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In-Text Citation: (Hassan et al., 2023)
To Cite this Article: Hassan, M. H. A., Yahya, S., & Shari, W. (2023). Factors Affecting Repayment Behaviour in Islamic Microfinance Programs. *International Journal of Academic Research in Accounting Finance and Management Sciences*, *13*(1), 554–560.

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Factors Affecting Repayment Behaviour in Islamic Microfinance Programs

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Abstract

This study is primarily concerned with borrower behaviour in the context of microfinance financing repayment. The high non-performing loans (NPLs) incurred by microfinance institutions are one of the contributing factors to the failure to achieve the objective of poverty alleviation. This study used the quantitative approach, and structured questionnaires were distributed among respondents in Peninsular Malaysia who were selected via multistage random sampling. The results of the analysis showed that borrowers' repayment behaviour was affected by their characteristics and accountability. Moreover, religiosity and business performance did not have a significant direct relationship with repayment behaviour. This research also found that accountability played a significant positive role as a mediator between borrower characteristics and repayment behaviour. This study makes a significant contribution to the knowledge of microfinance programmes, in which it explains repayment performance plays an important role in order to improve the social economy and alleviate poverty. The result also contributed to the practical aspect by suggesting ways to improve service and screening approaches to identify early warning signs and some factors that are potentially related to borrower behaviour.

Keywords: Islamic Finance, Microcredit, Repayment, Entrepreneurship.

Introduction

The motivation for the study arises out of concern for the repayment behaviour among the microfinance borrowers. As you may know, microfinance refers to the provision of financial services concentrating on the very poor, who often are from the low income group and self-employed. (Idama, 2014; Otero, 1999). Sinha (1998) defined microcredit as small loans, whereas microfinance involves the provision of financial services by non-governmental organisations (NGOs) and microfinance institutions (MFIs), which include financing, savings, insurance, and other financial dealings. Thus, microcredit is a subset of microfinance, as microfinance encompasses the provision of credit financing for the low-income group as well as non-credit financial products including savings, insurance, pensions, and payment services. (Idama, 2014).

Even though the main purpose of microfinance is poverty alleviation, previous research works have documented mixed results regarding its effectiveness in reducing poverty. They found divergent findings, namely positive, negative, and no impact on poverty alleviation (Samer et al., 2015). Therefore, various factors have been investigated to explain the phenomenon, such as risk management, collaterals, performance issues, payment delinquency, and challenges. The high non-performance loans (NPLs) faced by micro finance institutions (MFIs) has been found as one of the factors that contributes to the failure of microfinance in achieving its main objective, which is to reduce poverty (Shu-Teng et al., 2015). In fact, poor loan collection in major rural credit schemes has caused heavy losses (Bichanga & Aseyo, 2013). The prevalence of NPLs in Malaysia has shown an increasing trend over the years (Chong et al., 2010; Nawai, 2013; Nawai & Shariff, 2012; Shu-Teng et al., 2015b).

In addition, according to Maiangwa (2012), individual-based lending is riskier as compared to group-based lending with regard to repayment performance. One of the documented risks is the ability to make payment because usually the amount of financing offered for individual-based lending is higher than for group-based lending. In addition, Maiangwa (2012); Shu-Teng et al (2015) stated that individual-based lendings are exposed to the deficiency of loan information and the problem of loan monitoring by financial institutions.

Furthermore, the previous studies have criticised the subsidised microfinance system[1], which recorded high default rates (Morduch, 2006; Robinson, 2001). This statement has been confirmed by Mokhtar et al (2012), who documented that repayment performance in several MFIs in Malaysia, especially under the subsidised system, have not been satisfactory. Thus, to illustrate this argument, some of the data from previous studies have been used to compare the repayment performance rates of microfinance facilities in Malaysia (refer to Table 1).

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[1] Oxford Dictionary (2017) defines a subsidised system as the government or organisations supporting business activities or financially, while Mokhtar (2011) mentioned that under a subsidised system, the regulations or conditions of the loan are set by the government to ensure that the activities are run smoothly and efficiently.

Table.1

*The Prevalence of Non-Performing Loans/Financing (NPL/NPF) for Microfinance Products in Malaysia*

FINANCIAL INSTITUTIONS	RATE OF NON-PERFORMANCE LOANS (NPL)	PRODUCT/ FACILITIES APPROACH	SYARIAH COMPLIANCE
Government Agencies			
TEKUN Nasional	37.82%	Subsidiary	NO
Yayasan Usahawan Malaysia (YUM)	9.28%	Subsidiary	NO
Amanah Ikhtiar Malaysia (AIM)	1.5%	Subsidiary	NO
Permodalan Usahawan Nasional Berhad (PUNB)	6.35%	Subsidiary	NO
Cooperative Commission of Malaysia (CCM)	13.8%	Subsidiary	NO
Government Linked Companies (GLC)			
Perbadanan Nasional Berhad (PNB)	1.76%	Subsidiary	NO
Bank Rakyat	49%	Subsidiary	YES
SME Bank	12.3%	Subsidiary	MIXED
Commercial Banks			
Public Bank, CIMB, Maybank	Between 0.95%–3.15%	Own facilities	NO

Sources: ((Hassan & Yahya, 2020)

Table 1 shows the prevalence of loans defaults for the three main categories of microfinancing providers in Malaysia, namely government agencies, government-linked companies (GLCs), and commercial banks from 2012 to 2018. The government agencies, which are the Cooperative Commission of Malaysia (CCM), Permodalan Usahawan Nasional Berhad (PUNB) and Amanah Ikhtiar Malaysia recorded NPLs of 13.8%, 6.35 and 1.5% respectively. The higher percentages of NPLs were reported by TEKUN Nasional and Yayasan Usahawan Malaysia (YUM) stood with 37.82% and 9.28% respectively. Meanwhile, the commercial banks, namely Public Bank Berhad, CIMB Bank Berhad, and Malayan Banking Berhad (Maybank) recorded NPLs in the range of 0.95% to 3.15%. Under the GLC category, Bank Rakyat recorded higher NPL of 49% and following by SME bank which are stood with 12.3% in 2018. This percentage is worse than the percentages recorded by the government agencies and commercial banks. Based on NPL's percentage, the concern on this study more to emphasize on financial institution under the GLC due to recorded higher percentage and involved with subsidiary system. Therefore, the selection of Bank Rakyat and SME Bank as a sample for this study is expected to reveal more significant findings in relation to the causes of the NPL problem as compared to other institutions.

