

Segmentation of ABN AMRO Private Banking Singapore Customers

Bachelor Report

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Preface

As a finalization of my Bachelor Industrial Engineering and Management I'm required to execute a bachelor project. I combined this project with my minor International Management. This required me to execute this project in a country with large cultural difference from the Netherlands. The combination required an internship for 4 months. A roommate put me into contact with ABN AMRO Private Banking (AAPB) in Singapore, he was an intern there in 2005 and arranged a meeting with Peeter Chris 't Hart who is a Vice-President at AAPB in Singapore.

My objective was to help the organization with day to day tasks while I executed my research. The research itself was designed to help the marketing department and the Private Bankers in targeting their customers with the right financial products. And they needed a research to give a general overview of the customer characteristics, to find out which customers where profitable and how AAPB could target their customers more effectively by analyzing customer behaviour, wants and needs.

Summary

ABN AMRO Private Banking (AAPB) is a bank for wealthy customers with Assets Under Management (AUM) of over USD 1mn. They require extra attention due to their wealth and get personal attention from their Private Banker. Currently the bankers are supported with a profitability system that ranks the customers in different profitability groups based on their AUM and the revenue that the customer generates.

But not all of the customers were profitable and AAPB required a research in the profitability of their customers. They wanted to know why certain customers were not profitable and they wanted to know if groups of customers could be defined that require different financial products and different levels of attention.

These questions resulted in the following research objective: “To identify why customer are not profitable and to apply customer segmentation in order for ABN AMRO to better service their customer’s wants and needs”

Segmenting customers based on their behaviour, wants and needs and then analyze the profitability of these groups allows to make generalizations on these groups. AAPB will be able to better allocate their time, effort and money to service their customers more effectively.

This research resulted in the following recommendations.

AAPB has to create incentives for Private Bankers to attract core target customers and migrate “mass affluent” (AUM less than USD 3mn) to another proposition. AAPB has to acquire high potential young affluent customers and professionals, create a proposition for this life stage and cultivate their assets over time. They need to consider providing Discretionary Portfolio Management (DPM) to limited knowledge customers.

Continue business as usual activities in Indonesia given that it is a “cash cow” but focus more efforts on HK & SG where there are proportionately more green (profitable) customers.

AAPB has to focus on different sources of cross referrals given disentanglement of ABN AMRO. The Internal flow from Preferred Banking (AUM less than USD 1mn) to Private Banking (AUM higher than USD 1mn) will slow down because Preferred Banking will go to Royal Bank of Scotland and Private Banking will go to Fortis.

Promote high margin structured/specialty/alternative products to sophisticated customers. Advocate DPM and funds to customers with limited knowledge to increase activity in a manner that shifts the bonus of investing to the Private Banker. Disciplined approach to charge red customers higher margins; provide DPM to increase activity. Invest in educating orange customers to increase volume.

The current problem with the determination of the growth potential of a customer is that the wealth of the customer is determined upon the opening of the account and is not updated. If AAPB would update that information every year the growth potential metric would be more reliable and private bankers could better allocate their time to the customers with growth potential.

The final recommendation to AAPB is that they execute this research again as soon as the information from the Hong Kong office becomes available. This will result in a more robust research.

Introduction

Background

AAPB in Singapore was started in 1997. They started customer data collection around 2004 with Prospectus and Olympic. Olympic contains bank account information on every single customer of AAPB. Monthly reports are made to inform management on the status of AAPB Singapore. These reports only use information from Olympic such as Assets Under Management (AUM), Revenue and how the money is allocated, deposit, loans, stocks, portfolio, etc.

Prospectus contains customer information on their background. These include nationality, relatives, occupation, resident country, etc. One way the Prospectus data base is filled with information is by the Know Your Client (KYC) report. The KYC report is filled out by the private banker in cooperation with the customer on the start of an account, the fact that it is information on one moment and is not continuously updated is one of the problems that will be addressed later on in this research.

At the time the Prospectus information was not used at all for management information reports. It was there mostly for reporting on possible fraudulent behaviour to the authorities. AAPB recognized the potential for this data to be used for management information. By linking Prospect with Olympic new ways of data analysis can be established to get information to the management. For instance, profitability per nationality, AUM per region and type of account per nationality can be used to establish if there is a difference between Chinese and Indonesian needs.

Research project objectives

The goal of the research project is to search for useful linkages between Prospectus and Olympic information that was helpful for management and to try to segment customers by their needs.

First objective: Find different ways to present information, using new information that wasn't available up to then and link information to present management information. Management needs this information to focus on important issues and leave the unimportant alone. They need this information to make a judgement on interest rates, on commissions that they charge and so on. In essence they need this information to assess who are the profitable customers and who are not profitable so they can allocate the right resources to the right customers.

Management is unable to look at every single customer, this is why they look for possibilities to group certain customers and address their needs more generally. Segmentation helps management to group the customers based on certain customer characteristics.

This is the second objective, to segment customers. This would be achieved by looking for common characteristics between customers. These could be nationality, occupation, age, etc. When these characteristics are established, details on the profitability were added to these characteristics in order to specify the profitability of that characteristic.

Restrictions

In this paragraph the restrictions and obstacles are identified and explained.

The biggest problem in tackling this project was the notion that the research couldn't include contacting the private bankers, the employees who are in contact with the customers. This excluded gathering the information via a questionnaire. Only the available information could be used as an input for this project. This meant that this research would be a data mining research; instead of asking for opinion on the best characteristics, the research would have to be conducted by trying different characteristics and parameter and see if interesting information arises.

Second AAPB Asia had multiple offices in different countries. Singapore and Hong Kong where the largest offices were in total 80%-90% of all the customer information is stored, with an equal division between Singapore and Hong Kong. The problem was that Hong Kong didn't have their customer information in Prospectus; this meant that the linking of the information wasn't possible for around 55%-60% of AAPB's customers. This left Singapore as the only part of AAPB to be analysed, it still contained around 3500 accounts. It is still interesting to see if there are differences with the results for m Hong Kong but this would have to remain for later research.

Third, as said before, the Prospectus information was updated infrequently. The KYC report, which contains most of the information, was only inputted once at the opening of the account. For some of the information this wasn't a big problem. Your nationality remains the same all over your live. Marital status, occupation and country of residence where updated every now end than, so that wasn't a big problem. But the total wealth per person or the amount of money on an account, these weren't updated at all. This is unfortunately because one of the best indicators of the growth potential of a customer is the share of wallet; this is total wealth/amount of money on an account.

