Project Name: Convergence of social media and financial data

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EXECUTIVE SUMMARY

The success and scale of social media platforms has created an opportunity to use the data collected by the services to enhance new and existing products within the financial domain. Organisations are able to access large quantities of consumer data to draw advanced insights on an individual’s behaviours, history, wants and needs. Social media data analysis allows consumer behaviour to be anticipated, and permits a level of personalised engagement that has hitherto not been possible without human mediation. An emerging number of third party platforms are bridging the gap between the social media platforms and service providers to enable this insight.

Absent of any investment in how to leverage this data, financial institutions are at risk of being disintermediated by the social media platforms or other organisations using social media data. This paper discusses the background to this emerging trend and provides some examples of how it could be leveraged to the advantage of financial institutions by looking at some specific opportunities: to drive greater financial inclusion, to increase the convenience of consumer payments and to create greater accuracy for targeting marketing campaigns.
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1 INTRODUCTION

1.1 What are we talking about?

As human behaviours become more integrated with technology the capacity to learn more about consumers, from their accessible data footprint, grows. Mobile phone records, financial transactions and an individual’s social media presence are all examples of useable data sources which organisations can leverage.

Over the past 10 years, social media platforms have experienced rapid adoption on a global scale. Facebook records an active monthly user base in excess of 1.5 billion and unique daily logins of over 1 billion.1 Weibo (China’s answer to Twitter) is another example: scaling 600 million users, around 30% of which are active on a monthly basis.2

As these and other platforms expand they collect a wealth of consumer data which can be leveraged by third party organisations in the development of new and innovative services.

1.2 Why is it important?

The value of social media data can be broken down by the assessment of three categories. The Quantity, representative of the amount of data collected, the Frequency with which that data is gathered from its users and the Diversity. The Diversity element relates to the range of different data points collected.

With advances in internet connectivity alongside increases in smartphone adoption, social media platforms have been able to enrich the data they collect. This has particular relevance to the diversity and frequency aspects of data value. Geographic data logging across 4G, for example, enables platforms to identify a user’s routine movements in real time.

Furthermore the quantitative effects of changes in connectivity can be seen in social media user statistics. Facebook has seen a steady increase in the number of times the average user engages with its platform each month, over recent years. The percentage of users logging on to the service on a daily basis increased by 5% from 2013 to 2015.3 As technology and human engagement continues to advance, the value of social media data increases.

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1 http://www.ibtimes.co.uk/facebook-posts-strong-revenue-growth-average-daily-users-rise-more-1-billion-per-day-1522764
2 http://expandedramblings.com/index.php/weibo-user-statistics/
3 http://files.shareholder.com/downloads/AMDA-NJ5DZ/755629256x0x822961/fd718a0b-c312-4605-9a17-1d6ef07bed5a/FB_Q115EarningsSlides.pdf
As the value increases, organisations are enabling insights into consumer behaviour which have previously been inaccessible. Not only can businesses separate a consumer’s actual behaviour from what they claim to be doing, they are able to predict the likelihood of future behaviours and subsequently consumer wants and needs. These new insights present commercial opportunity.

1.3 What’s happening in the market today?

To date, consumer data from social media platforms has largely been leveraged for marketing purposes. Third party platform providers and the social media services themselves typically focus on processing large amounts of unstructured data to provide useful consumer insights. These insights are used to fuel targeted marketing campaigns. The success of Facebook’s targeting services is such that the platform now auctions its advertising space to the highest bidder in order to facilitate demand.

Other applications include the use of data from social media to analyse the risks associated with providing an individual with a particular product or service. Identity verification service providers will look at an individual’s connections along with patterns of interaction with those connections to assess how likely their provided identity is of being genuine. This method is based on the principle that it is much harder to fake a genuine social media footprint than it is to falsify alternative means of identification. Furthermore the use of advanced analytics on real time data can also identify anomalies in consumer behaviour when logging into or applying for various services. This can be applied to the point where a fraudster using stolen login credentials can be identified by their lack of consistency with typical consumer behaviour and prevented from accessing services they are not entitled to. This method has the potential to reduce instances of account takeovers on the social media services themselves in instances where criminals utilise data obtained through phishing techniques.

