

## Chapter 4.12

# Data Warehousing and Analytics in Banking: Concepts

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### ABSTRACT

In an increasingly competitive market, banks are constantly searching for sustainable competitive advantage to help them maintain their edge against competition. Over the years, banks have tried various drivers for competitive advantage, none of which were sufficient barriers for competitors. Understanding the behavior of their customers and using this knowledge to drive the interaction with customers is the most sustainable competitive advantage banks can obtain. Data warehousing and analytics provide banks with the ability to obtain customer knowledge, and the same infrastructure can be used for multiple business applications.

### INTRODUCTION

Conventionally, banks were product oriented. The customer was treated as a mere appendage

to the product sold. In the 1990s this trend started changing, especially with the advent of the Internet age. Customers became savvier with the availability of abundant information on the Internet. Banks began looking at alternate options to gain competitive advantage.

### Competitive Advantage

How different are banks from other businesses? Well, not really very different from the shareholder's perspective. Like in any other business, it involves taking calculated risks to earn a return on investments made. However, the significant difference is that the key commodity the bank deals in is *money*. Additionally, banks are one of the most leveraged businesses in the world—the capital adequacy ratio (CAR) specified by Bank for International Settlements (BIS) or local monetary authorities is typically around 8-10%. The capital adequacy ratio is a measure of the amount of a bank's capital expressed as a percentage of its risk-

weighted credit exposures. In other words, banks are allowed to gear themselves up very high.

In certain aspects, banks can be considered complex businesses. For instance, most of the products in banks have long tenures. For example, most home loans or mortgages are likely to be for 10 years or more. Banks have to contend with unpredictable cash flows. Activities that impact cash flows like loan repayments or a depositor's action when a deposit is due for maturity are determined by many factors including interest rates and solvency of the customers. Interest rate is a significant factor that affects the profitability of banks. What this basically means is that banks are more like super tankers rather than fast boats. They cannot change course instantly. Any course correction has to be planned and executed at a speed that does not result in the tanker capsizing! What this implies is that any strategy a bank plans to adopt has to be well thought out. More importantly, if something goes wrong, course correction could become difficult. This implies that banks have to build a sustained differentiation model while considering the competition, as they cannot change their course often and fast enough.

Let us examine the key trends banks have followed in terms of building competitive differentiators. Since the 1980s banks have used various strategies for creating differentiation. The most common drivers for differentiation are products, services, and channels. Product as a driver for differentiation means that banks compete with each other to bring new products to the market. Service as a differentiator was employed during the early 1990s, before getting swamped by channels with the explosion of Internet and connectivity. In the late 1990s banks rushed to create multiple channels for customers to transact with, which included, apart from traditional channels like Branch and ATM, electronic channels like tele-banking, mobile banking, and Internet banking. Quite often, a channel was introduced with a me-too mentality—introducing a channel because my competitor is doing the same! A good example

is the introduction of mobile banking by all the local banks in Singapore in the late 1990s. With the high penetration of mobile phones among the population, every bank rushed to provide mobile banking as an alternative channel touting user-friendly conveniences like checking your balance while you are on a bus! What seemed obvious later, but not apparent at that time, was that in a small geography like Singapore with branches and ATMs emerging at every corner, mobile banking became a 'nice-to-have' rather than 'must-have' facility. In a short time, practically all the banks withdrew the mobile banking channel.

Service is another competitive differentiator banks employ to attract customers. Depending upon the customer relationship with the bank, one can find service offerings like chauffeuring to collecting and banking checks that are beyond the conventional realm of banking.

The common drawback for all these drivers of differentiation—products, services, and channels—is that they can all be replicated easily by another bank. Hence the competitive advantage a bank gets through any of these methods is temporary, until the competitor bank catches up.

## **Sustainable Competitive Advantage**

What then can be considered as a sustainable competitive advantage? Any advantage that cannot be easily replicated by a competitor bank is the characteristic of sustainable competitive advantage. Knowledge and insight of its customers then is the true sustainable competitive advantage for any bank. Let us examine this concept in some detail. By analyzing customer behavior the bank can learn about their preferences and drivers for behavior. This knowledge can be used to customize products and services. For example, analyzing patterns in credit card transactions and matching them up with other interactions like customer complaints could exhibit leading behavioral indicators for credit card cancellations. This information can then be used to create an

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