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The Viability of Profit and Loss Sharing Based Financing for Malaysian SMEs

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Abstract: Small and Medium Enterprises (SMEs) are vital to the economy. However, they still face financing difficulty in conventional financing due to insufficient collateral. This exploratory study seeks to address this issue by illustrating that pure Profit and Loss Sharing (PLS) that is based on the premise of social justice provides an opportunity to finance SMEs. However, SMEs might be concerned that PLS contracts will reduce their profit since Islamic financial institutions will share the returns based on the profit sharing ratio. This study employs financial data from 30 SMEs in Malaysia to calculate the profit sharing ratio and redistribution of net income between Islamic financial institutions and SMEs. This study then examine SMEs' profit margin ratio from year 2002-2010. The findings show that SMEs have a more stable return per ringgit of sales with lower losses or higher profits through PLS based financing. The results demonstrate that SMEs are not worse-off in PLS based financing and suggest that PLS mode of financing is a viable financing option for SMEs.

Key words: Profit and loss sharing, SMEs, Islamic financing, access to financing constraint, financial data

INTRODUCTION

It is well documented that SMEs do contribute significantly to the economy. In 2011, SMEs contributed 32.5% to Malaysia's gross domestic product and 19% to Malaysia's total export (National SME Development Council, 2012). These 645, 136 SMEs make up 97.3% of Malaysia's total establishments and employ about half of Malaysia's workforce (National SME Development Council, 2012). As Malaysia geared towards high-income and knowledge-based, these contributions are bound to be more significant. By 2020, SMEs are expected to contribute 41% to the nation's gross domestic product, 25% to total export and 62% towards employment (National SME Development Council, 2010). However, this will not be forthcoming if no viable financing alternative to conventional financing is provided for majority of SMEs in the country. In conventional financing, SMEs have difficulty to obtain loans because of lack of collateral and proper documentations. As a result, many SMEs are either deprived of the financing they need to grow their businesses or charged a high interest rate to compensate for the higher credit risk. This high fixed interest rate becomes a big liability during economic downturn.

Conventional financing for SMEs in Malaysia: External financing options available to SMEs are very much collateral-based that is financial institutions will not extend credit without sufficient collateral (Manove *et al*., 2001; Menkhoff *et al*., 2006; Ono and Uesugi, 2009). This collateral requirement is more emphasized in SMEs lending compared to large corporations (Menkhoff *et al*., 2006). SMEs are usually required to pledge additional assets and as a result, SMEs with limited wealth faced difficulty in acquiring financing (Manove *et al*., 2001; Hanley and Girma, 2006; Menkhoff *et al*., 2006). Indeed, the largest challenge for most SMEs in getting financing is to provide sufficient collateral required by financial institutions (Hanley and Girma, 2006; Abor and Biekpe, 2007).

Malaysian SMEs too have financing difficulty (Small and Medium Industries Development Corporation, 2002). Preliminary results from the census of establishment and enterprises 2005 indicated that only 13.7% out of 523, 132 establishments had taken financial institutions and government loans (Aris, 2006). A survey by SME Corporation Malaysia and Bank Negara Malaysia showed that only two-third of the respondents who applied for bank financing was successful (National SME

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Table 1: Amount and percentage of conventional financing to SMEs by Malaysian banking system

Bank report	2002	2003	2004	2005	2006	2007	2008	2009	2010
Amount of loans disbursed to SMEs (RM billion)	49.5	87.1	100.4	110.6	134.1	141.7	162.9	143.2	147.2
Loans disbursed to SMEs over total loans disbursed (%)	12.0	20.9	20.6	20.9	25.8	24.6	25.4	21.8	20.3
SMEs outstanding loans over total outstanding loans (%)	15.2	17.3	17.2	17.2	17.3	17.7	17.2	15.2	14.5
SMEs outstanding loans over total outstanding business loans (%)	35.0	38.4	40.3	42.6	44.5	43.2	42.2	39.5	32.6

Bank Negara annual report, 2002-2010

Development Council, 2010). The main constraint to access financing is lack of collateral, followed by insufficient documents to support loan application (Aris, 2006). Table 1 further illustrate that the amount of loans to SMEs is still very low compared to total loans extended by the Malaysian banking system.

Overall, the amount of loans disbursed to SMEs increased from year 2002-2010, except in year 2009 when a number of SMEs were reclassified as large enterprises. The amount of loans disbursed to SMEs in year 2010 was almost 3 times that of year 2002. This increasing trend was due to various initiatives introduced by the government to increase financing opportunities for Malaysian SMEs. Among notable initiatives are the establishment of SMEs special unit at Bank Negara Malaysia (2010) and the enhancement of Credit guarantee corporation. Notwithstanding the huge monetary amount, the proportion of loans disbursed to SMEs over total loans disbursed by the banking system was still low, fluctuating from the lowest 12% in year 2002 to the highest 25.8% in year 2006. Furthermore, the total SMEs loan outstanding to total loans outstanding in the banking system was relatively low for all years. The highest percentage of SMEs outstanding loans out of total outstanding loans was only 17.7% in year 2007 which represents less than half of the total outstanding business loans in year 2007. The remaining majority of outstanding loans were from large enterprises and households. Thus, majority of loans from conventional financing went to large enterprises that could raise finance from capital markets. SMEs that are in dire needs for funds could not obtain much financing from conventional finance compared to these large enterprises. PLS based financing could fill this gap and help alleviate the access to financing constraints for SMEs.

