University of Nottingham

The Growth Potential of Debit Cards in Singapore

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Abstract

This paper starts by examining the evolution of the Singapore payments system from a historical perspective by reviewing the institutional evolution, as well as the development and adoption of some of the newest payment instruments. Two major trends in recent Singapore payment history are revealed, i.e. cash and check payments are being displaced by credit and debit card and other electronic mode of payments and usage of debit cards is seeing significant growth.

From the literature review, it is known that purchases made using debit cards surpassed credit-card purchases for the first time in USA history during the last quarter of 2008, giving the debit-card revolution a new push. With that, this paper aims to provide a better understanding of signature-based debit cards and specifically its growth potential in Singapore, post the Central Bank's liberalization program to grant foreign banks Qualifying Full Banks (QFBs) status who were then allowed to compete more effectively with the domestic national banks in the payments arena and provide debit services on an EFTPOS network.

With the regulatory change to the debit card space, the Network for Electronic Transfers (NETS) was no longer the only debit card operator in Singapore. Debit card as a mode of payment has indeed been increasingly preferred for everyday purchases with wide usage and viewed as a valuable service if accompanied with rewards, cash rebates and discount benefits to cardholders. Hence, the competition for debit cards in Singapore increased in intensity with consumers experiencing greater choice and accessibility.

Next, we deployed the Michael Porter's Five Forces and PEST analysis to examine the debit card industry in Singapore. While consumers are familiar with debit cards, its sustainable growth will come by increasing consumer education, awareness of the locations where it can be used and tailored marketing programs targeted at the right customer segment to encourage wider usage. It is evident from the questionnaire that differentiating the debit card value proposition by incorporating rewards, rebates and discounts can drive profitability and increase market share for banks, card companies

and merchants in their respective ways. At the same time, consumers, by carrying less cash, lowers the risk of loss and benefit from the usage of debit cards through loyalty programs tailored for their needs.

Meanwhile, the bank issuers and card companies must continue to embrace technological advancements and innovations, leverage them to execute pro-active customer relationship management with all stakeholders in the value chain, including merchants, governmental organizations, regulatory authorities to minimize the disintermediation risks, potential litigations and any other implications on the fixing of pricing and interchange rates for debit cards. Bank issuers must also capitalize on this current positive orientation to debit cards to diversify their revenue streams and aggressively drive their businesses to the next level of sustainable competitive advantage.

Acknowledgements

I am sincerely grateful to Professor Stephen Thompson, for his invaluable guidance, sharp and focused comments and learned suggestions for improvements to my work. A special thank you for his kind encouragement, patience and trust in me to successfully complete this paper.

I would also like to thank my dad, my extended family, friends and colleagues for their understanding, for my neglecting them, for standing by me throughout this trying period.

To my mum who passed away suddenly from a heart attack three years ago,
“I almost gave up, but I did not and I did it!”

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CHAPTER 1 - INTRODUCTION

This paper aims to provide a better understanding of offline debit cards, its usage at retail point of sale (POS), and specifically its growth potential in Singapore. Uncertainty in the current economic landscape, decline in consumer confidence, new and tighter issuer policies have impacted how credit is being used. There are indeed signs of consumers diversifying their methods of payment, to cope with recessionary times as they rethink their finances. But will consumers switch to paying with debit cards instead of credit cards?

The current state of global economies, soaring foreclosures, rising credit card debts and escalating unemployment have many banks re-considering their card issuance strategy, accelerating debt reduction schemes to guard against rising bad debts. This presents a challenge as well as an opportunity for banks and card companies to capitalise on a likely consumer orientation towards debit cards. A key strategy will be increasing usage with rewards and loyalty programs.

Banks can leverage debit cards as a relationship management tool, recognizing that boosting usage is a strategic imperative for increased deposits, multiple relationships and retention. Tailoring different offers to different segments of customer groups to encourage increased usage will no doubt generate immediate and long-term financial profitability for the banks. Worldwide statistics from Visa in 2006 showed debit card sales volume exceeded credit card volume, totalling US$2.2 trillion (55% share of debit) compared to US$1.8 trillion (45% share of credit).
[http://www.visa-asia.com/ ap/au/mediacenter/pressrelease/March 2006]

Debit cards come in many forms, but can be broadly differentiated where debit purchase transactions can either be online (PIN-based) or offline (signature-based). Each of these payments methods is competing for a share in the consumer wallet and merchant acceptance. As banks and card companies begin to introduce new products and services, we see increased investments in marketing resources to influence consumers to opt for signature–based debit instead of PIN-based debit at the point-of-sale. The reasons are varied and which will be examined further in the report.

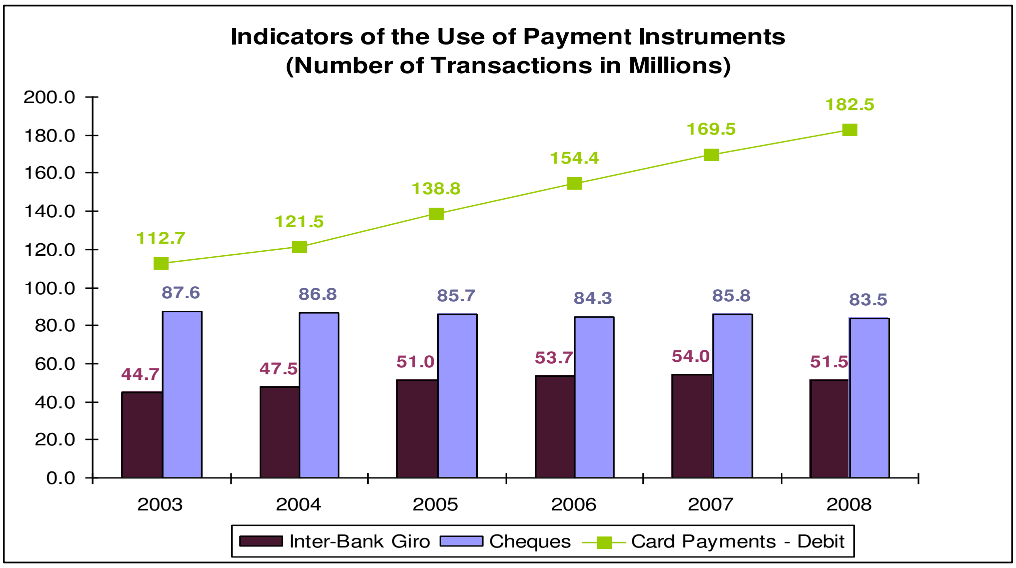
1.1 Overview of the Payments Industry in Singapore

A payments system is essentially a network of competing and complementary services that facilitates transactions through the exchange of a means of payment in return for goods, services and assets (Daniel, 1996). It is defined as the cultural, political, legal, economic and business practices and arrangements used within a market economy to determine, store and exchange value or ownership of goods and services.

Driven by technological process, changing consumer needs and development of new products and activities, Singapore's payment system landscape has changed over the years. Historically, transactions were based essentially on paper and cash. Today, it has a wide range of media of cashless payment instruments as well as efficient and reliable clearing and settlement systems.

In recent payments history in Singapore, consumers' choice of payment has shown two distinct trends (1) cash payments are being replaced by non-cash payments and (2) checks or paper-based instruments are being replaced by electronic payments instruments. Figure 1 below shows the trends from 2003 to 2008.

Figure 1: Indicators of the Use of Payment Instruments



Source [http://www. bis.org/cpss/paysys/Singapore.pdf]

Checks and inter-bank GIRO as forms of payments both declined in 2008 from close to 86 million transactions and 54 million transactions to 83.5 million and 51.5 million transactions respectively. Payment by debit cards is the only category which saw continuing increase from 2003 to 2008. It grew 8% year-on-year in 2008 compared to usage of checks and inter-bank GIRO which decreased by -3% and -5% respectively. The trend of using electronic cashless payment instruments will continue as consumers, businesses and financial institutions seek to be more efficient and cost effective.

1.2 Origin of Offline Debit Cards

Traditionally, no domestically issued internationally branded debit cards can be used in Singapore and foreign banks are excluded from the national ATM and POS network. The Network for Electronic Transfers (NETS) was the only debit card operator in Singapore. The Electronic Funds Transfer at Point of Sale (EFTPOS) service was launched in January 1986, to put in place a nationwide infrastructure that enables consumers to pay for purchases at the retailers using their ATM cards (online debit cards).

From 1 July 2002, the Singapore government liberalised the banking industry by allowing certain foreign banks, termed as Qualifying Full Banks (QFBs) to provide debit services on the EFTPOS network. With this, QFBs were then able to provide debit services such as offline debit cards and cashback at retail outlets. The implication of this was to intensify competition amongst service providers at all levels with increased consumer choice and accessibility.

Table 1: Debit Card Usage Volume and Acceptance Statistics

Year	2004	2005	2006	2007	2008
Cards with debit functions (Millions)	6.2	7.5	8.3	8.9	9.6
Number of EFTPOS terminals ('000s)	26.8	59.7	69.4	71.3	83.9
Number of ATMs ('000s)	1.6	1.7	1.8	1.9	2.0
Number of transactions at POS (Millions)	76.9	87.7	97.2	105.8	114.8
Volume of transactions at POS (SGD, billions)	8.1	9.5	11.8	14.0	15.9

Source [http://www. bis.org/cpss/paysys/Singapore.pdf]

The above portrays the rapid and continual growth in debit cards in Singapore with its usage at POS increasing significantly, from 77 million transactions in 2004 to 115 million transactions in 2008, almost 50% growth over 5 years. The value of transactions executed at POS totalled SGD15.9 billion in 2008 which almost doubled that of 2004 ‘s SGD8 billion. In 2004, the number of EFTPOS terminals was close to 27,000 which more than multiplied by 3 times in 2008 to approximately 84,000. ATM/EFTPOS as a mode of payment has become an indispensable method for cash withdrawals through ATMs and purchases of goods and services for many Singaporeans.

Historically, due to government’s regulation and NETS’ dominance, both MasterCard International (MCI) and Visa International (Visa) online debit cards, i.e., Maestro/Cirrus and Interlink/Plus, did not take off in a big way. In order to overcome this and also driven by the success in the United States of America (USA), MCI and Visa introduced product innovation with signature-based offline debit cards that are both signature-based at POS and pin-based at the ATM.

1.3 Definition of Offline Debit Cards

Offline debit cards, look very much like a typical credit card bearing the MasterCard or Visa logo. It allows the cardholder to make purchases and cash withdrawals from their deposit access accounts through EFTPOS and ATM. The only difference between a credit card and an offline debit card is that the offline debit cards have no lending functionality and the amount that the cardholder has signed or withdrew from ATM is automatically deducted from the cardholder’s current/saving accounts linked to the debit card.

Offline debit works quite differently from online debit. The offline debit card can be used at ATM and for purchases at checkouts where Visa/MasterCard cards are accepted, i.e., global and international acceptance. It provides cardholder with two options. The cardholder can pay with the online debit component by using the card just like a debit card by entering their PIN and there is no need to sign the sales draft. Alternatively, the cardholder can use the card just like a credit card. The merchant swipes the card through the terminal and does not request the customer to use the PIN pad. The customer signs on a printed receipt.

The vast majority of debit cards issued by banks today are offline debit cards. From the issuer banks' perspective, the transaction from an international debit card is similar to a credit card where both these transactions are processed by MCI or Visa's clearing and settlement network with the authorization function performed simultaneously. Settlement of the transaction is deducted directly from the cardholder's current/savings account and this virtually eliminates the bank's collectibility risk. With a highly saturated credit card market, many banks found that issuing international offline debit cards represents an attractive differentiation in their overall product mix.

At the same time, consumers have found the offline debit cards to be useful for certain type of purchases for which credit is not suitable, as in the case of a trip to the grocery store or a barber. Also, it is made available to consumers, who would otherwise not qualify for credit cards because of the minimum income or age requirement, the convenience and security of a credit card. Additionally, it also offered the 'unqualified' consumers the 'prestige' of owning a 'credit' card, as it seemed to the consumers that the international offline debit cards work just like credit cards, requiring signature for authorization.

1.4 Specific Aims and Methodology

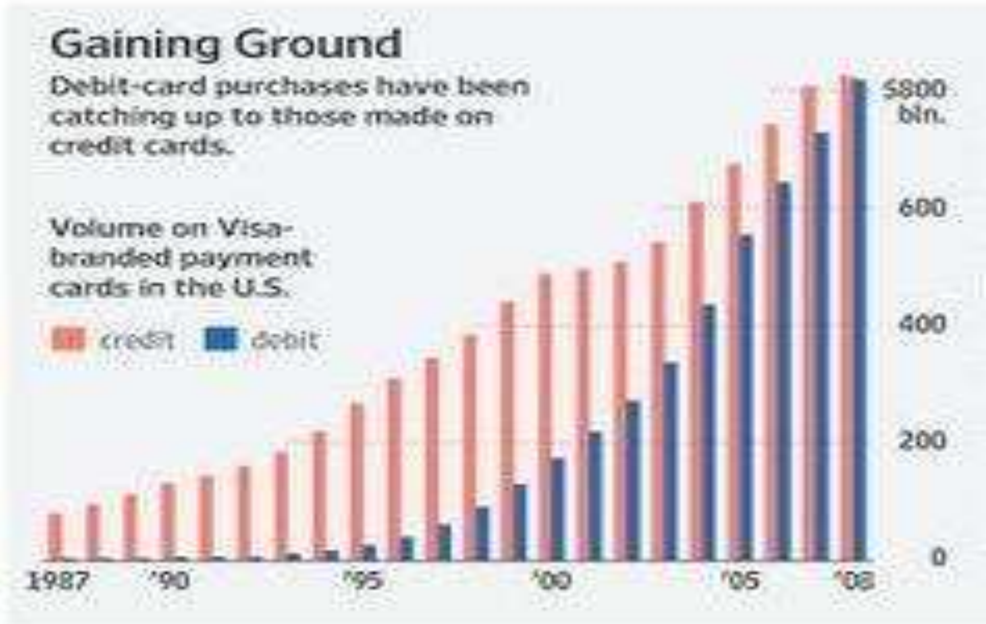
With a rapidly changing international payment landscape and innovation at a fast increasing pace, it is essential for consumers, card companies and bank card issuers, to be updated with the latest product developments. This report intends to focus on one of the lesser-researched card products, i.e., offline debit cards and its growth potential in Singapore.

The report will be designed to answer one main research question and 3 related sub-questions: -

1. Given the recent Visa Inc. report that the total dollar volume of purchases

made using its branded debit cards surpassed credit-card purchases for the first time in history during the quarter of 2008, is the “urge not to splurge” by thrift-conscious consumers in today’s recessionary times giving the debit-card revolution a new push and will debit cards take off in a big way in Singapore.

Figure 2: Gaining Ground - debit card spend catching up on credit cards
(Source: Nilson Report)



2. The impact of the developments on the issuance of debit cards business by examining success stories in other markets.
3. With the existence of possible positive impacts of debit cards, identify ways to capitalise on these developments and create new profit opportunities for card issuers in Singapore.
4. Establishing the grounds for a “win-win” situation for consumers and bank card issuers with increased debit card utilization.

1.4.1 Research Design

In order to identify trends in the spending patterns of the marketplace and the implications for card companies and issuing banks, a survey will be conducted. The objective of the survey is to identify and understand consumers with respect to:

1. Reasons for holding the debit card
2. Expectation of benefits linked to the use of debit cards
3. Potential ways to increase debit card usage through enhancements and rewards.

The survey will be conducted during the month of March 2010, through e-mail/mail interviews and collected by hand or e-mails. All 100 respondents were required to be at least 18 years of age but less than 65 years and having annual income of S$18,000 and above. They own a bank account and carry at least a general purpose plastic payment card.

This study is limited to a sample size of carefully chosen 100 diverse working or retired adults, relatives and friends who kindly agree to take the survey. With the sampling of 100 participants, we attempt to generalize the attitudes, knowledge, practices, and financial debt management for the population from different institutions. With this sample size, the data would not be a challenge to analyze as long as the data are well organized.

Confidentiality of salary and personal financial information is a limitation, as participants were hesitant to agree to take the survey. Although only 30 minutes of their time is required to complete the survey of 28 questions, carving out time to volunteer for this survey from their hectic work and family time may also cause scheduling issues, since there was no incentive given for taking the survey.

Emory and Cooper (1991) quoted that ‘a sample of 100 drawn from a population of 5,000 has roughly the same estimating precision as 100 drawn from a population of 200 million’. A small but carefully chosen sample can be used to represent the population. Hence, within the constraints of time and cost, the sample size of 100 was selected to represent the general population of debit cardholders.

1.4.2 Sampling methods

The sample will be selected based on judgment of the "representative" population, i.e., aged between 18 to 65 years and earning minimum S$18,000 per annum. The convenience sampling method is chosen for the purposes of achieving the objectives.

A limitation of all surveys about sensitive issues such as household finances is that some people are reluctant to participate because of confidentiality of personal finances or embarrassment for those who face the most financial stress. For those who are carrying high credit card debts, they might be more likely than others to refuse to answer certain questions or to understate their difficulties. Hence, the survey questions were designed to reduce such likelihood as far as possible. In order to encourage respondents to divulge sensitive information, they were assured that their replies would be treated in the strictest confidence.

The sample is selected for the abovementioned reason that people tend to be unwilling to disclose their personal information and preferences to someone unknown. Due to the Chinese socio-cultural environment of Singapore, access to such information is significantly influenced by the familiarity and trust of the researcher. This method is often used during preliminary research efforts to get estimates of the results, without incurring high costs and time to select the random sampling.

1.5 Structure of the Study

This study is organised into 5 Chapters. The first chapter provides an overview of the payments system in Singapore and the evolution and growth of non-cash instruments as a mode of payment, specifically the offline debit card product. A survey as part of this study, investigates the growth potential of the debit card as a payment mode in Singapore. In particular, we focus on how firms' strategic commitment to understand customers' needs and positioning the company with the right market orientation can lead to sustainable competitive advantage.

In Chapter 2, we conduct a detailed review of the macro environment of the

Singapore cards market by deploying the PEST analysis (Political, Economic, Regulatory, Social/Demographic and Technological factors). Market data obtained in terms of the penetration of cards, the number of transactions and the value of transactions strongly indicates the shift from the use of cash toward electronic modes of payments providing increased overall efficiency to the payment systems derived largely from economies of scale. This scenario will be supported with an in-depth application of Michael Porter's Five-forces in the second part of this chapter.

Chapter 3 then proceeds to discuss the purposes of this survey and display of the results and analyses. By examining the findings, it will enable us to identify key emerging trends, opportunities and threats for all parties in the payments value chain, and recommend industry innovations required to secure consumer willingness and product acceptance.

Integrating the above information and research data obtained, Chapter 4 capitalizes on the continuity with examining the implications on various parties' interests, namely, government and regulators in formulating policies, bank card issuers' and card companies' strategies, impact on retailers/merchants and last but not least, the ultimate consumers.