Moreover, the World Bank Group (2017) reported that Malaysian financial institutions had recorded the highest debts in the world. In 2014, 56% of Malaysian adults had bank loans, which was the highest percentage recorded worldwide (World Bank Group, 2017). Apart from that, Malaysia's NPL ratio had increased in September 2017 to 1.7% from 1.6% in 2016 (CEIC, 2017; World Bank Group, 2017). Among the reasons for the increase in NPL are weak global

growth and economic reforms in the domestic economy such as the rationalisation of
subsidies as well as the implementation of minimum wage and sales and services tax (SST)
(Shaharudin et al., 2016; Wong & Eng, 2018). According to Shaharudin et al (2016) and Zhou
et al (2014), the introduction of GST on 1 April 2015, SST and depreciation of the Ringgit have
resulted in an increase in the cost of living, leading to adjustments in household spending.
These circumstances were determined as factors that influence payment behaviour among
the customers. Lastly, in year 2019 the trend of NPL was recorded increased with NPL ratio at
1.53% in January 2019 compared with 1.61% in July 2019. Increased the NPL percentage will
reflecting the health of banking system and effect the loan cycle. Besides, difficulties to
collecting it will affect the profit or interest and principal on the loan. The statistic of NPL
performance as follow:
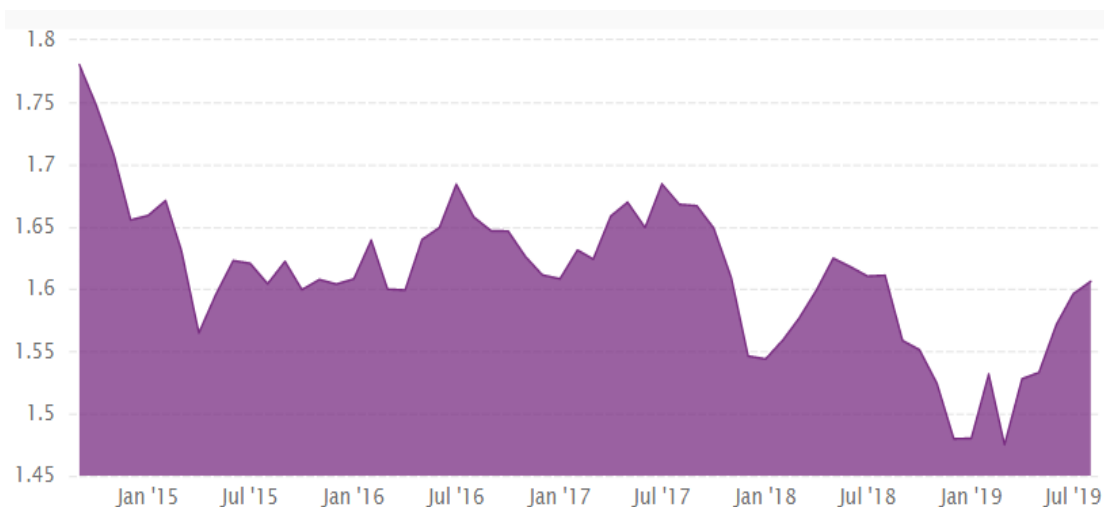
Sources: (CEIC, 2019)
Figure 1: Statistics of Non-Performing Loan (NPL)

Therefore, the factors of higher percentage of NPL, the implementation of additional tax,
higher debt, subsidiaries problem, unstable Malaysia currency and shrinking economies
should serve as early indicators to financial institutions to be more alert of potential
repayment problems in the future. For entrepreneurs, they must be able to identify the
causes of these problems so that they can be more cautious and prepared. Thus, it is expected
that this study will identify the factors that cause the occurrence of the repayment problem
and ascertain the factors influencing borrowers' accountability.

Review of the Literature
Timely loan repayment is the key for sustainability of financial institutions; however, several
socio-economic and institutional factors may affect the ability to make repayment (Angelucci
et al., 2012; Ganle et al., 2015; Samer et al., 2015; van Rooyen et al., 2012). Indeed, many
researchers from various countries have conducted studies in this area in order to understand
the factors affecting loan repayment. Mohammed and Wobe (2019) conducted research to
examine the factors influencing loan repayment performance among Omo Microfinance
borrowers in Wondo Genet Woreda, Ethiopia. The study found that 44.9% of the borrowers
did not make the repayment as per the credit schedules. The authors claimed that the major
factors that affected the loan repayment performance of the borrowers are their gender,

family size, education level, borrowing experience, repayment period, loan period, and advisory visit.

Recently, Fianto et al (2019) investigated the determining factors of non-performing financing in Indonesian MFIs. The results showed that age, gender, occupation, and the type of contract affected the non-performance of clients of Islamic MFIs in Indonesia. Next, study was conducted by Bhatt and Tang (2002), focusing on the determinants of loan repayment performance for microcredit schemes in the United States of America (USA). They had examined the socio-economics variables such as gender, educational level, household income, and business characteristics, namely business activities, number of years in business, and business performance. They noted a significant and positive association between higher education level and repayment performance. On the other hand, other variables, namely household income, female borrowers, business activities, and number of years in business do not have a significant impact on repayment behaviour.

The study carried out by Kuhn and Darroach (1998) identified the problem of default among microfinance borrowers in South Africa. This study examined various factors associated with loan default such as the loan amount approved, collateral issues, and administration cost. This study stated that loan amount could influence the repayment rate because loans tended to be associated with collaterals. The study in Africa was continued by Cassar et al (2007) to present evidence from participation in trust and microfinance games. The researchers focused on individual and group lending approach to present evidence that personal trust between group members and social homogeneity are more important in influencing repayment behaviour among the group members. The variables examined included the element of shocks, the effect of other contributions, personal trust, and generalised trust. The result found that personal trust between specific pairs of group members significantly affect the repayment performance compared with the high degree of social capital between group members which is probably insufficient to increase the repayment rates.

Zeller (1996) also investigated the determinants of microfinance repayment performance in group-based lending in Madagascar. However, this study looked at a different aspect from the previous study. The study focused on the effects of programme design as well as community and group characteristics as determinants of repayment performance for group lending. The sample data were based on six different lending programmes in Madagascar. The study found that to mitigate the risk of group lending, the diversification of the members' asset portfolio[2] should be implemented so that the repayment rate will improve even if the communities are facing high-risk exposure. Subsequently, Eze (2007) studied the determinants of loan repayment in Southeast Nigeria. The author revealed that the loan amount disbursed, the age of beneficiaries, household income, number of years of formal education, and occupation are significant determinants of loan repayment.

A further study was conducted by Godquin (2004), who examined loan repayment performance in Bangladesh. His analysis was focused on the impact of group lending, non-

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[2] A portfolio can be defined as a grouping of financial assets such as cash equivalents, commodities, stocks, currencies, and bonds. Asset portfolio is asset-backed funds to invest or transfer to property or shares, with the purpose to be liquidated as collateral and not deposited with a bank or building society 0(Reverso Dictionary, 2017)

financial products, and great incentives towards repayment performance. He found a positive but non-significant correlation between gender and loan repayment. In a more recent study, Mekonnen (2015) had examined the determining factors of loan repayment performance among rural women borrowers of saving and credit cooperatives in rural Dire Dawa, Ethiopia. The variables investigated include livestock ownership, loan supervision, education level, loan size, profits derived from activities that were financed by the loan, timeliness of loan release, suitability of loan repayment period, income from other activities, age, celebrating and participating in social festivals, and loan diversion. The results were mixed, showing either significant positive or negative. Meanwhile, Chaudhary and Ishfaq (2003) investigated the creditworthiness of rural borrowers in Pakistan. They found a higher probability of loan repayment among borrowers who attained a higher educational level, were not in the farming business, were female borrowers, and who utilised the loan proceeds for investment purpose.

Theoretical Framework
The adoption of the reinforcement theory, this study will examine the impact of punishments and rewards in order to encourage the borrowers to be more accountable. According to Skinner (1931), human behaviour can be altered based on the impact that would apply to them. This opinion is consistent with Bandura (1974), who argued that human behaviour occurs because of the reaction to the environment or as a consequence of a person's history. In addition, the behaviour may occur due to reinforcement and punishment that motivates them to perform (Schultz, 2015). Dawson (1974) also mentioned that people's behaviour cannot be learnt even with repetitive, paired experience unless it is correlated with them.

