FINANCIAL CAPABILITY AMONG UNIVERSITY STUDENTS IN INDONESIA

By

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ABSTRACT

The main aim of this study was to measure financial capability among university students in Indonesia. However, the study also contributes to: an understanding of the concept of financial capability and how it varies across countries and between groups. The main empirical part of the study was based on a major mixed method design which involved six focus groups followed by a large-scale representative survey of 521 face-to-face structured interviews with students, from Bogor Agricultural University, Bogor, Indonesia.

The empirical study provides a wealth of important findings on financial capability among students. Most importantly, it shows that there are different drivers of financial knowledge, attitudes, and behaviour. In particular, the study reveals that a financial education course had an impact on knowledge but not on attitudes and behaviour, once other factors were controlled for. Other factors showed a stronger effect on financial attitudes and behaviour. These were: financial socialisation by family; year of study; and work experiences; and for financial behaviour, the level of income was also a stronger determinant factor. Given that experience was shown as a determinant factor of knowledge, attitudes and behaviour, it is recommended that the financial education courses use experiential learning as a method of delivery to enhance their impact. However, even enhanced financial education courses, on their own, are unlikely to significantly improve financial behaviour. Appropriate provision and regulation of financial services, alongside maintaining adequate income levels are also vital.

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CHAPTER 1

INTRODUCTION

1.1 Motivation

There has been a considerable amount of research on financial capability, but it remains a highly contested topic, both in terms of its conceptualisation and the role it plays in people's lives. There has also been much research on financialisation, which is related to financial capability. Living in a more financialised world means that we need a better understanding of finance. Therefore, a higher level of financial capability is needed. According to The Money Advice Service (MAS, 2015, p.8), financial capability refers to:

> '*A person's ability to manage money well, both day to day and through significant life events, and to handle periods of financial difficulty'*
>
> '*It is driven by personal skills, knowledge, attitudes and motivations, and made possible by an inclusive financial system and supportive social environment'*.

Some literature is very critical of financialisation, such as Vitt, et al., (2000) and the study by Kempson, et al., (2005) for the UK's Financial Services Authority [FSA UK]). Financialisation and the rapid advances in information technology have brought major changes in contemporary economics and have created a more complex and dynamic financial sector, both in terms of products and systems (Marcolin and Abraham, 2006). Alongside this process of financialisation, the role of the government in providing social protection has been reduced, and more responsibility for personal finance is required. This means that individuals have had to take control of their own financial matters, for example, by contributing to a private pension rather than depending on government support (Harvey, 2007; Rowlingson and McKay, 2015).

The penetration of financialisation has brought many challenges. For example, in an increasingly financialised world, people may be drawn into using financial services that benefit the banks or other financial institutions rather than themselves due to financial miss-selling or inappropriate products or services. Another problem is that people are not making ends meet. A study by The Money Advice Services [MAS] (2013) shows that the number of those who are not making end meets and have financial difficulties is higher than ever before. It was explained that limited income is one of the issues; many people are struggling to improve their welfare, or even to fulfil their basic needs, because they do not have enough money. In this situation, cutting back on spending and generating more income are two options. Cutting back on spending might be the first option that people take, but it does not always help (Johan, et al., 2013). Meanwhile, increasing income is more challenging, especially in the competitive contemporary labour market. Therefore, ‘borrowing money’ is another coping strategy that may be chosen by some individuals. For some people, the easier access to credit that is offered by financialisation might be one opportunity. However, it raises new risks as well, such as being burdened by debt or worsening their financial condition, especially if they choose an unsecured loan/credit (Langley, 2008).

This chapter will provide the background of the research, and explain the importance of this study and the contribution that it hopes to make. This chapter will also present some data and figures related to the Indonesian context, starting with a brief history about its demographic and socio-economic conditions, before turning towards a discussion on the emergence of financial inclusion and increasing financial capability in Indonesia. This will be followed by a focus on young people.

The rest of this chapter will be divided into four sections. The first will present the background to the study. The second will discuss the Indonesian context and, in doing so, will focus on (1) demographics, (2) economic growth, (3) financial inclusion, (4) financial capability, and (5) financial capability among young people. This will be followed by a section outlining the objectives of this study. The final part will present the structure of the thesis.

1.2 Background

Financialisation increases the role of the market and expands the number of financial transactions (Cichorska and Klimontowicz, 2016). Epstein (2005, p.1) defines financialisation in terms of:

> *'The increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies.'*

As mentioned before, whilst financial products are now widely available, this has also opened up new vulnerabilities that people need to be concerned with, such as risky financial transactions, mis-selling of products, misleading information, or fraud and scams. As a result of the various and complex financial products and services that have emerged, people now have to be more selective when making decisions (Habschick, et al., 2007).

Government policies have become very important as a result. Financial products are complex, but the impact of this could be alleviated by better regulation of financial services, which is needed in order to reduce complexity and fraud. Strengthening regulation in the financial services sector is very important for ensuring good market conduct and in enhancing consumer protection, as well as ensuring that the policies that regulate business services provide appropriate financial services and products that meet the needs of society, not merely to benefit the company.

However, currently, it looks unlikely that people’s incomes will increase substantially and that the banks will be more stringently regulated. It also takes time to establish and implement a regulatory policy, since it requires good synergy from stakeholders. Given that the market keeps growing, increased support and education for people to understand and navigate the financial world would be helpful so that they can be more prepared, have a better understanding about financial products and services, be aware of financial risks and have better financial management skills (Beal and Delpachitra, 2003).

The European Banking Federation (EBF) (2009) argues that, in this complex financial market, ‘financial literacy’ plays an important role because it supports a greater understanding of financial management and protects people from fraud and unnecessary financial risks. Cude, et al. (2006) posit that financial literacy is related to the ability to utilize financial resources, to make spending decisions, to manage life risks and assets, and to prepare for financial security in retirement. According to the President’s Advisory Council on Financial Literacy (2008), financial literacy is defined as the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial wellbeing.

Hilgert, et al. (2003) and Cude, et al. (2006) outline what they consider to be good financial knowledge and skills to enable people to manage their financial resources. Bhushan and Medury (2013) explain that, along with the development of many new financial products, sound financial literacy helps individuals understand the costs, risks and benefits associated with financial products. A highly literate person will be more likely to choose and to use financial products and services effectively, avoid fraud and eschew insecure financial products or services, and in the long term, financial capability is believed to benefit individuals by promoting financial security, improving the quality of financial services, and contributing to the economic growth and development of a country (Hilgert, et al. 2003). However, there is little evidence to support this theory.

However, the concept of financial literacy has expanded into a broader notion, where financial literacy is seen as a part of financial capability. As well as enhancing personal finance knowledge, it is also important to include skills and behaviour (Roy Morgan Research, 2003; OECD, 2013a; Vyvyan, et al, 2014). As stated in their website, Jump$tart Coalition for Personal Financial Literacy argues that, financial capability consists of financial literacy, but it also includes '*social and emotional factors and access to financial services*'.

Financial capability plays an important role in making sound decisions on personal finance and in increasing welfare (Roy Morgan Research, 2003; Bagwell, et al, 2014; MAS, 2015). The importance of being financially capable is discussed by Mundy (2011, p. 8), who says that:

> '*People who are financially capable are able to make sound financial decisions for themselves and for their families; to make informed choices between different financial products and services; to budget and to plan ahead financially; to build up some savings; to avoid becoming over-indebted; to identify, and protect themselves against financial risks; to invest prudently; and to understand their rights and responsibilities.*'

It should be noted that financial capability is important for people of all incomes. It is also important for those with limited incomes, as they might be more vulnerable to fraud and scams, such as mis-selling of unsecured loan and false information or advertising (Prosper Canada, 2015, p.3). The support of financial knowledge and skills is needed to avoid them ending up being trapped and bound in more financial difficulties. Financial Services Authority and Basic Skills Agency [FSA and BSA] (2004) explain that financial knowledge and skills are needed to help individuals minimise losses when an unexpected event occurs, such as an economic change, an increase in inflation or a financial crisis. Nidar and Bestari (2012) add that, besides arising from a low-income level, financial difficulties can also be caused by poor financial management, such as credit or loan misuse and a lack of financial planning. Individuals may suffer from financial losses as a result of unwise spending habits and consumption, or choosing risky credit or loan products. It is argued that a lack of income and financial knowledge may limit access to financial markets.

Financial capability is increasingly important, but there is little agreement about what kind of issues should be covered, and how or when it is best to do so. As previous studies show, younger people are a vulnerable group who lack financial capability (e.g., Xu and Zia, 2012; MAS (2013; 2015)). Therefore, this thesis will examine the financial abilities that students lack but need. This study will focus on university students, as they will enter the workforce soon after they graduate, so financial knowledge is very important for them to manage their finances wisely. University students are a key group, so a study of their views on this will be important for policy development purposes. This study will use the term ‘financial capability’, which consists of knowledge, attitude and behaviour with respect to finances. The key aim of this study is to examine financial knowledge, attitude and behaviour among university students in Indonesia, and identify the critical areas in which students’ financial capability can be improved. Moreover, it will also explore the factors that affect financial capability and the role of financial education in enhancing it. The findings of this study will contribute to the strategy for improving financial capability among students.

1.3 Indonesia's context

1.3.1 Demographic profile

The population of Indonesia stands at 254 million (The Office for National Statistics, Indonesia [Badan Pusat Statistik] [BPS], 2015). This makes Indonesia the country with the biggest population in Southeast Asia, and is the fourth most populous country in the world, after China, India and the United States (US). To measure the population, the Indonesian government conducts a national census each decade, the latest of which was conducted in 2010. Figure 1.1 shows Indonesia's population growth since 1971.

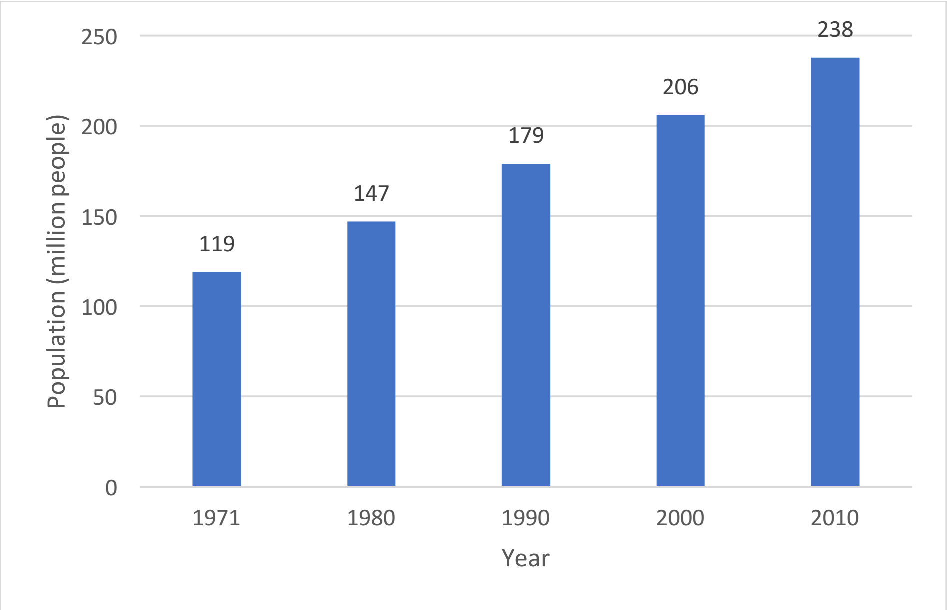


Figure 1. 1 Indonesia's population growth 1971-2010

Source: Statistics Indonesia (BPS), 2015

As illustrated in Figure 1.1, within the period from 1971 to 2010 the Indonesian population was growing quickly, and the total Indonesian population in 2016 was projected to reach 258 million people, with a population growth rate of 1.4 percent (BPS, 2016). Based on these projections, Indonesia's population will reach 270 million in 2025, 285 million in 2035 and 290 million in 2045.

As a result of this fast demographic growth, Indonesia has a predominantly young population. The dependency ratio becomes lower and the number of the population who are of a productive age (age 15–64 years) becomes higher. The 2010 census shows that about two in ten of Indonesians are children aged under ten years, nearly four in ten are below twenty years of and about half of Indonesia's population are under the age of 30 years. These figures demonstrate that, from a demographic perspective, Indonesia has a great source in terms of productivity, which is the potential workforce. The average age of the Indonesian population is 28.6 years (2016 estimation). This is the median age, which means half of the population are above 28.6 years old and half are below 28.6 years old**.** The population pyramid based on the 2010 census is displayed in Figure 1.2, while Table 1.1 shows the structure of Indonesia's population based on age (BPS, 2015; 2016; 2017; Bappenas, 2013).

At the moment, Indonesia's dependency ratio is 51.31, which means that every 100 working-age people have to support 51 dependants (old people and children). It is estimated that this number will be lower in the future, and is expected to be around 44–48 in 2020–2030 (BPS, 2016). An increase in the working-age population could have the benefit of accelerating economic growth. While the total population will begin to grow more slowly, the number of those under 30 is anticipated to rise; that is, approximately half of the total population or about 125 million people. Soon they will enter the productive age, which could further boost the national economy. Having a job means they will have an income, which will contribute to increasing the demand for goods and services as consumption begins to rise. It also means that households will also have a higher chance of saving more since the number of dependants is reduced, which too would benefit economic growth (Siregar, 2016).

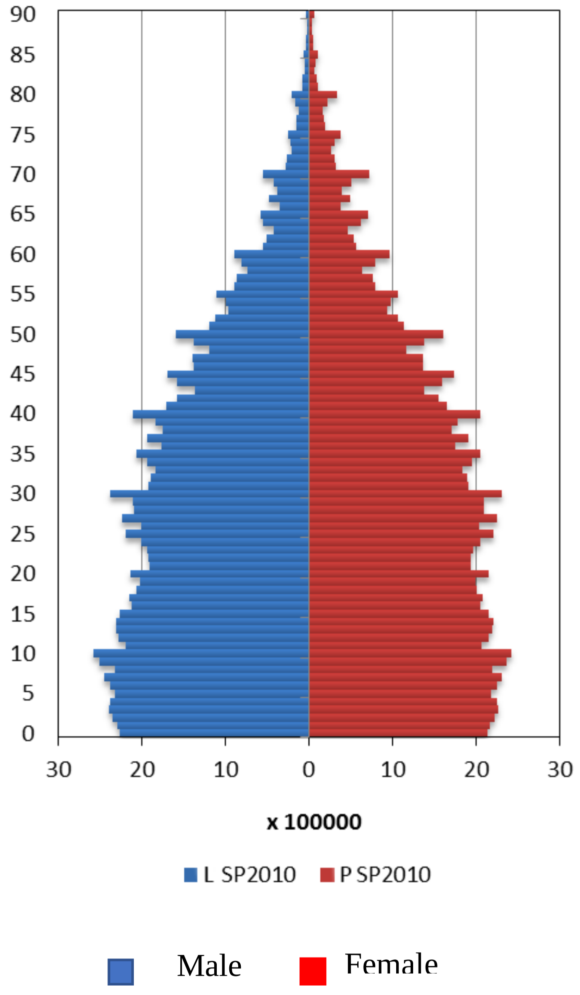


Figure 1. 2 Indonesian population pyramid based on the Indonesian National Census 2010

Source: Bappenas, et al., 2013, p.5

Table 1. 1 Structure of Indonesia's population based on age

No	Age group	% of population
1	0–14 years old	27.3
2	15–64 years old	66.5
3	65 and above	6.1

Source: Modified from Bappenas, et al., 2013

It should be noted that these changing conditions will offer a great opportunity for economic development, but the availability of sufficient jobs is very important. Otherwise, it will become a burden for society and cause issues such as increasing unemployment, increasing levels of poverty, high crime rates and an aging-population needing to be supported by social protection because they have no savings (Adioetomo, 2005; Jati, 2015). In order to support human development and capability, several programmes and policies have been arranged by the Indonesian government, including: (1) 12 years of free education (from primary until secondary school), and a scholarship programme for higher education; (2) national health insurance with a minimum fee; (3) a soft-loan programme for stimulating small and medium enterprises; and (4) a family planning programme (OECD, 2015b).

1.3.2 Economic growth

In terms of economic performance, Indonesia shows promising growth. Over the last few decades, Indonesia's income per capita has been on an upward trend. The World Bank (n.d) documents that the income per capita of Indonesia in 2015 was US$3,603 and that the country's gross domestic product (GDP) has continued to grow, from US$861 billion/year in 2015 to US$933 billion/year in 2016 (see Table 1.2).

Table 1. 2 GDP for Indonesia 2010–2016

Indicator	**Year**						
	2010	2011	2012	2013	2014	2015	2016
GDP (in billion US$)	755	893	918	915	891	861	933
GDP growth (annual %)	6.2	6.2	6.0	5.6	5.0	4.9	5.0
GDP per capita (in US$)	3,167	3,688	3,741	3,528	3,442	3,347	3,603

Source: World Development Indicators, The World Bank (n.d).

However, compared to neighbouring countries such as Malaysia, the Indonesian economy is still lagging behind. Malaysia has demonstrated better economic performance, with an income per capita about three times higher than that of Indonesia (see Table 1.3). The figure is even lower when compared to populous countries such as China. Based on the data from the World Bank, the income per capita in China, the world's most populous country, was US$8,069, or more than twice that of Indonesia. However, it is twice as high as India's.

Table 1.3 presents some 2015 data of popular indicator of neighbouring countries including the populous and developed countries that is China, India and the US, along with the United Kingdom (UK).

Table 1. 3 Popular indicators, 2015

No	*Country*	*Population*	*Surface area (sq. km)*	*GDP (million US$)*	*GDP growth (annual %)*	*GDP per capita (US$)*	*Inflation, consumer price*
1	Indonesia	257,563,815	1,910,931	861,934	4.8	3,347	6.4
2	Malaysia	30,331,007	330,800	296,283	5.0	9,768	2.1
3	Philippines	101,716,359	300,000	292,774	6.0	2,878	1.0
4	Korea, Republic of	50,617,045	100,280	1,377,870	2.6	27,222	0.7
5	China	1,371,220,000	9,562,911	11,064,700	6.9	8,069	1.4
6	India	1,311,050,527	3,287,259	2,088,840	7.9	1,593	4.9
7	US	321,418,820	9,831,510	18,036,600	2.6	56,116	0.1
8	UK	65,128,861	243,610	2,861,090	2.2	43,930	0.1

Source: World Development Indicators, The World Bank (n.d).

However, although it still being left behind, given that Indonesia is the largest and most populous country in Southeast Asia, and given that it forms an archipelago of more than 17,000 islands, Indonesia's economic performance is still promising. It has seen average growth rates of over 5% per year over the past few decades and is ranked as the world's tenth largest economy (based on purchasing power parity) and is thus also a G20 member (Setiawan, 2015).

Meanwhile, Indonesia also demonstrates a decreasing rate of unemployment. Table 1.4 below provides more detail about the unemployment rates in Indonesia in recent years.

Table 1. 4 Unemployment rate for Indonesia

	Year						
***in million**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Workforce	116.5	119.4	120.3	120.2	121.9	122.4	127.8
- In work	108.2	111.3	113.0	112.8	114.6	114.8	120.8
- Unemployed	8.3	8.1	7.3	7.4	7.2	7.6	7.0

Source: BPS, 2017

Given the growth in GDP per capita for Indonesia, potential demand for financial products and services is projected to increase; the number of those who will use financial products and services is projected to rise, meaning that the financial markets will develop further.

1.3.2.1 The poor-, middle- and upper-income groups

Based on daily expenditure per capita, three income categories can be delineated: (1) the low-income group; (2) the middle-income group; and (3) the high-income group (see Table 1.5). The low-income group consists of poor (i.e. those who live below the poverty line) and vulnerable groups (i.e. those who live above the poverty line, but are vulnerable to falling below it). The middle-income group is categorised based on the definition of the World Bank (2011), which relates to those with US$2–20 per capita daily expenditures. The high-income group, or the top group, are those with daily expenditures above US$20 (Mandiri Institute, 2015, p. 23).

Table 1.5 reveals that the middle-income group comprises the largest proportion of the population. However, it should be noted that the low-income group is also significant, with almost four in ten people being a part of it.

Table 1. 5 Income group based on daily expenditure per capita

Income group	**Daily expenditure/capita (US$)**	**2003 (%)**	**2010 (%)**	**2013 (%)**	
Low	< 1.25	21.9	14	11.5	37.4%
	1.25–2	40.3	29.3	25.9	
Middle	2–4	32.1	38.5	39.4	62.4%
	4–6	3.9	11.7	13.1	
	6–10	1.3	5.0	6.1	
	10–20	0.3	1.3	3.8	
High	>20	0.1	0.2	0.2	0.2%

Source: Mandiri Institute, 2015, p.23.

In terms of the poverty rate, although it still an important issue in Indonesia, as indicated in Figure 1.3, it is decreasing. By September 2016, Indonesia had managed to reduce poverty to 10.7% or 27.76 million people, a decrease of 0.25 million compared to March 2016 (10.86% or 28.01 million people) (BPS, 2016).

Yet there are still many challenges to overcome if Indonesia is to meet its development goals. Having said that, the Indonesian government has introduced several programmes designed to overcome inequality and unemployment issues. As mentioned before, in addition to providing free education until secondary school and providing a new programme of national health insurance, it has also developed an economic-production financing scheme, which is a soft-loan programme to fund feasible small and medium enterprises (OECD, 2015b). In order to have access to access the fund however, people need to have access to a financial institution.

The loan scheme might help the poor to borrow capital to expand their business. However, there is a high risk that they will be no more than a financial object for a bank or financial institution. They are given the loans along with an obligation to repay then, including interest and fees; this failure to adequately respond to this requirement can worsen their financial situation.

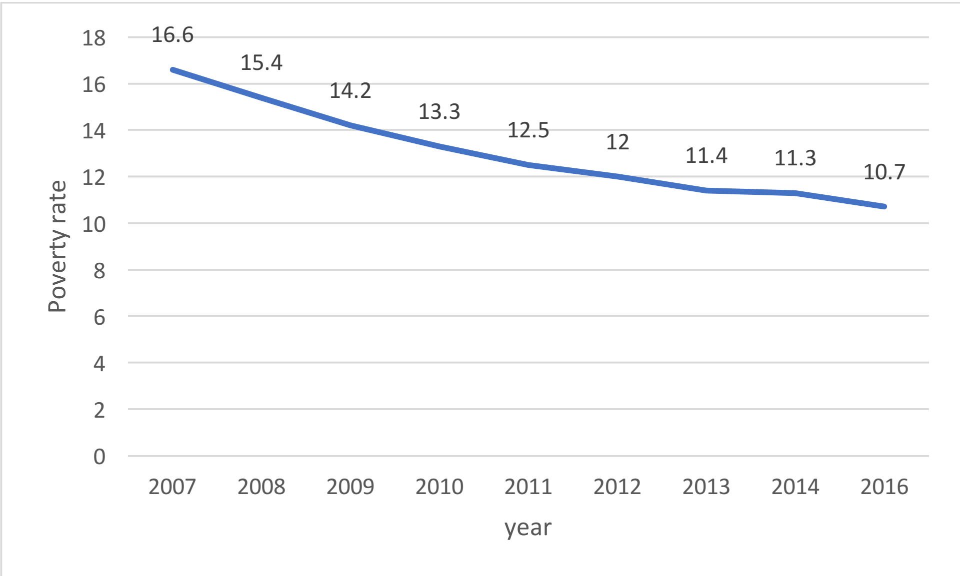


Figure 1. 3 Indonesia's poverty rate 2007-2016

Source: World Bank, n.d; BPS, 2016

Therefore, as we saw above, regulation that protects the consumer is very important in order to accommodate the increase in needs and demand (OJK, 2015). The implementation of financial inclusion programmes, such as the financing scheme discussed above, requires concurrent government policies and for regulations to be either formulated or strengthened in order to foster consumer protection in the financial market. Put simply, regulation is needed to ensure that financial products meet the needs of society, and are not merely to benefit the company.

The growth of the middle-income group

Indonesia is now classified as a middle-income country (Bappenas, 2013). According to Ravallion (2009), from the World Bank, someone who earns between a minimum of US$2 and a maximum of US$13 per day income can be categorised as being in the middle-income group, The Asian Development Bank (2010) meanwhile defines the middle-income group as those with a daily per capita expenditure of between US$2 and US$20 per day. A survey from a Japanese investment bank reveals that the Indonesian middle-income group has grown 50 times from 2004 to 2010, increasing rapidly from 1.6 million to over 50 million people. This is due to a growth in domestic consumption, which has supported improvements to the country's GDP. Household consumption contributes more than half of overall economic growth. Continued strong domestic consumption is one of the key reasons that Indonesia was able to successfully weather the global financial crisis of 2008–2009 (it had an average GDP growth rate of around 5.6% between 2008 and 2010). This solid economic growth has led to the increase in members of the middle-income group (Salim, 2012).

According to the World Bank (2017), about one in every five Indonesians now enter the middle-income group. This benefits policy makers, especially in the economic and business sectors. They hope that the middle-income group will continue to grow, given that it will lead to an increase in tax revenue and domestic spending. This growth of the middle-income group is not just expected to rise further, but it is expected that it will do so faster than before. As we discussed above, the country is expected to benefit from its 'demographic dividend', which has seen the country experience a changing population since 2010 because of a decline in the fertility rate and an increase in life expectancy (Bappenas, 2013).

Salim (2012) argues that the enlargement of the middle-income group will also be supported by sound financial management, such as an increase in savings, since it will benefit financial sustainability, and, in general, will lead to increasing national security. Promoting better practices for financial management, the author says, will be done in parallel to the growth in national financial sustainability and national security.

However, the increasing number of the middle class in Indonesia apparently does not contribute significantly to a rise in the level of national savings. About 12% of the population claim that they are unable to save or to invest (Salim, 2012; Siregar, 2016). In addition to increasing living costs, a more expensive lifestyle, impulsive buying and lack of knowledge are some of the reasons given for this poor saving behaviour (Salim, 2012). As Rasyid (2012) argues, the challenge in managing money is not only about the amount of income but also how to organise the money and resources. This fact might be a concern. Increased income requires better management, so people can allocate their resources optimally and in a productive way.

1.3.3 Level of financial inclusion

The fact that Indonesia is a largely Muslim country is relevant when it comes to any discussion on financial services, given that lending (at interest) is important to financial services. Therefore, before discussing about financial access, the following section will present a brief outline of Indonesia’s Islamic and conventional banks.

There are two types of national banking system in Indonesia, conventional banks and sharia banks. According to the 2010 census, 87% of the Indonesian population are Muslim, while 6.9% are Protestant, 2.9% are Catholic, 1.7% are Hindu, 0.7% are Buddhist, and 0.05% are Confucian (BPS, 2016). Although Indonesia is a country with a largely Muslim population, Indonesia is not an Islamic state that applies sharia (Islamic) law in its constitution and legal system. However, Islamic values and principles do exist in many normative aspects, and influence social life, including the banking industry. Since 1991, sharia/Islamic banks have been established in Indonesia. As all forms of interest are prohibited in the Islamic finance system, sharia banks apply a profit-sharing arrangement (Jahja and Iqbal, 2012; Arifin and Nasution, 2015; Bappenas, 2016).

However, although there has been a positive trend in market growth, with an average growth of about of 15–20% (Financial Services Authority in Indonesia [Otoritas Jasa Keuangan] [OJK], 2017), the preference for a sharia bank is still lower compared to conventional ones, with the former having a smaller customer base than the latter. Based on banking statistics from the Indonesian Financial Services Authority (OJK, 2017), by 2014 there were 119 conventional banks in Indonesia, with 19,780 bank offices, but only twelve sharia banks, with 2,147 offices across Indonesia (OJK, 2017). Data from the OJK (2017) reveals that the total number of sharia banking customers is about 15 million, while there are about 80 million customers of conventional banks. In spite of this though, the fact that the number of customers of sharia banks is growing at between 15% and 20% shows the increasing importance of these sharia banks.

According to Bank Indonesia (2000); and Ascarya (2005), the facilities and services that are on offer is one of the factors that influence people in choosing a bank. Although there is a positive perception of sharia banks from a religious perspective, the quality of services and facilities in conventional banks are viewed as better than in sharia banks. Moreover, from the customer viewpoint, the level of profit sharing for a sharia bank is less attractive than the interest that is offered by a conventional bank. Perhaps this is due to the public being more familiar with the latter than the former.

1.3.3.1 Financial access

A survey on the demand for financial services carried out by the World Bank (2010) showed that only about half of Indonesia's population had access to formal financial services. It shows that less than half of Indonesians put their money in the bank, and approximately one-third do not save money in any formal or non-formal financial-service product. In terms of credit, less than 20% of Indonesians borrow from banks, and about one-third borrow from informal sources, such as family members, friends, or pawn-shops. Table 1.6 outlines the major sources of borrowing and destinations for savings.

Table 1. 6 Access to finance

Saving			Borrowing		
1.	Savings in a bank	50%	1.	Borrow from bank	17%
2.	Savings in other formal financial institution	17%	2.	Borrow from other formal financial institution	43%
3.	Does not save	33%	3.	Does not borrow	40%

Source: World Bank, 2010; Mandiri Institute, 2015, p.18

A study by Johan, et al. (2013) shows that households tend to avoid banks and rely instead on other sources, such as going to their family or close relatives, the pawn shop, or money lenders, if they need to borrow money. The author explains that being unfamiliar with the system, being ‘unbankable’ and having limited access were some of the reasons behind this.

Data from the World Bank (2010; 2012) shows that the total proportion of adults in Indonesia who have access to finance is smaller than for it is in neighbouring countries; for example, in Thailand and Malaysia, eight in ten adults have access to finance. A study by Bank Indonesia [BI] (2012) shows a similar result. The possession of financial products by Indonesians is still categorised as being low; they have only 2.3 products each on average, below the Southeast Asia average of 3.6 products per person. What’s more, the score is far behind that other countries in Southeast Asia, including Thailand (2.5), Malaysia (5.4) and Singapore (7.7). Among the G20 countries, Indonesia is lowest when it comes to access to financial services (Salim, 2012).

This issue needs to gain more attention, as the financial services sector is believed as one of the factors that can stimulate economic growth. As explained by the G20 Leaders’ Forum Organization for Economic Cooperation and Development (OECD) (Messy, 2012; OECD 2013b; 2014, p.26), the role of the financial sector is described in terms of a ‘trilogy of consumer empowerment’: financial literacy, financial inclusion and consumer protection. The integration of the trilogy is very important for strengthening the financial system and improving welfare (Messy, 2012; Russia’s G20 Presidency and OECD , 2013b). As a part of the trilogy, financial literacy and financial inclusion shows a positive relationship, thereby enhancing the understanding of financial products and related matters, and will encourage the use of financial products and services. From a macro-economic perspective, increased levels of financial inclusion will reduce income inequality (Park and Mercado, 2015), as having access to funding allows people to have more resources, so they have more opportunities to boost their finances through, say, expanding a business (Mandiri Institute, 2015).

However, access to financial products is only good if those products are affordable and meet people's needs, otherwise they just make profits for financial companies. Therefore, increasing access to financial products and services should be accompanied by better regulation and financial knowledge so people only use the products that really suit them.

Similarly, in terms of the expansion of various financial products, Bhushan and Medury (2013) also describe the importance of having a sufficient level of financial knowledge in order to understand the risks and benefits that are associated with then. They argue that individuals who possess sound financial literacy will have a greater chance of being able to use financial products and services more effectively, so that they are not easily deceived by fraud, or the miss-selling of financial products or services.

1.3.4 Financial capability

Several studies on financial capability have been carried out across the world, in both advanced and emerging economies, including Indonesia (Lusardi and Mitchell, 2006, 2011; Bucher-Koenen and Lusardi, 2011; Sekita, 2011; Sohn, et al., 2012; Atkinson, et.al., 2006; Money Advice Services [MAS], 2013; Klapper, et al., 2013; Definit, 2013). This topic has gained attention for a number of reasons, for example, the rise of unsecured loans, risky credit, new financial products, the increasing need for financial services, financial problems such as bankruptcy and increasing debt levels, and increasing individual responsibility to make informed financial decisions (Roy Morgan Research, 2003; Kempson, et al, 2005; Prawitz, et al., 2006; OECD, 2014; Bhushan and Medury, 2013).

As discussed previously, one of the issues that has emerged in Indonesia is the gaps in the financial sector. In addition to gaps in affordability (income) and participation (inclusion), there is a gap in the level of financial understanding and skills people have. Japelli (2010) showed that Indonesian financial literacy is rated 3.6 (out of 8) points, which puts it in 43rd place out of the 55 countries surveyed. It shows that the awareness of financial planning is still low. Similarly, a survey conducted by VISA (2012) with 25,500 participants found that Indonesia ranks 27th out of 28 countries studied for financial literacy. The Financial Services Authority (OJK, 2014) has also conducted a national survey on the level of literacy, the National Literacy Financial Survey, which was conducted in the first half of 2013 in 20 provinces and involved 8,000 households. The result showed that only two out of ten Indonesians could be classified as being financially literate[1]. Definit (2013) showed that over three-quarters of Indonesians have insufficient financial literacy, and women, younger people and the elderly are the most vulnerable groups. This condition is an important issue for Indonesia. Thinking back to the role of the young groups and the window opportunity from the demographic dividend mentioned before, we can recall that about 182 million Indonesian citizens were recorded to be in the productive-age group (over 15 years) and 25% of them are aged 15–24 (BPS 2015). This is a remarkable number, not only because of its ability to grow the middle-income group, but also in terms of the way in which it will lead and driven the country's future economic development. However, a key determinant of the extent to which it will be able to do this is the level of financial capability.

Given that a wide range of financial products is offered on the market, the young generation today is not only challenged by complexity, but also by greater risks. The wrong decisions could

[1] *Unfortunately, the report did not offer a detailed definition of a financially literate person.*

be costly for their future financial security. They are required to have adequate skills to manage their finances and prepare for a financial secure future. These include budgeting, spending, savings allocation, choosing insurance and even future planning, such as a retirement plan (Rasyid, 2012).

Financial capability at a micro level is the foundation of the macro level (OJK, 2015). Improving this area:

> *'…can boost economic participation and social inclusion, drive competition and market efficiency in the financial services sector, as well as contributing to the economic health of society'* (Subinarto, 2014)

1.3.5 Promoting financial capability among young people

The role of young people is important for encouraging the growth of the middle-income group and, as Birdsall, et al. (2000, p.19-20) argue, economic participation of the middle-income group is a determinant of sustainable market growth. However, this also needs to be supported by education and training. Better education and established economic conditions will put the middle class in Indonesia in a strategic position for national development.

US Department of the Treasury (2015) shows that the younger generation are in a more difficult economic position now. It was explained that as well as having a low income, young people, including university/college students, are at risk in terms of lacking sufficient financial literacy and capability. A recent study by Jiang and Dunn (2013), from Ohio State University, US, find that the young generation today still lacks responsibility for managing finances. Using survey data from Ohio State University from 1997–2009, which involved 35,542 respondents aged 18–85 years, it is revealed that young people who were born between 1980 and 1984 had higher levels of debt, spent more money on credit cards and tended to pay off bills relatively more slowly compared to the previous generation at the same stage of life. Several reasons can explain this finding; in addition to stagnating wages, lower income and paying off education fees, there is easier access to credit, simpler credit-card-application processes, and more permissive opinions on debt, such as, being in debt nowadays is more socially acceptable than before. It should be noted that the context of the US might not be exactly comparable to that in Indonesia, as in Indonesia there are age and income restrictions for obtaining a credit card. However, there is an additional cardholder facility that allows those such as college students to apply for a credit card, as long the main cardholder is eligible. Moreover, nowadays, many providers also offer big promotions in shopping centres to obtain new cardholders. Usually, the requirements are easier, as a new card can be issued simply by submitting an identity card

A previous study by Hayhoe, et al. (2000) also finds that students who lack financial knowledge tend to make poor decisions when it comes to their finances. Jorgensen (2007) argues that as people grow older, their financial knowledge increases. He explains that this might be caused by general life experience. Therefore, one of the main targets of education should be young. This can be provided by formal academic institutions, such as schools, colleges or universities.