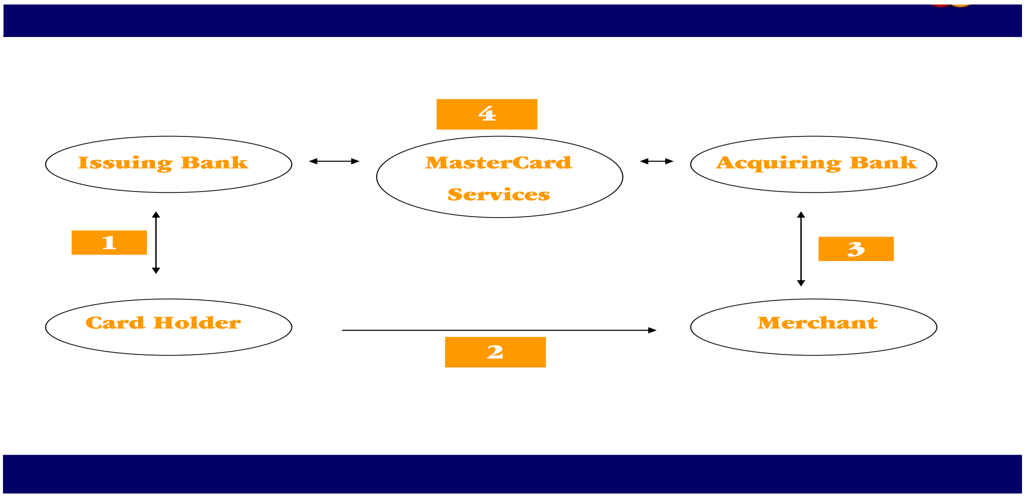
Chapter 5 concludes. We provide a synthesis of strategic decisions and constraints applicable to banks and card companies. We also discuss some policy implications, potential market and consumer orientation as a guide and direction for future research.

CHAPTER 2 - LITERATURE REVIEW

Payment card schemes, in particular debit cards, have received scant attention in the literature. Most of the literature on non-cash payment activity draws attention to the analysis of credit card networks, and fortunately can be applied to offline debit cards, which follows the same system of processing. The general international model for a debit card described in the literature focus on a "four-party" card system so named because four parties are typically involved in the payment process. These parties are

(i) consumers/cardholers, (ii) the issuer (the bank that issues the payment card to its consumer, (iii) the acquirer (the bank that serves the retailer accepting the card of payment and (iv) the retailer/merchant. Figure 3 below depicts the working of the Four-Party System managed by MasterCard, which is no different from any other scheme switch processor.

Figure 3: The Four-Party System



1) The "product" cycle begins with licensing by MasterCard and approval of the bank to issue credit/debit cards carrying the MasterCard trademark logo. The issuing bank will then issue the cards to eligible cardholders.
2) The cards are being used to pay for goods and services purchased at merchant locations accepting MasterCard.
3) The merchants are paid by the acquiring bank (acquirer) while the cardholders upon receipt of their monthly statements make payments to the issuer.
4) MasterCard, via its network, IT technology & other resource capabilities, then acts as intermediary between issuers and acquirers by providing clearing (determining net positions between issuers and acquirers), settlement, authorization and other value-added services.

Specific to debit cards, over the last decade, many countries have shown a rapid increase in the usage of debit cards. Der Hovanesian Mara's article "The Virtually Cashless Society" (Business Week 11/17/2003) highlighted the significant growth of debit cards in United States "All eyes are on the debit card". TowerGroup has released new research on micropayments and the effect such payments will have on the future. TowerGroup estimates use of debit cards particularly for micropayment cash transactions will increase debit card use to more than 25 times per month. The research indicates that when compared to using cash for micropayment transactions, cards increase the average sales ticket over 15% and increase sales volume at selected merchants by nearly 20%. Consumers use debit cards on average five times per month. TowerGroup research said the top five usage categories for small cash transactions are convenience stores, fast food restaurants, transportation, coffee and beverages, and parking.

In another journal, “Exploring the world of payments”[Swann, James, Community Banker, (15291332, Oct2003, Vol. 12, Issue 10)], it was reported that “Consumers are beginning to make use of their debit cards for a variety of services, not just the low dollar purchases that had originally made up the bulk of debit card activity”. As a result, community banks are increasingly creating their own debit card programs, seeking to tap into a new stream of revenue. A further sign of the growing prominence of the debit card as a payment method. The PULSE network recorded 4 million point-of-sale and ATM transactions on Christmas Eve, and 88 million in total for all of December, both records for the network. "ATM and debit cards are more and more becoming tomorrow's cash and checks," said Stan Paur, president and CEO of PULSE, an ACB associate member.”

Ian Lindsey (1994) viewed that “In the future, we are likely to see a faster rate of growth with debit cards than with credit cards.” He added, “The market for credit cards is more or less saturated; however, there is plenty of scope for the continued growth of debit cards.” Clearly, debit card is on the rise as card associations, banks and consumers are exploring new ways to tap into this new alternative payment.

2.1 Debit surpassed Credit?

Financial card use continues to rise despite the threat of global recession. The property boom of 2007-2008 made many Singaporeans wealthier, despite inflationary pressures such as rising transport and food costs. Singapore’s employment rate remains comparatively healthy, with new graduates and job seekers finding it easier to land jobs with higher salaries. Together with the introduction of new credit and debit cards targeted at consumers with different lifestyles and spending needs, these favourable economic conditions ensured that the adoption of financial cards in Singapore continued to grow strongly in 2008.

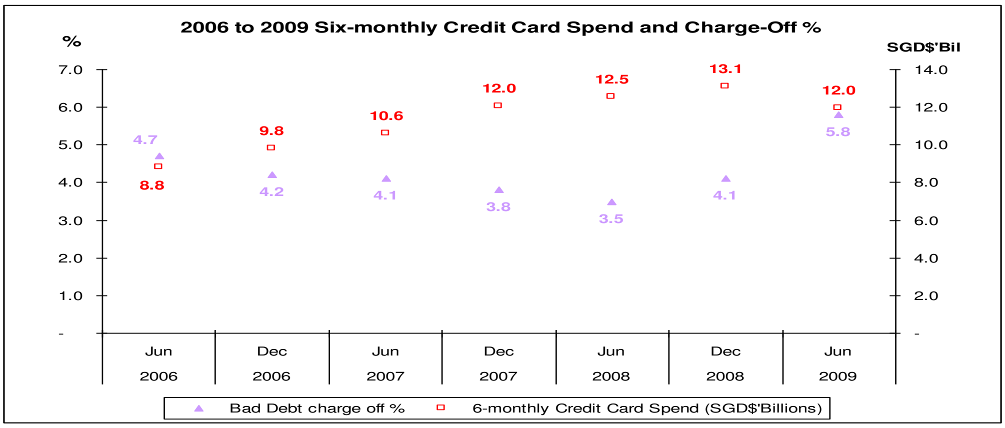
The growing popularity of financial cards in Singapore is leading banks to launch more credit cards catering to younger working adults. These cards tend to feature eye-catching designs and offer a wide range of lifestyle rewards, benefits and privileges that appeal to younger age groups. In 2008, banks continued to launch and aggressively promote these cards through various media platforms. To encourage cashless spending and appeal to untapped consumer groups that did not meet the income requirements for standard credit cards, such as newly graduated students and lower income earners, banks found the opportunity to offer this customer segment with debit cards.

In one sense this is simply the secular move to a "cash-less" society. But in a broader sense it speaks to the de-leveraging going on in the country, the push by credit card companies to get rid of "risk", which could perhaps lead to some potential longer term behavioural changes.

Figure 4 below depicts the recent decline seen by Singapore on the credit card spending pattern for the 6-months period ending December 2008 to that of June 2009 (a close to SGD1 billion reduction) and the steep increase in bad debt charge off rates from 4.1% to 5.8% incurred by card issuers for the same period. Is this a 1-time blip or are we seeing changes in consumer behaviour and/or bank issuers' and government leaders' push to re-shape the banking industry. It will be an interesting development either way which we will examine in this study.

Figure 4: 2006 to 2009 Six-monthly credit card spend and write-off trends

Source: Monetary Authority of Singapore - Monthly Statistical Bulletin 2009



Over the last 2 years, a number of banks in Singapore introduced new debit and credit cards that incorporated ez-link functions. The trend started when Citibank introduced SMRT debit and credit cards with ez-link functions. Other banks like United Overseas Bank (UOB) and Oversea-Chinese Banking Corp (OCBC) soon followed suit. With the majority of Singaporeans using public transport on a regular basis, this strategy gives banks access to a huge target consumer base, while also helping to increase spending on their credit and debit cards.

As financial cards in Singapore continue to incorporate more functions, such as combination of ATM, debit, credit and also for transportation all-in-one, consumers are likely to apply for such cards for convenience of carrying only one card in their wallets. Card issuers are expected to lure new applications with more perks such as discounts, rebates or rewards. Such competition will not limit to credit cards only but also to debit cards as well as prepaid cards. Consumers are most likely to benefit most from these competitions during such periods.

2.2 PEST Analysis

In order to understand the potential opportunity to grow the debit cards in Singapore from the perspective of the issuing banks and cardholder usage behavior, it is important to understand the macro and micro-environment which consists of actors and forces that will affect a bank's capability to operate effectively in providing products and services to meet its customers' needs. Traditionally, four forces have been the focus of attention, namely, political/legal, economic, social/cultural and technological, with the result that the term PEST analysis has been used. This is especially so as the cards industry is affected by factors within and outside of Singapore. This analysis would be useful as a starting point to review the strategic plans of the existing players and to respond to new competitive forces introduced over the last few years.

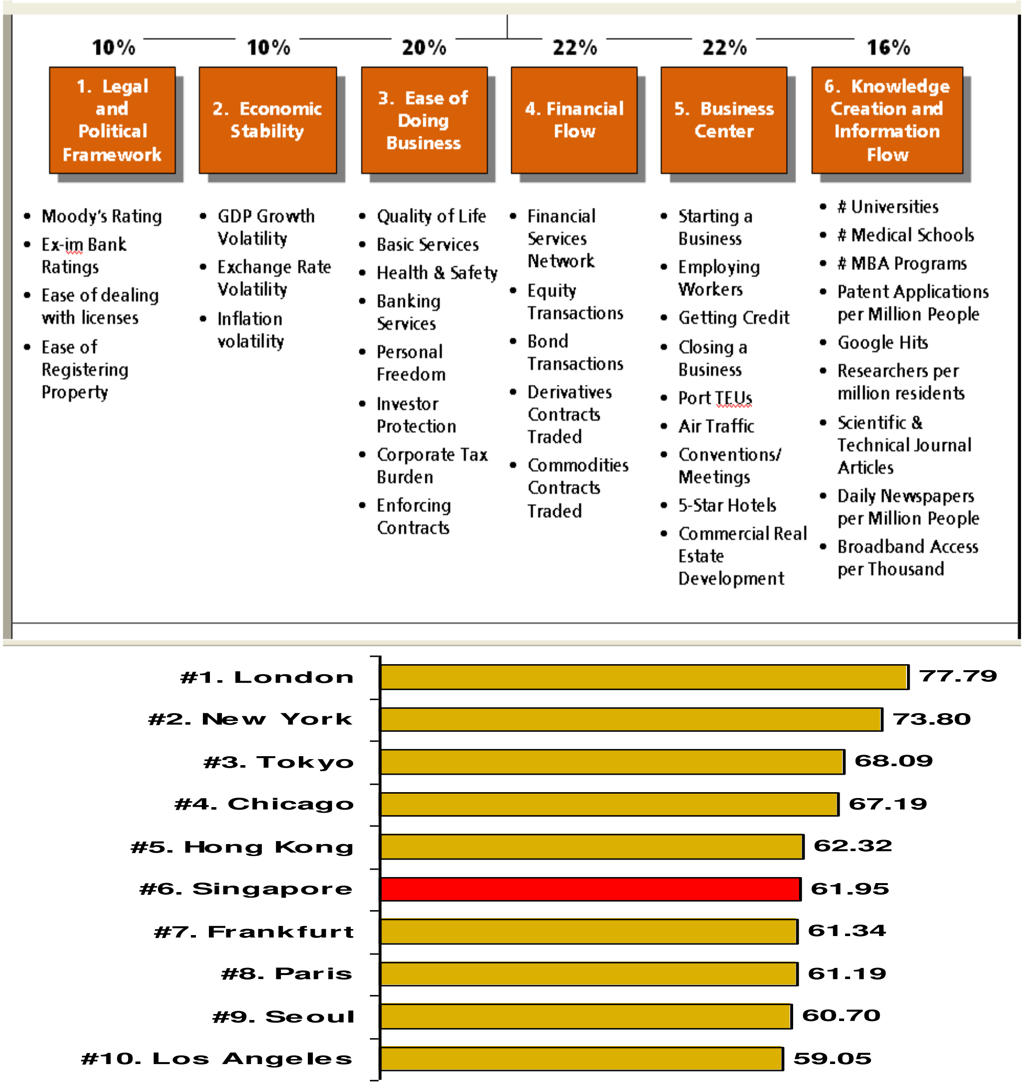
2.2.1 Political/Legal Environment

Singapore is a parliamentary democracy led by the People's Action Party., with the Primes Minister as the head of government. Executive power is exercised by the government while legislative power is vested in both the government and the Parliament of Singapore. The Judiciary is independent of the executive and the legislature. The Judiciary is independent of the executive and the legislature. The legislature is the parliament, which consist of the president as its head and a single chamber whose members are elected by popular vote. The Singapore Government is generally stable, capable and reliable.

Given the political stability and its well-regulated financial systems, many foreign investors and companies are locating their operations in Singapore. Singapore maintains an open investment environment and is dominated by foreign multinational corporations (MNCs) and corporations owned entirely or partially by the Singapore government ("government-linked companies" or GLCs). These GLCs own stakes in many major sectors of the economy, for example, airlines, telecommunications and port services. In the financial sector, the government owns the largest local bank, DBS, through Temasek Holdings.

The government takes a proactive approach towards attracting foreign investments by actively wooing MNCs with tax advantages and breaks, to invest in knowledge-intensive manufacturing and services activities in all sectors of the economy, especially finance and communications and media. The strategy is to make Singapore a key player in Asia Pacific as a financial center and an info-communications hub. Consequently, the country's legal framework and public policies has always been foreign investor friendly. The government places no restrictions on reinvestment or repatriation of earnings or capital. From the survey below by MasterCard Worldwide conducted in 2006 based on the index listed in Figure 5, Singapore is ranked number 6 in the world as a Center of Commerce, after London, New York, Tokyo, Chicago and Hong Kong.

<u>Figure 5: MasterCard Centres of Commerce Index and Ranking</u>



The Monetary Authority of Singapore (MAS) has, since 1999, 'encouraged' the local banks to merge and consolidate their resources so as to compete effectively in the global market. With this, the recent trends in merger & acquisitions in the financial services sector resulted in the major domestic banks in Singapore consolidating into the "Big 3" namely OCBC, DBS and UOB. At the same time, the regulations for foreign participation in the bank network were relaxed and foreign banks, including Citibank, HSBC, Standard Chartered were licensed to conduct certain approved banking operations in Singapore. With a slow growing population, an almost constant customer base, competition will be more intense with every bank vying to increase their share of the pie.

In terms of the regulated credit card market, the MAS imposes restrictions on the minimum qualifying age, on income requirements (minimum income of S$30,000/annum) and on the maximum credit limit extended to cardholders (two months' salary). This further limits the target customer base.

Singapore survived a series of external shocks with the Iraq war, SARS and the most recent global financial meltdown but buoyed by the firming economic recovery, the domestic banking segment saw lending activities continuing to expand albeit at a slower pace, largely driven by loans to the housing and construction sectors while unsecured lending is cautiously watched. However, interest margins tend to be suppressed by the low interest rate environment and the intense competition in the market for new and innovative loan structures.

Overall, despite the economic crisis, with a respectably low unemployment rate at less than 5%, a lower than expected GDP decline in 2009 of -2% (see Table 2 below), with a 2010 forecast by the Ministry of Trade and Industry that it expects the Singapore economy to grow at 4.5 to 6.5 per cent this year, consumer confidence have held up well.

2.2.2 Economic Environment

Singapore is one the four Asian Tigers which refers to the highly developed economies of which the other three are Hong Kong, South Korea and Taiwan. Singapore was among the first newly industrialized countries, noted for maintaining exceptionally high growth rates and rapid industrialization between the early 1960s and 1990s. In the 21st century, Singapore had since graduated into advanced and high-income economies, and is still the world's fastest growing industrialized economies.

However, attention has increasingly shifted to other Asian economies which are now experiencing faster economic transformation. Singapore has a highly educated and skilled workforce and have specialized in areas where we have a competitive advantage, i.e., Singapore became one of the world leading international financial centre, with early adaptation and successful innovation in information technology. A country with no natural resources except for its people assets and heavy reliance on foreign investments and international trade, the domestic market effectively competitive and efficient.

Singapore is considered a highly regulated market economy yet open but corruption-free business environment. Singapore's economy recorded an impressive 7.9% growth in 2006 (Table 2 below), marking three consecutive years of robust expansion. Barring any adverse external shocks (e.g. a double dip recession leading to further contraction of the US and Eurozone economies), with a stable economy continuing to attract investments both locally and from overseas, the market should continue to grow healthily with GDP growth projected at 4.5% to 6.5% for 2010.

Table 2: Key Economic Indicators

Source: Euromonitor Financial Cards in Singapore	2003	2006	2009
GDP at current prices (S$ Bn) *(1)*	160.9	210.0	257.6
GDP (% growth) *(1)*	3.1%	7.9%	-2.1%
Unemployment Rate *(1)*	5.2%	3.6%	4.3%
Disposable Income (S$ Bn) *(2)*	99.1	111.1	147.5

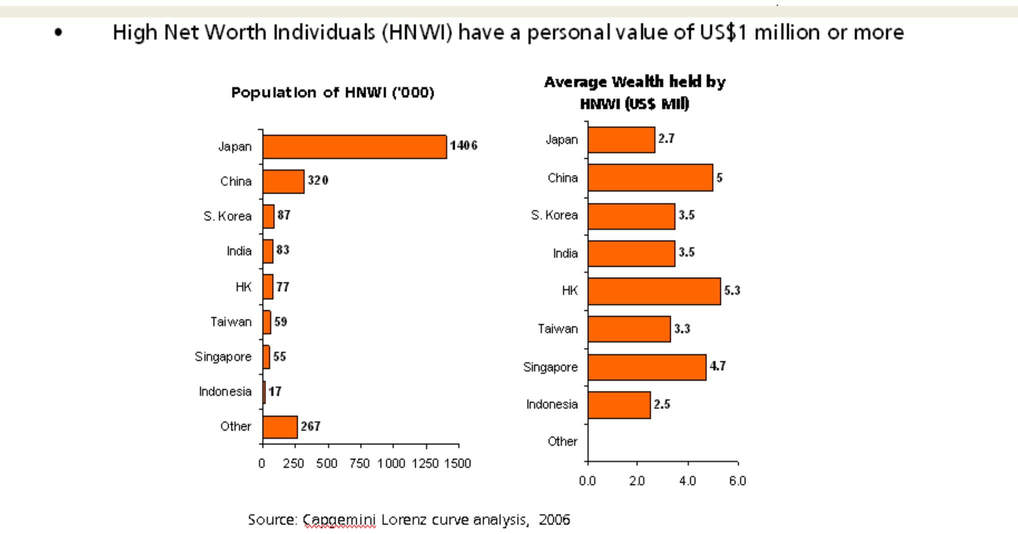
In Year 2009, Singapore achieved an annual GDP of S$257 billion. With a high per capita GDP at S$51,000 per annum, indicating it has a large proportion of its population in the ‘qualifying credit card’ segment, 48% of its workforce population. Source[http://www.singstat.gov.sg/stats/themes/economy/hist/gdp.html]

Looking forward, economic growth is likely to moderate in 2010 as the economy is beginning to recover from the negative effects of the recession and the rate of recovery will depend, to a very large extent, external environments such as China, Euro zone and US economies.