To support the theory of reinforcement, related theories have been employed to identify the variables that could be associated with the repayment behaviour. The theory of behaviour and asymmetric information have been applied as supplementary theories in the variable selection. The theory of behaviour forms the basis of the theory of reinforcement but this theory places more emphasis on human behaviour. Hence, it could potentially be used to support the dependent variable, namely borrowers' repayment behaviour. The correlation between reinforcement and repayment behaviour is in ensuring that the borrowers become good paymasters and the same time ensuring their security. The theory of asymmetric information has been selected because it is related to information, which is important in guiding a person to make the right decision. The theory of reinforcement is indirectly related to information, as this theory will work only based of information and the surrounding effects. Thus, in ensuring that the borrowers will honour their loan repayment obligations, genuine information has to be delivered to them, as insufficient information may affect their future loan performance.

In summary, the correlations between the variables and the reinforcement theory are as follow. Firstly, is financial strength, which is a crucial ingredient for business sustainability. However, it is not a guarantee that the borrower can perform the loan repayment. Hence, the reinforcement approach can encourage them to performance the obligation and increase the sense of responsible. Second is religiosity, in the Islamic dimension, the views on reward and punishment are numerous, extensive, and comprehensive. Reward and punishment can happen between man and God, between man and man, and between man and the universe, and this includes his deepest self (Nazri et al., 2011). When people practise religion, they will refrain from doing anything useless or that can destroy them. Next is the understanding of

the contract. Generally, contracts are agreements in place between two parties that should be binding on them (Fayyad, 2013). The element of reward and punishment should be clearly stated in the contract because it can give an early signal regarding the effect to be imposed (Central Bank of Malaysia, 2012). Finally, business performance is about how the owner of the company drives and performs the business (Achim & Borlea, 2013). Performance is related to the effectiveness of management, financial stability, and operational performance (Venkatraman & Ramanujam, 1986). Every company has rules that must be followed to ensure that all parties carry out their duties perfectly. In the rules, the elements of reward and punishment must be applied to help all parties to achieve their targets (Bandura, 1974; Nazri et al., 2011). The effect of reward and punishment will affect the behaviour of all parties, and it can play a role in improving a company's performance.

Furthermore, to complete the study on determining the issue of repayment performance, the variable of accountability will be used as a mediator to enhance the correlation between the independent and dependent variables. According to Dixon et al (2006); Lewis (2006), accountability is a key factor that affects the repayment 561ehavior of microfinance borrowers. In this regard, this study has developed a conceptual framework based on a single layer3 approach to determine borrowers' repayment 561ehavior under the microfinance financing.
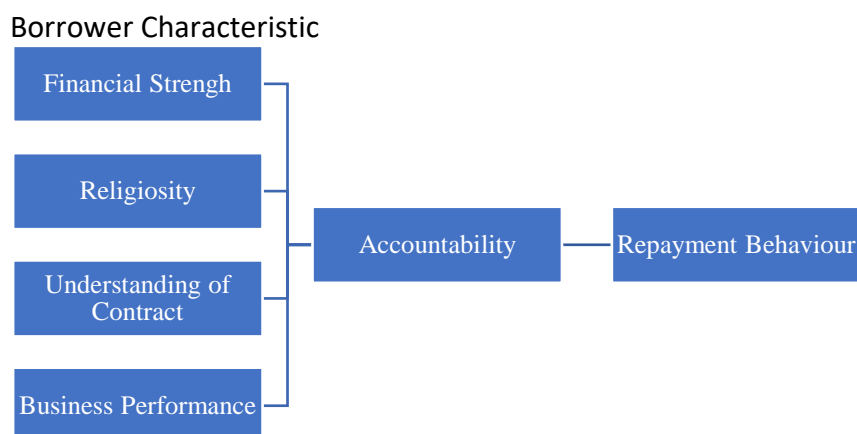
Borrower Characteristic

Figure 2: Theoretical Framework

Based on the discussion and framework justifications mentioned above, the hypothesis below is postulated

H$_1$	There Is A Positive Significant Relationship Between Borrower Characteristic And Repayment Behaviour
	H$_{1a}$: There is positive significant relationship between financial strength and repayment behaviour
	H$_{1b}$: There is positive significant relationship between religiosity and repayment behaviour
	H$_{1c}$: There is positive significant relationship between contract knowledge and repayment behaviour

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[3] Direct relationship between independent and dependent variable (Greaves et al., 2017).

	H₁d: There is positive significant relationship between business performance and repayment behaviour
H₂	**There is a positive significant relationship between borrower characteristic and accountability**
	There is a positive significant relationship between financial strength and accountability
	H₂b: There is a positive significant relationship between religiosity and Accountability
	H₂c: There is a positive significant relationship between contract knowledge and accountability
	H₂d: There is a positive significant relationship between business performance and accountability
H₃	**There is Positive Significant Relationship Between Accountability ofvThe Borrower and Repayment Behaviour**
H₄	**The Relationship Between Borrower Characteristic and Repayment Behaviour is Mediated Positively by The Level of Accountability.**
	H₄a: The relationship between financial strength and repayment behaviour is mediated positively by the level of accountability
	H₄b: The relationship between religiosity and repayment behaviour is mediated positively by the level of accountability
	H₄c: The relationship between contract knowledge and repayment behaviour is mediated positively by the level of accountability
	H₄d: The relationship between business performance and repayment behaviour is mediated positively by the of accountability

Data Analysis and Result

A total of 900 questionnaires were distributed to all the microfinance borrowers under the rural funding economic scheme (SPED). The questionnaires were distributed to two banks namely Bank Rakyat and SME Bank as they were the representative of KKLW running this programme. Out of the total questionnaires distributed, 302 were returned which is equivalent to a 22.33 percent response rate. However, 42 surveys were excluded because the respondents provided the same answers (straight lining) to all questions, with more than 50 percent of unanswered items and issues with outliers. Therefore, the result is an effective and valid sample of 260 respondents. A summary on the rate of return of the questionnaires is illustrated in Table 2.

Table 2
Response Pattern

Institution	Number of Borrower – 2016 - 2018	Northern & Eastern Region - 2016 – 2018	Q Distributed	Response Rate Received	Valid – After Screening Test	%
Bank Rakyat				186	160	18
SME Bank	3,927	1,349	900	116	100	11
Total	3,927	1,349	900	**302**	**260**	**29**

Source: Kementerian Kemajuan Luar Bandar & Wilayah (KKLW), (2018)

Profiles of Respondents

After discussing and describing the process of data screening, the general background of individuals who attended and answered the questionnaire in this research were further investigated. The data analysis and all information are presented using actual figures and percentages to simplify the interpretation. Therefore, the final sample consists of a total of 260 respondents who were then categorised based on gender, level of education, number of years in present position, and working experience in the organisation involved.

Table 3
Profile of Respondents

Background	Frequency	Percent
Gender		
Male	125	48.1
Female	135	51.9
Ethnicity		
Bumiputera	260	100.0
Age		
18 - 30	65	25.0
31 – 45	133	51.2
46 an above	62	23.8
Married		
Married	207	79.6
Singgle	53	20.4
Education		
Secondary School	199	76.5
Diploma	40	15.4
Degree	21	8.1
Occupation		
Business	230	88.5
Private Sector	29	11.2
Government Sector	1	0.4
Income		
RM1,000 and below	32	12.3
RM1,001 - RM4,000	93	35.8
RM4,001 - RM7,000	59	22.7
RM7,001 - RM11,000	49	18.8
RM11,001 - RM15,000	12	4.6
RM15,000 and above	15	5.8
Religion		
Islam	260	100.0

These statistics data provide insight into the demographic profiles of respondents who answered through online and offline questionnaires. The result showed that the response rate was 29% from 900 questionnaires distributed. Among these respondents, 48.1% were males and 51.9% were females. The majority of respondents were between the age of 31 to 45 years (51.2%) followed by those of the age 18 to 30 years (25%), and 46 and above (23.8%).

