Risk Based
Pricing
When does it work?
experian.

.01 WHAT RISK BASED PRICING IS FOR?

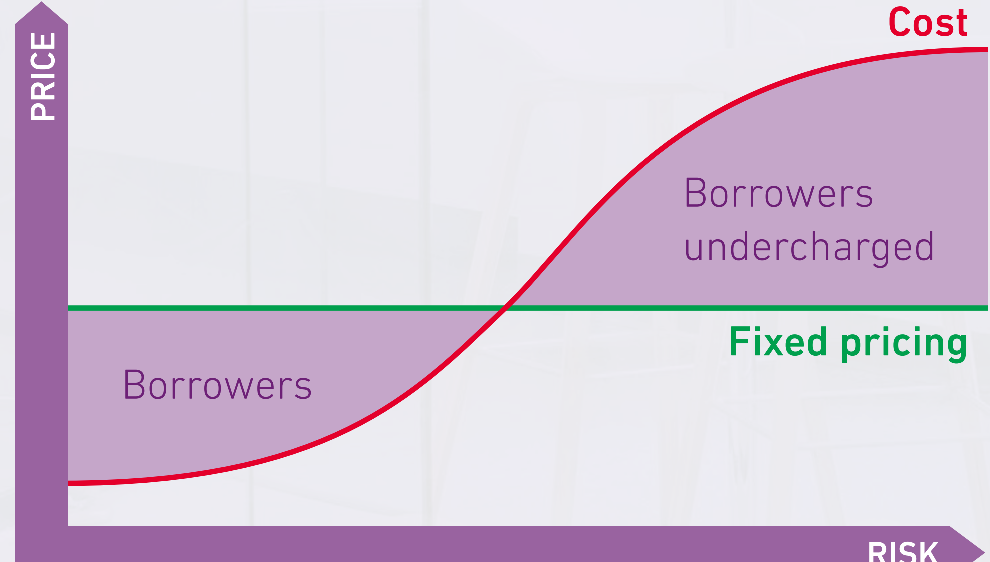
The theory

Risk-based pricing is a methodology many lenders adopt in the mortgage and financial services industries. It has been used for many years as lenders try to measure loan risk in terms of interest rates and other fees. Some formulations of RBP will be Risk Adjusted Pricing, mainly based on capital utilization ratios.

The term is well known in the insurance industry, where the tool has been used for years, while the banking industry is trying to use such tools—with varying success.

Every credit can be described as an equation of the cost of funding, operating costs, expected loss, and cost of capital. Every client is different and brings different risk parameters. This can be described as customer-based PD and customer or portfolio-based LGD. This can be understood as the higher PD and the worse LGD—cost of risk increases, and the cost of capital too.

It seems natural that financial institutions would like to present Risk Based Pricing to their customers and fairly and openly charge them accordingly to generate risk, doesn't it?



The correlation between increasing risk and increasing costs results in a disconnect for pricing between the fixed lending rate and variable costs

Well, at the end of the day, you don't want the good customers to pay for bad customers, and customers themselves should understand the pricing and accept the given price.

DOES IT WORK THAT WAY?

