

DETERMINANTS OF SUSTAINABLE GROWTH RATE (SGR) BY USING ZAKON'S MODEL TO ENCOUNTER WITH SHARIAH COMPLIANCE REQUIREMENTS FOR SHARIAH SECURITIES COMPLIANCE FIRMS IN MALAYSIA

Normaisarah Binti Abdul Manaf

Department Finance and Economics,
Universiti Tenaga Nasional, 26700 Muadzam Shah, Malaysia.

Sarah@uniten.edu.my

Noriza Binti Mohd Saad

Department Finance and Economics,
Universiti Tenaga Nasional, 26700 Muadzam Shah, Malaysia.

Noriza@uniten.edu.my

Nor Edi Azhar Binti Mohamad

Department Finance and Economics,
Universiti Tenaga Nasional, 26700 Muadzam Shah, Malaysia.

NorEdi@uniten.edu.my

Inaliah Binti Mohd Ali

Department Accounting,
Universiti Tenaga Nasional, 26700 Muadzam Shah, Pahang.

Inaliah@uniten.edu.my

Norfhadzilahwati Binti Rahim

Department Finance and Economics,
Universiti Tenaga Nasional, 26700 Muadzam Shah, Malaysia.

putri_jelafhad@yahoo.com

ABSTRACT

An issue on sustainability is one of area that received more comprehensive attentions by managers, and investors to handle and invest their business investment. Sustainable growth rate (SGR) is a pivotal indicator to the firm in gauging their business prosperity performance. The existing SGR models are fit to non-shariah firm since the element included in their model equation was not parallel with the maqasid al-shariah. These diverse indicators in the existing models mentioned become main objective of this study to be conducted. In addition to that, most of the public listed firms in Malaysia are going for shariah compliance. Thus, the development of the iSGR model is very useful in enhancing their business performance as regards to profitability, leverage, dividend and liquidity. Furthermore, iSGR model can gauge the future business prosperity and as benchmarks for Shariah Securities Compliance Firms based on shariah compliant requirements.

Keywords: SGR, Zakon's Model, Shariah securities, Performance

INTRODUCTION

Sustainable growth attaches great importance due to increasing the value of company into one comprehensive measure by combining operating and financial (Jagadish, 2011). The combination of operating and financial such as profit margin, asset efficiency, and capital structure and retention rate that mostly have association with sustainable growth (Amouzesh et al, 2011). Previous studies describe four growth rate models such as Van Horne's model, Higgen's model, Zakon's model and a simple model. Research study by Philips et al (2010) stated that some of financial dynamics affecting firm growth is capital structure; and earnings growth is one of the key valuation models.

In the long term, the company used to finance by mix of debt and equity known as capital structure. Therefore, the company's capital structure will remains the same by determining the sustainable growth. Furthermore, the company's capital structure will consistent by maintaining the earnings and increasing its owners' equity, even though there will be slight year to year deviations in the actual capital structure. Then, sustainable growth will be affected when the company's capital structure changes such as if financial leverage increase, it will increase the sustainable growth and if financial leverage decrease the sustainable growth also decrease (Jagadish, 2011). Sometimes too much growth rate causes financial stress to the company (fonseka et al, 2012). Consequently, firm will face higher costs, financial losses, higher debt, declining market share and bankruptcy. But, growth will give benefit in a certain level and can improve the financial condition of company. At the same time, firm can sustain their growth for strategic planning.

LITERATURE REVIEW

Sustainable growth rate in a business context is defined as the maximum pace at which a company can grow revenue without depleting its financial resources (Higgins, 1977). It is seen as a valuable because it combines a company's operating (profit margin and asset efficiency) and financial (capital structure and retention ratio) elements into a single measure.

Nasrollah Amauzesh, et. al (2011) examined the relationship between sustainable growth rate with liquidity and firm performance. The study used a linear regression to examine 54 listed companies in the Iran financial market. The result shows the deviation of actual growth rate from sustainable growth rate is having relationship with return on assets (ROA) and price to book ratios. Instead of sustainable growth rate, Bivona (2000) in his study looked at the relationship between sustainable growth policies in a changing market with profitability performance. A sustainable growth policies companies were represented by combining three main elements such as structure in terms of resources, management activities and operational activities. The study found that to assess business growth

strategies, a feedback approach could useful support small business entrepreneurs. Then, this feedback approach can comply with profitability level, a desired balance financial structure and external key factors' requirements.