PLS as alternative to conventional financing

Principles of Islamic finance and wealth management: Islamic Banking and Finance (IBF) system has been considered an alternative to the conventional system. What sets IBF and the conventional system apart is that the former is governed by Shariah principles (Lee and Detta, 2007). In Islam, all beings in this universe and earth are created by the one and only God, Allah. Thus, the ownership of all the wealth on earth lies solely with Allah. Mankind, as trustees is given the responsibility to manage this wealth in accordance to the objective of the Shariah principles (Maqasid al-Shariah). This objective is clearly stipulated by Al-Ghazali in his research, Al-Mustafa fi'ilm Al-isul:

> The objective of the Shariah is to promote well-being of all mankind which lies in safeguarding their faith (din), their human self (nafs), their intellect (aql), their posterity (nasl) and their wealth (mal). Whatever ensures the safeguard of these five serves public interest and is desirable (Chapra, 2000)

Well-being is thus, interpreted from the five necessities aspect (faith, life, intellect, posterity and property) and any action to protect and promote these aspects is considered desirable and in public interest (Chapra, 1985). Consequently, the Shariah guidelines ensure that IBF activities are void of excessive uncertainty (Arabic term: Gharar, for example selling products you do not own) and getting involved directly and indirectly in non-permissible (Arabic term: Haram) activities such as gambling or businesses involving forbidden products like pork, alcohol and the like. Islamic finance also emphasizes transparency and information disclosure (Ayub, 2007).

One well-known distinguishing characteristic of Islamic finance is the prohibition of taking and/or giving interest because interest creates an environment that promotes social injustice (Khan, 1985). Interest is considered unjustifiable gains because the bank charges interest without sharing the risks or responsibility in the project funded by the loan. If the project fails, all liabilities are borne by the borrower and this borrower must still pay the fixed interest rate to the bank. However, prohibition of interest does not mean prohibition of trade as trade is very much encouraged in the IBF system (Ayub, 2007).

PLS contracts for SMEs: PLS based financing contracts and sale contracts are the two types of Islamic financing contracts (Samad *at al*., 2005). Theoretically, the ideal Islamic financing contract is the PLS based financing contract whereby financial institutions share the risk

of the project in return for rewards based on a predetermined ratio (Samad *et al*., 2005; Ayub, 2007). This risk sharing attribute makes PLS based financing well-suited for SMEs.

First, SMEs would not have to pay a high interest to financial institutions during times of economic slowdown. In collateral-based conventional financing, the high interest rate is fixed and sealed when the loan contract is signed by both financial institutions and SMEs. SMEs are then required to pay the same amount every month until the end of the loan period, irrespective of market and economic condition. The 67.5% of 385 Australian small business respondents and 63% of SMEs operating in Sarawak, Malaysia had trouble repaying their loans mainly because of the economic slowdown and high interest rate (Jalaluddin, 1999; Chong, 2010). However in PLS based financing, Islamic financial institutions share the risk of losses with SMEs and will get zero return when SMEs make losses. This risk sharing attribute makes PLS based financing a fair way to obtain capital (Manan and Abdullah, 2012).

Second, because returns on PLS contracts are based on realised profits, Islamic financial institutions have incentives to provide SMEs with networks and resources. This business support will help strengthen SMEs' management skills, especially during economic downturn (Jalaluddin, 1999). Islamic financial institutions could assist SMEs in their strategic planning and also provide reflection on their performance (Hin *et al*., 2013). This is especially true when SMEs need to respond in a timely manner to their challenges to remain competitive (Hin *et al*., 2013). In addition, PLS based financing could contribute towards business expansion and innovation (Manan and Abdullah, 2012). Even the performance-based criteria in extending PLS contracts will motivate SMEs to perform better (Manan and Abdullah, 2012). The researchers (Ng and Kee, 2012) mentioned leadership and management, intellectual capital, motivation, strategy and entrepreneur reputation for honesty and friendliness amongst twelve critical success factors for SMEs. The input by Islamic financial institutions could enhance these factors and improved SMEs performance.

Third, since the returns for Islamic financial institutions are based on SME performance, decision to extend PLS contracts is based on the viability of SMEs rather than on the availability of collateral (Khan, 1995; Abu-Joudeh, 2011). The running business of the SME itself, instead of personal assets of SMEs, serves as collateral. Thus, viable SMEs with limited collateral could access PLS based financing.