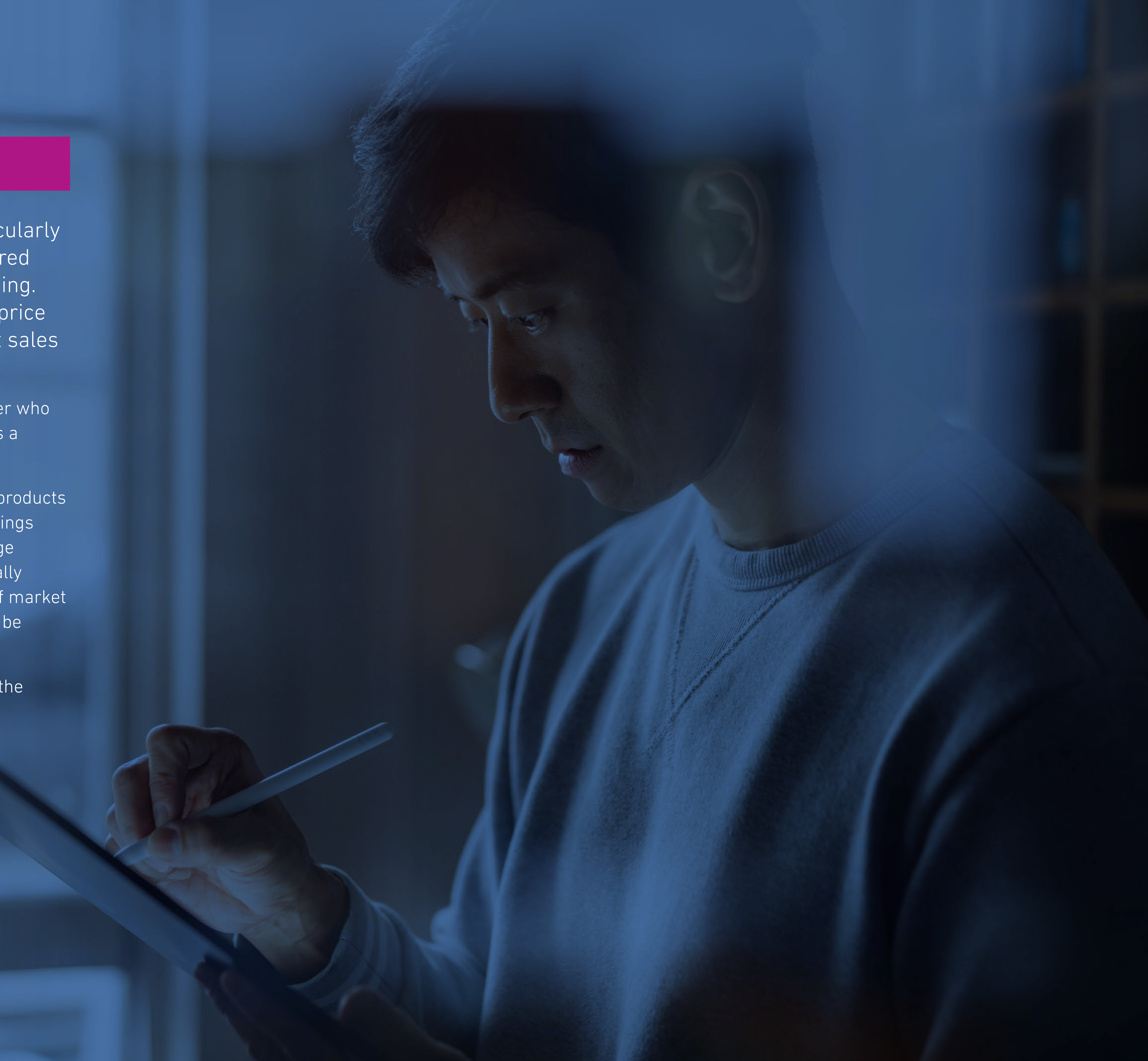
.02 SALES POINT OF VIEW: DOES IT PAY OFF?

From a sales point of view, the introduction of RBP is not particularly complicated, especially with fast products. Simple and unsecured credit products are ideal for the introduction of risk-based pricing. When risk can be assessed and priced quickly, presenting the price to the customer is almost 'instant,' which means a transparent sales conversation and an equally quick buying decision.

This approach, in turn, opens opportunities to reach out to a riskier customer who would not be accepted with a flat price approach. For sales, this approach is a classic win-win.

Complications can arise with more complex products, particularly secured products such as car loans or mortgages. Often, these products require several meetings between the client and the bank, the collection of documents that can change the risk category, etc. This, in turn, can mean a lack of transparency, especially compared with competitors who use flat pricing and, consequently, a loss of market or negative selection. Therefore, introducing RBP in such products needs to be carefully planned—and measured.

