Research Paper

The Determinants of Capital Structure for Malaysian Food Producing Companies

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Abstract

The aim of the research is to investigate profitability, size, growth opportunity, asset tangibility and liquidity which are firm specific factors determine the capital structure of Malaysia’s listed companies in food producer sector. The research done on 45 companies listed under food producer sector at Bursa Malaysia which covered the period of 2003-2012, total observations of 450 firms-years. The dependent variable is total debt ratio and independent variables are profitability, size, growth opportunity, asset tangibility and liquidity. The research employed Pearson correlation coefficient and multiple linear regressions and the findings shows profitability, size and liquidity are negatively significant related to total debt ratio. Tangibility is founds positively related to total debt ratio and growth opportunity is found positively insignificant with total debt ratio.

Key Terms: Debt level, Gearing, profitability, size, growth opportunity, asset tangibility liquidity, food producer sector

1. Introduction

1.1. Research Background

The purpose of this research carried out is investigates the firm-specific factors that determine the capital structure in Malaysia and conducted on companies in food producer sector which listed in Bursa Malaysia. The food producer sector plays an important role in Malaysia’s economy and estimated that the current global retail sale in food products worth approximately US$3.5 trillion and expected to grow annually at rate of 4.8 % to US$ 6.4 trillion by 2020 (Malaysia Investment Development Authority, 2012). The major sub-sector of food producers are fish and fish products, live stocks and live stock products, vegetables, fruits and cocoa products. The main Malaysia’s food producer products were exported are cocoa and cocoa product, cereal, flour preparations and margarine and shortening and the food products majorly export to Singapore, USA, Indonesia, Japan and Thailand (Malaysia Investment Development Authority, 2012).
Development Authority, 2012). In year 2013, Malaysia's food products export growth has increased at rate of 6.9% to RM 14.24 billion (Ministry of International Trade and Industry, 2014).

Capital structure has been a popular topic in finance after Modigliani and Miller conducted their research (Abdul Jamal et al, 2013). There are numerous studies conducted on capital structure determinants in developed countries, quite a lot of studies done in developing and emerging countries and also a few researches conducted comparing developed and developing countries determination of capital structure. Serrasqueiro (2011) did research on Portuguese small and medium sized enterprise; Upneja and Dalbor (2001) on restaurant industry; Coleman (2006) on small manufacturing companies; Forte, Barros and Nakamura (2013) on Brazilian small and medium enterprises; Owolabi and Inyang (2012) on Nigerian manufacturing firms; Mishra (2011) on Indian manufacture companies; Qureshi and Azid (2006) on public and private sector; Tongkong (2012) on Thai real estate listed companies; Pertwii and Anggono (2013) on Indonesian food and beverages companies and Akhbar and Ahmad Bhutto (2012) on Pakistani food and personal care industry. According to Booth, Alivazian, Demirguc- Kunt and Maksimovic (2001), the firm-specific factors that determine the capital structure in developed countries are relevant in developing countries. In Malaysia, few researches on determinations of the capital structure also been carried out. Pramato and Ismail (2009, cited in Mat Kila and Mahmod, 2008) did research on Islamic bank; Sahudin et al (2011) did research on main board listed construction companies; Wei and Hooi (2011) on public listed government linked companies and non-government linked companies; Affandi, Wan Mahmood and Abdul Shukur (2012) on listed property construction companies; Abdul Jamal et al (2013) on listed small and medium sized enterprise; Md-Yusuf, Mohamad Yunus, and Md Supaat (2013) on electrical and electronic sector and Noor Saarani and Shahadan (2013) on small and medium sized enterprise and large firms.

The key factors that concern by Malaysia's company Chief Finance Officers before making decision going for debt or equity issuance are finance flexibility, insufficient of internal funding, stock price change, earnings and cash flows volatility, bankruptcy/distress cost, shareholders versus managers conflict, interest tax saving, recent profit, earnings per shares, inability obtain funds from other source, under or over valuation equity and maintaining target debt over equity ratio. (Mat Nor et al, 2012) The key factors used by the researches to determine the capital structure in Malaysia's companies are size, firm reputation, profitability, tangibility asset, liquidity, growth opportunities, cash flows, age, non – debt tax shield, taxation, size of the board, presence of non-executive directors on the board, presence of independent non-executive directors on the board and CEO/Chair duality (Abdul Jamal et al, 2013; Affandi, Wan Mahmood and Abdul Shukur, 2012; Sahudin et al, 2011; Teh, Azrbaijaini and Ong, 2012; Wei and Hooi, 2011; Md-Yusuf, Mohamad Yunus, and Md Supaat, 2013; Noor Saarani and Shahadan, 2013; Abdul Wahab, Mohd Amin and Yusop, 2012; Noor Saarani and Shahadan, 2013; Mohamed Zabri, 2012). The research carried in Malaysia only focus on few sectors and financial decision cannot be made based on those studies because of insufficient evidence to prove the key factors that have been practice in Malaysia and those findings cannot represent whole firms in Malaysia due to uniqueness of the industry.

1.2. Rational of Research

Capital structure decision is one of the most important decisions in business organization and this decision can influence the firm value (Tongkong, 2012). Financial distress, bankruptcy and liquidation may occur as result of inefficient financial decision made by the firms to finance its business activity (Mat Kila and Wan Mahmod, 2008). Therefore, high leveraged companies should decide an optimal capital structure to reduce its costs (Mat Kila and Wan Mahmod, 2008).

The issue that investigated in this research is whether firm-specific factors like profitability, size, growth opportunity, liquidity and asset tangibility is significant determining the capital structure of Malaysia's listed food producer companies. Many research have been
conducted on investigated the relationship between firms-specific factors and capital structure in developed and developing countries.

In Malaysia, few researches have been carried out on determinants of capital structure in different industries. Those research done on property companies and developer companies, small and medium enterprise, larger capitalized companies, companies in electric and electronic sector, banking sector, construction companies, leading companies and government linked companies and non-government linked companies. The determinants of capital structure still an issue in Malaysia because only few sectors or industries have been research and no study done on food industries.

Therefore, capital structure determinant factors were limited to specific sector or industry and the findings found in previous studies cannot represent overall determinants of Malaysia Company’s capital structure because different sector have different firm characteristics (Abdul Jamal et al, 2013). Previous research on determinants of capital structure does not conducted on listed food producer sector companies, thus this research can create a new knowledge on food producer sector firms capital structure determinants and fulfil the existing gap.

1.3. Research Objective

The objective of the research is to examine whether profitability, size, growth opportunity, liquidity and asset tangibility determines the capital structure in Malaysia’s listed companies in food producer sector.

1. Does size is a factor that determines the capital structure?
2. Does profitability is a factor that determines the capital structure?
3. Does growth opportunity is a factor that determines the capital structure?
4. Does liquidity is a factor that determines the capital structure?
5. Does asset tangibility is a factor that determines the capital structure?