As service providers become more comfortable with the ways in which they are able to leverage social data, businesses are beginning to move beyond marketing and identification applications and into more diversified utilisation.

The below examples are representative of a limited selection from a wide range of market implementations.

1.3.1 Social data for border security

The Department of Homeland Security is using social media data to supplement wider security checks. The government organisation analyses visa applicants’ social media accounts, to check for possible relationships to terrorist organisations and connections to known criminals.

1.3.2 Social data for identification services

Trulioo, an identity verification service provider, utilises data from social media to supplement the verification of consumer identities. The platform combines social data with a plethora of other data sources to provide these services to third parties.

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5 http://fortune.com/2015/12/15/visa-social-media-terrorists/
6 http://www.trulioo.com/
1.3.3 Social data for risk analysis

Jumo, a pan African mobile payments service, approves micro loans based on the analysis of an applicant’s mobile number. Using analytics of the social data surrounding the users’ MSISDN, it is able to calculate the risk of that individual being able to repay a specific loan amount. This eliminates the barriers around having to provide formal documentation for risk assessment which many are unable to provide.

1.4 What are the possibilities?

The use of social data is limited only by technology’s ability to capture and interpret useful information. Over recent years the accumulation of large amounts of social data online has stimulated research surrounding potential applications:

- Researchers at the University of Pennsylvania were able to predict a social media user’s gender, age and personality traits, with a reasonable amount of accuracy, through computational analysis of the language they use online.7
- Collaborative study from Dartmouth Engineering, Dartmouth Medical School and the U.S. Veterans Administration, in the U.S., led to the launch of The Durkheim Project, a program driven by a platform capable of predicting the risk of suicide among war veterans by monitoring their Facebook, Twitter and LinkedIn accounts8.

As data analytics enable an increasing level of insight on consumers, organisations will have an increasing insight on behaviour which is not only representative of what an individual has done in the past but also what they are likely to do in the future. In addition the data that is fuelling this analysis is collected in real time, allowing it to adapt to changes in consumer situation and circumstance quickly.

1.5 But I don’t want my data collected

The use of social media data by corporations is not without its problems – there is a consumer concern around the use of personal information for commercial purposes. Research from ClickFox indicates that up to 60% of consumers do not trust retailers with their data9. This trend in public opinion is reflected through regulation, with the European Commission revising specific guidelines on the ownership and liability of personal data.

However it is likely that the reluctance for consumers to share their data is relative to the perceived value they get from doing it. Reports from Statista indicated that 99% of French internet users would be willing to share their personal information in exchange for cash rewards10. With this in mind the current economic climate presents a well suited environment for expanding the scope of social data driven services, particularly when considering the convergence of this information with financial data at the consumer level.

The scope for delivering value in the modern financial climate is wide, especially among demographics which form the majority of social media users. According to the Pew Research

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7 http://www.sciencedaily.com/releases/2013/09/130926123457.htm
8 http://www.durkheimproject.org
9 http://www.mycustomer.com/sites/default/files/Customer%20attitudes%20to%20sharing%20data.jpg
The highest percentages of social media users are found among 18-29 year olds. This is the same demographic which is experiencing a borrowing crisis in 2015.

Until now the assessment of an individual's ability to repay borrowed finance has been based on retrospective analysis of historic data. Through utilising modern information resources and advanced analytics it may be possible to build more enabling and potentially predictive data sets from real time and specific consumer behaviours. The potential to leverage the rich social media data set, available for this demographic, in order to deliver value in solving this major problem for them is enormous.