Planning should help in successful delivery and change adoption—both for the organisation and clients and in reaching expected financial results.



.03 IF WE DECIDE TO INTRODUCE RISK-BASED PRICING, WHAT OPTIONS DO WE HAVE? WHAT DOES BEST PRACTICE INDICATE?

First, we need to look at the distribution model. It works differently in a company that provides 100% digital instant lending and with a traditional branch-based model, where clients talk to the bank's representative and discuss the pros and cons, needs and risks of lending.

As a base, lenders want to charge high-risk clients with high margins and keep the excellent profile clients in the mean pricing goal. But in practice, you get a process in which low-risk clients or high-income, but not necessarily low-risk clients, request a discount—and worse, they get it.

When thinking of a traditional branch-based banking mass market, you'll often see competency delegation to a branch officer or a central team that takes individual price reduction decisions based on volume targets, relationships, or client value judged on whatever comes to mind. There is potentially some risk calculation, RAG (simple traffic light tool: red/amber/green), or more detailed, but the decision comes as a discount on an excellent client.

It's not easy to say to someone: you generate risk; therefore, you need to pay more, or we can't do business.

However, some clients understand basic scoring, profiling, etc., making the conversation more straightforward. But, still, why am I a bad customer?

We have all had this type of conversation, and that's why sales need to trust the risk management procedures put in place.

The whole risk-based pricing model should be closely linked to the profitability of the product. By definition, the purpose of doing credit business is profit. We invest the money entrusted by depositors, which imposes prudent risk management, but we also invest the capital entrusted by shareholders, which makes profit maximization the business objective. Therefore, in assessing whether the system is working, it is necessary to look at both sales levels, the cost of risk, and expected and actual cash flows.

Some financial institutions know the story and try to develop processes, making running a business easier. For example, they run simple statistical models or connect client tables to understand risk management.

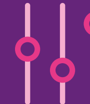
They use a matrix that works on basic parameters like loan tickets and customer DTI. Customers follow the given bands, and there is no manual decision. All loans must be serviced in seconds, including pricing—no manual approach due to cost and FTE reduction. We can also avoid demanding customer-facing situations.

.04 PRACTICAL ASPECTS: HOW TO IMPLEMENT RBP TO MAKE IT EASILY MANAGEABLE AND SIMPLE TO USE?

Let's say we want to move forward with RBP. We did our homework, segmented our clients, and saw that we have similar populations and could or should do something about it. So we decided to cut off some groups and made a different pricing model.

Success in implementing the RBP concept depends on cooperation and a good flow of information between the organization's many cells.

Most often, implementation of RBP directly or indirectly involves units responsible for:

 Management information system (MIS)

Risk management

Credit policy

Making credit decisions for a given product

Selling credit products and even (restructuring and recovery)