1.4. Scope of Research

This research is to investigate the determinants of capital structure of listed food producer sector companies in Malaysia. The research carried on 45 listed food producer sector companies in Bursa Malaysia for the period of 2003 - 2012. The firm-specific factors used to determine are profitability, size, growth opportunity, liquidity and asset tangibility as independent variables and dependent variable is debt. The period of this research conducted is 6 months.

2. Literature Review

2.1. Definition of Capital Structure

According to Brounen, Jong and Koedijk (2006) capital structure deals with firm’s financing activity, with debt, equity and intermediate securities. Capital structure is combination of debt, equity and hybrid securities which finance the company’s operation (Cortez and Susanto, 2012). According to Coleman (2006) capital structure refers to mixture of debt and equity used by firms to finance their long – term assets. Capital structure defined as proportionate relationship between with debt and equity (Owolabi and Inyang, 2012). Niu (2008) define capital structure as “describe the way in which a firm raised capital need to establish and expand its business activities”. Capital structure is a mix of various types of equity and debt finance sustained resulting from firm’s financial decisions (Niu, 2008).
2.2. Capital Structure Theories

2.2.1. Modigliani and Miller (MM) capital structure theory

Modigliani and Miller are the pioneers that conducted scientific study on capital structure area in 1958 and developed MM theorem (Hossain and Ali, 2012). According to Modigliani and Miller (1958) under perfect market where there are no taxes, transaction cost, bankruptcy and agency cost; the firm's decision and capital structure is independent from firm's market value and cost of capital. The scholars affirm that the firms should be unconcerned choosing between debt and equity financing in perfect capital market (Modigliani and Miller, 1958). There are three proposition states by Modigliani and Miller in MM theory. The first proposition is the firm's capital structure does not affect the market value and average cost of capital (Abdul Jamal et al, 2013). The second proposition is the firm's leverage does not affect weighted cost of capital (Abdul Jamal et al, 2013). The third proposition is the firm's value does not affect by its dividend policy (Abdul Jamal et al, 2013). In year 1963, Modigliani and Miller modify MM theory by reflected on the cooperation tax and state that the firm can go for fully debt finance because debt is tax deductible and debt can increase the firm value (Akbar and Ahmad Bhutto, 2012). Modigliani and Miller (1963 cited in Qiu and La, 2010) emphasis that debt finance will increase corporate value because interest of debt is tax deductible while equity cost not tax deductible.

2.2.2. Agency Cost Theory

Jensen and Meckling are the pioneers developed agency cost theory and according to them, an optimal capital structure can be determined by minimizing the agency cost (Moosa, Li and Naughton, 2011). Jensen and Meckling (1976) define agency cost as sum of principle's monitoring expenditure, agents bonding expenditure and the residual loss. Agency cost arises because of conflict of interest between shareholders and managers and also due to separation management of firm and ownership (Abdul Jamal et al, 2013). There two types of conflicts: conflict between shareholders and manager and conflict between shareholders and bondholders (Jensen and Meckling, 1976). Since the managers and shareholders try to take action in their own interest, managers might behave make financial decision that gives benefits to the managers but not maximize shareholders wealth (Abdul Jamal et al, 2013). According to Qiu and La (2010), the managers might act in a different way under different capital structure. The debt finance with interest payments can reduce conflict between manager and shareholder (Buferna, 2005 cited in Abdul Jamal et al, 2013). The managers will try to operate the firms as efficient as possible to meet the interest payment and try to maximize shareholders wealth because they worried about losing their job (Abdul Jamal et al, 2013). The second way to reduce conflict of interest between shareholders and managers is by increasing the equity holds by the managers (Niu, 2008). Conflict between bondholders and shareholders arise because the shareholders decision to transfers the wealth from bondholders to shareholders (Niu, 2008). Convertible debt finance can reduce conflict between bondholders and shareholders because it has low agency costs compare to debt (Jensen and Meckeling, 1976). According to Jensen and Meckeling (1976) optimal combination of equity and outsource debt will decrease the agency costs.

2.2.3. Trade-Off Theory

Trade off theory state that the firms optimal capital structure determined by trade-off the benefit of debt finance with debt's disadvantage (Scoot, 1977 cited in Hossain and Ali, 2012). Benefits of debt include tax shield, the reduction free cash flow, conflict between managers and shareholders and the disadvantages includes finance distress, cost associated underinvestment and assets substitution problem (Cotei, Farhat, and Abugri, 2011).The trade-off theory implies the firms to choose debt finance rather than equity until the point at which the bankrupt probability equal to advantage of using debt (Hossain and Ali, 2012). Trade off theory suggest high risk organization should go for less debt compare to low risk organization (Abdul Wahab,
Mohd Amin and Yusop, 2012). The theory also state that firms that use more tangible asset to operate should go for more debt finance because tangible asset can use as collateral organization (Abdul Wahab, Mohd Amin and Yusop, 2012). Myers developed static trade-off in 1984 and this theory state that higher profitability firms should have higher target debt ratio and the firms should able to gain more debt without risking financial distress (Abdul Jamal et al, 2013). Higher profitability firms required to have higher target debt ratio to ensure high tax saving from debt, profitability of bankruptcy is low and higher over- investment (Abdul Jamal et al, 2013). While, firms with high growth opportunity should use less debt finance because more debt will cause loss value in financial distress (Niu, 2008). Fisher et al developed trade-off theory dynamic version in 1989 and this theory suggest that companies inactively accumulate profits and losses, allowing their debt ratio move away from the target only if the cost of adjusting the debt ratio go over the cost of having a sub optimal capital structure (Hovakimian, Hovakimian and Tehranian, 2004). The dynamic trade off theory implies that firms gained high profitability in past are probable under levered while firms gained losses are probable over levered (Hovakimian, Hovakimian and Tehranian, 2004). This theory predicts that negative relationship between profitability and observed debt ratios but gives positive result on the profitability of debt versus equity and the negative relationship arise not because of profitability affect target leverage but it’s have an effect on deviation from the target (Hovakimian, Hovakimian and Tehranian, 2004). Therefore, the negative relationship would not arise for firms that offset the deviations from the target by resetting their capital structure (Hovakimian, Hovakimian and Tehranian, 2004).

