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DETERMINANTS OF PERSONAL BANKRUPTCY DISCHARGE IN MALAYSIA: A SOCIAL CAPITAL APPROACH OF AL-NAHD AND TA'AWUN

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ABSTRACT

This study investigates the relationship between Gross Domestic Product (GDP), Consumer Price Index (CPI), Unemployment Rate (UE), Interest rate (IR), Household Debt (HD) on bankruptcy discharge and test the application of an Islamic concept of mutual cooperation, Social Relief Fund (SRF) to enhance the bankruptcy discharge. The study period is from 2000 to 2019. The autoregressive distributed lag (ARDL) was used in the study. Two models were tested; Model 1 consists of the macroeconomic variables without SRF and Model 2, with SRF. Model 1 shows none of the variables has significant effect on bankruptcy discharge for long run relationship. However, Model 2 shows GDP, CPI and SRF have significant positive long run relationship with bankruptcy discharge. This provides statistical evidence that SRF has a beneficial long-run relationship to enhance bankruptcy discharge in Malaysia. For short run relationship, Model 1 reveals GDP, CPI, and UE as significant variables to discharge. Model 2 shows stronger short run relationships in which GDP, IR, HD, SRF are positive and CPI is negative to bankruptcy discharge. These variables are significant at 1 percent level. The findings contribute new knowledge on determinants of bankruptcy discharge in Malaysia. The study provides empirical evidence that SRF is a potential component as a social safety net in providing financial assistance among distressed debtors from bankruptcy. We recommend the use of SRF as the current bankruptcy reform is being viewed from the legislative lens and lacks the social capital component to assist debtors achieve financial restitution.

Keywords: Bankruptcy discharge, macroeconomic variables, social capital, Al-Nahd, Ta'awun.

INTRODUCTION

Financial crisis, economic recession and natural calamities such as COVID 19 pandemic forced many businesses to close down and businessmen to bankruptcy. One of the legal reforms from bankruptcy is bankruptcy discharge. A person can be discharged from bankruptcy by order of the court after the debtor pays all his debts according to the prescribed schedule. As such, there are many factors which affect the

debtor's ability to pay especially when he is already bankrupt. Often, the main issue is the inability to raise the funds for the discharge. In this paper, we investigate macroeconomic factors which influence bankruptcy discharge and testing the application of an Islamic concept of mutual cooperation using Al-Nahd and Ta'awun; Islamic social capital concept to provide a solution for the problem on bankruptcy discharge.

The last quarter century saw a dramatic increase in personal bankruptcy in Malaysia, and this increase led to amendments of the Bankruptcy Act 1967 (BA) in March 2000 and came to force on 1st. October 2003. Another amendment in 2017, was undertaken to BA 1967 with significant changes including renaming BA 1967 as Insolvency Act (IA) 1967. For the period between 2003-2017, the accumulative number of personal bankruptcies stood at 258,667 individuals while the number of bankruptcy discharges stood at 112,867 individuals (Figure 1).