2.2.3 Social and Demographics

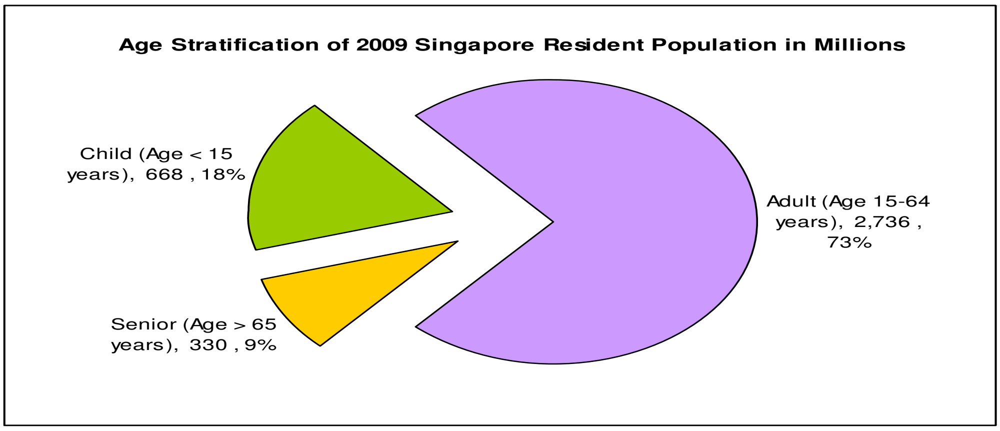
With education mandated by the government at 96% literacy rate, the number of educated workforce between the age of 25 - 35 years old is increasing and the emerging young affluent segment class is growing rapidly with higher standards of living. They are educated, IT and internet savvy, have high disposable incomes and huge spending power to maintain the glamour and prestige of their lifestyle and travel preferences. Figure 6 summarizes in Asia Pacific, Singapore stands 7th in the number of high net-worth individuals (with a personal value of more than US$1 million) and 3rd in terms of average wealth held. This demographic is targeted for its “high discretionary spend” potential.

Figure 6: Country Ranking of High Net-Worth Individuals



The Singapore government has stated openly that one of its top priorities is to increase population by encouraging women to marry earlier and have more children as fertility rate at 1.28 per female, is well below required replacement rates. Despite increasing child procreation tax incentives and more favorable maternity policies, the trend of falling birth rates continues. As a result, Singapore has no option but to start attracting large numbers of foreign citizens. As of 2009, out of a total population of close to 5 million, a high proportion, 25% or 1.3 million are 'non-resident' population.

Figure 7 : Singapore 2009 Resident Population Profile



The labor force participation rate is high and many Singaporeans are continually upgrading themselves through training and education to increase their productivity and employability levels. Virtually all homes have a phone and as in many countries in Asia today, mobiles phones is now widespread and some Singaporeans are beginning to replace their residential lines with their mobiles phones. The government has encouraged usage of technology, such as, Internet and PC usage. As a result, Singapore is one of the most wired countries in Asia.

2.2.4 Technological

Singapore is on the leading edge of electronic commerce with more than half of the Singapore households connected to the Internet. The payments industry today continues to work on a startling range of new technologies that will revolutionize the way payments are made. There is much hype over e-commerce and the vast payment possibilities with wireless technology, credit cards with contact-less functionality or mobile phones for wireless transactions.

Singapore's payments industry has evolved over the years, driven by technological progress, changing consumer needs and development of new financial activities. It has changed from one that was based essentially on paper and cash transactions to one that has a diverse range of cashless payment instruments, as well as efficient and reliable clearing and settlement systems.

Common methods of making retail payments besides using currency comprise of checks and interbank GIRO debit and credit transfers as well as payment cards (stored value, debit and credit cards). Gradual decline of cash as traditional payment method to cards seen with many reasons, status symbol, secure online spending, convenience and versatility.

Bank's customers can also use their debit (and credit) cards to make 3rd party account funds transfer and to make bill payments to selected commercial and government entities via the ATMs, and more recently through their telephone, mobile and internet banking services. With increasing trend towards electronic transactions, digital signatures are becoming more important for identification and to serve as alternative to hand-written signatures.

The push by government and industry to promote cashless transactions led to exponential growth of financial cards since 2001, and functions embedded in the cards. Card users are getting younger with the proliferation of EZ-Link cards for transportation, NETS for cashless retail purchases and bank-account linked debit cards. People are accustomed to card usage at an earlier age, without having to apply for a credit card. The NETS CashCard is based on smart card technology and is widely accepted at retail outlets, supermarkets, departmental stores, libraries and post offices for retail purchases. It is also used for payment of electronic road pricing and parking fees.

The EZ-link Card is based on contactless smart card technology. Used primarily in the public transport system. However, since its introduction, the EZ-link Card's use has been progressively extended to non-transit purposes such as retail payments. Credit cards are moving from loyalty-based (through bank rewards), to discounts with tie-ins at retailers/merchants, to co-branding with individual stores and cashback.

Banks are also capitalizing on such changing trends and pulling out all stops to woo consumers. The variety of cards offered by banks exploded, with differentiation by age group, gender, income and where the consumer likes to shop. Cards with flashy designs, different shapes and sizes surfaced due to consumer demand. Prepaid cards like EZ-link and NETS plan to collaborate to ensure seamless usage of both cards for electronic transactions. Further collaboration with global credit card companies may see EZ-Link and NETS access to other markets in Asia. Singapore is also seeing increase in use of mobile and internet banking due to convenience.

Foreign banks who have attained Qualifying Full Banks status, (ABN AMRO, Citibank, HSBC, Maybank and Standard Chartered Bank) have come together to form a shared ATM network, giving their cardholders access to over 140 ATMs islandwide.

Singapore is however, a slow adopter of the EuroPay-MasterCard-Visa (EMV) security platform. EMV standard incorporates a smart chip on the credit card, on which the identification and information of the cardholder is encrypted (very difficult to decrypt). The lack of incentive for the industry to adopt is due to high costs and the relatively low value lost to fraud experienced in Singapore. This may result in card issuers losing out to rest of region, unless the government intervenes to mandate EMV compliant cards issuance. Non-EMV compliant cards may face acceptance problems in EMV-compliant countries, due to concerns about fraud and duplicated cards.

Other up and coming channels of banking payments in Singapore include telephone banking, mobile banking and Internet banking. The phone banking was introduced in 1982 and since then, the range of phone banking services has increased. The bank customer is able to transfer funds and conduct account balance enquiries over the phone, make payments and trade in stocks. Mobile banking customers are able to conduct banking transactions through the display screen of their mobile phones. In addition, they can also pay for online purchases using their mobile phone instead of providing their credit card details over the Internet. By first registering their credit card details with their mobile phone service provider, the payment is processed using ID and PIN as authentication and subsequently reflected the charges as a credit card transaction or as another item in the phone bill.

Internet banking allows bank customers to conduct account balances enquiries, fixed deposits placements and fund transfers. A number of banks have also launched the Internet payment services that enable consumers to pay for their Internet purchases by direct debiting their bank accounts.

2.2.5 Conclusion

The global economic slowdown, which is driving down consumer spending and credit card purchases, could prompt banks to adopt alternative payment systems. Retailers have become increasingly interested in recent years in offering customers alternatives to credit and debit cards. However, many financial companies are wondering whether the economic downturn will fuel faster adoption of alternative payment methods.

One would argue that it is not a matter of whether alternative payments will gain steam as a result of economic difficulties but rather, in the face of economic difficulties, financial institutions must embrace the alternatives. They must understand the value proposition, and the motivations, of various players in the payment industry as to why do consumers choose one method over another, what motivates the retailers to prefer one method over another and how should banks react to this shifting paradigm.

Banks have reacted to alternative payment companies as threats. However, if they want to retain the valuable customer relationships (and maintain deposit growth), financial companies need to offer dynamic tools that not only meet consumers' needs, but also serve the needs of all constituents in the ecosystem. The prime constituents are merchants and the payment networks, and they soon will likely include wireless carriers. The prime factors banks must consider are from a competitive and economic perspective in the event that a sizable percentage of people are using their credit cards less during such times and moving forward.

During recessionary times, the survey indicated that nearly 40% of consumers said they have cut down on credit card purchases as a direct result of the current economic conditions, though they are often choosing other traditional payment methods (Javelin Strategy and Research).

Consumers are spending less, and credit card spending has been hit the hardest; 29% of consumers said they are finding it harder to pay off their credit card debt, 40% said they are putting less money into savings, and default rates on outstanding balances are going up. Hence, card issuers must concern themselves with these issues, because the increased risk in their portfolios can turn very bad, very quickly. Financial companies, especially those with robust card-issuing businesses, face the challenge of altering their payment strategies, their risk management tactics, and their customer relationships across all product lines.

Consumer spending is not disappearing completely. Analysis shows transactions that would have used credit cards, “pay later” in the past are migrating to debit cards and other "pay now" options, as well as "pay before" methods such as prepaid cards.

All these alternative payment methods are showing huge growth, according to Javelin's consumer surveys, and they present the opportunity to link with specific merchants and generate revenue from business-to-business services, ranging from acquiring to deposits and cash management.

From a competitive perspective, banks must fight harder to make sure these opportunities do not migrate to other companies, and to ensure that the payment alternatives remain bank products, for example, be the first to provide innovative solution with some notable forays into the mobile space. Several companies have in recent months been trying to take advantage of this perfect storm of economic and competitive factors affecting the payment landscape by providing dynamic solutions, incorporating the mobile channel, and doing so in a manner that fits with the times (minimal up-front investment and relatively little impact to core and legacy systems).

With an excellent infra-structure and political stability, financial institutions in Singapore must take advantage of this opportunity to strategically advance products and services in a way that ensures a working in their favor. However, given the small population size and the liberialization measures introduced with the addition of new foreign players, the payment cards industry faces intense competitive rivalry to seize market share from the other players. Hence, simply attaining organic growth would require banks to focus on strategies to strengthen existing and new customer relationships and innovate with customizing their card products to meet their discerning and well-travelled customers.

With this understanding, we will deploy Michael Porter's Five Forces in the next section to determine the strengths and weaknesses of all players in the system, the level of competition and ultimately how banks can leverage the framework to drive profitability in the overall debit card industry in Singapore.

2.3 Michael Porter's Five Forces

Satisfying customers is a central tenet of the marketing concept but it is not enough to guarantee success. The real question is whether a firm can satisfy customers better than the competition. Customer choice would then be creating a little more value in the eyes of the consumers than the competition. This extra value is brought about by the establishing a competitive advantage, creating greater value and understanding their competitors as well as their customers.

With this strategic concept, we will apply the Porter's model of competitive industry framework to analyze the profitability of the industry as determined by the five sources of competitive pressure. These sources include the threat from substitutes, competition from new entrants, intensity of rivalry, buyers' and suppliers' bargaining power surrounding our subject of interest in offline debit cards issued by banks in Singapore, in collaboration with the 2 largest card scheme companies, MCI and Visa.

2.3.1 Threat of Substitutes

The substitutes of debit cards are namely credit cards, checks, prepaid/stored value cards, NETS ATM and cash.

A credit card is a convenient mode of payment, and with the approved credit limit, it allows the cardholder to revolve a portion of the purchases as debts with low minimum sum monthly payments. As at 31 December 2009, there are 6.7 million credit cards generating a total cardholder billing volume of S$26 billion representing a card penetration of more than 2 cards per eligible population. [http://www.mas.gov.sg/data_room/msb/Monthly_Statistical_Bulletin.html#money].

As seen above in Figure 1, while checks are still a popular mode of payment in Singapore, it is experiencing a steady decline in the volume of transactions and usage with the increased popularity of credit and debit cards. In 2009, the number of Singapore denominated check transactions processed by the Singapore Automated Clearing House (SACH) decreased by 2.7% to 83.5 million.

Stored value facilities (SVF) are prepaid instruments that can be used for the payment of goods or services up to the amount that has been stored in the instrument. There are two types of SVF, namely single-purpose and multi-purpose SVF. A single-purpose SVF can only be used for the payment of goods and services provided by the issuer of the SVF, and not by any third party. An example of single-purpose SVF is the prepaid telephone card, which can only be used to pay for telephone services provided by the issuer.

On the other hand, a multi-purpose SVF can be used for the purchase of goods and services provided by the issuer as well as third parties. The ez-link card and Nets CashCard are examples of multi-purpose SVF. The usage of SVFs usually does not require a pin or signature to authorize the transaction. An example is the NETS CashCard. It is widely accepted at thousands of retail outlets, supermarket and department stores, libraries and post offices. It is also used for payment of electronic road pricing (equivalent to paying toll fees) and parking fees. Another example is the ez-link Card. It is used primarily in the public transport system, Mass Rapid Transit (MRT). The usage of NETS CashCard and ez-link card has expanded and can be used almost everywhere and every person in Singapore would have at least a NETS CashCard and ez-link card.

The NETS CashCard is based on smart card technology, and is widely accepted at retail outlets, supermarkets, departmental stores, libraries and post offices for retail purchases. It is also used for payment of electronic road pricing and parking fees. The ez-link Card is based on contactless smart card technology and used primarily in the public transport system. However, since its introduction, the ez-link Card's use has been progressively extended to non-transit purposes such as retail payments. Table 3 below shows the exponential growth in the number of stored value cards over the last decade although they are being used for small ticket size purchases.

Table 3: Statistics of Stored Value Card

Year	Number of transactions (millions)	Value of transactions ($ billions)	Number of stored value cards/accounts (thousands)
2000	100.10	0.17	4,697
2001	102.20	0.21	5,639
2002	702.11	0.66	9,776
2003	1,535.90	1.24	11,513
2004	1,598.15	1.33	10,673
2005	1,621.60	1.42	11,114
2006	1,691.02	1.52	12,042
2007	1,665.08	2.02	13,870
2008	1,872.50	2.25	15,484

Cash is another alternative payment. It is available to everyone, easy to use and its use is anonymous. Cash is also the logical payment method for certain transactions as in the case of 'micro-payments', for example, buying groceries from the neighbourhood provision store.

Undoubtedly and with increasing publicity, one of the critical strategies of MCI and Visa is for the scheme branded cards to replace cash and checks in addition to competing amongst themselves and displacing each other. "Globally there has been a shift in payment trends from paper-based cash and checks to electronic payment systems. Malaysia is fast catching on this trend making this an opportune time to launch our "Visa Debit Spend & Win a car" campaign," Stuart Tomlinson, Visa's country manager for Malaysia said, (TBWA, June 2009, Visa's Agency of Record). Visa has recently launched similar campaigns in Singapore and Indonesia. When asked if Visa was pushing the debit card hard this year to cardholders because of the negative perception credit now has from the economic recession, Tomlinson said "yes and no" and we hope to find out more in the study.

From the above analysis, the threat from substitutes is reasonably strong as we see that each of these payments methods, debit card, credit card and cash, is competing for a share in the consumer wallet and merchant acceptance with debit and credit card steadily gaining share in the industry as a payment instrument in Singapore. The choice of payment method is largely dependent on the cardholder's understanding of the benefits of the different uses, the perceived value, real or otherwise, with almost zero switching costs.

Banks and card companies will need to continue to aggressively educate consumers and merchants on the low cost of using cards as a mode of payment, at the same time build up switching costs and create distinctive brand personalities by providing attractive benefits for their use to drive usage domestically and internationally and reduce buyers' propensity to substitute.

2.3.2 Competition from New Entrants

New entrants can raise the level of competition in the payments industry thereby reducing its attractiveness for example, the introduction of foreign entrants. For the past few years, the government has been encouraging foreign multi-national corporations (MNCs) to enter into the debit market with the liberalization of the banking industry aiming to further strengthen Singapore as a financial center.

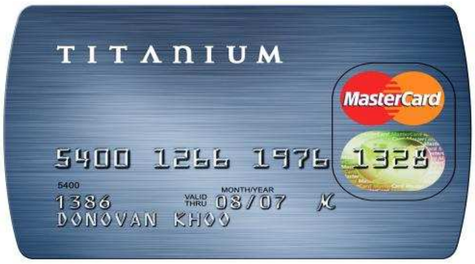
The Singapore market, previously dominated by NETS, is now facing threats from the following key foreign banks, which include Citibank (Citi), Standard Chartered Bank (SCB) and Hong Kong & Shanghai Banking Corporation (HSBC), collectively referred as “QFBs”. Given their minority share in the domestic card market as a new entrant, it is in the QFBs interest to build stronger alliances to strengthen the global relationship, drive product innovation with MasterCard & Visa International to issue debit cards with both domestic and international acceptance to differentiate themselves from the national Singapore banks.

From the perspective of the local banks in Singapore and their dominance, there are high barriers to entry into the card payments industry as it takes enormous investments and resources to set up a card center. With respect to the QFBs, given the high access to distribution and possibly low expected retaliation from domestic players in a country like Singapore with stable and strong government control, the high capital requirements could be afforded perhaps only by the global banks such as Citi, SCB and HSBC by partially defraying investment costs with economies of scale by leveraging their global network to gain with a steep learning curve.

2.3.3 Intensity of Rivalry

The intensity of rivalry between competitors in the payments industry in Singapore is dependant on the structure of the competition, cost structure, degree of differentiation, switching costs and the overall strategic objectives of the key national banks and new entrant global banks.

The card market in Singapore is highly competitive. The credit market is saturated with limited organic growth opportunity. The card product had been commoditized over the years and players are competing on lowering the “price to customer” to gain share, such as waiving of annual card fees, zero percent interest on revolving balances if a cardholder transfers from a competitor bank etc. In order to achieve credit card growth, banks continue to cannibalize their own card portfolio and that of the competition with customer segmentation, launching new products to attract the youth segment with unusual card design and cool appeal for example, mini or rounded edge size cards.