1.6 Purpose of this discussion paper

The purpose of this paper is to explore how Visa Europe can utilise social data analytics technologies to enhance products and services relevant to its existing business model. The structure of the study focuses on potential applications enabled through partnership with a specific vendor. Visa has chosen data analytics firm Hello Soda to be its partner.

Consult Hyperion have identified three subject areas within which the application of Hello Soda technology has the potential to create value for Visa Europe: increasing financial Inclusion, enhancing convenience for consumer payments and greater accuracy for targeted offers. These topics have been chosen as exemplars only and represent only a small proportion of possible applications. Further discussion beyond the scope of this paper may include applications within insurance, healthcare, government sector and others.

1.7 About Hello Soda

Hello Soda is a cloud based software provider that enables third parties such as financial institutions and other service providers to analyse social data to draw useful insights from their consumers. The analysis of psycholinguistics, patterns of communication and the identification

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**Figure 2: Hello Soda operating model**

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11 http://www.pewinternet.org/data-trend/social-media/social-media-user-demographics/
12 https://www.londoncouncils.gov.uk/who-we-are/about-us/young-london/young-people-and-housing-crisis
of personality traits drawn from social media data sources is based on the **OCEAN** personality model – Openness, conscientiousness, Extraversion, Agreeableness and Neuroticism. The platform is able to collect and process learnings which can then be used to enhance new and existing products and services (see figure 2). These learnings can be applied to determine how likely an individual is to repay a loan based on their personality type for example. Figure 3 illustrates Hello Soda’s ability to identify consumer personality traits and, subsequently the likelihood of certain behaviours, from holistic analysis of available online data.

![Figure 3: Identifying the big 5 personality traits among consumers.](image)

In the case of a financial institution, for example, this analysis can be applied to establish a more personal relationship between the bank and its consumers. This allows institutions to identify relationship-building, selling opportunities and tailor financial offerings based on the expected behaviour of specific individuals. This functionality will be a key focus in the identification of where the Hello Soda platform can be applied to enhance the existing Visa Europe operating model.
2 OPPORTUNITIES FROM MERGING SOCIAL AND FINANCIAL DATA AT THE CONSUMER LEVEL

2.1 What is social data?

The term “Social” is defined by the Oxford English Dictionary as “Relating to society or its organisation”. Logically social data can be understood as referenceable information to the same effect. Within the context of the Hello Soda operating model, social data can be interpreted as data that can be drawn from any point where a user has an accountable, traceable interaction with an accessible technology.

However when considering the potential opportunities presented by social data, it is important to understand the scope of where technology is able to draw useful information from. Valuable insights can be drawn taken from a wide variety of sources far beyond the scope of an individual’s likes, dislikes and frequently visited webpages. Furthermore the data available is not constricted to within the domains of social media providers.

For example, Guardian Analytics provides fraud solutions which monitor a user’s behavioural patterns to ascertain their likelihood of being a fraudster. The firm claims the behavioural path of a fraudster is different to that of a legitimate consumer. By monitoring how users navigate through online domains it is able to identify sinister motives. This same logic of behavioural analytics could potentially be applied to a wide range of platforms to gain useful consumer information.

2.2 What is financial data?

Financial data is a more straightforward concept when analysed at the consumer level. The term is descriptive of the various monetary transactions associated to a particular individual or group of individuals. The core element of an individual’s financial data, as it stands today, is constitutional of their financial history and usually consists of a list of previous purchases and expenditure, inclusive of various metadata surrounding the nature of each transaction, alongside income.

Typically this data is not consolidated across organisations, (which are understandably reluctant to share data), although certain attributes are collated within specific domains. Credit rating institutions such as Experian collate specific aspects of financial data from lending institutions and public records. They use this consumer information to assign credit ratings which indicate a person’s capacity to repay a loan based on previous performance: it is common practice for credit ratings and individual borrowing limits to be derived from historic consumer financial data.