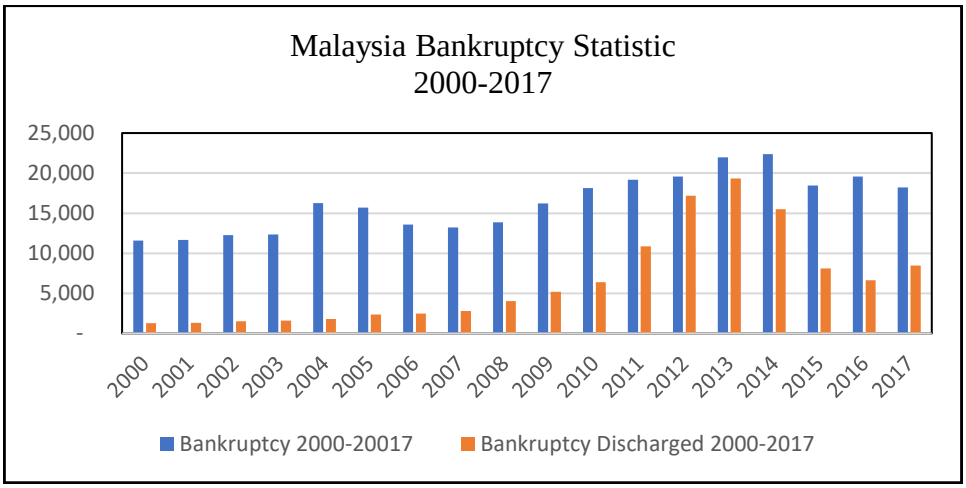

Figure 1. *Malaysia Bankruptcy Statistic 2007-2019*

Despite efforts undertaken to curb the rising number of personal bankruptcies, the annual number of personal bankruptcies and bankruptcy discharges remain high in Malaysia. In 2019, the total accumulative number of personal bankruptcies registered an increase to 287,200 and bankruptcy discharges is at 166,710 whilst the number of undischarged bankrupts is 120,490 (BHEUU, 2019). The highest number of personal bankruptcies constitutes people from the 35-44 age group between 2013 to 2017 (Table 1). This group represents 35.24 percent while the 25-34 age group which represents 22.52 percent constitutes the second largest number.

Table 1
Age Group of Personal bankruptcy

Age Group	2013	2014	2015	2016	2017	Total
Below 25	208	635	122	91	80	1,136
25-34	5,212	4,822	4,648	5,183	4,785	24,650
35-44	7,616	7,641	6507	6601	6241	34606
45-54	5973	6223	4744	4967	4628	26535
55 and above	2818	2867	2299	2536	2354	12874
No info	160	163	137	210	139	809
Total	21987	22351	18457	19588	18227	100610

Source: Malaysian Department of Insolvency

For the 120,490 undischarged bankrupts (as of 2019), they had been debased from the economic mainstream and faced employment problems. The law bars bankrupts from holding senior position or directorship in private and public companies; revoke professional licenses. The bankruptcy reorganization procedures and restrictions percolate into disruptions to bankrupt individuals'

production capacities to earn income. This consequently effects the debtors' financial, spiritual and mental state badly.

In addition, bankrupt individuals are financially incapacitated and restrained by the legal system to formal banking credit facilities and government financial assistance. Loss of job opportunities and accessibility to financing cause acute financial stress not only to the individual bankrupts but also to their immediate family members. Although it is obvious that a discharge order from the Court is necessary, to obtain it, is a difficult process without sufficient capital for the individual bankrupt to fully settle his debts with his creditors.

Numerous studies were developed based macroeconomic aggregates such as consumption, unemployment rate, gross domestic product, and income growth to provide insight to bankruptcy determinants. However, studies particularly on the relationship between macroeconomic factors and bankruptcy discharge are scarce. There exist gaps in the literature in the application of macroeconomic indicators to analyse bankruptcy discharge determinants. Studies exploring proposals to formulate an effective bankruptcy relief program (bankruptcy discharge) with the goal to achieve income sustainability for debtors is also scarce.

The aim of this study is to explore the theoretical and practical gaps of bankruptcy discharge by investigating the link between macroeconmic variables and bankruptcy discharge and, propose a financial framework focusing on financial rehabilitation. The objective of financial rehabilitation proposal is to increase the number of bankruptcy discharge and simultaneously reducing the number of undischarged bankrupts in Malaysia. For many bankrupts, unavailability of capital to settle the outstanding debt commitments is the main issue which hinder them from being discharged. To solve this problem, the proposed framework rehabilitation scheme intends to encapsulates a social capital and Al-nahd and Ta'awun (Islamic approach of contribution and mutual cooperation) model, which would provide personal bankrupts with opportunities to generate sustainable income to meet basic needs, settle debts and secure discharge from bankruptcies. The findings from this study, may provide intuition towards holistic and accurate understandings of bankruptcy discharge.