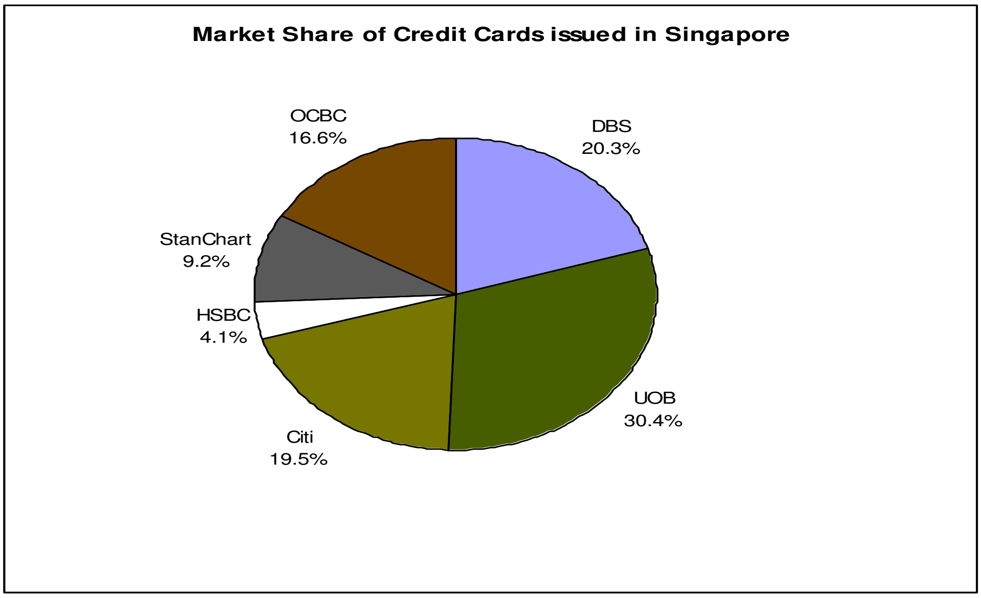
At the same time, the international banks, i.e., QFBs, are also taking full advantage of their privileged status and jumping on the bandwagon to issue internationally accepted debit cards. Debit represents a welcome addition to the product mix. It provides an additional source of revenue and is secure and cost effective with low risks of fraud and default payment and cost of capital. As the authorization and settlement is processed based on cardholder current account balances and is done simultaneously, the risk of fraud is virtually zero.

The last two years in particular saw an increase in card issuers focused on the issuance of debit cards. They offered a vast range of rewards programs, discount programs, gifts and additional services in order to recruit new cardholders and retention of existing cardholders. Virtually all card issuers have both a reward programs and a range of discounts for cardholders designed to act as competitive differentiators.

While cross selling by bank branches and direct mail continue to be used for acquisition of cards, banks have adopted road-shows as another driver to get new cardholders. They set up booths in high pedestrian traffic areas as well as engage in aggressive telemarketing to achieve their targets.

Let us examine the strategies of key foreign global banks and Singapore’s national banks to analyze the intensity of competitor rivalry and identify opportunities in the payments industry growth and profitability in the debit arena.

Figure 8 : Estimated market share position of each key player



2.3.3(a) HongKong Shanghai Banking Corporation (HSBC)

Source [http://www.hsbc.com.sg]

In Singapore, HSBC first opened its doors in December 1877. One of the earliest banks to establish in Singapore, HSBC is today a prominent player in Singapore's banking sector and offers a broad range of banking and financial services tailored to meet a wide spectrum of needs, from those of multi-national corporations to local businesses and individual Singaporeans. Linked to the Group's international network, HSBC in Singapore provides customers with a comprehensive range of financial services including personal, commercial, corporate, investment and private banking, insurance, securities and capital markets services. HSBC's modus operandi – The World's Local Bank – Go global (standardize) when you can and go local (adapt) when you must.

A Qualifying Full Bank, HSBC Singapore has 18 locations comprising of 9 full branch services, a dedicated centre for HSBC Premier customers and 8 other locations providing Automated Teller Machines, Cash Deposit Machines and electronic banking channels including 24-hour PhoneBanking services and Internet banking services.

Through a strategic tie-up with a retail supermarket giant, customers can also withdraw cash with QuickCash, using their debit card from the cashiers at the Cold Storage group of stores which includes over 230 everyday stores like Cold Storage, Giant, Guardian Health and Beauty, Jasons The Gourmet Grocer and Market Place. HSBC is aggressively expanding its banking presence in Singapore by launching this new MasterCard debit card (tied to a deposit access account) and accompanied by the feature that allows the cardholder to make electronic payment for purchases at the point of sale.

HSBC has given the option to its banking customers by offering to convert all its proprietary cards to MasterCard/Visa offline debit cards. These debit cards come with a cash-back service that allows customers to make withdrawals of up to S$500 when they make purchases of any amounts at the EFTPOS. In addition, HSBC customers will have access to over 800,000 ATMs worldwide, and be allowed to make POS payments at more than 8 million establishments globally.

2.3.3(b) Citibank N.A (Citi)

Source [http://www.citibank.com.sg]

"Citi Never Sleeps" - Citi has introduced a newer version of its former, world-famous tagline, a slight variation of the memorable line that debuted more than 30 years ago, an enhancement which builds on Citi's existing brand and supports the company's rich history of serving customers any time and any place through a variety of channels. It captures the organization's relentless commitment and boundless energy to serve customers in more than 100 countries, its global growth strategy as a worldwide leader in innovation.

As one of the pioneers in introducing the Wealth Management program, Citi targets affluent customers and achieves relatively higher spend on their payments card. It recognizes the potential in the debit market as well as mobile banking, a new way of banking when consumers are on the move and manage their finances wherever they are. In 2007, Citibank rolled out a 3-in-1 debit card, that can also be used like an EZ-Link card to pay for bus and train rides, a first in Singapore. The three-in-one card can be used like a regular debit card to get cash from ATMs, pay for purchases and earn savings rates.

It comes with the Citibank Tap & Save Account, a check and savings account with interest rates that increase as the monthly balance grows. Cardholders will also earn cash rebates from daily transport and other spending: 2 per cent for the EZ-Link automatic top-up and 1 per cent for other point-of-sale transactions. The cash rebates will be automatically deposited. The EZ-link automatic top-up seamlessly tops up the card to a stored value of $30 by drawing on account funds whenever the balance goes to zero. As the debit card has no minimum income requirement, all Singaporeans are eligible.

In addition, Citi is reknown for its strong rewards, discounts and merchandise programs. This debit card program also attracts the same card privileges attached to Gold or Platinum, which the specific segment of debit cardholders also get to benefit from. With this new innovation, Citi aims to reach out to even more Singaporeans and bring convenient, accessible and affordable banking to new levels.

2.3.3(c) Standard Chartered Singapore (StanChart)

Source [http://www.standardchartered.com.sg]

“Here for Good” is StanChart’s brand promise. It began rolling out a global brand campaign focused on its commitment to being a positive force in the markets where it operates across Asia, Africa and the Middle East in 2010. It underlines the Bank's distinctive approach to international banking and creating a strong platform for continued growth. StanChart has delivered record income and profit for seven successive years, winning customers and market share, even during the financial crisis. The new brand promise captures the ethos that has driven this achievement, one which has remained consistent throughout the Bank's 150-year history.

A simple phrase with multiple meanings, “Here for good” sums up Standard Chartered's commitment to developing deep relationships with its clients and customers; its values, conduct and focus on sustainability; and its longevity, heritage and continued strong performance. The brand campaign will bring to life StanChart's longstanding commitment to its customers, clients and communities, the bank's deep local knowledge and heritage in the world's fastest-growing economies; and its determination to build a sustainable business.

Like the other foreign banks, StanChart too stepped up its card acquisition campaigns by leveraging on its branch networks, direct marketing and road shows. It launched the Manhatten Card, a lifestyle credit card and is targeted at the fast growing young, ambitious and upwardly mobile Singaporean consumer. The card has been developed following extensive research in the market that showed customer demand for a new product specially tailored to adventure, clubbing, and entertainment. The Manhattan credit card is described as a true first for the Singapore market providing and communicating differentiated lifestyle privileges and experiences and enabling customers to connect with people sharing similar interests.

StanChart also launched an internationally accepted ATM debit Visa card – "Want access to your money wherever and whenever you want? With the Standard Chartered 'Visa debit Card ' you get the convenience of making purchases or withdrawing cash wherever Visa is accepted, the ATM/Debit card that lets you shop worry-free and cash-free." No bill payments at the end of the month as you make purchases using your own money. You can use your Visa Debit Card almost anywhere in the world wherever you see the Visa symbol. It is quick and secure and you can use it for purchases big or small. Use your own money at 27 million outlets and 160 countries worldwide wherever Visa is accepted. Enjoy peace of mind by not having to carry cash and all POS transactions on your card are signature based. Simply swipe and sign!

<u>2.3.3(d) Development Bank of Singapore/POS Bank renamed DBS Bank</u>

Source [http//www.dbs.com.sg]

Well-positioned at the heart of a growing Asia, DBS embraces the dynamism of Asia, and bridges Asian markets for consumers and businesses through their extensive network in the region. As a bank that specialises in Asia, DBS leverages their deep understanding of the region, local culture and insights to serve and build lasting relationships with its cusotmers. It is committed to expand its pan-Asia franchise by growing presence in mainland China, Hong Kong and Taiwan to intermediate the increasing trade and investment flows between these markets.

DBS is also focused on extending their end-to-end services to facilitate capital within fast-growing countries in Indonesia and India. DBS acknowledges the passion, commitment and can-do spirit in each of its 14,000 staff, representing over 30 nationalities and is committed to empowering, educating and engaging staff at all levels so as to build a high performance organization renowned for its good customer service and innovative business solutions.

As the second largest card issuer and a government-linked company, DBS has tremendous presence in the card market. It is among the first to tie up with MasterCard International to issue DBS MoneySmart Debit MasterCard. The card can be used to access any of MasterCard/Maestro /Cirrus ATMs worldwide and at NETS terminals locally.

The major local banks in Singapore have responded to continued growth in personal wealth and saturated market conditions by moving towards 'lifestyle-centric' and premium card products. These cards offer exclusive discounts and benefits, which are tailored to specific demographic segments of the population. For example, the DBS Women's card offers shopping deals, concierge services and special healthcare privileges.

2.3.3(e) United Overseas Bank (UOB)

Source [http//www.uob.com.sg]

UOB's business strategy is to focus on strengthening their lead in targeted customer and product segments in Singapore and the region, to drive organic growth by expanding their businesses in the various markets where they operate by leveraging the strategic fit and existing infrastructure. It seeks to build on the UOB brand in Singapore and the region by continually introducing innovative products with creative marketing and customised products of high quality at competitive pricing to give customers a fair deal. Last but not least, to deliver high service quality at every customer touch point and distribution channels designed for the convenience of the customers.

UOB is the largest issuer and acquirer in Singapore. The bank is well known for its strong rewards program, which offers loyalty program and attractive discounts on a wide range of merchandise, food and beverages. It is a strong supporter of Visa and has launched a series of debit card programs with UOB Visa R Classic/Gold Card and more recently, the UOB Campus debit card, eligible to any undergraduate 18 years and above, pursuing a full-time degree, positioned with "you will enjoy your best years as an undergraduate which not only gives you recognition, but also privileges that go beyond the campus grounds."

UOB was the first bank in Singapore to introduce a Gold Debit card (with gold surface similar to the credit gold card). The cardholder of the Gold Debit card can withdraw up to S$10,000 amount limit (usual withdrawal limit is S$3000), free travel insurance if the air ticket is charged to the card and a host of other privileges.

2.3.3(f) Overseas Chinese Banking Corporation (OCBC)

Source [http//www.ocbc.com.sg]

New Horizons II is OCBC's five-year strategy from 2006 to 2010. It continues on the broad strategic direction and successes of New Horizons (2003 to 2005). The emphasis is on embedding OCBC in the region through a build-and-transfer approach, and on continuing its efforts to build a high performance bank through a balanced scorecard discipline.

To seek international growth, OCBC will shift its emphasis from adding more country flags to deepening market penetration in Malaysia, Indonesia and China. OCBC will strive to build more best-in-class products and to become known for product innovation by sustaining 15% revenue contribution from new products annually. It will aim to be one of the top 3 banks for wealth management, credit cards and unsecured lending in the combined Singapore-Malaysia market. With its cross-border processing hubs in Singapore and Malaysia, it can leverage such infrastructure to deliver further efficiency gains and be a low-cost service provider.

Most recently, OCBC received the Businesses for Families Mark from the Ministry Of Community Development, Youth and Sports (MCYS), making it the first bank to receive the accreditation. The mark is awarded to businesses that meet specific pro-family standards related to their strategy, service quality, infrastructure & results. This recognition is a result of OCBC's continued efforts to invest in product innovation and service improvements to differentiate OCBC from its competitors in the family customer segment.

From customer insights gained through extensive research on the needs of this segment, OCBC created a unique family-oriented banking environment and rolled out several innovative products and services to support family banking.
By popular demand, OCBC increased its full-service Sunday Banking branches, introduced since 2006, from 5 to 18 within 3 years. Another example is the success of OCBC Mighty Savers™ Programme. OCBC Bank has seen more than 30% growth for its children-related accounts over the past one year.

OCBC is the smallest among the three local banks. It has pursued a relatively conservative strategy and has been a follower rather than a leader in the cards business. OCBC have also moved to co-brand their cards with retailers (eg. OCBC's Ikea friends card), and more recently have also introduced a selection of 'designer' card styles, e.g. Titanium card as they seek to better identify with a cardholders personality. The bank has been a processor for Robinson Department proprietary cards for many years and in 2002, the bank launched a co-brand program with Robinsons that resulted in the growth in their credit card portfolio. The OCBC Robinsons has been a popular card because the store offers a wide range of quality merchandise at reasonable prices and it offers an additional 5% discount on purchases if you charged it to the co-branded cards.

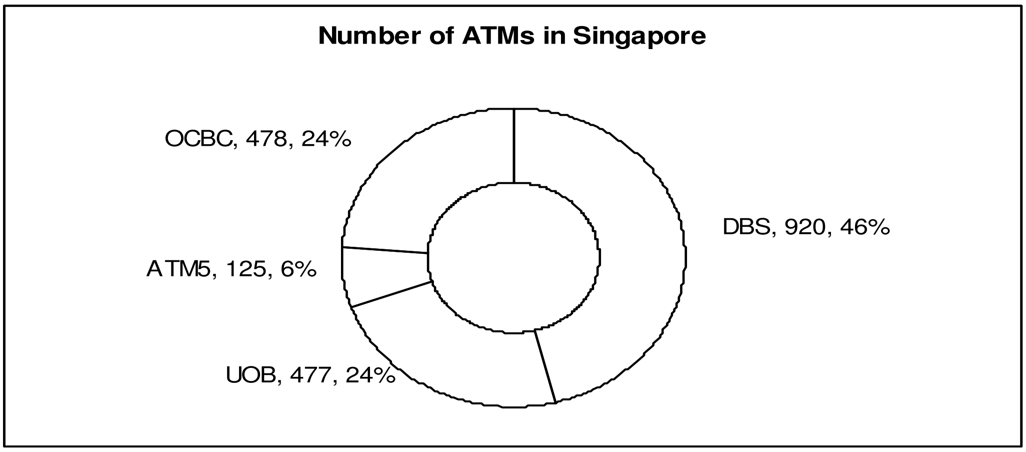
OCBC partnered with Visa to launch its "Yes – It's all I need" debit card with EZ link and contact-less technology, to pay for anything, anywhere (transit, ERP electronic road pricing toll charges, dining, travel etc at over 24 million merchants around the world), pay in anyway (pay in double quick time by tapping or waving the card), get cash anywhere and be rewarded.

2.3.3(g) Automated teller Machines (ATMS)

Given the focus on debit in this study, the intensity of the rivalry should also be reviewed from the ATMs perspective. In terms of access points, the number of ATMS has increased tremendously to offer greater convenience and accessibility to customers. The major local ATM networks connects the national banks, namely, DBS UOB and OCBC.

With the issuance of the QFB licences, some of the QFBs are sharing their ATM networks amongst themselves to provide better services to consumers. Banks have intensified their efforts to tie up with other banks to expand their ATM networks. For example, the foreign banks launched their shared ATM5 network, connecting HSBC, Citibank, Maybank, Royal Bank of Scotland, Standard Chartered Bank or State Bank of India.

Figure 9: Numbers of ATMs in Singapore



Source: Individual bank website count

Since its founding in 1985, NETS has been an integral part of Singapore society, through its provision of cashless payment for a myriad of uses. From early electronic points-of-sale (EFTPOS, or Electronic Fund Transfers at Point of Sale) to the latest mobile payment technologies (mNETS), the company has been a leader in providing convenient, flexible and efficient payment options.

Today, NETS has a merchant partner network of more than 15,000 and has payment options that include the contactless CashCard, which enables users to simply flash and pay. NETS continues to develop products that lead the way in electronic payment technology, providing more choices for consumers and new opportunities for merchants and partners. With these initiatives in place, NETS looks set to become the Asian Payment Powerhouse for its merchants, partners and consumers.

A nationwide infrastructure that enables consumers to make purchases at retail counters using their ATM cards. This service is recently expanded with the Wireless NETS Debit service, enabling a merchant to move a wireless terminal right to a consumer's doorstep. Through NETS Debit, NETS is pioneering the way towards a more convenient, cash-free society. Just three years ago, 55% of all transactions were cash; today, it is down to 40%. Think cashless payment in Singapore and invariably NETS comes to mind as the leader in payment innovations.
From the ubiquitous NETS Cashcard (stored-value payment) to electronic point-of-sales (NETS Debit), NETS has brought a range of new payment enhancements to the market since its founding in 1985. From the early days of developing the shared ATM network in Singapore, the company has continued to innovate with new payment services, which now enable users to pay online (eNETS) and on mobile phones (mNETS).

Partnered by more than 15,000 merchants in Singapore, NETS offers payment services that help them target different markets, gain more customers and increase transactions. The NETS CashCard, for instance, is the most widely accepted multi-purpose stored value device in the Republic, while NETS' wholly owned subsidiary eNETS is Singapore's largest online payment gateway with a footprint extending across the Asia-Pacific.

To encourage consumers to join the cashless revolution, NETS has also implemented customer reward programmes, which are pegged to the use of its various payment services. The NETS Privilege Programme, its latest consumer-centric initiative, lets users enjoy on-going discounts and privileges at participating merchants, as well as exclusive warehouse and event sales. Consumers are informed of these promotions through monthly electronic direct mailers, NETS' website, print advertisements and point-of-sale collaterals at participating merchant outlets.

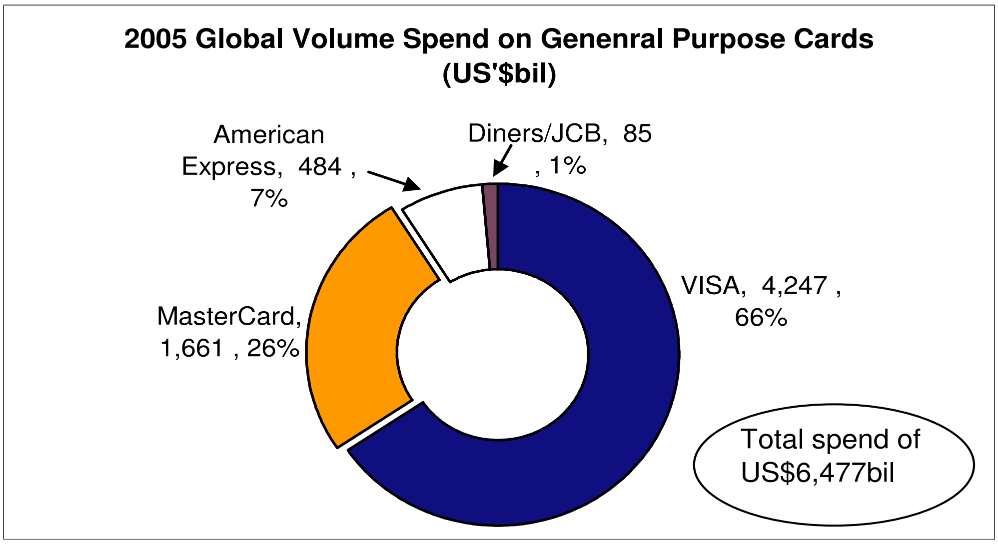
Today, NETS continues to develop products that lead the way in electronic payment technology, providing more choices for consumers and new opportunities for merchants and partners. With these initiatives in place, NETS looks set to become the Asian Payment Powerhouse for its merchants, partners and consumers.