Forth, the project was based on data from the first 10 months of 2007. The information from Olympic that was used in the current management reports is from that period. Due to the bad quality of the information before that period it couldn't be used. When there is a more consistent date stream available it is interesting to execute this research again in order to try to find different results.

Last, the private bankers where responsible for inputting the data, in certain cases the bankers had to estimate the variables. It is not reported which variables were estimated, and which were given by the customer themselves. Thus no selection can be made on these criteria to filter the estimated variables. This can result in difference between the real results and results from the data sets.

Methodology

Theory

A tactical goal for Private Clients is the focus on revenue generating clients. This focus puts more weight on the financial performance of the client. Segmenting the client base properly will result in giving the right attention to the right clients which eventually leads to a more efficient sales staff and better serviced customers.

Segmentation leads to more satisfied customers, because it offers the practitioner a number of clear benefits: improved understanding of customer needs, more appropriate resource allocation, clearer identification of market opportunities, and better tuned and positioned marketing programs (Wind 1978; Kotler 1994).

From the bank perspective, segmentation is all about maximizing value from every customer; so customers will pay more if they feel the product offering provides something special to them. This is particularly important in the context of private banking, as essentially the business model is based on the premise of high value clients and tailored services (Molyneux and Omarini 2005).

Ball, et al. (2006) the process of Market Screening. This is a method of market analysis that permits management to identify a number of desirable markets by eliminating those judged to be less attractive. This screening process can be divided in two types of screenings.

Country screening

Country screening takes countries as the relevant unit of analysis. First a general analysis of the profitability of a country will be analyzed. An attempt is made to look for characteristics that are general for that country. If these assumptions can be made then AAPB can target the customers within that country with specific products. An example is that Indonesians are risk adverse, so they don't need to be targets with structured products. While the Chinese like to take risk and are very interested in structured products.

Segment screening

After the analysis on country level is conducted a segment screening is conducted. This is the analysis of groups of customers based on their similar wants and needs. From this perspective, age, income, and psychographics (lifestyles) are essential means of identifying market segments. Each of these segments may share wants and needs across borders.

Ball, et al. also select 5 criteria for these segments:

1. *Definable*. Segments should be identifiable and measurable
2. *Size*. Segments should be large enough to be worth the effort needed to serve a segment
3. *Accessible*. The target segment should be reachable for promotional or distribution purposes
4. *Actionable*. If we cannot bring components of marketing programs (the 4 P's of product, promotion, place and price) to bear, it will not be a successful segment
5. *Capturable*. If a segment is "captured" by the competitor then this will not be a successful segment

An oversimplifying attempt by Storbacka(1997) to describe the goal of segmentation is the following:

“Identify your target segment; describe the characteristics of the segment members; determine their needs as to the product that you are selling, adapt the marketing mix components according to the segment's needs, sell the products, get increased product profitability and thus increased profitability of the firm”

Storbacka (1997) uses similar criteria. He states that to achieve a good fit between the case and segmentation solution, four criteria assess segmentation solutions. The segmentation must be permanent, unambiguous, easy to communicate and a reflection of buying behaviour. These definitions of these criteria are given below

The solution should be permanent enough to render possible the development, implementation and evaluation of a new market strategy. The solution should form the basis for the development of market strategies over a number of years. The solution should also be unambiguous so that customers can be placed only in one segment at a time. This facilitates longitudinal analysis of customer relationships. Reflecting buying behaviour means that belonging to a group should be pertinent to a specific buying behaviour. Hence, the fact that a customer belongs to a certain group already communicates something about the configuration of the customer relationship. It is important in the implementation stage to provide employees with a simple orientation to the foundation of the new strategies. This is especially important as almost all strategies include the introduction of new service charges - something which creates a lot of conflicts in the front line (customers complain to front line personnel).

Problem identification & formulation

AAPB groups their customers only on Assets Under Management (AUM: cash, non-cash and loans) and the Revenue they receive from a particular client (interest, commission, fees). The problem with this method is that it assumes that all customers are alike, and thus all customers are targeted with the same products to enhance their profitability. By combining the information from Prospect and Olympic, other characteristics can be added to the equation. New groups can be formed to see if separate groups of customers can be identified that require different products and different targeting methods.

A young entrepreneur of 40 is likely in need of different products, he might need funding for his business while a retired 80 year old might look for ways to distribute his wealth after his passing. Also differences between nationalities might exist, Chinese investors are known for their willingness to take risks, while Indonesian investors look for a safe haven to store their money as they don't trust the Indonesian government. Linking the Prospect and Olympic information enables this division between customers.

Another important issue within AAPB is the identification of non-profitable customers. The current management report gives a good insight which customers are non-profitable customers but it doesn't give a good insight into why customers are non-profitable customers. With the linking of the two databases a division can be made in the accounts that they hold, is it just savings that they have or are they more in to stock and portfolio management. Customers unfamiliar with the stock market can be informed about simple risk-averse products to increase profitability, active customers can be targeted with sophisticated financial products and contact with inactive customers that just want to save their money can be lowered to a minimum. This will result in a more effective allocation of people, time and money and thus increase the overall profitability.

Research questions

The combined issues from the last paragraph result in the following central research question:

“Why are certain customers of AAPB not profitable and how can ABN AMRO service their customer’s needs in a more effective way by applying customer segmentation?”