A total of 207 respondents were married (79.6%) while the rest were single (20.4%). All the respondents were Bumiputra since the financing was only offered to Bumiputra.

A total of 199 respondents (76.5%) had STPM education and below, 40 respondents (15.4%) had Diploma and the remaining 21 respondents (8.1%) had a Bachelor's Degree. In correspondence with the population frame, most of the respondents were entrepreneurs (88.5%), followed by those working in the private sector (11.2%) and only (1%) of the respondents were in the government sector. In terms of income background, 12.3% of the respondents earned less than RM1,000, 35.8% earned between RM1,001 to RM4,000; 22.7% earned between RM4,001 to RM7,000; 18.8% earned between RM7,001 to RM11,000; and 94.6% earned between RM11,001 to RM15,000, while the remaining 5.8% respondents earned over RM15,000.
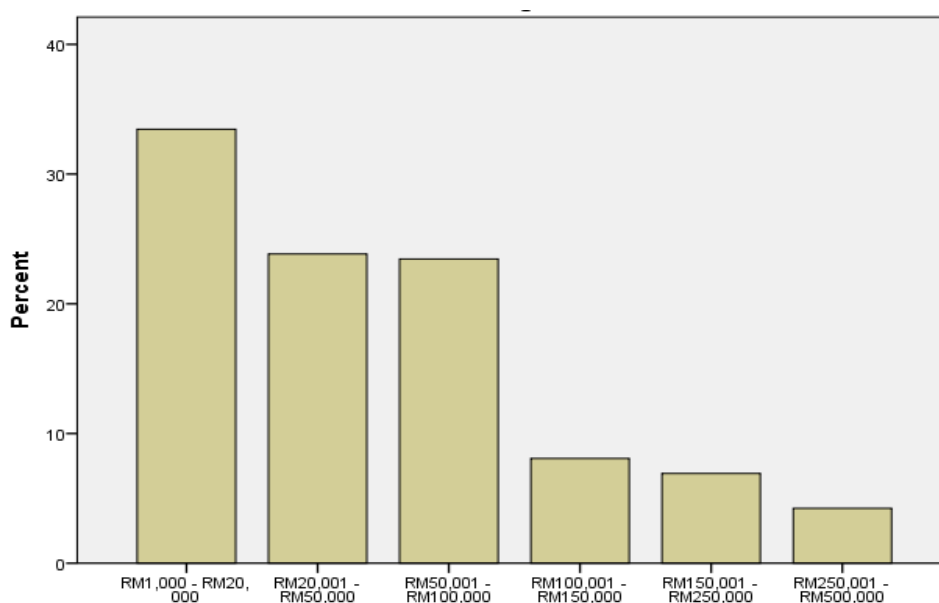

Figure 3: The amount of financing

In terms of the amount of financing, most of the borrowers applied for financing of RM1,000 to 20,000.00 in which they represented 33.5%. Meanwhile, the number of borrowers who applied for financing of RM20,000 to RM50,000 and financing of RM50,001 to RM100,000 were almost the same, at 23.8% and 23.5% respectively. Furthermore, the percentage of borrowers who applied for financing of RM100,001.00 to RM150,000.00 was 8.1% while those who applied for financing of RM150,001 to RM250,000 was 6.9%. The remaining 4.2% of the borrowers applied for financing amount of RM250,000 to RM500,000. In conclude, most of the borrower are received financing amount in range of RM20,000 to RM50,000.
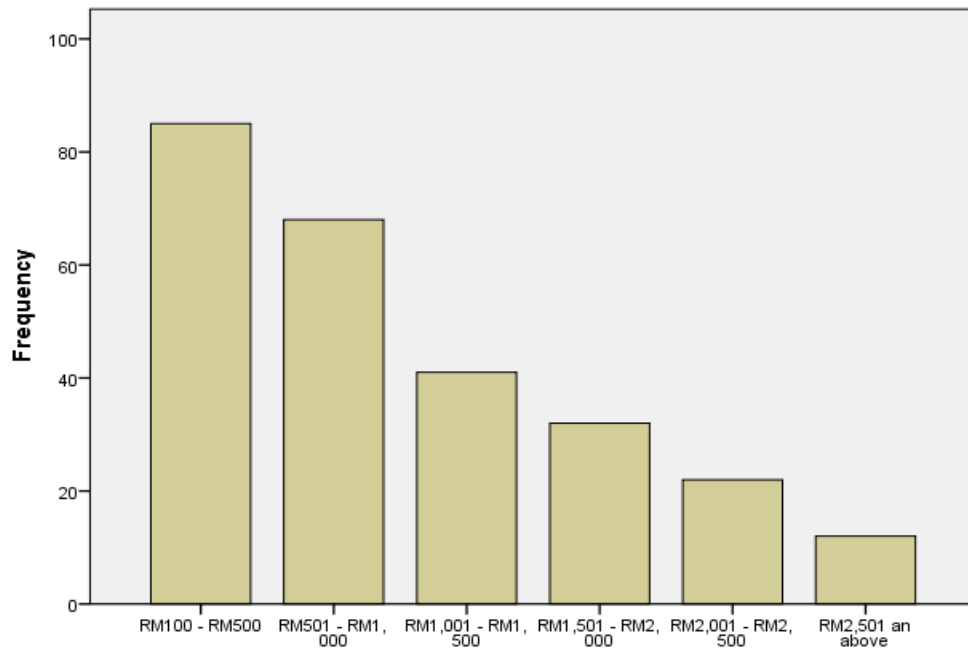
Figure 4: Monthly Repayment

Figure 4 shows the statistics result for monthly instalment commitment, which is closely related with the financing amount. The percentage of borrowers with monthly instalment of RM100 to RM500 (for`financing of RM20,000 and below) was 85%, followed by those with monthly instalment of RM501 to RM1,000 (for financing of RM30,000-RM50,000), which represented 26.2%. Next, the borrowers with monthly instalment of RM1,001 to RM1,500 constituted 15.8% while those with monthly instalment of RM1,501 to RM2,000 comprised 12.3%. Meanwhile, borrowers with monthly instalment of RM2,001 to RM2,500 represented 8.5% (considered as the second lowest) and those with monthly instalment of RM2,501 and above represented the remaining 4.6%. Based on the bar graft, the highest borrower commitment is for monthly instalment of RM100 to RM500 which is for financing amount of RM20,000 to RM50,000, whereas the smallest percentage is recorded by monthly instalment of more than RM2,500.00. Only a small number of borrowers were qualified to apply for financing of more than RM150,000.00.
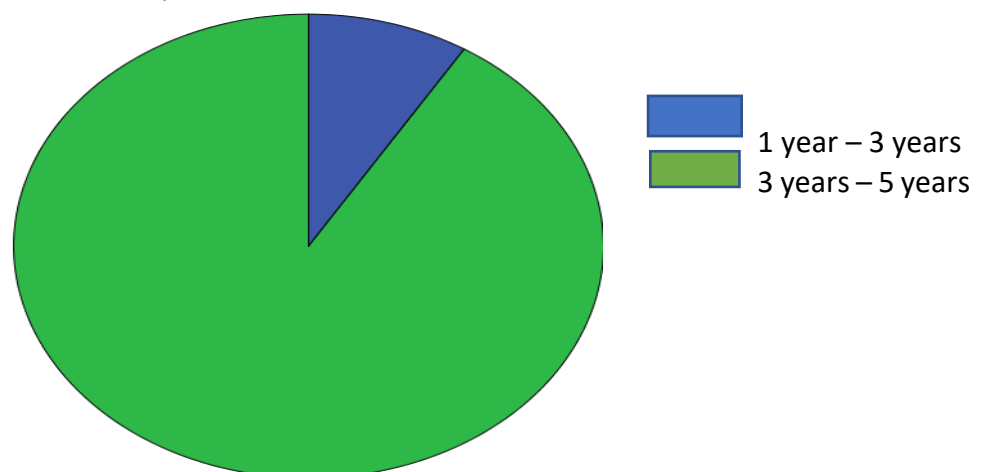