There are many reasons why it is important to deliver financial education to students, especially those in university. The main reason is that students are identified as the agents of change in society who will drive the economy forward. Gutter and Copur (2011) posit that developing sound financial behaviour during college years may lead to higher chances of attaining financial wellbeing in the future. Students encounter real life in university, and most of them have to manage their finances more independently. As soon as they graduate and get a job, they have to manage their income more responsibly. Therefore, one of the challenges in this case is preparing students to become smart economic consumers.

Entering life as a college student, for most of them, may also mean starting a new life with new responsibilities, including managing personal finances (Sabri, et al., 2008; Mahdzan and Tabiani, 2013). Students may face these new challenges without involvement or assistance of their parents. They should thus be able to administer their finances independently and, at the same time, be responsible for every decision they make. Similarly, Widayati (2012) describes how experiencing financial freedom for the first time may lead university students to face financial challenges. Peng, et al. (2007) argue that college students need to be equipped with financial literacy as they now have to be responsible for their finances. They face new challenges, such as dealing with bills, managing expenses, allocating savings, using a credit card, and so on. For most of them, the task requires more expertise and knowledge than ever before. Thus, it is recommended that effective financial education may help students to increase their ability to understand and to act positively with respect to financial matters.

Moreover, students are more likely to have a middle or high income, and therefore they are more likely to have the ability to save and to choose financial products. Not only do they encounter complex financial products and services but they may also face greater financial risk in the future (Lusardi, et al., 2010). Chen and Volpe (1998), for example, found that American students with low levels of financial literacy tend to make inappropriate financial decisions. By developing financial literacy, students will be able to be financially responsible throughout their lives.

According to Ministry of Education and Culture (2016), currently, in Indonesia there are about 3,246 institutions of higher education overseen by the Ministry of Research and Technology and Higher Education. This figure is made up of 122 state universities and 3,124 privately run universities and have a total of 6,118,733 students. Moreover, there are also 1,104 higher-education institutions overseen by the Ministry of Religious Affairs and other institutions. This is a remarkable number, even when it is compared to China, which only has 2,560 higher-education institutions and 1,219 degree programmes for a total population of almost 1.4 billion (National Bureau of Statistics of China, 2016). With such a large number of higher education institutions in Indonesia, there is plenty of opportunity to improve individual capability.

To support higher-education programmes, financial aid and scholarships have been offered to university students in Indonesia. Currently, the Indonesian government, through the Directorate General of Higher Education, provides two major financial aid programmes, namely: (1) the Bidikmisi programme, which is an educational cost support grant for students that have limited income and are unable to finance the cost of their education; and (2) scholarships, which are educational funding that provides for students with good academic performance. Moreover, many non-governmental organisations also offer scholarships for university students. Usually, there are two types of scholarship: (1) a full scholarship (covering tuition fees, living costs and an allowance for books); and (2) a part scholarship, which is a scholarship that covers only tuition fees or living costs (Ministry of Research, Technology and Higher Education of the Republic of Indonesia, 2017)

Although financial literacy will be very useful for young people’s futures, financial education is not yet a part of the curriculum in Indonesia, even though the current Indonesian government has developed a program to design effective financial education for households and students from primary school to university level (OJK, 2015). This is a good reason to conduct relevant research to support the development of financial education for young people in Indonesia, especially university students.

1.4 Research Questions

Based on the background of research, this thesis seeks to examine the following research question:

What is the level of financial capability among university students in Indonesia?

This research question is addressed through the following six sub-research questions:

1. What is the level of *knowledge* of personal finance issues among university students in Indonesia, and what drives these?
2. What *attitudes* to personal finance do university students in Indonesia have, and what affects these?
3. How do university students in Indonesia *behave* in terms of personal finance, and what drive this?
4. How do knowledge, attitudes, and behaviour vary depending on different student types and compared to other groups in Indonesia and overseas?
5. What aspects of personal finance do university students in Indonesia say they struggle with and what aspects would they like more help with?
6. How can financial capability be increased among university students in Indonesia, and what is the role of financial education in doing so?

1.5 Objective of study

Although a broad range of studies have been conducted on the topic of financial literacy and capability, research about the topic in Indonesia is still needed in order to provide context-specific evidence. Prior studies predominantly focus on households, and existing studies on university students in Indonesia that focus on financial capability as a holistic area have not been exhaustive. The existing studies that focus on university students in general are limited to a specific area, such as only being focused on knowledge, attitudes or behaviour.

As mentioned previously, The OJK has made a commitment to enhance financial literacy in Indonesia and is now preparing a framework for financial education that will be one of the courses that will be taught at school and university (OJK, 2014). Since financial education is a new subject in Indonesia’s education curriculum, it is necessary to develop an effective model for financial capability lessons. To design an effective model for financial education, it is important to examine the level of financial capability and to explore students’ specific needs in order to determine which topics should be taught.

Overall, this thesis will give a new insight into the study of personal finance, particularly in terms of financial capability. As mentioned in an earlier section of this chapter, this thesis also aims to contribute to the development of financial education by identifying critical areas to improve financial capability among students. The results of this research will provide evidence that may be used to develop a strategy to increase young people’s interest in conducting better financial management.

1.6 The structure of the thesis

In the following chapter, chapter 2, the concept of financial capability is examined in detail. The chapter begins by exploring the concept of financial literacy and discussing how it has developed into the more holistic concept of financial capability. The framework for this study will also be presented in this chapter.

Empirical studies about financial capability then will be discussed further in chapter 3. This chapter will present several related studies that have been carried out across the world. The levels of financial literacy and financial capability across countries will also be discussed.

In chapter 4, the methods that were employed in this study will be explained. The chapter will begin with a justification of the methods chosen and the formulation of the research questions. This leads on to an outline of the justification for, and techniques employed in, the mixed-methods approach adopted in this study (which uses focus groups and a survey instrument). Moreover, the type of data, the details of the data collection, including the participation selection, and the analysis will be explained thoroughly, along with a discussion on reflexivity, ethics, and the research’s limitations.

Chapters 5, 6 and 7 present the empirical data. In this research, the analysis of financial capability will be based on three themes: knowledge, attitude and behaviour with respect to financial matters. In Chapter 5, the level of financial knowledge among university students will be presented and the levels of financial attitude and financial behaviour will be presented in Chapters 6 and 7, respectively. In each chapter, the determinant factor for each area will be analysed, as well as how each varied across groups, such as between different genders, or those with different levels of study, in different fields of study and with different incomes.

In Chapter 8, the key findings and contributions of study will be presented, as well as its limitations. Recommendations for further research will also be presented here.

CHAPTER 2

CONCEPTUALISING FINANCIAL CAPABILITY

2.1 Introduction

As mentioned in the previous chapter, the concept of financial capability is highly contested. The aim of this chapter is to explore this concept and understand how it relates to other concepts, such as financial literacy and numeracy. Different dimensions of financial capability, such as knowledge, attitudes, and behaviour will be discussed, as well as variations in the concept and its operationalisation across countries and organisations.

This chapter concludes by outlining how these different models will be drawn on in this research. In order to gain a greater level of understanding of the key issues, this chapter will begin with a review of the term financial literacy itself and a discussion on how the concept has become an essential part of discussions on financial capability. Next, it will present the frameworks for both concepts. This will pave the way for the discussion in chapter 3, which will examine variation in financial capability across different countries.

2.2 The concept of financial capability

In previous study that have been conducted, some use the term of "financial literacy" and some use "financial capability" For some, these mean slightly different things (Huston, 2010, Remund, 2010; Zottel, et al., 2013). Some authors define financial literacy as one component of financial capability, for example Kempson, et al (2005). For others, they overlap (Xu and Zia, 2012). To explore this issue in more depth, this section will be divided into two parts. The first will examine the concept of financial literacy, whilst the the second will discuss the concept of financial capability.

2.2.1 Financial literacy

As suggested in chapter one, in this financialised world, there is a need for effective regulation to cope with the developments in financial institutions in order to ensure good market conduct and to protect the consumer. Better regulations of services are needed to reduce complexity and fraud. However, in addition to regulation, it is also important for people to increase their understanding and ability to manage their personal finances.

We saw in chapter one that over the last few years financialisation has lead to the rapid growth in consumer financial products and services, and a shift of responsibility from the state to the society that has meant that people now have to be more responsible and take greater control of their finances, including for retirement. However, this change does not seem to have had a corresponding effect on saving or investment rates. Cude et al. (2006) argued that one reason was because of a lack of financial literacy. In their study they argued that financial literacy levels are related to the ability to use financial resources spending, manage life risks and process assets, as well as preparing for financial security in retirement.

According to OECD (2013a), financial literacy is one of the key factors that supports economic growth and financial stability. From the individual’s perspective, sound financial literacy may help increase understanding about risk and cost, so it can also minimize the occurrence of improper financial decisions, such as unwise spending, and the easy loan that have high interest rates. A sound financial literacy could have positive impact on the ability to build up long-term savings, education funds or pension funds. Meanwhile, from the government's point of view, the government can obtain tax revenue for infrastructure development and public service facilities.

Sohn et al. (2012) argued that financial illiteracy could lead to poor financial decisions, which in turn decreases wellbeing as individuals find it difficult to fulfil their essential financial needs. Similarly, van Rooij et al. (2007) found that financial literacy plays an important role in financial decision-making: those with insufficient levels of literacy tend to depend on peer groups (that is, family and friends) for advice or information. A study by Klapper, et al (2013) showed that those who have a higher level of financial literacy are less likely to report negative income shocks during a financial crisis in their country because they tend to have unspent income that can support them. They are more likely to exhibit better financial behaviour when managing their income and spending and are, in general, more aware of how to manage their money. Thus, by providing a thorough understanding of the rules in managing finance, financial literacy could assist people and increase their chances of achieving greater financial security.

Meanwhile, a wide variety of studies on financial literacy have been carried out in different countries. Sohn, et al., (2012, p.1) argued that:

> *'financial literacy in the macro level ensures that citizens of a country are adequately equipped to deal with everyday financial situations and transactions in the marketplace'*

To gain more understanding about the concept, this section will begin by exploring existing definitions of financial literacy contained therein. There are a wide range of definitions, and this section will discuss them chronologically, based on their year of publication. However, where possible, newer studies that used the same concept will be examined.

Noctor, et al. (1992) as cited in Huston, (2010, p.311), defined the concept of financial literacy as ‘the ability to make informed judgements and to take effective decisions regarding the use and management of money’. This definition is also used in several studies, such as Schagen and Lines, (1996), Beal and Delpachitra, (2003), and Roy Morgan (2003) for Australia and New Zealand (ANZ) Survey of Adult Financial Literacy in Australia. Schagen and Lines, (1996, p.91) argue that the definition of financial literacy provided by Noctor et al (1992) covered three main area, that is, ‘financial planning’, ‘problem-solving’ and ‘decision-making’. As critiqued by Schagen and Lines, et al (1996), it seemed there is an overlap between the areas, for example, both ‘problem-solving’ and ‘financial planning’ are related to ‘decision-making’. However, looking in more detail, the difference can be seen as follow: ‘Financial planning’ refers to how to plan for future needs, such as buying a new house and building up a pension fund, ‘problem solving’ refers to being able to cope with financial difficulties, such as making ends-meet and fulfilling unexpected needs, whereas ‘decision making’ relates to decisions underpinning the purchase, say, of a major item, such as what, when, and where to buy it (Schagen and Lines, (1996, p. 92).

Noctor’s definition was then supported by Vitt et al. (2000, p. xii and p.2), who explained financial literacy as:

> *‘the ability to read, analyze, manage and communicate about the personal financial conditions that affect material well-being. It includes the ability to discern financial choices, discuss money and financial issues without (or despite) discomfort, plan for the future, and respond competently to life events that affect everyday financial decisions, including events in the general economy’.*

The definition offered by Vitt et al (2000) is broad and similar to the concept of financial capability. Similarly, Braunstein and Welch (2002), Perry (2008), and Bhushan and Medury (2013) also define financial literacy as the ability to make informed and effective decisions that related to managing money. This definition is also used by Sohn et al, (2012, p.1), who described financial literacy as ‘a person’s ability to understand, analyse, manage, and communicate personal finance matters’.

Meanwhile, other studies referred the term financial literacy to the specific area that is knowledge that related to financial matters, such as the concept that developed by Lusardi and Mitchell (2005). There is no specific definition of financial literacy included in this study (Huston, 2010). However, Lusardi and Mitchel (2005) focus on measuring knowledge of three main concepts: ‘compound interest’, ‘inflation’, and ‘risk diversification’. The questions they asked in their study are as follows (Lusardi and Mitchel, 2005, p.3):

- *Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow: more than $102, exactly $102, less than $102?*
- *Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, would you be able to buy more than, exactly the same as, or less than today with the money in this account?*
- *Do you think that the following statement is true or false? “Buying a single company stock usually provides a safer return than a stock mutual fund.”*

It was explained that questions about ‘compound interest and ‘inflation’ were designed in order to measure ‘knowledge of fundamental economic concepts’, while the last question ‘evaluates respondents’ awareness of asset volatility and risk diversification, crucial elements of an informed investment decision' (Lusardi and Mitchel, 2005, p.3). Questions about risk diversification were viewed as important since it might help to manage the asset more effectively. Similarly,

> *'...calculations about compound interest serve as the basis of most financial decisions. Most importantly, using credit cards, engaging in a mortgage contract, or fully appreciating the benefits of starting to save early requires some understanding of interest compounding and how it work's'* **(**Lusardi, 2012, p.6)

Lusardi has had great influence, despite the fact that she operationalises financial literacy in such a narrow way. The questions developed by Lusardi and Mitchel, (2005) – known as the 'Big Three' (Hastings, et al., 2013, p.7) – have been replicated in several studies around the world, such as in Cole et al (2009), Klapper and Panos (2011), Sekita (2011), Xu and Zia (2012), and many more. In 2007, Lusardi and Mitchell, in their review of financial literacy and preparedness for retirement, delineated the measurement of financial literacy into basic and advanced categories. Basic financial literacy was measured using the three questions above, where advanced financial literacy was measured using other concepts, such as understanding of risk and return, the nature of bonds, stocks and mutual funds, and basic asset pricing.

If we think about the questions that Lusardi and Mitchell have developed (2007), the 'Big Three Questions' seem too narrow to be used as a tool to measure levels of financial literacy. However, although designed to measure broader topics, the advanced questions are too complex, primarily because not everyone will engage with or understand those financial instruments. Kempson, et al, (2013, p.8), in their report about measuring financial literacy in low and middle-income countries, argue that at least three aspects underpin literacy, that is (1) knowledge about 'numeracy' or 'mathematical skills; (2) 'the awareness' of issue about financial matters, , and (3) knowledge about the use of financial services, such as opening a bank account and using a debit card.

Johnson and Sherraden (2007) argued that as well as developing financial knowledge and skills, it is important that individuals have access to financial policies, instruments, and services, so that they can be engaged financial citizens. Similarly, the President's Advisory Council on Financial Literacy (2008, p.35) defined financial literacy based on the definition provided by the Jump$tart Coalition. As such, they understand it as:

> *'the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial wellbeing'.*

Although the definition from Jump$tart covered a more comprehensive area beside knowledge, this definition also has been critiqued by Remund, (2010, p.285) since: (1) *'it does not explicitly state that financial literacy is a measure'*; (2) There is no '*key financial concept'* addressed in the definition; and (3) the concept does not address the importance of '*decision making and planning, nor the influence of an increasingly complex and volatile economy'* (p.285). In the review of several financial literacy studies that published since 2000, Remund (2010) also found a lack of standard definitions and measurements of financial literacy. He classified the definition of financial literacy into two categories, one 'conceptual' and one 'operational'. It was explained that in order to measure in practice, an operational definition is needed. In terms of a conceptual definition, five concept categories were identified (Remund, 2010, p.279):

1) *'Knowledge of financial concepts',*

2) 'The ability to communicate about financial concepts',

3) 'Aptitude in managing personal finances', *4) 'Skill in making financial decisions', and*

5) 'confidence to plan effectively for future financial needs'.

The same author then outlined a conceptual definition:

> *'Financial literacy is a measure of the degree to which one understands key financial concepts and possesses the ability and confidence to manage personal finances through appropriate, short-term decision-making and sound, long-range financial planning, while mindful of life events and changing economic conditions'. (Remund, 2010, p. 284)*

As Remund (2010) argued, the above definition clearly states that the concept of financial literacy is a measure, and that knowledge will lead to the skills, attitude and behaviour necessary for sound personal finances.

Meanwhile, the 'operational definition' provided by Remund (2010, p.288) focuses 'budgeting, saving, borrowing, and investing'. The operational definition allowed 'abstract' concepts such as 'financial literacy' to be measured in more 'tangible ways', so it also supports comparisons between studies (Remund, 2010, p.288).

The various definitions of financial literacy have been examined in review of 71 financial literacy studies, conducted by Huston (2010). This study categorised the literature into four domains: the basics of personal finance, borrowing, saving/investing, and protection (Huston 2010, p.298). The review showed that only a quarter of the literature reviewed covered all four aspects. Moreover, the author also found that the literature still lacks a conceptualized and defined concept of financial literacy.

The Organization for Economic Cooperation and Development [OECD] and International Network on Financial Education [INFE] (OECD INFE 2011, p.3), focused on more than knowledge in their discussions on financial literacy, which they define as:

> ‘*a combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing*’.

An extensive definition of financial literacy was also presented by Atkinson and Messy (2011), who described financial literacy as constituting more than just knowledge, but also attitudes, behaviour and skills. In addition, a study by the Money Advice Service (MAS 2013) found that the development of knowledge and skills is the main focus when seeking to develop sound financial literacy. It argued that depending only on knowledge is not sufficient, because decisions ‘are influenced by how, when, where and by whom the options are presented’ (MAS, 2013, p.5). Moreover, in a study of financial literacy in Russia by Klapper et al. (2013), financially knowledgeable people appear to be aware of how to manage their money, have strong numeracy skills, knowledge of compound interest and an understanding of inflation and sales discounts. Interestingly, their questions also included focused of the use of financial services (e.g. bank accounts and formal credit) and an individual’s capacity to spend and save. As stated by Jump$tart (2015, p.1):

> ‘*..the recognition that financial literacy is more than just knowledge or information; and, that the ability to use information and resources is key to achieving and maintaining financial wellbeing’.*

On the basis of the above discussion, we can say that some definitions of financial literacy are very narrow, for example that provided by Lusardi and Mitchel (2005), which focuses on knowledge (using the “Big Three” questions), whereas others are broader, focusing on different areas, including behaviour. In the narrow definitions, financial literacy leads to ‘good’ behaviour, while in those that are broder, behaviour is part of financial literacy itself.

The rise in financialisation increases the need for a more comprehensive understanding of financial literacy that not only covers understandings and skills, but also focuses on behaviour, opportunity and access. As argued by Hung et al., (2009, p.11):

> *‘financial knowledge, skills, behaviour, and their mutual relationship should be considered while conceptualizing financial literacy’.*

Similarly, Johnson and Sheraden (2007, p.122) argue that:

> *‘….financial literacy is a helpful but not sufficient idea. Participation in economic life should maximize life chances and enable people to lead fulfilling lives. This requires knowledge and competencies, ability to act on that knowledge, and opportunity to act. This involves linking individual functioning to institutions. It also involves use of pedagogical methods that enable people to practice and gain competency in this functioning. We refer to this as "financial capability.’*

In more comprehensive definitions, the term financial literacy has been transformed into the wider concept financial capability, which will be discussed in the following section.

2.2.2 From financial literacy to financial capability: the broader concept

As with financial literacy, there are also a wide range of definitions of financial capability. It should be noted though that both terms ‘are often used interchangeably’ (Zottel, et al, 2013, p.1), since some studies on financial literacy have included the broader concept (for example, Roy Morgan, 2003) rather than only measuring narrow areas, such as the level of knowledge.

The expansion of the term financial literacy into financial capability has been well defined in the several studies that will be discussed in this section. Sohn, et al (2012) argue that financial literacy is considered to be part of financial capability, where financial capability includes both the ability to act (knowledge, skills, confidence and motivation) and the opportunity to act (through access to quality financial services and products) (Sohn et al., 2012). According to Zottel (2013), financial literacy is part of financial capability, and they are often measured jointly. Zottel (2013, p. 15) stated that the aims of studies about financial capability are to measure:

> *'specific socioeconomic conditions [and] aspects of a person's internal capacity to make self-beneficial financial decisions. This internal capacity to manage resources is measured by assessing financial knowledge (literacy), attitudes, and skills.'*

Financial Services Authority (FSA) and Basic Skills Agency (BSA) (2004) established a framework for adult financial capability. It was explained that the framework was developed from a module that was published in 2000 by the Department for Education and Employment (DfEE) titled *Financial Capability through Personal Finance Education*. As presented in FSA and BSA (2004, pp.2-3), the framework identified three interlinking sections: (1) 'Financial Knowledge and Understanding'; (2) 'Financial Skills and Competence'; and (3) 'Financial Responsibility'. In addition, each section has three levels, namely: basic understanding and developing confidence; developing competence and confidence; and extending competence and confidence. Furthermore, each level was then divided into nine components as follows: (1) 'different types of money/payments'; (2) 'income generation'; (3) 'income disposal'; (4) 'gathering financial information and record-keeping'; (5) 'financial planning: saving, spending, budgeting'; (6) 'risk and return'; (7)'personal choices and the financial implications'; (8)

‘consumer rights, responsibilities and sources of advice’; (9) ‘implications of finance’. Detailed definition of each term are presented in the Table 2.1, below.

As explained in the report, the framework can be *‘used as a practical tool to develop ideas to help improve financial capability’* (FSA and BSA, p.4). As such, this framework may benefit teachers, financial advisors, or those who work in the field of personal finance, to set up work-plans as it can help to identify areas of weakness that need to be improved and support financial education programs in order to increase financial capability.

Table 2. 1 Details of operational definition of Basic Skills Agency’ concept

A	**Sections**	**Definition**
1	‘Financial knowledge and understanding’	‘the ability to make sense of and manipulate money in its different forms, uses and functions’. ‘…allows people to acquire the skills they need to deal with everyday financial matters and make the right choices for their needs’.
2	‘Financial Skills and Competence’	‘the ability to apply knowledge and understanding across a range of contexts including both predictable and unexpected situations’
3	‘Financial responsibility’	‘the ability to appreciate both the wider impact of financial decisions on personal circumstances, the family and the broader community, and to consider social and ethical issues’
B	**Levels**	**Refer to**
1	‘Basic understanding and developing confidence’	‘Those adults who have a low level of understanding and who require the skills to make informed judgments concerning their finances, and the ability to use appropriate financial services’
2	‘Developing competence and confidence’	‘Those adults who have a basic understanding and competence in handling financial services and require more knowledge and skills to meet their needs’
3	‘Extending competence and confidence’	‘Adults who require the skills and knowledge to understand the wider range of services and the ability to make informed decisions regarding their own personal circumstances’

(Source: FSA and BSA, 2004, p.2-3)

Kempson, et al. (2013, p.7), stated that compared to financial literacy, financial capability is a more complex concept to measure. They explain that measuring and analysing only one area, such as knowledge, was easier, especially since indicators of the ‘right and wrong’ answers in the questions were clearer. However, measuring financial capability required more complex assessment, since financial capability also comprises broader areas, including not only knowledge but also attitudes, skills, and behaviours.

The concept of financial capability has also been defined HM Treasury (2007, p. 19), who say it refers to:

> *‘People’s knowledge and skills to understand their own financial circumstances, along with the motivation to take action. Financially capable consumers plan ahead, find and use information, know when to seek advice and can understand and act on this advice, leading to greater participation in the financial services market’*

A prominent definition was proposed by the UK’s FSA. The FSA was the UK’s independent financial regulator, whose job it was to regulate the country’s financial services industry. The FSA has now become two separate regulatory authorities, the Financial Conduct Authority (FCA) and the Prudential Regulatory Authority (PRA). In 2005, the FSA commissioned a study to measure financial capability. This study was undertaken by Kempson et al (2005) from the Personal Finance Research Centre (PFRC), the University of Bristol, UK. According to Kempson et al., (2005, p. 2), ‘a person’s financial capability can be measured by examining their behaviour’. There are several key elements that make up the definition of financial capability used in the study, including knowledge and understanding, skills, confidence and attitudes. In addition, these key elements are influenced by other variables, namely experience, circumstances and personality (where experience and circumstances are determining factors of knowledge and understanding); skills; and confidence and attitudes (where confidence and skills are influenced by personality). Furthermore, knowledge and understanding itself will influence skills. Finally, behaviour is influenced by all the factors. The framework is displayed in Figure 2.1.

However, the report showed that from the eight focus groups (designed 'to test the assumptions underlying the model and to provide a basis for the development of the questionnaire' (Kempson, et al., 2005, p.24)), perceptions of financial capability differed from the conceptual framework that had been developed. As described in the report, participants found it difficult to distinguish between knowledge and skills, and they viewed the concept of financial capability in behavioural terms, that is around 'managing money', 'planning-ahead', 'making choices', and 'getting help' (Kempson et al., 2005, p.3). The report of baseline survey results of this study was prepared by Atkinson et al. (2006). A summary of the underlying components of financial capability that were outlined in the report is shown in Figure 2.2. below.

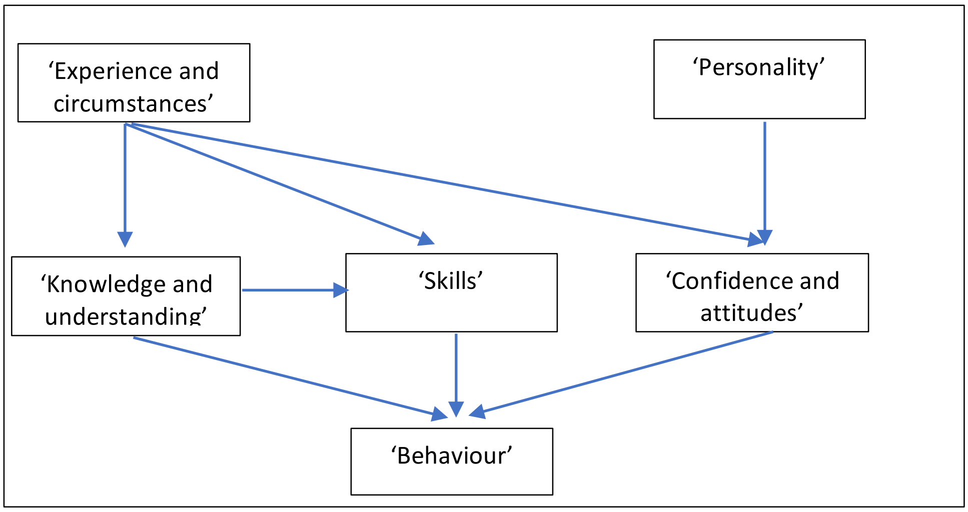


Figure 2. 1 Conceptual framework of FSA UK financial capability study

Source: Kempson et al., 2005, p.20

The first domain is ‘managing money’. As described in the report (Atkinson et al. 2006, pp.38-123), this domain reflects the fact that financially capable individuals are better at making ends meet. ‘Planning ahead’ is identified as the second domain of financial capability and refers to the ability to deal with upcoming financial commitments, including unexpected events. The next domain is ‘choosing products’. This domain was developed to assess knowledge of financial products, attitudes to risk, and behaviour and confidence when selecting appropriate financial products. The final domain is ‘staying informed’. This includes being well informed about changes in the economy, keeping track of new financial products, and knowing where to get help and advice. To measure the level of financial capability, Kempson and Collard (2006) then designed the comprehensive questionnaire that encompasses attitude and behaviour toward these domains. Moreover, Besides measuring capability in relation to the above domains, a ‘Money Quiz’ was also employed, with a focus on mathematical ability.

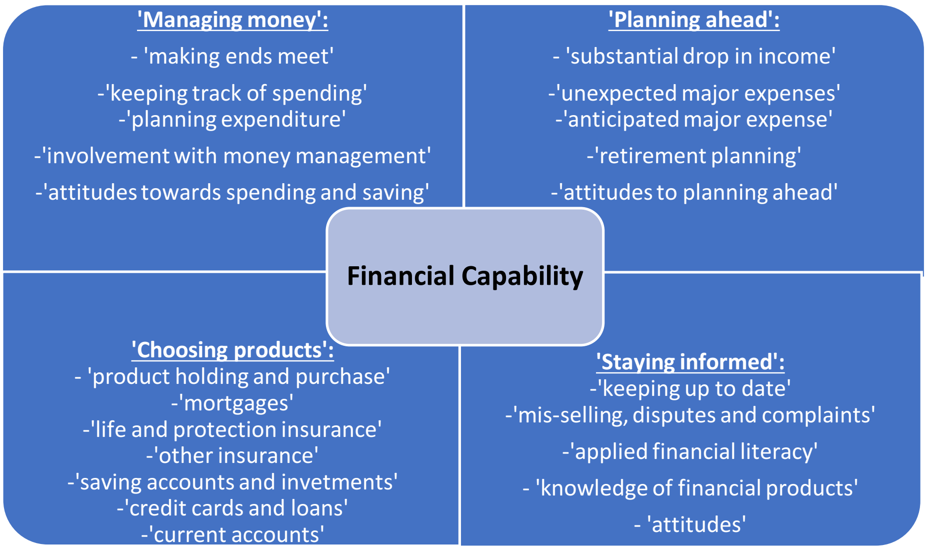


Figure 2. 2 FSA financial capability domain

Source: Drawn from Atkinson et al. (2006, p38-123)

So, from both Figure 2.2. and 2.3, the concept of financial capability that was developed for the FSA can be defined in terms of '*interrelated elements: knowledge, skills and attitude'* (Kempson et al., 2005, p.17), that are '*influenced by a person's experience and circumstances, and by their personality. The extent of a person's financial capability can be measured by examining their behaviour*' (Kempson et al., 2005, p.2) toward the four domains (i.e. managing money, planning ahead, choosing products and staying informed).

The framework from FSA UK has been deployed in further study by McKay (2011), who was also a member of the PFRC team that conducted the FSA UK study (Atkinson, et al, 2006). The aim of this latter study was to capture how financially capable the Canadian working age population are. In this study, financial capability was measured around five domains that were similar to FSA's framework. However, they differed slightly, particularly in the domain of 'managing money', which was divided into two individual domains, 'making ends meet' and 'keeping track of money'. The other domains, though (i.e. 'planning ahead', 'choosing products', and 'staying informed') were used in McKay's study. 'Making ends meet' and 'keeping track of money' was defined as 'how people handle their money' (McKay, 2011, p.8). The next domain, that is 'planning ahead was defined as 'the ability to plan ahead provides another core component of financial capability' (McKay, 2011, p.13); while 'choosing products' was explained as 'the behaviour displayed towards selecting appropriate financial products' (McKay, p.15); and the last domain that is 'staying informed' was identified as 'how far people were staying informed with financial news of different kinds' (McKay, 2011, p.17). As displayed in other studies (Kempson et al, (2005), MAS (2013, 2015), this study also explained that financial capability only can be measured by capturing all the above domains holistically. Meanwhile, McKay's study also showed the comprehensive measure of financial capability. Beside measuring the five domains of financial capability, this particular conceptualisation encompasses knowledge, attitude and behaviour. However the inter-relation between each domain is not stated explicitly.

In addition, the Personal Finance Education Group (PFEG), the UK's leading charity to support financial education for young people (https://www.pfeg.org/), developed a framework that comprises four main elements. As stated on the PFEG website (PFEG, n.d), the framework aims to 'support the planning, teaching, and progression of financial education by setting out the key areas of financial knowledge, skills and attitudes, across four core themes', so that financial education can be delivered flexibly across the existing range of subjects and learning opportunities at school. The components of the framework are displayed in Table 2.2 below.

Table 2. 2 Structure of the PFEG Financial Education Planning Framework

Main themes	**Components**	**Three key areas**		
'How to manage money'	'Paying, borrowing and saving' 'Financial planning and budgeting'	Knowledge	Skills	Attitudes
'Becoming a critical consumer'	'Seeking financial advice' 'Choosing financial products'	Knowledge	Skills	Attitudes
'Managing risks and emotions associated with money'	'Fraud and identity theft' 'Identifying and reducing financial risks'	Knowledge	Skills	Attitudes
'Understanding the important role money plays in our lives'	'Link work, life choices and financial planning' 'Personal and economic links with the wider world'	Knowledge	Skills	Attitudes

Source: (PFEG, n.d)

A study by MAS (2013, p.5) shows strong evidence that financial capability can be affected by five critical elements: skills, knowledge, attitudes, motivation and opportunity. The study explained that a combination of these five elements can explain:

"why some existing interventions may not be as effective as hoped. For example, many people may be motivated to receive financial advice, but lack physical or social opportunities, which may mean that they do not know which agencies to go to for appropriate advice, or they may be put off doing so by their peers. Similarly, many people may have sound skills and extensive knowledge, but their attitude or lack of motivation may mean they are more inclined to spend now rather than save for later" (MAS, 2013, p.5).

The model of financial capability developed by MAS (2013) is outlined in Figure 2.3 below

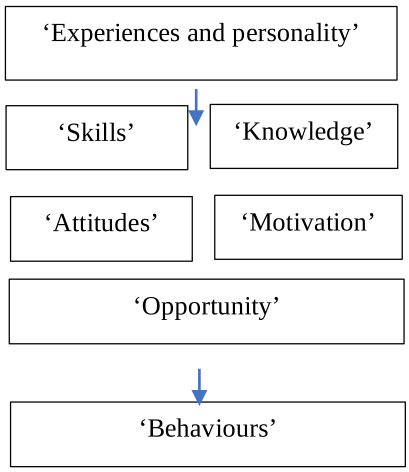


Figure 2. 3 MAS financial capability framework

Source: MAS 2013, p.5

As can be seen in Figure 2.3, MAS (2013) showed that financial capability requires varying skills, 'including mathematical planning, self-control, decision-making and problem-solving' (p.5). Moreover, this 'includes emotional, cognitive and behavioural skills and the capacity to engage in the necessary thought processes for financial management' (p.5). It was also shown that knowledge has a role in allowing for effective access to financial markets and as a source of information, and that one of the repercussions of insufficient of knowledge is a lower opportunity for income (such as ‘unclaimed benefits’) and miss-management of money (p. 5).

The next element includes ‘attitude’, ‘motivation’ and ‘opportunity’. As stated in MAS (2013), attitude is strongly associated with belief and behaviour, as well as social norms. In Peter and Olson (2002, p.134), attitude is described as ‘a person’s overall evaluation of a concept’. In the context of managing money, beliefs and values are shaped initially by parents’ beliefs, values and habits, and are developed further through experiences and by others’ attitudes. Furthermore, the motivation has an important role, as it refers to ‘ways of thinking that drive behaviour and include reflective (conscious) and automatic (unconscious) mechanisms’, for example, saving money for holiday purposes (MAS, 2013, p.7). Next, the final element in this concept refers to external opportunities that drive people’s financial behaviour, such as social opportunity (e.g. peer groups and financial advisors) and physical opportunity (e.g. where a person, whether they have an internet connection, and so on). Those five elements were used to evaluate the various aspects of financial capability, i.e. (1) ‘money management’, (2) ‘saving for the future’; (3) ‘risk taking’, and (4) ‘credit commitments’ (MAS, 2013, p.55). These main themes were grouped using factor analysis.