Part one of this paper is the introduction and literature review on the impact on bankruptcy, bankruptcy discharge, basic terms of social capital, the Al nahd and Ta'awun, income sustainability, economic development in Part two. Followed by Part three for the methodology, findings, discussion and conclusion.

REVIEW OF RELATED LITERATURE

In this section, we explain the key terms used in the study, namely bankruptcy discharge, social capital, Al-nahd (contribution) and ta'awun (mutual assistance).

Theoretical literature

Bankruptcy Discharge

Bankruptcy is a legal process and an instrument of distributive justice by which the debts of firms, individuals, corporations and some local governments in financial distress are resolved (White, 2014; Li et al., 2014). Bankruptcy Discharge is developed based on the underpinning theory that discharge is the relief from bankruptcy granted to person adjudged bankrupt to have fresh financial start. Howard & Margaret (1987) advocate that discharge as the concept of rehabilitation is new in economic theory. The rehabilitation concept encompasses the debtors' emotional and psychological cleansing, their participation in the open credit market and education for public (Porter & Thorne, 2006) Porter & Deborah Thorne (2006) on the other hand, stress that income stability is the main factor to achieve debtors' financial health and sustainability, thus it is a necessity to bankruptcy discharge and to re-start a business. In this context, income sustainability extends the traditional focus from economic and individual interests to a more holistic perspective which include consideration for the environment,

society and future generations. In essence, this new concept is in line with the Islamic perspective of Maqasid al-Shariah.

The main objective of economic rehabilitation of discharge from personal bankruptcy is to provide incentives for the affected person (personal bankrupt) to generate sustainable income and re-enter the economy. This would require the personal bankrupts to review their income and expenses for better financial performance (Porter & Thorne 2006). According to the authors, bankruptcy relief program constructed with a primary focus on capital and income is more effective compared to the practice of addressing solely on debts. Hence, the literature review highlights a gap for researchers to look for wider perspective since the existing focus is on legislative approach only to resolve bankruptcy discharge.

Islam embraces a wider understanding on debts and has more profound reasons in addressing debts. Muslims have to extinguish all debts because a person who fails to meet his debt commitments before his death, will not be allowed to enter paradise pending all debts are paid. If he dies before paying off all his debts, his immediate family members have to settle them for him. Therefore, Islam views debt obligations as a serious matter. Relieving a person from bankruptcies (bankruptcy discharge) becomes an individual and also a social responsibility. Muslims are encouraged to help those indebted group to start fresh, using Islamic social finance or social capital as tools to relive the debt burden.

Social capital

Social capital is defined as neighbourhood networks by Jacobs (1961) and networks, norms, and trust of social life that enable participants to jointly pursue common interests (Putnam, 1995), while Fukuyama et al. (1995) associates trust with social capital. However, Coleman (1990) posits the product of social capital is trust. (Knack & Keefer, 1997) conclude, there are link between level of trust in a country and its growth rate. (Guiso et al., 2000) find that social capital plays an important role in the degree of financial development across different parts of Italy.

The foray of social capital in economics and the first contribution in this field are (Putnam & Helliwell, 1995), and (Knack & Keefer, 1997). Granovetter (1985) argues that economic development is the outcome close community membership via a system and network, members are able to acquire the skills and resources to participate in the economic mainstream. Social capital reduces poverty rates and improves income inequality (Zak & Knack, 1998). The link between social capital, economic performance and regional development was examined by Iyer et al., (2005) and recommended that future research in the development and impacts of social capital will be beneficial from a more region-specific approach. Social capital is an essential part of the individuals and organizations that owned and controlled by them (Greve et al., 2010). Based on the above literature, this paper explores the link between the social capital and bankruptcy discharge as advocated by Putnam et al. (1993).