MATERIALS AND METHODS

Procedures and sampling: This study used the following financial data collected from financial statement of 30 SMEs from year 2002-2010: Long term debt, fixed assets, investments, inventories, fixed deposits, cash and bank balances, net income, sales revenue, interest expense, depreciation expense and tax paid. These data are used to calculate profit sharing ratio and net income under PLS context for each year over the period of 2002-2010.

The 30 SMEs used in this study must fulfil two selection criteria. First, the SME must have at least 9 years of operation. Second, the SME must have debt financing from financial institutions. These SMEs were chosen randomly from the following 14 economic sectors in Malaysia to manage the unique risk associated with a particular industry and to ensure that the sample is representative of the population: Chemical and petrochemical, electrical and electronics, machinery and engineering, manufacturing related services, metal products, non-metallic mineral products, paper and printing, pharmaceutical, plastic products, professional, medical, scientific and measuring devices and parts, rubber products, textile and apparel, transport equipment and miscellaneous.

Profit sharing ratio and its assumptions: Ideally, the profit sharing ratio should divide the profits between Islamic financial institutions and SMEs based on the level of liability that each party bears in the contract (Sadique, 2012). For Shafi'i and Maliki schools of Islamic law, profit sharing ratio should be based on capital participation while for Hanafi and Hanbali schools of Islamic law, the ratio should incorporate any higher skills or labour input if justified (Hasan, 1985; Sadique, 2012). These approaches are known as the ratio identity approach and ratio divergence approach, respectively (Hasan, 1985). This study applies the ratio identity approach, whereby the profit sharing ratio is the ratio of capital contributed by Islamic financial institutions to total capital or value of the SME.

In this study, Islamic financial institutions are only providing capital to already established SMEs with financing needs. Instead of an interest-based loan, financial institutions and SMEs engage in PLS based financing. The financial institution will receive returns based on the profit sharing ratio instead of a fixed interest income. Thus, the profit sharing ratio only measures the composition of capital extended by financial institutions to the total capital of the enterprise. This is a restricted PLS because this calculation involves many assumptions and a sampe size of only 30 SMEs. The calculation might vary when the number of SMEs increase because of different accounting policies and reporting. The total capital from financial institutions is represented by long term borrowings extended by financial institutions to

SMEs and does not include short term borrowings such as bank overdraft, trust receipts and banker acceptance. Short term borrowing are part of SMEs working capital. The total capital of the enterprise include fixed assets, investments, inventories, cash and bank balances, fixed deposits and the net amount owed by other individuals/companies to the SME. These assets are part of the company value in the event that the enterprise liquidates. In short, the profit sharing ratio is:

$$\sigma = \frac{LTD}{PPE + I + INV + CCE + FD + NAO} \quad (1)$$

Where:

- σ = Profit sharing ratio
- LTD = Long Term Debt from financial institutions
- PPE = Fixed assets
- I = Investments
- INV = Inventories
- CCE = Cash and Cash Equivalents
- FD = Fixed Deposits
- NAO = Net Amount Owed by other individuals/ companies to the SME

This profit sharing ratio calculation is based on several assumptions. First, SMEs and owners of SMEs are considered as the same entity rather than two separate entities. Second, this ratio is calculated without taking into account any accounting standards, either Islamic accounting standards or conventional accounting standards. In order to precisely calculate this ratio, the financial statements used should conform to Islamic accounting standards. However, since this study only wish to highlight that SMEs could still make sufficient return from PLS based financing instead of interest-based loans, this research used financial statements that conform to conventional accounting standards to calculate the profit sharing ratio. Third, profit sharing ratio calculation did not include any labour component for the Islamic financial institutions since, they are merely extending financing in the form of PLS contracts instead of interest-based loans to already established SMEs that needed financing. As for the SMEs, the owners' labour cost has already been accounted for by the SMEs in the form of directors' salary and remuneration in the income statement.

Net income under PLS context and its assumptions: Next, this study calculated the net income in PLS context that will be redistributed between Islamic financial institutions and SMEs based on the profit sharing ratio:

$$NI_{PLS} = NI_0 + INT + DEPR + T_0 + T_{PLS} \quad (2)$$

Where:

- NI_{PLS} = Net Income in PLS context
- NI_0 = Net Income as reported in the income statement
- INT = Interest expense
- DEPR = Depreciation expense
- T_0 = Tax paid by SME
- T_{PLS} = Tax expense in PLS context

Similarly, this calculation is based on several assumptions. First, Islamic financial institutions extend PLS contracts in place of interest-based loans to SMEs. Instead of paying a fixed interest to financial institutions, SMEs share the net income with Islamic financial institutions based on the profit sharing ratio. Hence, interest expense was added back into the reported net income, since SMEs no longer pay interest to financial institutions. Second, fixed assets have been considered as part of the enterprise's capital in the profit sharing ratio calculation. Hence, fixed assets are assumed to have no time value. Thus, depreciation expense was added back to the reported net income. All these adjustments changed the taxable income of the enterprise, thus tax paid by the SME for a particular year was added back to the net income and new tax amount was calculated. This research assumed that the newly calculated profit before tax under PLS context is the new chargeable income for PLS based financing.