2.2.4. Pecking Order Theory

Myers and Majluf (1984) and Myers (1984) are the pioneers that explain financial behavior by included the private information known by the managers into capital structure model (Kjellman and Hansen, 1995). Pecking order theory and this theory assumes that financial resources preference ranking created by using information asymmetric between managers and shareholders (Leary and Roberts, 2010). The ranking begins with internal funding or retained earnings, followed by debt finance and then equity finance (Leary and Roberts, 2010). Pecking order theory claims that the firms not necessary to follow target amount leverage and the firms should choose its leverage ratio based on its financing needs (Hossain and Ali, 2012). If the investors and lender are not well known compare to the mangers about the firm’s asset values and future prospect, mispricing debt and equity might occur in the market (Kjellman and Hansen, 1995). If the firms are necessary issue equity to fund new investment project, Kjellman and Hansen (1995) state that “under-pricing may be so severe that new investors might capture more than the net present value of that project”. Thus, existing shareholders will earn net loss (Kjellman and Hansen, 1995). The under investment can be prevented if the firms follows pecking order theory’s finance sources sequences (Kjellman and Hansen, 1995). Pecking order theory suggests that firms should increase their ability to retain profits over their life-cycle and reduce in depending on borrowing to fund investment opportunities (Serrasqueiro and Nunes, 2012). Internal funding or retained have no adverse choice, debt have minor adverse choice problem and equity have major diverse choice problem (Frank and Goyal, 2003). This theory emphasis firms to use internal funding because internal funding are less risky, less sensitive to mispricing and valuation errors (Abdul Jamal et al, 2013). According to Niu (2008), internal funding or retained earnings does not have flotation costs and no additional disclosure financial information required such as information on firms’ investments opportunities and their potential profit. If the firms going for external finance, the preference should follows this sequences: debt, convertible securities, preferred stock and common stock (Niu, 2008). Even though, both debt and equity have adverse selection risk premiere but equity have larger adverse selection risk compare to debt (Frank and Goyal, 2003). Since equity is more risky compare to debt, outside investors will demand for higher rate of return on equity (Frank and Goyal, 2003). Myers (1984) state that firms prefers to fund real investment by using less risky securities or bonds rather than equity.
2.3 Conceptual Framework

Figure 1: Conceptual Framework

2.4. Empirical Studies on Determinants of Capital Structure

In a recent research, Qiu and La (2010) reinvestigated the relation between firm characteristic and capital structure decisions of Australian firms and their result shows that asset tangibility, profitability, growth prospect and business risk are significant to debt ratio while the firm size is insignificant negatively related to debt ratio. The negative relationship between profitability and debt ratio shows that pecking order theory is relevant compare to trade of theory in Australia (Qiu and La, 2010). Furthermore, Mishra (2011) did research on the determinants of capital structure of Indian central Public Sector Undertakings and the result shows that asset tangibility, profitability, growth and tax are significant related to determine capital structure while size, non-debt tax shield and earnings volatility found no significant related to leverage. The results are similar with Qiu and La (2010), tangibility, profitability and growth significant with debt or leverage and size is not significant in both researches done.

Noulas and Genimakis (2011) examined the capital structure determinants on listed companies in Greek and the findings show that significant positive relationship between leverage with credit rating, profit volatility, depreciation, asset tangibility and growth rate. Profitability and age are significant negatively correlated to leverage and firm size not significant related to leverage (Noulas and Genimakis, 2011). The results are same as the findings from Qiu and La (2010) and Mishra (2011) research. The research results also supports that capital structure differs significantly across classification of economic while ownership and stock market categorization not affecting the capital structure decisions (Noulas and Genimakis, 2011). The research findings consistent with pecking order theory (Noulas and Genimakis, 2011).

On the other hand, Moosa, Li and Naughton (2011) researched the firm specific factors significant influence capital structure decision and the research result shows that size, profitability, liquidity and growth opportunity are significant factors to determine capital structure while conventional cross section analysis supports to the importance of stock price performance and tangibility. However, research did by Hossain and Ali (2012) on 39 firms listed on Dhaka Stock Exchange (DSE) during 2003-2007 result shows that size insignificant related to total leverage not consistent with Moosa, Li and Naughton (2011) researches but similar with by Qiu and La (2010), Mishra (2011) and Noulas and Genimakis (2011) researches. The result also shows that profitability, tangibility, liquidity and management ownership significant negatively related to total leverage meanwhile non-debt tax shield, growth opportunity, and industry classification are significant positively related to leverage (Hossain and Ali, 2012). Earnings volatility and dividend payment are insignificant related to leverage and the leverage ratio is significantly different across Bangladeshi industries (Hossain and Ali, 2012).
In contrast, Tongkong (2012) research on the factors that significantly influence on capital structure decision of Thailand’s listed real estate industry and period observations covers year 2002-2009 shows size is significant influence on capital structure decision. The result shows that profitability, growth opportunity and median industry leverage are significantly influence on capital structure decision (Tongkong, 2012). Industry leverage, firm size and growth opportunity is positively related to industry average while leverage is negatively related to profitability (Tongkong, 2012). The findings consistent with pecking order theory, profit making firms do prefer less debt finance and high growth opportunity companies are using high level of (Tongkong, 2012).

In addition, Forte, Barros and Nakamura (2013) investigated the determinants of capital structure of Brazilian small and medium sized enterprise. The result shows that profitability has negative relationship with leverage and growth has positive relationship with leverage, consistent with pecking order theory (Forte, Barros and Nakamura, 2013). Size is positively related to leverage, risker firms tends to have less leverage and age negatively related to leverage (Forte, Barros and Nakamura, 2013). The result is similar with Tongkong (2012) and Moosa, Li and Naughton (2011) researches.

In Malaysia context, Wei and Hooi (2011) did study on government linked company (GLC) and non-government linked company (NGLC). The research finding shows that tangibility asset positively related to debt and profitability negatively related to debt for both GLC and NGLC (Wei and Hooi, 2011). Firm size is significantly negative related to GLC and significantly positive related to NGLC while firm growth and cash flow are not significant related to debt (Wei and Hooi, 2011). The significant of profitability, tangibility and size are consistent with Tongkong (2012), Moosa, Li and Naughton (2011) and Forte, Barros and Nakamura (2013) studies but insignificant of growth is not similar with those result. Nevertheless, Affandi, Wan Mahmood and Abdul Shukor (2012) investigated the determinants of capital structure of property companies and the property asset intensity and firm size are significant to total debt ratio while profitability is not significant to total debt ratio. The finding insignificant of profitability is contrast with the result from studies done by the entire researcher above.

As well as research did by Md-Yusuf, Mohamad Yunus and Md suppat (2013) on the determinants of capital structure of listed firms in electrical and electronic sectors. Their findings shows that size, tangibility and liquidity are significant with debt ratio but profitability and growth are insignificant with debt ratio. The positive relationship between debt and profitability, size and tangibility are consistent with trade off theory whilst positive relation between debt level and growth opportunity and negative relation between debt and liquidity are consistent to pecking order theory (Md-Yusuf, Mohamad Yunus and Md suppat, 2013). On the other hand Abdul Jamal et al (2013) did research on the determinants of capital structure of large capitalized firms and the finding shows that profitability, tangibility, and liquidity are significant with leverage.

### 3. Research Design and Methodology

#### 3.1. Research design

The purpose of this research is to investigate whether firm – specific factors (profitability, size, growth opportunity, liquidity and asset tangibility) determines the capital structure of listed companies in food producers sector in Malaysia. An explanatory research approach conducted to examine and analyze the relationship between independent variables (profitability, size,
growth opportunity, liquidity and asset tangibility) with the dependent variables (total debt ratio).

3.2. Data collection method

In this research, quantitative data has been approached because the numerical data's are required to test and examine the dependent and independent variables and to answer the research questions (Saunders, Lewis and Thornhill, 2009). The listed companies' annual reports were collected from Bursa Malaysia website as method of secondary data collection. Secondary data used because it saves times and cost and the data collection period are much faster than primary data (Hair et al, 2011). Financial statements from the annual reports are used to calculate the dependent and independent variables.