The rivalry among the banks is very intense. Banks continue to roll out additional ATMs to increase acceptance of its cards and introduce new and innovative products to ensure that its customers stay interested in the products, in order to cannibalize the other banks' card portfolio to stay ahead of the game.

2.3.4 Power of Suppliers

In the card industry, the suppliers are the scheme card companies. The card issuer is the financial institution that issues the credit or debit card, while MCI or Visa owns the network or platform that performs the authorization, clearing and settlement of the transactions on behalf of the issuing and acquiring bank after determining whether the cardholder has sufficient credit or funds to complete the transactions. Below is data for 2005 but share position today, remains Visa as the market leader and MCI in second place.

Figure 10: Market Share of Card Companies by Scheme/Brand



Source: Chart created with figures extracted from The Nilson Report

MCI and Visa are the only two schemes for offline debit cards, and are relatively new compared to credit cards, as it was only introduced to Singapore less than a decade ago, when foreign banks obtained QFB status. Given the considerable innovative efforts and investments by MCI, Visa and banks, in creating offline debit to combat local networks such as NETS, the product will continue to grow over the next few years and more. Singapore is a relatively small market and competition between card companies will be intense.

The Herfindahl Index in the card payment industry ranges from 0.2 to 0.6 as can be seen from the oligopoly structure above, with fierce intensity of price competition and high supplier inter-firm rivalry. In most countries where MCI established offices to be closer to customers and the acceptance distribution network, Visa was already there with the early mover advantage.

However, due to the homogeneity of product offerings of the MasterCard and Visa offline debit card, cardholders often associate the MasterCard and Visa brand as one and the same. This therefore heightens the need for these two companies to differentiate themselves by targeting the right customer segments and position good value in order to compete to win. It is also crucial to capture the price-sensitive buyer and create the "stickiness" upfront as with debit card, cardholders are not easily tempted to switch given they have their daily-use personal or checking bank accounts linked to the card. As technology, both hardware and software, plays an important role in the implementation of new cardholder programs and products, switching costs are fairly high for bank issuers and they are usually hesitant to "re-card" a Visa card to a MasterCard.

Having captured more than 50% of the market as the leader, Visa was able to generate more revenue to re-invest back into the markets in close partnership with the issuing banks. Leveraging higher volumes and transactions processed through their network, proactively working with issuers to create loyalty within the large established cardholder base, Visa enjoyed economies of scale, scope and learning economies, gained cost advantage with less processing cost per transaction as a result of increased volume, charged their customers lower fees, to sustain competitive edge.

In addition, there is also the threat of "Honor All Cards" rules that was initiated in 1996 by several large merchants and merchant trade associations in the United States (led by Wal-Mart and Sears). In it, the merchants filed a lawsuit against MCI and Visa over the "Honor All Cards" rules that required merchants to accept the MasterCard and Visa branded debit cards. In April 2003, both MCI and Visa agreed to settle the cases out of court and to eliminate the 'Honor All Cards' rules. [Source: US market for debit cards (2004)]. The implications of the law suit on the part of retailers in Singapore with respect to the 'Wal-Mart' settlement and whether there is a pressure on consumers to select the least expensive type, i.e., PIN-based debit cards will be discussed later in Chapter 4.

Overall, the bargaining power of suppliers is weak with the card products being commoditized in a mature and saturated market, and MCI/Visa are competing on price to gain share, with banks looking to them to lower operational costs given the margin compression from annual fee waivers, declining interest rates, and at the same time discerning cardholders with four to five credit and debit cards in their wallets who are using the card which gives them highest benefit at the lowest cost.

2.3.5 Power of Buyers

In the payments value chain, the cardholders and the merchants/retailers who accept the debit cards are the buyers. To be successful, the card companies and issuers must get both the cardholders and the merchants on board of its card programs.

Cardholders have recognized the convenience of debit cards, especially for large ticket but low-margin products such as electrical appliances and computers where discounts can be negotiated for non-card payments. As mentioned above, cardholders generally have no loyalty and will choose whichever card they perceive as value for money and use it accordingly. The cost of switching for cardholders moving from one product or program to another is virtually zero.

Each cardholder has their unique needs that may be different from the next cardholder and hence different value perception. Value on cards includes discount programs, rewards program, no annual fees etc. Hence, in such an environment, success goes to firms which invest in marketing research to understand customer insights and how best to meet their needs. Given the high card penetration in Singapore, the cardholder's bargaining power is very strong.

From the merchant's point of view, they are very sensitive to merchant discount fees which have to be paid to the acquiring bank based on percentage of card volume, particularly those with high sales turnover but thin margins, such as large supermarket and electrical appliance chains. The recent settlement reached by Visa and MasterCard and the merchants/retailers led by Wal-Mart in the United States are expected to result in profound changes in the debit landscape in the future. Merchants may not be obliged to accept signature-based debit cards pending upon satisfactory negotiation of interchange rates which will result in a lowering of merchant discount fees. Hence, the merchant's bargaining power is equally strong.

2.4 Conclusion

Although credit card customers have historically used their credit cards for POS spending with an interest-free line of credit within the grace period, over the last few years, customers used their cards for borrowing purposes particularly when the stock market crashed and had severe effects on consumer liquidity. The factor distinguishing Singapore's recent credit cards sector is its increasing high rollover rate, estimated to be more than 60 percent in 2009.

Undoubtedly, there are other reasons behind the popularity of credit and debit cards at the POS. For instance, issuers have implemented various incentive schemes for card spending, including collaborating with merchant outlets to provide reward points and zero-percent instalment schemes. However, until the sector develops a broader range of segments, players in the market could be restrained by the lack of available information and the inability to provide more sophisticated products to the various customer groups.

Singapore's credit cards sector suffered in 2008 with banks cutting back sharply on credit lending but the market contraction benefited debit cards as banks started to diversify their revenue streams by focusing on alternative products. As seen in Chapter 2.3.3, almost all the banks have recently rolled out programs encouraging the use of the MasterCard or Visa debit cards in 2009, with special promotions and privileges such as cash rebates, fuel discounts, loyalty rewards etc.

The popularity of debit cards underlined by the rise in the number of cards in issue, from 6.2 million in 2003 and to an estimated 9.6 million in 2008 and likely to surpass the 10 million mark in the very near future. This growth in debit cards has been driven by the on-going automation of deposit accounts, while growth in debit card billed volume has been caused by the migration of cash withdrawal activities from branches to AT Ms.

In spite of this growth, the percentage of total debit card billed volume at the POS is still low compared to its credit counterpart. One reason for this was that the local banks have maintained their proprietary debit card switch networks for POS transactions and customer awareness of the use of internationally accepted MasterCard and Visa debit cards on proprietary switches is low. In addition to debit cards, banks are also seriously evaluating the market for prepaid cards, which currently consists of predominantly prepaid telephone, transit and road toll cards. Some banks are therefore looking to launch prepaid cards for salary transfer, which could prove to be a substantial growth opportunity.

Singapore's merchant acquiring market has witnessed intense competition due to the aggressive strategies implemented by the acquiring banks, which are also the country's three major local banks and credit card issuers. UOB Bank is the country's largest credit card issuer and acquirer, and has been expanding aggressively in the market. In order to sustain competitive advantage, banks need to harness leading edge technology to support product innovation and business strategies, with continual re-engineering of processes for cost-effective solutions and operational efficiency.

Singapore's debit card market is still at a nascent stage of development and much work remains to be done in areas such as building robust consumer education and with targeted awareness programs and the conversion of card products to EMV standards to manage risk. With the recent contraction in the credit cards market, there is significant potential for growth in debit, particularly in a small city like Singapore with a large educated and youth segment that have yet to be targeted by foreign QFB banks. Furthermore, rising income levels and the increasing desire for more luxury consumer goods will play a key role in driving up debit penetration with the desire to curb increasing default rates.

From the above Porter's forces, it can be summarized that the threats of substitutes, intensity of rivalry and bargaining power of buyers are high, weak bargaining power of suppliers make the debit card industry in Singapore a hard nut to crack. Nevertheless, once consumers become comfortable managing debit purchases, they tend to carry less cash and debit card will move into the space in cardholders' wallet.

In order to grow in the debit card industry, the main attributes to business success by Peter Drucker, "marketing and innovation produce results, all the rest are costs." Hence, by maintaining cost leadership, creating product differentiation and with the right customer-led business strategy, it can be concluded that the debit card industry is still a viable business in Singapore.

CHAPTER 3 SURVEY FINDINGS

3.1 Introduction

The research seeks to understand the spending behaviors and payment attitudes of the consumers and their familiarity with debit cards other than NETS online debit cards. The research will also identify potential ways to increase debit card usage through enhancements and rewards.

This chapter will provide an analysis of the survey results. Important findings are discussed and results are summarized in tables with relative percentages on a question-by-question basis attached in Appendix 2. It will attempt to highlight the needs and preferences of the respondents and discover emerging trends on the debit cards.

The chapter will commence with the overview of the questionnaire followed by the purposes of the survey in section 3.2 and Section 3.3 will provide the results of the survey. In section 3.4, we will provide insights of the main findings and recommendations of the survey.

3.2 Survey Objectives

The questionnaire was short and structured, developed to collect data with 28 questions exploring the needs of the consumers and their related attitudes towards spending. It took between 15 to 20 minutes to complete the questionnaire (Appendix I). The survey was conducted through e-mail/mail interviews and collected by hand or e-mails. All 100 respondents were required to be at least 18 years of age and having annual income of S$18,000 and above.

The first consideration is the selection of the target group with a good mix of participants who are familiar with credit cards and are 'educated' in terms of card benefits and offerings.

The survey aims to gain customer insights into the following areas of interest:

- ❖ The level of awareness of debit cards by the general public
- ❖ The degree of willingness to accept the internationally branded debit cards as another vehicle of payment with the dominance of NETS in Singapore
- ❖ The importance of enhanced rewards and loyalty schemes in relation to increasing the usage of debit cards to displace cash and checks

The questionnaire for the respondents was segmented as follows:

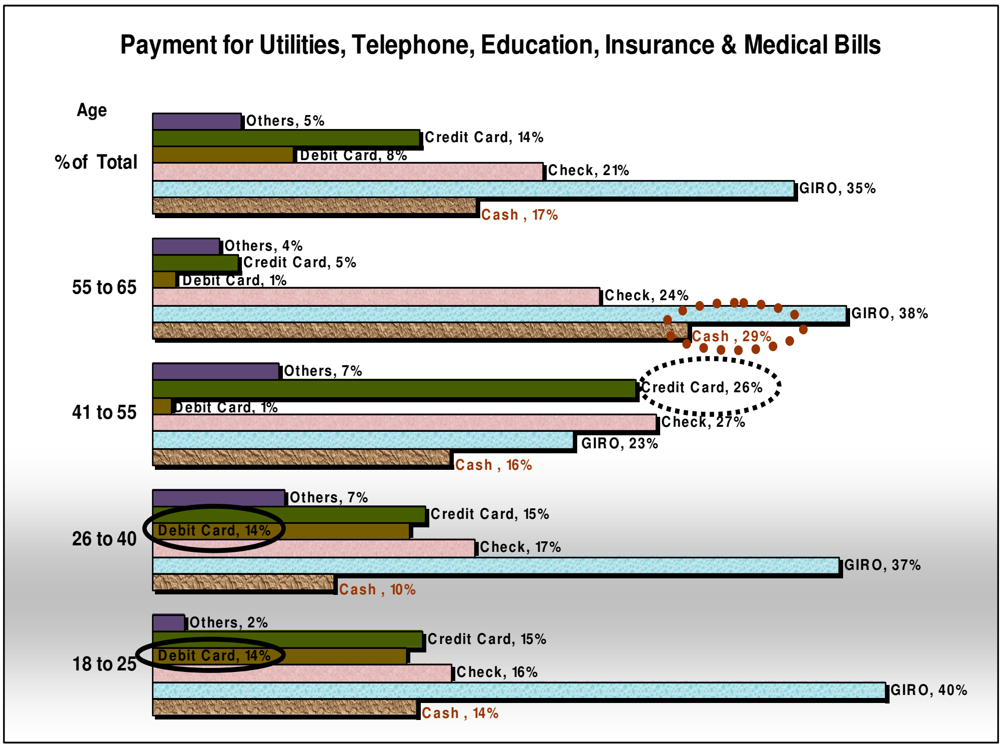
- ❖ Part 1 : Payment Attitudes and Behaviors
- ❖ Part 2 : Financial Management
- ❖ Part 3a : Card Utilization and Perceived Benefits
- ❖ Part 3b : Importance of Loyalty Schemes and Reward Programs
- ❖ Part 4 : Potential of Combo Cards, Credit or Debit Cards

3.3 Survey Analysis

3.3.1 Payment Attitudes and Behaviors

This section sought data to identify respondents' spending patterns, preference mode of payment for common expenditure and thereby, infer their familiarity with debit cards. In order to determine that, the questionnaire started with questions to ascertain the different modes of settlement used when making payment for household and lifestyle expenditure.

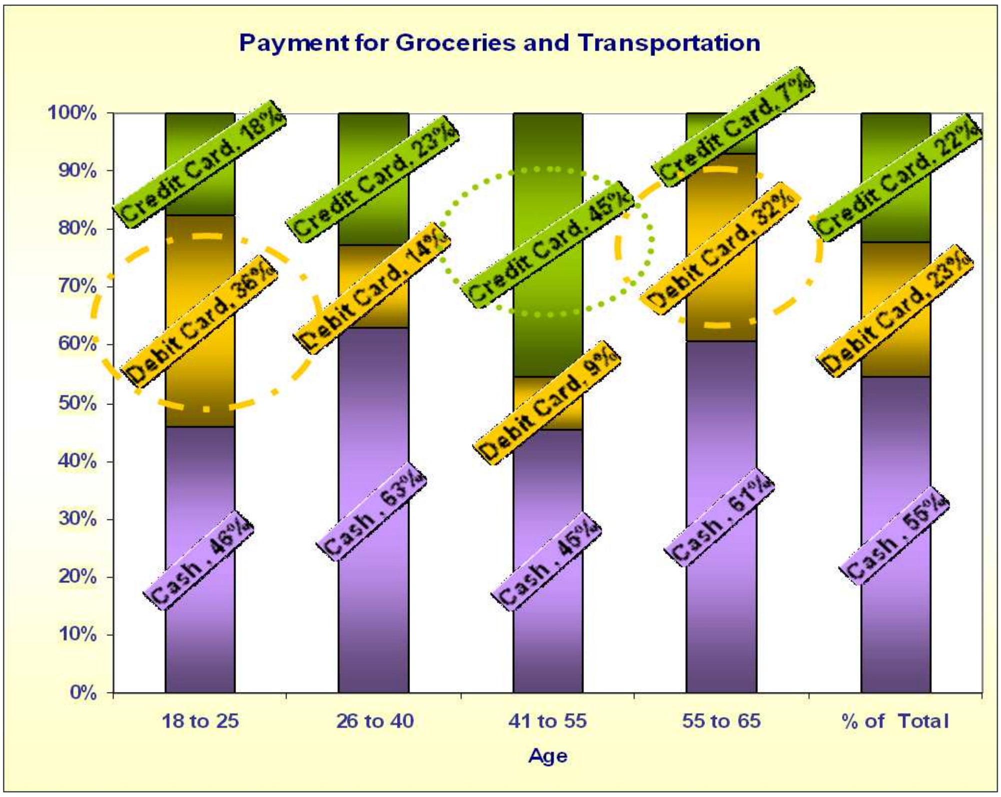
Figure 11a: Payment for Household Expenditure



Across all age categories, checks and GIRO remained the most common method of payment for utilities, telephone, education, insurance and medical bills while cash ranked highest amongst respondents ages 55 to 65 years, credit card highest amongst respondents age 41 to 55 years and debit card amongst respondents age 18 to 40 years.

This relatively low card payment result could be a function of the weak acceptance set-up at these merchants, where MCI and Visa, seen recently to be working aggressively with banks to target these "emerging categories" of merchants. The other emerging category of opportunity to open up card payments is with government associations such as tax and medical, hospital payments where the percentage of respondents we see in Figure 11b selected internet bank transfers or Medisave pension fund as modes of payment.

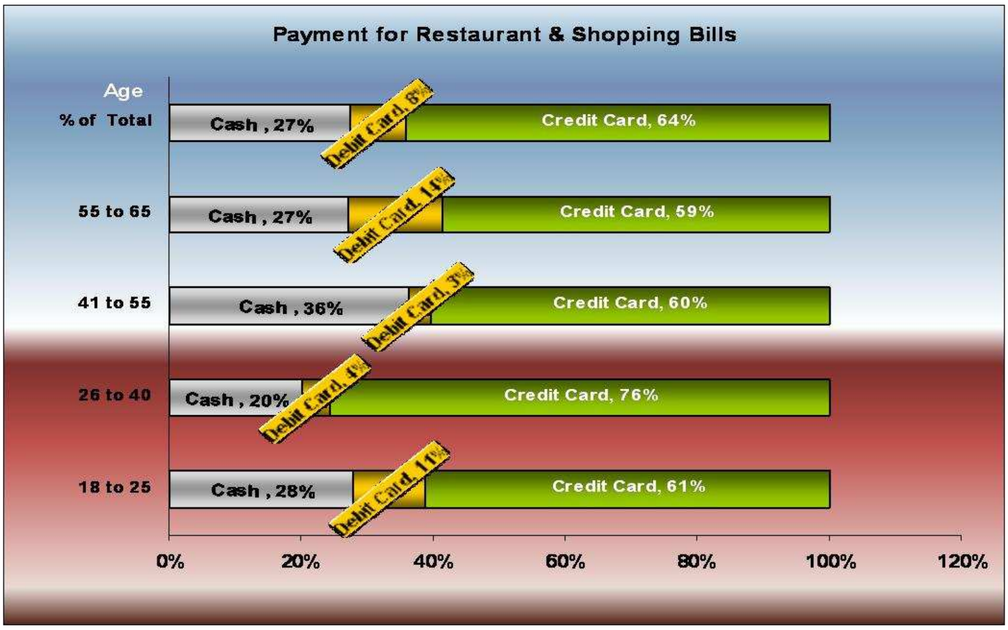
Figure 11b: Payment for Groceries and Transportation



No results was selected for checks and GIRO, cash dominated these two categories of expenditure with 45% to 63% of the respondents, possibly given its small ticket size with credit and debit card accounted for the rest. Debit card is used more commonly amongst respondents aged 18 to 25 and 55 to 65 years old mainly on public transportation with EZ-Link cards.