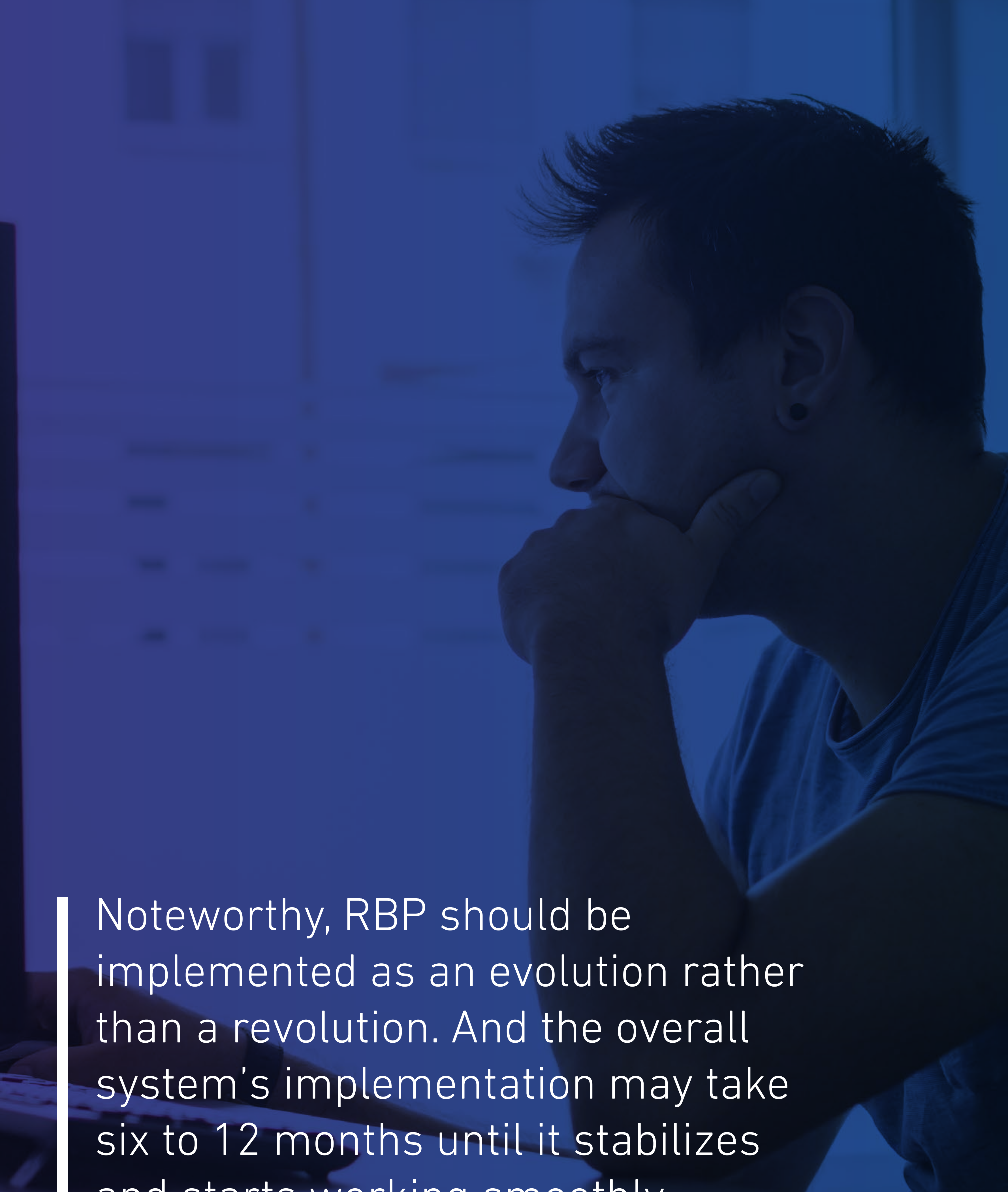
The role of those responsible for preparing information within the Management Information System (MIS) is to provide data related to costs and revenues generated by specific credit products/customer segments. The role of risk management area staff and those responsible for creating credit policy is to build and parameterize models.

Regarding product and sales, RBP implementation will change the traditional way of thinking based on volume growth and acceptance rate to an approach from the standpoint of profitability. Therefore, it is vital to conduct a broad spectrum of training and distribution support that will reasonably respond to questions or complaints from customers regarding the reasons for the price increase.

An adequately defined incentive system that considers aspects of profitability also seems critical. For decision-makers, implementing the RBP concept will bring the need to change the focus from risk mitigation to an approach from the organization's standpoint of loss and profit.

As a future state, the model of which many organizations are thinking is viewed as real-time pricing, connected with online CRM and spontaneous lending. This requires on-the-fly data analysis and customer online activeness monitoring, which requires powerful ML-based models to analyze client behavior and mandatory consent "for everything" collections, and advanced open banking usage.

This allows capturing clients not that sensitive to pricing, ready to pay more for good service while remaining low risk.