Al-nahd and Ta'awun

The concept of norms and network or Al-nahd in civic community was the practised by Muslims in times of famine and during their journey to holy battles Al-nahd defined in Arabic as an equal contribution with regard to the providing and sharing of food or meals by each and every member of a group to the overall expenditure of the group ((Ibn Hajar, 1939; Ibn Manzur & Mukarram, n.d.). Several hadith supported the practice of al-nahd and documented in al-Bukhari ((Bukhari, 1981). Narrated by Abu Musa: The Prophet said, "When the people of Ash`ari tribe ran short of food during the holy battles, or the food of their families in Medina ran short, they would collect all their remaining food in one sheet and distribute it amongst themselves equally by measuring it with a bowl. So, these people are from me, and I am from them." (Noordin (2014) as cited from Muhammad Baltaji (2008), highlights the concept of Al-nahd in co-operative insurance in order to justify the valid legal foundations for co-operation

Additionally, ta'awun is mutual assistance or mutual cooperation for the sake of goodness is rooted from Arabic word which is to put on help by others or from others (Sari (2015) as cited from Mahmud (2000). The concept of ta'awun or mutual assistance is in line with universal solidarity (ukhuwwah) for all creatures, in this world co-exist, and work harmoniously together ((Elamin & Tlaiss, 2015; Harangozó & Zilahy, 2015), which augurs ably in the execution of duties as servant and vicegerent of Allah consistent with purpose of human creation (Quran, 51:56).

Empirical Literature

The occurrence of personal bankruptcy and bankruptcy discharge are within the same ecosystem of economic, financial, legal and social systems in Malaysia (Figure 1). Both personal bankruptcy and bankruptcy discharge operate in the same environment within the same period between 2000-2019, and are being influenced by similar macroeconomic factors among others, unemployment rate (UE), gross domestic product (GDP), household debts (HD), inflation (CPI) and interest rate (IR). It can be inferred that said economic variables that influence personal bankruptcy have the same efficacy on bankruptcy discharge.

Macroeconomic factors such as Gross domestic product, inflation, unemployment rate, interest rate, income growth, and household debts are each utilised as a proxy to measure their significant level in influencing personal bankruptcy, (Benito et al., 2004; Carling et al., 2007; Contreras et al., 2018; Ptak-chmielewska & Matuszyk, 2019) focuses on GDP, (Everett & Watson, 1998; Holston et al., 2016; Acosta et al., 2009; Ptak-chmielewska & Matuszyk, 2019) on the unemployment level, Liu, (2009) on the level of inflation. (Everett & Watson, 1998; Holston et al., 2016) on interest rates or, (Altman, 1983;(Croix & Liu, 2009) and (Holston et al., 2016) on the availability of credit.

Existing studies on macroeconomics determinant also focused on Gross Domestic Product (GDP), Consumer Price Index (CPI), House Price Index (HPI), interest rate and personal disposable income and unemployment ((Rahman et al., 2014; Sahiq et al., 2018; Mainal et al., 2016; (Ma'in et al., 2016). Study by (Jureviciene et al., 2016) contributed to personal insolvency literature and showed that inflation, unemployment and interest rate have given impact on additional financial obligation fulfilment.

METHODOLOGY

This study used quantitative method to attain the objectives of this study via comparison the long-run and short-run dynamics results and significant level on discharge (D). The approach is as follows:

Model 1: Macroeconomic variables (GDP, CPI, IR, HD and UE) without social relief fund (SRF)

Model 2: Macroeconomic variables (GDP, CPI, IR, HD and UE) with social relief fund (SRF)

Model Specification

The main focus of the study is the dependent variable which is bankruptcy discharge (D). Based on the above theoretical and empirical gaps in the literature, the conceptual model is expressed as:

$$D_t = f(GDP_t, CPI_t, HD_t, IR_t, UE_t) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (i)$$

$$D_t = \alpha_0 + \alpha_1 GDP_t + \alpha_2 CPI_t + \alpha_3 HD_t + \alpha_4 IR_t + \alpha_5 UE_t + \mathcal{E}_t \ldots\ldots\ldots\ldots (ii)\ (Model\ 1)$$