Determining SMEs profit margin ratio: This study uses profit margin ratio to measure the profit for each ringgit of revenue made by each enterprise in PLS based financing and conventional financing. For PLS based financing, this ratio is calculated by dividing the returns that have been redistributed to SMEs with sales revenue:

$$\text{Profit margin} = \frac{(1-\sigma)(NI_{PLS})}{REV} \quad (3)$$

Where:

- Profit margin = SME profit margin
- NI_{PLS} = Net Income in PLS context
- REV = Sales revenue

For conventional financing, this ratio was calculated by dividing the net income as reported in the income statement with sales revenue:

$$\text{Profit margin} = \frac{NI_0}{REV} \quad (4)$$

where NI_0 is the net income as reported in the income statement.

Data analysis

Desceriptive analysis and paired sample t-test: This study uses Statistical Package for the Social Sciences (SPSS) to run descriptive analysis (i.e., minimum, maximum, mean and standard deviation) and paired sample t-test for both PLS profit margin ratio and conventional financing profit margin ratio. The paired sample t-test was used to test the null hypothesis that there is no significant change in profit margin ratio from PLS based financing and conventional financing (H_0: $\mu_\delta = 0$).

Profit margin trend analysis: The trend of both PLS profit margin ratio and conventional financing profit margin ratio from year 2002 till 2010 helps to ascertain which profit margin ratio is higher over the years.

RESULTS AND DISCUSSION

Implementation challenges of these results: This study shows that in PLS based financing, the profit sharing ratio is very important to both Islamic financial institutions and SMEs because the net income is distributed between Islamic financial institutions and SMEs based on this ratio. Thus, Islamic financial institutions will need to determine the real amount of capital that each SME has to calculate the ratio. In addition, Islamic financial institutions would want to minimize information asymmetry problems with the SME, since their returns are based on the performance of the SME. However, SMEs are often reluctant to share inside information about the actual performance and operation but at the same time, do not welcome financial institutions' active participation in management (Bin Yusoff and Bin Yaacob, 2010). This situation is reaffirmed by Chaston (1994) findings that only 28.4% of SMEs respondents were willing to share information regarding their enterprise with their bankers on a very regular or regular basis.

The 40% of the bankers respondents felt that SMEs will postpone any contact with the bank for as long as possible when these enterprises face financial problems and 36% of these bankers felt that bankers are the ones who eventually initiate contacts with their SMEs clients (Chaston, 1994). Thus, for PLS based financing to be a viable alternative financing option to conventional financing, SMEs must be able to view Islamic financial institutions as an important partner rather than just a financier.

As mentioned before, Islamic financial institutions could provide valuable inputs to SMEs to remain competitive in the market.

Descriptive statistics: Table 2 presents the descriptive statistics on the profit margin ratio for each of the 30

Table 2: Descriptive analysis on PLS based and conventional profit margin ratios for the 30 SMEs

	PLS conventional			
SMEs	Minimum	Maximum	Mean	SD
1	1.7907	5.5154	3.8801	1.3131
	-2.8099	4.6774	2.2813	2.3435
2	1.6103	6.8020	3.5202	1.5833
	-1.0084	7.7503	3.6153	3.2380
3	2.2279	14.5573	7.3880	4.3473
	2.2159	10.1528	5.5450	2.5952
4	1.4347	11.9141	5.1391	3.5233
	-20.8184	23.0039	-2.6033	14.4136
5	-44.8332	18.5134	0.2431	17.8900
	-62.3732	34.7289	-3.7198	26.9202
6	-5.1000	6.5355	1.0397	3.0671
	-14.9725	2.8771	-2.5074	5.6666
7	-2.0873	7.4697	3.5307	2.8539
	-6.3373	6.8129	1.9984	4.0497
8	5.2255	14.3589	9.6337	3.0972
	0.0512	14.6429	2.8442	4.5464
9	1.8368	10.4124	3.9155	2.7388
	0.7398	7.4504	3.2637	2.9190
10	0.1367	5.7185	3.0888	1.9971
	-1.8041	5.5258	1.7311	2.8880
11	6.4299	13.1998	10.6700	2.0079
	5.0053	12.7038	10.4531	2.2239
12	1.7425	3.3193	2.3609	0.5880
	-0.0020	1.6883	0.8398	0.5608
13	8.5079	19.2899	15.4766	3.8558
	4.5485	18.0420	11.7117	4.9549
14	1.1088	6.8198	3.0543	1.7335
	-0.5621	3.6264	1.2478	1.1699
15	1.2481	6.7640	3.2675	1.9504
	-2.7510	2.7307	0.8028	1.7044
16	1.1129	4.2882	2.5411	0.9176
	0.8202	7.7293	3.3489	2.6263
17	3.0197	13.2087	9.2200	3.5870
	-13.0993	22.2678	-0.1747	10.4077
18	-0.7454	11.9089	5.9937	3.7993
	-19.2063	14.1835	-0.7690	11.3515
19	6.2620	17.6295	10.0008	3.8980
	-2.1976	12.3588	5.4751	4.1336
20	-9.3552	5.2955	1.7902	4.3202
	-14.0821	5.9418	1.6054	6.0681
21	2.1168	4.1409	3.2756	0.7324
	-0.2167	4.9460	2.1981	1.6384
22	8.4683	18.7612	13.3898	3.5245
	-5.5232	15.2135	6.1634	6.0907
23	5.3045	12.3153	8.3854	2.6065
	-0.2250	7.1441	3.4147	2.5923
24	0.8133	13.4478	5.4932	3.4343
	-41.4664	22.3877	-2.8281	18.2357
25	12.3785	18.3495	15.0941	2.2697
	3.7908	19.1704	12.9004	4.3753
26	-8.1202	10.8378	3.3140	5.3823
	-31.7407	3.9229	-13.3459	12.2464
27	1.1478	7.5517	3.6532	2.1742
	-21.6723	13.5276	1.2337	13.2477
28	3.1220	5.6868	4.6282	0.8388
	1.8647	6.6152	4.3307	1.3761
29	1.8912	5.8737	3.9404	1.3687
	-2.7625	2.3521	0.9407	1.5560
30	-7.4458	10.5113	3.8465	4.8033
	-9.5506	7.1308	0.8829	4.4013

