Exploring the Customer Trust Building Strategies used by Fintech Firms

Aleksandra Gesing Kalinowska[1], Dr. Fawad Khaleel[2], Dr. Alija Avdukic[3], Dr. Patrick Harte[4]**

[1,2,4]Edinburgh Napier University

[3]University of Dundee School of Business

***Corresponding author*

f.khaleel@napier.ac.uk

Abstract

The Fintech industry remains broadly un-regulated compared to their banking counterparts; however, Fintech firms are aware that customer trust plays a vital role in defining success and failure within this industry. In this paper, we discuss the measures taken by Fintech firms to establish trust and self-regulate consumer protection methods for their customers. Our research explores the approaches used by Fintech organisations to create and maintain consumer trust in their services and examines the depth of safeguarding and protection provided by these approaches. To achieve this, the literature review was used to derive twelve grading factors across five thematic areas creating a multi-element grading framework for determining Fintech success or failure regarding building consumer confidence. This was then applied to assessing the practices of 16 Fintech firms (divided into four groups) selected using a multiple case studies strategy through secondary data and the results were further benchmarked against a traditional financial institution as our proxy. The majority of Fintech companies are not required by law to follow financial regulatory guidelines; however, our results show that most of the Fintech organisations studied closely align with the guidelines on consumer protection and financial crime prevention. The Fintech firms also adequately report on their compliance to general consumers. This appears to be contradictory to the literature on Fintech, which broadly focuses on the insufficient regulations overseeing financial technologies. Our results show that the best practices in safeguarding and protection measures practised within Fintech operating within the Transfer field are similar to that of traditional financial institutions. In contrast, the most inadequate consumer protection is essentially embedded within Cryptocurrency and Blockchain.

Key words: Fintech, consumers, trust, regulations, financial technologies

1. Fintech Emergence and Development

Fintech is a cluster of two words: finance and technology and refers to using technological innovation in the financial industry to deliver products and services (Chuen *et al*., 2015). Financial innovation is defined by Tufano (2003) as the process of inventing and promoting new financial products, services, technologies, organisations, or markets. Further, Fintech can also be divided into products and processes. Products include innovative derivative contracts, investment products and techniques such as payment processing transactions. Lee and Shin (2018), Magnuson (2018), Haddad and Hornuf (2019), and many others observe that these Fintech innovations (including cryptocurrency, crowdfunding or payment platforms such as PayPal or Apple Pay) while disruptive to existing financial institutions, they may also offer an entry route into the financial market for smaller companies. These products also satisfy market demand for new services to replace old and obsolete models as well as decrease costs and offer more personalised products and services. The traditional banking corporations are also trying to keep up with the pace set by Fintech, and overall there is more investment in R&D within the financial industry.

The development and advanced digitisation of information technologies (IT) such as mobile and cloud computing, internet, big data etc, and their worldwide adoption by consumers, provide greater opportunities for IT firms with expertise in automation (Chuen *et al*., 2015; Puschmann, 2017). This widespread development of opportunities and global use of digital systems has changed consumer behaviour and altered consumer expectations, especially on service channels. For traditional financial institutions, such as a bank, this has resulted in the downsizing of local branches and moving a large part of their business online (Nüesch *et al.*, 2015; Puschmann, 2017; Lee & Shin, 2018). For now, the general response of the traditional banking sector appears to have secured the future of this industry (Chen *et al*., 2017) (Chavan,

2013). The use of traditional banking was previously supported by consumers who were sceptical of technological and preferred face-to-face contact over virtual interactions. However, Covid-19 has tilted the balance in favour of Fintech.

Since Fintech's emergence, there has been a lot of discussion around its advantages and considerable threats to all participants such as consumers and investors as well as regulators across the world. Its rapid development became a challenge as its operations did not fall under the same regulatory regime as traditional financial institutions (Arner *et al.*, 2015). There is a broader issue with regulating technological developments due to the reactive approach of general financial regulators, which has created consumer and investor protection as the most significant problem within Fintech. This resulted in cases such as China and the local P2P platforms defaults and losses due to fraud and Ponzi scheme practices which considerably impacted the customers' trust in Fintech services (Claessens *et al*., 2018).

There are measures being put in place and exercised in some jurisdictions, such as for example, protecting customers' funds when it comes to outstanding balance reserve requirements reaching a 100% ratio in China or Brazil (Restoy, 2019). However, policymakers still tend to be technology-neutral and mainly concentrate on limiting possible risks of using technology, such as setting requirements (e.g., in Brazil) or providing recommendations (*e.g.* in EU) on control and operational risk management rather than intensifying prudential measures (Restoy, 2019). The limited regulation is also underpinned by a general regulatory perception that as Fintech is a relatively new paradigm, products such as crypto assets are in the early stages of market activity and so unable to destabilise systems (Restoy, 2019). Müller & Kerényi (2019) argue that the unsupervised development of Fintech fell through the regulatory gap during the financial crisis as regulators were busy dealing with the more visible and high-profile financial crisis.

From an academic perspective, there appears to be little research on the ethical practices associated with financial innovations, and the majority of studies focus rather on risks and regulatory challenges; for example, Magnuson (2018) presents the systemic risk of Fintech and Didenko (2017), Claessens *et al*., (2018), Lee & Shin (2018), and Restoy (2019) discuss regulatory challenges. Lack of reasonable empirical evidence and investigation in the field raises the question of how well and to what extent Fintech ethical issues are considered and the level of protection incorporated within Fintech products. These questions are vital because the technological developments reshaping financial services are largely led by predominantly IT focused start-ups (*e.g*., Silicon Valley based Fintechs) who have little understanding of financial regulations regarding consumer protection (Curran, 2016). Thus, despite the vast benefits of Fintech (reduced costs, convenience, speed and/or accessibility), there is a risk of unethical practices, sometimes unconsciously, due to ongoing limited regulations and underdeveloped codes of conduct within the field.

While the aggregate consumer perception of Fintech is positive (Riemer et al., 2017; Ghazali & Yasuoka, 2018; Müller & Kerényi, 2019) (mainly due to the value creation), the Fintech industry suffers from a lack of trust when compared to traditional financial institutions (Riemer *et al*., 2017www; Müller & Kerényi, 2019). The major concern affecting consumer adoption is the potential security risks and unethical practices (Ryu, 2018a) (Ryu, 2018b). There also seems to be a negative correlation between the approval of the Fintech products and concerns on data security and privacy, limited regulations, financial losses, or inadequate operational processes (Ryu, 2018b). Therefore, it is vital to investigate the safeguarding measures and consumer protection practices of Fintech firms.

The aim of this research is to explore the approaches used by Fintech organisations to create and maintain consumer trust in their services and examines the depth of safeguarding and

protection provided by these approaches. This will be achieved by assessing Fintech firms across five themes based on the type of business model and services. These five themes are *Consumer Protection; Fintech Regulation; Collaboration with a Traditional Finance Institution; Financial Inclusion and Discrimination; and Perceived User Benefits.* We will benchmark these findings with traditional financial institution; this will allow us to draw conclusions that will help us understand how Fintech can improve consumer trust in the interest of safeguarding and protection.

The remainder of the paper is structured as follows: Section 2 discusses the theoretical underpinning of ethical challenges within the financial world, followed by section 3, which details our methodological paradigm and explains the analytical approach of our study. Thereafter in section 5 we discuss our findings followed by our conclusions, and the implications of this study.

2. Literature Review

The overall perception of the Fintech industry is positive, specifically amongst younger generations familiar with new technologies and those who engage with them (Riemer *et al*., 2017; Persmoen & Sandvik, 2018). There remain more sceptical consumers who are hesitant and anxious about the risks involved with Fintech and the lack of adequate consumer protection with a particular fear of financial losses and data security breaches (Ryu, 2018a, Ryu, 2018b; Stewart & Jürjens, 2018). Currently, consumer protection is one of the most significant challenges affecting Fintech start-ups, and it remains one of the primary-selling points of traditional financial institutions.

Stewart and Jürjens (2018) suggest that a lack of transparency around the purpose and use of data collected by Fintech, is also affecting the trust in the Fintech industry and slowing its

adoption. Meanwhile, their counterparts (the traditional banking institutions), are strictly regulated on issues such as transparency. Public institutions, such as the Financial Conduct Authority (FCA UK), Bank of England (BoE), Prudential Regulation Authority (PRA) introduce continuous Government interventions in the form of amendments to improve consumer trust in traditional banks such as 'the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010' (Odinet, 2017; Sahni & Byrne, 2020, Penn, 2018). There is also a public narrative on safe, secure, stable and therefore, trusted banks (Riemer *et al*., 2017). In comparison, financial technological innovations are novel and without a proven record of reliability (Zavolokina et al., 2016). There is also the public perception of Fintech operating without established regulatory supervision (Odinet, 2017), although there is institutional support available for Fintech customers. For instance, the Consumer Financial Protection Bureau (CFPB) in the USA accepts complaints about unfair Fintech lenders (CFPB, 2016) and has recently imposed a $6 million fine on Fintech firms for violating customer lending regulations (Thomson Reuters, 2020).

The literature on Fintech also suggests that the innovative and creative nature of Fintech goes beyond product development and crosses into creative ways to avoid consumer protection and mislead customers on data privacy; adequate due processes; lending protections; defective goods or services protections; fair contract underwriting; appropriate oversight (e.g., state licencing); pricing; and clarity on APR (annual percentage rate) (Saunders, 2019). The issue of transparency becomes more problematic when there are examples of lending platforms charging excessive APRs of over 450% (Saunders, 2019). This has resulted in calls for increased government oversight and greater scrutiny of Fintech products (Deloitte, 2020).