Figure 5: Financing Tenure

In regard to financing tenure, the longest tenure is three to five years which comprises 91.2%
of borrowings compared to a tenure of one to three years which only constitutes 8.8%. Most
of the borrowers preferred to choose longer tenure because the instalment amount is lower
than the tenure of shorter period. A longer period will give more comfort to borrowers in
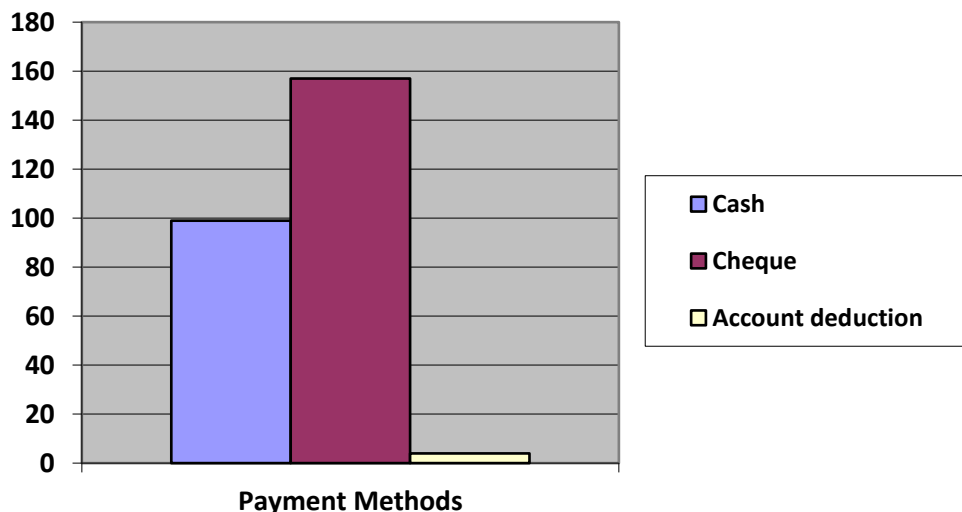terms of monthly commitment.

Figure 6: Payment Method

The bar chart in Figure 6 shows the payment method applied by respondents. The descriptive
analysis shows that paying via cheque was the most often utilised method, which was used
by a total of 157 respondents. The second most regularly used payment method was via cash,
either through the counter, CDM, or online banking (99 respondents), and the third most
frequently used method was through account deduction (4 respondents). Most borrowers
preferred payment using cheques because it is easier. Borrowers can submit many cheques
to the bank and simply leave it to the bank to deduct payment when payment is due. Over-
the-counter payment recorded the lowest percentage for reasons related to time and
distance. Most of the borrowers were too busy with their business and daily activities and
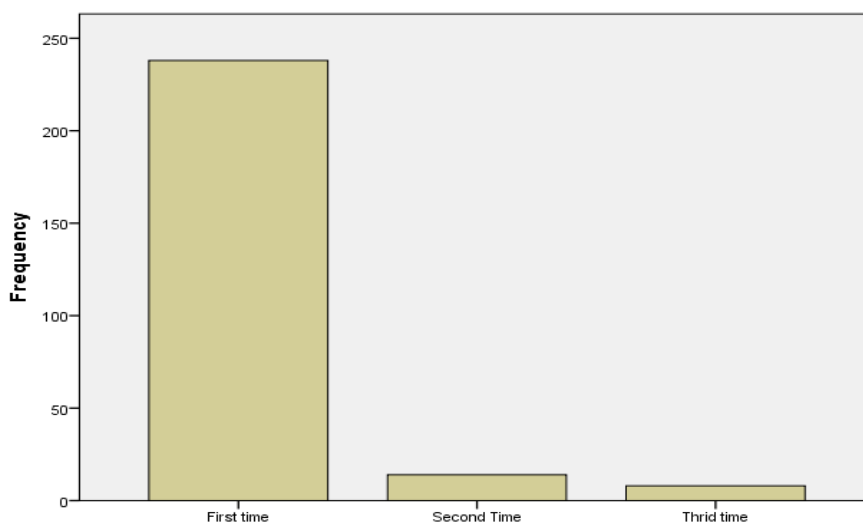thus, faced difficulties in going to the bank.

igure 7: Number of financing application

First time borrowers recorded the highest percentage at 91.5% compared to borrowers of second and third time who constituted 5.4% and 3.1% respectively. The percentage of borrowers is based on the amount of financing in which a higher percentage was recorded for financing of small amount. Second and third time borrowers usually recorded large financing amount because of overlapping or additional financing amount.

Measurement Model Assessment

The validity and reliability of the measurement model for this study are evaluated using the following analyses: internal consistency reliability, indicator reliability, convergent validity, and discriminant validity. To check the consistency reliability, the algorithm analysis was run by using the Smart PLS 3.0. The details are as in the following Table 4 and figure 8, which shows the internal consistency reliability.
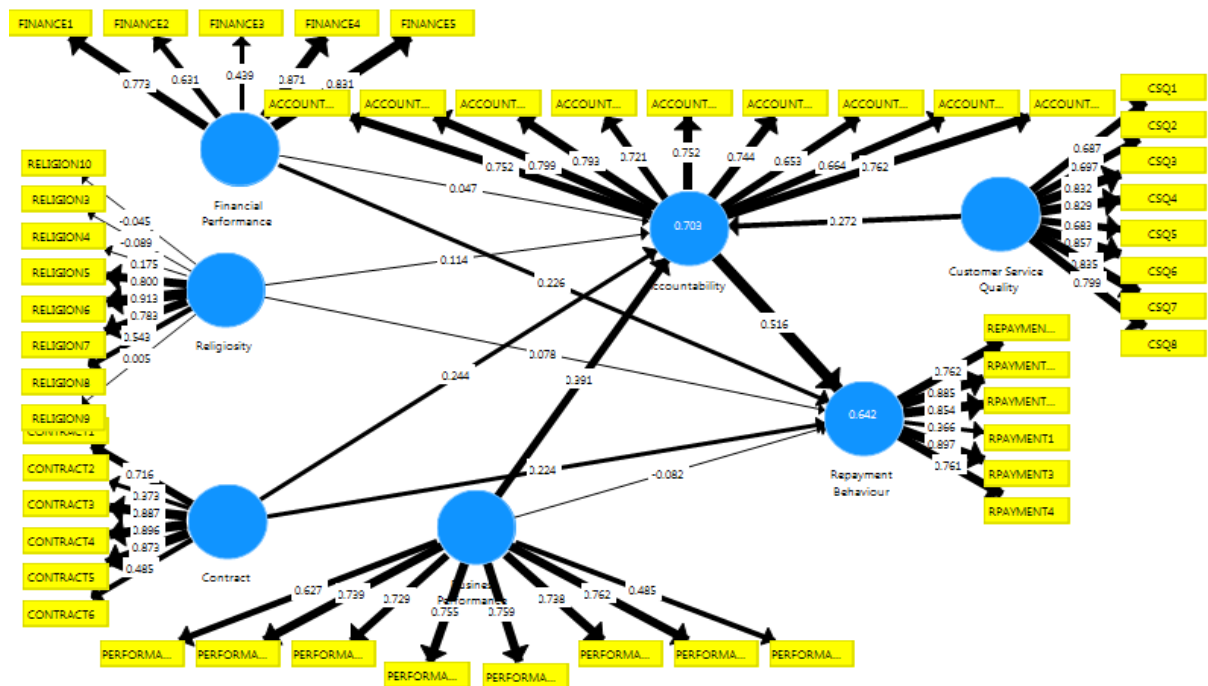