A further framework of financial capability is offered by Definit (2013) in study for the Indonesian FSA. The study aimed to develop a robust methodology to measure the level of financial literacy amongst Indonesian households. Although the study used the term ‘financial literacy’, in practice it employed the framework of financial capability similar to that developed by Kempson et al., (2005). To test the feasibility and applicability of the methodology, a pilot survey was deployed in three big Indonesian cities. The variables of financial knowledge in this study were categorized into two groups: basic and advanced (see Table 2.3). Knowledge in the basic group was measured using 11 variables related to (1) 'knowledge about formal financial products'; (2) 'numeracy regarding finance such as interest rates'; and (3) 'knowledge of the basic concepts of inflation, discount, and time value of money' (Definit, 2013, p.4. The other group – that is, advanced financial literacy – encompassed 10 variables that relate to knowledge about 'investment instruments, such as stocks, bonds, risks and returns, and portfolio' (Definit, 2010, p.4).

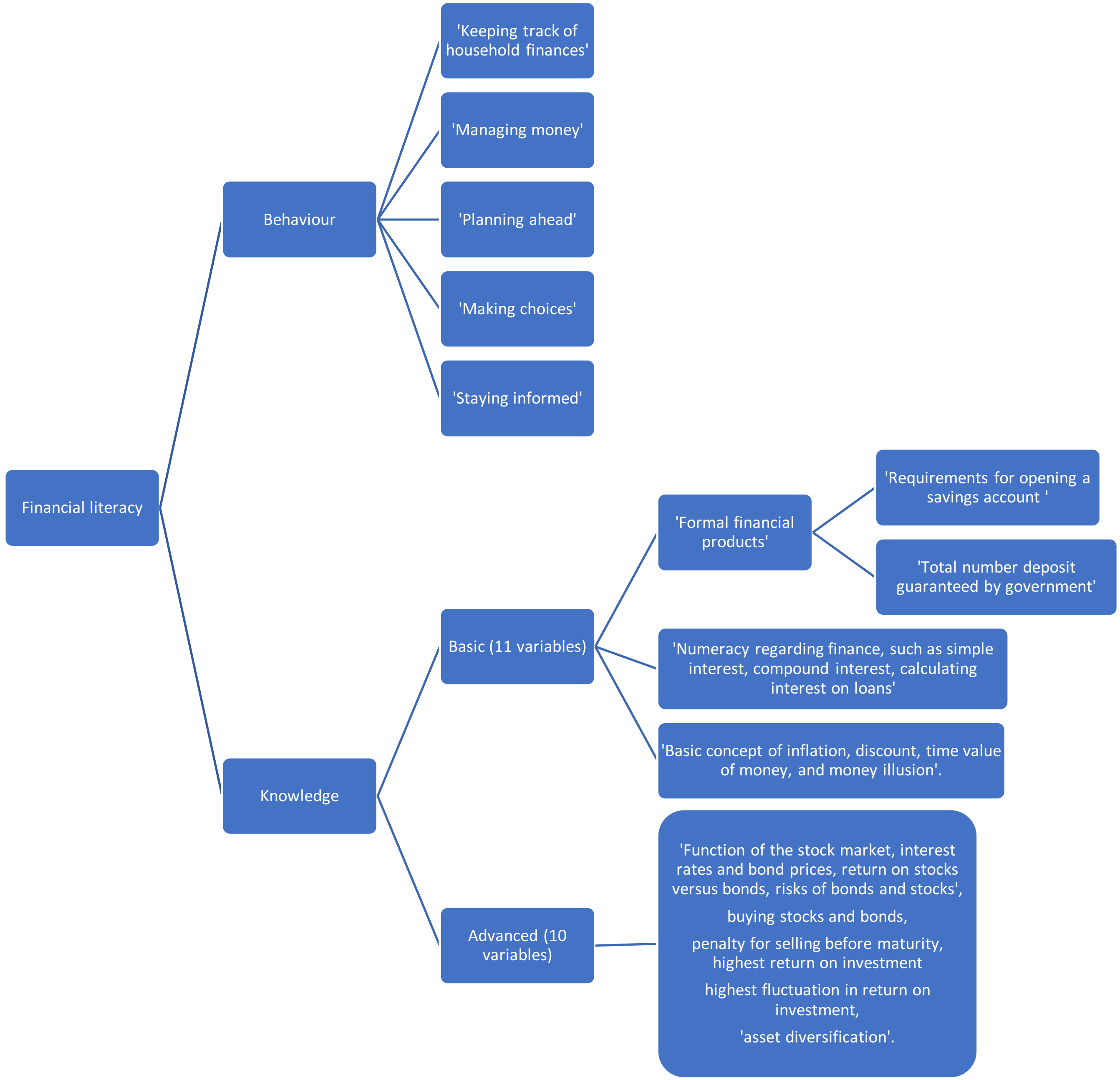
Table 2. 3 Financial literacy variables

No.	Variable	
	'Basic Financial Literacy'	**'Advanced Financial Literacy'**
1	'ID Requirement *(to open savings account)'*	'Function of the stock market'
2	'Minimum amount of money to open a savings account'	'Interest rates and bond prices'
3	'Minimum balance on savings account'	'Returns on stocks versus bonds'
4	'Deposit guaranteed by the government'	'Risk of bonds and stocks'
5	'Simple interest'	'The meaning of buying stocks'
6	'Compound interest'	'The meaning of buying bonds'
7	'Calculate interest on a loan'	'Penalty when selling a bond before maturity'
8	'Inflation'	'Which investment gives the highest return'
9	'Discount'	'Which investment produce the highest return fluctuation'
10	'Time value of money'	'to put or not to put your investments into one basket'
11	'Money illusion'	

Source: Definit- 2013, p. 7

Definit (2013) study employed longer questions when measuring knowledge. Besides using the 'Big Three' developed by Lusardi and Mitchell (2005), it also focused upon more complex topics. However, evaluating the questions that it used, especially the advanced topics, it can be said that the questions were too complex, especially in the context of Indonesia, where the possession of advanced financial instruments is relatively low. The study provided a detailed picture of the financial literacy of Indonesian households that not only focused on financial knowledge but a range of broader topics, including behaviour across the four areas of financial capability discussed above (i.e. ‘managing money’, ‘planning ahead’, ‘making choices’, and ‘getting help’). However, it did not explore other domains, such as motivation, skills, or attitudes. Figure 2.4 below illustrates the framework used in the study.

Figure 2. 4 FSA Indonesia framework (Source: modified from SEADI-Definit, p.3-4)



Meanwhile, Zottel, et al. (2013) from the World Bank also has defined the concept of financial capability:

> *'Financial capability is the internal capacity to act in one's best financial interest, given socioeconomic and environmental conditions. It encompasses the knowledge (literacy), attitudes, skills, and behaviour of consumers with respect to understanding, selecting and using financial services, and the ability to access financial services that fit their needs' (Zottel, et al. 2013, p.1).*

According to this definition, financial literacy is part of financial capability and they are often measured jointly. Zottel et al. (2013, p.2) argued that the concept of financial capability is often measured with reference to:

1. **Knowledge** related to (1) basic concept such as 'inflation', calculating 'compound interest'; (2) familiar with 'financial products and services'; (3) 'practical know-how' such as payment procedures and opening a 'bank account';
2. **Skill** in numeracy and literacy.
3. **Attitude** concerning the future, confidence in planning ahead, such as for a pension, 'reasons for or for not saving, borrowing', the preference of people when it comes 'budgeting, saving, lending'; and daily 'money management'
4. How people **behave** in relating to 'long-term planning', such as preparing for pensions and a 'rainy day', 'financial decision-making' such as choosing products, and searching for 'financial advice'.

In order to measure the level of financial capability more comprehensively, the authors then developed the indicators in each area, as presented in Table 2.4.

Table 2. 4 Indicator for Financial Capability

Category	Description
Financial knowledge and skills	1. **Financial knowledge score** (based on knowledge of basic financial concepts such as inflation, simple interest, compound interest, money illusion, risk diversification, and the main purpose of insurance policies)
Financial Behavior	1. **Budgeting score** (based on how adults plan to use money they receive, in terms of frequency, accuracy and the regularity with which they stick to the plan) 2. **Not overspending score** (based on spending money on unnecessary things before buying food and essentials, and spending on non-essentials adults cannot afford) 3. **Living within means score** (based on whether adults run short of money after buying essentials and why, their level of borrowing, and if they borrow to buy food and other essentials) 4. **Monitoring expenses score** (based on whether adults know how much money they spent in the last week, and how much they have available to spend) 5. **Savings score** (based on whether adults try to save for the future, try to save for emergencies, and try to save even if a small amount) 6. **Planning for old age expenses score** (based on whether adults have strategies in place which allow them to cover expenses in old age) 7. **Planning for unexpected expenses score** (based on whether adults could cover an unexpected expense equivalent to a month's income and, if not, whether they worry about it)
Attitudes	1. **Attitudes towards the future score** (based on agreement with statements about living more for the present day than for tomorrow, the future will take care of itself, focusing on the short term) 2. **Non-impulsiveness score** (based on agreement with statements about being impulsive, saying things without giving them too much thought, doing things without thinking them through) 3. **Achievement orientation score** (based on agreement with statements about having inspirations, working hard to be the best, always looking for opportunities to improve one's own situation)

Source: Zottel et al. 2013, p.8

Table 2.4 clearly shows that besides comprising a comprehensive area that is knowledge, skills, attitude, and behaviour, the framework of financial capability also completed by indicators of each area to measure the level of financial capability, so the area that need to be developed (weaknesses) can be identified. From Table 2.4 we can see that some indicators are similar to the variables in the domain of 'managing money' and 'planning ahead' in the study conducted Kempson et al. (2005), McKay (2011), or MAS (2013).

A further study measuring financial capability has been carried out by Finney and Hayes (2015) for The Office for National Statistics (ONS) in the UK. Focusing on the behaviour that underpins financial capability in Great Britain, the study used data from the third wave of the Wealth and Asset Survey of 2010-2012, used in a previous financial capability survey devised for FSA UK in 2005 by Kempson et al. There were six dimensions mapped in the study, but the ONS' framework did not refer to 'knowledge'. In general, the domains were similar to those in the FSA UK framework (Kempson et al. 2005), but difference lay in the classification of the domains of financial capability. In their framework, 'making ends meet', 'organized money management' and 'controlled spending' were separated into independent groups, whereas in Kempson et al. (2005), these three domains were grouped into one (managing money) (see Figure 2.5).

A more complex model (when compared to the "Big Three" concept) has been developed by The Money Advice Service (MAS 2015). Their 'Financial Capability Strategy for the UK' set out a new framework for understanding financial capability. The aim of which is to provide guidance when measuring financial capability and, as we saw in chapter one, financial capability is defined therein as (MAS, 2015, p.8):

> *'a person's ability to manage money well, both day to day and through significant life events, and to handle periods of financial difficulty… It is driven by personal skills, knowledge, attitudes and motivations, and made possible by an inclusive financial system*

and supportive social environment. Financial capability helps people achieve the best possible financial well-being'

Financial capability	Making ends meet	'A person's ability to live within their means'
	Planning ahead	'The extent to which someone makes provision for future expenditure from current income'
	Organised money management	'The extent to which someone knows how much they spend day to day'
	Controlled spending	'A person's attitudinal preference for longer-term financial security over current spending capacity'
	Staying informed	'The extent to which someone keeps up to date with changes in the wider economy'.
	Choosing products	'The sources of information (if any) someone uses when buying a financial product that most influence their purchase decision'.

Figure 2. 5 Framework of the financial capability of ONS

(Source: Drawn from Finney and Hayes, 2015, p. 2-3)

This framework in MAS 2015 is developed based on evaluation of previous studies, such as those from the Kempson et al., (2005) and MAS (2013). However, the 2015 framework (Figure 2.7) also included financial wellbeing as an output. In Bagwell et al. (2014, p.13), financial wellbeing is defined as follows:

'Financial wellbeing is a person's overarching financial situation, including objective elements such as the amount of savings they have and their ability to meet their financial commitments, as well as subjective elements such as how often they worry about money.

As with financially capable behaviour, a person's wellbeing is affected by their financial means and pressures'

In this updated framework, behaviour only consist of three domains: (1).'managing money well day to day'; (2) 'preparing for and managing life events'; and (3) 'dealing with financial difficulties' (MAS, 2015, p .13). Measurement indicators for each domain are also set out, as well as operational definitions for other areas. Details of the framework as a whole are shown in Tables 2.5 and 2.6.

Table 2. 5 MAS 2015 behavioural domains

Behavioural domains	
Managing money well day to day	
Take control	• Keep track of current account balance • Have a budget approach that works (self-reported) • Keep up with commitments
Short-term buffer	• Save every/most months • Could pay an unexpected £300 bill from savings or cash
Use credit sensibly	• Don't revolve credit card or use high-cost short-term credit • Have unsecured debt less than one month's income
Maximise income	• Check supplier tariffs (mobile phone, utilities etc.)
Preparing for and managing life events	
Have a plan	• Have financial goals • Have a plan to achieve their goals (based on all)
Build resilience	• Have savings equal to at least 3 months' income • Have life cover
Prepared for retirement	• Paying into a pension or have a previous pension scheme (working-age only) • Have a plan for long-term care (50+ only)
Dealing with financial difficulties	
Manage debt	• Debts are not a heavy burden • Have not missed three months' payments (in the last six months)

(Source: MAS (2015, p.11)

Table 2. 6 MAS 2015 Financial capability factors

Financial capability factor	
Ability (skills and knowledge)	
Knowledge	• Able to read the balance on a bank statement • Realise that if inflation is 5% and interest is 3%, then buying power is reduced
Skills	• Calculate the balance at the end of the year if £100 paid into a savings account at guaranteed 2% interest pa
Mindset (attitude and motivation)	
Attitude to the future	• Strongly disagree that they prefer to live for today, rather than plan for tomorrow • Believe it is very important to save for a rainy day • Believe it is very important to put aside for retirement
Confidence and self-efficacy	• Feel confident managing their money (8 or more out of 10) • Disagree that their financial situation makes them nervous • Disagree that nothing they do will make a difference to their financial situation
Take responsibility	• Believe it is important to keep track of income and expenditure • Believe it is important to shop around • Don't think that "often buying on impulse" is like them • Disagree that they are too busy to sort their finances • Discuss money openly with friends, family or partner • Think that "adjusting non-essentials when life changes" is like them
Connection (ease and accessibility)	
	• Feel confident in their ability to make financial product decisions (8 or more out of 10) • Have accessed internet within last seven days • Agree that they are happy to bank online

Source: MAS (2015, p.12)

Studies by Bagwell, et al. (2014) and MAS (2015), illustrated in Figure 2.6, provide a comprehensive framework with a clear definition of both the concept and its operation. Although the framework only highlights three domains in the behavioural area, looking at the details of each, the content is similar to that in Kempson et al., (2005) and MAS (2013). A more detailed comparison of these frameworks will be discussed in the following section.

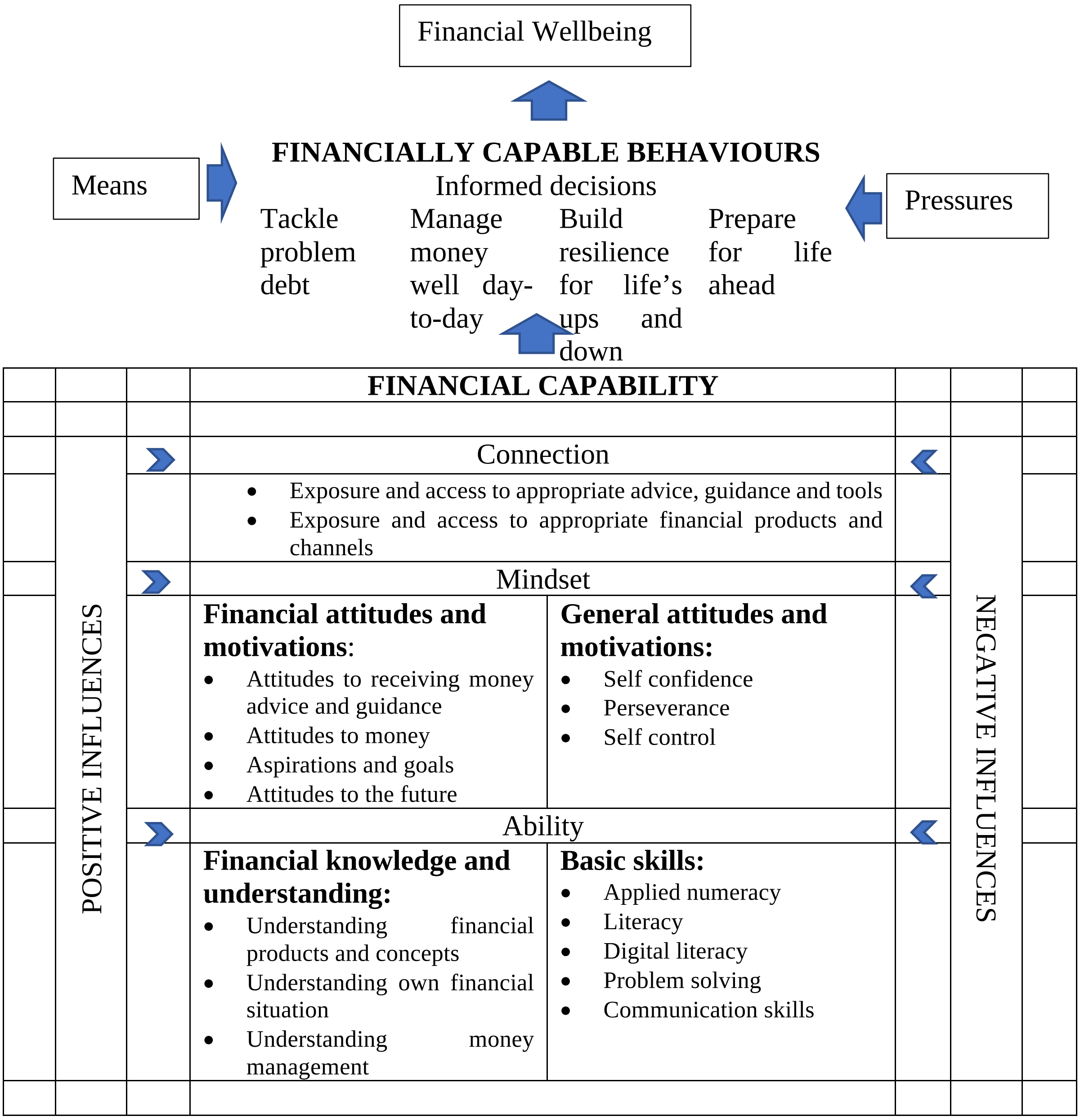


Figure 2. 6 Adult framework of financial capability

Source: Bagwell, et al (2014, p. 15); and The Money Advice Service (2015, p 9).

2.3 Framework for research

As presented in an earlier section, people use the concept of financial literacy and capability in different ways, and there is overlap in the way that the concepts are deployed. For example, the concept of financial literacy that was implied in the “Big Three” questions (Lusardi and Mitchel, 2005), although quite narrow, has been used in many studies across the world. What’s more, concepts developed in other studies have included broader areas, such as attitude and behaviour, and the concept has been used interchangeably with ‘financial capability’.

However, a review of the existing studies on financial capability has shown that some frameworks have provide conceptual and operational clarity between the two terms. For example, the framework developed in 2005 for FSA UK (Kempson et al. 2005, p.3; Atkinson, e al. 2006, p.1), McKay, (2011), Finney and Hayes, (2015) and the framework by Definit for FSA Indonesia (2013, p.3), focused on four operational domains (‘managing money’, ‘planning ahead’, ‘choosing products’ and ‘staying informed’), although in McKay (2011) the first domain, ‘managing money’, was split into two to focus on ‘making ends-meet’ and ‘keeping track of money’. Meanwhile, MAS (2013, p.55) identified four similar core themes: (1) ‘money management’, (2) ‘saving for the future’, (3) ‘taking risks’, and (4) ‘credit commitment’. Exploring the questions included in the questionnaires deployed shows that both frameworks focused on the areas of ‘knowledge’, ‘skills’, ‘attitudes’, and ‘behaviour’. In addition, the focus on behaviour in the latest framework from MAS (2015) only touched upon three domains (see Table 2.7).

Table 2.7. compares the above framework. From this comparison, we can see that similar operational domains are present, that is, ‘managing money’, ‘planning-ahead’, ‘choosing products’, and ‘staying informed’. However, PFEG has expanded themes that do not appear explicitly in other frameworks; namely, ‘fraud and identity theft’ in ‘managing risk and emotions about money’, and ‘understanding the important role of money’. However, the PFEG framework only measured three key areas, knowledge, attitudes, and skills.

On this basis, this thesis attempts to fill in these gaps by combining the key areas and the operational domains of the existing frameworks.

Table 2. 7 Comparison of frameworks across studies

Component	**FSA UK (2005-2006)**	**MAS (2013)**	**FSA Indonesia (2013)**	**MAS (2015)**	**PFEG**	**This Thesis**
Behaviour	‘Managing money’	‘Money management’	‘Managing money’	‘Managing money well day to day’	‘How to manage money’	‘Managing money
	‘Planning ahead’	Saving for the future’	‘Planning ahead’	‘Preparing for and managing life events’	‘Becoming a critical consumer’	‘Planning ahead’
	‘Choosing products’	‘Risk taking’	‘Making choices’	‘Dealing with financial difficulties’	‘Managing risk and emotions associated with money’	‘Choosing products’ (including managing risk)
	‘Staying informed’	‘Credit commitment’	‘Getting help’		‘Understanding the important role of money’	‘Staying informed’
Capability factors	‘Knowledge’ ‘Skills’ ‘Attitudes’ ‘Experience’ ‘Personality’	‘Skills’ ‘Knowledge’ ‘Attitudes’ ‘Motivation’ ‘Opportunity’	Knowledge Behaviour	‘Knowledge’ ‘Skills’ ‘Attitudes’ ‘Motivation’ ‘Ease and accessibility’’	‘Knowledge’ ‘Skills’ ‘Attitudes’	Knowledge Skills Attitudes Behaviour

Source: drawn from: Kempson et al. (2005, p.20); Atkinson, et al., (2006, p.1); MAS (2013, p. 5); MAS (2015, p.13); and PFEG (www.pfeg.org).

2.4 Conceptual Framework

Having identified the core themes in the study, this research will elaborate on the comprehensive framework from FSA UK 2005 (Kempson et al, 2005; Atkinson et al, 2006), and MAS (2013, 2015). The key areas that will be measured are: ‘knowledge’, ‘skills’, ‘attitudes’, and ‘behaviour’. However, the framework from PFEG was employed in the qualitative study.

The framework developed in this study drew on that developed in previous studies and comprises three domains; (1) knowledge and skills; (2) attitude; and (3) behaviour, and several operational domains: (1) managing money; (2) planning-ahead; (3) choosing products; and (4) staying informed. There is also an additional domain covering attitude, i.e. ‘managing risk’. In this framework, knowledge and skills, attitude and behaviour are inter-related elements that are influenced by internal (socio-demographic) and external (financial socialisation) factors. Knowledge and skill are predicted to influence attitudes and behaviour.

There are complex links between each factor. Robb and Woodyard (2011) argue that knowledge and skills might contribute positively to attitude and behaviour. As explained by Donohue, (2011), a lack of financial understanding could affect an individual’s chances of becoming financially secure. Moreover, sufficient financial literacy and an adequate level of financial capability will assist individuals in managing their finance effectively, and in the long term will contribute to economic growth and the wellbeing of the country (Byrne, 2007). As explained by Hilgert et al., (2003, p. 309).:

> ‘*Well-informed, financially educated consumers are better able to make good decisions for their families and thus are in a position to increase their economic security and well-being’*

Furthermore, attitudes will also influence financial behaviour. As argued by Ajzen (1991), knowledge is seen to be the underlying factor that affects attitudes and behaviour. A lack of knowledge could restrict the capacity to make informed decisions (Chen, and Volpe, 1998). For example, in the perception about the association between risk and return, normally, the investment that offers higher return will have higher risk. However, some people just chose only based on the return that is offered and forget to consider the associated risks. Knowledge played an important role in shaping the behaviour of individual, and positive behaviours will persist for longer if they are based on sufficient knowledge (Notoadmodjo, 2003).

Measurement of knowledge and skill will focus attention on several basic economic concepts, whilst attitude and behaviour will be measured by assessing the opinion and behaviour across the operational domain (i.e. in terms of ‘managing money’, ‘planning ahead’, ‘choosing products’ and ‘staying informed’). The details of measurement will be explained further in chapter 4.

Although this study was heavily influenced by the approach taken in previous UK studies such as those by the FSA (Kempson, et al, 2005; Atkinson et al, 2006) and MAS (2013, 2015); there are also some slightly differences in approach which were necessary to take into account the different population of interest (students rather than general public) and the different country (Indonesia rather than the UK). For example, in this study some additional questions of financial knowledge from Definit (2013), Cude et al (2006), Lusardi and Mitchel (2005, 2006), the College Student Financial Literacy Survey (Virginia Tech, n.d), and Harris Poll, (2014), were included, for example question about retirement cost using the concept of compound interest, and questions related to the concept of fraud and scam (*the details can be seen in the section questionnaire in Appendix 30).* Furthermore, this study also aimed to explore the role of personal finance education on financial capability and so included additional questions on this, such as the willingness to learn about personal finance/financial education, including the topic that need to be learned in the course.

More detail about the framework developed and deployed in this thesis is shown in Figure 2.7.

2.5 Conclusion

Over the decades, there have been various attempts to study financial literacy and capability. Financial literacy and financial capability have been defined in a variety of ways and the terms are often used interchangeably. Through a review of previous studies, it was seen that there are various concepts and definitions deployed when discussing financial literacy, ranging from ‘financial knowledge’, with a narrow measurement according to the “The Big Three”, to a more comprehensive assessment of financial capability that includes a focus on skills, attitude, and behaviour. What’s more, besides financial literacy, the concept of financial capability has been widely used, and in this concept, financial literacy is seen as part of financial capability (for example, Kempson, et al, 2005; Johnson and Sherraden, 2007). To measure it in practice, an operational definition will be needed (Huston, 2010; Remund, 2010). It was shown in this chapter that financial capability covers a wide range of factors, including: knowledge, skills, attitude, behaviour, motivation and opportunity; toward managing money, managing risk, planning-ahead, choosing products, and staying informed (Kempson et al, 2005).

However, despite the broader definition, there is no single definition and concept that is universally accepted, nor is there a standardized measurement procedure. As we shall see, when measuring these concepts, previous authors have made judgments about high or low levels of financial capability. However, this is another area of contestation. This chapter has unpacked the underpinnings of this concept, wherein it was revealed that understanding what a high or low level of knowledge actually is, or what a good or bad attitude looks like, is no easy feat. This is because they depend on various factors, such as the individuals involved, the time and the location (Kempson et al, 2005; Remund, 2010; and Vyvyan, 2014).

Nevertheless, this chapter argues that in the context of financialisation and the increasing responsibility individuals have over their own finances, it would be helpful to develop a clear and standardised conceptual and operational definition, as well as a measurement instrument. Doing so will allow policy makers around the world to improve financial capabilities and to craft better regulatory regimes.

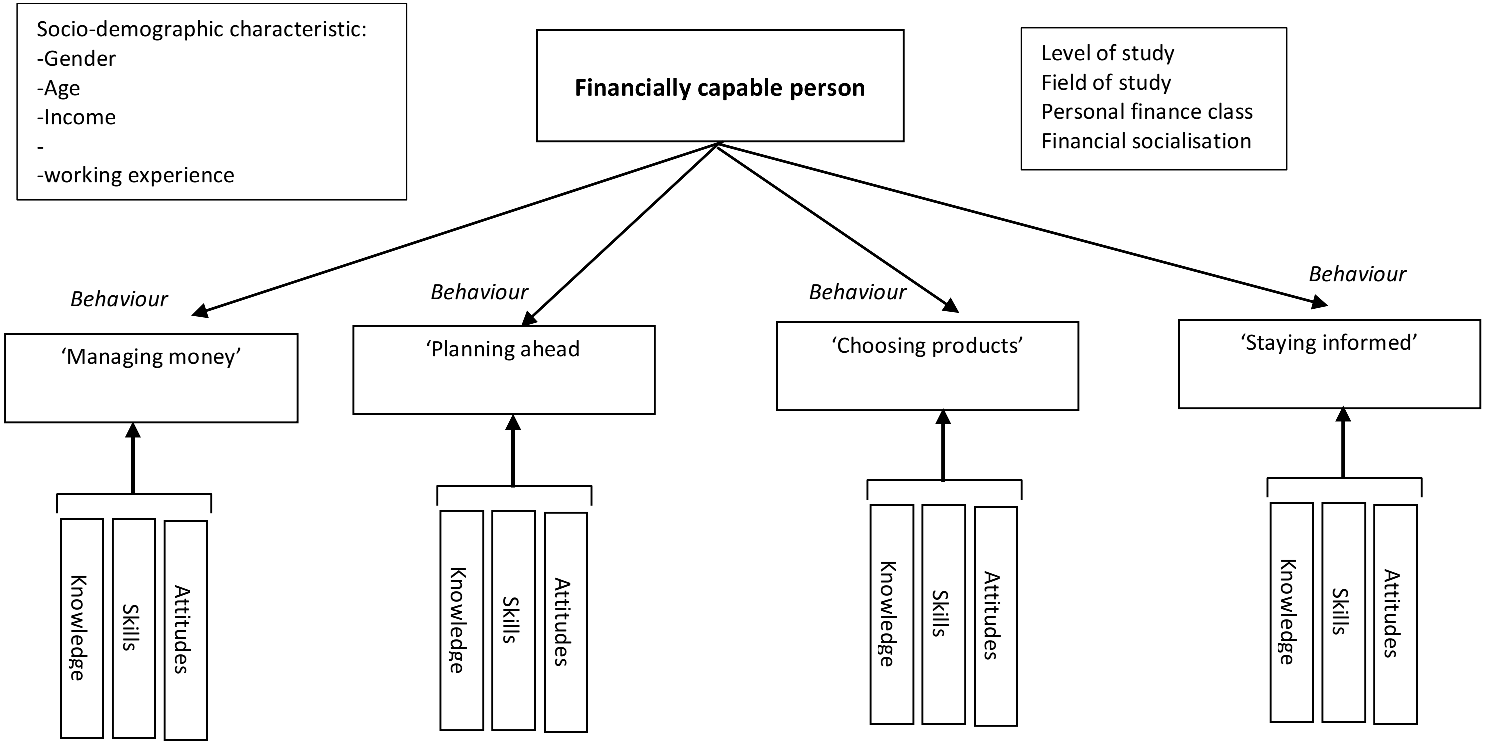


Figure 2. 7 Framework of further research

Source: modified from PFEG (www.pfeg.org), Kempson et al., (2005, p.20); Atkinson, et al., (2006, p.1); MAS (2013, p.5)

CHAPTER 3

LEVELS OF FINANCIAL CAPABILITY ACROSS THE GLOBE

Introduction

This chapter attempts to contribute to understanding of financial capability by exploring levels of financial capability in a comparative context, focusing on different groups, and different models of financial capability. By doing so, we will be able to understand why financial capability is higher in some countries or among some groups within a population.

The rest of this chapter will be split into six parts. The first will discuss studies on financial capability that have been carried out in: the US, Canada, UK, Germany, Japan, Russia, Indonesia, and India. In this section, studies of financial literacy carried out in a number of countries will be discussed first, followed by the results of several other studies on financial capability. This will be followed by a brief discussion about related issues. The second part of this chapter will explore several socio-characteristics that relate to financial capability, with a focus on gender, income, and work experience. This will be followed by an examination of the link between financial knowledge and behaviour. The fourth part will discuss financial education among university students. The fifth will discuss studies related to financial capability among undergraduate students. The last section will offer concluding remarks.

3.1 Level of financial literacy and capability

As discussed in previous chapters, with the increase in financialisation and the withdrawal of state welfare, the need of financial capability is increasing. Studies about financial capability have been conducted across the globe, and some studies have tried to develop conceptual and operational definitions (see chapter two). However, some issues still need to be emphasized and explored further. As discussed in chapter two, although many studies focused on financial literacy and capability, a standardised and universally accepted definition of the concept is still lacking.

As a result of the different conceptualisations, operationalisations, and methods that have been deployed in previous studies, it is difficult to make comparisons between them. However, this chapter will try to make comparisons wherever possible. The following section will present several studies that adopt similar concept or methods, so it more easily compared.

3.1.1 Level of financial literacy

As mentioned by Huston (2010), in measuring the level of financial literacy, some studies had a wide focus, including on: savings, budgeting, inflation, insurance, credit cards, debt, saving for the future and for retirement, shopping, and so on. Others, though, focus on more specific aspects, such as Lusardi and Mitchell (2005) for the American Health and Retirement Study (HRS), who group their investigation around three basic financial concepts: understanding of interest-rate compounding, the concept of inflation, and risk diversification.

The concept of financial literacy was developed by Lusardi and Mitchell (2005), who, in 2004, conducted the first large-scale survey of financial literacy (which has since been replicated in several countries). The questions used to measure financial literacy, as we saw in the previous chapter, are known as the "Big Three" and are displayed in Table 3.1. As discussed in chapter two, the questions they employed are quite narrow given that they only focused on numeracy and basic economic and financial concepts to do with inflation and risk. Although it is still debatable whether this set of questions is 'the best approach to measuring financial literacy' (Hastings, et al, p. 7), it has been replicated in many studies across the globe, which allows for a worthwhile comparison. This set of questions is used to measure levels of financial literacy not just in the United States (US), but also in Indonesia (Cole et al, 2009), Germany (Bucher-Koenen and Lusardi, 2011), Japan (Sekita, 2011) and Russia (Klapper and Panos, 2011).

Comparison of financial literacy in these various studies has been conducted in by various scholars, such as Lusardi and Mitchel, (2011); Atkinson and Messy (2011); and Lusardi (2013), the results of which are displayed in Figure 3.1. The studies explained that level of financial literacy varies across the globe[2] (Figure 3.1). In general, Germany exhibits the highest level of financial literacy, while Russia exhibits the lowest. In terms of knowledge about interest rates, Germany scores highest, with more than eight in ten of respondents answering correctly.

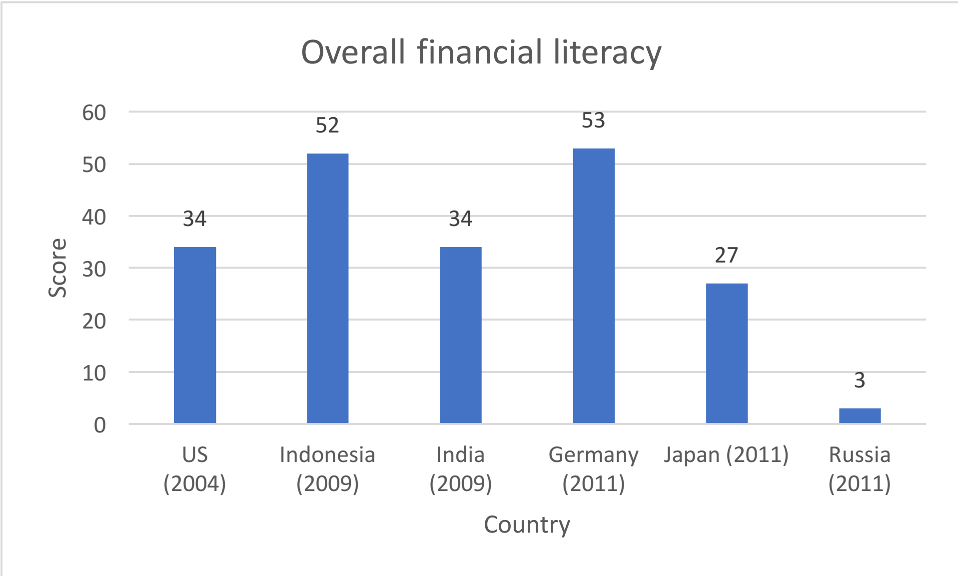
The study in Germany was carried out in 2009 and respondents were chosen randomly from household members who have information about household finances but who were not necessarily the head of that household. In total, 2,222 households were involved. The first question concerned interest rates and addresses basic numeracy skills. This question is fairly easy for German respondents to answer, because calculating interest is a part of its high-school curriculum, so most can answer it correctly, even those who are categorised as having a low level of education (Bucher-Koenen and Lusardi, 2011).