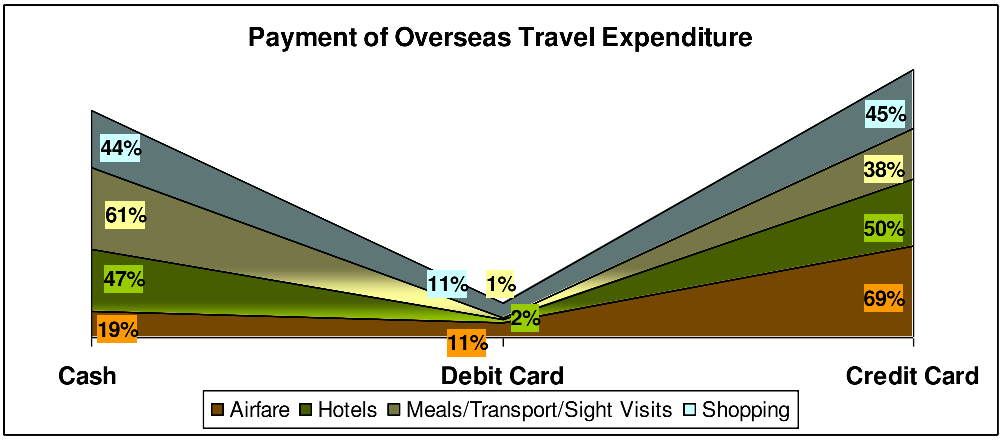
The high credit card usage in the 41 to 55 year age group came from payment for groceries at the larger supermarket chains such as Cold Storage, Market Place, NTUC FairPrice with better consumer awareness of the availability and benefits of card payment among this group of respondents.

Figure 11c: Payment for Restaurant and Shopping Bills



For shopping and dining at restaurants, we see a shift away from the traditional cash and check payments, to a majority share by credit card while debit card payments ranged from a low of 3% to 14%. The high representation of card payments is generated over the past decade of joint efforts by banks and card companies to drive card usage at POS, by providing attractive discounts at large shopping malls and popular restaurants.

Figure 11d: Payment of Overseas Travel Expenditure



From Figure 11d, other than payment for airfare where a higher proportion of respondents tend to pay with credit card as it is a domestic transaction, for hotel and shopping bills, meals, transportation and sight visits, the survey pointed to a balance of cash and credit card payment with low penetration for debit cards.

The element of foreign exchange exposure to high conversion rates and uncertainty of amounts charged until receipt of statement is a high deterrent for the use of cards to pay for transactions while overseas. Hence the typical over-the-counter money changer transaction and carrying foreign currency cash is seen to be a preferred mode. Finally, respondents were asked if they agreed with the statement "you will get faster service when you pay by card instead of cash". 64% said, "Yes", 32% said "No" and 6% said, "Not sure".

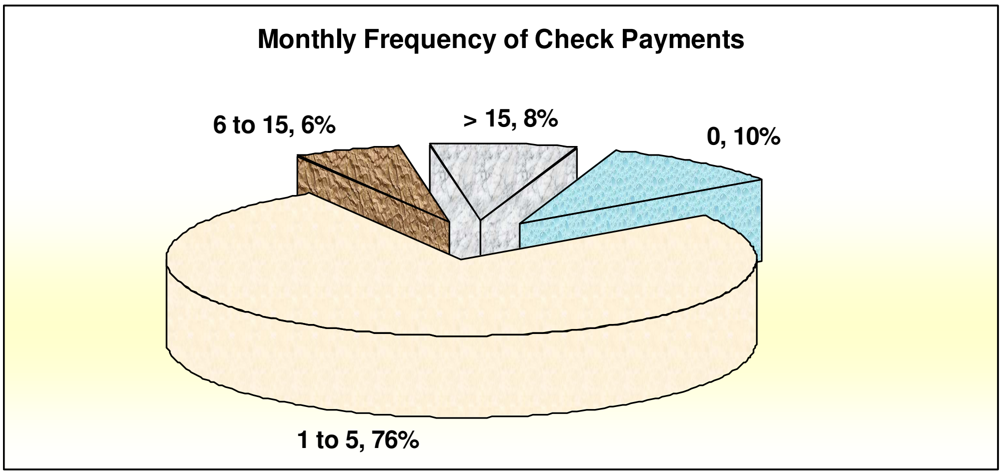
Interestingly, this perception tends to be true for younger respondents with 83% to almost 90% of those less than 40 years old agreeing with the statement while only 14% of the respondents over 55 years agreeing with the statement. This viewpoint somewhat correlates with the agreement received by the majority on the next statement "Do you prefer to pay by card when making purchases". 8 out of ten preferred to use card than cash. Some of the respondents who disagreed that there will be faster service when using cards yet still preferred to use card because of other intangible and perceived value, such as, convenience, prestige and safety.

3.3.2 Financial Management

The aim of this section is to determine the current market for check payments, the level of interest in using cards as an alternative to cash and the types of cards that they currently carry in their wallets. With this, we can then gain a better understanding of where bank issuers can tap into to increase debit card usage.

All respondents were asked approximately how many checks they wrote in a regular month and 76% of the respondents wrote an average of 5 checks a month with less than 10% in each of the other 3 categories, writing between 6 to 15 checks, more than 15 and no utilization of checks at all.

Figure 12: Frequency of Check Payments



All respondents were asked the types of cards they have used in the last 12 months. Overall, almost 90% have used NETS. 54% of the respondents used Visa, and close to 40% used MasterCard, 13% used American Express and 26% used some form of retail proprietory cards. Almost all of NETS users con-currently own a Visa or MasterCard or both.

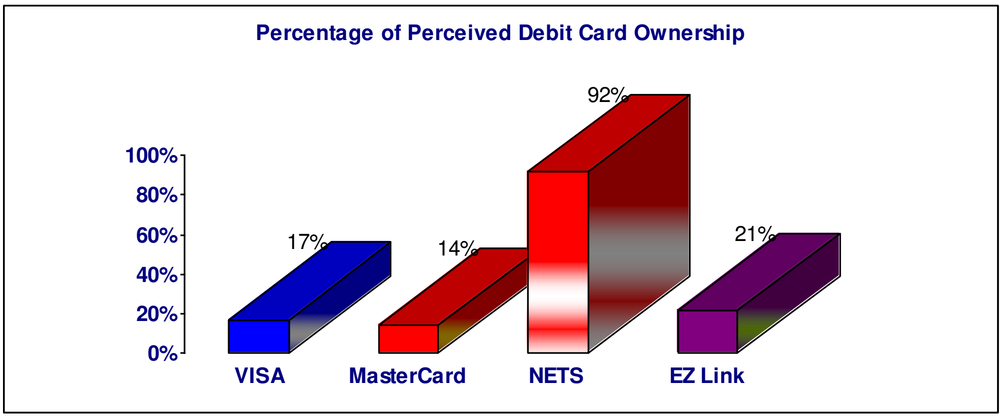
However, when it comes to the frequency of card usage, about 4 in ten are moderate users with 5-9 transactions a month. Half the population are light users with less than 5 transactions a month and and less than 10% are heavy users with above 10 transactions per month. In relation to settlement of accounts owing, 70% always pay their balances in full, about 20% of them let their balances owing revolve from month to month while one in 10 sometimes pay in full.

To further understand how often a product is used, a series of basic questions was raised concerning their current usage patterns. Approximately 98% of the respondents reported that they have used an ATM in the past year. Out of the ATM users, 40% indicated a usage of less than 5 transactions in a month. Almost 52% reported 5-9 transactions per month and less than 10% made ten transactions per month.

To gauge the familiarity of users with offline debit cards, the respondents were asked whether they had a card that worked like a credit card when making purchases but the amount of purchase is directly deducted from their current accounts, 14% of the respondents answered "Yes' and 81% said 'No' with rest "Not sure". For those respondents who do not know or do not have such type of card, they were further asked if they have ever used their ATM cards to pay for merchandise and services. 100% indicated that they have done so.

Users were asked to identify which card best described their debit card. As shown by Figure 13 below, 92% indicated NETS as their debit cards. Only a minority identified MasterCard and Visa cards as their debit cards.

Figure 13: Percentage of Perceived Debit Card Ownership



3.3.3 Card Utilization & Importance of Loyalty Schemes and Benefits

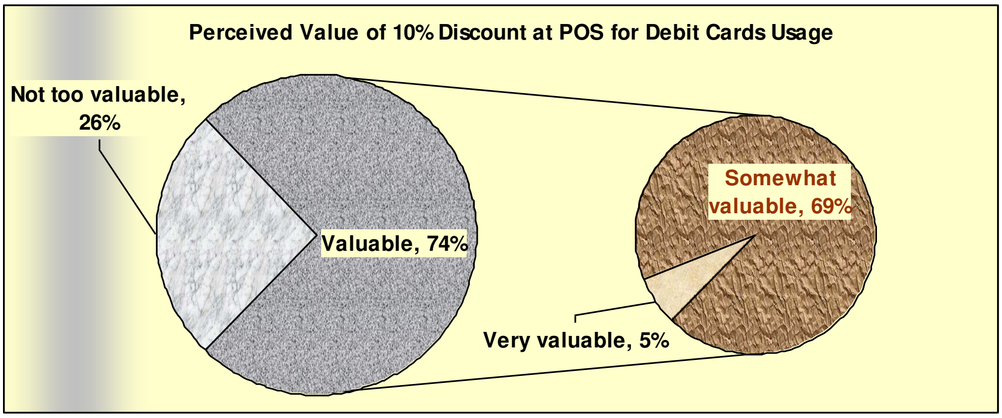
Before we delve into the importance of reward programs to cardholders, the first three questions of this section of the survey attempted to pin down the cardholder perception and understanding of the basic functionalities of debit cards.

Majority of the respondents reported never having a problem using their debit cards. Two out of 10 reported having the transaction failed due to a faulty magnetic strip or communication lines which did not work. Another common reason cited by cardholders where they were not successful with the use of their debit cards was the input of wrong pin numbers. 93% were not aware of using their debit cards to withdraw cash at the POS in conjunction with making a purchase, i.e. the cash-back facility.

With respect to enhancements and loyalty rewards schemes, generally, they are very appealing to cardholders and generate strong responses if the card offerings include POS discounts or rewards points. In order to determine the current level of card offerings, debit card users were asked if their debit cards offer any of a number of discounts, rewards or rebates. Overall, 7 in ten said “No”, with the rest indicating that their debit card did offer some form of discounts or reward points. Among the respondents that receive rewards on their debit cards, almost 40% of the respondents identified reward points and 20% to 25% reported that they receive direct discounts at the POS or cash rebates deducted from their bank statement.

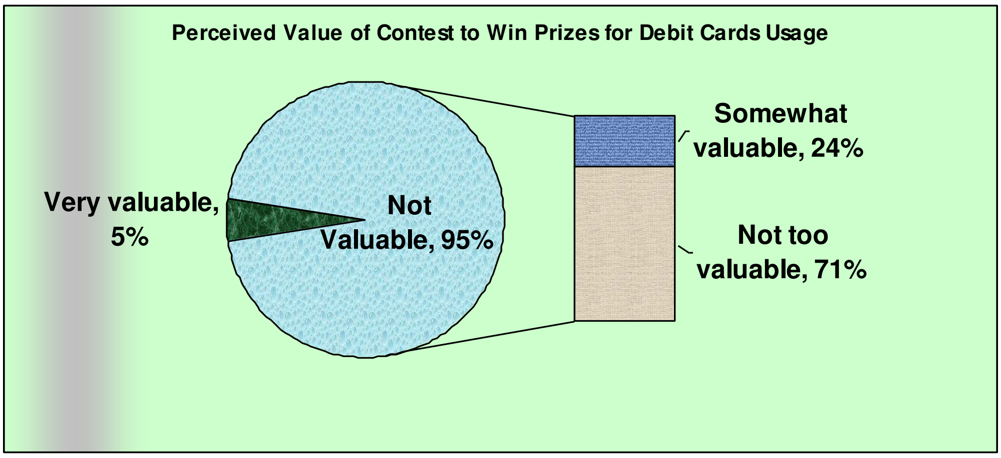
Irrespective of their experience with enhancements and rewards, all respondents were asked how valuable it would be to get a 10% discount at the POS when using their debit cards. As shown in Figure 14, 74% would consider this as ‘very or somewhat valuable’, the rest do not see it as valuable. Overall, the response to POS discounts can still be considered as positive perhaps dependent on the magnitude of the discount.

Figure 14: Value of Discount at POS for Debit Card Usage



Being entered into a contest to win prizes every time one uses the debit card is not widely regarded as a valuable incentive. As shown in Figure 15, less than 25% see this as being ‘somewhat valuable’ and overall, 71 % voted ‘ Not too valuable’.

Figure 15: Value of Contest to Win Prizes for Debit Card Usage

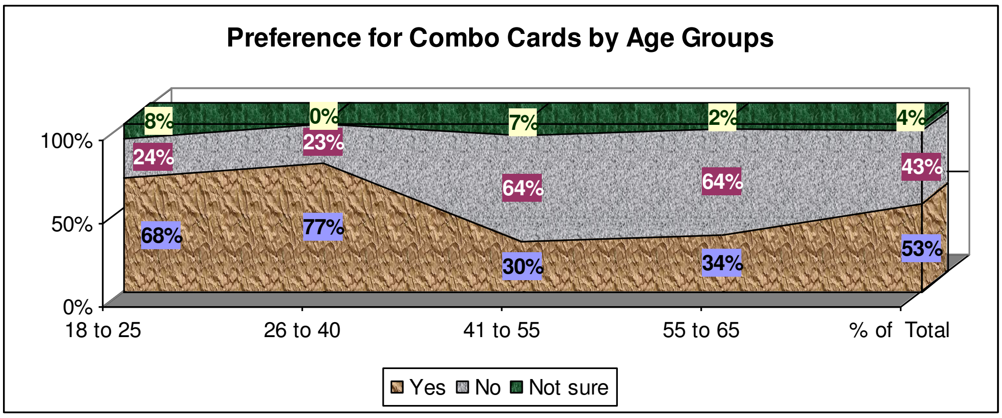


Finally, respondents were asked if they would be willing to pay any annual fees to get a debit card in return for rewards and enhancements, an overwhelming 100% voted against it.

3.3.4 Potential of Combo, Credit & Debit Cards

Interest in obtaining a combo card, defined as having the functionalities that provide the option to pay either by credit or debit and serve as an ATM card for cash withdrawals saw a mixed of response with about 53% desiring one with the balance not sure and not willing to explore.

Figure 16: Preference for Combo Cards



When asked about reasons for the interest in combo cards, i.e. more than half cited reasons of convenience and no need to carry so many cards followed closely by 35%

who wanted to keep up with new technology. For those who replied negatively feared the slow down the payment process, higher likelihood of errors and confusion that such a combo card may cause.

The last section of the survey assumes all features and benefits for the credit and debit cards are the same, will participants choose to pay for good and services with their debit card rather than credit card. Overall, more than half responded they will and this result was contributed by the 18-25 (67%) and 55-65 (70%) age groups.

Figure 17: Preference for Debit Cards

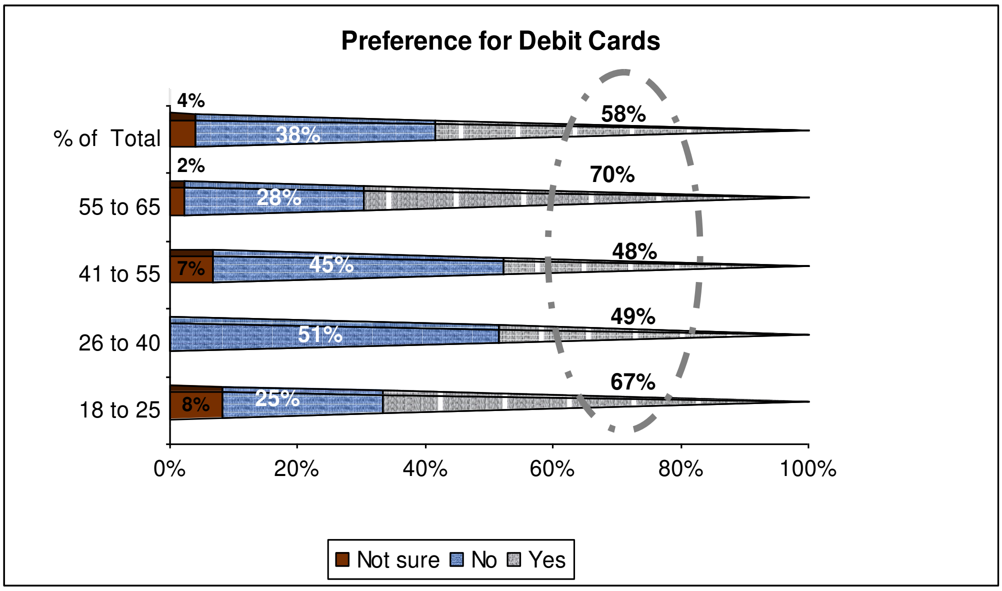
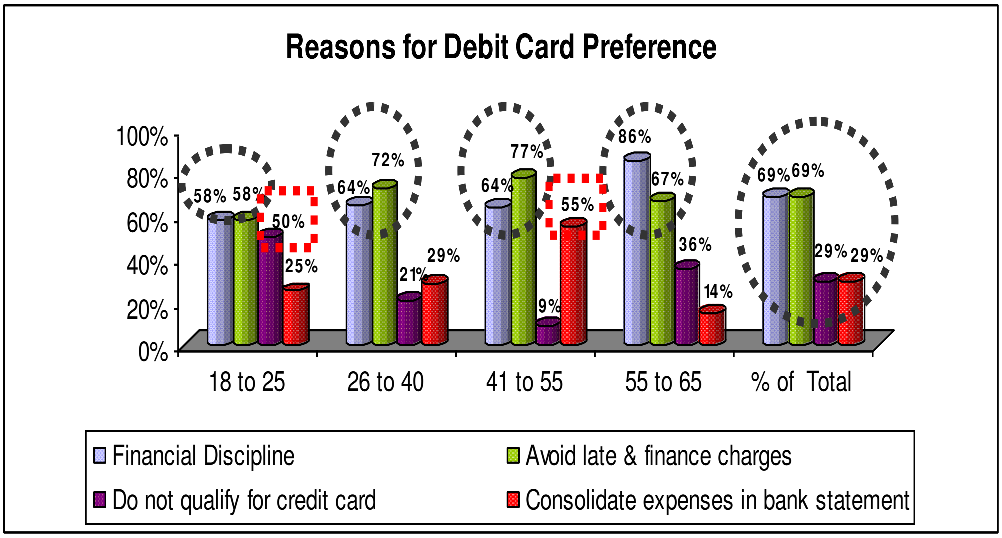


Figure 18 below indicates across all categories who expressed their willingness to pay with their debit card for two main reasons, instill financial discipline and avoidance of finance charges. Another two reasons which stood out was in the 18 to 25 year age group where half would apply for a debit card due to non-qualification of the credit card. In the mature working class category of 41 to 55 years, 55% responded in favor of debit cards for ease of personal administration with all expenditure consolidated into their bank statement.

Figure 18: Reasons for Debit Card Preference



3.4 Key Findings

All the respondents surveyed used debit cards. The familiarity with debit cards was not unexpected given traditionally that the NETS was extremely successful and every person who is a deposit access account holder will be issued with a NETS debit card by the local banks. A fair share also used the Visa and MasterCard branded debit cards, issued mainly by the foreign QFB banks, clamoring for a piece of the debit card business. As described above, 'Visa Global Debit Card Volume Surpasses Credit', it was reported that Visa Asia Pacific debit card volume grew more than 20% year on year. The key markets showing significant growths in South East Asia included Indonesia, Malaysia and Singapore.