Figure 8: Algorism Analysis

Table 4
Internal Consistency Reliability

Construct	Items	Loading	Cronbach's Alpha	rho_A	CR	AVE
Financial Perfomance	Finance 1	0.773	0.758	0.801	0.842	0.527
	Finance 2	0.631				
	Finance 3	0.44				
	Finance 4	0.871				
	Finance 5	0.831				
Religiosity	Religion5	0.813	0.795	0.887	0.860	0.613
	Religion6	0.929				
	Religion7	0.793				
	Religion8	0.547				
Understanding Of Contract	Contract1	0.714	0.844	0.899	0.891	0.629
	Contract3	0.889				
	Contract4	0.901				
	Contract5	0.881				
	Contract6	0.508				
Business Performance	Performance1	0.639	0.860	0.859	0.893	0.545
	Performance2	0.759				
	Performance3	0.723				
	Performance4	0.742				
	Performance5	0.784				
	Performance6	0.743				
	Performance8	0.770				
Repayment Behaviour	Repayment1	0.366	0.854	0.897	0.896	0.602
	Repayment2	0.897				
	Repayment3	0.762				
	Repayment4	0.885				
	Repayment5	0.761				
	Repayment6	0.854				
Customer Service Quality	CSQ1	0.688	0.907	0.908	0.925	0.609
	CSQ2	0.698				
	CSQ3	0.832				
	CSQ4	0.829				
	CSQ5	0.683				

	CSQ6	0.857				
	CSQ7	0.835				
	CSQ8	0.798				
	Accountability 1	0.752	0.897	0.903	0.915	0.547
	Accountability 2	0.798				
	Accountability 3	0.793				
	Accountability 4	0.720				
Accountability	Accountability 5	0.753				
	Accountability 6	0.745				
	Accountability 7	0.655				
	Accountability 8	0.666				
	Accountability 9	0.761				

Indicator Reliability

This research accepts factor loadings of more than 0.4 as suggested by (Hulland, John, 1999; Kwong-Kay Wong, 2013). Table 4 shows all the items that have obtained loading value of more than 0.4 except Religion 3, Religion 4, Religion 9, Religion 10, Contract 2 and Performance 9, which were deleted since each item obtained a low loading value of 0.089, 0.0.175, 0.005, 0.0045, 0.379 and [4]0.485 respectively.

Convergent Validity

The measurement model's convergent validity is assessed by examining its average variance extracted (AVE) value. According to Bagozzi and Yi (1988), the value of AVE should be 0.5 or higher for a validity to be achieved. Table 4 shows that all constructs have AVE value that ranges from 0.527 to 0.629 and it satisfies the recommended threshold value of 0.5. Hence, as illustrated by the result, the measurement model of the study demonstrated an adequate convergent validity.

Discriminant Validity

In this research, the measurement model's discriminant validity is assessed through three measurements: 1) Fornell and Larcker's (1981) criterion, 2) cross-loading, and 3) HTMT. The measurement model has a discriminant validity when 1) the square root of the AVE exceeds the correlations between the measure and all other measures, 2) the indicators' loadings are higher against their respective construct compared to other constructs, and 3) the value of

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[4] Item PERFORMANCE9 still need to deleted even though loading 0.485 because if was effected AVE value.

HTMT is greater than 0.9. The results showed that all square roots of AVE exceeded the off-diagonal elements in their corresponding row and column. In Table 5, the bolded elements represent the square roots of the AVE and the non-bolded values represent the intercorrelation value between constructs. In conclusion, all off-diagonal elements are lower than the square roots of AVE and thus, it was confirmed that the Fornell and Larker's criterion is accepted.

The next assessment of discriminant validity is via a Heterotrait-monotrait (HTMT) test. The value of HTMT for each construct should be lower than 0.9 and the value was recommended by Gold et al. (2001) and Henseler et al., (2015). Table 6 shows that the HTMT output for all the constructs in this research have no discriminant validity problem. In conclusion, the overall result for reliability and validity tests conducted on the measurement model is satisfactory and confirmed, an indicator that the measurement model for this study is valid and appropriate to be used to estimate parameters in the structural model.

Table 5
*Fornell and Larcker's Inter-correlation Matrix*

	Accountability	Business Performance	Contract	Customer Service Quality	Financial Performance	Religiosity	Repayment Behaviour
Accountability	**0.739**						
Business Performance	0.743	**0.738**					
Contract	0.630	0.520	**0.793**				
Customer Service Quality	0.671	0.558	0.454	**0.781**			
Financial Performance	0.563	0.526	0.440	0.587	**0.726**		
Religiosity	0.361	0.347	0.298	0.178	0.1	**0.783**	
Repayment Behaviour	0.754	0.555	0.630	0.673	0.58	0.323	**0.776**

Table 6
The HTMT Output Using Smart PLS

	Accountability	Business Performance	Contract	Customer Service Quality	Financial Performance	Religiosity	Repayment Behaviour
Accountability							
Business Performance	0.845						
Contract	0.714	0.615					
Customer Service Quality	0.714	0.623	0.492				
Financial Performance	0.654	0.654	0.524	0.691			
Religiosity	0.410	0.393	0.337	0.208	0.221		
Repayment Behaviour	0.810	0.622	0.708	0.742	0.684	0.368	

