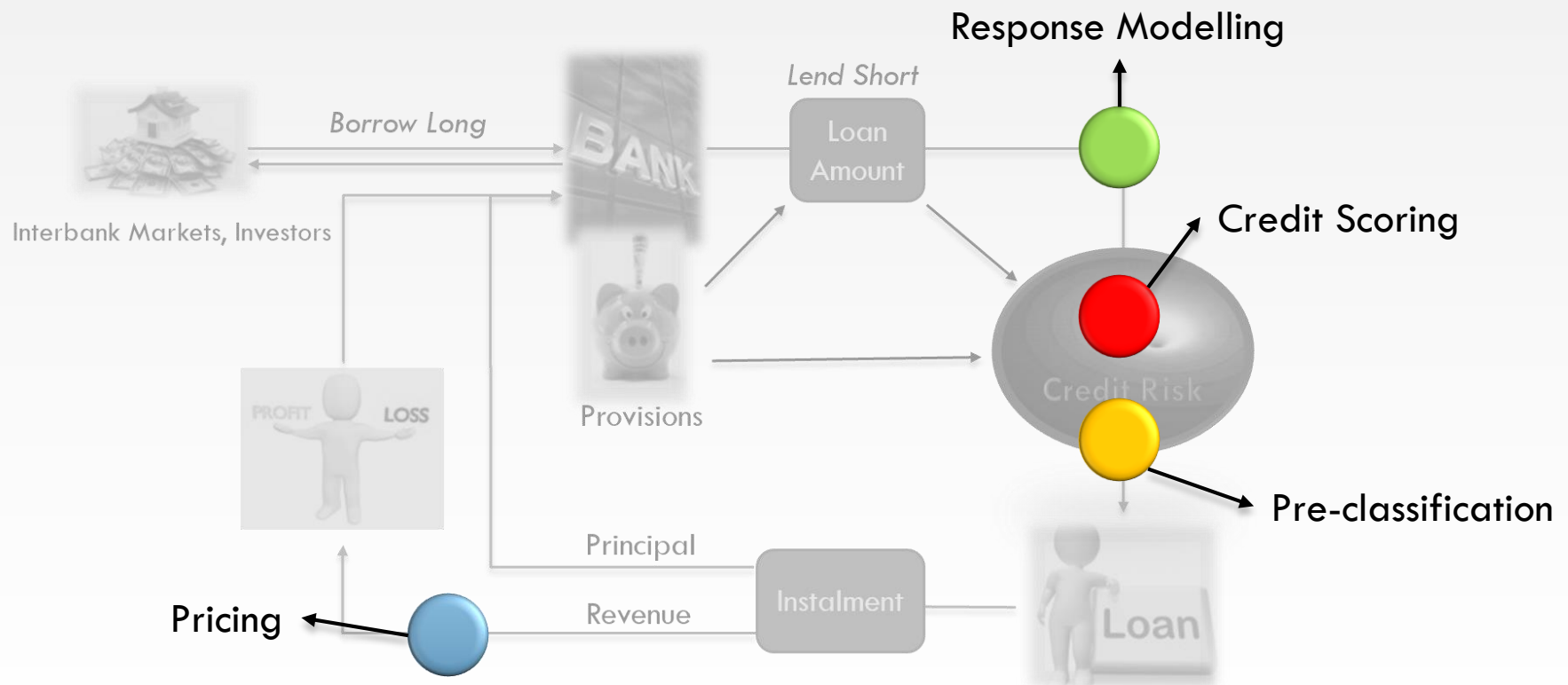
Credit Risk Management in Banks



Increasing Importance of Credit Risk



4 Exercises identified in Credit Risk Management



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3 Types of Interactions

Price-Risk-Response Relationship


Price-Response

- Elasticity


Risk-Response

- Adverse Selection

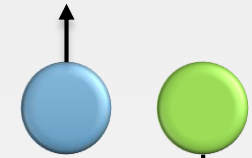

Price-Risk

- Unaffordability

▲ Price-Response Relationship



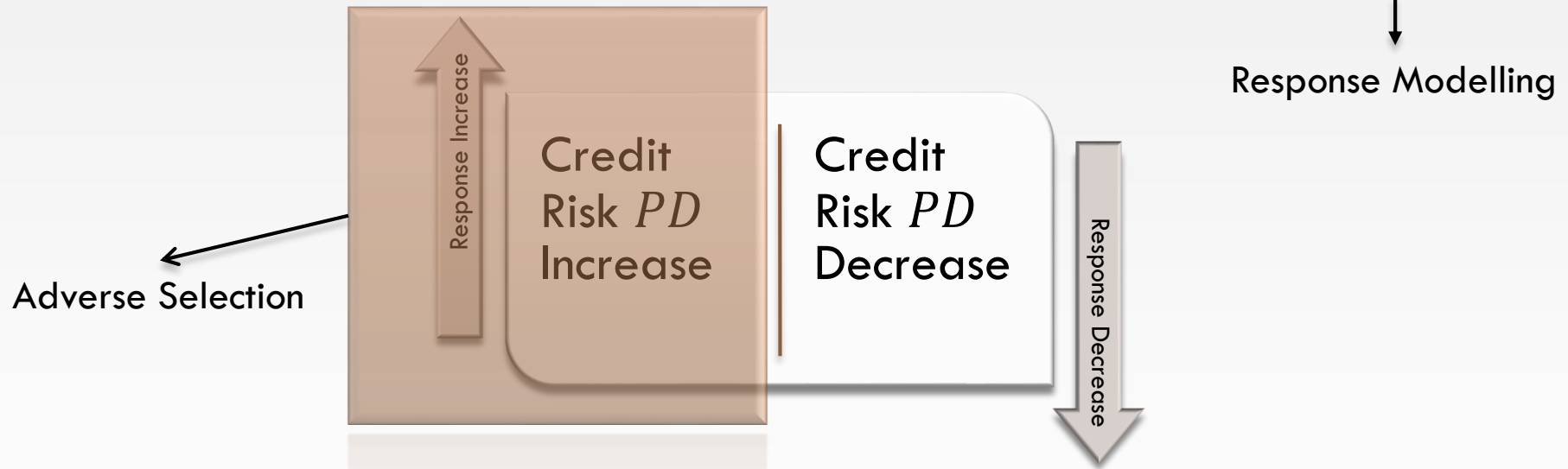
Pricing



Response Modelling

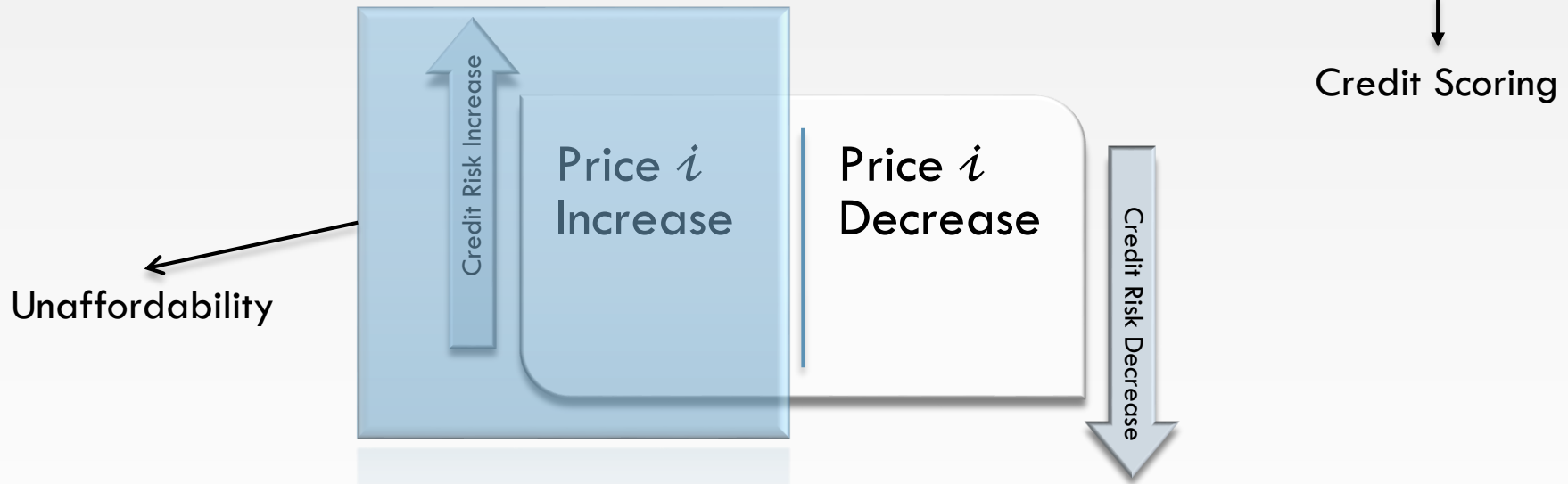
Implies $P(A = \text{Accept} | i = \text{low}) \neq P(A = \text{Accept} | i = \text{high})$

▲ Risk-Response Relationship (Adverse Selection)



Implies $P(A = \text{Accept} | PD = \text{low}) \neq P(A = \text{Accept} | PD = \text{high})$

Price-Risk Relationship (Unaffordability)



Implies $P(\text{Bad} | i = \text{low}) \neq P(\text{Bad} | i = \text{high})$

1 Unified Framework

- $P(A = a|i, s(\mathbf{x})) = q$
- $P(D = Good|i, s(\mathbf{x}), A = a) = p = 1 - P(D = Bad|i, s(\mathbf{x}), A = a)$
- $i(p, q) = i(P(Good|i, s(\mathbf{x}), A = a), P(A = a|i, s(\mathbf{x})))$

- A is a RV denoting acceptance of offered loan ~ 2 states, $a = Accept, r = Reject$
- D is a RV denoting Good/Bad states of a loan
- i is the interest rate (Price)
- $s(\mathbf{x})$ is a scoring function based on borrower characteristic vector \mathbf{x}

Questions?

End