Debit card users were asked to identify for what purposes they used their debit cards and across all categories, share of debit card usage was generally less than 20% with the exception of groceries, restaurant and shopping bills. It can be surmised that routine local purchases of merchandise, payment for meals and transportation scored the highest usage of debit cards with the youngest and oldest age group registering more than 35% share. Very few used their debit cards for telephone, utilities and other common household bills, particularly overseas travel expenses.

For these groups of users, reasons for the debit card popularity were varied. One being a debit card is safer and more convenient to carry than cash, which once lost is almost irrecoverable while banks provide a basic safety net for users to report lost of debit cards to freeze unauthorized usage. The same respondents also either do not qualify for a credit card due to age or income restrictions or generally prefer to maintain financial discipline not to spend more than they can afford to avoid incurring hefty finance and interest charges.

Another reason for the increased acceptance of debit cards is the loyalty rewards or benefit enhancements linked to the card, thereby promoting usage. Those in this category owned the internationally branded debit cards, Visa and MasterCard. The survey also indicated that offering instant POS discounts was appealing and this could be a powerful tool to increase the adoption of debit cards and increase usage both domestically and perhaps more importantly, overseas where the higher growth opportunity could be, with unlimited borders, not restricted by geographical boundaries.

We will examine this in greater detail in Chapter 4 studying the implications to all stakeholders in the payments value chain and provide recommendations to successfully implement and execute business strategies to sustain competitive advantage.

CHAPTER 4 IMPLICATIONS & RECOMMENDATIONS

4.1 Bank Issuers' Opportunities & Challenges

From the survey, it was clear that debit cards in Singapore is a widely accepted product due to the success enjoyed by NETS over the past decades. However, because of the dominance by NETS in the overall debit card industry, most of the users surveyed were not aware of the existence of the international MC/Visa branded signature-based debit cards. As indicated in the survey, only 31% indicated that they have a Visa/MasterCard debit card.

Hence, in order to drive growth in this area, the banks should concentrate efforts on enticing users to switch from NETS/cash/checks to a Visa/MasterCard debit cards to encourage usage and this can be done as follows :

4.1.1 Increase acceptance with strong channel strategies

Investing in education of consumer awareness and expanding the number of locations where the debit card is accepted are critical to the success of this product. For example, communicating one of the key benefits of the debit card, the cash back feature which offers customers the convenience of making cash withdrawals with their purchases at a couple of hundred acceptance merchant channels will inevitably drive growth. Once customers get used to not having to look for an ATM machine and queue in another line, the cash withdrawal transaction will become a norm in their daily routine and banks will start enjoying economies of scale and perhaps reduce capital investment and operating costs for ATMs.

4.1.2 Enhance card benefits to targeted segments

Researching into how the product benefits are being perceived by the cardholders, understanding and satisfying their specific needs, is a necessary step in developing strategies to broaden usage. Most of the respondents are credit card users who do not revolve their balances and pay their monthly bills in full. This segment of customers can be targeted for marketing of the debit cards with cash rebates, rewards and discounts similar to those that they receive for using their credit cards, with no "due-date" hassle to pay on time, no penalties for late payment as cardholders will not be given a chance to miss the due date. The other customer segments for banks to focus on are those aged 18 to 25 and those above 55 who are either too young or retired without the required income to qualify for a credit card.

Offering rewards/loyalty points for the redemption of benefits or discounts to increase usage on a Visa/MasterCard debit card is a differentiator from NETS. Results from the survey revealed that there was a fairly wide appreciation of cards offering perks. The next level of differentiation would be for cardholders to earn airline frequent-flyer miles as they spend which is hardly in existence today on debit cards.

The key challenge, however, for banks is the cost of maintaining the loyalty platform and securing these benefits for debit cardholders, while not being able to recoup the costs by charging annual fees for these cards as cardholders in Singapore are generally not willing to pay for these enhancements.

For issuing banks, with no profit on revolving interest on debit cards, costs need to be offset against savings from no interest-free credit period, low interest on the minimum deposits or floats required to maintain the debit savings account, and other benefits and opportunities of keeping customers loyal to the bank. The ease of switching banks for a debit card customer is significantly lower than a credit card customer, as the bank would have created multiple relationships to link the debit card to their direct debit savings, checking, or even payroll accounts, attachment to the bank’s financial, wealth management and investment programs. All these increase the inconvenience to the customer to change banking relationships.

As seen in Chapter 2.3.3(b), Citibank’s strength is with its use of rewards to lure debit card customers and they are reportedly tapping into the rising credit adverse consumers. By targeting its debit card to the more affluent consumers who are also risk adverse, and offering the rewards program that reflects the lifestyle of this segment, they hope to innovate and differentiate with a range of debit card products to replicate the success experienced in the United States of America.

The migration from silo-ed lines of business, for example, debit and credit cards business are run by different sections in a bank separated by deposits and loans, to an enterprise-wide functionally aligned strategy within banks now requires more than simply installing a processing system and operating it efficiently. It is about leveraging a bank's brand so customers can seamlessly execute the type of payment they want, through the preferred channel, to drive the desired outcome for the banks.

Gaining control of the customer payment tool will be the primary objective for banks which will enable them to maintain brand superiority, competitive advantage, and a play central role in consumer payments. With the debit card product, banks gain greater ability to maximize the value of deposit accounts, rising ability to drive new revenue through emerging payment forms.

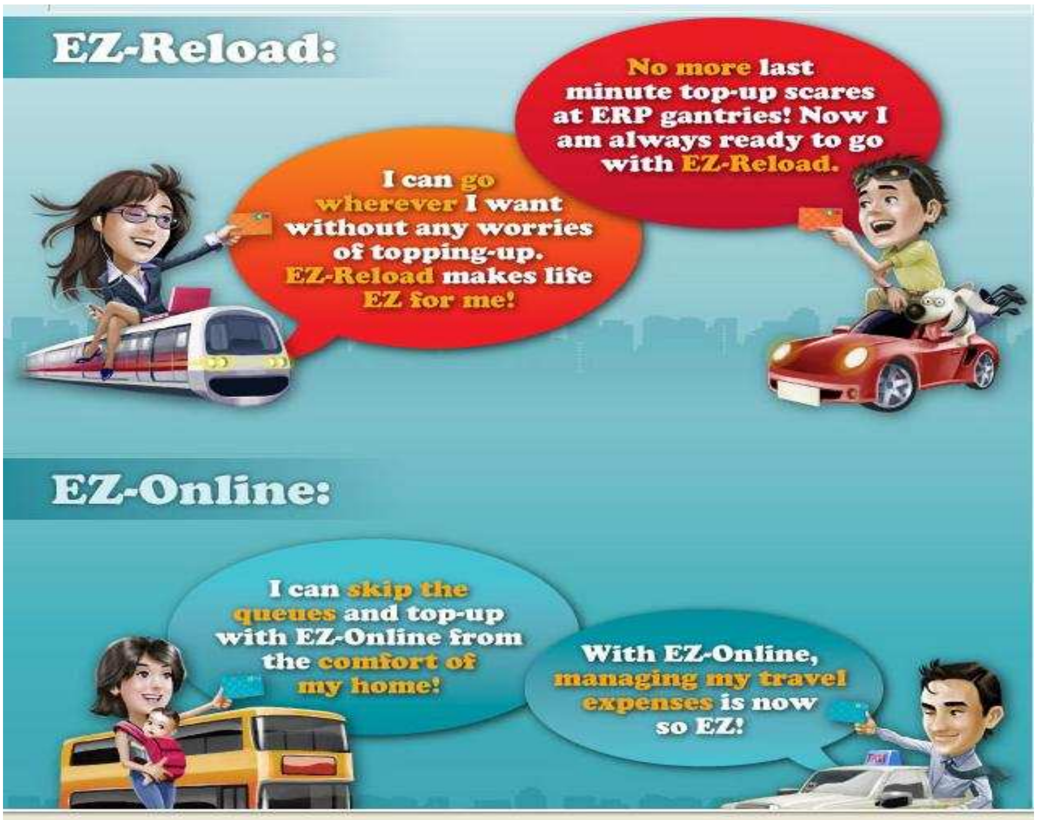
4.2 Card Companies' Strategy

Card companies such as Visa and Mastercard are in the epi-centre driving value across the payments chain to benefit consumers, businesses, merchants and financial institutions. As electronic payments capture an ever-greater share of transactions globally, their core strategy must involve delivering value to everyone on every side of every payment transaction with the following focus:

4.2.1 Product Innovation

The need for creative destruction and continuous invention to own a part of the innovation space is key to be the leader in the industry. Without speed to market with product innovation, card companies run the risk of being viewed as nothing more than a vendor, can only compete with lowering price, riding on a slippery slope with a tit-for-tat pricing strategy which will send profit margins spiraling down the pipe.
With the introduction of the Visa/MasterCard branded debit card in Singapore, the key differentiating feature is its worldwide acceptance overseas compared to its rival, NETS which can only be used domestically. Given its global brand network, Visa/MasterCard understandably benefit from premium fees earned for processing international transactions, with foreign exchange conversions, clearing and settlement services, increased need for authorization services to minimize risk of fraud. Hence, this product was well received by banks as it diversified their card portfolio and enabled them to market to a wider cardholder base targeting another level of segmentation based on risk and frequent overseas usage.

In a recent joint effort, MasterCard and EZ Link teamed up to introduce a revolutionary card that links consumers' Ez Link cards to their credit or debit card for automatic top-up and to the promotion entails "Sign up and top-up with either EZ-Reload or EZ-Online to take part in MasterCard® and EZ-Link's Free Rides Contest. The more you top-up, the more chances you get to win!" The benefits to the consumer as depicted below is self-explanatory.



4.2.2 Differentiate and Create Competitive Advantage

Dennis Adcock in his book, Marketing Strategies for Competitive Advantage, noted that "A competitive advantage exists when a customer perceives one offerings as their needs better than any other. Often, it is the intangible benefits, not the tangible product, which define the meeting of a need". Hence, card companies' marketing strategies should promote debit cards as a widely internationally accepted product, a major differentiator, complementary to credit cards, with the value-added feature of saving/checking accounts that offers increased convenience, easy to use and safe.

Global companies like Visa and MasterCard need to recognize the need to adapt to local requirements (decentralization) and to balance the trade-off of standardization as an attractive option to create massive economies of scale (centralization). A key determinant of the way international operations are organized is the degree to which the environment calls for global integration (centralization) versus regional responsiveness (decentralization).

Centralization reaps economies of scale but run the risk of “not invented here syndrome” thereby slow to introduce new locally accepted products. Decentralization maximizes customization of products to local customer preferences and speed of response to new market opportunities and local decision making tend to strengthen relationships with trade and governmental organizations.

Technological developments have made communication easier and quicker with the formation of intranets that allow global communication of competitor actions and changes. Card companies who desire a successful global reach must leverage a system that shares insights, methods and best practices to strengthen the companies’ ability to differentiate and compete to win in markets worldwide.

4.3 Consumer Benefits & Interests

For the consumer, value is a combination of two factors, price and utility. They choose the product which offers them the highest value, which might be influenced by a need for speed, service, convenience, perceived quality and reliability. With banks on the roll in churning out new products and offering a vast array of reward programs, POS discounts and enhanced services in order to increase usage and retention of customers, consumers are spoilt for choice. As banks invest in differentiating from each other by creating their own niche to achieve ‘customer intimacy’, consumer needs are better served.

Loyal customers are assets. A research by Bain and Company showed that satisfied regular customers tend to spend more, tend to place more frequent orders, cost less to serve and are good advertisements for the business and make share gain for competitors more difficult. A debit card by virtue of its set-up creates a better chance of a long-staying customer as switching to a competitor causes inconvenience with all the procedural and administrative hassle, for example, change of bank accounts and all the standing instructions linked to it.

Driven by intense industry competition, consumers are benefiting from a whole host of technology innovations in the debit space, with valuable financial management tools for accessing funds on deposit, wider payment options with a peace of mind regarding security, convenience and unsurpassed global acceptance with the world's top leading payment brands.

With the Visa/MasterCard debit card, consumers now have instant ability to access funds, pay for goods and services almost anywhere in the world, greater security than cash and checks coupled with limited liability for lost or stolen cards. They enjoy enhanced ability, through detailed statements, to track and manage spending without additional costs incurred and at the same time benefit from a wide and increasingly personalized range of benefits and rewards.

In the debit mobile and internet payments space, cardholders also have the ability to make secure internet purchases, wherever and whenever they choose. Early this year, Visa launched its first virtual debit card program enabling customers to make payments at any online merchant that accepts Visa debit cards globally. Under the program, there will be no plastic cards issued, only a virtual 16-digit account number will be used as part of the program. This innovative launch tapped into existing demand for a way to better manage online spending to meet fast changing customer needs.

As a result, consumers are provided with a convenient and safe way of making payments at online merchants with the evolution of this strategic product with expanded choice and flexibility. Not to take safety for granted, consumers would definitely need to be educated on the liability for lost or stolen debit cards and their responsibility in preventing any data compromise or breach of confidential information. With particular reference to internet purchases, use of debit cards online will see increased usage from current levels with the strengthening of security measures and information encryption.

4.4 Retailer's/Merchants' Concerns

Retailers are no strangers to information technology developments with electronic point of sale systems allowing the counting of products sold, money taken and faster service at checkouts. The survey indicates the perceived value of paying by card eliminates the delay caused by exchange of cash. The added benefit with more recent innovations such as loyalty cards have shifted the retailers' focus to understanding the customer with the wealth of information captured through the payment system. With successful operations and performance management systems, by monitoring individual purchasing patterns, direct mail promotions can be targeted to match their known preferences and product selection can be tailored more closely to purchasing trends.

With debit cards, merchants incur lower cost of processing compared to credit, cash or checks. Settlement of the purchase is guaranteed as the debit transaction triggers the payment authorization process which ensures that customers have sufficient funds in their accounts to complete the transaction. Billing and collection costs are consequently eliminated. Fraud and related costs are significantly reduced with probably no incidences of charge-backs as with the case of credit cards, whereby cardholders can file claim against the merchant with their banks by complaining of dissatisfaction with service or product quality.

Many retailers used to operate their own proprietary loyalty programs and with limited volumes, costs to maintain such a platform could be high with no benefit from economies of scale. Until recently, card companies and banks are approaching merchants to align such programs through the payments systems by forming co-brand partnerships. Singaporeans tend to identify with their interest groups, such as, school alumni or a branded shopping chain. For example, by carrying the NUS Visa Debit card, which was only issued to the graduates of National University of Singapore, they feel a sense of pride and prestige. This should see itself penetrating into the growth of debit card co-brand and affinity program segments targeting youths, baby boomers and the affluent retirees who are frequent travelers with the potential for high usage.

Hence, the main drivers for retailers to support card payments is the success that the system works, help understand customer needs to grow their business with lower operational costs subsidized by banks and card companies.

A key technological development that is changing they way products are bought is e-commerce or the internet. Online shopping is growing as more people become accustomed to electronic payment and fears over security subside. We have seen e-commerce making inroads into books, travel and groceries expenditure. These companies use its loyalty card scheme to target direct mail at those shoppers likely to value this service. For example, shoppers who appear to be price sensitive and unlikely to be willing to pay delivery charges are excluded from the mailing, thereby saving the company costs of wastage printing while increasing the chances of successfully targeting the right customer.

The above articulates continuous process innovation. A useful framework for companies to create a complete differential advantage has been proposed by Davis and Sanghavi, who suggests that innovation for retailers is maximized with both product and process innovation which he termed total innovation. Retailers who have achieved major successes do so by establishing superior retail positioning by both product as well as process innovation.

4.5 Regulatory Risks and Related Social Issues

Debit card business is a service industry and given the small domestic market, competition is intense. Singapore is regulated by The Monetary Authority of Singapore (MAS) and since 1983, had imposed various guidelines served to prevent excessive expansion of consumer credit and discourage individuals from spending beyond their means.

With effect from 19 February 2004, the MAS regulates that a cardholder is limited to consumer credit of twice the average monthly salary and the minimum income level requirement is S$30,000 per annum. This credit limit has not changed for more than 15 years. As a result, with the anxiety surrounding the credit crisis in the United

States sub-prime market extended through to Singapore, we saw the growth in revolving credit and credit card development hindered to a certain extent giving rise to growth opportunity in the debit card space. The other area of interest on the regulatory front that is related to the payments business is anti-competitive practices associated with marketing and price fixing, where two or more firms collude to force up the price of products.

By understanding the “The Wal-Mart Litigation” case and its impact on the payments industry players and consumers in United States, we will attempt to examine its repercussions, if any, to the Singapore market and whether it will have an adverse impact on the growth potential of debit cards.

After seven years, the gigantic “Wal-Mart” battle between practically every merchant in the United States and Visa/MasterCard over the "honor-all-cards" rules resulted in the greatest award in anti-trust history, more than $3 billion, to be paid over a ten year period, and significantly restricted the ability of the card companies to compel merchants to accept debit cards. The merchants claimed that they did not want to accept MasterCard or Visa branded debit cards, and that the card companies violated the antitrust laws by tying acceptance of debit to acceptance of credit. The merchants sought the right to elect not to accept Visa/MasterCard branded debit cards while accepting their credit cards.

The long-term effects of the merchant debit card settlements cannot be understated. For the first time, merchants have the option of declining to accept Visa/MasterCard debit products. Merchants can now exert their power to negotiate fees which very quickly resulted in new interchange rates for debit, at least one-third lower than the existing interchange rate they paid to the card issuers. Clearly, this was a positive move for merchants but negatively impacting revenues of banks.

With respect to impact on the consumer, merchants can choose to accept Visa/MasterCard branded credit cards but not the debit cards which could lead to some consumers getting to the front of the checkout line and finding out that the merchant is rejecting the payment option they have chosen. While this could impact a consumer's ability to choose their preferred method of payment, both Visa and MasterCard are confident that because of the strength of their global brands and the value proposition it brings to merchants and consumers, the vast majority of merchants will continue to choose to accept Visa/MasterCard branded debit cards. Extending the "Wal-Mart" case to a small consumer-centric market in Singapore, it is unlikely to be dominated by few large merchants where volumes are significantly big enough to 'force' price concessions from Visa and MasterCard. The consumer demands acceptance of international branded cards, debit and credit, at all locations and the merchants do not want to risk unhappy consumers and losing core business by declining to accept debit cards.

On the process of determining interchange rates, similar to experiences in Europe and Australia, the risk of Singapore regulatory intervention of the "fixing of interchange fees" for credit and or debit transactions remains in the horizon. This is a real threat to the banks and card companies as growth could be negatively impacted if issuers are faced with margin compression and declining profitability with lowering interchange fees earned from retailers.

Finally, other societal, environmental and political issues relating to marketing of card products are concerns that it promotes materialism and short-termism. Materialism results in people judging themselves and are judged by others by not who they are but what they own, e.g. Platinum/Diamond/World card. Short-termism is putting the interests of the consumers before the society's long-term interests. Encouraging consumer debt, promoting spend beyond what cardholders can afford is like blowing a balloon which finally burst in 2008 leading to the global financial and economic crisis. Henceforth, banks and card companies are changing gears and applying high speed on marketing debit and prepaid products with the concept of "pay before or pay now" as opposed to "pay later".