[2] It is interesting to note that differences between countries may be caused by the wording of the questions (Xu and Zia, 2012). In some countries, the questions were modified so although the concept is similar, there are some differences in the numbers and the wording used. For example, the survey in Russia used slightly different wording (*see Table 3.1)*.

A similar study was conducted by Sekita (2011) in Japan. This was a nationally representative study, involving members of 5386 households aged 20 to 69, who were selected using two-stage stratified random sampling. Nearly three-quarters of Japanese respondents answered the first question correctly. Sekita (2011) said that the concept of geometric progression is included in the curricula of upper secondary schools, and the vast majority of respondents (90%) had accomplished this level of education. Therefore, interest rates are viewed as a basic concept. In addition, Figure 3.1 also shows that higher scores were also documented in Indonesia. Cole et al's (2009) study documented that experiences with financial products also emerged as the factor that contributed to the score. It was reported that although only less than a half of Indonesian households owned a bank account, about one in three of unbanked respondents reported that they had owned an account previously, and about a quarter of respondents also held 'a formal sector loan', showing that they are familiar with related issues.

Table 3. 1 The set of financial literacy' question that used across studies

No	Topic of question	US (Lusardi and Mitchell (2005, p.3; 2006, p.5)	Indonesia Cole, et al.,(2009, p.10-11)	Russia Klaper and Panos, (2011, p.22)
1	Compound interest (Economic + Mathematical ability	*'Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?* ***a. More than $102*** *b. Exactly $102* *c. Less than $102* *d. Do not know* *e. Refuse to answer*	*'Suppose you borrow Rp. 100.000 from a money lender at an interest rate of 2% per month, with no repayment for three months. After three months, do you owe less than Rp. 102.000, exactly Rp 102.000, or more than Rp. 102.000?*	*'Let's assume that you deposited 100,000 rubles in a bank account for 5 years at an interest rate of 10%. The interest is earned at the end of each year and is added to the principal. How much money will you have in your account in 5 years if you do not withdraw either the principal or the interest?* ***a. More than 150k rubles*** *b. Exactly 150k rubles* *c. Less than 150k rubles* *d. I cannot estimate the amount even roughly*
2	Inflation (Mathematical ability numeracy)	*Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?* *a. More than today* *b. Exactly the same* ***c. Less than today*** *d. Do not know* *e. Refuse to answer*	*If you have Rp. 100.000 in a savings account earning 1% interest per annum, and prices for goods and services rise by 2% over a nine-year period, can you buy more than, less than, or the same amount of goods in one year as you could today, with the money in the account?*	*Let's assume that in 2010 your income is twice what it is now and that consumer prices also grow twofold. Do you think that in 2010 you will be able to buy more, less, or the same amount of goods and services as today?* *a. More than today* ***b. Exactly the same*** *c. Less than today* *d. I cannot estimate it even roughly*
3	Risk diversification Economy/Financial knowledge	*Please tell me whether this statement is true or false. "Buying a single company's stock usually provides a safer return than a stock mutual fund."* *a. True* ***b. False*** *c. Do not know* *d. Refuse to answer'*	*Is it riskier to plant multiple crops or one crop?*	*Which is a riskier asset to invest in?* ***a. Shares in a single company stock*** *b. Shares in a unit fund* *c. Risks are identical in both cases* *d. Don't know'*
			**'For the Indian survey, the amounts used were Rs. 100 for questions (1) and (2) and Rs. 500 for question (4)'.*	



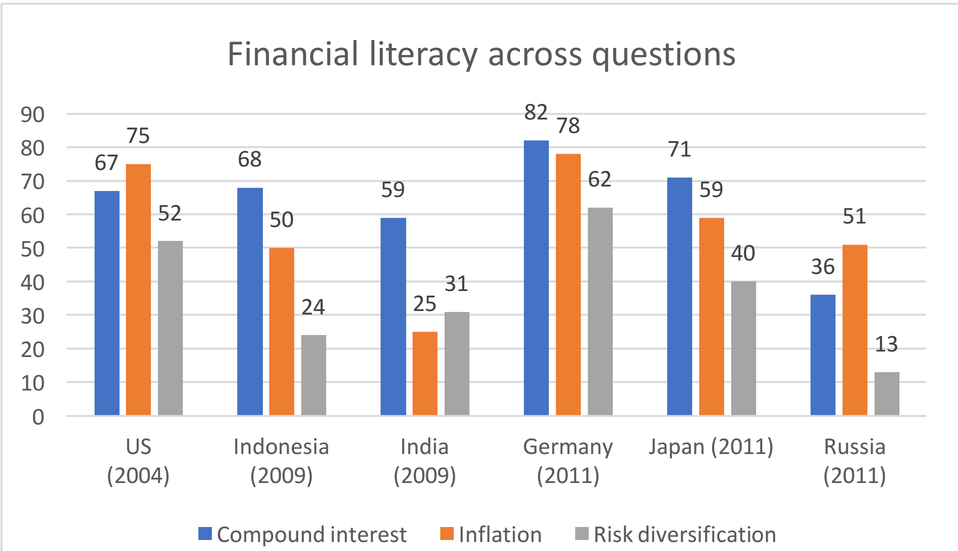


Figure 3. 1 Overview of financial literacy across countries.

Source: Drawn from Lusardi and Mitchell (2005; 2011); Bucher-Koenen and Lusardi (2009); Cole et al (2009); Lusardi and Mitchell (2011); Klapper and Pannos (2011); Sekita (2011); Xu and Zia, (2012); and Lusardi (2013, p.2)

The next question is about risk diversification. One of the notable points is that respondents to this question scored lower than other questions. The question is recorded as being challenging for respondents, even in the countries where financial markets are developed, such as the US

(Lusardi and Mitchell, 2011). The question requires familiarity with concepts associated with stock or investment strategy. However, many people lack this kind of knowledge. As previous studies have explained, personal experience in financial practices is reported as essential to develop understanding of the concepts, so without personal experience of the stock market, individuals struggle to understand or relate to these terms (Lowenstein, et al., 2001; Sohn et al., 2012). Moreover, Xu and Zia (2012) said that experience in the stock market plays a role in increasing knowledge of risk diversification; for example, individuals who have experience of stocks, unit links, or investment strategies are likely to display a higher level of knowledge in relation to the concept of risk diversification. In Japan, about six in ten of respondents were unable to answer the question about risk diversification. As with inflation, the concept of risk diversification is not included in the curricula of Japan's schools. Furthermore, according to risk profiles, Japanese households are less likely to choose risky assets. According to the Survey of Living Preferences and Satisfaction (SLPS) 2010, discussed in Sekita (2011, p.5), only two in ten of households participated in stocks, as most of them prefer to choose bank deposits or insurance contracts as their investment strategy.

Meanwhile, Russia exhibited the lowest score in almost every question (see Figure 3.1). Klapper and Pannos (2011) involved 1,400 individuals in their sample. The primary respondents were the head of the household, and there was no age limit imposed. The study was carried out to observe the impact of financial literacy on people's behaviour in an emerging market that experiences financial crises. The study stated that in Russia, financial education is not yet integrated in the school curricula.

However, in spite of its significant impact on financial decision-making, other studies revealed that knowledge itself is not the dominant factor. Knowledge alone does not work particularly well in reality, as other factors also have an essential role to play (Robb and Woodyard, 2011). One previous study by Mandel and Klein (2007) found that besides financial knowledge, motivation was an essential factor that could lead to sound financial behaviour. Sohn, *et al.* (2012), outlined that financial literacy encompasses knowledge and skills to cope with the financial issue in daily life and to make informed decisions.

3.2. Level of financial capability

Studies of financial capability that will be discussed in this section drawn on the framework developed in Kempson et al., (2005), McKay (2011), PFEG[3], MAS (2013), and Definit (2013) for FSA Indonesia. First, the main results of each study will be presented, and a comparison will be made of their results.

As we saw in chapter two, Kempson et al. (2005) measured financial capability across four domains: managing money, planning-ahead, choosing products, and staying informed. In their report, those who scored above average were classified as being in the 'high' group (e.g. as having a 'good' attitude or behaviour). The results of the baseline survey carried out by Atkinson, et.al (2006) for the FSA UK showed that overall, respondents scored highly in 'making ends meet', which had an average factor score of 75. This is the highest score of any of the domains. In contrast, the level of capability in choosing products had an overall factor score of only 44. 'Keeping track', 'planning ahead', and 'staying informed' scored 64, 56, and 57 respectively. Using factor analysis as a statistical technique to analyse the data, the study clearly indicated that 'individuals may be particularly capable in one or more areas, but lack skills or experience in others' (Atkinson et al., 2006, p. 134). The study demonstrated that in

[3] http://www.pfeg.org

the domain of managing money, although a number of people were able to make ends meet, around a quarter struggled to do so. In addition, the authors argued that more attention should be given to the area of planning ahead, as there were almost equal numbers of people who said that they plan-ahead as those who did not. Moreover, considerable diversity could be seen in people's behaviour when it came to 'choosing products' and 'staying informed'. The statistical analysis indicated that there is correlation between the factors across the domains; there is a positive relationship between 'planning ahead' and 'making ends meet', and 'staying informed' and 'choosing products'. This implies that those who prepare for the future are better able to make ends meet, to stay informed, and to carefully choose products.

McKay (2011) measured the level of financial capability in Canada (The Canadian Financial Capability Survey (CFCS)). A large sample of data was used in this survey, involving roughly 15,000 respondents. Factor analysis and multivariate analysis were performed in order to explore the influence of different groups, such as age, gender, income and ethnicity, on financial capability. To remind, as explained in chapter two, McKay was also a member of the team that conducted the UK' financial capability survey for the FSA UK (Atkinson, et al, 2006). Employed similar concept., financial capability in McKay (2011) was measured across several domains: 'making ends meet', 'keeping track of money', 'planning ahead', 'choosing products', and 'staying informed'. A set of questions about knowledge, attitude, and behaviour were employed on each of these domains. Although heavily influenced by the previous approach of FSA UK, it is difficult to make a direct comparison between both studies because there are some significant differences, ranging from the method of data collection (telephone surveys in McKay (2011) versus face to face interviews in UK), the questions applied, and the study's geographical context, which has an influence on the availability of financial products and services (McKay, 2011).

Through factor score analysis, six clusters of financial capability levels were categorised in McKay's study, based on strengths and weaknesses across all domains. As in UK (Atkinson, et al., 2006), the level (e.g. 'good' attitudes or behaviours) is defined based on the average score, although McKay's study used '*10 per cent lower the average as the cut-off point'* to categorise the weaker group (McKay, 2011, p.25). His findings show that roughly one in four respondents gained high scores in all domains, which he labelled as cluster one. The other clusters recorded lower percentages. Less than one in five respondents were categorised in clusters two and three. Cluster two consists of those who had high scores in all domains except in keeping track, and cluster three consists of those who scored lower in 'planning and staying informed'. Roughly one in five respondents were labelled as cluster four, which consists of those who had weaknesses in three domains: 'planning-ahead', 'staying informed', and 'keeping track'. Just over one in ten were categorised in cluster five (just below average at 'making ends meet', average for 'keeping track', and low in other scores), and less than one in ten respondents were in cluster six (very low at 'making ends meet', average for 'keeping track', and low in other scores).

Turning to the multivariate analysis, the results confirmed that women are more likely to score lower, except at 'keeping track of money'. However, the differences were relatively small. The noticeable differences appeared more when it came to age, where, older respondents tended to record higher scores. In addition, Aboriginal respondents were found to have lower scores in 'making ends meet', 'choosing products' and 'staying informed'. A small difference was also recorded in those who live in different regions; those who live in Quebec are more likely to score better when it comes to 'keeping track' and 'making ends meet' (McKay, 2011, pp.20-21).

As mentioned previously, a similar study was conducted by Definit (2013) for FSA Indonesia. Although the title of the study concerns ‘financial literacy’, terms related to financial capability were used and the study closely resembled that carried out by Atkinson et. al (2006) for FSA UK. This study also focused on four areas: managing money, planning-ahead, making choices and getting help. The variables of financial knowledge measured in the study were categorised into two groups: basic and advanced (see Table 2). Moreover, the survey measured behaviour in the four areas mentioned above.

The simple weighted method and factor analysis used in the FSA Indonesia study by Definit (2013), presented similar results: the average index of financial literacy was 42.51 points on a scale of 0-100 based on the factor analysis method, while the simple weighted method resulted in a score of 39.42. The scores achieved for basic financial literacy varied widely across the sample, while a low score of advanced financial literacy was recorded for the majority of respondents. The results showed that a basic level of financial literacy is positively correlated with education and income level. The majority of low-income households have a low level of basic financial literacy, and vice versa, those with high incomes have a high level of basic financial literacy. However, there is a different pattern for the advanced financial literacy level, where the correlation between the level of financial literacy and income is weak. Most respondents were categorised as low level in terms of advanced financial literacy, even those with high levels of income and education. The study also showed a positive correlation between advanced financial literacy and the possession of financial products. Moreover, based on analysis of socio-demographic variables, this study found that male respondents tend to have a higher score than females when it came to the basic financial literacy index.

Turning to the survey carried out by MAS (2013) in the UK, it was shown there that people are struggling financially and that people focus more on financial matters compared to the results reported by Atkinson et.al (2006). Perhaps this result is not surprising, given that there was a global financial crisis in 2008 and a deep recession in the UK at the time. In order to adapt to the financial hardship, they have developed a range of coping strategies, such as ‘cutting back on spending’ (37%), ‘withdrawing money from saving accounts’ (11%), and ‘generating income’ (8%). A rich set of questions was employed in the survey. There are five key outcome areas: ‘managing debt, saving regularly, saving for retirement, protecting assets, and making provision for dependants’ (MAS, 2013, p.27). The results are displayed in Table 3.2. The research established that attitudes, motivations, and opportunities are predominant in determining the way in which people manage their finances, despite their skills and knowledge. In relation to this, Lerner, et al (2015) showed that emotional aspects are one factor that drive decision-making. It was argued that emotions could affect the ‘judgments and choices’ (Lerner, et al, 2015, p. 799).

The study Finney and Hayes (2015) for the ONS UK showed similar results. The study used factor and regression analyses to analyse data and score each dimension on a scale from 0 to 10. It was found that the highest score was captured in the area of ‘making ends meet’, where the overall mean was 7.0, and the lowest was in ‘planning ahead’ where the overall mean was 2.3. Moreover, the noticeable finding in this study showed that only very few respondents (1%) scored high on all of the six dimensions and more than one fifth did not perform well on any dimension. Male respondents were found to be more capable in all dimensions except in ‘organizing money management’ and ‘controlled spending’. Although in all domains the gap between male and female was small, the statistical test showed significant differences within groups. In terms of age, there was a positive relationship between age and the level of financial capability in the terms of ‘making ends meet’, ‘planning ahead’, and ‘controlled spending’. The youngest group (16-24 years old) had the lowest score across all dimensions, except ‘choosing products’. In this domain, the oldest group (65 years old and above) was the most vulnerable. In addition, ‘organized money management’ was the only domain that showed a flat pattern across age groups, where the score among the respondents were almost similar. Furthermore, in terms of other socio-economics characteristics, it was shown that those who live in higher income households are more capable, but those in the two lowest quintiles show high levels of performance in organizing money management.

Table 3. 2 Money Advice Service Outcomes

‘Outcome’	‘Question’	‘UK population (base: 5079)’
‘Regularly reviewing your money’	‘do you keep track of your income and expenditure?’	84%
‘Managing debt well’	‘in the last six months have you missed more than one payment on a loan, credit agreement, mortgage, or had an authorized overdraft charge?’	13%
‘Saving regularly’	‘do you save some money each month?’	53%
‘Protecting your assets’	‘do you have home contents insurance?’	53%
‘Providing for your dependents’	‘do you have life insurance that pays out on death?’	26%
‘Saving for retirement’	‘are you currently paying into one or more pensions?’ (base: all non-retired 3,452)	28%

Source: MAS, 2013 (p.27)

In reviewing the previous studies that have been conducted so far, this section attempts to compare the results of the factors underpinning financial capability. Studies by Kempson et al., (2005), MAS (2013) and Definit (2013) for FSA Indonesia are discussed and their findings are presented in Table 3.3. Studies by McKay (2011) and Finney and Hayes (2015) are not displayed here, as their details of data was not presented in their report.

Table 3. 3 Domains of financial capability levels across studies

	Domain	FSA UK (%)	MAS (%)	FSA Indonesia (%)
		(2006)	(2013)	(2013)
1	'Managing money'			
	'Checking balance before withdrawing money'	38	66	39
	'Keeping records of expenditure'	57	84	50
	'Keeping up with bills and credit commitments'	64	35	22
	'Coping strategy for financial difficulties':			
	'Cutting back on spending'	55	67	29
	'Withdrawing money from savings accounts'	16	30	8.52
	'Borrowing from a non-financial institution'	N/A	18	29.6
2	'Planning ahead: retirement planning'			
	Yes	42	28	10
	No	58	N/A	90
	'Reason for not having retirement savings':			
	'Insufficient money'	28	N/A	56
	'Do not have a job'	29	N/A	N/A
	'Do not understand the products'	NA	N/A	19
3	'Choosing products'			
	'Savings account'	69	85	50.4
	'Current account'	89	N/A	N/A

Source: Atkinson (2006), MAS (2013), Definit (2013)

a. 'Planning-ahead'

An interesting result occurs when looking at 'planning-ahead'. More attention should be paid to the area of planning for the future or old age in the UK, as there were almost equal numbers of people who do and do not plan-ahead. Similarly, in Indonesia the percentage of respondents who own a pension fund was very low, even among those with moderate or high levels of financial literacy (about 12% for each). The main reason is lack of money to pay the premium (55.7%), unfamiliarity with the terms of pension funds (18.7%), or because they are not interested in having one (8%).

b. ‘Choosing financial products’

The vast majority (89%) of British households held a current account, and over two-thirds of them have a saving account. The percentage for Indonesian households was lower, as only half of them have a savings account. The study by Definit (2013) found a positive relationship between owning financial products and the level of financial literacy. Definit’s study also showed that among financial products, saving mechanisms are the most popular, either within a formal institution (bank) or non-bank, such as saving money at home (e.g. in a piggy bank). About one in three respondents chose a financial institution based on its reputation, 20% were influenced by their peer group (friends, relatives, colleagues), 17% based their decision on how they are treated by the bank’s staff and 14% based it on the administrative fee. In addition, only a very small number of respondents (less than 2%) reported that they have unit-linked insurance, stock, or mutual funds. Moreover, another striking result from this study was that quite a large number of respondents (42%) do not have any financial products.

c. ‘Staying informed’

In the domain of staying informed, nearly three-quarters of respondents in the UK said that it is important to stay informed about financial matters. The study showed that this is strongly linked to better outcomes in choosing products, as people who stay informed tend to use their knowledge to make appropriate decisions when choosing products. The study by Definit (2013) asked different questions related to the same domain. The questions were focused on the source of information; television was chosen as the main source by the respondents. However, the majority (91%) of them preferred entertainment programmes (films, soap operas, music, etc.), programmes about celebrities (80%), and crime documentary programmes (75%); while Economic, financial, politics, and social information were also chosen by the respondents, but mainly by those with high level of financial literacy.

d. ‘Knowledge of deposit guarantee schemes’

The study in Indonesia also included respondents’ familiarity with deposit guarantee systems. The results showed that approximately half of them report that they know about government guarantees in relation to bank deposits, but only just over a quarter of them are aware of the institution responsible for it.

Studies of financial capability also noted that financial capability is linked to socioeconomic status. People who are less financially capable were more likely to have lower levels of education, or to be young, female, single, unemployed, or on a lower income. This will be discussed more in the next section.

3.3. Discussion

As discussed in the chapter two, financial capability is the more comprehensive concept, where the concept is not only defined in terms of financial knowledge, but also other areas, such as attitude, skills, and behaviour toward financial matters. For example, the detailed definition of ‘financially capable person’ from the National Foundation for Educational Research is presented in Kempson et al. (2005, p.13), who argue that:

> “*Financially capable people are able to make informed financial decisions. They are numerate and can budget and manage money effectively. They understand how to manage credit and debt. They are able to assess needs for insurance and protection. They can*

> *assess the different risks and returns involved in different saving and investment options. They have an understanding of the wider ethical, social, political and environmental dimensions of finances."*

However, this still leaves some key questions regarding the standard measurement and indicators of a financially literate or capable person, for example: What might constitute a 'high' or 'low' level of financial capability? What is the expected level, and should we expect different levels for different dimensions of financial literacy or financial capability at different times? Should this be linked to whether or not someone has a need to know? Should we expect everyone to keep track of their finances? What if they have a very high income and regularly save money? Perhaps they do not want to keep track of their finances. Is saving always the 'right' behaviour? Most people want to be able to make ends meet (that is, have enough income to meet their basic needs) thus, even though some people are not able to do this, it doesn't suggest that a problem exists.

When it comes to knowledge, it is difficult to say what kind of knowledge people need to have, or what level of knowledge has been acquired, as it depends on the person, time and place (Remund, 2010). People may have different views about how important it is to know about various issues, such as inflation, compound interest, or which kind of financial products and service people should have. How important is it for a person to have an advanced understanding of stocks and shares, mutual funds, and so on, for example, if it would not be applicable for them, or, they are less likely to have advanced financial products due to less income. Is it really necessary to understand those concepts when other types of knowledge may perhaps be more worthwhile or in demand, for example, understanding the concept of compound interest, as people now have higher responsibility of their own future, such as pension, or perhaps taking a loan, and the concept of compound interest have a strong link with it.

In terms of attitude, what constitutes a good and bad attitude is also not a simple question. Most people might probably agree with a certain attitude as being the ‘right’ attitude; for example, people agree that it is important to have savings, but this does not imply that spending is always ‘bad’. People also need to spend to have a good life. Similarly, in terms of behaviour, there are some behaviours that are more or less desirable than others. For example, to be able to meet basic needs is certainly a good thing, and that is what people want to be able to do. However, there are other kinds of behaviour where the line is less clear, for example, as mentioned before, when it comes to savings. As explained by Keynes, a main economist from the 20th century, people need to be balanced between savings and consumption (Fitch, 1947).

Addressing these issues is very important if the researcher, policy maker or other stakeholder is to have a clear idea of what to improve and what needs further development. Having a standardised concept and measurement will allow for comparison between studies, groups or subpopulations and will help us to identify need for, and subsequently develop, policy and effective improvement strategies.

However, as Remund (2010) argued, it is not easy to build a consensus and, as Kempson et al. (2005, p.38) argued, ‘a one-size-fits-all approach would be inappropriate’. In many cases, it depends on the ‘individual’s financial circumstances’, ‘life stage’ and even geographical location (Kempson et al. 2005, p.16; Remund, 2010; Vyvyan, 2014). Similarly, Ofsted (2008, p.10) clarified that ‘there are often no ‘right’ answers because decisions depend on individual circumstances and preferences’. For example, the decision to buy an insurance policy will vary between individuals, as it depends on their particular financial circumstances and risk profile. As Kempson et al. (2005, p.17) explained:

> *'Financial capability is a relative, not an absolute concept. It might be possible to define a basic level of financial capability that is required by everyone in a given society. Beyond that level, the degree and nature of the financial capability required by any given individual will depend on their circumstances'.*

Further explained by Kempson et al. (2005), socio-economic status, such as income levels, might affect the level of financial capability. For example, those with limited income might require different capabilities than those with high incomes. Thus, the focus for those with limited incomes should be on their daily money management. Those with a very high income, alternatively, should be assessed in terms of how they plan their future, including their possession of financial products. Similar rules apply with the varying levels of knowledge. The need for knowledge might be different depending on circumstances. Possessing deep knowledge about mortgages might not be urgent among the elderly with limited income, who will probably never need a mortgage and, even if they did, their access to finance would likely be too limited. Failure to account for this could result in a 'false conclusion that poor people are financially incapable and that financial capability increases with income' (Kempson et al. 2005, p.16).

The review of existing studies in sections 3.1 and 3.2 showed that levels of capability varies across countries. When reviewing the existing literature, a number of salient points emerge. Clearly, the scores vary even when similar measurements are used, although this can be explained by several factors. As mentioned before, the country's economic and social conditions were argued to affect the score. For example, high levels of inflation (and inflation fluctuations) in Indonesia means that many Indonesians are more aware of the concept. Whereas those who live in Japan, a country that has experienced economic stagnation for more than a decade and which has been experiencing deflation since 1990 (Ito and Mishkin, 2004; Sekita, 2011), are less likely to answer questions about inflation correctly. In addition, another example of how a country's economic system can influence levels of financial knowledge was shown by Lusardi and Mitchell (2011). They explained that in countries with generous pension funds, the level of financial literacy tends to be low. For example, in Japan, where nearly three quarters of households depends on public pensions to fund their living costs during retirement, the survey results indeed showed that financial literacy is fairly low (Sekita, 2011). It shows that financial literacy is less important in countries with strong welfare states.

Moreover, the wording of the question is important too, as Xu and Zia (2012) showed. Researchers should consider that, even in cases where the concept of the question is similar but different numbers or words are used, even changing words for numbers (for example, using 22 instead of twenty-two) can affect results, because the difficulty of any ensuing calculation would be different. It was explained that the wording used should consider respondents' cognitive abilities. With regards to the content of questions, some are more difficult to answer because they may not fit with or relate to conditions within the targeted society. For example, in Indonesia, which has a population of 250 million, the number of investors in the domestic stock market is still below 1% (OJK, 2014). It is predicted that this very small percentage results from the fact that investing in stocks or bonds requires a fairly large amount of money (especially when it comes to bonds, given than in Indonesia a bond-investment requires a significant capital outlay). There is also other factor such as people's perception and risk profile that need to be considered. Therefore, questions about advanced financial literacy can be modified so as not to be dominated by a focus on stocks or bonds, but combined with other questions that are more suited to the condition in a specific country.

3.4 Socio-economic characteristics

Keown (2009) explained that demographic and socio-economic variables are factors that determine financial behaviour. Similarly, several studies have also examined the contribution of other socio-economic characteristics on the level of financial capability, such as Worthington (2006), Mandell (2008) Bujan, et al. (2016) and Loke (2017) This section will examine several variables that are predicted to influence financial capability: age, gender, income, and work experience.

3.4.1. Age

The surveys discussed in the previous section indicated that the impact of age forms an ‘inverted-U shape’ (Xu and Zia, 2012, p.9). Cole et al (2009) showed that age appears as one of the most important factors that influences the level of financial literacy, and in general, people in middle age are more likely to gain higher scores compared to those in other groups.

This has also been supported by previous studies, for example that of Chen and Volpe (1998), who found low levels of financial literacy in participants aged 18–22 years, and it was argued that this was associated with their youth, given that the majority were in the early stages of the financial lifecycle. Similarly, Ansong and Gyensare (2012) and Taft et al. (2013) identified a positive relationship between age and financial knowledge and found that age had an effect on a students’ financial literacy.

Similarly, with regard to various life stages, different life stages bring with them different life event that might each require a different focus, strategy and thus capability. As presented in Figure 3.2 below, in general, there are three stages of life. In the first stage, the focus is on wealth accumulation. In this stage, it is usually young adults who have just started to work and gain their own income. Some will start their own families, and their focus will be mainly on consumption and starting to save. In the second stage, the focus is on 'preserving and increasing the wealth' (University of Minnesota, 2016, p.634) that has been accumulated. At the last stage, the focus is usually on how to live with what has been accumulated . For example, financial products such as life insurance among young and single people is perhaps not as high as those who are married or who have children, as they do not have dependants that should be protected from the loss of income.

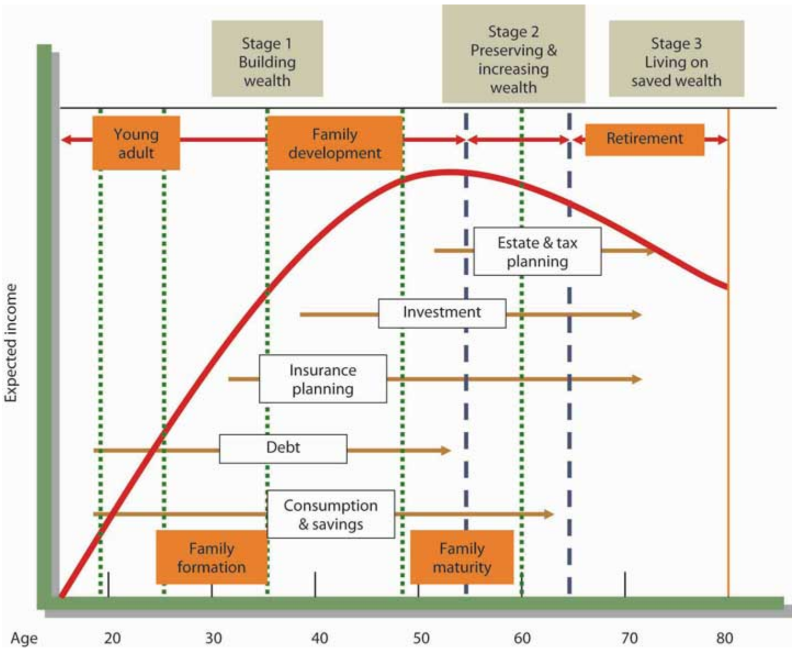


Figure 3. 2 Financial stages of life

Source: University of Minnesota, (2016, p.634)

3.4.2. Gender

A noticeable variation in financial literacy and capability could also be seen in terms of gender. Among the studies discussed above, it was shown that men are more likely to have a higher score than women in some areas of financial capability. In Atkinson, et al. (2006, p.127), it was shown that women were more likely to score lower than men. Danes and Hira (1987) also showed that male students scored more highly in questions relating to insurance and loans, while females tend to have more knowledge about financial management in general. A study by Kempson, et al., (2013) argued that women are better at managing money in the short term, but in other areas, such as ‘making ends-meet’, ‘choosing products’, ‘saving’, and wealth accumulation, men show better performance. The study argued that one factor to account for this is that men have a higher level of confidence when it comes to financial knowledge and skill, even though it might be misplaced. They also show higher levels of interest in issues related to financial matters. Gender also influences the strategy people choose to face financial difficulties; men tend to choose income generating strategies, women are more likely to manage their spending and to cut expenses (Kempson, et al., 2013).

It is widely reported that men tend to score better than women in terms of financial capability (Chen and Volpe, 1998; Manton et al., 2006; Danes & Haberman, 2007; Peng et al., 2007,). Hung et al. (2012) argued that determinants that cause women to score lower than men include a lack of exposure to financial products. This study also posited that women are more likely to feel less confident than men when making financial decisions. Although it depends on the culture and societal norms prevalent in a particular country, men usually still play a dominant role as the decision maker when it comes to household finance. The work of Schmitz and Bova (2013) has supported this finding by showing that women tend to underestimate their financial knowledge and, in many households, major financial decision-making regarding investment or large purchases are still done by men. Clarke et al., (2005) explained that males are more likely to perform better in financial tasks, such as investment strategies. In terms of risk preference, this study revealed that women tend to be more risk averse than men.

Sarsons and Xu (2015) and Mobius et al (2014, p.21) argued that because they have lower confidence, women tend to act more conservatively than men, even when they have the same ability and skill. Harrison, et al (2016, p.1), on a similar note, showed that women tend to have lower levels of confidence when it comes to managing money and making financial decisions. Sarsons and Xu (2015) argued that women tend to be less confident when confronted with unfamiliar topics, so they choose to be more careful. As such, it is not always a negative thing. As D'Acunto (2015, p.23) have argued, overconfidence increases the risk of making poor financial decision, causing people to 'overinvest in money-burning opportunities'.

However, contrasting results have been presented in several studies. Ramasawmy et al. (2013), for example, studied final year undergraduate students from the Department of Management at the University of Mauritius. They did not find any variability between men and women and showed that gender had no effect on the level of financial literacy. The study also showed that age and income had no impact on financial literacy either. Similar findings in terms of gender were also found by Ibrahim, et al, (2009) and Shaari, et al (2013). One plausible explanation is that nowadays, men and women have largely the same rights and have equal opportunity in many areas, such as in education and work. As Shaari et al. (2013) argued, this may reduce the disparities in knowledge. Similarly, Kempson, et al., (2013) showed that in environments where gender inequality still exists, women are more likely to be more vulnerable from lack of financial capability.

The varied results on the relationship between gender and financial literacy suggests that further research needs to be conducted.

3.4.3 Income

When looking at income, it is not surprising that income has been shown to have a positive correlation on financial literacy. One plausible explanation is that those with a higher income are more likely to have more flexibility in allocating their resources and will therefore seek related information in order to achieve the optimum result. Thus, they are aware and more familiar with the related financial issues. For example, in Russia, individuals in the lowest income quartile were found to be more likely to score low in terms of financial literacy, while those in the highest income quartile were more likely to have high financial literacy (Klapper and Panos, 2011). Xu and Zia (2012) also showed that in general, the level of financial literacy of people with higher levels of income is better than those on a lower income. This finding is similar to those in many previous studies, such as Lusardi and Mitchell (2007), and the survey by Roy Morgan for ANZ in Australia (2003). A similar finding in terms of income was also found in a study by Kempson et al., (2013). Their regression results also revealed the impact of income toward financial knowledge.

Meanwhile, a study by Vyvyan, et al., (2014) showed that although those on higher income are more likely to have better scores for financial literacy, those on any income level have the possibility to score well. It was argued that income itself is not the only factor that restricts a person’s ability to gain financial knowledge and to develop a positive attitude and behaviour. However, it can explain certain behaviours of lower income people, such as borrowing money to pay the bills, and the fact that many of them are also less flexible in allocating money into financial products and services and planning-ahead.

Studies in Indonesia and India also linked financial literacy to income and cognitive ability. In this study, income was measured using expenditure per capita. A set of eight mathematics questions (deploying concepts such as addition, subtraction, multiplication, and division) were used to measure cognitive ability. The study found that more than three-quarters of respondents in Indonesia and nearly two-thirds in India responded correctly to the questions. When examining the per capita expenditure, the result showed that, on average, households with higher per capita expenditure score better in all questions. Therefore, greater per capita expenditure and cognitive ability are significantly related to higher levels of financial literacy. However, as noted in this study, cognitive ability may have a stronger effect on financial literacy than expenditure, as the gap in correct answers between low and high cognitive ability samples was more than double than those between high and low per capita expenditure samples. This was confirmed by regression analysis, wherein cognitive ability was shown to have a substantially stronger association with financial literacy than with expenditure (Cole et al., 2009).

3.4.4 The Impact of Work experience

Nidar and Bestari (2012) mentioned that besides lack of exposure to financial education, lack of experience is a factor that contributes to financial knowledge. Experience is also predicted to be a factor that influences attitude. As Fazio and Zanna, (1981, p.185) explain:

> *‘attitudes formed through direct experiences are stronger than those formed through indirect experience. There is evidence to suggest that direct experience attitudes are more clearly defined, held with greater certainty, more stable over time, and more resistant to counter influence’*

In addition, an interesting finding concerns the relationship between financial literacy and status in the labour market, discussed by Bucher-Koenen and Lusardi (2011) and Klapper and Panos (2011). They showed that in Germany and Russia for example, self-employed people exhibited higher scores when it came to risk-diversification (see Table 3.4). This may be caused by the nature of self-employed work, which forces respondents to get used to dealing with risks when running their business, thus giving them experience of how to minimise risk for higher gain. Again, as recommended by Sohn et al. (2012), the experiential learning model is probably the most effective method to measure people's financial literacy.