Table 3: Paired sample t-test on PLS based and conventional profit margin ratios for the 30 SMEs

		Paired differences							
					95% confidence interval of the difference				
Pairs	SMEs	Mean	SD	SE mean	Lower	Upper	t-values	df	Sig. (2-tailed)
1	1	1.5987954	1.2248425	0.4082808	0.6572981	2.5402927	3.9168	8	0.004
2	2	-0.0950590	2.2581303	0.7527101	-1.8308116	1.6406936	-0.1260	8	0.903
3	3	1.8429476	2.8581709	0.9527236	-0.3540370	4.0399322	1.9340	8	0.089
4	4	7.7423955	14.8322870	4.9440957	-3.6587096	19.1435005	1.5660	8	0.156
5	5	3.9628864	11.4805048	3.8268349	-4.8618108	12.7875836	1.0360	8	0.331
6	6	3.5471114	4.4934115	1.4978038	0.0931696	7.0010532	2.3680	8	0.045
7	7	1.5322755	1.3042609	0.4347536	0.5297319	2.5348192	3.5240	8	0.008
8	8	6.7894520	3.7755602	1.2585201	3.8872995	9.6916044	5.3950	8	0.001
9	9	0.6517141	1.7244326	0.5748109	-0.6738021	1.9772303	1.1340	8	0.290
10	10	1.3576725	2.0812032	0.6937344	-0.2420819	2.9574269	1.9570	8	0.086
11	11	0.2169916	1.2052150	0.4017383	-0.7094186	1.1434018	0.5400	8	0.604
12	12	1.5211479	0.5596527	0.1865509	1.0909608	1.9513351	8.1540	8	0.000
13	13	3.7649651	2.6413253	0.8804418	1.7346627	5.7952674	4.2760	8	0.003
14	14	1.8065126	2.0244649	0.6748216	0.2503711	3.3626540	2.6770	8	0.028
15	15	2.4646745	1.5999394	0.5333131	1.2348523	3.6944968	4.6210	8	0.002
16	16	-0.8078532	2.6259556	0.8753185	-2.8263414	1.2106350	-0.9230	8	0.383
17	17	9.3946761	11.1951038	3.7317013	0.7893576	17.9999946	2.5180	8	0.036
18	18	6.7626413	8.2439347	2.7479782	0.4257921	13.0994905	2.4610	8	0.039
19	19	4.5257214	3.7070283	1.2356761	1.6762472	7.3751956	3.6630	8	0.006
20	20	0.1848467	1.9536235	0.6512078	-1.3168412	1.6865347	0.2840	8	0.784
21	21	1.0774282	1.4857415	0.4952472	-0.0646138	2.2194703	2.1760	8	0.061
22	22	7.2263937	4.0925631	1.3641877	4.0805712	10.3722162	5.2970	8	0.001
23	23	4.9706753	1.9290327	0.6430109	3.4878895	6.4534611	7.7300	8	0.000
24	24	8.3212526	16.6050584	5.5350195	-4.4425252	21.0850304	1.5030	8	0.171
25	25	2.1937451	5.5716183	1.8572061	-2.0889798	6.4764701	1.1810	8	0.271
26	26	16.6599164	8.2620178	2.7540059	10.3091673	23.0106655	6.0490	8	0.000
27	27	2.4195033	12.0975852	4.0325284	-6.8795239	11.7185304	0.6000	8	0.565
28	28	0.2974876	0.8505494	0.2835165	-0.3563025	0.9512778	1.0490	8	0.325
29	29	2.9996847	1.1261770	0.3753923	2.1340284	3.8653409	7.9910	8	0.000
30	30	2.9635546	1.6157560	0.5385853	1.7215746	4.2055346	5.5020	8	0.001