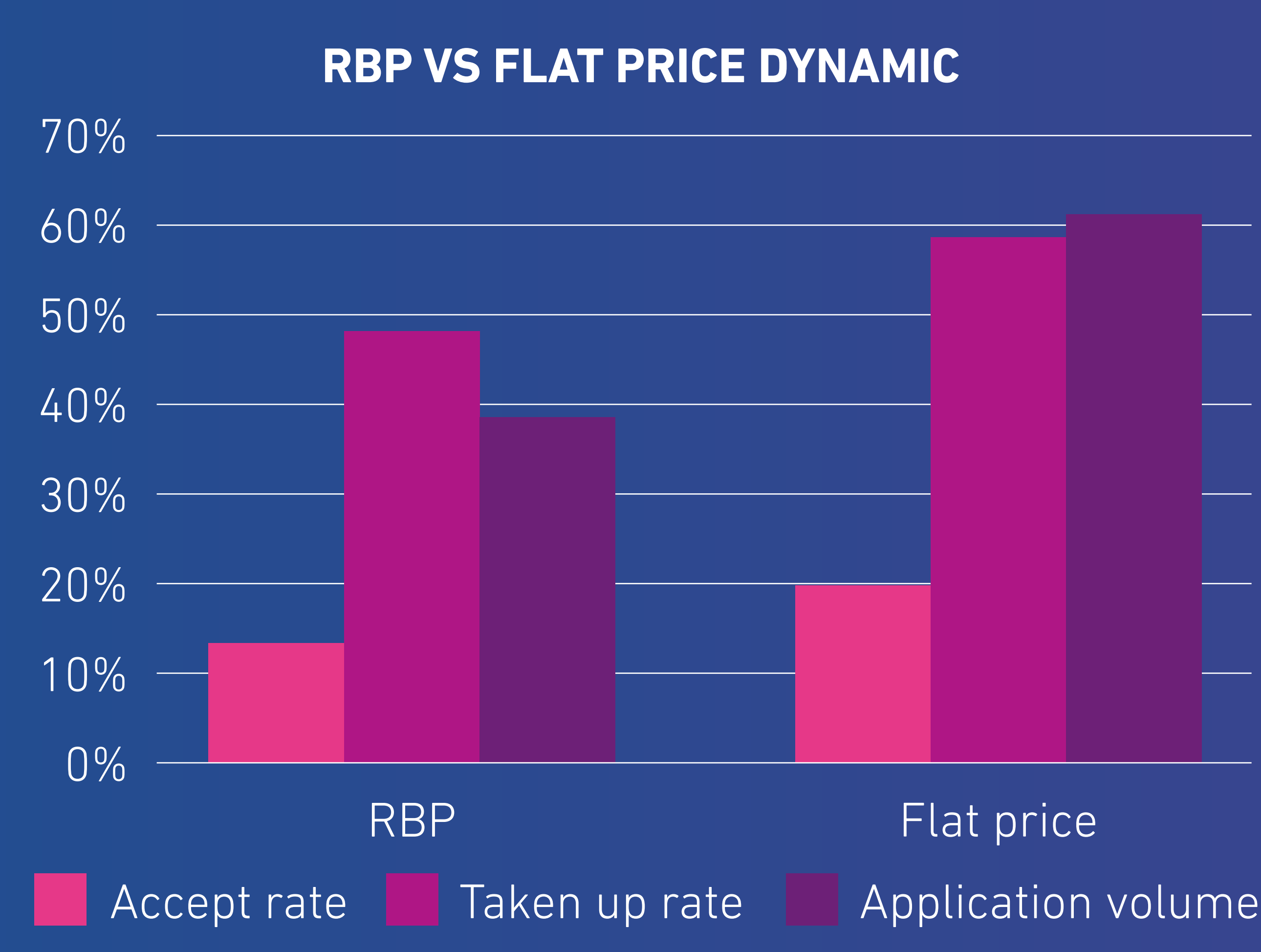


> Noteworthy, RBP should be implemented as an evolution rather than a revolution. And the overall system's implementation may take six to 12 months until it stabilizes and starts working smoothly

.05 LEARNING POINTS FROM REAL CASE EXAMPLE IN THE NORDIC REGION

One example observed from the Nordic market is when reviewing comparable loan products with different pricing approaches over a year. Here we see that when operating with a 100% transparent flat price, the quality of the applicant is better measured in the acceptance rate. Furthermore, the next take-up rate is also observed to be higher.