Table 3.4 Financial literacy by status in the labour market

Labour status	Compound interest (%)		Inflation (%)		Risk diversification (%)	
	Germany	Russia	Germany	Russia	Germany	Russia
Self-employed	88.6	30.6	90.0	47.2	84.5	16.7
Employed	89.7	41.4	84.0	52.6	73.3	14.2
Non-employed	83.0	42.4	76.7	55.3	61.1	14.9
Retired	78.1	21.4	80.0	44.0	55.6	7.9

Source: Modified from Bucher-Koenen and Lusardi (2011); Klapper and Panos (2011)

3.5. The Relationship Between Financial Knowledge and Behaviour

Many studies have shown a connection between financial knowledge and behaviour, including Chen and Volpe (1998), in their study of 924 undergraduate students from 14 colleges in the US. In that study, they showed that those with sound financial knowledge tend to make a record of their financial statements. They are also more likely to answer correctly in tasks about financial decision making. Similarly, Hilgert, et al. (2003) showed that financial knowledge and financial practices are found to be closely associated. In their study, Hilgert, et al. (2003), examined the link between knowledge and behaviour among household in the US by focusing on four financial management behaviours: cash-flow management, credit management, savings and investments. The survey instrument encompasses five sets of questions: (1) questions concerning financial knowledge; (2) experiences of financial products and services; (3) assessment of financial behaviours; (4) the way of learning about managing household finances; and (5) the preferred way to learn about managing their finances. The results of the study found a positive correlation between financial knowledge and behaviour; individuals who obtain higher scores on financial literacy tests tended to follow recommended financial practices in all of the four activities outlined above (for example, paying bills on time and having a fund for emergencies). This study also showed that credit management scores have a close association with the scores on the composite measure of financial knowledge.

Furthermore, the connection between knowledge and behaviour is also noted by Robb and Sharpe (2009). They documented that credit card use behaviour and financial knowledge are related significantly, and it was revealed that individuals who have a higher level of financial knowledge have higher balances on their credit card. Studies by Robb and Woodyard, (2011) also support this finding. They show that if knowledge and skills are developed, positive attitudes and behaviours will be enhanced. Extensive financial skills will contribute to effective money management and lead to better financial decision-making (Hilgert, et al, 2003; Bonte and Filipiak, 2012). In a similar vein, a study by Roy Morgan (2003) was carried out for ANZ in Australia (which employed a framework similar to that developed in Kempson et al. (2005) although included an additional question about mathematical and literacy abilities) also aimed to assess behaviours, attitudes, perceptions and awareness. It showed that those who have a higher level of financial knowledge are more likely to exhibit better financial behaviour, such as managing income and saving.

Attention in the rest of this section will now turn to prior studies concerning financial capability, particularly those that emphasised financial knowledge, for example, the study of financial literacy by van Rooij et al. (2007). This study focused on the impact of financial knowledge on financial decision-making, especially in terms of its relation to investment decisions. It focused on two components: basic financial literacy (i.e. the “Big Three” questions, see chapter two), and more advanced financial knowledge. They linked financial literacy with economic outcomes, measured in terms of participation in the stock market. They showed that financial literacy has a positive correlation with an individual’s desire to invest in stocks.

A similar study was conducted by Klapper et al. (2013), who found a connection between financial knowledge and financial behaviour. Their study observed the impact of financial literacy on real behaviour in an emerging market experiencing financial crisis by measuring individual levels of numeracy and knowledge of compound interest, inflation, and sales discounts. They also included individuals’ use of financial services and their capacity to spend and save. It was shown that those who have higher levels of financial literacy are more likely to exhibit better financial behaviour, such as managing income and spending. Financially knowledgeable people appear to be aware of how to manage their money and are less likely to report negative income shocks during financial crises.

Other similar findings were provided in several studies, such Beal and Delpachitra (2003), and Robb and James (2009). The authors found that financial knowledge had a positive influence on financial behaviour among college and university students, with those who possessed good knowledge tending to have good control of their spending such that they avoided unnecessary debt and impulse buying. They tend to act more responsibly when it came to budgeting and making ends meet (Robb and James, 2009).

A cross-country comparison was conducted by Kempson, et al., (2013) for the Financial Literacy and Education Russia Trust Fund. It revealed a similar pattern. They examined financial literacy in several countries, including Germany, Malaysia, Poland, and Armenia. They focused on knowledge, attitude and behaviour and showed that across these countries, a positive significant relationship between education and the level of financial literacy can be clearly seen, even after other socio-demographic variables, including income, age, and gender were controlled for. Furthermore, this study also found that knowledge is also significantly associated with attitude and behaviour. Those who have higher knowledge scores exhibit positive attitudes and behaviour.

From the above discussion, we can conclude that it is clear that knowledge is connected to behaviour and that positive behaviours are more likely to persist if driven by sufficient knowledge (Notoadmodjo, 2003).

3.6 Financial education

From the studies discussed above, it can be seen that the literacy scores are associated with higher educational attainment. It was also shown that general education and literacy and numeracy skills are also important. Lusardi and Mitchell (2011) found that those who have lower education levels are less likely to answer the questions correctly and are more likely to say they do not know the answer. This pattern was also found in all countries mentioned in the studies above. More specifically, financial education may improve financial capability and higher levels of education are strongly correlated with improved financial knowledge. This may be because education expands knowledge horizons and develops logical thinking.

Several studies showed that one way to improve financial knowledge and capability is through financial education (for example, Sekita 2011, and Klapper et al., 2013). In these studies, it was argued that knowledge, attitude, skills, and behaviour can be fostered through education. Lyons and Hunt (2003) also argues that financial education has a positive significant effect on financial behaviour. They showed that those who received financial education were less likely to misuse credit. Similarly, a study in United States by Johnson and Sherraden (2007) found that financial education plays an important role in enhancing financial literacy among students in a way that will lead to sound financial behaviour. Linking back to the studies discussed in the previous section, especially those discussed in section 3.1, it was shown that the countries that mandate financial education in school curricula record higher levels of financial literacy and capability. Respondents felt familiar with the concept of inflation and risk diversification so they gain a better score.

According to the Organization for Economic Cooperation and Development (OECD 2006, p.118), financial education is defined as follows:

> *"the process by which financial consumers/investors improve their understanding of financial products, concepts and risks and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being"*

A longitudinal study to evaluate 'Money Smart' (a financial education program) by the US Federal Deposit Insurance Corporation (FDIC) (2007) showed that the program is effective as it increases levels of confidence and encourages positive financial behaviour (such as increased saving rates, intention to open bank account, lower debt, and comparing financial products).

This significant improvement was examined using telephone surveys conducted over a six to twelve months period, before and after the training had been completed.

Moreover, a study by Borden et al. (2008) reviewed the impact of ‘Credit Wise Cats’, a free of charge financial educational seminar series for students and community members that focused on several topics, such as ‘budgeting and tracking expenses, consumer credit and financing options, savings and insurance coverage’ (p.28). In their review Borden et al. (2008) compared test results of 93 participating students and showed that the program has positive effect on financial knowledge, attitudes and behaviours. A decreasing trend in risky behaviour was also found among participants, shown through the reduced numbers planning to use cash-advance facilities.

Several countries, such as the US and UK, have recognised the need for financial education provision in the classroom. Thus, in these developed countries several schools have started offering financial education classes. For instance, in the US, “46 states now include personal finance in their state education standards; 36 states require that these standards be implemented” (Council for Economic Education, 2013, page v). In the UK, especially in Wales, Scotland, and Northern Ireland, financial education is already delivered in some schools, and is a compulsory element in classes on mathematics and citizenship (Winch, 2013). Lusardi and Mitchell (2007) and Definit (2013) have argued that financial education needs to be integrated holistically into national education systems. Delivering personal finance lessons in the learning environment will encourage students to learn with more focus and thus more effectively (NFEC, n.d)

In addition, The U.S. Department of the Treasury (2015) conducted a study on behalf The U.S. Financial Literacy and Education Commission to document US federal government strategies to enhance students’ financial capability. This study evaluated financial education and intervention programs aimed at postsecondary students in the US. There are various subjects and methods applied in the existing program, and it was shown that the purpose of financial education and intervention ranges from enhancing financial knowledge to encouraging expected financial behaviours. This study concluded that financial education programs are effective in bringing about positive change. However, it was advised that more robust observations are needed when assessing programs and a mix method of quantitative and qualitative approaches will be useful, in order to support a deeper understanding about suitable programs or subjects.

A more recent study by Urban et al., (2015) examined the effect of attending a personal finance course on high school students in the US. It was argued that ‘a rigorous financial education program’ (p.1) is effective in improving the credit scores of participants. Moreover, prior to that, a study by Peng et al. (2007) found that those who are exposed to personal finance courses in high school or college exhibit better knowledge about investment. Shim, et al. (2009) supported this finding by investigating the link between field of study and financial knowledge. It was revealed that students from economics backgrounds who participate in a personal finance courses score higher in terms of financial knowledge.

Definit (2013) and Lusardi and Mitchell (2007) argued that it is essential to start an education programme from an early age up to university level and they are more effective when targeted at specific population groups. Bernheim, et al (2001) showed that those who had been exposed to financial education accumulate more assets and those who have been encouraged to save in their childhood tend to save more in their adulthood. Appleyard and Rowlingson (2013, p.517) discussed why financial education is perceived to be important for children and young people, arguing that it may help them to build:

"……greater understanding of effective economic decision making now and in the future. The increasingly complex financial world we live in, at a time of global financial crisis and retrenchment of state welfare, make such education increasingly important"

However, financial education does not have to stop at secondary school. Further and higher education institutions may also play a role. Peng et al. (2007) conducted a study of 1,039 alumni of Midwestern University in the US in order to examine the effect of personal finance courses on knowledge investment. The study showed that financial education delivered during college contributes positively and significantly to financial knowledge about investment patterns, whereas similar results were not found when looking at personal finance courses delivered in high school. The increased responsibility of college students is believed to be the explanation for this finding. As financial responsibility increases when someone enters college, they need more knowledge about personal finance in order to support themselves when managing their finances and in making effective financial decisions, such as managing incomes and savings (Joo, et al., 2003).

Meanwhile, many young groups started this new stage with insufficient financial knowledge and many students have not been exposed to adequate financial education (Elliot, 1997). Starting to live independently, college students face new responsibilities to manage their finances, including budgeting, managing income and expenses, and paying bills. For some of them, spending habits and attitudes toward money need to be carefully managed (Margaretha and Pambudi, 2015). Moreover, in some countries, such as at the US, students now also have access to student loans to cover their tuition fees (Dwyer, et al., 2013). Normally, this loan will be repaid after they graduate and have secured a job. Elliot (1997), Holub (2002) and Boushey (2005), showed that the inability to plan-ahead may overwhelm students upon graduation, who may be overwhelmed by a debt burden, caused by their inability to manage student loans and credit cards. A study by Boushey (2005) revealed that high debt is accumulated when students enter college life, and at a higher rate for those on lower incomes. Financial education was thus recommended. They argue that it is important not just for post-graduation life but also whilst they are still students so that they can manage their finances more appropriately. Sound financial literacy will help them to minimise the chance of running into financial problems, such as bankruptcy, later in life (Masud, et al, 2004; Sundarasen, 2016).

3.6.1. Financial Education Among University and College Students

There are many reasons underpinning the importance of delivering financial education to students, especially those at university. The main reason is that students are identified as the agents of change in the society and are more likely to be in middle or high income groups and thus drive the economy forward. Gutter and Copur (2011) argue that developing sound financial behaviour during college years may lead to greater chances of attaining financial wellbeing in the future. Personal financial literacy is expected to be the basic capital to face the reality of social life.

Several studies show that young people are at risk of poor financial literacy (Cole et al., 2009; Visa, 2012; Definit, 2013). A study by Beal and Delpachitra (2003), for example, on financial literacy among university students in Australia shows that financial knowledge and skills are low, which could have a negative effect on future prospects. In addition, a survey from Money Matters on Campus 2015 showed that students are not confident with their ability to manage money and when making financial decisions (Bushi, 2016). The findings support prior studies by Nellie Mae (2005), who argued that undergraduate students are not prepared to manage credit wisely. Previous study by Hayhoe, et al (2000) also found that students who lack financial knowledge tend to make poor decisions related to their finances. Jorgensen (2007) argued that as people grew older, financial knowledge increases. He explained that this might be caused by increasing life experiences. Therefore, one of the main targets of education should be this group and this can be provided by formal academic institutions, such as schools, colleges and universities.

Broadly speaking, financial education should be provided in order to shape young people's financial awareness so that they are more selective and careful when managing their finances in the future. Appleyard and Rowlingson, (2013, p.508) argue that delivering financial education for young people is not only important 'to prepare them for the adult world of finance but also to assist with their particular needs while still young'.

3.7. Undergraduate Student's Financial Capability

As we have just seen, studies have revealed that young groups are vulnerable to financial illiteracy and that there is positive impact of financial education on college students. In this section, the focus will be on studies about financial literacy and financial capability that focus specifically on college students. However, given that the studies did not use similar measurement tools, comparison between them will not be undertaken.

Kotler (2000) showed that adolescent college students were more likely to engage in impulsive buying behaviours, where they tend to purchase emotionally. Stern (1962, p.59) describes impulsive buying as 'any purchase which a shopper makes but has not planned in advance'. Today, the number of impulsive shoppers are growing rapidly (Kacen and Lee, 2002), especially in adolescence, where control of emotions is still developing. They made purchasing based on the 'wants' not the 'needs'. This is supported by a national study on adults in US by

Wood (1998), who concluded that the phenomenon of impulsive buying was greater in those aged 18 to 39.

A study by Volpe, et al. (1996) of 454 college students at a state university in the US revealed that students in general have low levels of knowledge about investment. However, male students and students from business backgrounds were more likely to gain higher scores. This finding supported previous findings in Danes and Hira (1987) about financial literacy amongst US college students, which showed that students were likely to have knowledge about general issues concerning financial management, but that when it came to more specific topics they tended to score lower. The study showed that students have poor knowledge of insurance, credit cards, and managing money. However, in general, male students and older, married students have better scores when it comes to insurance and loans. It was shown that financial experience is one of the explanations. Thapa and Nepal (2015) also demonstrated similar findings, that is, that students recorded higher scores on questions related to numeracy and lower in other issues, such as investment, as they lack the necessary experience.

Chen and Volpe (1998) also conducted a similar study on financial literacy, involving 924 college students in the US. Their study showed similar results, where just over a half of respondents responded to questions correctly. Male students are more likely to have higher scores than female, and students from business major backgrounds were more literate than those from other backgrounds. Similarly, students with work experience tended to achieve higher scores. This study also examined the difference between students from different classes, with a focus on graduate and undergraduate students and junior and senior students. As expected, the result showed that those from lower class ranks had inadequate financial knowledge.

A study of financial literacy amongst college students that focused on the area of study was conducted by Fatoki and Oni (2014), who measured college students' financial literacy at two different universities in South Africa by administering surveys. The authors showed that students with business study backgrounds scored better than those with non-business backgrounds, since the former were exposed to the relevant topics more frequently than the latter.

Cude, at al., (2006) examined financial literacy and practices among college students in Louisiana State University (LSU) and the University of Georgia (UGA), US. The study employed an online survey of financial management practices administered to 1891 undergraduate students. In addition, four focus groups were conducted at each university in order to gain deeper understanding about students' knowledge of financial management. The results showed that only a few students regularly saved and budgeted, although most paid bills on time. The authors also showed that grade point average (GPA) and parental marital status had positive influences on an individual's financial fitness score. Moreover, this study also revealed that parental behaviour plays a role, indeed it the most significant influencer of students' financial behaviours. However, it should be noted that although it involved a large number of respondents, this study relied upon an online survey and a small questionnaire.

Ibrahim et al (2009) focused on university students in Malaysia to determine the factors that have a significant impact on their levels of financial literacy. They found that demographic variables, knowledge, and attitudes towards financial matters were all important. Meanwhile, another study conducted by Shaari et al. (2013) of 384 university students in Malaysia, found that students' spending habit and enrolment year are associated positively with their level of financial knowledge, while age and gender variables had a negative relationship. It was also found that financial literacy can help students avoid borrowing blindly. Lack of financial knowledge, attitude, and behaviour were also identified as important variables in a study conducted by Jorgensen (2007, p.25) of 462 students from undergraduates and graduate college in Tennessee, Nevada, Oklahoma, South Dakota, Idaho, and Virginia. Using an online survey, the study found that level of study relates positively to college students' knowledge, attitudes and behaviours. Moreover, parental influence is an important determinant factor. Those who are subject to financial influence from their parents are more likely to achieve a better score.

Research relating to financial literacy, knowledge and capability among college students has been conducted in Indonesia too. As a developing country that continues to grow and which has a considerable number of young people, Indonesia places a strong emphasis on the importance of financial literacy/capability. Sound financial management, such as how to manage and invest money properly, leads to good financial decisions that in the long term will strengthen the economic security of the country as a whole. Nababan and Sadalia (2012) conducted a study of 97 economics undergraduate students from University of Sumatera Utara, Indonesia. The study revealed that students' level of financial literacy is still low. Similar result was found by Nidar and Bestari (2012) in their study of 400 undergraduate students from University of Padjajaran, Bandung, Indonesia. The study asked a range of questions that covered several areas, including basic personal finance, income and spending, credit and debt, saving and investment, and insurance. The results showed low levels of financial literacy among students and, in particular, a lack of knowledge when it came to investment, loans, and insurance. Nidar and Bestari (2012, p.5) identified low levels of financial literacy among students, particularly when it came to knowledge about 'credit and debt, savings and investment, and insurance and basic personal finance'. Meanwhile, a regression analysis showed that other variables, such as education level, field of study, income level, parental influence, and the possession of insurance, significantly influenced the level of financial literacy.

In addition, an earlier study by Krishna, et al, (2010) revealed similar findings. Using different methods and questions, it was found that students are categorized as having low financial literacy. Other similar findings were found by Zahroh (2014), who found that knowledge of personal finance needs to be increased, especially in terms of investment, debt and credit, and insurance. Zahroh's study (2014) focused 100 undergraduate students from the Faculty of Economics and Business at the University of Dipenogoro, Semarang, Indonesia. Based on the analysis therein, female respondents and those from economics backgrounds were found to be more likely to achieve higher scores for financial literacy. Work experience was shown to have a significant relationship on financial literacy as well, but its contribution was not as high. A positive relationship was also found between financial literacy, financial attitude and decision-making ability. Overall, those with lower levels of financial literacy are less likely to have positive financial attitudes and are less able to make sound financial decisions.

Mendari and Kewal (2013) also conducted a study of the financial literacy of 305 students at the Musi College of Economics (STIE Musi), Indonesia. The study found that only one-third of students could respond correctly to questions focused on insurance. The concept of insurance was viewed as a new term among the respondents. One plausible explanation is the possession of insurance policies in Indonesia is still low. Although in fact, people in Indonesia still have to pay for health services themselves, even though some are provided health and life insurance by their employer and the government has introduced a new health programme to help people in poverty access health services. Data from The World Insurance in 2010, released by Swiss Re (2011), showed that Indonesia ranked 11th out of 27 countries in Asia in terms of insurance policy ownership. According to Hartono (1985), the low ownership of insurance policies in Indonesia is related to the negative perception insurance has, the complex claim procedure and expensive premiums. Therefore, education is important in order to raise awareness of the importance of being insured (Rahayu, 2013).

3.8 Conclusion

It should be noted, that it is difficult to make comparisons between studies since they used different conceptualisations and operationalisations, and thus asked different questions in their respective questionnaires. Moreover, they employed different methods to gather data and relied upon different samples. The studies do not always reveal their analytical methods or data, so it is difficult to replicate the analysis.

From the surveys carried out in several countries, it is clear that although they used similar concepts and questions, the results varied. One reason for this is the differences in wordings or numbers used, which may result in questions becoming more complex. It is also important to realise that the economic situation in each country will affect respondents' answers. For example, as discussed in section 3.1., in countries that have rarely experienced periods of inflation, respondents are less likely to answer questions on inflation correctly (Sekita, 2011). Many factors can influence financial capability, such as income, age, work experience, financial experience, socialisation by family, economic conditions, and so on. However, aside from the economic and social conditions of a country, it was documented that school curricula plays an important role in ensuring that people have sound financial capability. Studies have shown that people in countries that have implemented financial education in their school curricula are likely to gain better scores (Bucher Koenen and Lusardi, 2011). The survey results found though that not all countries have implemented all of the concepts, such as those concerning inflation, risk or diversification. As shown by Hilgert et al. (2003), financial knowledge and financial practices are found to be closely associated. Therefore, in further research, the factors mentioned above should be considered in order to gain a more comprehensive understanding.

In conclusion, many studies showed that a focus on the improvement of financial capability is needed. Individuals with insufficient financial knowledge might have problems in making optimal decisions. As the results reported similar findings for groups vulnerable to financial illiteracy (women, younger people, older people, and people with a lower education or income), it is important to address financial education for these groups. However, as suggested by Johnson and Sherraden (2006), well-designed financial education programmes should give individuals the chance to attain practical experience, because learning from experience and practice is important for knowledge retention (MAS 2013). There are several critical key elements underpinning financial capability that need to be explored, including knowledge, skills, and attitude (PFEG, n.d). Study by Kempson et al. (2005) for FSA UK, and MAS (2013) also added opportunity, motivation, and experience as determinants of financial capability. As MAS (2013, p.7-8) explained, motivation is an internal factor that directs behaviour both consciously and unconsciously, while opportunity is an external factor that supports certain behaviour so it possible to be done, for example ‘networking’ and internet access. Combining all the elements, will help ‘to understand why some existing interventions may not be as effective as hoped’ (MAS (2013, p. 5), further explained, individuals who are financially capable are believed to develop the ability to make prudent financial decisions that will benefit wellbeing.

There are few studies that have specifically explored financial capability in Indonesia, thus it is important to conduct further research in this area. In those studies that have been conducted, a number of limitations has been noted, including limited samples, only targeting specific groups (for example, only focusing on economics and business students, for example), asking limited questions in their questionnaires, or covering limited areas (for example, only measuring knowledge or attitudes or behaviour, itself).

This research contributes by filling this research gap. Further research that focuses on financial capability more broadly is needed, particularly in the context of Indonesia. This study responds to this need by analysing the levels of financial capability amongst university students in Indonesia. It does so in order to formulate recommendations to support the Indonesian government in developing strategies to enhance financial capability amongst the young.

CHAPTER 4

METHODOLOGY

The aim of this chapter is to present the methodology employed in this study. It will also contribute to the literature on studying financial capability, especially in the context of university students. The main body of this chapter will be divided into seven parts. The first will examine the research questions, after which the chosen research design and the type of data that will be used are discussed (the second and third parts). Next, the fourth part will discuss ethical considerations. The fifth to sixth parts will provide a thorough discussion about the data collection procedures employed in this study. It outlines the use of focus groups and surveys, and includes discussion on sampling procedures, focus group and survey design and data analysis procedures. The final part (seventh part) of this chapter will present the process of quantitative data collection (survey).

4.1 Research Question

One of the fundamental issues at stake when selecting a research method is the research questions that will be asked, and answered, by the researcher (Bryman, 2007). To remind, based on the research background and the literature review presented in previous chapters, the main research question underpinning this research is:

What is the level of financial capability among university students in Indonesia?

And the sub-questions that feed off of this:

1. What is the level of *knowledge* of personal finance issues among university students in Indonesia, and what drives these?

2. What *attitudes* to personal finance do university students in Indonesia have, and what affects these?
3. How do university students in Indonesia *behave* in terms of personal finance, and what drive this?
4. How do knowledge, attitudes, and behaviour vary depending on different student types and compared to other groups in Indonesia and overseas?
5. What aspects of personal finance do university students in Indonesia say they struggle with and what aspects would they like more help with?
6. How can financial capability be increased among university students in Indonesia, and what is the role of financial education in doing so?

To answer these questions, this study employed a mixed-method approach. Harkness et al. (2006, p.78), argue that mixed methods may help *'to reduce the biases associated with each method'*. According to Creswell and Plano Clark (2011), the purpose of employing this approach is to provide better understanding about certain phenomena.

Previous studies on financial capability have included more than one method, for example Kempson, et al. (2005). As we saw in chapters two and three, a range of research methods have been employed, including survey, focus groups, in-depth interview, and a combination thereof. With this in mind, the study used survey and focus groups to obtain the data.

As mentioned previously, this study used the paradigm of critical realism. Within this framework both quantitative and qualitative techniques can be deployed simultaneously and complementarily based on the needs and the characteristics of the research through a mixed method approach (Gorard, 2013). According to Creswell and Plano Clark, (2011), since 1990s, the use of mixed method has increased, and the authors argued that mixed method research results in a more comprehensive research since the researcher has the freedom to apply both paradigms and tools in data collection in accordance with the type of data needed. In this study, qualitative data was used to aid the design of questionnaire and, where possible, contribute towards a deeper understanding of the findings from the quantitative analysis (Bryman, 2007). It was hoped that combining both methods would contribute to a more comprehensive understanding of the issues and offer a richer explanation for phenomenon and its underlying causality (Flicks, 2006).

This study used an *exploratory method*, which means that qualitative data was collected first, followed by quantitative (De Vaus, 2001). Qualitative data was collected using focus groups, which were designed to check the term in the questionnaire that will be used in the survey, and to explore the financial topics needed and the difficulties faced by students, whereas a survey was conducted to obtain quantitative data and to explore the findings from the qualitative part of the study. Through these two methods, the researcher would be able to identify topics that need to be delivered in financial education programmes to strengthen students' financial capabilities. The main part of the research however was the quantitative analysis.

4.3 Design of study

According to Thomas (2013, p.105), research design is 'the plan for the research'. Babbie and Mouton (2001), De Vaus (2001), and Gorard (2013) describe research design as the strategy answer the research questions. This study adopted a *cross-sectional* design, which means that the research is carried out at a single point in time (De Vaus, 2001).

This study was carried out in two phases. The qualitative data was obtained in August 2014, whereas the quantitative data was obtained between May and September 2015. Both were conducted at Bogor Agricultural University (IPB) in Bogor City in the province of West Java, Indonesia. The researcher was previously a lecturer in Department of Family and Consumer Sciences, IPB, and a member of the team teaching personal finance modules there. This meant that access to data was relatively straightforward, although data collection nevertheless did not go ahead until formal permission and ethical approval was obtained.

Other than ease of access, IPB was chosen as a case because it is a well-recognised and well-developed multi-discipline Indonesian university that brings together students from various socio-demographic backgrounds. Based on the Quacquarelli Symonds World University Ranking 2016, IPB was the 4th best in Indonesia (Henaldi, 2017). The total number of undergraduate students when this was study conducted was 13,825 students, who were spread across nine faculties and 36 departments.

Since 2006, IPB has implemented the ‘major-minor’ system for undergraduate programs. Through this system, students can choose a field of study outside their major course discipline. The typical undergraduate program at IPB takes four years to complete. Also in 2006, IPB began offering ‘Personal Finance’ as a compulsory module (major course) in the Department of Family and Consumer Sciences (IKK) and as an elective course for students from another departments (as a minor-supporting course). As explained in the module syllabus, the course is designed to provide basic understanding concerning the topic of personal finance. Students cover several topics, ranging from the principles of financial management, the time value of money, savings, lending, tax calculations, making financial decision, the concept of risk management, the principle and type of investment, and retirement planning. More detail is outlined in Appendix 1.

There are only a few universities in Indonesia that provide this type of course. Because it is offered as a minor-supporting course, it is possible for students to choose this course even though they are not registered as a student in the IKK Department. Thus, one of the main reasons why IPB was selected as the location of study was because it allowed for a comparison of those who had taken the personal finance module and those who had not.

4.4 Data Collection

This study relied upon primary and secondary data. Primary data was obtained through focus group discussions and surveys, whereas secondary data was gathered from relevant sources, including books, journals, policy documents, research reports and working papers in related areas such as economics, business and finance, education, and social policy, reports from organisations such as the OECD, Financial Service Authority, Money Advice Service, and World Bank, and media reports. These were sourced not just from Indonesia, but from across the world.

This study was funded by Indonesia Endowment Fund for Education (LPDP), however, the quantitative data collection was also funded by The Centre on Households Assets Savings and Management (CHASM) at The University of Birmingham, UK. As this study employed face-to-face interviews with large number of respondents, this study required the recruitment of interviewers, the cost for data input, (this be explained more in the next section) and a reward needed to be provided for each person who responded to the survey. Therefore, there was a high cost involved. These were funded by CHASM. This is without considering the costs involved in trips between the UK and Indonesia, administration and pilot studies, which were funded by LPDP.

4.5 Ethics

Every study should be carried out ethically in order to minimise risk and harm that might ensue from the study itself (Thomas 2013). According to Bryman (2012, p.135), researcher should be concerned about the main ethical consideration such as ‘harm to participant’, ‘informed consent’, ‘invasion of privacy’, and ‘deception’. Researcher should ensure that participants of the study are aware about their involvement in the study, and make sure the confidentiality of data that gained from the study, as well as the data protection (Thomas, 2013).

This study received full ethical approval from the Humanities and Social Sciences Ethical Review Committee at the University of Birmingham (see Appendix 2 and 3). This study first received ethical approval in August 2014, before the qualitative phase of field work was conducted. As there were some methodological changes made to the quantitative stage of the research, an amended ethical review application was approved in February 2015. In the first application, the assumption was that the quantitative surveys would be conducted online. In the second application, quantitative data would be collected face to face, with respondents chosen according to a stratified random sampling technique. The reason for this change will be discussed in Section 4.7.2.

Prior to gaining the final approval from the ethics committee, some issues were raised. As this study also involved participation of interviewers other than the researcher, further details concerning the interviewers needed to be provided, especially regarding their training and confidentiality agreements, given that they are working on behalf of the researcher and, therefore, the university. Regarding the agreement form, a contract agreement form was sent to the Research Contracts department[4]. The Research Contracts department needed to be

[4] A copy of the form is attached in Appendix 12

contacted so that the contract could be reviewed to ensure that researcher, participants, and university's legal interests were properly covered. After these conditions had been met and the requested information had been provided, in March 2015 the Ethics Committee confirmed that this study had full ethical approval.

4.5.1 Data Protection

Data obtained in this study was maintained in accordance to University of Birmingham Code of Practice for Research 2013-2014. All data, such as recordings, questionnaires, and paperwork from focus groups and the survey, including the list of participants and respondents, were stored in a locked container and kept safely. All the electronic data, including the transcript of focus groups, were stored in the researcher's personal laptop and protected securely with a password that was only known to the researcher.

4.5.2 Gaining informed consent

Prior to data collection, all participants and respondents were provided with consent forms and participant information sheets, containing information about the research, such as its purpose and its expected outcomes, anonymity, privacy, data confidentiality, data protection, how the data will be used and stored, and data dissemination, including any potential risk and harm. Respondents were given the opportunity to read the contents of the agreement and then to sign if they agreed to participate. There are two copies of the form, the first was given to each participant and respondent to be kept by them, the other was kept by the researcher to be archived in the locked container (see Appendix 4-11).

4.5.3 Privacy and Confidentiality

It is the researcher's responsibility to ensure the privacy and confidentiality of all the research subjects and data. All data has been used and reported for research purposes only. In documenting the results, all personal data of participants and respondents has been kept private and does not appear in the report. Regarding data entry, coding was used, especially in the case of the quantitative data, and anonymity was respected when reporting on data from focus groups.

4. 6 Focus groups

A focus group is an opportunity for a group of people to discuss a particular topic in more depth. Bryman (2012, p.502) define a focus group as:

> *'a form of group interview in which: there are several participants (in addition to the moderator/facilitator); there is an emphasis in the questioning on a particular fairly tightly defined topic; and the accent is upon interaction within the group and the joint construction of meaning'.(Bryman, 2012, p.502)*

Finch et al., (2003) argued that an important feature of focus groups is the interaction between participants in the discussion, given that asides from sharing their opinion and experience about a specific topic, participants also hear those of others' and can respond to what they have heard. As a result, it is also said that 'individual response becomes sharpened and refined, and moves to a deeper and more considered level' (Finch et al., 2003, p. 171).

Morgan (1997, p.12) argues that focus groups imply the 'interaction within the group based on topics that are supplied by the researcher'. In this study, focus groups were conducted in order to gain an understanding on the groups' view about financial capability, and the main aim was to check whether the terms in the questionnaire would make sense. The focus groups explored their understanding from more than one point of view. It focused on knowledge, skills, attitudes, and motivation, what students think are important, what participants think they already know and what they felt they needed more knowledge on. The groups also discussed the best time and method to deliver financial education, e.g. at school, at university, online, etc.

Focus groups were carried out in August 2014 in the Department of Family and Consumer Sciences, at IPB. Six focus groups were carried out, with each consisting of six to eight people from different years and areas of study. The number of participants in each group was arranged so that they are able to interact about the topic actively; indeed, Krueger and Casey (2009, p.67) have argued that that the ideal number of participants in a group is ‘five to eight’, given that such a number allows all participants to express their opinion and hear others’ points of view. Moreover, the number of participants was limited because although they all had equal chance to express their opinion freely, the focus was not on any one particular participant, but on all group members. Each focus group lasted approximately two hours. The duration was set carefully so the participants were not tired and would be able to maintain their focus.

Through controlling the composition, size and the length of the focus groups, it was hoped that they would allow for insights to be gleaned on various perspectives and perceptions concerning personal finance issues.

4.6.1 Participants of focus groups

In this research, focus groups participants were those in their second year or above at IPB, and who were aged between 18 and 24 years old. This is because in the IPB, Personal Finance course is only offered to students at this level. Participants were selected and grouped carefully. As Morgan (1997) suggests, participant selection should consider heterogeneity in terms of participants' ability in order to avoid the domination of one particular participant during the discussion. However, it should not be too homogenous, in order to allow for a diversity of opinions to be heard. All participants should feel comfortable and not feel inferior within the group so they express their opinion freely and make a considerable contribution. Therefore, this was the main consideration when grouping the participants; groups were formed based on certain characteristics, such as year of study and course major or faculty background (see Figure 4.1).

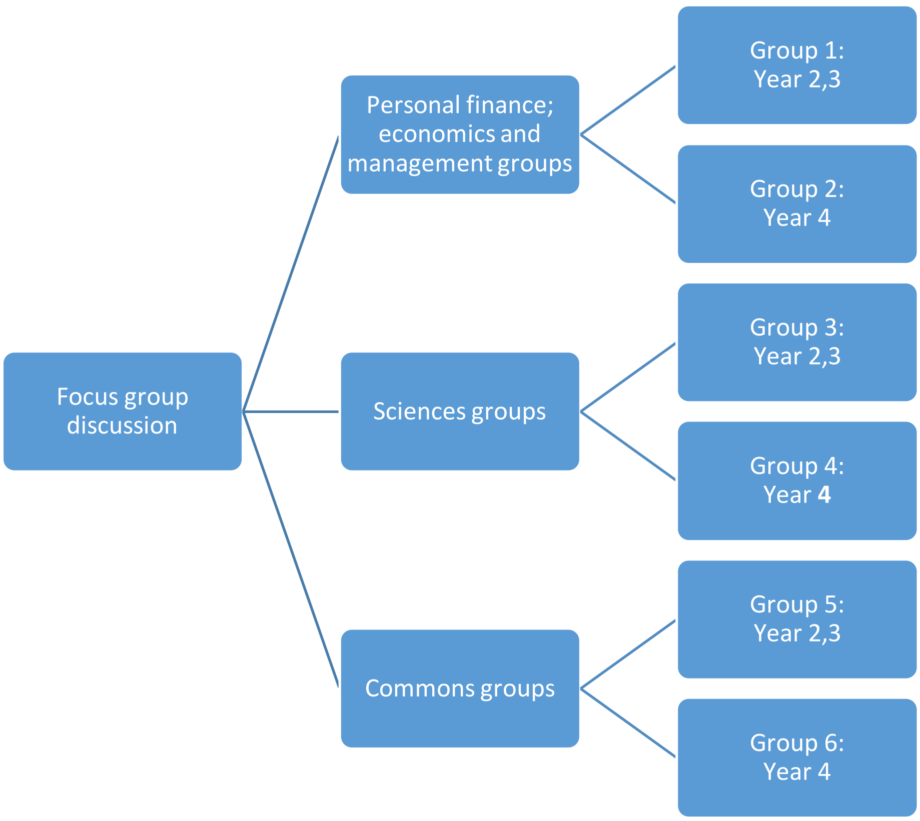


Figure 4. 1 Scheme for participant selecting for focus groups

(Source: Authors research)

- The personal finance, economic, and management group was made up of those students who had previously been enrolled in the personal finance course, as well as students from the Faculty of Economic and Management (FEM).
- The science group was comprised of those studying science or who were enrolled in the Faculty of Veterinary Medicine (FKH), the Faculty of Agricultural Technology (Fateta), or the Faculty of Mathematics and Natural Science (FMIPA). Within this group, a requirement was that students had not taken the personal finance course as a minor or supporting course.
- The commons group was made up of students from other fields of study, namely; the Faculty of Agriculture (Faperta), the Faculty of Forestry (Fahutan), the Faculty of Fisheries and Marine Science (FPIK), the Faculty of Animal Science (Fapet), and the Faculty of Human Ecology (FEMA). Again, a requirement was that students had not taken the personal finance course as a minor or supporting course.