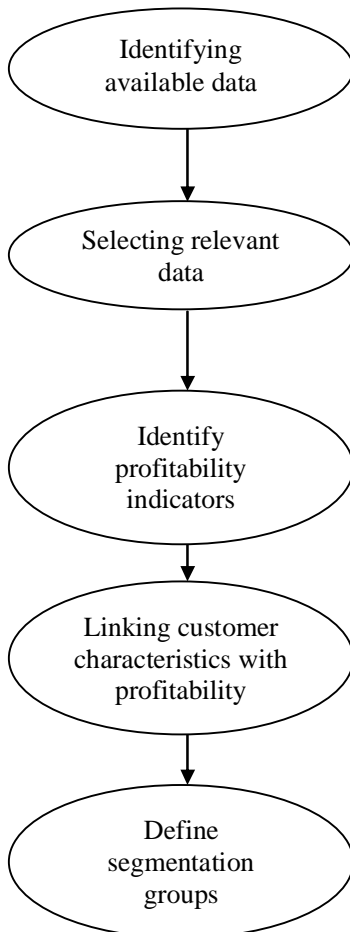
This central question can be divided in the following sub questions. Each question will represent a step in the research structure that can be found in the next paragraph. The questions will be answered in the results and findings chapter in the collected data and finding paragraph (page 14 to 19). Here each question is answered separately

These are the following questions:

- *“What data is available from the current database and can be used in the research?”*
- *“Which of these criteria can be used for the customer segmentation?”*
- *“Why is a customer not profitable enough?”*
- *“Which relations can be established between the profitability of a customer and the behaviour of a customer?”*
- *“Which needs, wants and behaviour of a customer can be used for the segmentation and the targeting of a group of customers?”*

Research structure

The research structure can be divided in five steps. These steps have to be executed consecutively in order to get the right data. First all data needs to be collected, then a selection needs to be made for relevant data. After that the profitability of customers needs to be measured, this then needs to be linked with customer behaviour in order to finally select significantly different customer segmentation groups.



First step: Identifying available data

The available data within Prospect and Olympic needs to be located and identified. A judgement needs to be made whether at all the information can be used for this research. Soft data; strings of information can't be used for quantitative research as it is incoherent with each other.

Second step: Selecting data relevant for this research

Once the data has been gathered a selection needs to be made on the suitability of the data for this research. Not all the data is useful as a characteristic for segmentation. In the restrictions paragraph in the introduction chapter, problems which I encountered with the gathered data are discussed.

Step three: Identify indicators for customer profitability

Once the usable data entries have been selected a measure of profitability needs to be developed. Currently there are 2 indicators of customer profitability, Assets Under Management (AUM) and Revenue. The object of this step is to search for other indicators of customer profitability that can explain why customers are non- profitable customers.

Forth: Linking customer characteristics with their profitability

This step will identify links between customer behaviour, wants and needs and the profitability of that customer. This will give AAPB a good idée on where to cut down on investments and where the chances are for growth. This will be the basis for the final step.

Fifth: Define segmentation groups

Define groups of people that share similar behaviour, wants and needs within the group. But have significant differences in behaviour, wants and needs between different segmentation groups. This selection is made in order for AAPB to service their customers wants and needs more effectively and more specific.

Data collection and processing

As said before, AAPB has two databases Prospect and Olympic. Olympic contains all information on the accounts that customers hold with AAPB. Ranging from saving and deposit accounts, Discretionary Portfolio Management (DPM) accounts, the loans that they hold and the transactions they make on their stock accounts. It also holds information on the Revenue that is derived from each of these accounts and on each action that a private banker performs for their customers. This information is available in access and can be exported to excel. It is sorted with a Parent ID number that is linked to the main account holder. More than one account (Client ID) can be added to one parent ID. Due to the work of Thijs Fransen this information is in good shape, complete for all parent ID's, very diverse and easily accessible.

And then there is Prospect. This is the database that holds data on customer needs, wants but also on their age, income and other psychographics. This data can be accessed with a computer program that will be tailor made for this research. Once the relevant data for this research has been selected, the program will be written. The output will be in Excel. The KYC report, which is the major input source for Olympic, requires a report for each individual account and it is therefore on Client ID. This information has to be translated to Parent ID before it can be linked with the Olympic data. This can lead to problems as it is hard to determine which account (Client ID) is the main account of the Parent ID.

The data from Prospect is of a lesser quality. As mentioned before the data for the Hong Kong customers is not available. Also the data is not always accurate as some of the data is only inputted once while regular updated information is preferred. Not all of the KYC reports have been filed completely, for some accounts not all the data is reported. This results sometimes that some accounts can't be used in the analysis. These problems will be further elaborated in the results and findings chapter.

Results and findings

Data collection experiences

As mentioned before, this research was limited to the available data at AAPB. As expected, there was information that would have been very interesting but wasn't available due to different reasons.

Information was entered as text. For instance Private Bankers had to assign a value to the houses of their customers and other possessions. But different private bankers gave different names for houses, cars and boats. It was impossible to use this information as it was inconsistent among the answers from the Private Bankers. It would have taken too much time to sort that out for all the 1500 customers.

Not all the questions were answered by the Private Bankers. This resulted that for certain customer behaviour characteristics there were too much blanks and that they weren't usable for the research.

Some static data entries should have been more dynamic. For instance, customer's total wealth was only inputted on the opening of the account. It made the determination of share of the wallet, the size of the AAPB share of a customer's total value, as of today impossible. You could only determine what it was on the opening of the account. This information is very interesting as it gives you an idea on the growth potential for this customer within AAPB. If this information was updated once a year this will be a great improvement.

Some data was obviously wrong. In a number of cases Private Bankers said that the total value of a customer was the same as the amount of money in the bank accounts of the customer. This is possible but only if the customers hold no other assets or have a load of debt. But it is highly unlikely and therefore this information had to be removed from the research.

Collected data and findings

In this paragraph the research steps will be reflected and the research questions will be answered. A more extended data analysis can be found in the attached presentation "Singapore Segmentation". This presentation gives an overview of the results from the research and incorporates the conclusions and actions that were drawn from the results.

First step: Identifying available data

Central question: *"What data is available from the current database and can be used in the research?"*

The total number of customers used for the analysis was 1,483. The total amount of Private Customers that AAPB has in Asia is around 5,000. Customers with less than USD 50,000 in AUM were left out of this analysis. AAPB requires a minimum amount of USD 1mn. These accounts with less than USD 50,000 are from people that used to be active within AAPB and probably have switched to a different bank but still hold a little cash.

Also the Hong Kong based customers were left out. They had not finished the inputting the KYC information into the Hong Kong database. It is expected to be finished by March 2008, for this research the information couldn't be used.

In some cases extremes were left out as they skew the average due to a low amount of people in that group. Most of the time these were 6 customers that had USD 100mn or more in AUM. With averaging the AUM within certain segmentation groups the influence of these customers was too big. Notes were made in this corresponding graph that excluded that information.

The selection that was made can be found in the appendixes under “data entries” where there is a short description on each entry. Not all of these data entries were relevant for this research. The next paragraph will go further into the relevant selection that was made and will explain the data entries that were used.