A case example from a Nordic Consumer Finance player:



Main purpose: Discuss how RBP works and to identify when it will not work as we expect it.

Adverse selection problem

- The true probability of being good differs from what the lender considers the likelihood of loan repayment and this difference is mainly due to **adverse selection**
- Price response function, adverse selection estimation and affordability proxies are prerequisites to develop a successful risk-based pricing strategy

Risk Distributions skewed

- The "quantity-effect" might exceed the "price-effect"
- The quantity of "bads" exceeds the quantity of "goods" in the market, **making RBP strategy being unprofitable**

This is a real-life example that RBP must be managed carefully from a marketing and sales perspective to ensure the disappointment factor of suddenly facing a high price is not well received.

> Customer segments and profiling are crucial when determining the most appropriate pricing strategy. For example, is it low risk, where the population is more price sensitive, or more mass market, where the convenience factor drives the loan appetite rather than the price level?

.06 SUMMARY

Implementing a risk-based pricing scheme is the way forward, particularly for organizations offering simple products such as cash loans.

The key is to appropriately assess segmentation, risk, and embedding of the customer or prospect due to the risk of adverse selection resulting in a de facto drop in sales to the expected customer profiles.

The practical aspect of implementation should be remembered—a common and agreed strategy for the entire organization, appropriate risk models, and the change management necessary with every change.

Implementing RBP may be viewed as ethically questionable by customers due to 'penalizing' the customer before an adverse event occurs and accepting customers with too high a risk for which the best customers will pay.

Therefore, risk measurement and persistence in implementing change should be emphasized. Properly structured reports will allow for understanding the changes in the inbound and acceptance population, allowing for effective offer and portfolio management.

Adverse selection can cause an organisation not using risk based pricing to attract more higher risk customers, while lower risk customers select the lower prices offered by a risk based pricing strategy.

The Main Problem: Adverse Selection

Adverse selection is the most significant risk you will face when introducing RBP. The bifurcation of the incoming population (TTD through the door) versus the accepted one versus the one deployed can cause risk models to lag behind reality.

The consequence of this phenomenon is that customers become selective about the price offered (linked to a risk that has not been accurately assessed), with the result that more good ones do not trigger the loan and more bad ones are accepted. Therefore, despite an actual increase in the average margin, there is a risk of a decrease in volume and an increase in the intermediate level of credit risk on the accepted population.

Techniques to counter this phenomenon have been signaled above. These include increasing the influence of analytics on the accepting population, especially the use of price sensitivity models, and a strenuous routine—reviewing the data daily, drawing conclusions, and implementing adjustments. Well, nothing can replace the hard and strenuous work of the risk analyst, which in an invisible way in the daily progress but firmly leads to the project's success.

The problem (with risk-based pricing) is that the profile of customers that take up the loan is likely to be different to the population that does not take the loan. The result is that increasing the price not only reduces volume, but also increases loss rates to a greater level than that simply predicted by the risk score.

Consequently, increasing prices increase losses and eventually reduce overall profits.

Jakob Færgeman - Principal Consultant, Experian

Bartlomiej Staszewski - Senior Global Consultant, Experian

Are you curious about how you can get the most out of your data, or do you want to hear more about our solutions? Please don't hesitate to contact us.

Jakob Færgeman - Principal Consultant, Experian
Jakob.Faergeman0@experian.com

Bartlomiej Staszewski - Senior Global Consultant, Experian
Bartlomiej.Staszewski@experian.com

22-NO-0276