4.6.2 Procedure

The focus group participants were recruited after official permission from the institution where the research was conducted had been gained. A formal letter was sent to the Rector of IPB in order to seek such permission, to which a research proposal that indicated the research aim, expected outcomes, and research activity plan was attached. After official permission was gained, an invitation to participate in the focus groups was announced in each department through posters and pamphlets. Social media channels such as Facebook were also used to announce the invitation. The announcement included a brief explanation about discussion topics, research purposes, participants' role, and privacy and confidentiality. It also said that a free pen-drive would be given as a reward for participation. Information about who will participate in the discussion was also provided.

Focus group participants were selected based on their willingness to participate in the discussion and the characteristics needed for each group, as discussed before and visualized in Figure 4.1. The detailed list of participants is presented in Table 4.1.

After the quota for each group had been met, the focus groups were scheduled. All focus groups took place in the same quiet seminar room in the Department of Family and Consumer Sciences at IPB. This room was selected because it was both neutral and accessible. This room contained meeting equipment, including a microphone, projector white board, and flipchart. As recommended by Powell and Single (1996), the location of focus group should be neutral, so that the participants are able to focus and feel relaxed, free from any potential distractions.

Table 4. 1 List of participants of focus groups

No	**Group**	**Year of study**	**Age**	**Number of participants**	**Gender**	
					Male	Female
1	Personal finance; Economics and Business I	2 and 3	18-21	7	2	5
2	Personal finance; Economics and Business II	4 and above	22-24	8	2	6
3	Sciences I	2 and 3	18-21	6	2	4
4	Sciences II	4 and above	22-24	6	1	5
5	Common I	2 and 3	18-21	8	2	6
6	Common II	4 and above	22-24	7	2	5
	Total			42	11	31

(Source: Author's research)

Participants sat in a circle and the researcher acted as a moderator to guide and listen to the discussion. After introducing the focus group, the researcher described the topic overview and briefly explained the objectives. At this stage, the confidentiality agreement was mentioned and participants were made aware of their rights and the purposes of the research and data that would be collected. Participants were also asked to respect the confidentiality of others by not repeating what would be discussed in the group. Participants were asked to sign an informed consent form that clearly outlined the confidentiality agreement and the participants' right to withdraw from the research before the focus group began.

Moreover, guideline and information about the research had been listed clearly in the information sheet given to the participants when they were recruited. However, to remind them and to make it clear, the information sheet was again distributed to each participant and the details were explained verbally before the focus group started in order to ensure that all participants understood their role. All participants were asked to re-read and to sign two copies of the consent form, one for the researcher and the other for the participant. All activities in focus groups were recorded, with participants' permission. However, participants were told that they could ask the interviewer to stop recording if they wished to discuss sensitive matters, although none executed this right.

A list of issues was used as a topic guide for the discussions (see Appendix 13-15). The topic guide was designed by adopting and modifying those used in previous studies, that is FSA UK studies (Kempson et al, 2005; Kempson and Collard, 2006; Atkinson, et al, 2006), Donohue (2011), MAS (2013), and PFEG (n.d) All focus groups were conducted in Indonesian and were transcribed verbatim. The data obtained was analysed in English.

4.6.3 Method of Analysis

The analysis of the data obtained from focus groups consisted of several steps. In this study, the qualitative data that gained from the focus groups, were analysed using thematic analysis. According to Bryman (2012, p. 717), thematic analysis is defined as '*a term used in connection with the analysis of qualitative data to refer to the extraction of key themes in one's data*'.

As Creswell and Clark (2007) explained, the process of data analysis begins by examining all the data available, then carefully reading the entire transcript. The next step is to perform data reduction by selecting the parts according to the research topic. Then, putting them into a categorized theme and giving them a label in the form of a code (coding).

The steps to analyse the data in this study are presented in the following Figure 1.

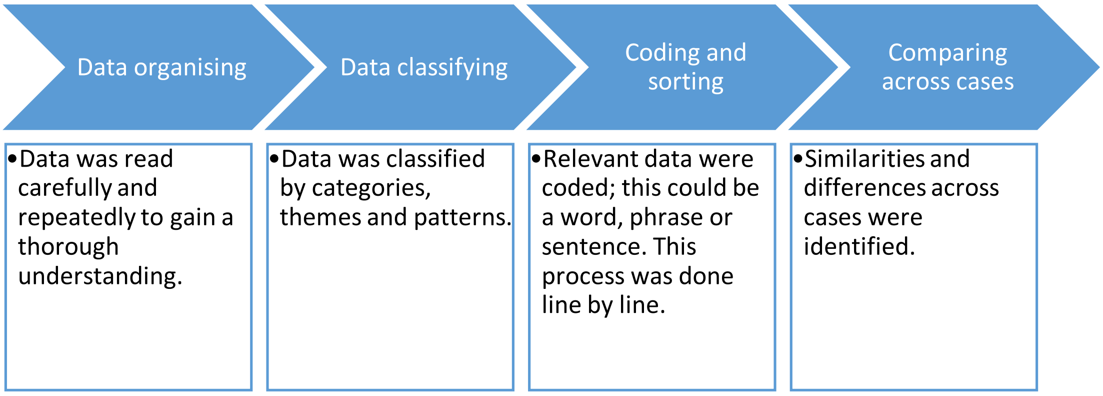


Figure 1. The stage of analysis

Source: Adapted from Marshall and Rossman (2006); and Matthews and Ross (2010)

In this study, the raw data obtained from six focus groups, once transcribed, totaled 125 pages (at a 1.5 point line space), or 51,428 words. Data familiarisation is very important, so the recorded data was listened to several times to ensure an accurate transcription. Then, the transcription itself was re-read to gain a complete understanding. The next step was data reduction, which was performed in order to make the data more manageable and involved selecting the parts that related to the research topic. Initial themes were identified and the relevant data was categorised or labelled in the form of codes. The next stage involved grouping the data according to themes. The last step involved summarising or synthesising the data.

(The themes and an example of the analysis that conducted in this study was presented in Appendix 16).

4.7 Survey

A survey was conducted to collect the quantitative data. The aim of the survey was to capture students' level of financial capability. It was administered between May until September 2015. The procedure involved in doing so consisted of several steps, ranging from (1) preparation, (e.g. asking permission from the Rector of IPB); (2) recruiting interviewers; (3) training interviewers; (4) selecting respondents; (4) piloting; and (5) actually administering the survey and collecting the data. The detailed survey method is discussed below.

4.7.1 Population and sample

The population for this study is all IPB undergraduate students in any of the four years of study involved in the bachelor programmes on offer there. The total population thus was 13,825 students. This study used stratified random sampling (a form of probability sampling), with nine faculties at IPB and gender as the strata. These nine faculties were: the Faculty of Agriculture (Faperta), the Faculty of Veterinary Medicine (FKH), the Faculty of Fisheries and Marine Science (FPIK), the Faculty of Animal Science (Fapet), the Faculty of Forestry

(Fahutan), the Faculty of Agricultural Technology (Fateta), the Faculty of Mathematics and Natural Science (FMIPA), the Faculty of Economics and Management (FEM), and the Faculty of Human Ecology (FEMA).

To determine the minimum number of samples for the survey, the Slovin Formula (Simamora, 2002) was applied:

$$\boxed{\text{n} = \frac{N}{1+Ne^2} = \frac{13825}{1+(13825)(0{,}05)^2} = 505 \approx 510 \text{ students}}$$

Where:

n= sample size
N = population size
e = margin of error (5%

According to the Slovin formula, the minimum number of respondents who need to be involved is 510 students. The number of samples for each faculty will be done proportionally by using the following formula:

$$\boxed{\text{n}_\text{i} = \frac{NI}{N}\ x\ n}$$

Where:

ni = sample size of each faculty
Ni = Total of sub-population
N = Total of population
n = sample size

The detailed distribution of all respondents is displayed in Figure 4.2. First years were included in the survey but are not assigned to particular faculties, as they are completing a general foundation year.

4.7.2. Survey method

Before choosing the survey method, some alternatives were considered. First of all, the online survey method, in which the questionnaires would be sent to students by email. Students' data and their email address were obtained from the student admission centre, The Directorate of Educational Administration, at IPB. Then, the number of samples was determined based on the required minimum required for further analysis and on the number of variables involved in this research. Online surveys offer some advantages, particularly practical ones, such as time and cost efficiency. Researchers can distribute a huge number of questionnaires in a short time (Duffy, et al, 2005). The questionnaire used would have been a self-completion type. As Bryman (2012) said, besides convenience for the respondents, self-report questionnaires can eliminate bias that may be caused by interviewer characteristics, such as gender and background that influence respondents' answers.

However, after some observations and discussions with experts at IPB (including the Director of Education Administration, Head of the Information System Division, Head of the Department of Family and Consumer Sciences and staff in the Directorate of Student Affair IPB) limitations of using the online survey were identified. The most important was the potential for a low response rate, which is a pitfall of any online survey, but especially so in Indonesia, where online surveys are less popular and where there are issues over access to the internet and problems with internet speeds. Moreover, as argued by Szolnoki and Hoffmann, (2013), a key issue in online surveys is whether they produce representative results, since it is difficult to randomize the sample. They argued that face-to-face administering of surveys leads to a more representative sample.

Therefore, a face-to-face survey was seen as more appropriate. In this study, the sample was selected randomly so the results can be generalised (see Table 3 and Figure 2). The lower response rates that would be expected if using an online survey could be improved by using this method. In term of representativeness, higher response rates are generally better than a larger sample size. This method could also minimise the possibility of missing data caused by respondents who do not provide proper answers, either because they do not follow the instructions, because of they have difficulty answering or, especially in long questionnaires, because they do not finish the questionnaire. In the face-to-face survey, respondents can ask for guidance or help in order to understand the questions.

Moreover, as this study also measured aspects concerning knowledge, the researcher felt that the face-to-face method is more effective given that respondents will answer the question without looking up the answer, taking a long time to work it out or asking a friend. The possibility of respondents searching for the answer may happen with the online method (Opdenakker, 2006). In this survey, each participant was offered a book bag as a reward to compensate for their time and to encourage higher response rates in the recruitment stage.

4.7.3. Respondents Selection

The selection of respondents started after permission from IPB had been gained. As with the focus groups, a formal letter was sent to the Rector of IPB in order to obtain permission to conduct the survey and to obtain a list of current IPB students. The Directorate of Education Administration IPB gave the researcher complete student data. From that list roughly 1,000 students were selected randomly as the sample. This was done using Microsoft Excel.

Participation invitations were sent by email and/or text message. Once they agreed to participate an interview was then arranged. In case a person didn't respond to the invitation, a weekly reminder email and/or text was sent. This was done three times. If, by the third reminder, there was still no response, the student was replaced by another student who had also been selected randomly. This process was carried out until the minimum sample size had been achieved (i.e. 510 students). Total number of successful respondents that was gained in this study is 550, however, only 521 respondents that met the requirement that being used in the analysis. Each participant was assigned a number or a code that was specific to the questionnaire. Moreover, as mentioned earlier, each respondent received a book bag as a reward. The characteristics of the 521 respondents are displayed in Table 4.2.

4.7.3.1 Academic disciplines

In terms of academic disciplines, the researcher divided the fields of study into two main categories: business/economics majors and non-business/economics majors. Students from the Faculty of Economics and Management (FEM) were categorised into the business/economics group, while students from Faculty of Agriculture (Faperta), Faculty of Fisheries and Marine Science (FPIK), Faculty of Animal Science (Fapet), Faculty of Forestry (Fahutan), Faculty of Agricultural Technology (Fateta), Faculty of Mathematics and Natural Sciences (FMIPA), Faculty of Veterinary Medicine (FKH) and Faculty of Human Ecology (Fema) were grouped into the non-business/economics majors group. Roughly 9% of the same had taken the Personal Finance module (as shown in Table 4.3).

Table 4. 2 Characteristics of Respondents (Source: author's research)

No		Variable		*n*	Percent
1	Faculty	a.	Agriculture (Faperta)	65	12
		b.	Fisheries and Marine Science (FPIK)	62	12
		c.	Animal Science (Fapet),	28	5
		d.	Forestry (Fahutan);	57	11
		e.	Veterinary Medicine (FKH)	29	6
		f.	Agricultural Technology (Fateta),	64	12
		g.	Mathematics and Natural Science (FMIPA),	98	19
		h.	Human Ecology (FEMA)	52	10
		i.	Economics and Management (FEM)	66	13
2	Gender	a.	Male	214	41
		b.	Female	307	59
3	Years of age	a.	17	3	6
		b.	18	53	10
		c.	19	130	25
		d.	20	116	22
		e.	21	124	24
		f.	22	83	16
		g.	23	11	2
		h.	24	1	2
4	Year of study (year enrolment)	a.	Year 1	131	25
		b.	Year 2	139	27
		c.	Year 3	80	15
		d.	Year 4	171	33
7	Work experience	a.	None	266	51
		b.	Less than one year	193	37
		c.	One to less than two years	48	9
		d.	Two years or more	14	3

Table 4. 3 Academic disciplines of respondents

No	Variable	Frequency	Percentage
1	Field of study:		
	a. Business-economics majors	455	87.3
	b. Non-business economics majors	66	12.7
	Total	521	100.0
2	Personal finance class:		
	a. Take personal finance module	50	9.2
	b. Not taking personal finance module	471	90.8
	Total	521	100.0

Source: Author's research

4.7.4. Survey Instrument

The questionnaire used in this study was prepared based on the results from focus groups and was inspired heavily by existing questionnaires developed in other studies, that is those developed in 2005 by Kempson and Collard for FSA UK (Kempson and Collard, 2006), MAS (2013), Financial Capability Tracker Questionnaire Wave 3 (MAS, 2013b), Financial Capability Tracker 2015: Draft Questionnaire Wave Draft v0.2 (MAS, 2015b), Definit (2013), Cude et al (2006), Lusardi and Mitchel (2005, 2006), the College Student Financial Literacy Survey (Virginia Tech, n.d), and Harris Poll, 2014. However, most questions in this study were drawn from Kempson and Collard (2006) and MAS (2013), although slightly modified were made on a few questions to make them more suitable to the context under investigation in this project.

The questions measure five domains of financial capability: managing money, planning-ahead, managing risk, making choices, and staying up-to-date/staying informed. Closed question types were chosen, for several reasons, including practicality when processing answers, the possibility to minimise the variety of answers, and the ease with which respondents can complete them (Bryman, 2012). The questionnaire consisted of questions that relied on either rating scales, ranks and dichotomous responses. The questionnaire focused broadly on (1) personal financial attitudes; (2) personal financial behaviours; (3) financial socialization forces (family, peers, school, and the media) that shaped financial literacy; and (3) personal financial knowledge and skill. The questionnaires are detailed in full in Appendices 30-33 (in both Indonesian and English).

4.7.5. Interviewer selection

As we saw above, four paid-interviewers were involved in the data collection process. The interviewers were final year undergraduate students who had already had some training in research methods and they all had previous experience as an interviewer in other surveys. One of them was also chosen as the team leader in the field. All interviewers were asked to sign a confidentiality agreement form provided by the Research Contracts Department at the University of Birmingham (in English and verbally translated), which also detailed their job responsibilities (see Appendix 12)

All of the interviewers were trained before the data gathering process. The training was designed to provide knowledge and understanding of the objectives. substance and procedure underpinning the survey. Interviewers were also informed about various problems that may be faced in the field, whether technical or substantive, and trained in how to handle them. The training was conducted online twice in the last week of April 2015 using Skype. Each training session lasted about four hours. Before the training started, survey guidelines or manuals were distributed by email to all interviewers so they had an overview of the survey.

The first day of training concerned the background and objectives of the study, the general information about field procedures, the role of interviewers (including a description of their job and responsibilities), the common issues that may arise in the field and an explanation about how to conduct the interview correctly and ethically. Moreover, material about understanding the questionnaire was provided. On the second day of training, the focus was on familiarising interviewers with all the questionnaire sections, the questions, and the various instructions therein. It also included detailed direction on how to fill it out correctly. There was also a demonstration and role-playing session for interviewers, who pretended to interview each other and fill out the questionnaire. During the practice session, one participant acted as a respondent and the other as an interviewer. After the practice session, there was also a self-editing and cross-editing session between the interviewers about the questionnaire used in the role play. The results and the feedback from the role-playing session were discussed and reviewed too. Beside the role playing session, a practice session outside the class with live respondents was also conducted on the day after the training. Each interviewer was asked to find three to four students who share similar criteria to the respondents targeted for real interviews.

In order to maintain communication and to keep in touch with the interviewers, the researcher created a group chat on *Whatsapp*. Any message, issue, or updated information about the survey could be shared, discussed, and spread to all members quickly and easily.

4.7.6. Piloting

Before the survey was deployed, a pilot was carried out on other students who shared similar characteristics with the real respondents in order to test its feasibility as a research instrument. Polit et al., (2001) explained that pilot study is a mini-version or a trial version of the study that is held as a preparation before the study proper is conducted.

Undertaking a pilot study offers several advantages, including (1) giving an “early warning” to the researcher about any unforeseen issues that may cause a problem later on in the study; and (2) show whether respondents and interviewers find the method or instrument is achievable, simple, and easy to understand; for example, it will show whether it is too complex or too complicated, or whether there is a question that potentially triggers bias or misinterpretation. Besides testing for data quality control, such as question consistency and variation in respondents’ answers, piloting was also done to find out the length of time needed for an interview. Based on the feedback gained through the pilot, the researcher can make some change to the instrument and revise the it before the real survey is conducted. They may, for example, reduce the number of questions, change the wording of particular questions or add new questions (Daniel and Sam, 2011; Bryman, 2012).

In this study, the piloting was done in two stages. The first pilot was run in March and April 2015 with 6 participants. The participants were Indonesian undergraduate students in Birmingham. The researcher interviewed the participants using the questionnaire. Based on this pilot, some questions were revised, particularly when it came to their wording. The second pilot was conducted in Bogor, Indonesia to 16 undergraduate students at Bogor Agricultural University. Respondents in this trial session shared similar characteristics with the target respondents.

All interviewers were asked to record the average interview duration and the difficulties that may be found in the trial sessions. Then, another online meeting between the researcher and the interviewers was held in order to discuss and conduct a general review of both technical and non-technical issues and to find solutions for any problems that had arisen.

Based on the results of the pilot, the average interview duration was set at between 30 and 40 minutes. Some minor changes were made to some questions, including instructions for the interviewer to skip and to filter questions, and the wording of some socio-demographic and retirement and financial products-related questions. Other questions were changed on the basis of feedback from pilot respondents.

4.7.7. Data Analysis

The quantitative data obtained was processed using Microsoft Excel and SPSS. Descriptive analysis was performed in order to find the frequency, mean, standard deviation, and maximum and minimum values of the data, and to compare differences between groups (known as bivariate analysis), while a statistical inferential test was run in order to examine the difference between groups, the relationship between variables and to determine the factors that influence financial capability. The data was presented in tables and graphs.

The various stages of data processing were:

a. Preparing a code-book as a guide for data entry and data processing. The data collected was assigned a specific code. In this study, two interviewers helped to input the data. To ensure the quality of data, frequent random checking was done by the researcher during the process of data entry and after all data had been input. A process of data cleaning was then conducted by the researcher, together with the assistants, to clarify any data that was unclear.
b. Once the data had been inputted into Excel, it was cleaned to ensure that there were no errors made during the data entry process. Data cleaning process was done by presenting descriptive statistics for each variable, including the mean, standard deviation, maximum value, and minimum value.
c. Data tabulation was then performed in order to classify the data and understand the frequency of individual questions or variables.
d. To ensure the internal consistency, Cronbach's alpha coefficient was applied to the scale type questions, that is, questions about attitude and behaviour. Since the questionnaire contained some items that were 'negatively' worded, these needed to be 'reversed' before checking reliability (Pallant, 2013). The output of the reliability test can be found in Appendix 17 and is discussed below.

e. Summary scores and indexes were then calculated separately for each of financial knowledge, attitudes and behavior – see below for further details for each of the summary scores. The summary scores for knowledge, attitude and behaviour were then transformed so that they had the same range, i.e. 0 – 100,. The general formula for the transformation index that was used in this study was as follows:

$$\frac{\text{Total score achieved - Minimum score}}{\text{Maximum score – Minimum score}} \times 100$$

4.7.7.1 Level of financial knowledge and skill

Knowledge of personal finance was measured using eight questions. The questions focused on knowledge about managing money, inflation, interest rates, diversification, investment, credit cards, choosing financial products and pensions. Moreover, there was also one question on personal finance skill that was measured through one open-ended question about bank statements. Respondents were asked to read a bank statement and to answer a question about how much money was left in a specific month. In total, there was nine questions to measure level of financial knowledge and skill.

Using Excel and SPSS, the summary score for financial knowledge was then calculated. Each correct answer was counted as “1”, whereas others (incorrect answer, ‘don’t know’, and ‘refused to answer’) were counted as “0”. So, there was only two codes of answer employed, that is “1” and “0”. The score for each respondent was then calculated by adding all of the points gained for all questions (earned points). The maximum possible score was 9 (which signified that the respondents had answered all 9 questions correctly). This score was then transformed into a grade scale from 0-100 by dividing the points earned by the maximum number of points possible ("9") and multiplying it by 100% (*see point e in 4.7.7)*.

4.7.7.2 Level of Attitudes

As mentioned before, the Cronbach's alpha test was employed to measure the internal reliability of the questions. The reliability of all questions in the attitudes section was 0.736 (Appendix 17a), which indicates that they are acceptable (Pallant, 2013; Malhotra, 2004).

There were five dimensions that focused on attitudes in the survey, which are (1) managing money; (2) managing risk and insurance; (3) planning-ahead (4) choosing product; and (5) staying up to date/informed. In the questionnaire, attitudes were measured using the Likert 5 scale ranging from Strongly Agree-to-Strongly Disagree. Respondents were asked to rate statements presented based on their level of agreement. As in the case of financial knowledge, levels of financial attitudes were measured by creating a score. When analysing the data, before running the reliability analysis and calculating the total score, some questions were re-coded (transformed) using SPSS, to ensure that that all items are scored so that high scores indicate high levels of agreement (positive direction) (Pallant, 2013). After this transformation, the five point scales were scored as follows:

Positively worded:

1 = Strongly Disagree
2= Disagree
3= Neutral
4= Agree
5= Strongly Agree

The positively worded questions are: question with the code ATT_1; ATT_2; ATT_4; ATT_5; ATT_6; ATT_11; ATT_12; ATT_13; ATT_15; ATT_16; ATT_17; ATT_18; ATT_19; and G2; see questionnaire in the Appendix 30):

Negatively worded:

1= Strongly Agree
2= Agree
3= Neutral
4= Disagree
5= Strongly Disagree

The negatively worded questions are: question with the code *ATT_3; ATT_7; ATT_8; ATT_9; ATT_10; ATT_14;* see questionnaire in the Appendix 30*).*

The score of each respondent was calculated by adding all of the points gained for all questions (earned points). Total questions/statements for attitudes was 20, therefore, the maximum possible score was 100. This score was then transformed into a grade scale from 0-100 by dividing the points earned by the maximum number of points possible ("100") and multiplying it by 100% (*see point e in 4.7.7)*.

4.7.7.3 Level of Behaviour

The next area was financial behaviour. The questions used were mainly taken from major survey of financial capability in UK, that is Kempson and Collard (2006) and MAS (2013), although some questions were modified in the attitudes section and combined with new questions. To measure the reliability of the questions, a Cronbach's alpha test was again run. The reliability for all questions in the behaviour section was 0.618 (Appendix 17). It should be noted that, across 14 questions of financial behaviour that use the interval-scale-type questions, one question was removed due to 'Cronbach's alpha result, that is the new (modified) question about keeping track (Question no 3 in Table 7.22, or question A3 in the questionnaire, Appendix 30). The behaviour of keeping track income and expenditure was still analysed based on the original question from MAS (2013), but only for descriptive analysis, not included in the bivariate and multivariate analysis.

To measure levels of behaviour, respondents were asked to rate a set of behavioural statements based on their particular situation. A Likert scale was employed, with five scales ranging from 'always' to 'never'. As in the attitudes section, before running the reliability analysis and calculating the total score, some questions were recoded using SPSS, to ensure that high score indicated the same direction in terms of behavior. After this transformation, the five point scales were socred as follows:

Positively worded:

1 = Never
2= Hardly ever
3= Sometime
4= Most of the time
5= Always

The positively worded questions are: question with the code BVR_2; BVR_3: BVR_4; BVR_6; BVR_7; BVR_8; BVR_9; BVR_10; A3; A9; and A14; see questionnaire in the Appendix 30).

Negatively worded:

1= Always
2= Most of the time
3= Sometime
4= Hardly ever
5= Never

The negatively worded questions are: question with the code A16*;* see questionnaire in the Appendix 30*).*

Then, the score of all statements in each area was summed up and transformed into a 0-100 scale (*see point e in 4.7.7)*. In this case, the score of each respondent was calculated by adding all of the points gained for all questions (earned points). Total questions/statements for behaviour that used in the bivariate and multivariate analysis was 13, therefore, the maximum possible score was 65. This score was then transformed into a grade scale from 0-100 by dividing the points earned by the maximum number of points possible and multiplying it by 100% (*see point e in 4.7.7)*.

Producing a summary measure for each of financial knowledge, attitudes and behavior presented various conceptual and methodological challenges. Conceptually, for example, is it appropriate to combine different types of attitudes into one single measure of 'financial attitude' or different types of behavior into one single measure of 'financial behaviour'? Does this imply a measure of 'good behaviour' for example? Methodologically, the approach taken here assumes that all individual question items that make up the summary score are equally important. An alternative approach would be factor analysis to determine the weighting of different items. And indeed, this approach had been taken by previous researchers (e.g. Atkinson, et al, 2006; McKay, 2011). Factor analysis was attempted at an early stage of the analysis. However, it was not clear how to determine the particular clusters and so a simpler aggregation approach was taken. There is definitely scope for further conceptual and methodological work in this field, and further analysis of the data using different approaches would be useful in future to see how sensitive the findings are to different types of analysis including factor analysis.

4.7.8. Statistics Analysis

The analyses conducted in this study were:

(1) Descriptive analysis, to examine the statistics of the data.

(2) Independent sample T-test analysis, to examine the differences between two groups, such between different genders, levels of study, field of study, attendance of personal finance class, and work experience.

(3) Analysis of Variance (ANOVA), to examine differences between income and financial knowledge, attitude, and behaviour.

(4) Analysis of Pearson Correlation, to examine the association between financial knowledge, attitude and behaviour.

(5) Multiple regression analysis, to determine the factors that influence financial capability (financial knowledge, attitudes, and behaviour). Before starting the multiple regression test, the assumption test has been employed, that is (*Pallant (2013, p.156-157), and the Open University (n.d)):*

a) Normality

This assumption was tested by looking at the P-P plot for the model. The closer the dots lie to the diagonal line, the closer to normal the residuals are distributed. In this study, The P-P plot for the model suggested that the assumption of normality has been met. Normal distribution when plotted on a frequency distribution from the characteristic symmetrical bell-shaped curves

b) Multicollinearity. This refers to the relationship among the independent variables. A good regression model should be free from multicollinearity, or, the predictors are not too highly correlated with one another. Multicollinearity occurs when one independent variable (IV) is actually a combination of other independent variables. In this study, analysis of collinearity statistics showed that this assumption has been met for all area (financial knowledge, attitudes, and behaviour), as VIF scores were below 10, and tolerance scores above 0.2.

c) The values of the residuals are independent. This assumption was tested using the Durbin-Watson statistic, where the value should be close to 2. Values below 1 and above 3 are cause for concern and may render the analysis invalid. In this study, The Durbin-Watson statistic showed that this assumption had been met, as the obtained value was close to 2 (Durbin-Watson for financial knowledge, attitudes, and behaviour = 1.658; 1.916; 1.935; respectively.

d) Outliers, that is checking for the extreme scores (very high or very low scores). Significant outliers and influential data points can place undue influence on the model, making it less representative of the data as a whole. In this study, to identify any particularly influential data points, Cook's Distance was used. Any values over 1 are likely to be significant outliers, and should therefore be removed and the analysis then rerun. This study showed that no such instances have occurred. Cook's Distance values were all under 1, suggesting individual cases were unduly influencing the model.

e) Homescedasticity. The variance of the residuals about predicted DV scores should be the same for all predicted scores. This graph plots the standardised values of model would predict, against the standardised residuals obtained. As the predicted values increase (along the X-axis), the variation in the residuals should be roughly similar, and it should look like a random array of dots. In this study, the plot of standardised residuals vs standardised predicted values showed no obvious signs of funnelling, suggesting the assumption of homoscedasticity has been met.

4.7.9. Hypothesis of study

This study is underpinned by a number of hypotheses, drawn from the literature review and previous studies. They are grouped below according to knowledge, attitudes and behaviours.

4.7.9.1. Financial knowledge:

a. There is a statistically significant difference between socio-demographic factors (gender, income, work experience, level of study, field of study, attendance on the personal finance course) and level of financial knowledge
b. Socio and demographic factors (gender, income, work experience, level of study, field of study, attendance on the personal finance course) have a statistically influence on financial knowledge
c. Financial socialisation (discussion about finances with friend or with family) have a statistically significant influence on financial knowledge

4.7.9.2. Financial attitude

a. There is a statistically significant difference between socio-demographic factors (gender, income, work experience, level of study, field of study, attendance on the personal finance course) and level of financial attitude.
b. Socio and demographic factors (gender, income, work experience, level of study, field of study, attendance on the personal finance course) have a statistically influence on financial attitude.
c. Financial socialisation (discussion about finances with friends and with family) has a statistically significant influence on level of financial attitude.

d. Level of financial knowledge has a statistically significant influence on the level of financial attitude.

4.7.9.3. Financial behaviour

a. There is a statistically significant difference between socio-demographic factors (gender, income, work experience, level of study, field of study, attendance on the personal finance course) and level of financial behaviour.
b. Socio and demographic factors (gender, income, work experience, level of study, field of study, attendance on the personal finance course) influence have a statistically influence on financial behaviour.
c. Financial socialisation (discussion about finances with friend and family) has a statistically significant influence on financial behaviour.
d. Level of financial knowledge and level of financial attitude have a statistically significant influence on level of financial behaviour.

4.7.10 The survey data collection process

After the piloting stage, the survey was carried out from May until August 2015. From the second week of May 2015 an invitation to participate in the survey was delivered by email, text message or over the phone to the randomly selected students. If there was no response, one or more reminders were sent a week apart (up to a maximum of three reminders). Usually, after one or two reminders, a response was obtained. Common reasons for a refusal to participate include: being busy, uninterested, unsure about the message, afraid of fraud.

Some were more difficult to get in touch with than others. Some phone numbers or email addresses were not recognised, for example. To increase the response rate, multi-mode contacts were made. According to Brambilla and McKinley (1987), the mixed-mode approach helps in reducing problems associated with low response rates. In addition, multiple contacts, physical appearance, incentives, and personalisation have significant impacts on survey response rates (Fincham, 2008). Therefore, face-to-face contact was also used for a few, if applicable. The method was also used to follow up on potential respondents who feel unsure about the survey or afraid of fraud. Direct contact was made by meeting them in their class and asking about their willingness to participate in the survey politely.

Interviewers were provided with a permit letter from the university and information sheets about the survey to convince the potential respondents about the legality of the survey. However, there were some potential respondents who still could not be contacted (these were labelled as ‘no contact’). An inability to contact was most common with those in their final year of study, largely because they were in the field collecting data. To replace the ‘no contact’ respondents, the interviewer then selected another name from the list of students that had been chosen randomly and repeated the process.

An appointment to conduct the interview was arranged with those who are willing to take part in the survey. Interviews were held in the location agreed by the potential respondents, such as a campus cafeteria or canteen, campus hall, in the class after lecture, campus park, respondent’s dormitory/home, and so on.

The personal finance course at IPB is offered in every semester, every year. The reason for conducting the survey at the end of semester is based on consideration that students that registered on the course had completed the module. However, timing the data collection towards the end of the semester presented challenges; some potential respondents cancelled their appointments because they wanted to prepare for their exams and assignments. In this case, for those who were still happy to continue their participation, the interviewer offered to re-arrange the survey for after the examination period. There were also some who cancelled their appointment without providing any reason. The same procedure as that deployed with the 'non-contact' respondents was applied in order to replace those who withdrew their participation.

About 80% of the potential respondents had been completely interviewed before the end of term. For the rest, it was difficult to interview them because they had left the university because of the vacation period. Fortunately, some targeted respondents took a short course in the summer semester, so they available to be interviewed. It was also possible to interview during the orientation week for the first and the second-year students, which is held in the holiday period. Further research should consider avoiding collecting data during exam time.

By the third week of August 2015, a total of 493 questionnaires had been completed (see Table 4.4). The rest of the interviews (17 respondents remaining) needed to be postponed until the students return in the last week of August 2015 when the new academic term started. All interviews were completed by mid-September 2015. In total 550 interviews were conducted. After data cleaning, the total number of questionnaires that could be used was 521. The analysis was run after all data was complete. We can see from Table 4.6 that there was a good response rate.