Difference between PLS profit margin and conventional profit margin for each SME

SMEs under PLS based financing and conventional financing. The mean results show that all 30 SMEs have positive average profit margin ratio with PLS based financing. However, 7 SMEs report a negative average profit margin ratio under conventional financing. Table 2 also reveal that the highest loss for an SME under PLS based financing is RM 0.45 for each ringgit of sales but the highest loss for an SME under conventional financing is RM 0.62 for each ringgit of sales. In addition, 25 SMEs has lower spread in their profit margin ratio under PLS based financing compared to under conventional financing. To summarize, the statistics indicate that SMEs have a more stable returns under PLS based financing compared to under conventional financing with lower losses.

Paired sample t-test: Table 3 highlights the results of paired sample t-test. Based on the results, the null hypothesis is rejected for 17 SMEs out of the 30 SMEs. This implies that the profit margin ratios for the 17 SMEs are significantly different for PLS based financing and conventional financing over the 8 years period. Moreover, confidence intervals for all these 17 SMEs suggest that the mean difference between PLS profit margin ratio and conventional financing for all these SMEs are statistically significantly >0. This situation indicates a higher profit margin for PLS based financing. However for the remaining 13 SMEs, the profit margin ratios are not statistically significantly different under these different types of financing. There is no significant evidence of a difference in profit margin ratio, on average when SMEs utilized PLS based financing compared to when SMEs utilized conventional financing.

Trend analysis for profit margin ratio: The trend analysis from year 2002-2010 illustrates that PLS based financing improve profits. The PLS profit margin ratios are more stable over the years compared to the conventional financing profit margin ratios. For most companies, the PLS profit margin ratios are higher than conventional financing profit margin ratios in most years. In years when the SME suffered a loss for each ringgit of sales from conventional financing, the enterprise either suffer lower

loss for each ringgit of sales made by the enterprise under PLS based financing, as shown in Fig. 1a for year 2002 or even earn a return for each ringgit of sales made by the enterprise under PLS financing, as reflected in Fig. 1b for year 2002 and 2006.

In addition, the PLS profit margin ratios for 11 out of the 30 SMEs were consistently higher than the interest-based conventional financing profit margin ratios for all years, from year 2002 till 2010. Profit margin ratios for these SMEs are shown in Fig. 2a-2k.

From the results, none of the 30 SMEs have PLS profit margin ratio that was consistently lower than the conventional financing profit margin ratio for >3 years. Only 5 SMEs have PLS profit margin ratios which are consistently lower than the conventional financing profit margin ratios for 3 years. This situation is reflected

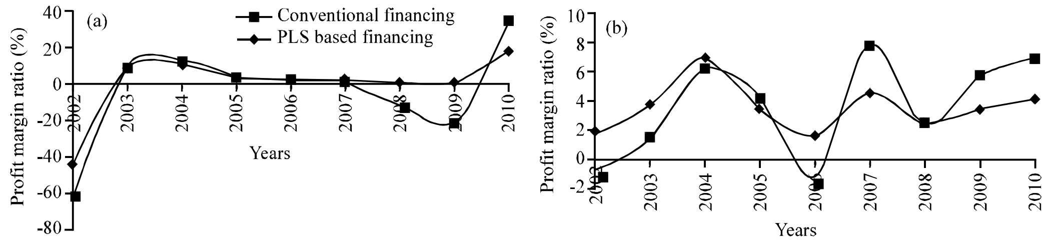

Fig. 1: Improved PLS profit margin compared to conventional financing profit margin: a) SME 5; b) SME 2