3.3 Target population and Sample Size

The target populations in this research are all the listed Malaysia companies under food producers sector. There are 78 listed companies under food producers sector and the list obtained from Bursa Malaysia Knowledge Centre. However, 45 companies are selected using purposive sampling technique. According to Adler and Clark (2008), purposive sampling technique is a sampling method involves researcher’s judgement in choosing the sample elements that will facilities the research. Purposive sampling is appropriate for this research because the researcher need to chose companies which are employing debt finance or other financing source such as internal finance, profit and loss making companies, companies with high or low level of fixed assets and big and small size companies to answer the research questions. The data collected from the financial statement of the food producer's sector companies were taken from year 2003 – 2012 and the total observation years in this research is 450.

3.4. The dependent variable

Capital structure is the mixture or combination of debt and equity that companies used to finance its operations (Md-Yusuf, Mohamad Yunus and Md suppat 2013). The gearing or leverage is used to measure the proportion of debt finance (Md-Yusuf, Mohamad Yunus and Md suppat 2013). Many researchers (Rajan and Zingales, 1995) used total debt ratio as proxy for the capital structure. According to Mat Kila and Wan Mansor (2008) companies in most emerging market and also some companies in developed countries finance their assets including current assets using both short and long – term debt. Therefore, it is appropriate to use total debt ratio as proxy for capital structure for Malaysia's listed companies in food producers sector. The total debt ratio is measured as total debt divided by total assets (Md-Yusuf, Mohamad Yunus and Md suppat 2013).

3.5. The independent variables

Profitability, size, growth opportunity, liquidity and asset tangibility are firm specific factors that widely used in most of capital structure determination researches as independent variables. The impact of firm-specific factors such as profitability, size, growth opportunity and asset tangibility are found to be strong and consistent with the capital structure theory across a large number of countries (De Jong, Kabir and Nguyen, 2008). However, the firm- specific factors were limited to specific sector or industry and the findings found in previous studies cannot represent overall industry or sector because different sector have different firm characteristics (Abdul Jamal et al, 2013). Therefore, these factors are chosen to examine whether this factors are determining the capital structure of food producer's companies in Malaysia.

3.5.1. Profitability
Static trade off theory state that profitable companies would go for more debt finance to avoid wastage of cash free flows gained from profits and high profitable companies would easily obtained debt finance and also able to obtain high level of debt capacity (Cortez and Susanto, 2012). On the other hand, pecking order theory emphasis profitability companies would rather use retained earnings compare to external debt finance because debt finance consists of some risks (Akbar and Ahmed Bhutto, 2012). Profitability is measured as earnings before interest and tax divided by total assets (Booth et al., 2001).

**H1: Profitability is significant with total debt ratio of the companies**

### 3.5.2. Size

Many researchers finds that size is one of the common factor that determinants the capital structure of a company (Md-Yusuf, Mohamad Yunus and Md suppat 2013). According to trade - off theory, the large size companies tend to have high level of debt capacity and are able to borrow more debt finance (Sayilgan, Karabacak and Küçükkocaoğlu, 2006). The larger companies are able to obtained more debt finance because the creditors are willing to lean money (Cortez and Susanto, 2012). Rajan and Zingales (1995) state that the large size companies have lower probability of bankruptcy. Larger companies are also capable to gain high profit and able to diversify the risks compare to small size companies (Mat Kila and Wan Mansor, 2008). The trade – off theory state that profitability and level of debt has positive relationship (Sayilgan, Karabacak and Küçükkocaoğlu, 2006). In contrary, the pecking order theory states that size and debt level has negative relationship (Md-Yusuf, Mohamad Yunus and Md suppat 2013). The large companies will be going for equity finance because have lower information asymmetric compare to smaller companies (Abdul Jamal et al, 2013). The size is measured as the natural log of total assets (Abdul Jamal et al, 2013).

**H2: Size is significant with total debt ratio of the companies**

### 3.5.3. Growth opportunity

Md-Yusuf, Mohamad Yunus and Md suppat (2013) state the “growth refer as opportunity of the companies to expend and improve their business operations through new investment consumption”. Growth opportunity represents intangible assets owned by company which has no collateral value (Pandey, 2001). Titman and Wessels (1988) state that growth opportunity is capital assets that can add value to company and cannot use as collateral and does not generate current taxable income. According to trade off theory, the companies which have future growth opportunity which is a form of more intangible assets be likely to borrow less debt compare to companies that have more tangible assets (Md-Yusuf, Mohamad Yunus and Md suppat 2013). The companies are probably having difficulties in raising debt finance because the intangible assets are not fully collateralised (Ali, 2011). The high growth companies should borrow less because the company tend to loss value in financial distress (Niu, 2008). Therefore, trade-off theory states that growth opportunity and debt level has negative relationship (Niu, 2008). The pecking order theory suggest the higher growth companies should prefer debt finance rather than equity finance when the internal funding not sufficient due to high asymmetric information (Ali, 2011). Thus, the relationship between growth opportunity and debt level are positive. Growth opportunity is measured as the percentage change in total assets (Titman and Wessels, 1988).

**H3: Growth opportunity is significant with total debt ratio of the companies**

### 3.5.4. Tangibility

Tangible assets refer to plants, buildings, machineries and vehicles which usually operated in maximizing the sales revenue while intangible assets refers to patent, goodwill, and technology are used as supportive assets to strengthen the position of the company (Md-Yusuf,
Mohamad Yunus and Md suppat 2013). Agency theory state that high leverage firms more likely to underinvested or invest sub optimally and as a result wealth is transformed from debt holder to equity holder (Deesomsak, Paudyal and Pescetto, 2004). These cause the creditor or lender required collateral because the use of secured debt to improve this problem (Deesomsak, Paudyal and Pescetto, 2004). Besides that, assets tangibility can increase the value of liquidity and decrease the possibility of mispricing in the result of bankruptcy (Deesomsak, Paudyal and Pescetto, 2004). Companies have more tangible assets are less risk of bankruptcy because the tangible assets can be liquidities and covert to cash easily (Md-Yusuf, Mohamad Yunus and Md suppat 2013). According to trade - off theory, the companies have more tangibility can use it as collateral to obtained debt finance (Titman and Wessels, 1988). Harris and Raviv (1991) state that the companies with more tangible assets tend to incur low cost of debt because the tangible assets can use as collateral against external finance. On the other hand, pecking order state that companies have more tangible assets faces asymmetric information problems (Noulas and Genimakis, 2011). Thus, the companies are more likely going for equity funding and less to take debt finance (Noulas and Genimakis, 2011). Tangibility measured as fixed assets divide by total assets (Abdul Jamal et al, 2013).