Table 4.4 Responses rate of the survey

Potential respondents		N	%
Total contacted		892	
a.	Number of interviewed	550	62
b.	Number of refusal	244	27
c.	Number of non-contact	98	11

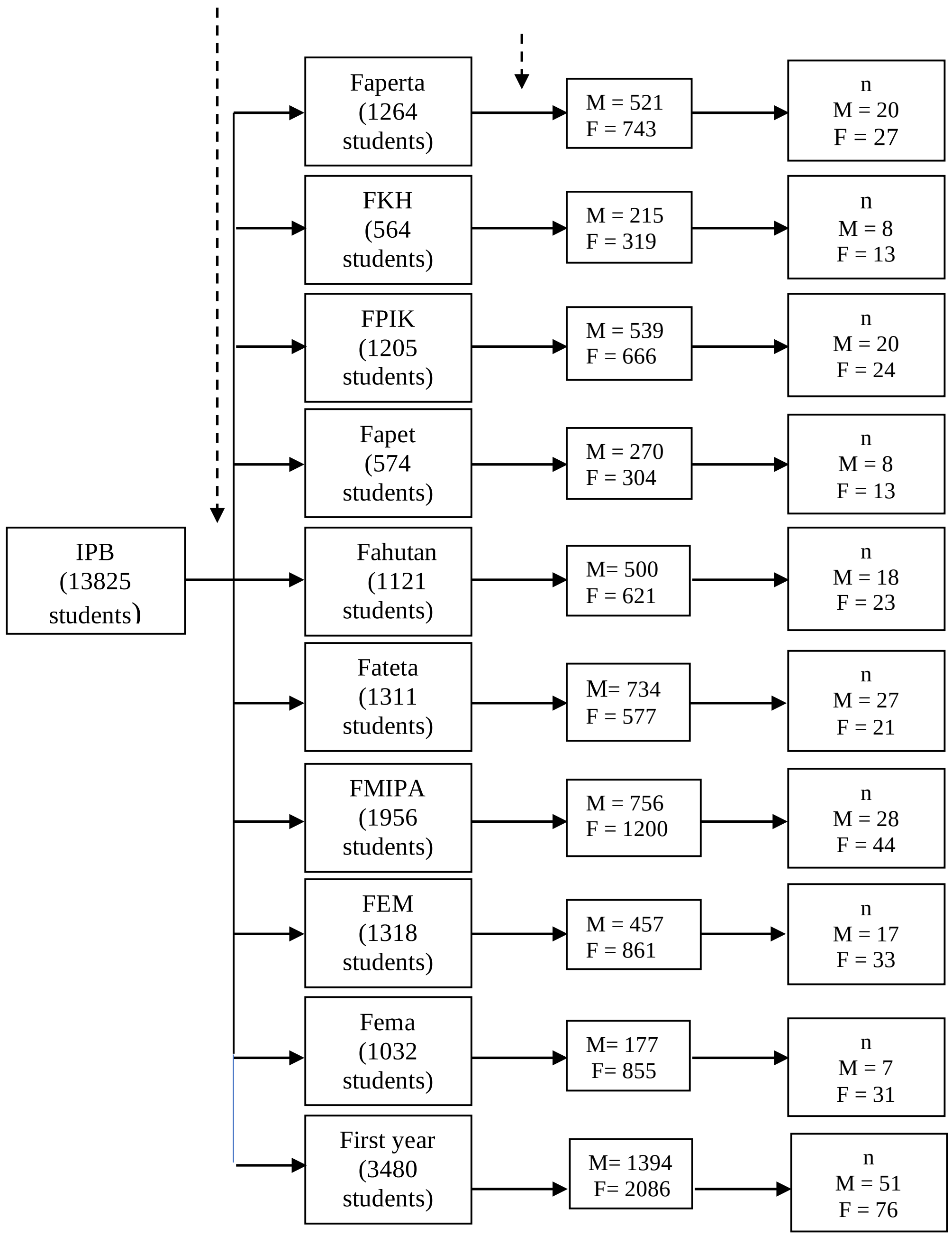


Figure 4. 2 Scheme of sample selecting for survey

Source: Author' research

4.8 Conclusion

This chapter outlined the justification of the methodology used in this study. It started by offering a brief discussion of the general issues that underpin the research methods employed in the study. This was followed by a discussion on the chosen study design, data sources, sampling methods, data collection procedures and data analysis techniques for both the qualitative and quantitative data. We also discussed the ethical considerations. Finally, there was a reflection on the data collection process, where we saw that care should be taken to ensure appropriate timing for data collection.

This chapter has showed the rigorous methods that underpin this study. We saw that it relies upon mixed-methods, with six focus groups and 521 face-to-face surveys providing rich quantitative data. The comprehensive questionnaire that was administered by interviewers lasted for 30-40 minutes and had been piloted twice. The questionnaire was mainly drawn from major previous study from FSA UK (Kempson, et al, 2005; Kempson and Collard, 2006) and MAS (2013).

As discussed in previous chapters, there have been a range of studies focusing on financial literacy and capability, with various concepts and research methods deployed in each. Despite a lack of a standardised concept and method, most studies reported that knowledge, skills, attitude, and behaviour are still low, especially among those in young groups, including college and university students. In Indonesia in particular, the topic of financial capability is still limited, especially in studies focusing on young groups. To the best of the author’s knowledge, there is still limited study of financial capability among university students in Indonesia that used a comprehensive questionnaire and as large a sample as the one achieved in this study. The existing studies in Indonesia predominantly focus on specific areas, i.e. either knowledge, attitude, or behaviour in isolation. This chapter will contribute to knowledge about conducting more comprehensive studies of financial capability, especially amongst university students. Another contribution of this study is that the data collected will be made available, although in line with ethical considerations.

One of the limitations of this study is that it has only involved university students from one university. This is for two reasons. First, because of the ease of access. Second, because IPB, one of the main state universities, is the only university in the country that offer the personal finance course for undergraduates. The study could be replicated with a larger sample of undergraduate students from other universities, or the Indonesian population more generally, if there was sufficient funding. Another limitation is related to data analysis, that it does not include factor analysis as employed in the previous study such as Atkinson, et al, (2006); and MAS, (2013), although this study also has done a range of statistical analysis, therefore, it is suggested to carry out the factor analysis in the future research.

CHAPTER 5

FINANCIAL KNOWLEDGE OF INDONESIAN STUDENTS

Introduction

As mentioned in the chapter two and three, financial capability comprises several elements, such as knowledge, skills, attitude, and behaviour, across several domains that is ‘managing money’, ‘planning-ahead’, ‘choosing products’, and ‘staying informed’ (Kempson, et al, 2005, p.21; Atkinson et al. (2006, p.3). In chapter three we saw that the level of financial knowledge varied across studies. However, most showed that financial knowledge was low for most, including among university students.

The aim of this chapter is to contribute to the understanding of the level of financial knowledge among university students by analysing their financial knowledge and exploring its determinants. Following this introductory section, this chapter will be divided into five parts. The first will examine findings from the survey concerning the level of financial knowledge of Indonesian students in comparison with other studies. The second will discuss differences within groups of respondents. The third will explore the factors that have influenced financial knowledge. The final two parts will discuss issues related to financial education, including students’ willingness to learn financial education and the expected outcomes. Where appropriate, findings from the focus groups will be used to explain the survey findings.

5.1. Level of knowledge

Knowledge is related to what and how much is known about a concept or a product (Sumarwan, 2011). In terms of financial knowledge, MAS (2013, p.6) explained that ‘knowledge is required to be able to access effectively the financial markets and sources of advice and support’. In this study, the survey measured knowledge of personal finance through the use of nine questions, one of which (question nine, the show-card for which is attached in Appendix 18) tested a respondent's ability to read a bank statement (which may be considered more of a 'skill' than a component of knowledge). The nine questions tested knowledge about managing money, inflation, interest rates, diversification, investment, credit card, choosing products, pensions, and bank statements. It was found that across all questions, only one percent of respondents answered all questions correctly, and less than ten percent answered eight questions correct (Table 5.1). No respondents achieved a score of zero. However, there was one percent that only answered one question correctly, whilst six percent could only answer two.

Just over one in five responded correctly to five questions, and this is the highest percent across all answers (see Table 5.1). In total though, a third of respondents were still only able to answer less than half or the questions correctly. Looking at the distribution of answers displayed in Table 5.1, they followed a normal distribution. Based on the index, the average score for level financial knowledge was 56 (on a scale from 0 to 100), the lowest score was 11 and the highest was 100.

Table 5. 1 Frequency of correct answer across the questions

Number of correct answer	Score	Frequency (n)	Percent (%)
1	0	6	1
2	12.5	33	6
3	25	63	12
4	37.5	91	18
5	50	122	23
6	62.5	83	16
7	75	78	15
8	87.5	40	8
9	100	5	1

Base= ALL (521)

The details of the questions used and the responses from respondents is shown in the Table 5.2, with the correct answers displayed in bold.

Table 5.2 indicates that the majority of respondents could answer the question about choosing products, which involved the application of simple mathematical literacy (question 3). Nearly 9 of 10 of this question correctly. This was the highest percentage out of all the questions. In addition, basic knowledge about interest rates was tested by question 2, and a correct response was recorded by two third of respondents. This is the second highest correct answer in the questions in the survey. Moreover, half of respondents answered correctly the questions on inflation (question 1), fraud (question 7) and credit cards (question 8). Meanwhile, questions about diversification (question 4) and time value of money (question 5) were perceived as being difficult. Less than a quarter of respondents responded correctly.

There were interesting results regarding the questions about retirement funds (questions 5 and 6). The majority of respondents were able to answer question 6 correctly. However, most were not able to answer Question 5; two in ten recorded the correct answer here. This is interesting, because it would seem to imply that people understand that developing a saving habit early is better, but do not realise quite how much better it is. Both questions examined a similar concept, namely the time value of money. Question 5 though was more advanced, although it did not require complex calculation. However, a deeper understanding about the concept is required, thus perhaps some respondents were not able to find the right answer in the short space of time they were allocated to answer the question.

Table 5. 2 Detail of respondents’ answer across the questions* (*Base ALL=521*)

No	Questions	Percent (%) Answer			
		Correct	False	Don’t know	Refused
1	‘If the inflation rate is 5% and the interest rate you get on your savings is 3%, will your savings have more, less or the same amount of buying power in a year’s time?’ A. More B. The same **C. Less** D. Don’t know E. Refused	50	18	31	2
2	Suppose you had Rp 100,000 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow? **1. More than Rp102,000** 2. Exactly Rp 102,000 3. Less than Rp 102,000 4. Do not know 5. Refuse to answer	68	19	2	1
3	Suppose you saw the same television on sale at a discount in two different shops. The original purchase price of the television was Rp. 2,500,000. One shop is offering a discount of Rp 300,000 off the original price, the other is offering a discount of 10% off the original price. Which is the better deal – Rp 300,000 off or 10% off? **A. Rp 300,000 off** B. 10% off C. Don’t know D. Refused	88	6	5	1
4	‘Please tell me whether this statement is true or false. “Buying a single company’s stock usually provides a safer return than a stock mutual fund” A. True **B. False** C. Do not know D. Refuse to answer	24	25	50	1
5	‘Rob and Molly are the same age. At age 25 Rob began saving Rp 2,000,000 a year for 10 years and then stopped at age 35. At age 35, Molly realized that she needed money for retirement and started saving Rp 2,000,000 per year for 30 years and then stopped at age 65. Now they are both 65 years old. Who has the most money in his or her retirement account (assume both investments had the same interest rate)?’ A. ‘Molly, because she saved more money overall’ **B. ‘Rob, because his money has grown for longer period of time’** C. ‘They would each have about the same amount’ D. ‘Unable to determine with information provided’ E. ‘Don’t know’	21	43	35	1
6	‘The best age to start paying into a pension is...’ **A. In your twenties** B. In your fifties	68	18	13	2
7	‘If I am in physical possession of my credit card, no fraudulent charges can occur’. A. True **B. False** C. Not sure	50	11	39	-
8	‘If I don’t use credit cards, I can’t be a victim of identity theft’. A. True **B. False** C. Not sure	47	15	38	-

**Questions were adopted from Kempson and Collard. (2006); Atkinson et al., 2006); Lusardi and Mitchel, (2005); MAS (2013,2013b); MAS (2015b), Harris Poll (2014, p.27; College Student Fin. Literacy Survey. Virginia Tech)*

Meanwhile, only half of respondents responded correctly to the question related to credit cards, although nearly four in ten reported that they did not know the answer. It seems that they were careful in answering this question. As we saw in chapter one, there are age and income restrictions for credit card applications in Indonesia, thus students are less likely to have a credit card, unless they are an additional holder of their parents' cards. Therefore, this may explain the results.

Furthermore, from the focus groups it was found that they had health insurance provided by the company for which their parents worked. When they were asked about their perceptions of insurance, such as health insurance, most of the students were aware of the benefits of insurance, but were confused about the cost:

> *"I know insurance is important, for example, if we need to see a doctor, we don't have to pay for the fees, but what happens to the money that we have already spent to pay the premium if, for example, we don't make a claim? We can't get it back. The money is just gone"* (Female, group 5/Common I).

Meanwhile, the focus groups also provided an interesting finding related to planning ahead. They reported that they intend to plan for their financial future, but need advice on how to do so. From the focus groups, it was shown that participants are still confused about the concept of insurance and the practicalities of planning-ahead.

> *"I want to financially plan for my future, but I don't know where to start"* (Male, group 4/Sciences II)

Moreover, the level of personal finance knowledge was also measured through one open question that focused on their ability to read a bank statement. Students were asked to read a bank statement and answer questions about how much money would remain in a specific month (see Appendix 32, showcard Z4) for the bank statement used). The results of this study show that the majority of respondents were correctly able to answer this question (see Table 5.3).

To obtain the level of financial knowledge, a descriptive statistic was done across the knowledge score from the survey. The mean score and category of the level of financial knowledge are presented in Table 5.4. We can see that the mean knowledge score is 56, which indicates that on average respondents got approximately a half of the total questions correct. A further observation from Table 5.4 is that approximately six in ten respondents recorded a score that was below average.

Table 5. 3 Percentage of respondents' answer across the questions

Questions	Percent (%) Answer			
	Correct	False	Don't know	Refused
SHOWCARD Z4. 'Looking at this example of a bank statement, can you please tell me how much money was in the account at the end of February?'	90	9	1	-

Base= All (521)
Question was drawn from Kempson and Collard, 2005; MAS (2013b; 2015b)

Table 5. 4 Level of financial knowledge

a. Statistic		Value
Mean		56
Minimum		11
Maximum		100
Standard deviation		19
b. Category	**Score**	**Percent**
Below the average	<= 56	60.5
Above the average	>56	39.5
Total		100

Base= All (521)

Upon further observation of the responses to each question (Table 5.2), we can see that respondents could answer questions on topics that were familiar to them. Most of them were able to give the correct answer to the question about choosing products and comparing prices. The plausible explanation is because it was close to what they often deal with. In terms of the financial life cycle, university students are in the early stage and are thus more likely to spend most of their money on daily consumption (Chen and Volpe, 1998; Furtuna, 2007). Moreover, all of the respondents were full-time students, so their main income was from their parents or sponsor. They may have had part-time jobs, but their income from these would have been limited. Therefore, students were less likely to allocate their income for investment purposes. Furtuna (2007) argues that with limited exposure to the world of investing, students were unaware and unfamiliar with topics related to it.

In the survey, high scores were seen for the question about interest rate calculation, even though participants in the focus groups reported that understanding the concept was one of their weaknesses (this will be discussed later). However, it should be noted that these are the perceived strengths and weaknesses in the focus groups as reported by participants and may therefore differ from the participants' actual strengths or weaknesses.

This result is aligned with previous studies concerning financial literacy of university students in Indonesia, such as that by Margaretha and Pambudhi (2015). As described in chapter three, even though Margaretha and Pambudhi (2015) employed different measurement techniques, they also found low financial knowledge among students. In their study, the majority of students were only able to answer half of the questions correctly and scored lower on questions about investment, debt, and insurance.

As explained in chapter four, the research instrument used in this study was inspired by previous studies in the UK, that is the studies for FSA UK by Kempson, et al. (2005); Kempson & Collard (2006); Atkinson, et al. (2006), MAS (2013, 2015) and studies conducted in the US (Lusardi & Mitchell, 2005; Harris Poll, 2014) and *College Student Financial Literacy Survey. Virginia Tech (n.d).* In those studies, the subjects were mainly households, while in this study the focus is on university students. Nevertheless, some findings can be compared across these existing studies, such as the questions about inflation (Question 1), compound interest (Question 2), and risk diversification (Question 4). It should be noted that in the context of those studies conducted in Indonesia, only that conducted by Cole et al. (2009) is amenable to comparison, because Definit (2013) did not provide sufficient detail. Moreover, as we saw in chapter three, Lusardi and Mitchell financial literacy questions has been replicated in several studies across country such as: Germany (Bucher-Koenen and Lusardi, 2011), Japan (Sekita, 2011), Russia (Klapper and Panos, 2011), and Indonesia (Cole et al, 2009; Definit 2013). Therefore, comparison will also be made across the studies. The comparison of the main findings across these and other studies are presented in Table 5.5.

As discussed in chapter three, several studies found that financial knowledge has a positive relationship with the level of study; as this study is focused on university students, it was predicted that higher scores will be shown among respondents. However, as shown in Table 5.5, compared to other studies that employed similar questions, lower scores were found, especially in the questions concerning knowledge on risk diversification and inflation. However, it was still higher compared to specific countries, including Russia, India and, surprisingly, the UK, especially for young people.

This study showed that personal experience contributed to developing understanding, and this is in line with the finding from previous study (Lowenstein, et al., 2001, Sohn et al.,2012). Xu and Zia, (2012) showed that those with experience in investment in, say, the stock market, had a higher chance of gaining a better score in the related topics, including when the focus was on risk diversification. Compared to similar research in Indonesia (Cole, et al, 2009), this study also showed lower scores in all questions. Age was predicted to be the factor that caused lower scores. This pattern is also found in MAS (2015), wherein it was identified that young people scored lower compared to adults and that student spending is most likely to be focused on consumption rather than investment (Furtuna, 2007; Chen and Volpe, 1998). Thus, information about, say, inflation and investment is not a topic to which they were exposed.

Table 5. 5 Comparison of financial knowledge across studies

No	Questions	Score/Country (year)										
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		ID UG	ID Hs	UK YP	UK All	UK All	US All	US UG	DE All	JP All	RU All	IN All
		2015	2009	2015	2015	2005	2004	2010	2011	2011	2011	2009
1	Compound interest	68	78	60	64	61	67	79	82	71	36	59
2	Inflation	50	61	41	60	79	75	56	78	59	51	25
3	Risk divers	24	28	n/a	n/a	n/a	52	47	62	40	13	31
4	‘reading bank statement’	90	n/a	81	78	91	n/a	n/a	n/a	n/a	n/a	n/a
	Base (Sample size)	521	3,360	744	3,461	5,328	1,269	7,417	2,222	5,386	1,400	15,000

- Note:
  1. *Indonesia, Undergraduates (2015, this study)*
  2. *Indonesia, Households (Cole, et al, (2009)*
  3. *UK, Young People 18-24s (MAS, 2015)*
  4. *UK, All Adults (MAS, 2015)*
  5. *UK, All Adults (MAS, 2005)*
  6. *US, All adults (Lusardi and Mitchell, 2005)*
  7. *US, Undergraduates (Lusardi, 2010)*
  8. *Germany (Bucher_Koenen and Lusardi, 2011)*
  9. *Japan (Sekita, 2011)*
  10. *Russia (Klapper and Panos, 2011)*
  11. *India (Cole et al, 2009)*

Source: Authors’ research, Lusardi and Mitchell (2005); (Bucher-Koenen and Lusardi (2009), Klapper and Pannos (2011), Sekita (2011), Cole et al (2009), Xu and Zia, (2012), and Lusardi (2013)

As the previous studies found (see Table 5.5), the question about interest rates had higher scores overall. The pattern of responses was similar to other studies in the Table 5.5, where higher scores were recorded in questions related to numeracy while questions concerning risk and diversification were rated as the most difficult. One plausible explanation for why the question on interest rates was deemed fairly easy is that all students in IPB owned at least one bank account, thus they were more likely to be aware of the basic concept. If we consider the question itself in more detail, it addressed basic numeracy skills; considering that the student-enrolment system at IPB relies upon a higher score in mathematics, the students would have found such basic numeracy easy to grasp. The scores from respondents in previous studies in Germany and Japan (shown in Figure 5.2) support this finding. As explained in chapter three, calculating interest rates and the concept of geometric were a part of their high-school curriculum, thus respondents were more likely to respond to it correctly (Bucher-Koenen and Lusardi, 2011; Sekita, 2011).

Moving on, the question about inflation required an understanding of the basic economic concept. As we saw above, only half of respondents in this study answered this question correctly. This is a low score compared to other studies. Students achieved even lower scores in the questions about risk and diversification, where only less than a quarter answered correctly. One plausible explanation is the familiarity of the issues. The words themselves are not commonly used, and many students have not had much exposure to the term in their daily life. Similarly, respondents recorded low scores on the questions about investment (such as stocks, shares, and diversification), as they had less involvement. This pattern of responses is consistent with other studies, where better scores were seen in questions about the rate of interest, while those focusing on risk and diversification were rated as the most difficult, even in developed countries such as the UK and Japan (Table 5.5). As presented in chapter three, inflation in Japan has been falling since 1981, and during the 2000s Japan experienced a period of deflation. As a result, Japanese respondents were not familiar with the concept (Sekita, 2011); since they have less experience with the issues, both questions were viewed as an advanced topic.

The result is consistent with previous studies of university and college students. Although different sets of questions were used (see chapter 3), most studies reported that financial knowledge was low, including in the previous studies focusing specifically on college and university students. In general, those studies also highlighted students' lack of knowledge in topics concerning insurance, investment, and loans (see details in chapter 3). For example, in chapter 3, Chen and Volpe (1998) and Thapa and Nepal (2015) showed that students scored better in topics they were familiar with, such as vehicle insurance and lease payments, and did not score well in questions about topics that were new to them, such as tax and investment.

Moreover, as mentioned previously, the low level of financial knowledge among respondents might also be associated with the youth of the participants, as the majority were in the early stage of their financial lifecycle (Chen and Volpe, 1998; Ansong and Gyensare 2012; Taft et al. 2013). At this stage, their general knowledge about finance (such as savings, loans, and insurance) was still vague, and they spent most of their income on consumption rather than investment. Therefore, they were not familiar with the topics because they had not been exposed to them.

Most respondents in this study had no prior work experience and their main income was money given by their parents. Therefore some of them did not have much flexibility in money allocation, for example, to try new financial products. Therefore, some of them were unfamiliar with specific financial concepts. This was also seen by Chen and Volpe, (1998) and Nidar and

Bestari (2012), who argued that low levels of work experience amongst the young had an effect on their knowledge regarding personal finance. Work experience increases financial knowledge, especially in relation to building a sense of responsibility and developing the skills needed to manage money (Cunnien, et al., 2009)

5.2 How does financial knowledge vary according to different groups?

As showed in the chapter three, Worthington (2006), Keown (2008) and Mandell (2008) argued that levels of financial knowledge are related to socio-demographic variables. To explore the effect of demographic and socioeconomic variables, this section will discuss the level of financial knowledge among respondents based on sets of variables, including gender (female [F]; and male [M]), field of study (*non-economics-business; econ-buss= economics and business)*, whether they attended a personal finance course, the year they enrolled (*first year students; and senior [second year and above])*, their level of work experience, and their income.

The details of responses are presented in Table 5.6 (*note* that the precise wording of the questions is displayed in Table 5.2). We can see from this that the responses varied among groups. Moreover, it was also expected that respondents from economics-and business backgrounds and those who had attended the personal finance course would have higher levels of financial knowledge, as they would have gained greater exposure to the related topics during their study. In terms of gender, male students were also predicted to possess more knowledge compared to women. Similarly, those in the higher levels of study, those with working experience, and those with higher incomes, were predicted to obtain higher score of financial knowledge, since they are more likely to have had more exposure to financial matters.

Table 5. 6 Comparison respondents' responses among all groups

Question	Answer	Field of study		Personal Finance Course		Gender		Work experience		Year of study	
		Non-Econ	Econ-buss	No	Yes	F	M	No	Yes	First year	Senior
1	Correct	48	62	49	58	48	53	44	56	47	51
	Incorrect	17	22	18	20	18	18	21	15	17	18
	DK	33	14	32	16	32	28	34	27	34	29
	Refused	2	2	1	2	2	1	1	2	2	2
2	Correct	67	75	69	62	65	72	65	71	63	69
	Incorrect	20	13	19	20	20	19	19	18	24	17
	DK	12	12	11	14	14	8	15	9	12	11
	Refused	1	0	1	4	1	1	1	2	1	1
3	Correct	89	88	89	80	89	87	87	90	86	89
	Incorrect	5	10	5	10	5	8	7	4	7	5
	DK	5	2	5	8	5	4	5	4	5	5
	Refused	1	0	1	2	1	1	1	2	1	1
4	Correct	23	34	21	54	23	26	19	29	18	26
	Incorrect	25	22	25	20	24	26	26	24	23	25
	DK	50	44	52	22	51	47	54	45	57	47
	Refused	2	0	2	4	2	1	1	2	2	1
5	Correct	19	34	19	42	19	24	19	23	16	23
	Incorrect	65	45	65	36	62	64	64	61	71	60
	DK	14	20	15	18	18	12	16	14	13	16
	Refused	2	1	1	4	1	0	1	2	0	1
6	Correct	68	72	68	74	66	72	68	68	65	69
	Incorrect	18	16	17	22	19	15	16	19	20	17
	DK	13	12	13	4	13	12	14	11	14	12
	Refused	1	0	2	0	2	1	2	2	1	2
7	Correct	48	67	49	62	49	52	44	56	43	53
	Incorrect	11	8	11	10	11	12	9	13	10	11
	DK	40	25	40	24	40	36	47	30	47	36
	Refused	1	0	0	4	0	0	0	1	0	0
8	Correct	45	58	45	66	49	44	42	52	31	52
	Incorrect	15	14	16	8	14	19	14	17	22	13
	DK	39	28	39	22	37	37	44	30	47	34
	Refused	1	0	0	4	0	0	0	1	0	1
9	Correct	90	94	91	84	89	92	90	90	90	91
	Incorrect	10	6	9	16	11	8	10	10	10	9
	DK	*NA*	*NA*	*NA*	*NA*	NA	NA	*NA*	*NA*	*NA*	*NA*
	Refused	*NA*	*NA*	*NA*	*NA*	NA	NA	*NA*	*NA*	*NA*	*NA*

However, this study found that significant differences in financial knowledge were only to be found in the field of study, whether they had attended the personal finance course and the level of study and level of work experience. Further details will be discussed in the section below.

5.2.1 Field of study

As aforementioned in chapter four, respondents were classified into two groups, those pursing economics or business majors and those pursuing non-economics or business majors. As expected, correct answers were more likely to be given by those with an economics or business background, especially to questions 1, 5, 7, and 8. A slightly higher percentage were correct in questions 3 and 6 (see Table 5.6.). However, both groups demonstrated similar ability in reading bank statements, wherein the majority were able to complete the task successfully. Moreover, it was also seen that students from non-economics and business backgrounds tended to report 'don't know' in most questions, except in question 5 (which concerned pension funds). However, they also gave a higher percentage of incorrect answers. This result showed that they may have just guessed the answer, rather than saying that they 'don't know'.

Further analysis was undertaken to examine the differences between the two groups and their respective levels of financial knowledge. The result of Independent Samples T-Test showed that there was a significant difference between those from economics and business backgrounds and those who came from non-economics and business backgrounds. This was shown by the significance statistic in Table 5.7 which was 0.001 (less than the alpha significance level of 0.05). Therefore, Ho was rejected (see Table 5.7)

Table 5. 7 Independent samples T-Test between financial knowledge and field of study

	Group	Mean (Score 0-100)	Standard Deviation
1.	Non-Economic and Business major	55	18
2.	Economic and Business major	65	22
	T-Test (p)	0.000***	

***significant at p<0.001

As shown in Table 5.7, a noticeable difference was seen between the field of study and financial knowledge, and from Table 5.8 we can see that more than half of respondents from economic or business backgrounds recorded a score above average, whilst almost four in ten respondents from non-economics or business backgrounds scored scored above average.

Table 5. 8 Cross-tabulation between field of study and financial knowledge

Field of study	Below average (%)	Above average (%)	Total (%)	Number of respondents (n)
Non-Economic and Business	63	37	100	455
Economic and business	44	56	100	66
Total				521

**compared to the average of total score (mean score is 56).*

Similarly, focus groups recorded that participants from economics and business backgrounds were found to be more knowledgeable compared to other groups. For example, interest rates appeared to be a challenging topic for those from non-economics and business backgrounds, as documented below:

> *"I don't know how to calculate the rate of interest, for example in savings accounts or bank loans"* (Female, group 3/Sciences I)

The other participant in the same group also agrees, saying:

"Yes, I know the basic concept of it [the rate of interest], but I don't know how they calculate it… What is the name?... Daily rate of interest? And what's the other? I don't know the name...But, sometimes if I try to calculate by myself, the result is different" (Female, group 3/Science I).

5.2.2 Personal Finance Course

More than half of the respondents that attended the personal finance course scored above average while it only recorded by four in ten of those who had not taken the course (Table 5.9), In other words, respondents who attend the course recorded higher scores, as presented by the mean score in Table 5.10.

Table 5.6 indicated a greater gap in correct responses between those who attended the course and those who had not. The gap was almost doubled in questions 4 and 5, which were about investment, time value of money and compound interest. It was found that those who did not take the course tended to answer, 'don't know' in question 4. Most respondents were unfamiliar with terms such as 'stock' and 'mutual fund'.

However, when comparing the results of each question, interesting findings were discovered; those who did not attend the course gave a higher number of correct answers for questions 2, 3 and 9. Perhaps it was because some of them came from economics and business backgrounds, thus are more knowledgeable about the issues. Moreover, the number who answered 'don't know' or who refused answers were found to vary, although no specific pattern was found between the groups.

This study also examined the differences between those who had taken the personal finance module and those who had not. As we can see in Table 5.10, the result of independent samples t-test showed differences in financial knowledge amongst those who had attended the personal finance course and those who hadn't, where the p-value was found to be less than 0.05. Therefore, Ho was rejected, which means that there was a significant difference in terms of knowledge between both groups.

Table 5. 9 Cross-tabulation of attendance on the personal finance course and financial knowledge

Course of personal finance	Below the average (%)	Above the average (%)	Total (%)	Number of respondents (n)
Had not taken the course	62	38	100	471
Taken the course	42	58	100	50
Total				521

**compared to the average of total score (mean score, 56).*

Table 5. 10 Independent samples T-Test of financial knowledge and attendance on the personal finance course

Group	Mean (Score 0-100)	Standard Deviation
1. Had not taken Personal Finance Course	55	18
2. Had taken Personal Finance Course	65	21
T-Test (p)	0.001**	
Sample size (521)		

****significant at $p<0.001$*
***significant at $p<0.05$*

As expected, this study revealed that respondents from the Faculty of Economics and Management were more likely to have better financial knowledge than those from non-economic backgrounds. Likewise, students who had attended the personal finance course scored higher in all areas of financial capability. This result is logical, as their study background has allowed them to obtain knowledge related to financial management. Students of economics, management, or those taking business majors, were exposed to related subjects more frequently and in greater depth; examples included financial management, accounting, and other economic modules.

Similarly, students who had completed the personal finance module were more accustomed with the topics discussed in the focus group. Those who had joined the class learned more about various topics of personal finance, therefore they hold a better understanding of the concept of managing money and a better financial understanding. Therefore, unsurprisingly, those students had a better understanding of financial terms and concepts. However, it also should be noted that students may chose the course because they are more interested in these topics and already more knowledgeable in the first place. There could therefore be a 'selection effect', and we would only be able to confirm whether it was the the course itself that had an effect if we carry out a longitudinal study with an experimental design.

Nevertheless, this finding is consistent with several previous studies such as Chen and Volpe, (1998), Krishna et al. (2010), Ansong and Gyensare, (2012) and Nidar and Bestari, (2012). As we saw in chapter three, these studies have shown that financial education is positively related with financial knowledge; it was found that students in business majors were better informed on the issues of personal finance compared to students in other majors, and that study background had a significant effect on students' knowledge. We also saw in chapter three that respondents in Germany and the US, where financial education is more developed, were more likely to answer the question correctly, as over three-quarters (78%) of German households could answer the question about inflation correctly (see Figure 5.1) (Bucher-Koenen and Lusardi, 2011). Students in economics-business majors and those who attended the personal finance course were found to be more literate because they had had to the opportunity to gain more knowledge and to learn in more depth about financial topics (Beal and Delpachitra, 2003;

Krishna et al., 2010; and Shaari et al. 2013). This is consistent with findings from Collins and O'Rourke (2010).

5.2.3. Level of study/year of enrolment

This research then examined the differences between groups based on the year in which they were enrolled at the time. In this study, a distinction was made between first-year students and second year and above students (senior).

In terms of financial knowledge, as expected, the second year and above students recorded the better score. Although both groups had a high percentage of those scoring below average, the senior students documented a better score overall, both as a percentages (see Table 5.11) and in terms of their mean score (see Table 5.12). The mean score for second year and above students was 58, while first year student obtained a score of 51. More than four in ten senior students were classified as above average in their financial knowledge. Meanwhile, only a third of first year respondents scored highly. Table 5.11 shows that respondents at higher levels of study were more likely to obtain a better score.

This result is consistent with Chen and Volpe (1998), Shaari et al. (2013) and Ansong and Gyensare (2012). As we saw in chapter three, their research found that age and work experience were positively correlated with financial literacy; a person’s age is an indication of how much experience they have gained, including experience in financial matters. Jorgensen (2007) argued that senior students might have been involved in more financial decisions, thus they have higher motivation to learn about related issues.

Table 5. 11 Cross-tabulation of level of study and financial knowledge

Year enrolled	Below the average (%)	Above the average (%)	Total (%)	Number of respondents (n)
First year student	70	30	100	131
Second year and above	57	43	100	390
Total				521

**compared to the average of total score (mean score, 56).*

It was shown that second year and above students had a higher percentage of correct answers in all questions. Besides higher percentages of incorrect answers, first year students also tended to say, ‘don’t know’ in most questions, except in question 5 (the most difficult question). However, given that the percentage of incorrect answers was also high, again, perhaps some of them might have just guessed the answer (see Table 5.6).

Clearly, length of study contributes to the accumulation of knowledge, where senior students are more likely to be more knowledgeable about finance than juniors. The result of the independent samples t-test confirmed this finding, given that a significant difference was found in terms of financial knowledge between those in different years. As seen in Table 5.12, the significance value is 0.000 and thus less than p at the 5% confidence level. Therefore, Ho was rejected.

Table 5. 12 Independent samples T-Test between financial knowledge and level of study

Group	Mean (Score 0-100)	Standard Deviation
1. First year student	51	18
2. Second year and above	58	19
T-Test (p)	0.000***	

****significant at $p<0.001$*

5.2.4. Gender

Over the years, there have been mixed results from studies on the relationship between gender and knowledge. As discussed in chapter three, several studies have found a significant difference in financial knowledge between the two genders and have stated that gender influences the level of financial knowledge (Chen and Volpe, 1998; Atkinson, et al., 2006; Manton et al., 2006; Danes and Haberman, 2007; Peng et al., 2007). In the context of students, a study by Nababan and Sadalia (2012) showed that male students demonstrate relatively higher levels of financial literacy compared to female students. This supported a previous study by Chen and Volpe (1998), which showed that, in terms of financial literacy, women scored lower than men. Meanwhile, Krishna et al. (2010) also found that gender affects the level of financial literacy among students; however, they found that female students tend to gain higher scores.

Table 5.6 showed that, except in question 8, male students in this study tend to record a higher percentage of correct answers, although the gap is only small. Moreover, Table 5.6 also shows that female students were more likely to say, ‘don’t know’ than males across almost all questions. This would seem to suggest that they have less confidence. Male students are more likely to guess an answer, judging by the percentages of incorrect answers. However, further exploration of this data found that there is no significant difference in the level of financial knowledge between the two sexes. Although the average level of knowledge for males was found to be higher than females (at 58 and 55, respectively, se Table 5.14), and the percentage of males that scored above average was higher than females (see Table 5.13), the result of the independent samples t-test showed that gender does not contribute significantly to differences in the level of financial knowledge.

Table 5. 13 Cross-tabulation between gender and financial knowledge

Gender	Below the average (%)	Above the average (%)	Total (%)	Number of respondents (n)
Female	63	37	100	307
Male	56	44	100	214

compared to the average of total score (mean score, 56).

As showed in the Table 5.14, the independent samples t-test showed that the significance statistic was greater than the p value of 5%. Therefore, Ho was accepted, and it is concluded that there was no difference in financial knowledge between genders.

This study has shown that male and female students had an equal level of understanding in terms of financial knowledge. This result is similar to findings from previous research, (notwithstanding that discussed above that *does* point to gender differences), such as studies carried out by Jorgensen (2007), Ibrahim et al. (2009), Nidar and Bestari (2012), and Rita and Pseudo (2014). These studies found that gender does not significantly affect financial literacy and that male and female students showed an equal understanding of the concept inherent in financial management and financial products.