Structural Model

This section on measuring the structural model involves assessing R2, beta, and the corresponding t-values (Hair, Hult, Ringle, & Sarstedt, 2014). To acquire the t-values, a procedure of bootstrapping with 5000 resamples was used. Besides these fundamental measures, researchers were supposed to report predictive relevance (Q2) and effect sizes (f2) (Hair et al., 2014; Soto-Acosta, Popa, & Palacios-Marqués, 2016) as well. In addition, this research continued to assess the mediation relationships that were proposed in the conceptual framework. The bootstrapping analysis has been running to identify the relationship and significant level.
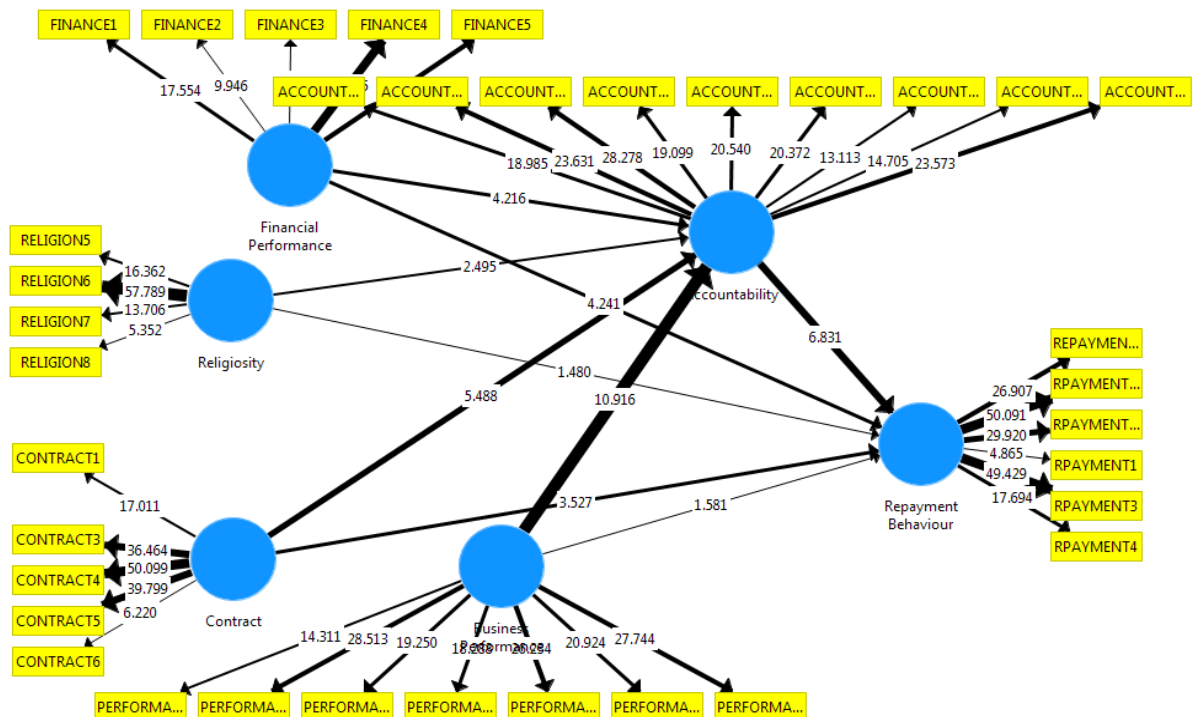
to table 7, this study firstly looked at the antecedent to accountability. Financial strength (β = 0.182, p < 0.01), religiosity (β = 0.102, p < 0.05), understanding of contract (β = 0.2777, p < 0.01) and business performance (β = 0.468, p < 0.01) were positively related to accountability explaining 65.6% of the variance in the accountability. Next, for the antecedent to repayment behaviour, financial strength (β = 0.23, p < 0.01) and understanding of contract (β = 0.228, p < 0.01) were positively related to repayment behaviour explaining 64.1% of the variance in the repayment behaviour. However, religiosity (β = -0.075, p > 0.05) and business performance (β = -0.101, p > 0.05) were not related to repayment behaviour.

Table.2

Result of the Structural Path Analysis

| Hypothesis	Relationship	Std Beta	P-Values	Decision	$f2$	$R2$	$Q2$
H1a	Financial Performance -> Repayment Behaviour	0.23	0.000	Supported	0.093	0.641	0.35
H1b	Religiosity -> Repayment Behaviour	0.075	0.139	Not Supported	0.013		
H1c	Contract -> Repayment Behaviour	0.228	0.000	Supported	0.084		
H1d	Business Performance -> Repayment Behaviour	-0.101	0.114	Not Supported	0.012		
H2a	Financial Performance -> Accountability	0.182	0.000	Supported	0.065	0.656	0.332
H2b	Religiosity -> Accountability	0.102	0.013	Supported	0.025		
H2c	Contract -> Accountability	0.277	0.000	Supported	0.15		
H2d	Business Performance -> Accountability	0.468	0.000	Supported	0.376		
H3	Accountability -> Repayment Behaviour	0.526	0.000	Supported	0.262		
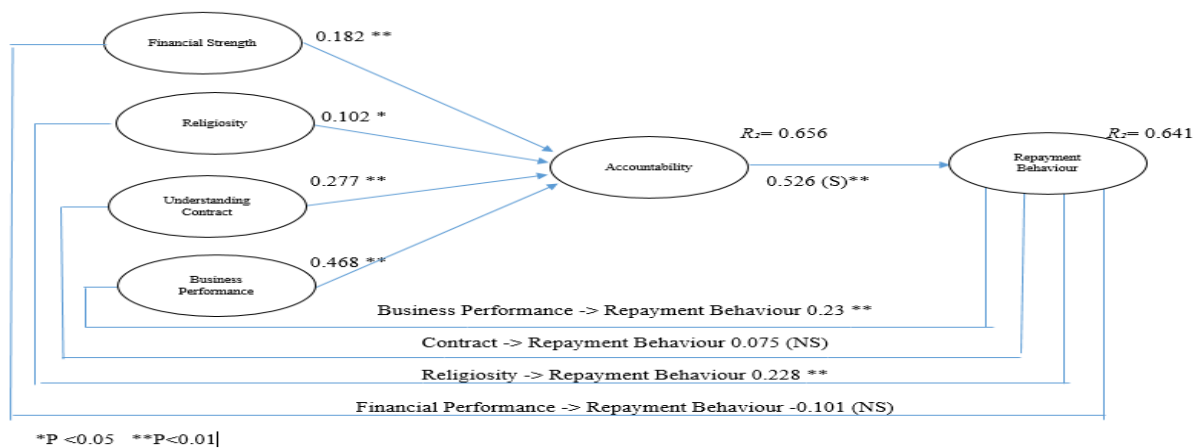
Figure.10: Results of Structural Model

Mediating Analysis

To test the mediation analysis, this research employed the analysis of indirect effect as suggested by Preacher and Hayes (2008) by using the bootstrapping method (with two tails) analysis revealed (refer Table 8) that the indirect effect of accountability between financial strength ($β$ = 0.091) and religiosity ($β$ = 0.053) was positively significant with t-value of 3.481 and 2.358 respectively. The relationship between understanding of contract ($β$ =0.147.) and business performance ($β$ = 0.249) has higher correlation and was strongly positive significant with a t-value of 4.885 and 5.149 respectively. This research also confirms that there is mediation, given that the indirect effect of financial strength 0.091, 95% Boot CI: [LL=0.044, UL=0.145]; religiosity 0.053, 95% Boot CI: [LL=0.120, UL=0.1]; understanding of contract 0.147, 95% Boot CI: [LL=0.092, UL=0.211]; and business performance 0.249, 95% Boot CI: [LL=0.16, UL=0.3510] do not straddle a 0 in between. Based on the above results, this research concludes that the mediation effect of accountability on the relationship between financial strength, religiosity, understanding of contract, business performance, and repayment behaviour is statistically significant. Therefore, all the hypotheses are supported.