An expansion model to include social capital variable (SRF)

$$D_t = \alpha_0 + \alpha_1 GDP_t + \alpha_2 CPI_t + \alpha_3 HD_t + \alpha_4 IR_t + \alpha_5 UE_t + \alpha_6 SRF_t + \mathcal{E}_t \ldots\ldots\ldots (iii)\ (Model\ 2)$$

where D represents the dependent variable; bankruptcy discharge and the macroeconomic factors used as the independent variables in each of the above three equations, GDP=Gross domestic products%,

CPI=consumer price index, HD=Household debts, IR=Interest rate, UE=Unemployment and SRF= Social relief fund. In model 2, social relief fund (SRF) is a proposed independent variable representing a new approach to apply Islamic social capital based on the concept of Al-Nahd and Ta'awun incorporated to assess its impact on bankruptcy discharge in Malaysia. In the above equation, α_0 is the constant and α is the coefficient of specific macroeconomic variables. The term ε is referred to as the error term. The error term is defined as the residual error of the regressions and t = 1…n; T refers to the time series period.

Operational Description of Variables

The Bankrutcy Discharge (D), Macroeconomic Factors (GDP, CPI, IR, HD, and UE) and Social Capital factor named as Social Relief Fund (SRF) variables are annual data, collected from Bahagian Hal Ehwal Undang Undang (BHEUU) of Prime Minister Department of Malaysia, Malaysia Department of Statistic Pusat Zakat Selangor (PZS) and Pusat Zakat Wilayah Persekutuan (PZWP). The study period is from 2000-2019. The variables are operationally described in Table 2.

Table 2
The description of variables

Variable type	Variables	Variables Description/ proxy	Source of data Malaysia
Dependent Variable	Personal Bankructy (B)	No.Personal Bankruptcy / Adult Population	BHEUU
	Bankrutcy Discharge (D)	No. Discharge / No. Bankruptcy	BHEUU
Macroeconomic Factors	Gross Domestic Products growth	GDP =% total market value of goods and services produced in a nation during a particular period	Malaysian Statistical Department (MSD)
	Consumer price index (CPI)	CPI is used as a proxy of inflation. Measured by year-on-year change of the CPI index	Malaysian Statistical Department (MSD)
	Unemployment (UE)	No. Unemployed / No. Employed (%) in Labour force .	Malaysian Statistical Department (MSD)
	Interest rate	Average lending rates	BNM Monthly statistical bulletin
	Household Debt	Household Debt % of GDP. Credit consumption= household debts	Malaysian Statistical Department (MSD)
Social Capital/Taa'wun	Social Relief Fund (SRF)	Annual contribution 2.5% of gross income	PZS & PZWS

Confirmation on the stationarity of the variables was done since time series data is applied in this study. Unit root test was subsequently conducted to determine the order of integration of the variables by applying Augmented Dickey–Fuller (ADF). Once the variables' order of integration has been established, ARDL bounds cointegration technique was applied to explore the long-run relationship between the macroeconomic variables, SRF and bankruptcy discharge. Pesaran et al. (2001) states several advantages of the ARDL bounds cointegration technique over other conventional cointegration techniques, among them are its ability for mixed order variables either I(0), I(1), but does not accept

high-order (≥ I(2)) variables (Shahbaz and Islam, 2011; Ozturk & Karagoz, 2012), application of small and finite samples (N < 19) (Pattichis CA, 1999), accommodates the fractionally integrated variables, deals with omitted variables and serial correlation issues, addresses any endogeneity problem and provides unbiased estimates in the long-run model. (Harris & Sollis (2003) posit ARDL technique can estimate both long-run and short-run dynamics simultaneously in a single reduced form of the equation.