Consumers International (2020) has further raised the underlying issue of privacy protection within Fintech as the business model Fintech relies heavily on sharing data about consumers

and their behaviours (Brummer & Gorfine, 2014; Odinet, 2017; Saunders, 2019; Consumers International, 2020). Consequently, data breaches and information misuse are relatively common, often impacting on a Fintech firm's reputation and consequently affecting the trust in, and adoption of, Fintech services. The potential for data breaches not only causes monetary losses but is also making traditional banks wary of entering into partnerships with Fintech firms (Stewart and Jürjens, 2018; Saunders, 2019). Fintech collaborations with traditional financial organisations are an essential growth element of this industry as it improves the rate of adoption (Riemer *et al*., 2017; Klus *et al*., 2019). Such collaborations benefit both industries as it develops access to broader and more diverse customer bases. However, concerns around consumer protection still precludes traditional financial institutions from developing collaborations with Fintech firms (Bömer and Maxin, 2018; Hornuf *et al*., 2020).

The issue of consumer protection in Fintech is generally associated with insufficient regulations (Ryu, 2018b; Stewart & Jürjens, 2018) and difficulty in financially assessing the risk associated with these products (Aaron *et al*., 2017). For conventional institutions the regulations and law requirements have been rigorously tested and developed particularly after the financial crisis of 2008 (Sahni & Byrne, 2020). There is also a century of regulations aimed at consumer protection and risk management, such as the National Bank Act (1863), Federal Reserve Act (1914), The International Banking Act (1978), Bank Secrecy Act (1970) and The Banking Act (1933) which created division into investment and commercial sectors while also imposing deposit insurance requirements. The Markets Act (2000) regulates banks and financial services within the European Economic Area (EEA) and includes prudential (Regulation EU 575/2013) and capital (Directive 2013/36/EU) requirements, Market Abuse Regulation, payment services regulations and many others. Additionally, FCA UK (2020) also oversees financial crime regulations that apply to all financial organisations, such as Money

Laundering and Terrorist Financing Regulations 2019 (MLRs) of Proceeds of Crime Act (2002).

Fintech still largely avoids law-makers' narratives and is mostly self-regulated with very limited legal governance (Sahni & Byrne, 2020). This is because the technology side of Fintech do not fit into the majority of existing 'traditional' frameworks (Didenko, 2017; Claessens *et al.*, 2018). The technological complications also make the overly risky or unethical practices difficult to investigate and penalise, such as the incorrect advice on investment given by Robo-advisors. Magnuson (2018) claims that the issue with monitoring and supervising Fintechs (in contrast to traditional banking institutions), is closely connected to limited information and complexity about their operations which is incomprehensible to policymakers. For instance, applying the European Parliament Directive regulating unfair business-to-consumer practices within the EU on Fintech is quite challenging (Velentzas *et al.*, 2012). Mention's (2019) research suggests that often new financial tools to new target audiences frequently goes beyond existing regulatory guidance, for instance, the use of unlicensed underwriters and brokers in providing for-profit services by the Fintech start-up entitled 'Zenefits'. Magnuson (2018) shows that many Fintechs operate complicated technological mechanisms and their algorithms are rarely understood by regulators. Brummer and Gorfine (2014) suggest financial technology regulation is still insufficient because of its unusual nature and pace - different to standard finance and the slow pace of the regulatory models which adapt and evolve accordingly. Some Fintechs by their very nature are decentralised and defined by disseminated networks of individual players, which also impedes appropriate monitoring, such as Cryptocurrency (Allen et al. 2022). Monitoring and governance are also problematic as Fintech operates freely across multiple country jurisdictions (Magnuson, 2018).

Cyber-crime also creates a significant challenge for customer protection for Fintech, due to the inherent vulnerability to identity theft, illegal transactions, money laundering, fraud, tax evasion and others (Nikkel, 2020; Wamba *et al*., 2020). For traditional banking, the legal standards such as anti-money laundering (AML), customer-due-diligence (CDD) and know-your-customer (KYC) are embedded into the business model, however many Fintech firms do not comply with the standards, which has resulted in fines (Wu, 2017; Thomson Reuters, 2020). For instance, the $700,000 penalty issued by the Financial Crimes Enforcement Network (FinCEN) against Ripple Lbs (digital currency firm) (Avergun and Kukowski, 2016), because the Fintech firm failed to register their business as MSB (Money Service Business) under the Bank Secrecy Act. From Fintech's point of view, they argue that they do not have to comply with AML regulations because they are not financial services companies, and their business models do not fit the existing AML provisions (Wu, 2017). Further, there is the cost associated with applying compliance regulations which will make Fintech products more expensive and reduce their competitive advantage (Wall, 2016; Temelkov, 2018). This is a major issue as the key innovative element of Fintech is the use of technologies for cutting costs, enhancing efficiency and quality of financial products and services (Didenko, 2017; Lee & Shin, 2018; Navaretti *et al*., 2018; Morgan, 2022).

The low-cost aspect of Fintech is also fundamental to improving the financial inclusion and widening access of financial services to communities that are currently not serviced by the traditional financial institutions (Lee & Shin, 2018; Magnuson, 2018). Chuen et al. (2015) estimate that 38% of the world population does not possess a bank account, and around 40% is not served adequately. The new technologies allow easy access to digital financial products that are essential for the development and integration of under-resourced communities, such as money transfer (using, e.g., PayPal or Apple Pay), loans, insurance and others (Johnson *et al*., 2019).

Walker *et al*. (2019) showed the importance of Fintech in achieving United Nations Sustainable Development Goals (UNSDG) for building a sustainable future. Others disagree on the potential of Fintech to improve financial inclusion, as they argue that the learning algorithms used by Fintech firms exhibit discriminatory attitudes towards race, gender or any other protected characteristics (Credit Suisse, 2017; Zetsche *et al*., 2017; Johnson et al., 2019). For instance, on some lending platforms, women appear to be discriminated against the ability to qualify for loans and when they do qualify, interest rates imposed are usually higher than those offered to men (Credit Suisse, 2017).

There are regulations in place (*e.g*., Equal Credit Opportunity Act in the USA) that protect borrowers and prohibit lenders from using information such as race, gender, ethnic origin, marital status, age or religion in the underwriting process (Odinet, 2017) – however monitoring the equality issues in the machine learning programmes' use of big data is problematic. Initial enquiries in the academic literature show evidence of ethnic discrimination within prominent Fintech platforms (Zetsche et al., 2017; Pope and Sydnor, 2011; Jagtiani and Lemieux, 2019). The issue of financial inclusion is fundamental to developing a society based on equal opportunity. A study by Bartlett *et al*. (2019) shows the extent of this problem within the entire financial industry, as it discovered that non-white borrowers are offered about 0.08% higher interest rate on mortgages than white customers. This equates to about $0.5bn per year more in interest payments by those discriminated against. Johnson et al. (2019) further argue that this issue has translated into automated, electronic approaches to making various financial decisions and therefore required increased transparency and accountability commitments from financial technology organisations.

However, this is not to dismiss the user benefits of Fintech innovations and the potential of Fintech to be a force for good. Lee and Shin (2018) demonstrate that the opportunities offered

by Fintechs not only disrupt standard banking firms, but they are also shifting consumers' behaviour towards tailor-made, cheap and personalised products and services. These products and services are offered across society through mobile channels which improve accessibility. Recent studies on Fintech (Zavolokina *et al*., 2016; Lee & Shin, 2018; Ryu, 2018a; Ryu 2018b) suggest that iFntech products are creating economic activities by providing accessible low-cost products. These products also provide better customer satisfaction due to user-friendly functionalities when compared to financial instruments offered by banks (Dorfleitner *et al*. 2017; Chuang *et al*., 2016; Alwi et al. 2019). Most of the literature on Fintech examines consumer satisfaction based on user-experiences, whereas this study focuses on analysing Fintech's perspective on customer protection.

3. Research Approach

3.1. Data Sample

In order to provide cases rich in information, a purposive sample was selected. Purposive sampling is described by Etikan *et al*. (2016) as a non-random choice of participants based on their attributes. We selected 16 firms that could represent the following 4 sub-sectors of the Fintech industry: Payment, Lending, Transfer, and Cryptocurrency/Blockchain. Our selected sample represents the firms that either initiated or established financial technology innovations within each sub-sector. We also considered the operating time within the sub-sector, market presence, financial standings, along with qualities and scale of business.

3.2. Data Collection and Measurement

In order to derive coherent themes ensuring content validity, it was necessary to conduct secondary research in the form of an extensive literature review. This approach is similar to that adopted by Ryu (2018a) in his research, where the basis for developing themes was also

embedded within the literature. In this study a Multi-Element Grading Framework (Table 1) was developed based on the theoretical background and findings within five areas: Consumer Protection; Fintech Regulation; Collaboration with a Traditional Finance Institution; Financial Inclusion and Discrimination; and Perceived User Benefits. In essence, this is our thematic framework outlining our five themes with the corresponding derived 12 grading factors under investigation.

NO	**THEMATIC CATEGORY**	**Bibliographic Reference**	**GRADING FACTOR**
1	CONSUMER PROTECTION	Brummer & Gorfine, (2014); Zavolokina et al., (2016); Didenko, (2017); Odinet, (2017); Claessens et al., (2018)	*LICENCING INFORMATION*
2			*COMPLAINTS PROCEDURE*
3			*PRODUCT/SERVICE PRICING*
4	REGULATION	Magnuson (2018); Ryu (2018b); Stewart and Jürjens (2018).	*FRAUD PREVENTION / AML PROGRAM/ ACTIONS/ INFO*
5			*KYC / CDD CHECKS*
6	COLLABORATION WITH TRADITIONAL FINANCE INSTITUTION	Riemer et al., (2017); Klus et al., (2019); Hornuf et al., (2020)	*SPONSORED/ COLLABORATING WITH TRADITIONAL BANK INFO*
7	FINANCIAL INCLUSION/ DISCRIMINATION	Didenko, (2017); Lee & Shin, (2018); Navaretti et al., (2018); Johnson et al. (2019); Sahay et al. (2020)	*OPERATES IN FINANCIALLY DISADVANTAGED/UNDERSERVED AREAS*
8			*CORPORATE SOCIAL RESPONSIBILITY (CSR)/ SUSTAINABILITY STATEMENT*
9	USER BENEFITS	Cronin, (2009); Brummer & Gorfine, (2014); Mention, (2019).	*MOBILE APPLICATION*
10			*READABILITY: MAINLY BLACK/NAVY FONT ON WHITE*
11			*STANDARDISED FONT IN BODY TEXT (E.G., ARIAL, TNR, CALIBRI)?*
12			*SEARCH TOOL/SITEMAP?*

Table 1: Multi-Element Grading Framework

Information about Fintech practices was gathered through reviewing publicly available data such as legal communication, privacy statements, terms and conditions, and other website information (consent, mission statements, service and product offers and/or marketing communication). It allowed for accessing data and to answer questions about the practices of Fintech organisations. The outcomes were then compared to the approaches of our proxy: a Traditional Financial Institution. It was necessary to include a benchmark and the criteria was a well-established bank perceived as trustworthy.