13 http://www.oxforddictionaries.com/definition/english/social
15 http://www.experian.co.uk/consumer/faq/E2.html
2.3 Impact of social media data on the finance and payments industry?

As the amount of available and accessible consumer data increases, the proposition of enabling institutions to leverage information from social technologies becomes more interesting. A collaboration between Visa and Hello Soda that enabled financial institutions to leverage a harmony of financial and social insights could have a significant impact on the way banks are able to identify and execute on market opportunities.

For example, the understanding of consumer behaviour, alongside consumer spending patterns, allows the potential for businesses to identify customer wants, needs, eligibility and insights more accurately, predicatively and in real time.

The following paragraphs outline market impact summaries of social data within each of the chosen topic areas (mentioned in section 1.6). These impacts are examples only and do not represent the exclusive effects of the use of social data within each topic. Section 2.4 onwards analyses potential opportunities within each topic area in more detail.

2.3.1 Targeted marketing: Disintermediation of financial institutions

Organisations with primary access to an abundance of social media data have the potential to leverage that data in order to disintermediate banking and lending institutions. Platforms such as Facebook are able to determine customer requirements for financial products and services and notify preferred vendors before the financial institutions (FIs) that would normally offer these products have any visibility of that individual customer’s needs. The banks have an opportunity to mitigate this risk through the adoption of independent third party platforms, such as Hello Soda, with the ability to analyse and draw insight from the same accessible data.

2.3.2 Financial Inclusion: Increasing access to financial products and services

As the value and reliability of social data increases, there is an emerging opportunity for businesses to become less dependent on traditional types of consumer data in order to perform tasks such as identification and the assessment of risk. The analysis of socially driven data can enable institutions to find out what they need to know about their customers through relatively informal means. Most significantly it presents an opportunity for financial service providers to acquire customers who are unable to produce the forms of data institutions have traditionally used to manage customer risk: creditworthy millennials with thin credit files or migrants, for example.

2.3.3 Consumer convenience: added value for consumers

The positive impacts of increasing consumer convenience are well documented. The Smart Card Alliance for example, attribute the convenience of contactless payment cards to benefits ranging from increases in consumer spending and frequency of purchases to customer loyalty and increased revenues.\(^\text{16}\)

The enhanced insight provided by platforms such as Hello Soda and enabled by real time social data can be leveraged to facilitate a more frictionless experience for consumer payments across a wide range of transactions. This presents an opportunity for institutions to encourage a higher frequency of payment transactions whilst simultaneously delivering value to their consumers.

2.4 Driving financial inclusion

Financial inclusion is a concept that embodies an ethos of not only extending the reach of financial services, but ensuring those services are appropriate and tailored for their intended market. In developed economies, where the majority of individuals do have access to formal banking services, the primary focus is on how appropriate those services are and how to encourage their take-up. In developing economies the primary focus is typically to extend the reach of financial services. However ensuring the appropriateness of the services extended is still relevant. This section outlines a limited number of examples of how the social data can be leveraged, alongside existing technologies and the Visa business model to drive services which enhance financial inclusion in both developed and developing markets.

2.4.1 Increasing financial services penetration through mobile money adoption

According to the World Bank, the number of people without formal access to financial services stood at around 2 billion adults towards the end of 2014, with financial institution account penetration in Europe and Central Asia standing at just 51%\(^\text{17}\). Although there are various technology based schemes globally which are aimed at reducing this figure, adoption of them is often encumbered by lengthy registration processes and a general lack of awareness\(^\text{18}\). When considering how social data can be utilised to reduce this figure the statistics are not favourable. According to We Are Social, social media penetration in in Europe is was less than 50% in 2015\(^\text{19}\) and it would be reasonable to assume that the majority of that 50% is made up of banked users.