**H4: Tangibility is significant with total debt ratio of the companies**

### 3.5.5. Liquidity

Liquidity refers to the ability to convert of assets into cash without affecting the asset’s price (Md-Yusuf, Mohamad Yunus and Md suppat 2013). According to trade-off theory, the companies with high liquidity assets should borrow more because the companies able to meet contractual obligations on time (Md-Yusuf, Mohamad Yunus and Md suppat 2013). Therefore, trade- off theory suggest liquidity and debt level has positive relationship time (Md-Yusuf, Mohamad Yunus and Md suppat 2013). In contrast, the pecking order theory suggests high asset liquidity companies should prefer internal funding rather going for external funding (Eriotis, Vasiliou and Ventoura-Neokosmidis, 2007). So, the companies have to create liquidity reserve from retained earnings and use those funds for its operations and investment (Niu, 2008). Thus, pecking order theory state that liquidity and debt level has negative relationship (Abdul Jamal et al, 2013). Liquidity is measured as current assets divide by current liabilities (Md-Yusuf, Mohamad Yunus and Md suppat 2013).

**H5: Liquidity is significant with total debt ratio of the companies**

### 3.6 Data Analysis Techniques

The data is entered and descriptive analysis, Pearson coefficient correlation and multiple regressions analysis conducted using IBM SPSS version 22.

#### 3.6.1 Descriptive Analysis

Descriptive statistical is a brief descriptive coefficients set that summarised the given data set (Md-Yusuf, Mohamad Yunus and Md Suppat 2013). Descriptive statistical is method used to describe a set of data (Gravetter and Forzano, 2012). The descriptive statistics measure the centre tendency and dispersion (Watt and Berg, 2012). In this research, descriptive statistics are used to analysis the value of mean, standard deviation, skewness and kurtosis of the dependent and independent variables. According McGrew and Monroe (2000), skewness is measure symmetry degree in a frequency distribution by influential the extent which the value are evenly or unevenly distributed on right or left sides of the mean. Kurtosis measures the
flatness or peakness of the data set (McGrew and Monroe, 2000). If the kurtosis value is more than 3, it is called leptokurtic (peaked) and if the value is below 3, it is called platykurtic (McGrew and Monroe, 2000).

3.6.2 Pearson Correlation

The Pearson coefficient correlation is used to test the relationship between the two variables (Greener, 2008). Pearson correlation is determine how strong and significant relation between the two variables (Taylor, 1990). The correlation coefficient or r coefficient is measure the degree of two variables relationship (Taylor, 1990). The r coefficient takes on value between -1 to +1, ranging from being negative correlated (-1), no correlation between the variables (0) and positive correlated (+1) (Zou, Tuncali and Sliverman, 2003). The negative and positive sign of correlation coefficient represent the direction of the relationship and the absolute value shows the strength of the relationship (Zou, Tuncali and Sliverman, 2003).

3.6.3 Multiple Regression Analysis

The multiple regression analysis is used to determine the strength of relationship between multiple independent variables with one dependent variable (Saunders, Lewis and Thornhill, 2009). The coefficient of determinants (R2) is shows degree of goodness fitness of the variables in the multiple regression equation ranging from 0 to 1 (Rawlings, Pantula and Dickey, 1998). The t test used to whether there is significant relationship between dependent variable and each of the independent variables (Rawlings, Pantula and Dickey, 1998). The significant variables are determinants using t-value of each independent variable from regression analysis and compare with the t-distribution table (Saunders, Lewis and Thornhill, 2009).

The multiple regression equation was developed to predict the dependent variable using independent variables:

\[ TDR = \text{CONSTANT} + \beta_1 \text{PROF} + \beta_2 \text{SIZE} + \beta_3 \text{GOPP} + \beta_4 \text{TANG} + \beta_5 \text{LIQ} \]

\[ TDR= \text{Total Debt Ratio} \]
\[ PROF= \text{Profitability} \]
\[ SIZE= \text{Firm size} \]
\[ GOPP= \text{Growth Opportunity} \]
\[ TANG = \text{Asset Tangibility} \]
\[ LIQ = \text{Liquidity} \]

4. Results and Discussion

The target population of this study is 45 companies listed under food producers sectors and study period covers from 2003 – 2012 and the sample is drawn using purposive sampling. The total sample observation year is 450 years and the data are run using SPSS software. The descriptive, Pearson correlation and multiple regressions are used to determine whether the independent variables (profitability, size, growth opportunity, tangibility and liquidity) are significant with the dependent variable (total debt ratio).

4.1 Normality Test

According to Pallant (2011), skewness and kurtosis can use to test normality of the data. Based on table 4.1, the profitability variable skewness value is 3.067 which are positively right skewed. The kurtosis value is 12.801 which are relative pecked compare to normal distribution (leptokuratic). The size variable skewness value is 10.623 which are positively right skewed. The kurtosis value is 174.791 which are relative pecked compare to normal distribution (leptokuratic). The growth opportunity variable skewness value is 21.098 which are positively
right skewed. The kurtosis value is 446.703 which relative peaked compare to normal distribution (leptokuratic). The tangibility variable skewness value is 1.410 which is positively right skewed. The kurtosis value is 0.881 which is flatter than normal distribution with wider peak (platykurtic). The liquidity variable skewness value is 3.785 which are positively right skewed. The kurtosis value is 15.551 which are relative peaked compare to normal distribution (leptokuratic). The total debt ratio variable skewness value is 1.416 which is positive right skewed.  The kurtosis value is 0.863 which is flatter than normal distribution with wider peak (platykurtic).

4.2 Descriptive Analysis

<table>
<thead>
<tr>
<th>Table 1: Descriptive Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>N</strong></td>
</tr>
<tr>
<td>Statistic</td>
</tr>
<tr>
<td>PROF</td>
</tr>
<tr>
<td>SIZE</td>
</tr>
<tr>
<td>GOPP</td>
</tr>
<tr>
<td>TANG</td>
</tr>
<tr>
<td>LIQ</td>
</tr>
<tr>
<td>TDR</td>
</tr>
</tbody>
</table>

According to table 1, Most of the food producer companies are only able to make average profit of 8% from their total assets and the standard deviation is 0.114. Size of food producers companies is large since the average mean size is 100% and the standard deviation is 0.018. The average growth of the listed food producer companies during the observation period is 33% and the standard deviation is 4.94244.

The average mean tangibility is 17% which indicates that the most company's fixed assets are 17% out of total assets and the standard deviation is 0.17620. The average liquidity shows that the most of food producer company's current assets are 40 times more than it current liabilities and the standard deviation is 104.91940. The large numbers of Malaysian food producers companies are used average 7.99% of debt finance in financing their business operations. The total debt is average of 7.99% of the total assets and the standard deviation is 0.11.

4.3 Pearson Correlation

<table>
<thead>
<tr>
<th>Table 2: Correlation Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Correlation Matrix" /></td>
</tr>
</tbody>
</table>
According to table 2, the profitability is negatively correlated with total debt ratio and the strength of relationship between the two variables are -0.206, which is a week relationship. The profitability variable is significant of 0.000 (2-tailed) which less than 0.01 level. This result shows that the Malaysia’s food producers companies are using internal funding or retained earnings rather using debt finance to fund their investment and business operation, which suggest by pecking order theory.

The relationship between size and total debt ratio is -0.077 which is negative week relationship and not significant (0.102) at level of 0.01, 0.05 and 0.1. The negative relationship indicates that bigger size companies are not prefer using debt finance and also shows that most of companies in food producer sector are following the pecking order theory.