Second step: Selecting data relevant for this research

Central question: *“Which of these criteria can be used for the customer segmentation?”*

An explanation of the important data entries is given in this paragraph. All of the entries that were used for the research can be found in the table below. The rest of the data was used as input for making selection. This was for example “Is total AUM lower than ...” was used to split the customers in different AUM groups and “Parent ID” was used to link the different datasets with each other. It could also be that it was an input for one of the profitability measures. USD_Commission and USD_TXN was used to determine the Margin and volume. The other data entries were left out of the research. They were useless once the data was reviewed, for example with “amount of money in ...” was very inconsistent and not up to date.

Customer characteristics	Profitability measures
RM Name	USD_Income
Nationality	USD_AUM
Gender	ROA BPS
Age	Margin on trades BPS
Residence	Volume in %
Know to PB since	Active
Years on book	%Cash
Business Type	Segment colour
Source of Wealth	Wallet share Prospect
Referral Type	Wallet share AUM
Investment Knowledge	

The customer characteristics were used for the segmentation in different customer target groups.

- RM Name was used to make a selection on each customer that was with a Private banker (RM is Relationship Manager). This was used to see if a certain Private Banker’s had relative more non-profitable customers and if they might have given too much discount on the margin that a customer has to pay
- Nationality of the customer was used to generate assumptions on the profitability of the customers by nationality
- Gender; is there a difference in the behaviour of man and woman.
- Age; can assumption be made on the stage of life people are in? Does a customer of 40 need different financial products than one from 80
- Residence is almost the same as nationality, but because Indonesians can live in Singapore this extra check was used to see if it would have made a difference
- Know to PB since; how well does a Private Banker maintain the relationship with a customer. And how reliable is a customer to his or her Private Banker

- Years on book, is the amount of years that a customer is a customer of ABN AMRO. Due to transfers of Private Bankers to different positions or to different banks this could result in different results.
- Business Type can be used to analyze if different occupations require different products.
- Source of Wealth was used to question if customers that inherit their money use it differently than customers who had to work for it
- Referral Type was used to measure the recruitment system of ABN AMRO, an attempt was made to investigate if a customer was very profitable for ABN AMRO because that customer would bring in a lot of new customers, But this failed as the data was not sufficient
- Investment Knowledge was used to find differences between people with a high investment knowledge and people with limited investment knowledge

Profitability measures were used to analyze why a certain customer was not profitable enough, the results are in the next paragraph. Here the explanation is given on the chosen measures.

- USD_Income is the amount AAPB makes on a customer on yearly bases. This is the main measure as it is used now for the measuring of the profitability
- USD_AUM is the total Assets a customer holds with AAPB. This is the other parameter that is used for the measuring of the profitability
- Segment colour is the colour a customer gets based on the Income and the AUM. There are three colours; Red, Orange and Green
- ROA BPS is Income divided by AUM in base points. One base point is 0.01%.
- Margin on trades BPS. This is the commission AAPB makes on a customer divided by the value of the trades that customer makes in base point. For a profitable customer this should be above 100 base points. If it is lower than 100 base points it could indicate that the Private Banker is giving more discount to a customer than it deserves
- Volume in % is the value of the trades divided by the AUM of that customer in percents. This should be around or above 100%, if it is too low it could indicate that a customer is not as active as it should be. Further examination is needed to know why this customer is not so active
- Active, this measures if the customer is active at all. If the customer is not active further examination is needed to know why this customer is not active and action needs to be taken on the possible reallocation of that customer to a different proposition.
- %Cash, is the amount the customer holds in cash on savings or deposits accounts divided by the total AUM. A high percentage indicates that a customer holds a lot of their AUM in relative low revenue generating assets
- Wallet share Prospect. This is the AUM derived from Prospect divided by the Total Customers Worth. This is a measure of growth potential with a customer. This is a static measure as the AUM in Prospect is the AUM on the start of the account. The downside is that this information quickly becomes outdated
- Wallet share AUM. This is the same measure as the last one except that the current AUM is used. The Total Customers Worth is a static measure as it is only inputted once upon the opening of the account. This also is not a perfect measure of the growth potential

The Wallet share is an important measure for AAPB to measure the growth potential of a customer. Unfortunately both these measures aren't perfect. The advice for AAPB is to update the customers Total Worth every year to get a reliable measurement of the growth potential.

Step three: Identify indicators for customer profitability

Central question: *“Why is a customer not profitable enough?”*

AAPB uses a profitability system based on AUM and Revenue from the customers. More AUM and higher Revenue resulted in a higher rating. This system rates customers in three colours:

- Red: non-profitable customers,
- Orange: mediocre customers that can develop into profitable customers
- Green: profitable customers.

Besides this profitability system, two more indicators were designed to see whether customers are profitable. These were Volume and Margin.

Volume is a turnover ratio. This is the value amount of trades that a customer makes on a yearly basis, divided by a customer's total value with AAPB. It is desired to be around 100%. This means that it is desired for a customer to trade a value equal to its total AUM in the course of one year. When a customer trades substantially below that amount than that customer probably isn't profitable.

Margin is the amount of commission customers pay when they buy a certain product from the Private Banker. AAPB holds a profitability border of 1% or 100 base points. When the Margin is below 100 base points the customer is not profitable enough.

To answer the question: Why is a customer not profitable enough? It can be for 4 reasons.

If a customer is not profitable enough it will be because the Revenue is too low. This can have three main reasons. Either the customer has little AUM, the customer holds most of the AUM in low revenue generating assets (mainly in cash) or the Private Banker gives the customer a discount.

These three reasons can be measured in the following ways:

Assets Under Management are measured and are an input for the current profitability measuring system. If the AUM are too low then this will result in a cost-benefit disparity. The costs of running his account by a Private Banker are higher than the money AAPB can make out of that customer. This customer should be transferred to ABN AMRO Preferred Banking.

The volume can be too low, below 100%. This is a measure of the activity of a customer. If a customer has a low volume it is probably because that customer holds most of the AUM in non-revenue generating accounts. These mainly are saving and deposit accounts where there is a low margin for AAPB. Analysis on these customers is necessary to establish why they hold most of their money in these classes. This will be discussed further in later paragraphs.

Finally, the margin can be too low, below 100 base points. Here it can be seen if the customer gets a discount from the Private Banker on the margin he charges on a product. Private Banker can give discounts but only to profitable customers. Only if a customer is a green customer then he should be eligible for a discount, red and orange customers shouldn't be eligible for a discount.