However a thin presence on formal social media platforms does not necessarily dictate a lack of usable social data. Examples from providers such as Jumo have proven the concept of utilising the social data surrounding a consumer’s mobile phone to manage risk and there is research to support wider application. Figure 4 illustrates the roles that could be played by each party in collaboration between Hello Soda and a mobile money provider in order to facilitate a more enabling environment. Social data analysis could enable individuals with no credit history to establish risk and identity profiles and also has the potential to identify appropriate products for specific individuals. In the example the mobile money platform is responsible for utilising a social data analytics platform to establish identification and credit profiles for individuals previously ineligible for certain financial services.

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Further benefit can be derived from the analysis of the data surrounding a consumer’s MSISDN, the critical mobile telephony identifier, to enable a greater level of convenience in accessing financial products. A higher propensity for underbanked individuals to engage with formal financial institutions could be achieved through enabling social data driven procedures to replace tiresome application processes.

2.4.2 Enabling access to payments technologies for merchant networks

In 2015 small businesses accounted for 99.3% of the 5.2 million private sector enterprises in the UK. As this market continues to grow, the playing field for providing low cost secure card acceptance mediums has become increasingly competitive. New and innovative payments technologies have inspired fresh concerns surrounding risk and security. As Point Of Sale (POS) technologies become more flexible and mobile, acquirers have an increased responsibility to perform an appropriate and ongoing level of due diligence on the merchants they establish agreements with. Social data analytics platforms can enable an aspect of real time analysis which could allow a risked based approach to merchant registration processes.
Figure 5 illustrates how by forming part of an acquirer’s on-boarding process for small and seasonal merchants, social data can reduce friction during registration whilst maintaining appropriate levels of due diligence. The example shows how an acquirer can utilise an individual’s social media and smartphone information to meet merchant registration requirements such as proof of identification and proof of address in the absence of slower more traditional procedures.

By streamlining this process Hello Soda could not only allow large acquirers to access lower tier retailers with more confidence but also establish a merchant users base for which behavioural information is easily accessible. Potential selling opportunities for credit and insurance, for example, can be passed on from an intimate knowledge of merchant wants and needs.

2.4.3 Impacting rising debt via helpful financial management tools

According to the Financial Inclusion Centre “Good advice is critical for promoting financial inclusion, financial resilience and security amongst households”23. However a recent YouGov survey found that in the UK only 45% of 18-34 year olds reported having some or good understanding of financial products and services24. Reports from the Institute for Fiscal Studies conclude that individuals with low financial literacy are more likely to accumulate debt25. This and similar research has fuelled investment in education schemes aimed to counteract rising household debt across Europe. However other studies suggest a lack of effectiveness of some financial literacy programmes26. Recent thinking suggests that delivering financial education in the right context is critical.

Innovative financial management tools fuelled by a combination of social and financial data sets can be used as an additional way to encourage personal money management. Information around planned expenditure, trends in financial consumption and upcoming expensive events such as birthdays or weddings are all available through the convergence of social and financial data. By integrating analysis of this information into banking and payment applications, an unrealistic dependence on financial literacy can be offset by real time preventative measures which protect consumer credit ratings and lower lending risks for banks.

Figure 6 proposes a conceptual example. For a student with a loan that is due to last an academic term, Hello Soda could take note of relevant data in order to provide individuals with accurate real time monthly expenditure projections. It can do this by correlating data between expenditure patterns, and online conversations to intervene when behaviour is likely to result in unsustainable spend. The example illustrates this concept calling on data from Facebook, a bank account and Weibo as examples.

23 http://inclusioncentre.co.uk/wordpress29/#_ftn1
24 https://yougov.co.uk/news/2012/06/07/britains-financial-literacy/
2.4.4 Increasing access to finance for consumers with thin risk profiles

Statistics from the Council of Mortgage Lenders revealed a 1% drop in the total value of mortgages lent during 2014\[27\]. This is in part due to a lack of accessible finance among young people along with house prices rising at a greater rate than wages\[28\], creating a necessity for banks to lend more than their risk processes will allow. Since 2002 there has been a dramatic decrease in the number of first time buyers in the UK. The Office of National Statistics reported that only one in ten 16-24 year olds can afford to buy their own home in 2013 compared with one in three during the 1980s\[29\].