Taking into consideration for firm leverage to proxy the sustainable performance and enhance the business prosperity, Korteweg (2009) concludes that the market expects them to lever up in the future to capture the benefits of leverage. Shaikh Salman (2010) stated that leveraged firms can increase their returns in booms, but in slumps, they lose the edge and can even go bankrupt and make both their shareholders and creditors suffer. In economic booms, leveraged companies are more profitable than non-leveraged companies, but in recessions, leveraged companies are less profitable and hence riskier than non-leveraged companies. Thus, leveraged companies are depending on the assumption that the economic boom will last indefinitely.

As claimed by Park & Jang (Shawn) (2013) debt leverage is an efficient way to reduce free cash flows and enhance firm performance. Their results revealed a positive influence on firm performance by debt leverage, which supported the signaling effect theory (Ross, 1977). However, Anderson & Nyborg (2011) have an inverse argument that leverage is negatively related to growth and profitability performance. Similar result indicated by prior study, Dhanapal & Ganesan (2010) found that there have negative relationships between growth rate and financial leverage but has positive relationship with operating leverage.

The recent global crisis has sparked interest in the relationship between income inequality, credit booms, and financial crises (Bordo & Meissner, 2012) as indicator to consider firm sustainability was affected. As proposed by two previous study, Rajan (2010) and Kumhof & Ranci ere (2011) rising inequality led to a credit boom and eventually to a financial crisis in the US in the first decade of the 21st century as it did in the 1920s. Data from 14 advanced countries between 1920 and 2000 suggest these are not general relationships. Credit booms heighten the probability of a banking crisis, but we find no evidence that a rise in top income shares leads to credit booms. Instead, low interest rates and economic expansions are the only two robust determinants of credit booms in their data set. Anecdotal evidence from US experience in the 1920s and in the years up to 2007 and from other countries does not support the inequality, credit and crisis nexus. Rather, it points back to a familiar boom-bust pattern of declines in interest rates, strong growth, rising credit, asset price booms and crises.

Park and Jang (Shawn) (2010) studied on understanding the growth patterns of an industry is essential for establishing sustainable growth strategies. However, until recently little had been known about restaurant firm growth patterns. Thus, this study examined the growth patterns of restaurant firms in association with firm size class and internationalization, after controlling for total and long-term debt leverage, retained earnings, and growth opportunity. Overall, the results of this study showed that small restaurant firms grow faster than large restaurant firms but the growth rate decreases as firm size increases. Furthermore, the growth rate of large firms decreased more slowly than small firms.

The SGR is represent by the Zakon's model from Zakon (1989) as stated below:

$$SGR = D/E \cdot (R-i) \cdot p + R \cdot p \tag{1}$$

Where:

SGR =sustainable growth rate

D/E = debt / equity ratio

R =ROA

i=interest rate (1- taxation rate)

p=retention ratio

$$iSGR = ROE \cdot (R-pr) \cdot p + R \cdot p \tag{2}$$

Where :

iSGR =syariah sustainable growth rate

ROE = iNet income / shareholders' equity

R =ROA

Pr =profit rate (1- taxation rate)

p=retention ratio

RESEARCH METHOD

The sample consists of 450 public-listed companies under shariah compliant securities for ten-year period from 2004 to 2014. Non-shariah compliant companies are excluded because they are governed by non- shariah rules. This study gathered secondary data from Bloomberg software from Bursa Malaysia. Data has been analyze by using IBM SPSS.

Table 1. List of variables

Variable	
Dependent	SGR(LGRWTH)
Independent	DPS
	CR
	NPM
	LNTA
Control	Sector

RESULTS AND ANALYSIS

The Durbin–Watson statistic is a test statistic used to detect the presence of autocorrelation (a relationship between values separated from each other by a given time lag) in the residuals (prediction errors) from a regression analysis. The Durbin-Watson statistic is always between 0 and 4. A value of 1.926 means that there is no autocorrelation in the sample. Values approaching 0 indicate positive autocorrelation and values toward 4 indicate negative autocorrelation. As can be seen from Table II, the value of our R² is 0.135, which means that 13.5 percent of the total variance has been ‘explained’. Not very impressive, but not bad either compared with the R² values one tends to get in analyses of social survey data.

Table 2. Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin-Watson	
					R Square Change	F Change	df1	df2		Sig. F Change
1	.135 ^a	.018	.017	1.41227	.018	13.523	4	2934	.000	1.926

a. Predictors: (Constant), LNTA, NPM, CR, DPS

b. Dependent Variable: LNGROWTH

ANOVA value will help you determine if your condition means were relatively the same or if they were significantly different from one another. Put differently, this value will help you determine if your IV had an effect. In this table, the Sig. value is 0.00. You can conclude that there is a statistically significant difference between your three conditions. You can conclude that the differences between condition Means are not likely due to change and are probably due to the IV manipulation.