Forth: Linking customer characteristics with their profitability

Central question: *“Which relations can be established between the profitability of a customer and the behaviour of a customer?”*

The current profitability system was used to search for correlation between the profitability and the behaviour of the customers. This system was also used to understand why customers were or weren't profitable or profitable enough. Besides that Volume and Margin were used to explain the reasons for the profitability or the non-profitability of that customer group.

Overviews of the important relationships are discussed in this paragraph. In the attached presentation “Singapore Segmentation” more extensive results are presented. The results are divided in three separate focus groups. Targeting; the profitable customers on which ABN AMRO should focus. Markets; describe the relationships between nationality and profitability. Levers, the area where ABN AMRO can gain efficiency.

Targeting:

The core target market of AAPB are customers with AUM between USD 3-15mn. This group only represents 22% of the base whereas customers with AUM less than USD 3mn account for 74%. Customers younger than 40 years and professionals and salaried display strong financial drivers yet only represent 5-10% of total customers. 54% of customers are not active, don't trade in stocks, 23% of customers have limited investment knowledge and 69% have average investment knowledge.

Markets:

The Indonesian market contributes less to AUM and Revenue in comparison to its representation in the customer base. Indonesia has most non-active, low tolerance, limited/average knowledge customers, with highest cash allocations (75% of AUM is in cash). Hong Kong, Malaysia and Singapore contribute relatively more to AUM and revenue in comparison to their representation in the customer base. They display low margin but high volumes due to reliance on equity. Indonesia, Taiwan, and Thailand have low volumes (high cash allocations) but support high margins due to prominence of structured products and funds.

Levers:

52% of referrals come from AAB network versus 8% from other customers. Sophisticated customers have strong financial drivers but low margins due to negotiation skills while limited knowledge customers have high margins but low volumes and high cash allocation. 70% of the customers have a Margin & Return On Assets (ROA) below 100 base points while another 18-25% is within 100 to 200 base points. Red customers have low ROA due to low volume, low margin and high cash allocation (70% or more of AUM is in cash). They also have a higher portion of limited and average knowledge customers. Orange customers show good margins but there are opportunities to drive volume.

Fifth: Define segmentation groups

Central question: *“Which needs, wants and behaviour of a customer can be used for the segmentation and the targeting of a group of customers?”*

In this chapter the recommendations for AAPB are presented. Advice is given on the targeting of different segment of customers to better service the customer wants and needs.

Targeting:

AAPB has to create incentives for Private Bankers to attract core target customers and migrate “mass affluent” (AUM less than USD 3mn) to another proposition. AAPB has to acquire high potential young affluent customers and professionals, create a proposition for this life stage and cultivate their assets over time. They further need to explore root causes for inactivity and consider providing Discretionary Portfolio Management (DPM) to limited knowledge customers with the message: “You keep the control, we keep you sharp” (Dutch value proposition)

Markets:

Continue business as usual activities in Indonesia given that it is a “cash cow” but focus more efforts on HK & SG where there are proportionately more green (profitable) customers.

Levers:

AAPB has to focus on different sources of cross referrals given disentanglement of ABN AMRO. The Internal flow from Preferred Banking (AUM less than USD 1mn) to Private Banking (AUM higher than USD 1mn) will slow down because Preferred Banking will go to Royal Bank of Scotland and Private Banking will go to Fortis.

Promote high margin structured/specialty/alternative products to sophisticated customers. Advocate DPM and funds to customers with limited knowledge to increase activity in a manner that shifts the bonus of investing to the Private Banker. Disciplined approach to charge red customers higher margins; provide DPM to increase activity. Invest in educating orange customers to increase volume.

Conclusions & Recommendations

The main objective for this project is to identify groups of customers that share customer behaviour, wants and need in order to help AAPB with targeting their customers with the right financial products. It is important to first understand who their customers are and then it is important to understand what kind of behaviour their customers have in order to identify characteristics that can link customer groups of similar behaviour, wants and needs.

The data consisted of 1483 Private Customers that had their Private Banker in the Singapore office of AAPB. The total amount of Private Customers that AAPB has in Asia is around 5000. But the information on most of the customers wasn't available. Hong Kong wasn't ready with inputting their information in the Prospect system. A recommendation for AAPB is to execute this research again as soon as the information from Hong Kong is available. This will result in covering most of the customers in Asia and makes the research more reliable. Now the Hong Kong customers are underrepresented, the data will ensure a more balanced research. Also customers with AUM of less than USD 50,000 were left out of the analysis, these customers most probably left AAPB for another bank.

AAPB already used a profitability system based on AUM and the Revenue. This system resulted in Red, non-profitable customers, Orange, mediocre customers that can develop into profitable customers, and Green customers, profitable customers. This system was used to search for correlation between the profitability and the behaviour of the customers. This system was also used to understand why customers were or weren't profitable or profitable enough. Most of the research was data analysis and data interpretation. Dividing customers based on different characteristics and profitability.

The conclusions and recommendations from this research can be divided in three segments. Targeting; who are the customers and what is the core target. Markets; the differences based on the nationality of the customer and Levers; the area where ABN AMRO can gain efficiency.

Conclusions

Targeting:

The core target market of AAPB are customers with AUM between USD 3-15mn. Customers younger than 40 years and professionals and salaried display strong financial drivers. 54% of customers are not active (don't trade in stocks), 23% of customers have limited investment knowledge and 69% have average investment knowledge.

Markets:

The Indonesian market contributes less to AUM and Revenue in comparison to its representation in the customer base. Indonesia has most non-active, low tolerance, limited/average knowledge customers, with highest cash allocations (75% of AUM is in cash).

Levers:

52% of referrals come from AAB network versus 8% from other customers. Sophisticated customers have strong financial drivers but low margins due to negotiation skills while limited knowledge customers have high margins but low volumes and high cash allocation. 70% of the customers have a Margin & Return On Assets (ROA) below 100 base points while another 18-25% is within 100 to 200 base points. Red customers have low ROA due to low volume, low margin and high cash allocation (70% or more of AUM is in cash). They also have a higher

portion of limited and average knowledge customers. Orange customers show good margins but there are opportunities to drive volume.