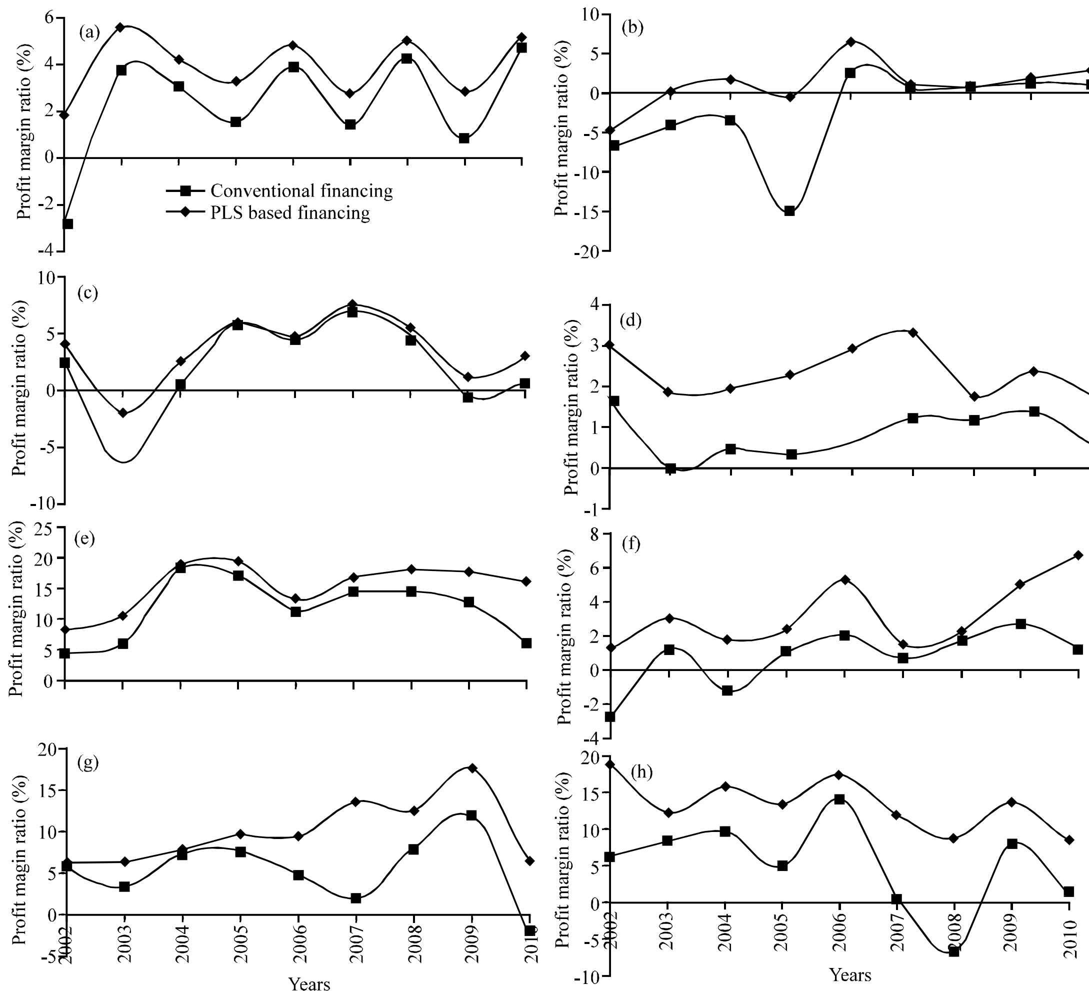

Fig. 2: Continue

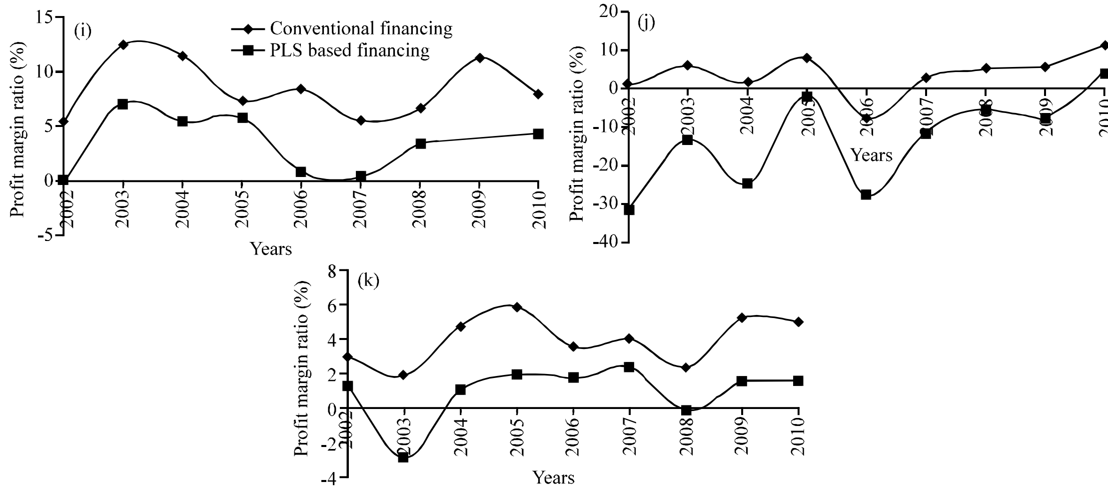

Fig. 2: Consistently higher PLS profit margin ratio from 2002-2010; a) SME 1; b) SME 6; c) SME 7; d) SME 12; e) SME 13; f) SME 15; g) SME 19; h) SME 22; i) SME 23; j) SME 26; k) SME 29