The coefficient value of growth opportunity is -0.032, shows that the negative week relationship and the growth opportunity variable is not significant (0.493) at level of 0.01, 0.05 and 0.1. The negative relationship shows that food produces companies are following trade off theory. According trade - off theory, that high growth opportunity companies owns more intangible assets and those assets cannot used as collateral for debt finance (Niu, 2008). Therefore, Malaysia’s food produces listed companies are owned assets in form of intangible assets.

The tangibility variable is positively correlated with total debt ratio and the coefficient value is 0.274, weak relationship between the two variables. The independent variable is significant of 0.000 which is less than 0.01 significant levels. The positive relationship shows that companies with high tangibility assets are more likely funding their business using debt finance because the tangible assets can use as collateral for debt finance and follows trade - off theory.

The relationship between liquidity and total debt ratio are negative and the coefficient is -0.232 which weak relationship. The liquidity variable is significant of 0.000 which less than 0.01 significant level. The negative relationship shows the listed food producer companies are following pecking order theory. According to pecking order theory, high liquidity companies are prefer to use internal funding rather going for debt finance (Eriotis, Vasiliou and Ventoura-Neokosmid, 2007).

4.4 Multiple Linear Regressions

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.383*</td>
<td>.146</td>
<td>.137</td>
<td>.11560</td>
</tr>
</tbody>
</table>

According to table 3, the correlation coefficient (R) is 0.383, which shows that 38% all the independent variables (profitability, size, growth opportunity, tangibility and liquidity) are influencing among each other. The coefficient of determinant (R square) shows that 14.6 % of
the dependent variable (total debt ratio) is explained by the independent variables (profitability, size, growth opportunity, tangibility and liquidity). The 85.4% variance in total debt ratio is being explained by other factors that not selected in this research. The adjusted r square is 0.137, 13.7% of variation in total debt ratio can be point to profitability, size, growth opportunity, tangibility and liquidity variables. According to Dancer and Tremayne (2005), cross section application will not have natural ordering of observation and the r square will be lower and assessment of the modal considered on significant while time series application will have natural ordering of observation and the r square are usual high (Dancer and Tremayne, 2005).

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1.017</td>
<td>5</td>
<td>.203</td>
<td>15.225</td>
<td>.000</td>
</tr>
<tr>
<td>1</td>
<td>Residual</td>
<td>5.934</td>
<td>444</td>
<td>.013</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6.951</td>
<td>449</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: TDR
b. Predictors: (Constant), LIQ, GOPP, PROF, TANG, SIZE

According table 4.3.2, the p-value of 0.000 which is less than 0.01 significant level shows that the model is significant. The F- value of 15.225 indicates that there are relationship between total debt ratio and profitability, size, growth opportunity, asset tangibility and liquidity.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>1.085</td>
<td>.506</td>
<td>.245</td>
<td>2.145</td>
</tr>
<tr>
<td>PROF</td>
<td>-.170</td>
<td>.049</td>
<td>-.156</td>
<td>-3.488</td>
</tr>
<tr>
<td>SIZE</td>
<td>-1.002</td>
<td>.505</td>
<td>-.153</td>
<td>-1.984</td>
</tr>
<tr>
<td>GOPP</td>
<td>.001</td>
<td>.002</td>
<td>.046</td>
<td>.605</td>
</tr>
<tr>
<td>TANG</td>
<td>.173</td>
<td>.032</td>
<td>.245</td>
<td>5.371</td>
</tr>
<tr>
<td>LIQ</td>
<td>.000</td>
<td>.000</td>
<td>-.157</td>
<td>-3.437</td>
</tr>
</tbody>
</table>

a. Dependent Variable: TDR

The Multiple Regression equation below was developed using standardized coefficients beta which predict the dependent variable using independent variables.

\[
TDR = CONSTANT + \beta_1 \text{PROF} + \beta_2 \text{SIZE} + \beta_3 \text{GOPP} + \beta_4 \text{TANG} + \beta_5 \text{LIQ}
\]

\[
= 1.085 - 0.156 \text{PROF} - 0.153 \text{SIZE} + 0.046 \text{GOPP} + 0.245 \text{TANG} - 0.157 \text{LIQ}
\]

\[
(0.032) (0.001) (0.048) (0.546) (0.000) (0.001)
\]

The above equation shows that the profitability, size, tangibility and liquidity are significant with total debt ratio. On the other hand, growth opportunity is not significant with total debt ratio. The equation is also indicates that the total debt ratio will be 1.085 when the independent variables not influencing it. According to the equation above, the tangibility has most impact on total debt ratio, followed by liquidity, profitability, size and growth opportunity.
The highest standardized coefficient beta value is tangibility variable 0.245 and significant value of 0.000 which is less than 0.01 significant level. The second highest beta value is -0.157 which is liquidity and significant value of 0.001 which is less than 0.01 significant level, followed by profitability -0.156 which is significant value of 0.001 which less than 0.01 significant level. The size standardized coefficient beta is -0.153 and significant value of 0.048 which is less than 0.05 significant level and lastly, growth opportunity has the lowest beta value of 0.046 and insignificant value of 0.546 which is more than 0.01, 0.05 and 0.1 significant levels.

According to table 4.3.3, the profitability variable is found to be significant with total debt ratio at significant level of 0.01. This shows that the profitability is one factor that determines capital structure of Malaysia's food producer companies. The negative relationship between profitability and total debt ratio shows that the high profitability Malaysia companies do not prefer debt finance and the companies more likely prefer to use internal funding (Md-Yusuf, Mohamad Yunus and Md suppat 2013). The low profitability companies will be using more debt finance because their internal fund not sufficient (Cortez and Susanto, 2012). The result follows pecking order theory suggestion where high profitability companies should use retained earnings as source of finance because it save cost and not involve interference of outside people into companies affaires (Abdul Jamal et al, 2013). The result is found contradict with trade-off theory assumption, where high profitability companies should use debt finance because of tax deduction (Niu, 2008). This results same with research done by Titman and Wessels (1988), Rajan and Zingales (1995), Pandey (2001), (Sayilgan, Karabacak and Kıcıkkocaoglu, 2006), Karawish and Karaiwesh (2010), Tongkong (2012), Affandi, Wan Mahmood and Abdul Shukur (2012), Forte, Barros and Nakamura (2013), and Abdul Jamal et al, (2013). However, there is also some research finding like Affandi, Wan Mahmood and Abdul Shukor (2012) and Mohamed Zabri (2012) found that profitability is not significant with debt ratio. Based on the regression result, profitability is insignificant with total debt ratio of the company's hypothesis (H0) is rejected and profitability is significant with total debt ratio of the company's hypothesis (H1) is accepted.