3.3. Data Analysis

The thematic examination is conducted by classifying and grouping key emerging ideas and categories (Ritchie and Lewis, 2003) (Braun and Clarke, 2006), in our case our five themes as outlined above. The data was first categorised, followed by a comparative analysis, using the presented Multi-Element Grading Framework (Table 1), which is conducted between Fintech firms and the proxy traditional bank (BoS) to examine their safeguarding and protection measures.

4. Finding and Analysis

4.1. Measurement Framework and Data Collection Issues

The grading schema is developed to enable measurement of each grading factor under investigation with the condition of a positive outcome being the focal word appearing within the content. For example, when grading a ‘complaints procedure’ (i.e. a grading factor under the “Consumer Protection” thematic category), the condition was for the word ‘complain/complaint’ to appear, and phrases such as ‘contact us’ or ‘support’ were not considered for positive grading for this factor. Another exemplar includes the way in which marks were assigned to the ‘KYC’ grading factor in the “Regulation” thematic category; it was

necessary to find information pertaining to customer data handling collected by Fintechs. The last example given is the manner in which the condition for a positive result for the grading factor 'Operates in Financially Disadvantaged/Underserved Areas' in the "Financial Inclusion/Discrimination" thematic category; here it was a requirement to find information of the firm operating in areas/regions identified as developing/disadvantaged.

4.2. Benchmark – Bank of Scotland

Results for the Bank of Scotland (BoS) selected as the 'Traditional Financial Institution' proxy, are presented in Table 2. BoS met all the requirements of the study (excluding 'not applicable' factor) which provided the benchmark for comparison of the selected Fintech firms.

All information gathered was accessed directly through the Bank's website. The data was easy to find thanks to their sitemap which allowed for quick completion of grading, in marked contrast to some Fintech organisations (discussed below). Furthermore, BoS seems to be clear about all researched factors and provides plethoric information to consumers, those existing as well as those prospective including information that may be helpful in aiding decision-making related to becoming its customer.

	No.		**17**
	CATEGORY TYPE		**TRADITIONAL FINANCIAL INSTITUTION**
	APP/FIRM		**BANK OF SCOTLAND (BoS)**
	BRIEF CHARACTERISTIC		Commercial Bank based in Edinburgh, Scotland; part of Lloyds Banking Group; offers a range of traditional banking products and services; Web: www.bankofscotland.co.uk
NO	**THEMATIC CATEGORY**	**GRADING FACTOR**	
1		***LICENCING INFORMATION***	1

2	**CONSUMER PROTECTION**	***COMPLAINTS PROCEDURE***	1
3		***PRODUCT/SERVICE PRICING***	1
4	**REGULATION**	***FRAUD PREVENTION / AML PROGRAM/ ACTIONS/ INFO***	1
5		***KYC / CDD CHECKS***	1
6	**COLLABORATION WITH TRADITIONAL FINANCIAL INSTITUTION**	***SPONSORED/ COLLABORATING WITH TRADITIONAL BANK INFO***	N/A
7	**FINANCIAL INCLUSION/ DISCRIMINATION**	***OPERATES IN FINANCIALLY DISADVANTAGED/UNDERSERVED AREAS***	1
8		***CORPORATE SOCIAL RESPONSIBILITY (CSR)/ SUSTAINABILITY STATEMENT***	1
9	**USER BENEFITS**	***MOBILE APPLICATION***	1
10		***READABILITY: MAINLY BLACK/NAVY FONT ON WHITE***	1
11		***STANDARDISED FONT IN BODY TEXT (E.G., ARIAL, TNR, CALIBRI)***	1
12		***SEARCH TOOL/SITEMAP***	1
RESULTS BY FIRM			**11**

Table 2: Bank of Scotland Study Results

4.3. General Findings

This subsection discusses overall findings of the study and presents the grading allocated to the selected sample of Fintech organisations within each of our thematic categories. The research consisted of 16 Fintech organisations, based in different locations. They were assessed against twelve grading factors grouped into five thematic categories: Consumer Protection; Regulation; Collaboration with Traditional Financial Institution; Financial Inclusion/ Discrimination; and User Benefits which evolved in the process of literature review.

The results presented in *Appendix 1: Study Results by Groups* and *Appendix 2: Overall Study Results,* show that out of 16 companies investigated, the maximum score of 11 was achieved by *'Currencyfair'* from the Transfer type category. The other two firms with second high score

of 10, were *'Azimo'* and *'Worldremit'*, both also Fintechs in the Transfer type category. The success of the firm within the money transfer category is directly dictated by the customers confidence. Therefore, it is logical for these firms to applye rigorous consumer protection policies.

In contrast, Fintechs with the lowest number of matched measures that achieved 5 points (*'Axoni'* from the Cryptocurrency/Blockchain type category) and 6 points (*'Yapstone'* from the Payments type category, and *'Circle'* from the Cryptocurrency/Blockchain type category) respectively. This is consistent with the highly volatile, unregulated, and untraceable nature of blockchain transactions.

Putting aside the type of Fintech, the two grading factors for which the maximum score is achieved by all 16 firms were those of 'Readability' and 'Standardised Font in Body Text' (both within the "User Benefits" thematic category). All Fintech firms designed their websites in a way which allocated them one point. The second highest occurring score appearing on the firms' websites was the grading factor 'Fraud Prevention/ AML Program/Actions/Info' (*i.e.* belonging to the "Regulation" thematic category) where 15 out of 16 companies provided such information.

In contrast, the grading factor with the lowest score was 'CSR/ Sustainability Statement' (*i.e.* from the "Financial Inclusion/Discrimination" thematic category), where only 2 firms appeared to provide any relevant information connected to this. The second lowest scoring grading factor (only 3 companies) was 'Search Tool/Sitemap' of the "User Benefits" thematic category.

4.4. Consumer Protection

Our findings show that within the Consumer Protection thematic category, the maximum score was noted by the 'Licencing Information' grading factor (14 companies provided information).

12 Fintech firms provided information on the remaining two grading factors of this theme - 'Complaints Procedure' and 'Product/Service Pricing'.

Within the Payment type category, three-quarters provide information about 'Licencing' on their websites as well as a 'Complaints Procedure'. The measure which considered 'Product/Service Pricing' data was matched only by two firms. In this type category group, the best results were achieved by the firm '*Stripe'* which provides information regarding all three grading factors. In recognition of the fact that companies within this type category provide their services to corporate customers where 'Product/Service Pricing' information is often available and dependent on the specific business needs, this may explain the wider negative scoring for this grading factor.

Where lending platforms provide diverse small loans, it was possible to find 'Licencing' data for all four firms in Lending type category. Likewise all four firms list 'Product/Service Pricing' information. However, only a single firm in this group publishes a 'Complaints Procedure'. Consequently, a lack of specific procedures may become problematic for these firms and this may impact negatively on consumer perception of trustworthiness. It is important to note that some regulations are already starting to change and increased oversight and inspections of Fintechs is beginning to occur. This development in oversight also relates to complaints handling and resolution procedures (Deloitte, 2020).

Fintechs within the Transfer type category group appear to pay particular attention to consumer protection as is suggested by their results; all firms matched all three measures denoting that it was possible to find information on their website about 'Licencing', 'Complaints Procedure' and 'Product/Service Pricing'. This outcome strongly correlates with the results of traditional financial institution proxy, BoS. All four firms in this group are based in Europe which may

suggest that offering financial services obliges them to meet more rigorous rules and regulations, imposed by both home countries as well as the European Union and EEA.

Within the Cryptocurrency/Blockchain type category, three companies provide 'Licencing Information' and only two publish 'Product/Service Pricing'. All four, however, do stipulate 'Complaints Procedure' to their customers and potential users. The results are interesting, specifically considering the area of operation which, according to Magnuson (2018) is difficult to monitor and administer by the regulators. Therefore, the fact that most of companies within this group communicate their 'consumer protection policy' may have a significant impact on generating consumer (and prospective user) trust and gaining credibility.

The overall results within the Consumer Protection thematic category suggest that, although still insufficiently regulated and not fitting into existing regulatory frameworks (Zavolokina *et al*., 2016; Didenko, 2017; Odinet, 2017; Claessens *et al*., 2018), Fintechs seem to pay attention to informing customers about 'Consumer Protection' measures. The results are close to those of the proxy where the majority of Fintechs (14 out of 16) display 'Licencing Information' and 12 out of 16 inform about both 'Complaints Procedure' and 'Product/Service Pricing'. This may be due to their intentions of providing transparency and thereby increasing their credibility in the eyes of potential users and paying higher attention towards more ethical operations. On the other hand, the reason may be to satisfy the demand of changing and constantly updated regulatory requirements which according to Deloitte (2020) already take place in some parts of USA.

4.5. Regulation

Within the Regulation thematic category, the study asked about two grading factors: 'Fraud Prevention/ AML Program/Actions/ Information' and 'KYC/CDD Checks'. overall, Fintech

companies performed well and 15 out of 16 publish information on their websites about fraud/AML prevention actions, while 13 provide KYC (risk-based data collection) evidence.

Further, within two types of Fintech firms - Payment and Cryptocurrency/Blockchain, all four firms in each category scored positively for the first measure, while for 'KYC/CDD Checks' information was unavailable for one firm in each group. Only one firm within the Lending category does not display information about both, 'fraud/AML actions' and 'KYC/CDD Checks'. Such a positive outcome suggests that the vast majority of Fintech firms selected for this study treat financial crime risks seriously. Moreover, they appear to demonstrate that they adhere to the regulations which, as Temelkov (2018), apply to all organisations offering financial services including Fintechs. Although some financial technology companies may avoid such conformance stating they do not consider themselves as 'financial' companies (Wu, 2017).