ARDL Model Specification for Bankruptcy Discharge

$$\Delta D_t = \alpha_0 + \sum_{j=1}^{k1} \alpha_1 \Delta D_{t-j} + \sum_{j=0}^{k2} \alpha_2 \Delta GDP_{t-j} + \sum_{j=0}^{k3} \alpha_3 \Delta CPI_{t-j}$$

$$+ \sum_{j=0}^{k4} \alpha_4 \Delta HD_{t-j} + \sum_{j=0}^{k5} \alpha_6 \Delta UE_{t-j} + \sum_{j=0}^{k6} \alpha_7 \Delta IR_{t-j} + \sum_{j=0}^{k7} \alpha_7 \Delta SRF_{t-j}$$

$$+ \beta_1 D_{t-1} + \beta_2 GDP_{t-1} + \beta_3 CPAI_{t-1} + \beta_4 HD_{t-1} + \beta_5 UE_{t-1} + \beta_6 IR_{t-1} + \beta_7 SRF_{t-1} + \beta_8 ect_{t-1} + \mathcal{E}_t$$

Variance Decomposition

The next step was variance decomposition (VDC) of the prediction errors. VDC indicates the amount of information each variable contributes to the other variables in the autoregression. It determines how much bankruptcy discharge (D) variance can be explained by each of the variables exogenous shocks in the model.

Impulse response function (IRF)

IRF analysis was included to provide a dynamic simulation and effects of shock in SRF on D. IRF shows graphically period-by-period simulation on the current and future values of the endogenous variables, the long-run effect of the D in response to the shock in SRF, and the size of the impact of the shock as the shock rate dissipates over time.

DISCUSSION OF FINDINGS

Table 3 shows the results of Model 1 (without SRF) where all macroeconomic variables tested are statistically insignificant in the long-run. Table 4 of Model 2 (with SRF) highlights that all variables except for HD and UE are significant at 10 percent level. On individual basis, SRF positively affects D. In term of the estimated coefficient, a 1% increase in D is contributed by a 22.85% increase in SRF. GDP like SRF positively influences the D where an increase of 77.55% in DGP leads to a 1% increase in D. At 10% significance level, both CPI and IR positively influence D. At 1% hike in D is due to 7.25% and 377.2%% increase in GDP and IR respectively. Therefore, we found from the results that the macroeconomic variables (GDP, CPI, IR) and social capital variable (SRF) significantly affect bankruptcy discharge in Malaysia.

Table 3
Dynamic ARDL Long Run Results (without SRF)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP	-6.172739	28.46174	-0.216878	0.8331
CPI	10.78793	10.13094	1.064850	0.3147
IR	197.5422	242.3550	0.815094	0.4361
HD	-7.856535	9.970411	-0.787985	0.4510
UE	240.1023	386.9765	0.620457	0.5503
C	-2286.342	2844.571	-0.803756	0.4422

Notes: *, ** and *** denotes significance at 10%, 5% and 1% level respectively.

Table 4
Long-run relationship between the variables (with SRF)

Variable	Coefficient	t-Statistic	Prob.
GDP	77.54780*	2.185252	0.0806
CPI	7.251366*	2.041114	0.0967
IR	377.2056*	2.193609	0.0797
HD	9.569810	1.488179	0.1969
UE	618.3332	1.988353	0.1035
SRF	22.85216*	2.224681	0.0767
C	-6584.788*	-2.237578	0.0754

Notes: *, ** and *** denotes significance at 10%, 5% and 1% level respectively.

The test results of the short-run dynamics (without and with SRF) are given in Table 5 and Table 6 respectively. A negative sign for error correction term (ECTt-1) at 1% significance level indicates that variable D will response by moving towards the long-run equilibrium path. ECTt-1 is -0.22010 (without SRF) or 22.01%, and -0.439709 (with SRF) or 43.97% of disequilibrium error respectively, corrected annually. Table 5 (without SRF), GDP and CPI and UE negatively affect the D at 1% significance level, while UE negatively affect D at 5% significance level.