Recommendations

Targeting:

AAPB has to create incentives for Private Bankers to attract core target customers and migrate “mass affluent” (AUM less than USD 3mn) to another proposition. AAPB has to acquire high potential young affluent customers and professionals, create a proposition for this life stage and cultivate their assets over time. They need consider providing Discretionary Portfolio Management (DPM) to limited knowledge customers with the message.

Markets:

Continue business as usual activities in Indonesia given that it is a “cash cow” but focus more efforts on HK & SG where there are proportionately more green (profitable) customers.

Levers:

AAPB has to focus on different sources of cross referrals given disentanglement of ABN AMRO. The Internal flow from Preferred Banking (AUM less than USD 1mn) to Private Banking (AUM higher than USD 1mn) will slow down because Preferred Banking will go to Royal Bank of Scotland and Private Banking will go to Fortis.

Promote high margin structured/specialty/alternative products to sophisticated customers. Advocate DPM and funds to customers with limited knowledge to increase activity in a manner that shifts the bonus of investing to the Private Banker. Disciplined approach to charge red customers higher margins; provide DPM to increase activity. Invest in educating orange customers to increase volume.

There is one more recommendation for ABN AMRO that is not part of the marketing strategy recommendations. To examine the growth potential of a customer the metric share of wallet is used. This is the AUM divided by the total wealth of that customer. If that percentage is low the customer has a high growth potential. The current problem is that the wealth of the customer is determined upon the opening of the account and is not updated since then. If AAPB would update that information every year the growth potential metric would be more reliable and private bankers could better allocate their time to the customers that can grow.

Reflection

In my preparatory report I had to define goals that I wanted to achieve. In this chapter I will come back on those goals and will in what matter I have accomplished these goals.

Overall process

Overall this was an unforgettable experience. This was the first time for me to ever be away for a long period. It was very exciting to take this step and it gave me the idea that there is more then only the Netherlands and got me interested in living abroad. I have met a lot of different and interesting people and I'm still in contact with some of them. I learned that every international student or intern is in the same position as you and is just as excited to meet new people. So I don't need to worry when I speak to a stranger, as long as you are open, they will be open to.

The time with ABN AMRO was also a very good time. My colleagues welcomed me with open arms and I easily adapted to the working environment. We quickly came to a research project that was relevant for ABN AMRO and interesting enough for a bachelor thesis. I got the support from my team to work on this project as it would be of great assistance for them in designing the new marketing plan.

In my experience, only one thing was not satisfactory. The time it took me to finish this project; the writing of the minor report and the bachelor report. Due to a combination for lack of interest, loss of the laptop that made me start all over again and other opportunities that took my attention. But in the end it was just my laziness that results in this late completion.

The reflections are divided in a few subjects to give a more complete picture of the process. These are the objectives as defined in the objectives chapter and most of the bachelor and minor objectives are from the guidelines as defined by Universiteit Twente in the *minor handleiding*

Results versus Bachelor objectives

1. Show that you have sufficient knowledge and insights in your own field of study;
The bachelor Industrial Engineering and Management is a broad study, it handles material that ranges from statistics to economics and from marketing techniques to business analysis. My project included most of these fields. I used SPSS for data analysis and the analysis whether data was significant to use it in my research. I used marketing techniques to make targeting strategies for segmented groups of customers. And I used the data to analyze the business for imperfections, which customers where not profitable. I think the project is wide enough to have covered most of my bachelor.
2. Be able to collect relevant data, to interpret them and finally make a judgment also based on the weighing of the relevant social, scientific and ethical aspects;
For this project I needed to collect data from 2 databases. I needed to select the data that I wanted and I needed to have a company develop a program to extract that information. When I had the data I needed to select what could be used and what not. I needed to do theoretical research to find the right tools for determining if a customer was profitable. But I also needed to take into account other than just financial drivers that could make that customer profitable, future value of a customer, establish their needs and wants. And finally I needed to make a judgment on the relevant items that ABN AMRO could use to best determine the segmentation groups.
3. Fulfill a task of a certain "academic" level of difficulty, related to your curriculum;

This relates to the first objective. It relates to my curriculum and I tried to encompass most of the material from my bachelor. I interpret an “academic” level as a level where you can analyze, interpret and solve a problem with a level of independence. PC and I discussed the problem of non-profitable customers and handed gave we the boundaries of the research and pointed me to the tools of the data bases. For the rest I had to go out and find this out by myself, I contacted the people that could extract the information, I analyzed the data and together with the marketing strategist we designed the targeting plan for ABN AMRO Singapore. It is up to the supervisors to decide if it is of an academic standard but I think it does.

4. Show a certain level of independence in the preparation and execution of the project.
As said in answering the last objective, I think that a certain level of independence is necessary. I arranged this internship by myself, I arranged a place to stay and had to go out and meet people by myself. I had to draw myself over the line to finish this research but in the end the research is here.

Results versus Personal objectives

5. Applying theory in practice
This was my first real work experience where I could use the thing that I have learned from my study. I have had my own consultancy company, but this was the first time gaining experience working for a boss in the same field as my later career. It was very interesting to be handed a real problem, be able to analyze it and find a solution that could be implemented by ABN AMRO.

I used several techniques, theory and experience that came from my study. Working with SPSS on an actual problem, target customers with marketing theory and use my experience to search for relationships and indicators of profit.

6. Understanding the Asian culture
My four months in Asia learned me a great deal about the Asian culture, but to state that I would understand the Asian culture now is a little too much. I have only been in a few places in Asia and still need to get experience in the biggest country of the all, China. But starting with Singapore was a good step. Because Singapore is a mix of people from different regions of Asia you can experience many different cultures all at once. This first experience hopefully is one of many, I at least held some Singaporean friend whit whom I still have contact today.

7. Getting acquainted with working for an international bank
For me, there were two important goals in this internship. The first was establishing if I liked it to work in an international environment and working abroad. Second I wanted to know if wanted to work in the world of finance. I already had experience with working in the consultancy business. But there I missed the numbers; it was more of a qualitative business instead of a quantitative one.

Both goals have been confirmed by this internship. I got even more interested in finance although it was not for Private Banking but more for Investment Banking where project based work with quantitative analysis. Later I did an Internship with Lehman Brothers and currently I’m doing my master thesis at NIBC. I got a job in London, were I will start in August. This internship and especially the name of ABN AMRO Singapore on my résumé opened a lot of doors for me.