The recent economic downturn has understandably resulted in lending institutions reviewing the way they manage risk. This, in turn, has led to the introduction of stringent one-size-fits all lending criteria that are excluding many from accessing finance.

The introduction of these more stringent controls does not necessarily have to result in exclusion for younger demographics. Social data driven services have the potential to increase addressable markets, for lenders, through the introduction of alternative methods of risk assessment, which can be optimised to analysis the risk characteristics of individual borrowers.

Implementation of this type of analysis could be particularly enabling for individuals who are not able to produce adequate assurance to lending institutions through traditional data sources such as credit history. Examples of these types of consumers include young people struggling to buy their first home and foreign immigrants unable to transfer credit history between countries. Banks could open up lending to these customers by analysing their social data, which is abundantly available to supplement or instead of their credit history. Figure 7 illustrates how Hello Soda could help banks to access these underserved demographics.

Financial institutions stand to gain great benefit from accessing underserved demographics. Research by Mintel on behalf of the BBC revealed that Britons are more likely to split from their partners than they are from their Bank\(^{30}\). This presents a significant opportunity for lenders to capture new customers from an early age before competitors who do not have the capability to leverage social data.

### 2.5 Driving economic growth by enhancing convenience for consumer payments

Faster internet connectivity alongside the proliferation of smartphone technologies is creating a wide range of opportunities for businesses to facilitate customer transactions. It is predicted that by 2019 there will be over 9 billion mobile subscriptions around the world, 60% of which will be linked to smartphone devices\(^{31}\). With the mobile wallet market set to reach 1.6 trillion USD by 2018\(^{32}\), investment in the space has been attracted from a broad spectrum of both digital and financial service providers.

Ultimately this investment has resulted in a fragmented payments market, creating a wide range of end customer user interfaces and processes that are having a detrimental effect on


convenience. The use of social data in this space has the potential to limit situations where consumers are required to perform additional and encumbering authentication processes when making payments. The following section outlines a limited selection of examples where the convergence of social and financial data can have an impact on the payments market and where Hello Soda can enable Visa to take advantage of the opportunities created.

2.5.1 Enabling flexible limits for contactless transactions

The current state of the market has seen scheme operators set the transaction limits for contactless payments. These are typically geared towards facilitation of low value transactions only, as a means of managing the risks associated with device theft or compromise. However, there is scope for greater flexibility around those transaction limits through the use of social data.

Figure 8 illustrates a hypothetical scenario where the maximum transaction limit, beyond which additional authorisation is required for a contact payment, is the result of a number of attribute queries. Whether a consumer frequents the store, whether the purchases are in line with the lifestyle of the individual and how typical the transaction amount is are all factors which can be queried using social and financial data. Each authorisation request has the potential to be specific to the dynamics of an individual transaction, making payments frictionless for consumers has the potential to drive commerce at merchant locations.

2.5.2 Increasing conversion rates for e-commerce transactions

According to the Centre for Retail research “E-commerce is the fastest growing retail market in Europe”, sales in the UK, Germany, France, Sweden, The Netherlands, Italy, Poland and Spain are expected to reach £184.44bn in 2016. However e-commerce conversion rates for mobile remain low when compared to tablet and desktop devices.

For the UK in 2015, smartphone conversion rates were 54% less than they were for tablet devices and 64% less than they were for consumers using desktop devices. User experience is likely to play an influential role in contributing to this statistic. There is an opportunity to

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33 http://www.retailresearch.org/onlineretailing.php
34 http://www.smartinsights.com/ecommerce/ecommerce-analytics/ecommerce-conversion-rates/
leverage an individual’s social profile to drive mobile e-commerce transactions and subsequently the online retail industry.