In Table 6, the variables of the SRF, GDP, IR and HD positively affect D at 1% significance level, CPI negatively affect D at 1% significance level, while variable UE is not significant with D in Malaysia in the short-run. The SRF coefficient indicates a positive relation and reveals that the short-term imbalances are corrected with a speed of 65.65% each year. This means that the bankruptcy discharge (D) reacts relatively fast to changes in SRF, in the short-term, there is an expressive degree of sensitivity among these variables. It can be inferred that, in addition to contributing to improve the liquidity of debtors, the funds from SRF might have been immediately directed to settle debts.

Similarly, the result obtained for the HD variable in Table 6 reveals that short-term imbalances are corrected with a speed of adjustment of 9.97% each year, indicating that changes in the household debts could expediate the capacity of payment of individual debtors. An even faster response is observed for the IR, which expresses that imbalance in relation to its long-term values are corrected at a rate of 59.5% each year. It is observed for the CPI variable, since its short-term imbalances are corrected with a rate of 39.0% in each year. A negative CPI improves economic stability, increasing the purchasing power of the population, and the results indicate that its effects are quickly perceived by individual debtors. The same, occur for the GDP, since the coefficient obtained shows that short-term imbalances tend to be corrected promptly, with an adjustment speed of 22.625% each year. The sense of the relationship

is positive, confirming the important role that the increase of income levels and the improvement in the economic scenario exert on the bankruptcy discharge (D).

Table 5
Dynamic ARDL Short Run Results (without SRF)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDP)	-5.6485***	1.618430	-3.490094	0.0068
D(CPI)	-13.740***	2.665311	-5.155182	0.0006
D(UE)	-59.0752**	25.60897	-2.306818	0.0465
ECT_{t-1}*	-0.2201***	0.030734	-7.161498	0.0001

* denotes significance at 10%, ** at 5% and *** at 1% level.

Based on the results in Table 6, SRF has similar behaviour for short-run and the long-run. The findings thus, provide statistical evidence that SRF influenced Discharge in both short-run and long-run during the study period.

Table 6
Dynamic ARDL Short Run Results (with SRF)

Variable	Coefficient	t-Statistic	Prob.
GDP	22.62536***	8.986494	0.0003
CPI	-3.898771**	-3.180928	0.0245
IR	59.50382***	4.281827	0.0078
HD	9.976931***	8.145583	0.0005
UE	46.20402**ns**	2.015133	0.1000
SRF	6.563245***	11.87515	0.0001
ECT_{t-1}*	-0.439709***	-11.39867	0.0001

Note: *, ** and *** denote significance at 10%, 5% and 1%. ns: not significant

Table 7 presents the results of Variance Decomposition analysis. They indicate that in the initial period, the incidence of bankruptcy discharge is fully explained by its own behaviour. As time goes by, there is a significant reduction in the share of GDP, HD, CPI, IR, UE, and SRF from period 2 and period 10. What stands out is that the representativeness of GDP, IR, UE and SRF reduce their explanatory power over the periods. For instance, GDP decreased from 6.501367% in period two to 6.4349% in period 10, IR from 3.311568% in period two to 2.985311% in period 10, UE from 6.24% in period two to 3.83% in period 10, and SRF from 0.390143% in period two to 3.48% in period. In contrast, HD increased its participation rate over time, initially explaining 0.050858% of bankruptcy discharge in period two, and 6.365601% in period ten.

At 10^{th} period horizon, GDP and HD are the highest contributors of shocks to D (Discharge). As evidence, a 1% of shock in GDP and HD will contribute to 6.435% and 6.366% variance or shocks to D respectively. The lowest shock in the variance is found in SRF at 0.348%. The reaction of bankruptcy discharge in the face of shocks on the macroeconomic variables demonstrates a greater elasticity, especially in relation to GDP and HD, and to a lesser extent, to IR.