Size is found significant negative relationship with total debt ratio, 0.048 of p-value which is significant at level of 0.05 but not significant at level of 0.01. The significant value is indicating that size is the factor that determines food producer company's capital structure. The negative relationship shows that large size food producer companies are using less debt finance. The companies preferred equity finance because the bank or creditors will limit the approval of loan borrowing due to asymmetric information (Md-Yusuf, Mohamad Yunus and Md suppat 2013). The small size Malaysia's food producer companies are employ debt finance because the company might inadequate internal funding and less asymmetric information that enables the company obtain loan easily than large firm size (Md-Yusuf, Mohamad Yunus and Md suppat 2013). The result is opposite trade-off theory where the theory implies that the large size companies able to obtained debt finance easily compare to small size companies (Hossain and Ali, 2012). The result found in this research is similar to Titman and Wessels (1988), Bevan and Danbolt (2002), Mat Kila and Wan Mansor (2008) and Fauzi, Basyith, and Idris (2013). Based on the findings, size is insignificant with total debt ratio of the companies' hypothesis (H0) is rejected and size is significant with total debt ratio of the companies (H2) is accepted.

The growth opportunity is found positive relationship with total debt ratio but insignificant, p-value is 0.546 which not significant at level of 0.01, 0.05 and 0.1. The insignificant of the independent variable shows that growth opportunity is not the factor that determines capital structure. The positive relationship shows that the high growth companies borrow more debt finance to finance their investment since the internal funding is not sufficient and relevant with pecking order theory (Pandey, 2001). The result is contradict with trade-off theory which implies high growth opportunity companies should less use debt finance because the high growth companies holds more intangible assets and those assets cannot be used as collateral for debt finance (Md-Yusuf, Mohamad Yunus and Md suppat 2013). The result is same as Pandey (2001), Affandi, Wan Mahmood and Abdul Shukur (2012) and (Md-Yusuf, Mohamad Yunus and Md suppat 2013). Based on regression results, growth opportunity is insignificant
with total debt ratio of the companies hypothesis (H0) is accepted and growth opportunity is significant with total debt ratio of the companies hypothesis (H3) is rejected.

Tangibility is positively significant related to total debt ratio, p-value is 0.000 which is significant at level of 0.01. The significant of the variable shows that tangibility is factor determine the Malaysia listed companies under food producer sector's capital structure. The positive relationship indicates Malaysia's food producer companies is using their tangibility assets as collateral to obtain debt finance and follows trade-off theory (Abdul Jamal et al, 2013). The low tangible asset Malaysia’s listed companies under food producer sector are employ internal funding or equity finance due to difficulty to obtain debt finance. This is because the companies own small number of tangible assets to be used as collateral for debt finance (Mohamad Yunus and Md suppat, 2013). The pecking order theory implies the high tangibility companies are will be facing asymmetric information and will facing difficult in obtaining debt finance and prefer internal funding (Noulas and Genimakis, 2011). The finding is same as Rajan and Zingales (1995), Md-Yusuf, Mohamad Yunus and Md suppat (2013), Affandi, Wan Mahmood and Abdul Shukur (2012), Karawish and Karaiwesh (2010), Qiu and La (2010) and Fauzi, Basyith, and Idris (2013). Based on the regression result, tangibility is insignificant with total debt ratio of the companies hypothesis (H0) is rejected and tangibility is significant with total debt ratio of the companies hypothesis (H4) is accepted.

Liquidity is found negatively significant with total debt ratio; p - value is 0.001 which is significant at 0.01 level. The significant value proves that liquidity is the factor determines capital structure of Malaysia listed companies under food industry companies. The negative relationship shows that high liquidity Malaysia's food producer companies is prefer using internal funding rather going for debt finance and follows pecking order theory assumption. The high liquidity companies will maintain high level of current asset and generates high cash inflows which the companies will be using those inflows to fund their investment and business operation (Eriotis, Vasiliiou and Ventoura-Neokosmid, 2007). The low liquidity companies will be utilizing debt finance because inadequate of internal funds (Eriotis, Vasiliiou and Ventoura-Neokosmid, 2007). However, trade-off theory state that high liquidity companies should use debt finance because high liquidity companies able to pay interest timely and also able to convert its assets into cash form easily (Abdul Jamal et al, 2013). The findings is similar Md-Yusuf, Mohamad Yunus and Md suppat (2013), Abdul Jamal et al, (2013), Mat Kila and Wan Mansor (2008), Hossain and Ali (2012) and Eriotis, Vasiliiou and Ventoura-Neokosmid (2007). Based on regression liquidity is insignificant with total debt ratio of the companies hypothesis (H0) is rejected and liquidity is significant with total debt ratio of the companies hypothesis (H5) is accepted.

**4.5 Summary Result of Hypotheses Testing**

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Significant Level</th>
<th>Result</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Profitability is significant with total debt ratio of the companies.</td>
<td>0.032</td>
<td>Accepted</td>
<td>The p - value is 0.032 which is less than 0.01 significant level. This shows that profitability is significant with total debt ratio of the companies.</td>
</tr>
<tr>
<td>H2: Size is significant with total debt ratio of the companies.</td>
<td>0.048</td>
<td>Accepted</td>
<td>The p-value is 0.048 which is more than 0.01 but less than 0.05. This indicates that size is significant with total debt ratio of the companies.</td>
</tr>
<tr>
<td>H3: Growth opportunity is significant with total debt ratio of the companies.</td>
<td>0.546</td>
<td>Rejected</td>
<td>The p-value is 0.546 which is above 0.1, 0.05 and 0.01 significant level. This shows that growth opportunity is insignificant with total debt ratio of the companies.</td>
</tr>
</tbody>
</table>
5. Discussions and Conclusion

The research conducted to investigate whether firm-specific factors (profitability, size, growth opportunity, asset tangibility and liquidity) determines the capital structure of Malaysia listed companies under food producer sector. The research done on 45 listed companies under food producer sector and employed multiple linear regression analysis to find significant of the factors on capital structure. The independent variables are profitability, size, growth opportunity, asset tangibility and liquidity and dependent variable is total debt ratio. The firm-specific factors that found significant are profitability, size, tangibility and liquidity with total debt ratio. Therefore, profitability, size, tangibility and liquidity are the factors that determine the capital structure of Malaysia listed companies under food producer sector.

5.1. Descriptive Analysis

Based on the descriptive analysis, the food producer companies are only able to make average profit of 8% from their total assets and the standard deviation is 0.114. The skewness value is 3.067 and the kurtosis value is 12.801. Size of food producer companies’ average mean size is 100% and it indicates the companies are large since the average mean value is big and the standard deviation is 0.018. The skewness value is 10.623 and the kurtosis value is 174.791.

The average growth rate of the listed food producer companies during the observation period is 33% and the standard deviation is 4.94244. The skewness value is 21.098 and the kurtosis value is 446.703. The average mean tangibility is 17% which indicates that the most company's fixed assets are 17% the standard deviation is 0.17620. The skewness value is 1.410 and the kurtosis value is 0.881.

The average liquidity shows that the most of food producer company's current assets are 40 times more than it current liabilities and the standard deviation is 104.91940. The skewness value is 3.785 and the kurtosis value is 15.551. The Malaysian food producers companies are used average 7.99% of debt finance and the standard deviation is 0.11. The skewness value is 1.416 and the kurtosis value is 0.863.