A typical e-commerce transaction is likely to involve the consumer having to enter multiple credentials in order to verify their identity to a number of different organisations. They may be expected to log into their merchant held account, verify presence of the card via the CVV number and then enter credentials prompted by additional security processes. Each one of these events has the potential to increase the likelihood of the consumer abandoning the transaction. Figure 9 illustrates the customer journey described.

Figure 9: Consumer journey for e-commerce transaction

There is an opportunity for social data analysis to enable services which allow consumers to log on to merchant held accounts via their platform, which is able to identify a consumer and authenticate specific transactions using a similar logic displayed by the example in figure 8.

Figure 10: Social media log in and authentication for e-commerce
Figure 10 illustrates a conceptual example of a service which authenticates user identity and allows financial institutions to authorise payment from a card on file using social media and financial credentials. This type of a service has the potential to support a more frictionless user experience for mobile e-commerce transactions.

2.6 Greater accuracy for targeted offers

The US market provides a powerful showcase for the effectiveness of targeted offers. Research sponsored by Discover Financial Services revealed that 76% of smartphone users access relevant offers from merchants via their mobile phones. In addition 40% do so at least once a week. However the vast amount of unsolicited, unwanted and irrelevant offers often swamp the relevant ones. The mean click through rate for financial service related products globally is just 3%. It may be possible to increase this percentage through the intelligent application of consumer social media data.

Providers have the potential to save time and money through the utilisation of relevant consumer data to deliver offers and promotions in a time sensitive, accurate and cost effective manner. However the emergence of such services has the potential to disrupt current banking / consumer relationships as much as it does enhance them. The following section discusses the use of social data powered targeted marketing and its potential impact on the finance and payment industry.

2.6.1 Disintermediation of banking institutions

Organisations are increasingly looking for new and innovative ways to gain insights about their consumers. Service providers within the social media space are already reacting to this demand. Software solutions company Brandwatch for example, analyses online conversations in order to deliver market perspectives on certain products and services. These perspectives are then used to inform decisions on product development and marketing campaigns. A similar principle can be applied at the consumer level to deliver exclusively useful offers to consumers, eliminating situations where individuals are bombarded with advertisements and promotions that they have no interest in.

From available data, what a consumer buys, routine movements of where a consumer travels and a history of new and periodic participation in hobbies and interests are all available. For example, the likelihood of the type of football boots worn, for a team training session at a particular venue and time can be determined from a consumers card transaction history, Facebook events and twitter conversations. Hello Soda can use this data to meet and in some cases predict fluctuations in an individual consumer’s demands.

For example, Depending on the periodic attendance to a football training session, (which can be determined from smartphone geo data), a sporting equipment vendor may be able to predict when the lifespan of the boots will be coming to an end. Promotions on new boots can be extended at that time. Furthermore, transaction histories can be used to gain insights on brand

loyalty to determine the make of the boots the offer relates to. Messages can be personalised from Facebook connections and other sources depending on consumer engagement strategy.

Figure 11 illustrates the example described, demonstrating how relevant information on products and services from the merchant would play a part in this type of promotion. The same scenario is applicable to banking and payments services and presents a potential disintermediation threat to financial institutions without access to the level of consumer insight that social data provides.

In instances where banks do not have access to social insights on their consumers they are at a danger of being disintermediated by organisations that do. Facebook for example may have the data necessary to identify a consumer’s requirement for a loan, capacity for borrowing and susceptibility to particular value added services and “deal sweeteners” well in advance of a bank even learning they were looking for finance. It is likely that banks will need to adopt platforms capable of social data insight in order to prevent this from happening. Hello Soda provides a potential fit in enabling banks to defend themselves from this threat.
3 WHAT ARE THE BARRIERS TO ADOPTION?