Table 3. ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	107.884	4	26.971	13.523	.000 ^b
	Residual	5851.873	2934	1.995		
	Total	5959.757	2938			

a. Dependent Variable: LNGROWTH

b. Predictors: (Constant), LNTA, NPM, CR, DPS

In the coefficient table, the coefficient for dividend per share (DPS) is -0.653. So for every unit increase in DPS, a 0.653 unit decrease in company growth is predicted, holding all other variables constant. The coefficient for current ratio (CR) is -0.006. So for every unit increase in CR, a 0.006 unit decrease in company growth is predicted, holding all other variables constant. The coefficient for net profit margin is 0. So for every unit increase in NPM will not give any impact in company growth is predicted, holding all other variables constant. The coefficient for loan to total asset (LNTA) is -0.085. So for every unit increase in LNTA, a 0.085 unit decrease in company growth is predicted, holding all other variables constant.

Table 4. Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	4.239	.119		35.537	.000
	DPS	-.653	.147	-.083	-4.428	.000
	CR	-.006	.005	-.024	-1.331	.183
	NPM	.000	.000	.039	2.139	.032
	LNTA	-.085	.020	-.080	-4.273	.000

a. Dependent Variable: LNGROWTH

Referring to the correlations table, LNTA has a strong negative correlation with company growth while net profit margin has a weak positive correlation with company growth in sharia compliance companies. Looking at the correlation for CR and DPS, both has strong negative correlations with company growth. Loan to total asset were indicate two tails significant at 0.01 level while NPM and DPS were indicate two tails significant at 0.05 level.

Table 5. Correlations

		LNGROWTH	LNTA	NPM	CR	DPS
LNGROWTH	Pearson Correlation	1	-.097**	.037*	-.021	-.100**
	Sig. (2-tailed)		.000	.046	.255	.000
	N	2954	2939	2954	2954	2954
LNTA	Pearson Correlation	-.097**	1	.015	-.068**	.235**
	Sig. (2-tailed)	.000		.269	.000	.000
	N	2939	5259	5259	5259	5259
NPM	Pearson Correlation	.037*	.015	1	.027*	.023
	Sig. (2-tailed)	.046	.269		.049	.101
	N	2954	5259	5284	5284	5284
CR	Pearson Correlation	-.021	-.068**	.027*	1	.028*
	Sig. (2-tailed)	.255	.000	.049		.039
	N	2954	5259	5284	5284	5284
DPS	Pearson Correlation	-.100**	.235**	.023	.028*	1
	Sig. (2-tailed)	.000	.000	.101	.039	
	N	2954	5259	5284	5284	5284

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

CONCLUSION

This study would like to demonstrate the new compatible of financial model for firm's sustainable growth in their business performance that meets the shariah compliance objective and requirement. Therefore, this results comply with the Stakeholder theory that can create as much value as possible for stakeholders and to be sustainable over time aligned in the same direction based on Shariah Compliance for prosperity business performance.

A new model develop serves as a benchmarking to strengthen the firm's Shariah companies financial stability and sustainability in facing the stiff challenges of the current global economy specifically in Emerging Market. The concerns of shareholders as one of the owner of the firm towards shariah compliance benchmarking as an assessment by regulators in Malaysia such as Security Comission, Bank Negara Malaysia, and Bursa Malaysia.

REFERENCES

- Amouzesh, N., Moeinfar, Z., Mousavi, Z. (2011). Sustainable Growth Rate and Firm Performance: Evidence from Iran Stock Exchange. *International Journal of Business and Social Science*, 2(23).
- Anderson, R. W. and K.G. Nyborg. 2011. Financing and Corporate Growth Under Repeated Moral Hazard. *Journal of Financial Intermediation*. 20, 1 – 24
- Bivona, Enzo (2000). How to define and profitable and sustainable growth policy in a changing market? a case study: a small publishing company, *Proceedings of the 18th International System Dynamics Conference, Bergen, Norway, August*.
- Bordo, M.D., and Meissner, C.M. (2012), “Does inequality lead to a financial crisis?”, *Journal of International Money and Finance*, 31(8), 2147-2161.
- Chathoth, P.K. & Olsen, M.D. (2007), The Effect of Environment Risk, Corporate Strategy, and Capital Structure on Firm Performance: An Empirical Investigation of Restaurant Firms, *Hospitality Management*, 26, 502–516.
- Chung YP, Na HS and Smith R. (2013) How important is capital structure policy to firm survival? *Journal of Corporate Finance*, 22, 83-103.
- Conning, Jonathan, 1999, Outreach, Sustainability and Leverage in Monitored and Peer-Dewally M, Shao Y, Singer D (2013) The liquidity crisis: evidence from the US hospitality industry. *Tourism Economics* 19(3) 545–563
- Dhanapal, C., & Ganesan, G. (2010). Enterprise Sustainable Growth Rate Analysis: An Empirical Study. International Conference on Business and Economics, 15-16, March 2010, Malaysia. Retrieved from http://www.internationalconference.com.my/proceeding/icber2010_proceeding/PAPER_242_EntrepriseSustainable
- Fatemi, A.M. & Fooladi ,I.J. (2013). Sustainable finance: A new paradigm, *Global Finance Journal*,24, 101–113.
- F. Javier Sánchez-Vidal. (2014), High debt companies' leverage determinants in Spain: A quantile regression approach, *Economic Modelling*, 36(C), 455-465
- Fonseka, M. M., Ramos, C. G., Tian, G. (2012). The Most Appropriate Sustainable Growth Rate Model for Managers and Researchers *The Journal of Applied Business Research*, 28(3).
- Guariglia, A., Liu, X.X. and Song, L.N. (2011) Internal Finance and Growth: Microeconomic Evidence on Chinese Firms. *Journal of Development Economics*, 96, 79-94.
- Higgins, R.C. (1977). How Much Can a Firm Afford? *Financial Management*, Autumn, 7-16.