Additionally, it was observed that for the Transfer Fintechs, all provided information about both grading measures. This group of firms achieved the highest score so far. This suggests that, for these companies building consumer trust through communicating consumer protection and adhering to the regulations is an important part of business operations. Adopting such an approach may help in building perception of ethical organisation and minimise distrust, fear and anxiety about safety concerns, lack of protection and regulations as discussed by Ryu (2018b) and Stewart and Jürjens (2018).

The results within this section generate similar conclusions to those of Consumer Protection. Whilst many researchers still focus on limited and inadequate regulations which are not able to embrace Fintech and its phenomena (Brummer & Gorfine, 2014; Zavolokina et al., 2016; Didenko, 2017; Odinet, 2017; Claessens et al., 2018), a high proportion of firms in this research

contradict the perception of regulation avoidance and, similarly to our proxy, respect legislative guidelines and publish them to users.

4.6. Collaboration with Traditional Financial Institution

Grading organisations within this measure was challenging, because few companies disclose information on partnership with or sponsorship from traditional organisations. Additionally, out of the listed partners it was necessary to establish those considered as 'conventional' finance institutions. Unavailability of such information on the firm website resulted in a negative score. Accordingly, only 10 out of 16 studied Fintechs display information about collaborating with traditional banks. These results may be disappointing considering the fact that research shows that a partnership with traditional financial institutions brings stability to fintech firms and improves customer confidence (Najaf et al. 2021). The sampled Fintech companies could potentially take advantage of such partnerships. These may often reach beyond simply building consumer trust and in addition offer access to broader customer base and marketing infrastructures as well as increasing brand awareness (Riemer *et al*., 2017; Klus *et al*., 2019; Hornuf *et al*., 2020).

Within the Payment type of firms, only two demonstrated partnering or sponsorships by traditional financial institutions. Fintechs within this field operate as technology platforms providing payment solutions and collaborating with traditional banks would seem natural where both parties could share experiences and infrastructure. However, it was noted that within Lending type firms, 3 out of 4 share the information on collaborating with conventional organisations. Here, sharing information with such a partnership may have a significant impact on a lender company's perception and credibility (Riemer *et al*., 2017; Klus *et al*., 2019). Additionally, considering that Fintech lending often reaches niche areas underserved by traditional banks (Lee & Shin, 2018; Magnuson, 2018), partnering with conventional

institutions may provide better perception and positive impression of dealing with a ‘mainstream’ institution.

The study, once again shows that Fintechs from the Transfer field seem to perform better than those of other areas where all firms demonstrate collaboration with traditional financial institutions. These partnerships may play a significant role in enhancing business operations, however, communicating them to potential customers may have the additional benefit of generating trust. On the other hand, those firms within the Cryptocurrency/Blockchain domain achieve the worst score in this area; only one Fintech from this group seems to provide information about collaboration with a conventional bank. The reason for such a poor result, however, may not necessarily be lack of interest in such a partnership from the side of these types of Fintech companies, rather the problem may be similar to that discussed by Klus *et al.* (2019), who claim that banks may be sceptical about co-operating with Fintechs because they are afraid of reputation damage should there be any unethical practices issuing. Additionally, Cryptocurrency/Blockchain companies may not be understood by traditional financial institutions well enough to enter into collaborations with these companies.

4.7. Financial Inclusion / Discrimination

The measurements assessed by means of two grading factors: ‘operates in financially disadvantaged/underserved areas’ and ‘CSR/ Sustainability Statement’ within this area of thematic area achieved the worst results. In total, only 6 out of 16 companies appear to reach disadvantaged or underserved areas where, according to Johnson *et al.* (2019), access to traditional financial services can be still very limited. Disappointingly, 2 companies from the 16 total, published their approach to CSR or Sustainability.

Accordingly, within the Payment and Lending Fintech types, only one firm in each group provides information about each of the above to grading factors. Additionally, only one Fintech from the Cryptocurrency/Blockchain field declare operating in financially disadvantaged and underserved areas, however, none of the firms in this Fintech type communicates CSR/Sustainability practices. The best results, when it comes to underserved parts of the world, were noted by firms from the Transfer category where three-quarters announce their presence in such areas. Although, similarly to the previous group of companies (Payment and Lending), none of them in the Transger group seem to pay particular attention to economic, ethical, legal and philanthropic practices (CSR purposes) which aim at contributing to societies and communities surrounding the individual firm (Carroll & Shabana, 2010).

In comparison to traditional financial institutions, the results within this section are disappointing, bearing in mind the opportunities and revolution in cutting costs, enhancing efficiency and diversification of the industry brought to the financial world by Fintechs (Didenko, 2017; Lee & Shin, 2018; Navaretti et al., 2018). These benefits, as per Lee and Shin (2018) and Magnuson (2018), specifically cheaper services, should enable financial technology companies to enter these underserved markets and benefit economies. Likewise, CSR and Sustainability philosophies would mean that organisations, apart from a purely profit-generating purpose, should also assist (virtually) surrounding communities and the wider environment. Consequently, it seems that a very limited number of Fintech companies seem to realise the opportunities offered by supporting financial inclusion and subsequently communicating it to the external world. There appears to be a lack of understanding of the potential paybacks such as generating consumer trust, confidence, and approval.

4.8. User Benefits

The User Benefits theme was the simplest to measure. There were four grading dimensions to research which involved checking Fintech websites for: a 'Mobile Application' option; 'Readability', 'Standardised Font in Body Text'; and the availability of a 'Search Tool/Sitemap'. The results within this section show that all firms seem to pay close attention to the User Benefits on their websites.

Within the Payment group of Fintechs, only two did not offer a 'Mobile Application' and two were missing a 'Search Tool/Sitemap' option for easier navigation and finding information. However, all Fintech firms, (including the remaining 12 from other groups) designed their websites in a way that met the requirements of "Readability' and 'Standardised Font in Body Text'. Assessing these features against ease of use and navigation may have significant impact on consumer perception and adoption (Cronin, 2009). Interesting findings were noted within the Lending group of firms where apart from the aforementioned conditions being met, only one provides a 'Mobile Application' to its customers. Additionally, none of them considered a 'Search Tool/Sitemap' in their user design interfaces. Thus, lack of these convenience features may diminish the reliance and dependence on financial technology firms which do not offer them.

Yet again excelling somewhat over the other Fintech types, Fintechs categorised as Transfer firms seem to realise the benefits of offering convenient and user-friendly design interface to consumers with all of them meeting all measurement grading factors with the exception of 3 firms not appearing to have the 'Search Tool/Sitemap' on their website. It should be noted that the fact that Transfer firms offer international currency transfer may be the reason which impacted on such positive outcomes for grading factors in the User Benefits theme; fitting the

requirements and expectations of users from different parts of the world is needed in order to allow the business model to flourish.

Finally, the Cryptocurrency/Blockchain Fintechs' results are similar to those of Lending firms where 'Readability', 'Standardised Font in Body of Text' and a 'Search Tool/Sitemap' option achieved the same scores. However, 2 out of 4 companies here do offer users a 'Mobile Application' option.

Overall, across all thematic categories, the Cryptocurrency/Blockchain Fintechs achieved the worst results. This may be explained by an ongoing existence of a reasonably limited understanding of this category and its unusual nature, different to that of traditional finance companies (Brummer & Gorfine, 2014). The implication of this would mean Cryptocurrency/Blockchain Fintechs being less transparent to regulators seems to provide opportunities for operating without supervisory guidance (Mention, 2019).

It should be noted that while some of the researched firms provided clear and accessible information, measuring certain grading factors was almost impossible. One of the possible reasons for this could be that certain information may only be available to existing customers after signing up for the services. This may not necessarily mean that the firm does not 'tick the box' with the certain measure; for example, for the grading factor 'licencing information', it is simply not apparent from 'the surface'. In some instances, Fintech actions towards generating and maintaining consumer trust, information regarding licences, fraud prevention etc, seem a key factor in gaining credibility and trust towards attracting potential new users. Moreover, when compared to the fact that for our proxy, finding information for all the grading factors was a smooth process and information was easily accessible sets a precedent for all Fintechs to provide more comprehensive information and we propose our grading factors as a baseline.

5. Conclusion

The primary research revealed some interesting findings. Firstly, although some researchers still argue that Fintech organisations are insufficiently regulated and do not fit into existing governing frameworks (Brummer & Gorfine, 2014; Zavolokina *et al.*, 2016; Didenko, 2017; Odinet, 2017; Claessens *et al*., 2018), it became apparent that a large number of researched companies pay attention to consumer protection and communicate relevant information about it to customers and potential users. A similar attitude was discovered towards regulatory requirements and adhering to directives such as fraud, AML, KYC or CDD compliance. In this thematic category, Fintech companies perform similarly to traditional financial institutions where collection and management of relevant data follows necessary precautions. Additionally, they also inform customers that the necessity of collecting this information is to prevent potential financial crime such as fraud or money laundering. Consequently, the research findings in this field appear to contradict the majority of those presented in the literature review.

Likewise, reasonably good results were achieved within the 'Collaboration with Traditional Financial Institution' field and 'User Benefits', although one measure within the latter ('Search Tool/Sitemap') performed worst with only 3 companies scoring positively; lacking this particular feature may have a significant impact on speed of finding required information and may adversely effect consumer acceptance. Many Fintechs appear to realise the benefits of collaborating or being sponsored by conventional institutions; for example, improved reputation, gaining access to wider customer base and/or enhanced brand recognition (Riemer *et a*l., 2017; Klus *et al*., 2019; Hornuf *et al*., 2020). Thus, a majority of positive results suggest that financial technology firms actively seek such partnerships. Similarly, being technology innovators, most of the analysed companies run their websites in a user-friendly manner with

good ‘Readability’ and ‘Standardisation of Font’ usage in main text areas for easier reading and navigation as discussed and recommended by Cronin (2009). An above average number of researched firms also offer a convenient ‘Mobile Application’ version of their website which may increase consumer acceptance and confidence in dealing with such a firm. Accordingly, most of the above outcomes seem to agree with the literature about benefits of collaborations with traditional financial institutions and offering user benefits associated with convenient and easy use of a firm’s website.