8. Upgrade my English writing and speaking
Having to talk English for almost 90% of the time during this period severely increased my English verbal skills. It was a learning process for me, especially the dialect that they speak

over there. But gradually my English was improving. I forced myself to write everything in English ever since because I know that I needed a long way before my English was good enough to be accepted to work in an overseas country. Because of my dyslexia it is still very difficult to get the spelling of all the words right; I especially have to focus on words that sound similar such as where and were or which and witch. But constantly focusing and the spelling check help me a great deal.

Implications

Study

I already had a focus on finance but this internship got me further interested in that. Because I was with ABN AMRO when they were taken over by the consortium of RBS, Fortis and Santander I got interested in the world of corporate finance and Mergers and Acquisitions. My next internship with Lehman was a part of my free choice courses within my master. This was with the M&A department of Lehman Brother Benelux, here I worked on two live deals and at the end I wrote a paper on defence measures against hostile takeovers where I used my experience gathered both from Lehman and from ABN AMRO.

Career

When I applied to different business course before I went to Singapore, I already reaped the fruits of the internship with ABN AMRO. I had this internship on my résumé and people were always interested in how I got and acknowledged the possibilities that this would hold for me. Also when I applied to the internship with Lehman the time with ABN AMRO was the thing that opened the door for me.

After the internship with ABN AMRO I knew that I wanted to start my career abroad and that I want to work in different countries. But it took the experience with Lehman Brothers to realize what segment of the financial world this would be. After that internship I started to focus on getting into the London Banking Tour of 2009. This is a trip of one week to London where 24 finance students from the Netherlands visit 10 of the largest Investment Banks, from Goldman Sachs to JP Morgan Chase. I managed to get in, based on my experience with ABN AMRO and Lehman Brothers.

Unfortunately on the first Monday of that week Lehman collapsed, It was an incredible amazing time to be there in London. We visited the Lehman office that day and actually saw people walking away with their office documents in a box. It was shocking to see because a few friends of mine just started there in London and probably lost their jobs.

After that week I was invited to some interviews after applying with six banks. The crisis was on its peak and most banks stopped their graduate program or were hiring a limited amount of people so none of the interviews were a success. I applied with another six banks that was invited to a few more interviews of which the application with Macquarie Bank was successful; I will start at the M&A advisory department in London in August 2009. Out of 4000 applicants only 14 were hired. I was also the only one from the London Banking Tour that is left with a job from that trip; normally the success ratio is around 6 people out of 24. I thank this job to my experience in Singapore and the internship with ABN AMRO as it got me focussed on the finance world and working abroad.

References

- Ball D., McCulloch W.(2004). *International Business; the challenge of global competition*" McGraw-Hill
- Data monitor. (2004). *"Building a customer Value Framework in Wealth Management."*
- Faculteit BBT. (2005). *Handleiding Bacheloropdracht TBK-T, 1st edition*. University of Twente
- Heerkens, J.M.G.(2000). *De Algemene Bedrijfskundige Probleemaanpak (ABP)*, University of Twente
- Hwang, H., T. Jung, et al. (2004). *"An LTV model and customer segmentation based on customer value: a case study on the wireless telecommunication industry."* Expert Systems with Applications 26(2): 181-188
- Kotler, P. a. A., G. (1996). *Principles of Marketing*, Prentice-Hall
- Libai, B. (2002). *"Toward an Individual Customer Profitability Model: A Segment-Based Approach."* Journal of services research 5(1): 69
- Molyneux, P. and A. Omarini (2005). *"Private Banking in Europe – Getting Clients & Keeping Them! Annual Conference of the European Association of University Teachers of Banking and Finance, Conference theme: "Financial Systems: Empirical Research and Contemporary Developments."* Cass Business School, City University, London 31 August
- Storbacka, K. E. (1997). *"Segmentation based on customer profitability : retrospective analysis of retail bank customer bases."* Journal of Marketing Management 13: 479-492
- Verhoef, P. C. and B. Donkers (2001). *"Predicting customer potential value an application in the insurance industry."* Decision Support Systems 32: 189-199
- Wind, Y. (1978). *"Issues and advances in segmentation research."* JMR, Journal of marketing research 15(3): 317
- For general information: <http://en.wikipedia.org/wiki/Singapore>

Appendixes

Country background

Geography

Singapore is a conglomerate of 69 Islands. The main island is connected to the south of Malay with a surface area of 704.0 square kilometres and it is considered one of the few city-states in the world. Singapore is still reclamation land from the sea and therefore is expected to grow 100 square kilometres in the next 25 years. With a population of 4.5 million as of June 2007, 3.6 million of them are permanent residents (Singaporean citizens), it is a very dense populated country. The temperature is between 22°C to 34 °C and has a Tropical climate, with rain all year around.

History

Singapore comes from the Malay word singa and pura this means lion-city. The earliest settlement is from the second century and it was an outpost for the Sumatran Empire. In the 16th century it belonged to the Portuguese and in the 17th century to the Netherlands. In 1819 Sir Thomas Stamford Raffles signed a treaty with Sultan Hussein Shah for the British East India Company to develop Singapore as a trading post. This event is thought of as the start of the island's modern era. In 1869 the island belonged to the British and was under direct control, by then there were 100,000 people living there.

In the Second World War it was taken by the Japanese from February 1942 until 12 September 1945. Singapore officially gained sovereignty on 9 August 1965; this date is still celebrated with a big parade.

Politics

Singapore is a republic. The executive powers rest with the cabinet that is headed by the Prime Minister. The Official President holds some veto-rights on national reserves and judiciary positions. Officially there has to be an election but the last one was in 1993. The People's Action Party has been the dominating party in the politics since that date. This resulted in the accusation of other party's that Singapore is actually a one party state and that it is a procedural democracy instead of a real one. The main issue that remains here then is the right of free speech. The government tie-up the freedom of speech because they believe it would disrupt the multi-racial harmony. The speaker's corner in Singapore remains empty.

Economics

The country economics are dependant for a major part on exports. This export consists mainly on refining imported goods with manufacturing as a high contributor. Singapore has one of the biggest harbours in the world and ships the most in tonnage a year. Singapore is also one of the largest financial centres in the world, due to its geographical centre it had in Asian economy. This of course is the reason that ABN AMRO is located in Singapore since 1858 (The Netherlands trading society) and is considered as the oldest still existing bank in Singapore.