Table 7
Variance Decomposition of Discharge

Period	D	GDP	CPI	IR	HD	UE	SRF
1	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	83.64409	6.501367	6.101910	3.311568	0.050858	6.24E-05	0.390143
3	77.56642	5.593523	5.427608	3.044643	4.330112	3.702375	0.335318
4	75.78478	6.399498	5.266215	2.991194	5.510236	3.710897	0.337176
5	74.51110	6.365409	5.646668	2.987542	6.354176	3.788600	0.346505
6	74.32770	6.433718	5.719365	2.982759	6.360455	3.829388	0.346616
7	74.30959	6.433349	5.733940	2.984246	6.362510	3.828927	0.347440
8	74.29890	6.434369	5.735594	2.985447	6.365277	3.832389	0.348024
9	74.29654	6.434365	5.735103	2.985205	6.365644	3.835054	0.348086
10	74.29572	6.434995	5.735166	2.985311	6.365601	3.835064	0.348141

Impulse response function (IRF)

Figure 2 depicts a negative shock to SRF on the D within the first 3 years and the magnitude response on D which subsequently tapers down time. The time period in years is represented by the vertical axis, the solid line are the estimates points of the IRF which is within 10% standard error bands (broken line).

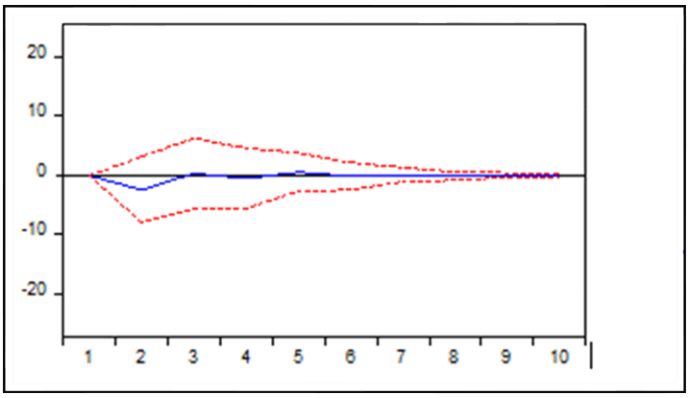

Figure 2. Impulse response of D to SRF

Source(s): Author's derivation

Comparing the results of the variance decomposition with the impulse-response functions, there is a consistency between the two, since the figures show that the reaction of discharge in the face of shocks on the variables demonstrates elasticity, especially in relation to GDP, HD, CPI, UE, IR and to a lesser extent, the SRF.

CONCLUSION

This paper highlights the problem faced in Malaysia with regards to personal bankruptcy and personal bankruptcy discharge. Over 2013 to 2017 period, we found the highest number of personal bankruptcies constitutes people from the 35-44 age group. The main concern of this study is the large number of bankrupt individuals who could not be discharged and have been debased from the economic mainstream, since they face restrictions in terms of employment due to legal restrictions and production

capacities as they are financially incapacitated and restrained by the legal system to formal banking credit facilities and government financial assistance. These hurdles pose financial and mental stress for them to start afresh and earn income to start a new life.

In this paper, we explore the concept of social capital to introduce the needed funds for the bankrupt individuals to obtain discharge and start afresh. The fund is called Social Relief Fund (SRF), a capital raised via Islamic social finance by integrating the concept of Al-Nahd and Ta'awun. The results provide empirical evidence that SRF in the presence of selected macroeconomic variables (GDP, Consumer Price Index), Interest Rate, Unemployment and Household Debt) have significant impact on personal discharge in the long run and short run. GDP, CPI, IR, HD and SRF are positive and significant at 1 percent level to Bankruptcy Discharge. SRF is a relatively new rehabilitative idea, recommended for policymakers in Malaysia to consider it as a rehabilitative approach in bankruptcy reforms. SRF has potential as a social safety net through mutual cooperation (ta'awun) and contribution from society members in providing assistance towards financially distressed debtors to achieve financial restitution, thereby fulfilling the objectives of maqasid-al shariah.

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