Finally, out of all studied categories, those examining approaches towards ‘Financial Inclusion/ Discrimination’ revealed the worst results. Very few (6 firms) Fintechs appeared to reach financially disadvantaged of underserved areas. It seems that, although rapidly developing and providing opportunities of cheaper financial services (Johnson *et al*., 2019), many financial innovators are still hesitant about accessing such parts of the world with their services. Consequently, in disagreement to Lee and Shin (2018) and Magnuson (2018) who discussed potential benefits of accessing niche markets underserved by traditional financial organisations, Fintechs do not seem be interested in taking advantage of them for now. Furthermore, the second measure within this category, ‘CSR/Sustainability Statement’, showed the worst results of all, where only 2 Fintechs disclosed information about subject practices. Again, such an attitude and lack of integrated sustainable and socially responsible practices which have economic, ethical, legal and philanthropic purposes (Carroll & Shabana, 2010), instead of building trust amongst all stakeholders of the business (Knaut, 2017), may have an adverse effect.

The outcomes from the perspective of examined Fintech companies also discovered some interesting facts. It was noted that the best performance with highest scores in most of the measured categories was achieved by Fintechs operating within the Transfer field.

Accordingly, in comparison to the benchmark (BoS), the results were very similar which leads to a conclusion that this group of companies appear to provide comparable safeguarding and protection measures. Additionally, achieving reasonably high scores suggest that practices of these Fintechs encourage generating consumer trust. The Payment and Lending groups of companies achieved average results overall, somewhere between the Transfer and Cryptocurrency/Blockchain groups. Accordingly, organisations form the area of Cryptocurrency/Blockchain performed poorest against all other Fintech types, scoring below average implying that their approaches against our measured grading factors do not promote consumer confidence and trust which according to Müller and Kerényi (2019), is or should be at the heart of operations of all financial organisations. As an extension of these findings, the safeguarding and protection of Cryptocurrency/Blockchain's measures are poorer than those of BoS (benchmark) or the Transfer Fintechs.

The result of this study has direct implications for the Fintech firms around the world, especially on the importance of presentation and access to information for the customers. Our study also informs the future development of policies, approaches, and practices of Fintech firms, especially in context of Financial Inclusion/ Discrimination' and 'User Benefits'. Our findings are also built upon the academic research on Fintech lead financial inclusion (Lagna and Ravishankar, 2022). Our study also highlights the importance of 'Collaboration with Traditional Financial Institution' for the existing Fintech firms, which is consistent with the findings of other academic literature (Elsaid, 2021). For government bodies and policy makers, our study provides a valuable insight into the current practices and approaches of generating trust and safeguarding customers within the Fintech industry. The findings of this study also have a societal impact by providing a narrative for the informed consumer choice.

5.1. Recommendations

The exploration of five thematic categories exposed some distinctive approaches to the ethical practices affecting consumer trust. Accordingly, the findings of the study suggest recommending a Basel styled guideline for enhancing measures for safeguarding and protecting Fintech customers.

There is still limited legislation which applies to Fintech, (Brummer & Gorfine, 2014; Zavolokina *et al*., 2016; Didenko, 2017; Odinet, 2017; Claessens *et al*., 2018). However, as noted by Deloitte (2020), change is on its way, and enhanced overseeing of financial technologies is beginning to materialise. Thus, Fintech companies must prepare in advance and ensure compliance to regulatory requirements by clearly informing potential customers of what this would entail. Consumers who will be able to find information easily about for example, licences, complaints procedure, fraud policies, KYC or CDD checks may be more likely to feel assured of the protection features provided by the firm and thus will be confident of the firms' credibility simply by being well-informed.

Additionally, in accordance with Riemer et al. (2017) and Klus et al. (2019), enhancing their own reputation and gaining credibility should motivate Fintechs to collaborate with traditional financial institutions. As per Riemer *et al*. (2017), exchanging benefits should be a focal point in such a partnership or any collaborative/sponsorship negotiations but this would require Fintechs improving how they are perceived in the sight of traditional financial companies for improved access to the innovative technologies that traditional financial companies are able to offer. By listing conventional banks or other institutions on their own websites with whom there is a collaboration, my improve a financial technology firm's standing with potential users about its honesty and transparency thus gaining better customer outcomes. A similar attitude should be presented towards financial inclusion and CSR and/or Sustainability. Organisations

showing both interest in and care for the environment and society are, according to Knaut (2017), more likely to generate the trust of its stakeholders. Thus, it is recommended that Fintechs integrate CSR into business models and clearly communicate mission or vision statements to ensure better perception and stakeholders' trust.

Lastly, despite all Fintechs appearing to pay attention to user benefits overall, some still failed to offer a search tool or sitemap on their websites. Therefore, to ensure better user experience, such an option should be added for quicker and easier search and access to required information. Lack of these features may have a significant impact on the adoption by users since the inability or inconvenience in finding information in a quick and simple way may redirect customers to another firm offering such convenience. Finally, being technology innovators, it would be expected that more Fintechs offer customers a mobile application option; offering such an opportunity is worth considering as it may add value to how the Fintech firm is perceived as well as making their services desirable due to convenience at the customer level.

5.2. Limitations and Future Research

The research allowed for generating fresh knowledge about Fintech practices. However, just as any study, this one also has limitations which provide direction and opportunities for further research. First, the sample, although of a reasonable size as for the multiple case study project (Palic *et al*., (2016) advise no more than fifteen), the act of dividing Fintechs into four different groups left only four of them in each group. This may have led to an insufficient number of representative organisations to reflect the general attitudes within each field of operation/study. Thus, possible future research could focus on a larger number of representative organisations in each field of Fintech operations, or specialise by field. Additionally, such a study could also

consider Fintechs types operating in other business areas not included in this study for example, in the fields of Investment or Insurance.

Second ,the selected Fintech firms appeared to be headquartered mainly in Europe and USA therefore, allowing limited generalisability of findings. However, researching those located in other parts of the world could potentially contribute with different and more insightful knowledge.

Third, the sampling method used in this study may also be a limitation. Although a variety of organisations form four different fields were used, the sampling was purposive and non-random to allow cases to be studied which are rich in information. However, such a tactic may be perceived as subjective and prone to bias, therefore, to address this issue, future research could use a different selection technique.

Fourth, focusing on the specific set of measurements derived through the literature review may be a constraint and potential future explorations of the problem could include other or additional grading factors perceived as significant in impacting on consumer trust. Likewise, an enhanced grading framework (*e.g.*, with 0-5 or 0-3 instead of 0-1 grading level) could potentially provide improved exploration and deeper understanding of Fintech ethical practices.

Fifth, a limitation of this research may also be the use of a cross-sectional approach, representing data gathered at one point in time, to enable a general overview of the researched problem. Constantly changing regulations and closer attention being paid to financial technology service providers by the regulators will develop. Consequently, some Fintech organisations may change their attitudes towards adhering and communicating their approaches towards for example, ‘Regulations’, ‘Consumer Protection’ or CSR/Sustainability.

Thus, possible future studies using a longitudinal approach could arrive with different conclusions.

5.3. Contribution of the Study

This research presents a novel approach towards examining Fintech firms and their approaches towards generating and maintaining consumer trust. Although there are studies available on measuring consumer acceptance and adoption factors, they tend to focus on specific areas often with a limited number of grading measures. This research, however, considered a multi-dimensional framework allowing for grading the practices of selected Fintech companies over five different themes.

Furthermore, the study analysed a number of available sources to provide an overview and understanding of Fintech practices and portrayed the findings which may be useful for regulators in developing potential regulations, legislation and guidelines ensuring adequate safeguarding and protection measures are developed and maintained.

Finally, the study offers a valuable insight into the factors which should be considered and given greater focus by Fintech firms wishing to enhance their credibility with customers and potential users. Thus, its realistic significance provides guidance for practical management where appropriate strategies can be developed in accordance with our proposed recommendations.

References

Aaron, M., Rivadeneyra, F., & Sohal, S. (2017). *Fintech: Is this time different? A framework for assessing risks and opportunities for Central Banks* (No. 2017-10). Bank of Canada Staff Discussion Paper.

Allen, F., Gu, X., & Jagtiani, J. (2022). Fintech, cryptocurrencies, and CBDC: Financial structural transformation in China. *Journal of International Money and Finance*, 124, 102625.

Alwi, S., Alpandi, R. M., Mohd Salleh, M. N., Basir, I. N., & Md Ariff, F. F. (2019). An Empirical Study on the Customers' Satisfaction on Fintech Mobile Payment Services in Malaysia. *International Journal of Advanced Science and Technology*, *28*(16), 390-400.

Arner, D. W., Barberis, J., & Buckley, R. P. (2015). The evolution of Fintech: A new post-crisis paradigm. *Geo. J. Int'l L.*, *47*, 1271.

Avergun, J., & Kukowski, C. (2016). Complying with AML Laws: Challenges for the Fintech Industry. Retrieved from https://www.crowdfundinsider.com/2016/04/83845-complying-with-aml-laws-challenges-for-the-Fintech-industry/

Bartlett, R., Morse, A., Stanton, R., & Wallace, N. (2019). *Consumer-lending discrimination in the Fintech era* (No. w25943). National Bureau of Economic Research.

Bendassolli, P. F. (2013). Theory building in qualitative research: Reconsidering the problem of induction. In *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research* (Vol. 14, No. 1).

Bömer, M., & Maxin, H. (2018). Why Fintechs cooperate with banks—evidence from Germany. *Zeitschrift für die gesamte Versicherungswissenschaft*, *107*(4), 359-386.

BoS Foundation. (2020). Home - Bank of Scotland Foundation. Retrieved from https://bankofscotlandfoundation.org/

BoS. (2020a). Bank of Scotland UK. Retrieved from https://www.bankofscotland.co.uk/helpcentre/

BoS. (2020b). Sustainability. Retrieved from https://business.bankofscotland.co.uk/business-resource-centre/guidance/managing-a-business/sustainability.html

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), 77-101.