CHAPTER 5: ENCAPSULATION

Facing a combination of economic weakness, shifting consumer spending habits and far-reaching regulatory pressures, banks' card businesses are undergoing profound

change. As the era of excessive consumer lending, product proliferation and reliance on fees and interest income recedes, banks are managing their current card portfolios and defining new profitability in the debit card product model.
To unearth the next generation of payment opportunities, banks need to engage their customers in a much deeper and broader relationship by offering innovative debit products and going after new revenue streams.

Consumers are also spending cautiously, and when they do spend they increasingly choose debit over credit. Banks and card companies now need to transform their credit and debit businesses and expand their offerings by catering to consumers' increased demand for security, accessibility and simplicity in their relationships. Consumers now expect their banks to offer the same type of personalized experience they enjoy with Web-based services such as myYahoo and iGoogle. They also want more choice and customization with respect to their debit products, loyalty packages and payment devices.

The era of pushing products out to the market through a few preferred channels is giving way to a new model in which banks use analytical techniques, perfected by retailers, to pull customers in by identifying consumer trends, shaping products around them and personalizing offers. Banks should look beyond the industry for best practices in customization and create niche segments, learn more about their customers and tailor recommendations precisely to needs.

5.1 Financial Innovations and Recommendations

In summary, bank issuers and card companies must capitalize on the growth of debit cards to generate incremental revenues and profits which can be achieved in the following ways:

5.1.1 Optimizing pricing strategies

Banks and card companies must embrace customer segment-based pricing and make their pricing strategies more flexible to align with their focused marketing strategies.

5.1.2 Diversifying product portfolios

By linking debit, checking and savings products to credit products under a single roof, i.e. a combo card product, customer retention could be better assured. For example, credit card customers who consistently pay on time could be entitled to receive a higher interest rate on their savings accounts. Banks that expand their menu to include another form of debit product, the prepaid card can capture a larger slice of the under-banked market share too.

5.1.3 Adapting to new payment methodologies

With an estimated 5.4 billion mobile phones and up to 1 trillion specialty devices expected to be in use globally by 2015, people's interactions and performance of tasks, including payments will dramatically change. These rapidly emerging channels, coupled with product segments and alternative payment types, such as electronic and mobile money transfers debit transactions are key investment areas. As near-field communication technology matures, mobile and specialty devices will facilitate growth in payments.

5.1.4 Embracing micro-payments

Even though spending is down, swiping is up indeed, nearly tripling over the past decade, contributed by debit cards according to some industry estimates. These figures suggest that bank issuers should consider marketing programs to increase card use for small-dollar amount purchases in alignment with the survey which indicated consumer willingness to use their debit cards for such transactions for purchase of groceries, transportation etc.

5.1.5 Targeting demographic groups

Banks should develop customer acquisition campaigns to select segments revealed by the survey in the 18 to 25-year-old age group and they could be targeted through inexpensive but effective social networking channels.

With the payments industry experiencing a period of unprecedented change, bank issuers must develop a strategy for creating new sustainable sources of revenue and staying relevant to ever-demanding consumers. Those who hesitate will find themselves quickly falling behind their competitors.

5.2 Future Research

Internet technology is having a major impact on the payments and banking industry. The evolution of the mobile channel from banking to payments represent an extension of existing revenue streams, as well as a broadening of the spectrum of opportunity for financial institutions. They also provide a venue for payment tools that currently function only online to make the leap to the physical world.

Consumers eventually will use their mobile phones to manage their finances, make payments, and take advantage of customized offers, services that will enable them to replace their leather wallets with mobile ones but it may take years before this happens dependant on the pace of development of the mobile payment ecosystem.

Nonetheless, we can expect more tentative upstarts as attempts to deliver interim wallet offerings that will provide tempting clues about how our relationship with cash, checks, credit and debit cards payment modes will change in the foreseeable future.

5.3 Conclusion

The reality is that the vast majority of consumers want to pay as they go. Consumers are showing signs of behavioural shifts by using their debit cards to buy almost everything, from groceries to utilities to medical bills.

The surging popularity of debit cards largely reflects the growing use of plastic by consumers. Credit and debit card purchases of retail goods and services vaulted past cash and checks in 2003. Now the recession is giving many consumers second thoughts about their credit cards. Lenders also are making it more expensive to charge purchases and conducting stringent credit limit reviews on credit card users.

A big group of consumers like the discipline that debit spending can bring them and that is particularly relevant in today's recessionary environment. Debit cards are especially popular with younger consumers and despite the ramifications in United States with the Wal-Mart litigation, merchants still pay banks to accept debit cards although at lower rate. Debit cards seem to be thriving in Singapore. In the past couple of years, banks have encouraged debit card use through rewards programs. With the government driving Singapore towards a cashless society, more room for growth in debit card will surface, from payment for cinema tickets to even car park charges. With consumers carrying less cash than in the past, debit cards are extending into the space in the Singaporeans' wallets at a very fast pace.

Given the liberalization measures by the government to allow foreign banks greater access to the Singapore debit card market, the local national banks will have to respond to new competitive forces with more innovative products to stay ahead of the game.

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APPENDIX I

Survey

I would appreciate your taking a few minutes to complete a short confidential survey. Anonymity is assured and all information provided will be kept highly private and confidential. Please tick the box that best describes your responses to the questions or delete where appropriate.

Personal Profile

Name: ____

Sex: □ Female □ Male

Race: □ Chinese □ Indian □ Malay □ Others

Marital Status: □ Single □ Married □ Divorced □ Others

Age: □ 18–25 years □ 26-40 years □ 41-55 years □ Above 55 years

Occupation: □ Professional/Technical

□ Sales/Clerical

□ Management/Clerical

□ Others ______________________________(Please specify)

Payment Attitudes & Behavior

1. Please provide an estimation of what proportion of your monthly expenditure is paid by cash, check or direct bank deduction (GIRO), excluding car and home mortgages?

   □ 0%-25% □ 26%-50% □ 51%-75% □ > 75%

2. How do you typically pay for the following expenditure or household bills? Please tick only one for each category.

Category	Cash	GIRO	Check	Debit Card	Credit Card	Others
Utilities						
Telephone						
Groceries						
Transport						
Insurance						
Education						
Restaurants						
Medical						
Other/Shopping						

3. When you are travelling overseas, how do you typically pay for the following expenditure? Please tick only one for each category.

Category	Cash	GIRO	Check	Debit Card	Credit Card	Others
Airfare						
Accomodation						
Meals						
Transport						
Sight visits						
Shopping						

4. Paying for purchase of goods and services by card is faster than by cash.
   - ☐ Agree
   - ☐ Disagree
   - ☐ Not sure

5. Do you prefer to pay by card when making purchases?
   - ☐ Yes
   - ☐ No
   - ☐ Not sure

6. Are you responsible for making most of your household's financial decisions?
   - ☐ Yes
   - ☐ No
   - ☐ Shared

<u>Financial Management</u>

7. How many checks do you write in a month to pay for your personal expenses?
   - ☐ Do not have a current account
   - ☐ 1 to 5 per month
   - ☐ 6 to 15 per month
   - ☐ Above 15 checks

8. Which of the following types of cards did you used in the last month? Please tick all that apply.
   - ☐ NETS
   - ☐ Visa
   - ☐ MasterCard
   - ☐ American Express

- ☐ Any other type of proprietary department store/retail card
- ☐ Others - ________________________(please specify)

9. Approximately how many times in a typical month do you use credit or debit cards?
   - ☐ Less than 5
   - ☐ Approximately 5 to 9
   - ☐ Above 10

10. In general, do you always pay your credit or charge card balances in full?
    - ☐ Yes
    - ☐ No
    - ☐ Sometimes

11. How many times per month do you usually use an ATM?
    - ☐ Less than 5
    - ☐ Approximately 5-9
    - ☐ Above 10

12. Do you have a card that works like a credit card when you make a purchase and the amount of the purchase is directly deducted from your current/savings account?
    - ☐ Yes
    - ☐ No
    - ☐ Not sure

If Q12 = ‘No’ or ‘Not sure’, answer Q13. If Q12 = ‘Yes’, skip to Q14

13. Have you ever used your ATM Card to pay for merchandise or services?
    - ☐ Yes
    - ☐ No

- ☐ Not sure

14. Which of the following best describe your debit/ATM Card?
    - ☐ Visa Electron/Plus/Interlink (with Visa logo and linked to your savings account)
    - ☐ MasterCard Debit/Maestro/Cirrus (with MasterCard logo linked to your savings account)
    - ☐ NETS
    - ☐ EzLink

15. How many debit cards do you have?
    - ☐ 0 to 2
    - ☐ 3 to 5
    - ☐ More than 5

Card utilization and Perceived Benefits

16. When you use your debit card/ATM card for purchases, did you ever request for cash withdrawal from the cashier at the same time?
    - ☐ Yes
    - ☐ No

17. Have you ever had problems related to using your debit/ATM card?
    - ☐ Yes
    - ☐ No
    - ☐ Not sure

18. If yes to Q17, please identify the problems (please tick all that apply)
    - ☐ Unauthorized transactions were processed to your card
    - ☐ Cannot remember the PIN number
    - ☐ Terminals or communication lines did not work properly

- ☐ Incorrect amount deducted from the bank account
- ☐ Others: ____________________________________(please specify)

Loyalty Schemes & Rewards Programs

19. Does your debit/NETS cards offer any rewards programs?
    - ☐ Yes
    - ☐ No
    - ☐ Not sure

20. If yes, what are the rewards? (please tick all that apply)
    - ☐ Cash rebates deducted from total monthly purchases
    - ☐ Rewards points to redeem gifts or shopping/meal vouchers
    - ☐ Airline frequent flyer points
    - ☐ Discounts directly at Point of Sales settlement
    - ☐ Others: _______________________________(please specify)

21. How valuable would it be to you to get a 10% discount on such purchases for you to use your debit cards?
    - ☐ Very valuable
    - ☐ Somewhat valuable
    - ☐ Not too valuable
    - ☐ Not sure

22. How valuable would it be to you to get a chance to participate in a contest to win prizes or cash each time you use your debit cards?
    - ☐ Very valuable
    - ☐ Somewhat valuable
    - ☐ Not too valuable
    - ☐ Not sure

23. If annual fees are charged for debit cards, say $30 to $60 per annum, will you apply for the card?
    - ☐ Yes
    - ☐ No
    - ☐ Not sure

Combo Cards

24. Are you interested to apply for a combo card that provides the option to pay either by credit or debit and serve as an ATM card for cash withdrawals as well?
    - ☐ Yes
    - ☐ No
    - ☐ Not sure

25. If "Yes" to Q24, please identify the reasons (please tick all that apply)
    - ☐ Convenient
    - ☐ Avoid carrying too many cards
    - ☐ It provides flexibility in your finance management
    - ☐ To embrace and try new technology
    - ☐ Others: ___________________________________(please specify)

26. If "No" to Q24, please identify the reasons (please tick all that apply)
    - ☐ Confusing
    - ☐ Not safe to combine ATM with credit cards
    - ☐ Likelihood of errors in processing is higher
    - ☐ Slows down the payment process
    - ☐ Others: ___________________________________(please specify)

Credit or Debit?

27. Assuming all features and benefits are the same, will you choose to pay for good and services by your debit card rather than credit card?
    - ☐ Yes
    - ☐ No
    - ☐ Not sure

28. If “Yes” to Q27, please identify the reasons (please tick all that apply)
    - ☐ Provides a discipline not to spend more than you can afford
    - ☐ No worry about hefty late charges if you fail to pay on time
    - ☐ There is no choice as you do not qualify for a credit card
    - ☐ Consolidates all your expenses onto one single bank statement
    - ☐ Others: ___________________________________(please specify)

Thank you very much. Your help with this survey is greatly appreciated.

APPENDIX 1I – Survey Results

Payment Attitudes & Behavior

Question 1: Proportion of your monthly expenditure paid by cash, check or direct bank deduction (GIRO), ie non-card payment mode

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
0% - 25%	3%	1%	1%	5%	3%
26% -50%	67%	53%	7%	18%	36%
51% - 75%	23%	42%	88%	75%	57%
> 75%	7%	4%	4%	2%	4%

Question 2: Proportion of household expenditure made by different modes of payment

2a) Utilities, Telephone, Education, Insurance and Medical Bills

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Cash	14%	10%	16%	29%	17%
GIRO	40%	37%	23%	38%	35%
Check	16%	17%	27%	24%	21%
Debit Card	14%	14%	1%	1%	8%
Credit Card	15%	15%	26%	5%	14%
Others	2%	7%	7%	4%	5%

2b) Groceries and Transportation

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Cash	46%	63%	45%	61%	55%
GIRO	0%	0%	0%	0%	0%
Check	0%	0%	0%	0%	0%
Debit Card	36%	14%	9%	32%	23%
Credit Card	18%	23%	45%	7%	22%
Others	0%	0%	0%	0%	0%

2c) Restaurant and Shopping Bills

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Cash	28%	20%	36%	27%	27%
GIRO	0%	0%	0%	0%	0%
Check	0%	0%	0%	0%	0%
Debit Card	11%	4%	3%	14%	8%
Credit Card	61%	76%	60%	59%	64%
Others	0%	0%	0%	0%	0%

Question 3: Proportion of travel expenditure by different modes of payment

	Airfare	Hotels	Meals/Transport /Sight Visits	Shopping
Cash	19%	47%	61%	44%
Debit Card	11%	2%	1%	11%
Credit Card	69%	50%	38%	45%

Question 4: Paying for goods & services by card is faster than by cash

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Yes	83%	88%	75%	14%	64%
No	8%	5%	25%	76%	30%
Not sure	8%	7%	0%	10%	6%

Question 5: Do you prefer to pay by card when making purchases?

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Yes	83%	88%	80%	71%	80%
No	17%	12%	20%	29%	20%
Not sure	0%	0%	0%	0%	0%

Question 6: Are you responsible for making household's financial decisions?

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Yes	1%	42%	51%	71%	41%
No	99%	23%	33%	20%	44%
Shared	2%	35%	16%	9%	15%

Financial Management

Question 7: How many checks do you write in a month to pay for your personal expenses?

Age	18 to 25	26 to 40	41 to	55 to 65	% of Total
0	17%	11%	7%	6%	10%
1 to 5	83%	77%	77%	68%	76%
6 to 15	0%	5%	9%	9%	6%
> 15	0%	7%	7%	16%	8%

Question 8: Which of the following types of cards did you used in the last month?

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
NETS	93%	90%	89%	84%	89%
VISA	58%	41%	64%	57%	54%
MCI	42%	50%	36%	29%	39%
AMEX	24%	10%	10%	11%	13%
Retail cards	25%	29%	20%	31%	26%
Others	0%	0%	0%	0%	0%

Question 9: How many times in a month do you use credit or debit cards?

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
< 5	50%	57%	43%	49%	50%
5 to 9	42%	38%	50%	41%	42%
> 10	8%	5%	7%	9%	7%

Question 10: Do you always pay your credit or charge card balances in full?

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Yes	42%	79%	80%	78%	70%
No	42%	17%	14%	13%	21%
Sometimes	17%	5%	7%	9%	9%

Question 11: How many times per month do you usually use an ATM?

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
< 5	33%	29%	34%	64%	40%
5 to 9	58%	67%	59%	27%	52%
> 10	8%	5%	7%	9%	7%

Question 12: Do you have a card that works like a credit card but amount of purchases is directly deducted from your current/savings account?

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Yes	8%	10%	16%	21%	14%
No	83%	90%	84%	68%	81%
Not sure	8%	0%	0%	11%	5%

Question 13: Have you ever used your ATM Card to pay for goods/services?

100% responded "Yes" to this question

Question 14: Which of the following best describe your debit/ATM Card?

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
VISA	8%	9%	32%	20%	17%
MasterCard	8%	1%	36%	14%	14%
NETS	93%	92%	88%	93%	92%
EZ Link	32%	10%	19%	26%	21%

Question 15: How many debit cards do you have?

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
0-2	90%	38%	46%	79%	63%
3-5	8%	59%	23%	20%	28%
> 5	2%	3%	31%	1%	9%

Card utilization and Perceived Benefits

Question 16: When you use your debit card/ATM card for purchases, did you ever request for cash withdrawal from the cashier at the same time?

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Yes	9%	8%	9%	3%	7%
No	91%	92%	91%	97%	93%

Question 17: Problems related to using your debit/ATM card?

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Yes	1%	1%	2%	3%	2%
No	99%	99%	98%	97%	98%

Question 18: Please identify the problems

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Unauthorized transactions	0%	0%	0%	0%	0%
Cannot remember pin	0%	2%	3%	4%	2%
Terminals/Line faulty	2%	2%	2%	3%	2%
Incorrect deduction from account	0%	0%	0%	0%	0%

Loyalty Schemes & Rewards Programs

Question 19: Does your debit/NETS cards offer any rewards programs?

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Yes	42%	32%	41%	7%	29%
No	58%	68%	59%	93%	71%

Question 20: If yes, what are the rewards?

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Cash rebates at month end	50%	21%	9%	0%	20%
Reward points	58%	31%	32%	35%	39%
Airline miles	0%	0%	0%	0%	0%
Discount at POS	25%	29%	18%	21%	24%

Question 21: How valuable is a 10% discount on purchases for the use debit cards?

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Not too valuable	25%	29%	28%	21%	26%
Not sure	0%	0%	0%	0%	0%
Very valuable	17%	4%	0%	0%	5%
Somewhat valuable	58%	68%	72%	79%	69%

Question 22: How valuable is a chance to participate in a contest for debit card use?

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Very valuable	8%	4%	0%	7%	5%
Somewhat valuable	17%	32%	17%	29%	24%
Not too valuable	75%	64%	83%	64%	71%

Question 23: If annual fees are charged for debit cards, say $30 to $60 per annum, will you apply for the card? **100% responded "No"**

<u>Combo Cards</u>

Question 24: Are you interested to apply for a combo card that provides the option to pay either by credit or debit and serve as an ATM card for cash withdrawals?

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Yes	68%	77%	30%	34%	53%
No	24%	23%	64%	64%	43%
Not sure	8%	0%	7%	2%	4%

Question 25: If "Yes" to Q24, please identify the reasons

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Convenient	25%	50%	73%	71%	55%
Reduce cards to carry	58%	52%	50%	71%	58%
Flexible Finance Management	8%	6%	0%	21%	10%
Embrace new technology	58%	43%	36%	7%	35%

Question 26: If "No" to Q24, please identify the reasons

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Confusing	42%	50%	73%	71%	59%
Not safe	33%	52%	50%	71%	52%
High likelihood of errors	33%	49%	64%	64%	53%
Slow down payment process	67%	71%	36%	50%	57%

<u>Credit or Debit?</u>

Question 27: Assuming all features and benefits are the same, will you choose to pay for good and services by your debit card than credit?

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Yes	67%	49%	48%	70%	58%
No	25%	51%	45%	28%	38%
Not sure	8%	0%	7%	2%	4%

Question 28: If "Yes" to Q27, please identify the reasons

Age	18 to 25	26 to 40	41 to 55	55 to 65	% of Total
Financial Discipline	58%	64%	64%	86%	69%
Avoid late & finance charges	58%	72%	77%	67%	69%
Do not qualify for credit card	50%	21%	9%	36%	29%
Consolidate expenses in bank statement	25%	29%	55%	14%	29%