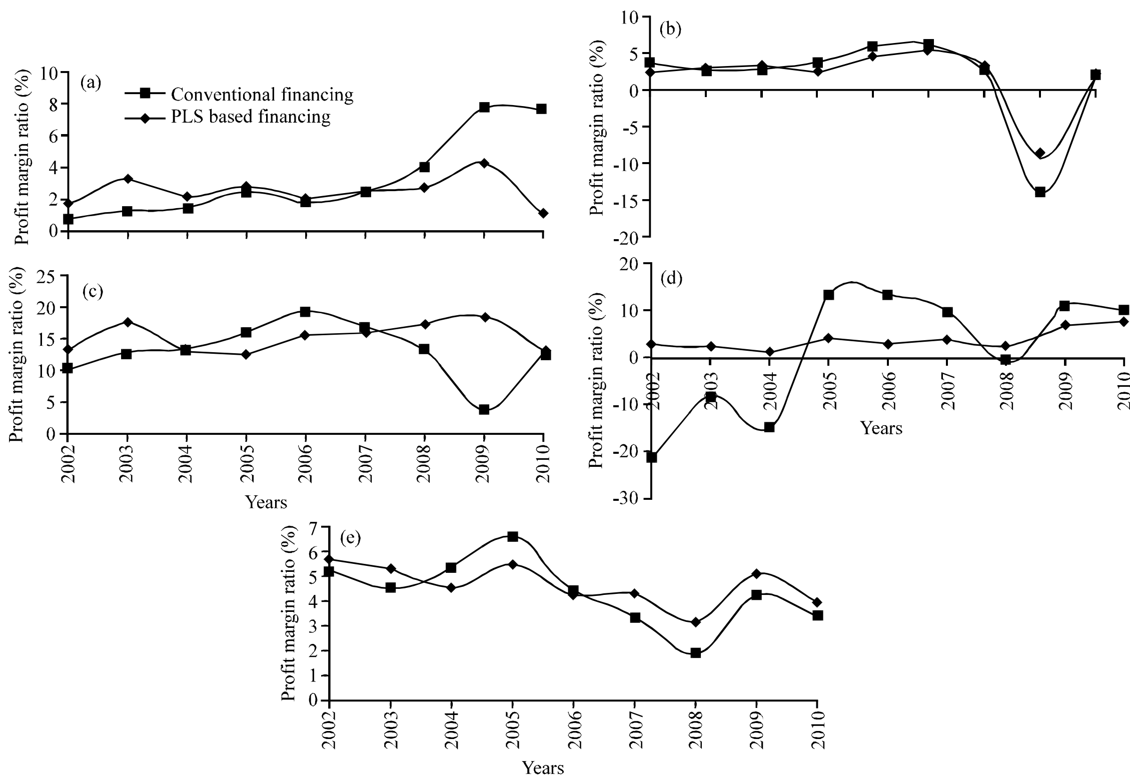

Fig. 3: Consistently lower PLS profit margin ratio for 3 years; a) SME 16; b) SME 20; c) SME 25; d) SME 27; e) SME 28

in Fig. 3a-e. These 5 SMEs are also part of the 13 SMEs mentioned in the paired sample t-test result above. Share of the profits was higher than the interest expense of these SMEs. The 2 of these SMEs were highly debt dependent and as a result had high profit sharing ratios over the years.

The results of the trend analysis also demonstrate that although, the remaining 8 of the 13 SMEs mentioned in the paired sample t-test result shows no significant different in the difference between PLS profit margin and conventional profit margin ratio, this should not be a cause of concern for SMEs since none of these SMEs

have lower PLS profit margin ratios for >2 years. For these SMEs, the additional returns from PLS based financing could be invested or used to expand the SMEs to generate more returns.

CONCLUSION

SMEs are vital for economic growth, employment and social stability. They currently contribute to >30% of gross domestic product. Despite their economic importance, they face financing constraints from collateral-based conventional financing. Conventional financial institutions perceive SMEs as risky and usually demand for either collateral or some form of guarantee before they provide the required financing which in most cases the SMEs lack. As an alternative, it is proposed that they could be financed based on PLS mode that will help to share the risk. This study intends to promote PLS principle as alternative financing option for SMEs and show that it benefits the SMEs. Pure PLS principle does not require personal assets as collateral since the running business of the SMEs is the collateral itself. The decision to extend the PLS based financing would be based on the viability of SMEs rather than the availability of collateral since the returns for Islamic financial institutions are based on the performance of the SMEs (Abu-Joudeh, 2011). Thus, this alternative financing option could help reduce constraints faced by viable SMEs who lack collateral. This financing mode will allow more SMEs access to finance their activities.

This study demonstrates that on average, PLS based financing provide SMEs a more stable return per ringgit of sales compared to conventional financing, with lower losses or higher profits. However when the SME is too debt dependent, the SME will have lower returns from PLS contracts because a higher portion of returns will be redistribute to financial institutions based on the profit sharing ratio. Previous study by Jalaluddin (1999) showed that these enterprises support PLS contracts because the following various factors: Business support, risk sharing attribute, default risk in conventional debt financing, cost of borrowing and suitability for business funding. This study adds better stable returns to this list of reasoning. However, this exploratory study employs only 30 SMEs. Future research can address the PLS contracts with a larger sample of SMEs of at least 100 or even 500 SMEs for better validity of the findings.

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