Brummer, C., & Gorfine, D. (2014). Fintech: Building a 21st-century regulator's toolkit. *Milken Institute*, *5*.

Bryman, A., & Bell, E. (2011). *Business Research Methods* (3rd ed.). New York: Oxford University Press.

Carroll, A. B., & Shabana, K. M. (2010). The business case for corporate social responsibility: A review of concepts, research and practice. *International journal of management reviews*, *12*(1), 85-105.

CFPB. (2016). CFPB Now Accepting Complaints on Consumer Loans from Online Marketplace Lender. Retrieved from https://www.consumerfinance.gov/about-us/newsroom/cfpb-now-accepting-complaints-on-consumer-loans-from-online-marketplace-lender/

Chavan, J. (2013). Internet banking-benefits and challenges in an emerging economy. *International Journal of Research in Business Management*, *1*(1), 19-26.

Chemmanur, T.J., Imerman, M.B., Rajaiya, H. & Yu, Q. (2020). Recent developments in the fintech industry. *Journal of Financial Management, Markets and Institutions*, 8(01), 1-31.

Chen, Z., Li, Y., Wu, Y., & Luo, J. (2017). The transition from traditional banking to mobile internet finance: an organisational innovation perspective-a comparative study of Citibank and ICBC. *Financial Innovation*, *3*(1), 1-16.

Chuang, L.M., Liu, C.C., & Kao, H.K. (2016). The adoption of Fintech service: TAM perspective. *International Journal of Management and Administrative Sciences*, *3*(7), 1-15.

Chuen, K., Lee, D., & Teo, E.G. (2015). Emergence of Fintech and the LASIC principles. *Journal of Financial Perspectives*, *3*(3).

Claessens, S., Frost, J., Turner, G. & Zhu, F. (2018). Fintech credit markets around the world: size, drivers and policy issues. *BIS Quarterly Review September*.

Coetzee, J. (2018). Strategic implications of Fintech on South African retail banks. *South African Journal of Economic and Management Sciences*, *21*(1), 1-11.

Consumers International. (2020). 10 things consumers need to know about Fintech. Retrieved from https://www.consumersinternational.org/news-resources/blog/posts/10-things-consumers-need-to-know-about-Fintech/

Credit Suisse. (2017). Algorithmic bias: a new Fintech challenge. Retrieved from https://qz.com/1121150/algorithmic-bias-a-new-Fintech-challenge/

Creswell, J. W. (2003). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (2nd ed.). Thousand Oaks: SAGE.

Cronin, M. (2009). 10 Principles of Readability And Web Typography. Retrieved from https://www.smashingmagazine.com/2009/03/10-principles-for-readable-web-typography/

Curran, T. (2016). Fintech: Balancing the Promise and Risks of Innovation. *Consumer Compliance Outlook*, Third Issue. Available online at https://consumercomplianceoutlook.org/2016/third-issue/fintech-balancing-the- promise-and-risks-of-innovation/

Deloitte. (2020). Fintech's Should Prepare for Consumer Protection Examinations. Retrieved from https://www2.deloitte.com/us/en/pages/regulatory/articles/Fintech-consumer-protection-examinations.html

Didenko, A. (2017). Regulating Fintech: Lessons from Africa. *San Diego International Law Journal*, *19*, 311-368.

Dorfleitner, G., Hornuf, L., Schmitt, M., & Weber, M. (2017). Definition of Fintech and description of the Fintech industry. In *Fintech in Germany* (pp. 5-10). Springer, Cham.

Elsaid, H. M.(2021). "A review of literature directions regarding the impact of fintech firms on the banking industry." *Qualitative Research in Financial Markets*, 19(19).

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, *5*(1), 1-4.

FCA. (2020). Anti-money Laundering Compliance. Retrieved from https://www.fca.org.uk/firms/financial-crime/money-laundering-terrorist-financing

Fosso Wamba, S., Kala Kamdjoug, J. R., Epie Bawack, R., & Keogh, J. G. (2020). Bitcoin, blockchain and Fintech: a systematic review and case studies in the supply chain. *Production Planning & Control*, *31*(2-3), 115-142.

Ghazali, N. H., & Yasuoka, T. (2018). Awareness and perception analysis of small medium enterprise and start-up towards Fintech instruments: Crowdfunding and peer-to-peer lending in Malaysia. *International Journal of Finance and Banking Research*, *4*(1), 13.

Gog, M. (2015). Case study research. *International Journal of Sales, Retailing & Marketing*, 4(9), 33-41.

Graue, C. (2015). Qualitative data analysis. *International Journal of Sales, Retailing & Marketing*, *4*(9), 5-14.

Gray, D. E. (2013). Theoretical Perspectives and Research Methodologies. In *Doing research in the Real World* (3rd ed.). Thousand Oaks: SAGE.

Haddad, C., & Hornuf, L. (2019). The emergence of the global Fintech market: Economic and technological determinants. *Small Business Economics*, *53*(1), 81-105.

Hayes, B. K., Heit, E., & Swendsen, H. (2010). Inductive reasoning. *Wiley interdisciplinary reviews: Cognitive science*, *1*(2), 278-292.

He, M. D., Leckow, M. R. B., Haksar, M. V., Griffoli, M. T. M., Jenkinson, N., Kashima, M. M., ... & Tourpe, H. (2017). *Fintech and financial services: initial considerations*. International Monetary Fund.

Hornuf, L., Klus, M. F., Lohwasser, T. S., & Schwienbacher, A. (2020). How do banks interact with Fintech startups?. *Small Business Economics*, 1-22.

Jagtiani, J., & Lemieux, C. (2017). Fintech lending: Financial inclusion, risk pricing, and alternative information. *Risk Pricing, and Alternative Information*

Jagtiani, J., & Lemieux, C. (2019). The roles of alternative data and machine learning in Fintech lending: evidence from the LendingClub consumer platform. *Financial Management*, *48*(4), 1009-1029.

Jiwasiddi, A., Adhikara, C., Adam, M., & Triana, I. (2019). Attitude toward using Fintech among Millennials. *In The 1st Workshop on Multimedia Education, Learning, Assessment and its Implementation in Game and Gamification in conjunction with COMDEV 2018. European Alliance for Innovation (EAI).*

Johnson, K., Pasquale, F., & Chapman, J. (2019). Artificial Intelligence, Machine Learning, and Bias in Finance: Toward Responsible Innovation. *Fordham L. Rev.*, *88*, 499.

Klus, M. F., Lohwasser, T. S., Holotiuk, F., & Moormann, J. (2019). Strategic alliances between banks and Fintechs for digital innovation: Motives to collaborate and types of interaction. *The Journal of Entrepreneurial Finance*, *21*(1), 1.

Knaut, A. (2017). How CSR should understand digitalisation. In *Sustainability in a Digital World* (pp. 249-256). Springer, Cham.

Lagna, A., & Ravishankar, M. N. (2022). Making the world a better place with fintech research. *Information Systems Journal*, 32(1), 61-102.

Lee, I., & Shin, Y. J. (2018). Fintech: Ecosystem, business models, investment decisions, and challenges. *Business Horizons*, *61*(1), 35-46.

Leedy, P. D., & Ormrod, J. E. (2010). *Practical research: Planning and Design* (9th ed.). New Jersey: Pearson Education.

Lloyds Banking Group. (2020). Lloyds Banking Group plc. Retrieved from https://www.lloydsbankinggroup.com/our-group/our-heritage/our-history2/

Luximon, V., Sandhu, M. S., & Teng, C. Y. (2012). Embedding Corporate Social Responsibility into the Organizational Culture. In *Australian and New Zealand Academy of Management Conference 2012* (pp. 1-18). ANZAM.

Magnuson, W. (2018). Regulating Fintech. *Vand. L. Rev.*, *71*, 1167.

Mayer, I. (2015). Qualitative research with a focus on qualitative data analysis. *International Journal of Sales, Retailing & Marketing*, *4*(9), 53-67.

McConnell, P., & Blacker, K. (2012). Systemic operational risk: the UK payment protection insurance scandal. *The Journal of Operational Risk*, *7*(1), 79.

Mention, A. (2019). The Future of Fintech. *Research-Technology Management*, *62*(4), 59-63.

Morgan, P. J. (2022). Fintech, financial literacy, and financial education. *The Routledge Handbook of Financial Literacy*, 239-258.

Müller, J., & Kerényi, Á. (2019). The Need for Trust and Ethics in the Digital Age–Sunshine and Shadows in the Fintech World. *Financial and Economic Review*, *18*(4), 5-34.

Najaf, K., Mostafiz, M. I., & Najaf, R. (2021). Fintech firms and banks sustainability: why cybersecurity risk matters?. *International Journal of Financial Engineering*, 8(02), 2150019.

Navaretti, G. B., Calzolari, G., Mansilla-Fernandez, J. M., & Pozzolo, A. F. (2018). Fintech and Banking. Friends or Foes?. *Friends or Foes*.

Nikkel, B. (2020). Fintech forensics: Criminal investigation and digital evidence in financial technologies. *Forensic Science International: Digital Investigation*, 200908.

Nüesch, R., Alt, R., & Puschmann, T. (2015). Hybrid customer interaction. *Business & Information Systems Engineering*, *57*(1), 73-78.

Odinet, C. K. (2017). Consumer Bitcredit and Fintech Lending. *Alabama Law Review*, 69, 781.

Palic, M., Vignali, C., Hallier, B., Stanton, J. L., & Radder, L. (2016). Research Methodology. *International Journal of Sales, Retailing and Marketing*, *4*(9), 1-97. Retrieved from http://www.ijsrm.com/ijsrm/Current_&_Past_Issues_files/IJSRM4-9.pdf#page=9

Penn, B. (2018). Banking regulation in the UK: overview. Retrieved from https://uk.practicallaw.thomsonreuters.com/w-008-0211?transitionType=Default&contextData=(sc.Default)&firstPage=true&bhcp=1

Persmoen, Å.K. & Sandvik, E. (2018). Collaboration between Banks and Fintech Companies: An Assessment of Emerging Organisational Designs within (Master's thesis, Handelshøyskolen BI).