5.2 Pearson correlation analysis

The factor that contributes the most is tangibility (0.274) and the factor least contribution is growth opportunity which is -0.032. The factors that found significant with total debt ratio are profitability, asset tangibility and liquidity at 2 tailed tests. However, growth opportunity and firm size are found no significant with total debt ratio. Hence, profitability,
tangibility and liquidity are the factors determine capital structure of Malaysia’s food producer companies. Profitability, size, growth opportunity and liquidity are found negatively related to total debt ratio and only tangibility is found positively related to total debt ratio.

5.3 Multiple Linear Regression

As summary, the correlation coefficient (R) is 0.383, which shows that 38% all the independent variables (profitability, size, growth opportunity, tangibility and liquidity) are influencing among each other. The coefficient of determinant (R square) shows that 14.6 % of the dependent variable (total debt ratio) is explained by the independent variables (profitability, size, growth opportunity, tangibility and liquidity). The adjusted r square is 0.137, 13.7% of variation in total debt ratio can be point to profitability, size, growth opportunity, tangibility and liquidity variables. The regression model developed in this research is TDR = CONSTANT + β1PROF + β2SIZE + β3GOPP + β4TANG+ β5LIQ. Based on the results of regression analysis, profitability, firm size, asset tangibility and liquidity is significant with total debt ratio. Growth opportunity is found no significant with total debt ratio. Therefore, profitability, firm size, asset tangibility and liquidity are the factors that determine capital structure of Malaysia listed companies under food producer sector. Profitability, firm size and liquidity are found negatively related to total debt ratio. On the other hand, growth opportunity and asset tangibility are found positively related to total debt ratio. The ANOVA test shows that the model is significant and there is relationship between total debt ratio with profitability, size, growth opportunity, tangibility and liquidity variables.

5.2 Hypotheses

Profitability is factor that determines capital structure of Malaysia listed companies under food producer sector.

The findings of the research show that profitability is significant with total debt ratio which is proxy to capital structure. The negative relationship between profitability and total debt ratio show that high profitability Malaysia’s food producer companies are utilizing more internal funding rather than external funding. This indicates that Malaysia companies are following pecking order theory hierarch which implies companies to use internal funding first, then debt finance and lastly equity funding (Niu, 2008). Low profitability companies will be funding their investment and business activities using debt finance due to insufficient internal fund which is retained earnings Cortez and Susanto, 2012). Based on the finding, profitability is insignificant with total debt ratio of the company’s hypothesis (H0) is rejected and profitability is significant with total debt ratio of the company’s hypothesis (H1) is accepted.

Size is factor that determines capital structure of Malaysia listed companies under food producer sector.

The result shows that size is significant with total debt ratio at 0.05 level of significant. The negative relationship between size and total debt ratio shows that Malaysia’s food producer large size companies are prefer to fund their business and investment activities using internal funding and equity (Md-Yusuf, Mohamad Yunus and Md suppat 2013). On the other hand, Malaysia’s food producer small size companies are utilizing debt finance such as loans to fund their business and investment activities (Md-Yusuf, Mohamad Yunus and Md suppat 2013). The negative relationship between size and total debt ratio that prove Malaysia food producing companies follows pecking order assumption. Hence, size is insignificant with total debt ratio of the companies’ hypothesis (H0) is rejected and size is significant with total debt ratio of the companies (H2) is accepted.

Growth opportunity is not factor that determines capital structure of Malaysia listed companies under food producer sector.

Growth opportunity is found to be not significant with total debt ratio at level of significant 0.01, 0.05 and 0.1. The positive relationship shows that high growth Malaysia’s food
producer companies are funding their investment via debt finance because insufficient of internal funding (Pandey, 2001). Conversely, low growth opportunity Malaysia's listed companies under food producer sector are utilizing internal funding rather than external source of funding (Ni, 2008). Therefore, growth opportunity is insignificant with total debt ratio of the companies hypothesis (H0) is accepted and growth opportunity is significant with total debt ratio of the companies hypothesis (H3) is rejected.

**Tangibility is factor that determines capital structure of Malaysia listed companies under food producer sector.**

The result shows that tangibility is significant with total debt ratio and this indicates that tangibility is a factor that determines capital structure of Malaysia listed companies under food producer sector. The positive relationship between tangibility and total debt ratio shows that Malaysia's listed companies under food producer sector owns high tangibility assets are utilizing debt finance to fund their business operations (Abdul Jamal et al, 2013). The low asset tangibility food producer companies are using either internal funding or equity funding (Md-Yusuf, Mohamad Yunus and Md suppat 2013). The positive relationship between tangibility and total debt ratio shows that the Malaysia food producer companies are following trade-off theory. Therefore, tangibility is insignificant with total debt ratio of the companies hypothesis (H0) is rejected and tangibility is significant with total debt ratio of the companies hypothesis (H4) is accepted.

**Liquidity is factor that determines capital structure of Malaysia listed companies under food producer sector.**

The finding of the research illustrates that liquidity is significant with total debt ratio. The negative relationship between liquidity and total debt ratio shows that high liquidity Malaysia's listed companies under food producer sector are funding their operations and investment using internal funding (Md-Yusuf, Mohamad Yunus and Md suppat 2013). The low liquidity Malaysia's food producer companies are employ debt finance to finance their production and investment activities (Eriotis, Vasiliou and Ventoura-Neokosmidii, 2007). Hence, liquidity is insignificant with total debt ratio of the companies hypothesis (H0) is rejected and liquidity is significant with total debt ratio of the companies hypothesis (H5) is accepted.

As conclusion, the firm specific factors; profitability, size, tangibility and liquidity are the determinants of the capital structure of Malaysia’s listed food producer companies. The growth opportunity is not found as factor that influences capital structure determination. The findings are consisting with the main capital structure theories such as trade-off theory and pecking order theory explains the capital structure of Malaysia's listed companies under food producer sector.

5.3. Implication

This main contribution of the research is contributing new knowledge about food producer company's capital structure determinant factors. The research findings show that profitability, size, tangibility and liquidity are significant with total debt ratio. The Malaysia's listed food producer companies are funding their activities using average 7.99% of debt finance. This shows most of Malaysia's food producer companies are utilizing less debt and other average of 92.01% are employing internal and equity funding.

5.4 Recommendation

Recommendation for future researchers is to investigate other firm specific factors that did not used in this research. The other firm-specific factors such as age, earnings volatility and non-debt shield tax can be investigated whether these factors are the determinants of capital structure of Malaysia’s food producers companies.

Second, the future researcher can also investigate country specific factors that determine capital structure of Malaysia's listed companies under food producer sector. There
are very little studies carried on investigating the impact country specific factors on companies’ capital structure in Malaysia context. Therefore, future researchers can explore and create new knowledge by conducting research on the impact of country specific factors on Malaysia’s listed companies under food producer sector capital structure.

The future research can investigate the growth opportunity factor which is found insignificant in this research. Lastly, the future researcher also can increase the sample size since this research only used 45 out of 78 Malaysia’s listed companies under food producer sector to get more appropriate results.
References