Singapore is rate the business-friendliest country in the world and this is the reason thousands of expatriates work in Singapore. The whole management of ABN AMRO Private Banking Singapore had a Dutch nationality so you find a Dutch working culture here.

The economy grows with 7.9%, 6.4% and 8.3% in 2006, 2005 en 2004 respectively and is expected to grow with 5% for the next 5 year. They have a very low unemployment rate of 2.7%. And the tax rate is 7% from 1 July 2007.

In 2006 they received almost 10 million tourist's en they expect it to increase to 17 million by 2015 due to legislation of gambling in 2005 and the build of 2 new resorts. They also would like to attract people with largest Ferris wheel in the world and the return of formula 1 in Singapore.

Al these developments are attributing to ABN AMRO Private Banking because the rapid growth of the economy will bring and develop more rich people in Singapore, these are the target customers of Private Banking.

Technological

Singapore has a high Technology Achievement Index in comparison with other Asian and pacific countries. The only other country that has these kinds of numbers is the republic of Korea. It is widely known that some cities in Asia are for more developed that the western world when it comes to technology. Singapore is one of those cities, you pay the bus with a card the same as London has for its metro system. Every car is installed with a machine that you use for toll-roads and for parking, you need to use the same card as for the bus to pay. 90% of the people have a phone and school is very important for the Singaporeans. The export consists for an extremely large part of medium and high technology, 75%. They have shopping malls that are solely occupied by electronic sale shops; you can find everything that exists in the world that needs a sort of form of electric power. The people here like gadgets and always need the newest things.

Data entries

Initial data extracted from Prospect and Olympic

Name:	Content:
1. NR	The number of the client (used for excel formulas)
2. Parent ID	The identification number of the Customer in text format
3. Parent ID (0)	The identification number of the Customer in number format
4. Client Name	The family name of the Customer
5. RM Name	The name of the Relationship manager (Private Banker)
6. Booking country	The country where the Private Banker is located
7. Risk country	The country where the customer is active
8. Contact name	The name of the contact person
9. Nationality	The nationality of the main account holder
10. Marital status	Married yes or no
11. Gender	Male or Female
12. Residence	The country where the customer lives
13. Language	Language of the customer
14. Will arranged	Do they have a will yes or no
15. Know to PB since	Since when is the customer know to the Private Banker
16. Banking Deposits	Amount of money in Banking Deposits
17. Banking Forex	Amount of money in Banking Forex
18. Banking Forward FX	Amount of money in Banking Forward FX
19. Investment Funds	Amount of money in Investment Funds
20. Trading Services	Amount of money in Trading Services
21. Equities	Amount of money in Equities
22. Fixed Income	Amount of money in Fixed Income
23. Emerging Markets	Amount of money in Emerging Markets
24. Hedge Fund	Amount of money in Hedge Fund
25. Derivatives	Amount of money in Derivatives
26. Precious Metals	Amount of money in Precious Metals
27. Options	Amount of money in Options
28. Guaranteed Products	Amount of money in Guaranteed Products
29. DCD / Range DCD	Amount of money in DCD / Range DCD
30. Reverse Exchangeable	Amount of money in Reverse Exchangeable
31. Certificates	Amount of money in Certificates
32. Futures	Amount of money in Futures
33. RM Consolidated	The name of the Private Banker, in this case the most current RM, some of them left in the mean while
34. Team	To which team does this Private Banker belong
35. Market	To which market does this Private Banker belong
36. Region	To which Region does this Private Banker belong
37. Commission	The commission earned in the first 8 months of 2007 on products other than deposits
38. USD_Commission	Annualized commission in US Dollars
39. Txn size	The amount of money used in transactions other than deposits
40. USD_Txn	Annualized transaction size in US Dollars
41. USD_Income	The annualized amount earned on a customer in US Dollars
42. USD_AUM	Annualized Assets Under Management in US Dollars
43. ROA	Return on Assets, USD_Income divided by USD_AUM
44. ROA BPS	Return on Assets in basis points
45. Segment	The segment where the customer currently belongs to
46. <100000k	Is total AUM lower than 100mn
47. <15000K	Is total AUM lower than 15mn

48. <3000K	Is total AUM lower than 3mn
49. <1000K	Is total AUM lower than 1mn
50. <500k	Is total AUM lower than 500.000
51. <50k	Is total AUM lower than 50.000
52. Active 1/0	Does AAPM earn commission on this customer yes/no
53. Nr Accounts	Who much accounts does the customer have
54. Trades(annualized)	The annualized amount of trades a customer executes
55. Cash	Amount of AUM in Cash
56. Liabilities	Amount of AUM in Liabilities
57. Non-Cash	Amount of AUM in non-Cash and non-Liabilities
58. %Cash	The percentage of total AUM in Cash
59. %Non-cash/loans	The percentage of total AUM in Non-Cash and Liabilities
60. Margin on trades BPS	The margin on a trade. USD_Commission divided by USD_Txn in Basis points
61. Volume in %	The percentage in AUM a customer trade on a annual basis
62. % on Cash	The percentage AAPB makes on deposits. (Income-Commission) divided by cash
63. Years on book	The number of years a customer is in the books of AAPB
64. On books 1/0	Is information available yes/no
65. Segment colour	The colour (Red/Orange/Green) of the current segmentation
66. Value Local Currency	The AUM in local currency
67. Total Customers Worth	Total worth of the customer in local currency
68. CAAML Risk	Is he a political risk to AAPB
69. Business Type	In what type of business is the customer active
70. Position	What kind of position does he hold
71. Total Income	What is his annual income
72. Source of Wealth	How did he make his fortune
73. Age	Age
74. Referral Type	How did he become a customer of AAPB
75. Investment Knowledge	What is his knowledge of investments
76. Investment Horizon	How long will he hold on to his investments
77. Tolerance Level	How much risk can he take
78. Wallet share Prospect	What is the wallet share of AAPM based on the static data
79. Wallet share AUM	What is the wallet share of AAPM based on the static data and on the current AUM

Selection data used for research

Customer characteristics	Profitability measures
RM Name	USD_Income
Nationality	USD_AUM
Gender	ROA BPS
Age	Margin on trades BPS
Residence	Volume in %
Know to PB since	Active
Years on book	%Cash
Business Type	Segment colour
Source of Wealth	Wallet share Prospect
Referral Type	Wallet share AUM
Investment Knowledge	