Pope, D.G. & Sydnor, J.R. (2011). What's in a Picture? Evidence of Discrimination from Prosper. com. *Journal of Human resources*, *46*(1), 53-92.

Puschmann, T. (2017). Fintech. *Business & Information Systems Engineering*, *59*(1), 69-76.

Remenyi, D. (1998). Central ethical considerations for masters and doctoral research in business and management studies. *South African Journal of Business Management*, *29*(3), 109-118.

Restoy, F. (2019). Regulating Fintech: what is going on, and where are the challenges?. *BIS, (FSI speech).*

Riemer, K., Hafermalz, E., Roosen, A., Boussand, N., El Aoufi, H., Mo, D., & Kosheliev, A. (2017). *The Fintech Advantage: Harnessing digital technology, keeping the customer in focus*. University of Sydney, Business School and Capgemini.

Ritchie, J., Lewis J. (2003). Qualitative Research Practice: A guide for Social Science Students and Researchers. Retrieved from https://books.google.co.uk/booksRitchie,+Jane+and+Lewis,+Jane+(eds)+(2003).+Qualitative+Research+Practice.+A+Guide+for+Social+Scienists+and++Researchers.+London:+Sage

Romānova, I., Grima, S., Spiteri, J., & Kudinska, M. (2018). The Payment Services Directive 2 and competitiveness: the perspective of European Fintech companies. *European Research Studies Journal*, *21*(2), 5-24.

Ryan, A. B. (2006). Post-positivist approaches to research. Researching and Writing your Thesis: a guide for postgraduate students, 12-26.

Ryu, H. S. (2018a). What makes users willing or hesitant to use Fintech?: the moderating effect of user type. *Industrial Management & Data Systems*.

Ryu, H. S. (2018b). Understanding benefit and risk framework of Fintech adoption: Comparison of early adopters and late adopters. In *Proceedings of the 51st Hawaii International Conference on System Sciences*.

Sahay, M. R., Von Allmen, M. U. E., Lahreche, M. A., Khera, P., Ogawa, M. S., Bazarbash, M., & Beaton, M. K. (2020). The promise of fintech: Financial inclusion in the post COVID-19 era. *International Monetary Fund*.

Sahni, R.A. & Byrne, T. (2020). Banking Laws and Regulations. Retrieved from https://www.globallegalinsights.com/practice-areas/banking-and-finance-laws-and-regulations/usa

Saunders, L. (2019). Fintech and Consumer Protection: A Snapshot. Retrieved from https://www.nclc.org/images/pdf/cons-protection/rpt-Fintech-and-consumer-protection-a-snapshot-march2019.pdf

Saunders, M., Lewis, P., & Thornhill, A. (2019). Understanding research philosophy and approaches to theory development. In *Research Methods for Business Students*. London, England: Pearson Education.

Stewart, H. & Jürjens, J. (2018). Data security and consumer trust in Fintech innovation in Germany. *Information & Computer Security*.

Temelkov, Z. (2018). Fintech firms opportunity or threat for banks?. *International journal of information, Business and Management*, *10*(1), 137-143.

Thanh, N.C., & Thanh, T.T. (2015). The interconnection between interpretivist paradigm and qualitative methods in education. *American Journal of Educational Science*, *1*(2), 24-27.

Thomson Reuters. (2020). Five best practices for Fintech Compliance. Retrieved from https://legal.thomsonreuters.com/en/insights/articles/five-best-practices-for-Fintech-compliance

Tufano, P. (2003). Financial innovation. In *Handbook of the Economics of Finance* (Vol. 1, pp. 307-335). Elsevier.

UCLA. (2020). What is Sustainability? Retrieved from https://www.sustain.ucla.edu/about-us/what-is-sustainability/

Vasiljeva, T., & Lukanova, K. (2016). Commercial banks and FINTECH companies in the digital transformation: Challenges for the future. *Journal of Business Management*, (11).

Velentzas, J., Broni, G., & Pitoska, E. (2012). Unfair commercial practices on marketing-advertising and consumer protection in EU member states. *Procedia Economics and Finance*, *1*, 411-420.

Walker, J., Pekmezovic, A., & Walker, G. (2019). Sustainable Development Goals: Harnessing Business to Achieve the SDGs through Finance, Technology and Law Reform. John Wiley &

Sons. Retrieved from https://books.google.co.uk/books?id=z8OrDwAAQBAJ&source=gbs_navlinks_s

Wall, L. D. (2016). Avoiding Regulation: Fintech versus the Sharing Economy. Retrieved from Federal Reserve Bank of Atlanta: https://www. frbatlanta. org/cenfis/publications/notesfromthevault/09-avoiding-regulation-Fintech-versus-the-sharing-economy-2016-09-29. aspx.

Williams, C. (2007). Research methods. Journal of Business & Economics Research (JBER), 5(3).

Wu, Y. T. (2017). Fintech innovation and anti-money laundering compliance. *NTU L. Rev.*, *12*, 201.

Zavolokina, L., Dolata, M., & Schwabe, G. (2016). The Fintech phenomenon: antecedents of financial innovation perceived by the popular press. *Financial Innovation*, *2*(1), 1-16.

Zetsche, D.A., Buckley, R.P., Arner, D.W. & Barberis, J. N. (2017). From Fintech to TechFin: The regulatory challenges of data-driven finance. *NYUJL & Bus.*, *14*, 393.

Appendices

5.4. Appendix 1: Study Results by Group

Payment Type Category

	NO	1	2	3	4
	TYPE CATEGORY	PAYMENT			
	APP/FIRM	BRAINTREE	GRAVITY PAYMENTS	STRIPE	YAPSTONE
	BRIEF CHARACTERISTIC	Division of PayPal; providing mobile and online and mobile payments platform for E-commerce firms; based in Chicago, US; Web: www.braintreepayments.com	Credit card processing and financial services firm; based in Seattle, US; Web: www.gravitypayments.com	Payment and business management online; based in San Francisco, US; Web: www.stripe.com	Online and mobile payments solutions for marketplaces and platforms; based in California, US; Web: www.yapstone.com

NO	THEMATIC CATEGORY	GRADING FACTOR				
1	CONSUMER PROTECTION	*LICENCING INFORMATION?*	1	0	1	1
2		*COMPLAINTS PROCEDURE?*	0	1	1	1
3		*PRODUCT/SERVICE PRICING?*	1	0	1	0
4	REGULATION	*FRAUD PREVENTION / AML PROGRAM/ ACTIONS/ INFO?*	1	1	1	1
5		*KYC (KNOW YOUR CUSTOMER)/ CDD CHECKS?*	1	0	1	1
6	COLLABORATION WITH TRADITIONAL FINANCIAL INSTITUTION	*SPONSORED/ COLLABORATING WITH TRADITIONAL BANK INFO?*	1	1	0	0
7	FINANCIAL INCLUSION/ DISCRIMINATION	*OPERATES IN FINANCIALLY DISADVANTAGED/UNDERSERVED AREAS (E.G., AFICA)?*	1	0	0	0
8		*CORPORATE SOCIAL RESPONSIBILITY (CSR)/ SUSTAINABILITY STATEMENT?*	0	1	0	0
9	USER BENEFITS	*MOBILE APPLICATION?*	0	1	1	0

10		***READABILITY :MAINLY BLACK/NAVY FONT ON WHITE?***	**1**	**1**	**1**	**1**
11		***STANDARDISED FONT IN BODY TEXT (E.G., ARIAL, TNR, CALIBRI)?***	**1**	**1**	**1**	**1**
12		***SEARCH TOOL/SITEMAP?***	**1**	**0**	**1**	**0**
RESULTS BYFIRM			**9**	**7**	**9**	**6**

Lending Category

	NO	**5**	**6**	**7**	**8**
	TYPE CATEGORY	**LENDING**			
	APP/FIRM	**TALA**	**AVANT**	**OPPLOANS**	**AFFIRM**
	BRIEF CHARACTERISTIC	Accessible consumer credit; small loans from $10 to $500; based in Santa Monica, US; Web: www.tala.co	Small personal loans; loans from $300 to $1000; based in Chicago, UK; Web: www.avant.com	Personal loans platform for middle income Americans; loans form $500 to $4000; based in Chicago, US; Web:	Lending firm offering payment at the point of sale then charging instalments; no spending limit; based in San Francisco, US; Web:

					www.opploans.com	www.affirm.com
NO	**THEMATIC CATEGORY**	**GRADING FACTOR**				
1	**CONSUMER PROTECTION**	***LICENCING INFORMATION?***	**1**	**1**	**1**	**1**
2		***COMPLAINTS PROCEDURE?***	**0**	**0**	**1**	**0**
3		***PRODUCT/SERVICE PRICING?***	**1**	**1**	**1**	**1**
4	**REGULATION**	***FRAUD PREVENTION / AML PROGRAM/ ACTIONS/ INFO?***	**0**	**1**	**1**	**1**
5		***KYC (KNOW YOUR CUSTOMER)/ CDD CHECKS?***	**0**	**1**	**1**	**1**
6	**COLLABORATION WITH TRADITIONAL FINANCE INSTITUTION**	***SPONSORED/ COLLABORATING WITH TRADITIONAL BANK INFO?***	**0**	**1**	**1**	**1**
7	**FINANCIAL INCLUSION/ DISCRIMINATION**	***OPERATES IN FINANCIALLY DISADVANTAGED/UNDERSERVED AREAS (E.G., AFICA)?***	**1**	**0**	**0**	**0**
8		***CORPORATE SOCIAL***	**1**	**0**	**0**	**0**

		RESPONSIBILITY (CSR)/ SUSTAINABILITY STATEMENT?				
9	**USER BENEFITS**	***MOBILE APPLICATION?***	**1**	**0**	**0**	**0**
10		***READABILITY :MAINLY BLACK/NAVY FONT ON WHITE?***	**1**	**1**	**1**	**1**
11		***STANDARDISED FONT IN BODY TEXT (E.G., ARIAL, TNR, CALIBRI)?***	**1**	**1**	**1**	**1**
12		***SEARCH TOOL/SITEMAP?***	**0**	**0**	**0**	**0**
RESULTS BY FIRM			**7**	**7**	**8**	**7**