Hong-Yi Chen a, Manak C. Gupta b, Alice C. Lee c, Cheng-Few Lee. (2013), Sustainable growth rate, optimal growth rate, and optimal payout ratio: A joint optimization approach, *Journal of Banking & Finance* 37,1205–1222

Iliea, L. & Olaru, R. (2013). Leveraging and Deleveraging: Pluses and Minuses, *International Economic Conference of Sibiu 2013 Post Crisis Economy: Challenges and Opportunities, IECS 2013 & Procedia Economics and Finance* 6, 634 – 644.

Jagadish, R. R. (2011). Performance Analysis with Sustainable Growth Rate: A Case Study *International Journal of Research in Commerce, Economics and Management*, 1(1), 2231-4245.

Johnson, R., & Soenen, L. (2003). Indicators of Successful Companies, *European Management Journal* , 21(3), 364–369.

Kanani , M. A., Moradi, J., Valipour, H. (2013). Sustainable Growth and Firm Risk from the Signaling Perspective *Asian Economic and Financial Review*, 3(5), 660-667.

Korteweg, A. (2009). The net benefits to leverage, *Journal of Finance*, forthcoming.

Kumhof, M. and R. Ranciere. (2011). “Inequality, Leverage and Crisis.” *IMF Working Paper WP/10/268*, November. Retrieved from <http://www.imf.org/external/pubs/ft/wp/2010/wp10268.pdf>.

Kwangmin Parka, SooCheong (Shawn). (2014) Jangb, Capital structure, free cash flow, diversification and firm performance: A holistic analysis, *International Journal of Hospitality Management* 33 51–63

Lourenço, I. C., & Branco, M. C. (2013). Determinants of corporate sustainability performance in emerging markets: the Brazilian case, *Journal of Cleaner Production* 57, 134-141.

Maurice Obstfeld, Financial Flows, Financial Crises, and Global Imbalances, *International Conference on Macroeconomic Analysis and International Finance*, Monitored Lending, *Journal of Development Economics* 60, 229-248.

O’Connor, T. (2013). Equity market liberalization and firm growth, *Review of Development Finance* 3, 1–12.

Onofrei M., Anghel I. (2012), Risks and Rewards of Leverage in Romanian Real Estate Investment, *Procedia Economics and Finance*, 3, 481–488

Phillips, M., Volker, J., Anderson, S.J. (2010). Understanding Small Private Retail Firm Growth using the Sustainable Growth Model. *The Journal of Finance and Accountancy*.

Rajan, R.G. (2010), *Fault lines: How hidden fractures still threaten the world economy*, Princeton University Press, Princeton.

Ross, S.A. (1977). "the Determination of Financial Structure: the Incentive-Signaling Approach." *the Bell Journal of Economic*, 8, 23-40.

Salman Ahmed Shaikh. (2010). A Brief Review & Introduction to Practiced Islamic Banking & Finance, *Munich Personal RePEc Archive*, Paper no19458.

Semmler, W. & Bernard, L. (2012). Boom-bust cycles: leveraging, complex securities, and asset prices. *Journal of economic behavior & organization*, 81 (2), 442–466.

Wu, X., & Yeung, C. K. A. (2012). Firm growth type and capital structure persistence. *Journal of Banking & Finance*, 36(12), 3427-3443.

Żygadło, K. D., Słoński, T. (2010). Sustainable Growth Rate in the Strategic Analysis of Brewery Industry, *Agris On-Line Papers in Economics and Informatics*, 2(1).