Table.3

Indirect Analysis

Ho	Relationship	Std Beta	Decision	LL	UL
H4a	Financial Performance ->Repayment Behaviour	0.0910	Yes	0.0440	0.1450
H4b	Religiosity->Repayment Behaviour	0.0530	Yes	0.0120	0.1000
H4c	Contract -> Repayment Behaviour	0.1470	Yes	0.0920	0.2110
H4d	Business Performance ->Repayment Behaviour	0.2490	Yes	0.1600	0.3510

Discussion of Findings

Based on **H1, the result shows that two hypotheses are significant while another two hypotheses are not significant**. For H1a, the relationship between financial strength with repayment behaviour is positively significant (β = 0.23, p= 0.0). The beta value recorded the highest value compared with other variables. As mentioned by Tinoco (2013) the company that faces difficulties in fulfilling its financial obligation will have the problem of default. Kenton (2019) stated that a company or an individual cannot generate income from business activities which means it is unable to manage its finances especially the operation cost, which will lead to default.

H_{1b}: *There is positive significant relationship between religiosity and repayment behaviour*. Religiosity did not directly affect repayment behaviour and it resulted in no significant relationship (β = 0.075, p= 0.139). This result contradicts with the theory that religion has the power to influence human behaviour because it is related with human spirituality. This result indicates that the knowledge of religion does not directly influence borrower behaviour in repayment. As mentioned under the theory of reinforcement, people's behaviour depends on the consequences of whether they gain benefits or suffer losses (Calvin & McDowell,

2016). Hence, the borrower does not feel the effect will imposed to them if not implementing the religion. As mentioned by (Abou-Youssef et al., 2015) the implementing of religious is not about enough with knowledgeable but most importantly is about taqwa which is the element to drive knowledge doing right things.

$H_{1c:}$ *There is positive significant relationship between understanding of contract and repayment behaviour*.

This result supported the hypothesis by showing positive significant relationship (β = 0.228, p= 0.0) between contract and repayment. The beta value recorded the second highest value compared to other variables, which means that the contract variable has higher correlation with repayment behaviour. This result is parallel with that of the previous study which found that the contract plays a significant role in guiding borrowers to follow the agreement. Most of the borrowers are in default when they fail to fulfil and comply with the agreement of a promissory note. H_{1d}: *There is positive significant relationship between business performance and repayment behaviour.* The result found that business performance has negative correlation (β = - 0.101, p = 0.114) with repayment behaviour. This result contradicts the previous study which showed that good business performance usually can make repayment promptly. Previous studies have established that business performance has positive significant influence on the ability of the borrower to repay debt (Achim & Borlea, 2013; Nawai & Shariff, 2012; Shaharudin et al., 2016). Likewise, (Nawai, 2013) found that good business performance will more likely lead the borrower to repay the loan on time. This result is supported by the studies by Nannyonga (2000); Onyenucheya & Ukoha (2007); Oke et al., (2007); Von Pischke (1991) who showed that borrowers who have higher business performance have a higher chance of repaying their loans compared to borrowers facing declining business performance. However, the result showed that the relationship between business performance and repayment is not significant and has no effect on repayment.

The second research question is *2) Does borrower characteristic have significant relationship with the level of accountability?* From the coefficient analysis path, all the variables have a positive significant relationship with accountability. The result for H2a showed positive significant relationship (β = 0.182, p = 0.0) between financial strength and accountability. The relationship between religiosity and accountability also shown positively significant (β = 0.102, p = 0.013). This result is parallel with the finding of Hess (2012) who explored the impact of religiosity on personal financial decisions, specifically in areas of high religious social norms. This finding is consistent with the study by Vasconcelos (2009) who found that religion teaches people to have good behaviour and to be good in decision making.

H2c result shows positive significant relationship between understanding of contract and accountability with positive beta coefficient (β = 0.277, p = 0.05). This result is consistent with the previous study in that all parties are obligated and responsible for the agreement because they are bound by the agreement (Arsyad, 2006; Rodríguez-Meza, 2000). H2d result showed positive significant relationship between business performance and accountability with beta coefficient (β = 0.277, p = 0.05). This beta coefficient recorded the higher value compared with other variables and it is considered as strongly correlated with repayment behaviour. This result is consistent with the previous study by Shu-Teng et al (2015) who found that business characteristics (business experience) have positive significant relationship with

repayment and is supported by a study from Nawai and Shariff (2013) which revealed that business with higher sales earns more profit and has better payment performance..

3) **Does the level of accountability have significant relationship with repayment behaviour?** The relationship is positively significant (β = 0.526, p = 0.01) as explained by variance of 27.7%. Apparently, this finding is also parallel with the theory of reinforcement and repayment behaviour by (Deng et al., 2016). According to (Deng et al., (2016) the reinforcement learning process is at the heart of successful relationship with repayment behaviour and accountability in which reinforcement encourages borrower to become accountable based on reward and punishment. According to Skinner (1931), human behaviour can be changed based on the impact that is imposed on them.

The fourth research question is 4) **Does the level of accountability mediate the relationship with borrower characteristic?.** Based on the result, it can conclude that the accountability is positively and significantly mediate all relationships. Compared with direct effect, the result of religiosity and business performance is not significant. The correlation of indirect effect between religiosity and repayment behaviour has shown increased value in beta from 0.075 (direct effect) to 1.02 (indirect effect).

Conclusion
This study aims to undertake a comprehensive research effort related to payment behaviour among microfinance borrowers. The primary objective is to acquire a better understanding of the internal factors that influence repayment behaviour. Based on the analysis, the study reveals that borrowers' repayment behaviour is impacted by their characteristics and accountability. Specifically, the findings support H1a, which posits a positive significant relationship between financial strength and repayment behaviour, and H1c, which proposes a positive significant relationship between understanding of contract and repayment behaviour. However, the results do not support H1b, which suggests a positive significant relationship between religiosity and repayment behaviour, and H1d, which asserts a positive significant relationship between business performance and repayment behaviour.

Furthermore, the study addresses the second research question, which examines the relationship between accountability and various factors. The results demonstrate that financial strength, religiosity, understanding of contract, and business performance have a positive significant relationship with accountability. Finally, the study indicates that accountability level also plays a crucial role in repayment behaviour, as the results show a positive significant relationship between the two. Overall, these findings provide a valuable contribution to the existing body of knowledge on microfinance and repayment behaviour, and offer insights that can aid microfinance institutions in developing more effective strategies to improve repayment behaviour among their borrowers.

In conclusion, this study has identified several factors that affect repayment behavior in Islamic microfinance programs. However, there are several areas that could be explored in future studies to provide a more comprehensive understanding of these factors. Firstly, future studies could investigate the impact of social capital on repayment behavior. Additionally, the role of microfinance institutions in promoting responsible borrowing could also be explored. Secondly, this study has highlighted the importance of financial literacy in shaping borrowers' repayment behavior. Microfinance institutions should prioritize financial education and

literacy programs to help borrowers understand the terms and conditions of their loans. Thirdly, to promote accountability, microfinance institutions should put in place measures such as regular loan monitoring and follow-up to make borrowers more responsible.

Fourthly, while this study found that religiosity is not a significant predictor of repayment behavior in Islamic microfinance programs, this result may vary depending on the cultural and social context. Future studies could evaluate the impact of religiosity on repayment behavior in different contexts. Lastly, microfinance institutions could incorporate financial strength indicators into their loan approval processes to ensure that borrowers have the capacity to repay their loans. This could help improve repayment behavior and reduce default rates. Overall, future studies should consider exploring these areas to gain a deeper understanding of the factors affecting repayment behavior in Islamic microfinance programs.

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