The opportunity to leverage consumer data in order to enhance financial and other service types is subject to the careful navigation of certain regulatory and market dynamics. There are a number of potential barriers to adoption at both the consumer and corporate level. These need to be addressed in order for successful application of the discussed concepts to occur. This section discusses some examples of the types of barriers to adoption that may arise.

3.1 The balance of consent given and value received

The use of consumer data to the benefit of corporate entities is a concept that has traditionally provoked a negative response from the general public. During 2015 a popular legal notice individuals were posting to their Facebook status in an attempt to protect their personal information, went viral\(^\text{37}\). Although it was reported that the notice held little legal standing, the event is representative of a relevant consumer stance. As mentioned in section 1.4 in order to address this barrier consumers are going to need to have visibility that they are going to receive significant benefit though providing access to their data.

3.2 Long term investment

Certain learning based implementations of social data analytics platforms are dependent on a foundation of knowledge and insights which need to be established for each deployment before it can be leveraged to its full potential. Companies need to be able to reference real and existing relationships between consumer behaviour and the insights that can be drawn from them, before they can apply the insights to the delivery of products and services.

In order to achieve this the platforms necessary to structure and analyse consumer data need to be operated for a significant period of time prior to companies realising full value from them. This is particularly relevant for platforms such as Hello Soda which build value on the basis of allowing service providers to establish personal relationships through relevant individual learnings.

3.3 Regulation

Regulators are taking an increasing interest in the corporate use of consumer personal information and in specific cases the use of social media data. The Wall Street Journal\(^\text{38}\) recently publicised regulatory concern over lending organisations use of consumer social media information during loan applications. In Europe a particular focus on the protection of consumer personal data is reflected in the General Data Protection Regulation, recently published by the European Commission. Among other influences the regulation increases the domain of what is considered to be personal information, potentially increasing the scope of data items organisations will be required to seek consent to access.


\(^{38}\) [http://www.wsj.com/articles/SB10001424052702304773104579266423512930050](http://www.wsj.com/articles/SB10001424052702304773104579266423512930050)
These factors may restrict service provider’s ability to deliver innovation and potentially present a threat to the business case presented by analytics platforms founded on social media data. Looking at regulatory trends and the uncertainty of future legislation, it is possible organisations will be wary of investing in technology which may be branded useless in the near future by new laws and policies.
4 SUMMARY AND CONCLUSIONS

The convergence of social media and financial data, at the consumer level, has the potential to enable new and exciting services across broad range of industries. In particular it offers both a threat and an opportunity for existing financial institutions. Analysis of social media data allows for a much more personalised and targeted relationship with individual consumers, potentially even down to the level of predicting an individual’s changing preferences and requirements over time.

This is only the start of the trend. As personal devices such as wearable computers and smartphones continue to advance, the benefits derived from consumer data will increase exponentially. The introduction of heart monitors on smartwatches, for example, is the first step in enabling access to specific data attributes on consumer health. This information could be used to identify consumer ailments before any symptoms are shown. Combined with other data elements from social and financial sources the treatments, appointment bookings and relevant financial support for those ailments, could be organised and paid for automatically, to the convenience of the individual.

Financial institutions continue to provide a core set of regulated services that it is unlikely any social media company will want to compete with, but without engagement with social media data it is increasingly likely that these third-parties will be better able to identify and service the financial services requirements of consumers by auctioning their details to the highest bidder. Finding ways of engaging with this data and providing services either to consumers or the third-party data aggregators will be essential for financial institutions over the coming years.

However in order for such services to be enabled, a balance needs to be achieved between consumers, service providers and regulators. A common position needs to be established on the fair use of consumer information to the mutual benefit of all stakeholders.

This paper has looked at a number of examples of how social media data could be utilised by financial institutions – to promote financial inclusion, to increase the convenience of consumer payments and to better target marketing spend. However, these examples only scratch the surface of the opportunities. The use of social media data in financial services is already happening, financial institutions need to engage with this trend now in order to learn how best to exploit the opportunities and counter the threats that it brings.