Transfer Category

	NO	**9**	**10**	**11**	**12**
	TYPE CATEGORY	**TRANSFER**			
	APP/FIRM	**TRANSFERWISE**	**AZIMO**	**CURRENCYFAIR**	**WORLDREMIT**

		BRIEF CHARACTERISTIC	Low cost international money transfer; available in 59 countries; Based in London, UK; Web: www.transferwise.com	Global money transfer; transfer to 80+ countries; based in Amsterdam, NL; Web: www.azimo.com	Online peer-to-peer currency exchange platform; transfer money to 19 countries; based in Dublin, IR; Web: www.currencyfair.com	Global money transfer; transfer 90 currencies to 150 countries; based in London, UK; Web: www.worldremit.com
NO	**THEMATIC CATEGORY**	**GRADING FACTOR**				
1	**CONSUMER PROTECTION**	***LICENCING INFORMATION?***	**1**	**1**	**1**	**1**
2		***COMPLAINTS PROCEDURE?***	**1**	**1**	**1**	**1**
3		***PRODUCT/SERVICE PRICING?***	**1**	**1**	**1**	**1**
4	**REGULATION**	***FRAUD PREVENTION / AML PROGRAM/ ACTIONS/ INFO?***	**1**	**1**	**1**	**1**
5		***KYC (KNOW YOUR CUSTOMER)/ CDD CHECKS?***	**1**	**1**	**1**	**1**
6	**COLLABORATION WITH TRADITIONAL FINANCE INSTITUTION**	***SPONSORED/ COLLABORATING WITH TRADITIONAL BANK INFO?***	**1**	**1**	**1**	**1**

7	**FINANCIAL INCLUSION/ DISCRIMINATION**	***OPERATES IN FINANCIALLY DISADVANTAGED/UNDERSERVED AREAS (E.G., AFICA)?***	**0**	**1**	**1**	**1**
8		***CORPORATE SOCIAL RESPONSIBILITY (CSR)/ SUSTAINABILITY STATEMENT?***	**0**	**0**	**0**	**0**
9	**USER BENEFITS**	***MOBILE APPLICATION?***	**1**	**1**	**1**	**1**
10		***READABILITY :MAINLY BLACK/NAVY FONT ON WHITE?***	**1**	**1**	**1**	**1**
11		***STANDARDISED FONT IN BODY TEXT (E.G., ARIAL, TNR, CALIBRI)?***	**1**	**1**	**1**	**1**
12		***SEARCH TOOL/SITEMAP?***	**0**	**0**	**1**	**0**
RESULTS BY FIRM			**9**	**10**	**11**	**10**

Cryptocurrency/Blockchain Type Category

	NO	**13**	**14**	**15**	**16**

		TYPE CATEGORY	CRYPTOCURRENCY/BLOCKCHAIN			
		APP/FIRM	CIRCLE	COINBASE	AXONI	BITPAY
		BRIEF CHARACTERISTIC	Internet platform to run internet business with the use of new form of money - USD Coin (USDC); based in Boston, US; Web: www.circle.com	Cryptocurrency buy, sell and management digital platform; exchanging: Bitcoin, Bitcoin Cash, Sthereum, Ethereum Classic, Litecoin, Tezos and other; operates in 102 countries; based in San Francisco, US; Web: www.coinbase.com	Blockchain infrastructure firm, distributed applications, enterprise infrastructure, workflow automation; based in New York, US; Web: www.axoni.com	Bitcoin payments service allowing businesses to accept payments in bitcoins; based in Atlanta, US; Web: www.bitpay.com
NO	**THEMATIC CATEGORY**	**GRADING FACTOR**				
1	**CONSUMER PROTECTION**	***LICENCING INFORMATION?***	**1**	**1**	**0**	**1**
2		***COMPLAINTS PROCEDURE?***	**1**	**1**	**1**	**1**
3		***PRODUCT/SERVICE PRICING?***	**0**	**1**	**0**	**1**
4	**REGULATION**	***FRAUD PREVENTION / AML PROGRAM/***	**1**	**1**	**1**	**1**

		ACTIONS/ INFO?				
5		***KYC (KNOW YOUR CUSTOMER)/ CDD CHECKS?***	**1**	**1**	**0**	**1**
6	**COLLABORATION WITH TRADITIONAL FINANCE INSTITUTION**	***SPONSORED/ COLLABORATING WITH TRADITIONAL BANK INFO?***	**0**	**0**	**1**	**0**
7	**FINANCIAL INCLUSION/ DISCRIMINATION**	***OPERATES IN FINANCIALLY DISADVANTAGED/UNDERSERVED AREAS (E.G., AFICA)?***	**0**	**1**	**0**	**0**
8		***CORPORATE SOCIAL RESPONSIBILITY (CSR)/ SUSTAINABILITY STATEMENT?***	**0**	**0**	**0**	**0**
9	**USER BENEFITS**	***MOBILE APPLICATION?***	**0**	**1**	**0**	**1**
10		***READABILITY :MAINLY BLACK/NAVY FONT ON WHITE?***	**1**	**1**	**1**	**1**
11		***STANDARDISED FONT IN BODY TEXT (E.G., ARIAL, TNR, CALIBRI)?***	**1**	**1**	**1**	**1**
12		***SEARCH TOOL/SITEMAP?***	**0**	**0**	**0**	**0**
RESULTS BY FIRM			**6**	**9**	**5**	**8**

		NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		17
		CATEGORY	PAYMENT				LENDING				TRANSFER				CRYPTOCURRENCY/BLOCKCHAIN					TRADITIONAL FINANCE INSTITUTION
		APP/COMPANY	BRAINTREE	GRAVITY PAYMENTS	STRIPE	YAPSTONE	TALA	AVANT	OPPLOANS	AFFIRM	TRANSFERWISE	AZIMO	CURRENCYFAIR	WORLDREMIT	CIRCLE	COINBASE	AXONI	BITPAY	RESULTS BY FACTOR	BANK OF SCOTLAND (BoS)
		BRIEF CHARACTERISTIC	Division of PayPal; providing mobile and online and mobile payments platform for E-commerce firms; based in Chicago, US; Web: www.braintreepayments.com	Credit card processing and financial services company; based in Seattle, US; Web: www.gravitypayments.com	Payment and business management online; based in San Francisco, US; Web: www.stripe.com	Online and mobile payments solutions for marketplaces and platforms; based in California, US; Web: www.yapstone.com	Accessible consumer credit; small loans from $10 to $500; based in Santa Monica, US; Web: www.tala.co	Small personal loans; loans from $300 to $2000; based in Chicago, UK; Web: www.avant.com	Personal loans platform for middle income Americans; loans form $300 to $4000; based in Chicago, US; Web: www.opploans.com	Lender company offering payment at the point of sale then charging instalments; no spending limit; based in San Francisco, US; Web: www.affirm.com	Low cost international money transfer; available in 59 countries; Based in London, UK; Web: www.transferwise.com	Global money transfer; transfer to 80+ countries; based in Amsterdam, NL; Web: www.azimo.com	Online peer-to-peer currency exchange platform; transfer money to 19 countries, based in Dublin, IR; Web: www.currencyfair.com	Global money transfer; transfer 90 currencies to 150 countries, based in London, UK; Web: www.worldremit.com	Internet platform to run internet business with the use of new form of money - USD Coin (USDC); based in Boston, US; Web: www.circle.com	Cryptocurrency buy, sell and management digital platform; exchanging: Bitcoin, Bitcoin Cash, Ethereum, Ethereum Classic, Litecoin, Tezos and other; operates in 102 countries; based in San Francisco, US; Web: www.coinbase.com	Blockchain infrastructure company, distributed applications, enterprise infrastructure, workflow automation; based in New York, US; Web: www.axoni.com	Bitcoin payments service allowing businesses to accept payments in bitcoins; based in Atlanta, US; Web: www.bitpay.com		Commercial bank based in Edinburgh, Scotland; part of Lloyds Banking Group; offers a range of traditional banking products and services; Web: www.bankofscotland.co.uk
NO	CATEGORY	GRADING																		
1	CONSUMER PROTECTION	*LICENCING INFORMATION?*	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	14	1
2		*COMPLAINTS PROCEDURE?*	0	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	12	1
3		*PRODUCT/SERVICE PRICING PROVIDED?*	1	0	1	0	1	1	1	1	1	1	1	1	0	1	0	1	12	1
4	REGULATION	*FRAUD PREVENTION / AML PROGRAM/ ACTIONS/ INFO?*	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	15	1
5		*KYC (KNOW YOUR CUSTOMER)/ CDD CHECKS?*	1	0	1	1	0	1	1	1	1	1	1	1	1	1	0	1	13	1
6	COLLABORATION WITH TRADITIONAL FINANCE INSTITUTION	*SPONSORED/ COLLABORATING WITH TRADITIONAL BANK INFO?*	1	1	0	0	0	1	1	1	1	1	1	1	0	0	1	0	10	N/A
7	FINANCIAL INCLUSION/ DISCRIMINATION	*OPERATES IN FINANCIALLY DISADVANTAGED/ UNDERSERVED AREAS (E.G., AFRICA)?*	1	0	0	0	1	0	0	0	0	1	1	1	0	1	0	0	6	1
8		*CORPORATE SOCIAL RESPONSIBILITY (CSR)/ SUSTAINABILITY STATEMENT?*	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	1
9	USER BENEFITS	*MOBILE APPLICATION?*	0	1	1	0	1	0	0	0	1	1	1	1	0	1	0	1	9	1
10		*READABILITY: MAINLY BLACK/NAVY FONT ON WHITE?*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	1
11		*STANDARDISED FONT IN BODY TEXT (E.G., ARIAL, TNR, CALIBRI)?*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16	1
12		*SEARCH TOOL/SITEMAP?*	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	3	1
RESULTS BY COMPANY			9	7	9	6	7	7	8	7	9	10	11	10	6	9	5	8		11