Table 5. 14 Independent samples T-Test between financial knowledge and gender

Group	Mean (Score 0-100)	Standard Deviation
1. Female	55	19
2. Male	58	19
T-Test (p)	0.101	

****significant at p<0.001*
***significant at p<0.05*

One potential explanation for this finding is related to the rise of gender equality. In the globalised era, women and men have more chance to have equal rights in many aspects of life, including access to education and information. Women and men should be treated fairly in all aspects. In Indonesia, women have the same opportunity as men to pursue their studies, from nursery to higher education. This can be seen by observing the proportion of female students in many educational institutions. In IPB, where this study was held, the proportion of female students was 60%. This shows that women share the same opportunities as men in accessing education and gaining knowledge. Similarly, Jorgensen (2007) and Ibrahim et al. (2009) argued that women and men share the same rights to access education, jobs, and so on. Because women and men have the same chance to access education at all levels, it was also argued that all subject lessons are well distributed between genders, which leads to the suggestion that there is no difference in levels of financial literacy between men and women. Qiao, (2012, p.42) also reported that the gap between males and females in financial knowledge were diminished and they are now more “economically independent”.

5.2.5. Work experience

The next variable to be analysed is work experience. This section examines the differences in levels of financial knowledge between those who had work experience and those without.

In general, this study found that more than half of respondents reported that they did not have any work experience; out of those who said they did have an experience, the majority said they had less than a year of experience. Most of the work experience reported was part time or through self-employment (running a small business[5]). In this study, four in ten respondents reported that they had work experience.

[5] Indeed, an interesting finding that arose from this study is that some of respondents stated they had ran a small business as a method of earning extra income. Some of their experience of running a small business was due to an additional program run by the Directorate of Higher Education of Indonesia (DIKTI) to increase students' entrepreneurial skills. Students were encouraged to write a proposal for a small business. These proposals were then reviewed by DIKTI. The students whose proposals were selected then received funding to run their businesses for approximately eight months.

Comparing the percentage of all responses in each question, as expected, respondents with work experience were more likely to respond correctly, except in questions 6 and 9, where they achieved a similar percentage of correct answers to those without (see Table 5.6). Other than giving incorrect answers, those with no work experience also tended to say 'don't know' more often in all questions.

Meanwhile, Table 5.15 shows that nearly half of respondents who had work experience achieved an above average score, while nearly seven in ten of respondent with no work experience scored above the average.

Table 5. 15 Cross-tabulation between work experience and financial knowledge

Working experience	Below the average (%)	Above the average (%)	Total (%)	Number of respondents (n)
No work experience	69	31	100	280
Have work experience	51	49	100	241
Total				521

**compared to the average of total score (mean score, 56).*

Further analysis by an Independent Sample T-Test showed that there was a significant difference in terms of financial knowledge between those with work experience and those without. Respondents with working experience obtained higher score, as shown by the mean score in Table 5.16. Those who had work experience recorded a score of 60, while the mean score of those without work experience was 53. The result of independent samples T-Test had a significant value of 0.000, less than p. Thus, Ho was rejected.

Table 5. 16 Independent samples T-Test between financial capability and work experience

Group	Mean (Score 0-100)	Standard Deviation
1. No work experience	53	18
2. Have work experience	60	20
T-Test (p)	0.000***	

****significant at p<0.001*
***significant at p<0.05*

This finding tallies with that in previous research such as Hilgert et al (2003)., where it was found that there is a close association between financial knowledge and financial practice. Personal experience was reported to be essential for each of the financial practices indexes that were explored (cash-flow management, credit management, saving, and investment). The connection between financial knowledge and personal experience was established by Loewenstein et al. (2001), who found that experience stimulated strong and memorable feelings, possibly making them more dominant in processing.

5.2.6. Income

Data from the survey tell us that the minimum income per month was Rp 300,000, that the maximum was Rp 4,000,000, and that the average was Rp. 1,069,481. On this basis, respondents then were classified into quartiles: (1) those with income less than Rp 800,000 (Q1); (2) those with income between Rp 801,000-1,000,000 (Q2); (3) those with income between Rp 1,001,000-1,200,000 (Q3); and (4) those with income above Rp 1,200,000 (Q4).

For reference, the official website of IPB 2017 suggests that a student’s living costs range from Rp. 1,000,000 – 2,000,000, per month. Table 5.17 shows the average living cost per calendar month for a single student (excluding the tuition fee). For comparison, the average living cost for a student in the UK (outside London) is shown.

Table 5. 17 The average of students living cost

No	Component	IPB, Indonesia (Bogor city, 2016) (Rupiah/person/month)*	UK (non-London, 2015) (Rupiah/person/month)**
1	Housing (room rent and bills)	250,000-1,000,000	6,714,000
2	Food	300,000-600,000	11,980,000
3	Bills	** see No.1*	666,000
4	Miscellaneous (travel, communication, books, clothes, social, etc.)	450,000- up	4,050,000
	Total	1,000,000-2,000,000	13,410,000

*Source: *http://admisi.ipb.ac.id/p/single/biayahidup*
***http://www.savethestudent.org/money/student-money-survey-2015.html*
**** 1 GBP equal to Rp. 18,000 (Rate per 24 September 2017)*

This study found that in terms of financial knowledge, about six in ten of respondents in Q1-Q3 scored below average, while a slightly lower percentage was found in the highest income group, Q4 (see Table 5.18).

Table 5. 18 Cross tabulation between financial knowledge and income

Financial knowledge	Income groups							
	Q1 <= 800,000		Q2 801,000-1,000,000		Q3 1,001,000-1,200,000		Q4 > 1,200,000	
	%	N	%	N	%	n	%	N
Below the average	65	129	60	96	60	25	55	67
Above the average	35	69	40	64	40	17	45	54
Total	100	198	100	160	100	42	100	121

**compared to the average of total score (mean score, 56).*

Tables 5.18 and 5.19 show that in terms of financial knowledge, respondents with higher incomes tend to achieve a better score. Table 5.19 also show that there was a slight difference in mean score between the groups (with scores ranging from 55 to 58). The analysis of the independent samples T-Test showed a p-value of 0.361, greater than alpha, at the 5% confidence level. Therefore, Ho is accepted, and it was confirmed that there was no difference between the different groups (see Table 5.19).

This finding showed that it is possible for all respondents to achieve a high score in those areas, regardless of their income level. This is unexpected, as income was predicted to be one of the factors that influenced financial knowledge, as higher income were said to lead to a higher chance of exposure to financial experience. One plausible reason is because of the greater access to education and information in general, whereby anyone can gain information regardless of their economic status. Thus, perhaps other factors are more important.

Table 5. 19 Analysis of variance (ANOVA): financial knowledge and income

		Income	N	Mean	Std. Deviation	F stat.	Prob.
Knowledge	Q1	<= 800000	198	55	18.678	1.071	.361
	Q2	800001-1000000	160	57	18.739		
	Q3	1000001-1200000	42	56	20.816		
	Q4	>1200000	121	58	20.426		

****significant at p<0.001; **significant at p<0.05*

5.3 Factors that determine financial knowledge

Regression analysis was then conducted in order to examine the relationship between the dependent variable and independent variables (Pallant, 2013). The dependent variable is the composite (index) score of financial knowledge, while the independent variables are: gender (female and male), year enrolled (first year and second year and above), whether they attended the personal finance course (yes or no), field of study (economics-business and non-economics-business), work experience (yes or no), discussing money with family (yes or no), discussing money with a friend (yes or no), and income. The confidence level was set at 95% (0.05). The results are displayed in Table 5.20.

Table 5.20 shows that year enrolled, field of study and attendance on the personal finance course have a positive and significant influence on financial knowledge, after controlling for other factors. The following model explains the determinants of financial knowledge:

Financial knowledge = 40.120 + 3.120 year enrolled + 8.670 field of study + 7.060 personal finance course + 5.150 work experience+ 6.695 family socialisation

As seen from the model above, should one unit a year enrolled increase, financial knowledge would rise to 3.120. Moreover, in terms of field of study, students from economics or business backgrounds would be 8.670 times more likely to obtain a better financial knowledge score. Similarly, where student had taken a Personal Finance module, it would lead to a 7.060 increase in financial knowledge. Meanwhile, should students with work experience increase, it would benefit to a 5.150 increase in the financial knowledge. As for family socialisation, students who have the opportunity to discuss about money with family would be 6.695 times more likely to score better on financial knowledge.

This study found that beside work experience, those who discussed money matters with family were more likely to have a better level of knowledge. Evidence from previous studies, such as Hilgert at al. (2003) and Harris Interactive (2011) have shown that besides through formal education, financial knowledge can be gained from conversation and other interactions with socialisation agents, including friends, family and the media. It is shown that one approach to improving knowledge is by gaining experience. This research showed that personal experience and family role models contribute to the development of a person’s financial knowledge. Moreover, the results showed that field of study and attendance on the personal finance course were the strongest factor that influenced financial knowledge (see the B value in Table 5.20).

Table 5. 20 Regression coefficients financial knowledge

No	Dependent variable	B	Beta	Sig.
1	(Constant)	40.120		.000
2	Gender dummy (1=male, 0=female	3.120	.080	.061*
3	Year enrolled (1=year 2 and above; 0=year 1)	3.986	.090	.041**
4	Category field of study (1=Economics-Business major; 0=non-Economics-Business major)	8.670	.148	.001**
5	Category personal finance (1=had taken Personal Finance course; 0=had not taken personal finance course)	7.060	.108	.013**
6	Work experience (1=had work experience; 0-no work experience)	5.150	.134	.002**
7	Discussing money with family (1= yes; 0= never)	6.695	.116	.007**
8	Discussing money with friend (1= yes; 0= never)	.411	.009	.839
9	Income	1.465	.038	.385
	F	7.250		
	Sig	0.000		
	R	0.319		
	R2 adjusted	0.102		

**significant at p<0.1; **significant at p<0.05; ** significant at p<0.01*

Meanwhile, the focus-group discussions also explored some factors that contribute to a person becoming financially capable. The most common answer was education, as illustrated in the following excerpt:

> *"Education is the most important influencer to make a person become financially capable, since it can develop people's knowledge and skill in how to manage money, and develop the mindset"* (Male, group 4/Sciences II)

To gain deeper information about financial education, in this study the topic that is expected to be studied in financial education was also identified. This information will serve as an input to develop effective financial behaviour that meet the student needs. Therefore, the next section will present a brief discussion of financial education.

5.4 The willingness to learn about personal finance

This study explored the willingness of respondents to learn about personal finance. Both the quantitative and qualitative study found that students showed a good interest in increasing their financial knowledge. The majority of respondents in the survey and all of participants in the focus groups reported that they want to continue with their financial education. This positive intention was recorded by eight in ten respondents in the survey (see Table 5.21). Furthermore, when it comes to the topics they wish to learn more about, respondents in the survey were more likely to learn about saving and investing, followed by budgeting and insurance and risk management topic (see Table 5.24).

Table 5. 21 Interest of increasing financial knowledge

No	*Question:* *How interested if at all are you in increasing your financial knowledge?*	Percent
1	Very uninterested	0.0
2	Somewhat uninterested	0.8
3	Not sure	16.8
4	Somewhat interested	54.3
5	Very interested	28.1
	Total	100.0

Base:ALL(521)
**Question was adopted from College Student Financial Literacy Survey. Virginia Tech (n.d)*

This study also examined the intention of learning financial education across groups, based on level of study, field of study, attendance on the personal finance course, gender, work experience, income, and socialisation with family and friends. The results are shown in Tables

5.22 and 5.23. It was found that respondents in all groups showed similar eagerness to increase their financial knowledge (see Table 5.23). Moreover, further analysis using Pearson Chi-Square only found a relationship between discussing money with family and the intention to learn about finance (see Table 5.23), while no relationship among other groups was found (see Tables 5.22 and 5.23).

Table 5. 22 Interest of increasing financial knowledge (2)

Question	Answer	Income			
		Q1	Q2	Q3	Q4
How interested if at al are you in increasing your financial knowledge?	Very interested	24	28	31	34
	Somewhat interested	54	58	57	48
	Not sure	20	14	12	16
	Somewhat uninterested	2	0	0	2
	Very uninterested	0	0	0	0
	Sig.	0.403			

**significant at p<0.001;
*significant at p<0.05

Similarly, the willingness to learn about personal finance was also documented in the focus groups, wherein all participants reported that they wanted to learn more about personal finance. Many of the participants mentioned planning ahead and money management as examples of topics that they needed to learn about more comprehensively.

> *"I want to live comfortably in the future. How do you make financial plans for the future?"* (Female, group 3/Sciences I)

> *"…how to control unplanned spending and make priorities between needs and wants. Moreover, I also want to learn in more detail about how to make a financial plan for my future"* (Female, group 2/ Personal finance and Economics II)

This is in line with the findings for the previous questions, which demonstrate a weakness in managing money and planning for the future, and suggests that participants need to gain a better understanding of how to keep track of their spending and how to budget:

> *"What is the best way to manage money and how to manage income and expenses"* (Female, group 1/ Personal finance and Economics I)

> *"What I really want to learn is the steps in making a budget plan"* (Female, group 5/Common I).

Table 5. 23 Interest of increasing financial knowledge (3)

Question: How interested if at al are you in increasing your financial knowledge?	Level of study		Field of study		Personal Finance Course		Gender		Work experience		Discussing money with family		Discussing money with family	
	0	1	0	1	0	1	0	1	0	1	0	1	0	1
Very interested	26	29	28	30	28	32	28	28	30	26	23	29	32	27
Somewhat interested	53	55	53	62	54	56	55	54	53	55	51	55	51	55
Not sure	20	16	18	8	17	10	17	16	16	18	21	16	15	17
Somewhat uninterested	1	1	1	0	1	2	0	2	1	1	5	0	2	1
Very uninterested	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sig.	0.577		0.163		0.484		0.365		0.701		0.008**		0.483	

**significant at p<0.001;
*significant at p<0.05
<u>Note:</u>
-Level of study: 0=first year; 1=second year and above
-Field of study: 0=Non-Economics and Business major; 1= Economics and Business major
-Personal finance course: 0=had not taken the course; 1=had taken the course
-Gender: 0=female; 1=male
-Work experience: 0=no work experience; 1=has work experience
-Discussing money with family: 0=No; 1=yes
-Discussing money with friend: 0=No; 1=Yes

Moreover, participants said that they wanted to learn about selecting financial products for investment. An example of this is as follows:

> *"I really want to know about investment, such as what is the best type of investment, how shares and stocks work, which one is better, investing in property or stock, and so on"* (Male, group 6/Common II)

Table 5. 24 Topic of financial knowledge

No	*Question: Which of these topics, if any, would be of interest to you? (Check all that apply)*	Percent
1	Saving	72.3
2	Investing	71.3
3	Budgeting	60.1
4	Insurance and risk management	46.2
5	Interest rates	32.2
6	Taxes	26.4
7	Retirement/pensions fund	20.8
8	Loans/debt	17.0
9	Credit and credit cards	12.3
10	None of these	2.3
11	Other, specify : avoiding fraud; smart consumer; choosing product, inheritance	1.9

**multi answer; ** Base: ALL (521)*

The intention to learn about investment is in line with a study by UNCF (2012), which found that students showed interest in learning about generating income, in addition to saving. Moreover, knowledge and understanding about borrowing was also found to be a topic that participants wanted to learn about further. For example, comparing secured loans and recognising unsecured loans, including understanding more about interest rates.

> *"I want to learn about credit, for example if we have to take credit from a bank or get a credit card, how to calculate the rate of interest and how to identify secured loans and unsecured loans"* (Male, group 1/ Personal finance and Economics I)

Some participants in the focus groups also noted that it is important to learn more about risk management, as seen in the excerpt below:

> *"I want to learn about how to manage risks and what are the benefits and costs of insurance so I can get full protection"* (Female, group 1/ Personal finance and Economics I)

Furthermore, participants were asked to rank some domains of financial capability from a list. The results showed that "how to manage money" was rated as the most popular topic for further learning, followed by "planning ahead and the role of money", "how to become a critical consumer", and "managing risk". The participants illustrated that if a person can manage money wisely, they will be able to set up expenses on a budget sheet and make a plan for allocating money to meet future and current needs (see Appendix 16b).

5.5. Learning methods in financial education

As the main focus of financial education is the students, understanding their wants and needs is a major concern. Student preferences about the method of delivery for financial education were also examined in this study. The qualitative data from focus groups provided the data. Across all focus groups, the majority of participants said that they would prefer a practical education, with more concrete examples, when learning about personal finance. This is illustrated by the following excerpts from the transcript:

> *"…combination between theory and practice, such as case studies, visiting companies, simulation, and using tools besides textbook or slides"* (Female, group 1/ Personal finance and Economics I)

> *"…doing some projects, for example a project about designing an investment plan for the future, or choosing loan-program from bank to buy a house"* (Female, group 1/ Personal finance and Economics I)

The majority of survey respondents and all of participants in the focus groups reported that they want to continue with their financial education. The topics raised, in order of importance, were: how to manage money; planning ahead and the role of money; how to become a critical consumer; and managing risk. From the survey, students also showed interest in learning about savings, investment and budgeting. The majority of participants said that they would prefer a practical approach, with more concrete examples.

5.6 Conclusion

This study divided the level of financial knowledge into a 'high' group and a 'low' group. Those who scored above the mean score were categorised in the high group, and those who obtained score below the mean were categorised in the low group. In general, it was found that the level of financial knowledge among university students was generally in the low group, given that six out of ten of respondents in the survey scored below average. However, as discussed in chapters two and three, it is difficult to say whether the overall level of knowledge is 'high' or 'low', since it depends on various factors, such as the person, time, and place (Kempson et al. 2005; Remund 2010; Vyvyan, 2014).

Therefore, beside calculating the score, this study then also took a look at how different groups within the sample compare. We saw that respondents were still unfamiliar with some financial terms. The concept of risk diversification (investment), compound interest, inflation, and credit cards were recorded as the most difficult questions by respondents. However, as predicted, higher scores were achieved by those who studied in an economic and business major, and those who had attend the personal finance course. Senior students (i.e. those in their second year and above) recorded higher scores. The Independent Samples T-Test confirmed a significant difference in financial knowledge across the group, that is, it differed based on field of study, attendance on the personal finance course, year of study, and level of work experience. Surprisingly, gender and income did not contribute to any difference in financial knowledge.

The regression analysis that was run showed that the field of study, personal finance course, year of study, and work experience were also determinant factors underpinning levels of financial knowledge, along with financial socialisation by family. This study has also shown students' interest in receiving financial education. This finding suggests that to enhance financial knowledge, higher education providers should consider providing financial education for all students and do so using practical content in order to ensure it give students the necessary experience. Moreover, parents are also encouraged to be more involved in personal finance education at home, such as through open conversation about money management.

CHAPTER 6

FINANCIAL ATTITUDES OF INDONESIAN STUDENTS

Introduction

The aim of this chapter is to examine the financial attitudes of university students in Indonesia and understand how it varies according to gender, level of study, background of study, attendance on the personal finance course, income, and level of work experience. The chapter will present the results of the survey on financial attitudes, and where applicable these will be elaborated with findings from the focus groups. As in chapter five, findings from previous similar studies will also be compared. This chapter consist of four parts. The first presents financial attitudes across five domains of financial capability and offers comparisons with other studies. The second offers a discussion on financial attitudes in general. The third will discuss how financial attitudes differ among the groups. Finally, the last part will analyse factors that determine financial attitudes.

6.1. Financial attitudes across domains

Attitudes are defined as the '*general evaluations people hold in regard to themselves, other people*, *objects, and issues'* (Petty and Caccioppo, 1986, p.127). In this study, attitudes refer to what a person feels and believes in relation to personal finance, as measured by the responses to the statements in the survey and the focus groups.

It should be noted that defining the 'right' and 'wrong' attitudes is quite challenging, as it is a subjective area and highly likely to be influenced by social norms. Some attitudes will generally be seen as more desirable than others. As argued by McLeod (2009), it has a connection to 'self-image and social acceptance' and people tend to adjust their responses even if they do not reflect their actual beliefs, just because they want to build a good image or be accepted by others. Meanwhile, Kaminska and Foulham (2013) explain that ‘social desirability bias’ often occurs with respondents; they tend to give a response that it is more acceptable to society, even though it is different to their actual opinion.

In spite of debates around how to measure attitudes, this chapter attempts to explore financial attitudes among university students. As mentioned in chapter 4, there are several domains concerning financial attitudes measured in the survey: (1) managing money; (2) risk and insurance; (3) planning-ahead; and (4) choosing products and staying informed. In this study, the expected attitudes encompass these domains. In summary, desirable attitudes in this study are measured based on the degree to which respondents agree and strongly agree with: the need to organise money; preferring saving to impulsive buying; protecting from the risk of loss; saving money for a rainy day and planning for the future, such as saving for retirement; searching for information before deciding to buy; reading contracts and agreements carefully; and keeping up to date with information.

6.1.1. Managing money

In the survey, the statements on attitudes towards managing money asked for respondents’ preferences regarding being financially organised, and their opinion relating to financial activities such as saving, spending, debt, risk and insurance, and planning for the future (see Table 6.1). From Table 6.1, it is evident that the majority of respondents agreed or strongly agreed that being organised in managing money is important. Only less than one tenth disagreed and no-one strongly disagreed with the statement. This shows that they were aware of the importance of keeping financial records. Controlling and monitoring income and keeping records of spending and cash-flow are necessary in money management; commitment is required to spend the time “working out budgets, keeping records, and checking statements for bank and credit card accounts” (Atkinson et al., 2006, p.38).

In terms of saving, more than two thirds agreed or strongly agreed with the need to save rather than spend (statement 2), very few (7%) disagreed with this statement and no one strongly disagreed. However, nearly two in ten agreed that it was better to ‘buy things on credit rather than wait and save up’, with a similar number in the neutral position (Statement 3). This number should be highlighted, as it was expected that they would spend wisely and avoid impulsive buying.

In addition, with regard to the purchasing attitudes, nearly two thirds believed that waiting until they have enough money is more important than insisting on buying using a credit card; roughly nine in ten also ‘agreed’ or ‘strongly agreed’ with not using a credit card if they could not repay it, and preferred to cut back on expenses. It can be said that they agreed with avoiding being burdened by debt. In the early financial life cycle, they are active consumers, so it is important to maintain control when using money. However, this is self-reported feedback, which does not mean it describes actual behaviour. Moreover, we should also be concerned that there was still one in five who tended to agree with using credit cards to buy unaffordable items. Details of the responses across all respondents are presented in Table 6.1.

Compared to similar questions in previous studies in the UK (MAS, 2013; Atkinson et al., 2006), Table 6.1 shows a similar pattern of responses in statement 1, and slightly different responses in statements 3 and 4. In all the statements, it is shown that Indonesian undergraduate respondents in the study tended to avoid bold assertions, preferring to answer ‘tend to agree’ and ‘tend to disagree’, rather than ‘strongly agree’ or ‘strongly disagree’. However, in statement

2, a different response was recorded. Respondents in this study were more likely to support the statement, while the responses in other studies vary (MAS, 2013 and Atkinson et al. 2006).

It should be noted that with regard to attitudes connected to psychological aspects, people have a tendency towards ‘seeking correctness’ (Petty and Caccioppo, 1986, p.127). Some attitudes are definitely perceived as being better than others in particular societies at particular times. For example, people think it is better to be a saver than a spender, as a spender is impulsive and does not think enough about the future. They might even say they are more a saver than a spender. However, in practice they might be more of a spender than a saver. These cultural biases mean that people will report certain attitudes in surveys because they want to say the ‘right’ thing, or what they think is the right thing. They might say things which may not be entirely true. This may be a deliberate lie, or perhaps people really believe it is better to be a saver than a spender, but in practice they do not live up to their attitude. Again, this might be because they are telling a lie, or just lack self-awareness. Similarly, people prefer to say they are organised rather than disorganised.

6.1.2. Managing risk

The domain of managing risk was measured through responses concerning opinions about insurance and using credit cards. Table 6.2 shows that the average (mean) attitude score towards risk and insurance was 56. The detailed responses across the statements are also shown in Table 6.1. It should be noted that in this domain the table only displays the results of this study, as there is no data from previous studies that employed similar questions.

Table 6. 1 Financial attitudes toward managing money

No	Statement	Responses	Indonesia UG 2015	FSA UK 2005	MAS 2013	MAS 18-24 2015	MAS All 2015
			%	%	%	%	%
1	I am very organised when it comes to managing my money day to day.	Strongly agree	30	42	n/a	47	51
		Tend to agree	50	39	67		
		Neither agree nor disagree	12	na	17		
		Tend to disagree	8	13	15		
		Strongly disagree	0	6	n/a		
		Don't know	n/a	n/a	1		
	I am more of a saver than a spender.	Strongly agree	18	19	n/a		
		Tend to agree	53	37	45	n/a	
		Neither agree nor disagree	21	n/a	28		
		Tend to disagree	7	30	26		
		Strongly disagree	0	13	n/a		
2		Don't know	n/a	n/a	1		
	I prefer to buy things on credit rather than wait and save up.	Strongly agree	3	5			
		Tend to agree	17	15	13		
		Neither agree nor disagree	15		15		
		Tend to disagree	52	28	70		
		Strongly disagree	13	51		69	77
3		Don't know	n/a	n/a	2		
	I would rather cut back than put everyday spending on a credit card I couldn't repay.	Strongly agree	25	61			
		Tend to agree	59	23			
		Neither agree nor disagree	9				
		Tend to disagree	6	9		n/a	
		Strongly disagree	1	6			
4		Don't know	n/a	n/a			
	Base (sample size)		521	5328	5079	744	3461

**Questions were adopted from (Kempson and Collard, 2006), and MAS (2013, 2013b;2015b)*

As presented in Table 6.2, in some statements over half the respondents tended to be risk-averse. Nearly one in five believed that having life insurance was important and paying only the minimum amount on a credit card should be avoided in order to reduce the risk of being burdened by debt. However, more than a third of respondents had a neutral opinion across other statements about risk and insurance, and one in three disagreed about the importance of protecting their own property, such as houses or cars, with insurance. Nearly two in ten respondents supported the statement that life insurance purchases were not necessary. This means that they had not made life insurance a priority in their planning. Students preferred to choose the neutral position, presumably because some of them still depended on their parents. Their attitudes and decisions may have also still been influenced by parents, including attitudes towards risk. According to Grable (2008), family situation and family involvement is one of the factors that could affect a person's tolerance of risk. In addition, students also did not have their own income yet and did not possess personal assets, such as a home or car. Therefore, some of them were not aware about asset protection.

Similarly, an interesting finding was found in the focus groups when it came to discussions on managing risk. Some participants did not show any interest in buying insurance because in their opinion the cost of the insurance outweighed the benefit; from their point of view, buying insurance was a waste of money. Details of the excerpts are shown below:

> *"I don't understand the role of insurance in protecting my life and what happens to the money that I have paid as the premium if nothing happens with my health or life?"* (Male, group 2/ Personal finance and Economics II)

> *"My main weakness is managing risk; for example, I often ride a motorcycle without wearing a helmet, and I don't have any insurance to protect my life. For me, it is kind of waste of money to pay the insurance premium"* (Male, group 2/ Personal finance and Economics II).

Table 6. 2 Financial attitudes toward managing risk

Statement	Response percentage				
	Strongly agree	Tend to agree	Neither agree nor disagree	Tend to disagree	Strongly disagree
A. I can generally trust the information provided by insurance companies about their policies.	3	28	37	30	3
B. I am confident that insurance policies would pay out if I ever needed them to.	2	39	39	18	1
C. I accept the risks and choose not to pay for home content insurance.	3	30	37	29	1
D. Paying for life insurance is not necessary.	3	16	22	53	6
E. I feel credit cards are safe and risk free.	3	16	19	51	11
F. I feel comfortable not paying the full billing amount of my credit card as long I make the minimum payment.	1	18	29	45	7

Base= All (521)
**Questions adopted from MAS (2013b)*

The findings show that students were sceptical about the value of insurance. This is understandable since at their stage of life, insurance is still new concept. Therefore they were not aware of the main aim of insurance to cover for the potential of loss and as a risk transfer instrument (Hallman and Rosenbloom, 2003). A previous study by Finira (2013) explains, students' knowledge contributed to a positive attitude towards insurance, showing that the greater the information possessed by the student, the stronger their belief in insurance. Moreover, they are also young and probably do not have mortgages or children, so have very little reason to insure their lives.

This finding is consistent with previous studies, such as Mendari and Kewal (2013), who reported that only one third of students could respond correctly to questions related to the concept of insurance. Moreover, unfamiliarity with the concept might be affected by the low level of ownership of insurance policies in Indonesia. As we have already seen in chapter three, data from World Insurance in 2010 (Swiss Re 2011) shows that Indonesia ranked 11th out of 27 countries in Asia in terms of insurance policy ownership.

6.1.3. Planning-ahead

Table 6.3 presents the details of all respondents' responses concerning planning ahead. It also offers a comparison with previous studies, namely MAS (2013) and MAS (2015). Even though similar studies (e.g. Atkinson, et al., 2006, 2005; McKay, 2011; Definit, 2013) asked similar questions, they are not included in the comparison because they did not show the frequencies of responses in their report.

Table 6.3. shows that regarding planning-ahead, respondents in this study agreed and strongly agreed with the notion that it was important to prepare for their future needs. The vast majority believed that it was better to have a financial cushion for unexpected needs (statements 1 and 5) and that they would save money for big events (statement 2). It was also noted that although they were a long way from retirement, in total nearly nine out of ten agreed or strongly agreed about the necessity of having a plan to cover for old age (statement 6). More than half believed that investing in a pension fund was "the best way to save for retirement" (statement 3). This finding is consistent with findings from Koposko, et al (2016), who argued that university students were starting to consider future financial security. This means that more than half of the respondents believed that one of their financial goals was to prepare for their old age and that this was one of the items on their financial planning lists. No respondents strongly disagreed with the statement and only one percent disagreed. On that basis, we can say that the students typically believed that preparing for the future was important for their wellbeing and financial security.

Table 6. 3 Financial attitudes toward planning ahead (Source: Author's research, MAS (2013; 2015)

No	**Statements**	**Answers**	Indonesia UG 2015	UK ALL 2013	UK 18-24 2015	UK ALL 2015
1	I always make sure I have money saved for a rainy day.	Strongly agree	40	62*	31*	40*
		Tend to agree	**53**			
		Neither agree nor disagree	4	19		
		Tend to disagree	3	18	n/a	
		Strongly disagree	0			
		Don't know		1		
2	I always begin saving well in advance for a big event (Christmas, Eid, etc).	Strongly agree	26			
		Tend to agree	**56**			
		Neither agree nor disagree	11	n/a	n/a	
		Tend to disagree	5			
		Strongly disagree	0			
		Don't know				
3	Pension funds are the best way to save for retirement.	Strongly agree	16			
		Tend to agree	**44**	52		
		Neither agree nor disagree	20	30	n/a	
		Tend to disagree	19	13		
		Strongly disagree	1	5	n/a	
		Don't know				
4	I prefer to live for today rather than plan for tomorrow.	Strongly agree	3			
		Tend to agree	14	25		
		Neither agree nor disagree	18	29		
		Tend to disagree	**53**	44*	46*	49*
		Strongly disagree	12			
		Don't know		2		
5	It is important to have some money saved in case my life changes.	Strongly agree	46			
		Tend to agree	**49**	77*		
		Neither agree nor disagree	5	17	n/a	
		Tend to disagree	1	4		
		Strongly disagree	0			
		Don't know		2		
6	It is important for me to plan how to pay for the care I will need in my old age.	Strongly agree	43	42*	24*	42*
		Tend to agree	**50**			
		Neither agree nor disagree	6	28		
		Tend to disagree	1	26	n/a	
		Strongly disagree	0			
		Don't know		3		
		Base (Sample size)	521	5079	744	3461

** Questions were adopted from Kempson and Collard (2006); Atkinson et al. (2006) and MAS (2013;2013b)*

Comparing the results with previous studies in the Table 6.3, the total percentage of those who ‘agreed’ and ‘strongly agreed’ with the statements about planning-ahead was higher than in the MAS’s study (2013). A quite different result was shown in planning for costs in old-age; about a quarter of respondents in the UK in MAS (2013) tended to disagree with the statement, whereas the figure was only one percent in Indonesia. Moreover, the level of neutral opinions was also higher in MAS (2013), nearly one in three, while it was only minority in this study (Table 6.3). Again, as explained by McLeod (2009), attitude is related to the psychological state, and people tend to hold socially accepted values. Students might state certain preferences, but perhaps these are not their actual beliefs.

6.1.4. Choosing products

The next domain, choosing products, comprised three statements designed to record students’ beliefs about choosing products. It is evident that the vast majority of respondents agreed and strongly agreed with making price comparisons before purchasing items, especially if the item they wanted to buy was expensive. Only two percent and one percent respectively did not agree and strongly disagreed with this statement. On the whole then, they believed that searching for as much information as possible was important. Moreover, most of the respondents were also aware of the importance of reading contracts before signing them. In total, roughly nine in ten of the respondents agreed or strongly agreed with each statement (Table 6.4).

Table 6. 4 Financial attitudes towards choosing products

Planning-ahead	Strongly agree	Tend to agree	Neither agree nor disagree	Tend to disagree	Strongly disagree
	(% respond)				
A. It is important to compare prices before deciding whether to buy (especially for expensive items).	36	52	8	2	1
B. It is important to search for information before deciding to buy.	35	56	6	2	0
C. It is important to read carefully the agreement/contract before signing it.	50	44	4	2	0

**Base= All (521*

** Questions were adopted from MAS (2013b, 2015b)*

The survey results show that respondents have a favourable attitude to the process of choosing products. Ideally, before making a purchase, customers need to collect information in advance, such as the product specification, the price, the warranty policies, the payment terms, and so on. The more complex or expensive the product, the more intensive the process of information searching (Sumarwan, 2011).

6.1.5. Staying updated

Respondents were asked about the importance of keeping up-to-date with financial information, such as rates of inflation and interest. Three quarters agreed that it was important to stay up-to-date with financial matters (see Table 6.5).

Table 6. 5 Attitudes towards staying up-to-date with financial matters

The statement	(% respond) Strongly agree	Tend to agree	Neither agree nor disagree	Tend to disagree	Strongly disagree
It is important for people like you to keep up-to-date with what is happening with financial matters generally, such as the economy and the financial services sector.	24	50	24	2	0

**Base= ALL (521);*
** Questions were adopted from Kempson and Collard,. (2006)*

6.2. The overall level of financial attitudes

In summary, the results of the survey indicated that, in terms of attitude, the majority of respondents ‘tended-to-agree’ with the need to manage money, plan ahead, and choose products carefully. More than two thirds of respondents agreed or strongly agreed with choosing saving over spending, preparing retirement plans, planning financially for retirement, purchasing life insurance, paying debts in full and on time, and saving money. A slight difference in the results was shown when it came to the attitude towards insurance; even though the respondents tended to agree with avoiding risk, in some statements they tended to be neutral. A summary of responses across all domains is shown in Table 6.6.

Table 6. 6 Summary of financial attitudes

Statements	Strongly agree	Tend to agree	Neither agree nor disagree	Tend to disagree	Strongly disagree
MANAGING MONEY					
1. I am very organised when it comes to managing my money day to day.	30	**50**	12	8	0
2. I am more of a saver than a spender.	18	**53**	21	7	0
3. I prefer to buy things on credit rather than wait and save up.	3	17	15	**52**	13
4. I would rather cut back than put everyday spending on a credit card I couldn't repay.	25	**59**	9	6	1
MANAGING RISK					
5. I can generally trust the information provided by insurance companies about their policies.	3	28	**37**	30	3
6. I am confident that insurance policies would pay out if I ever needed them to.	2	**39**	**39**	18	1
7. I accept the risks and choose not to pay for home content insurance	3	30	**37**	29	1
8. Paying for life insurance is not necessary.	3	16	22	**53**	6
9. I feel credit cards are safe and risk free.	3	16	19	**51**	11
10. I feel comfortable not paying the full billing amount of my credit card as long I have made the minimum payment.	1	18	29	**45**	7
PLANING AHEAD					
11. I always make sure I have money saved for a rainy day.	40	**53**	4	3	0
12. I always begin saving well in advance for a big event (Christmas, Eid, etc).	26	**56**	11	5	0
13. Pension funds are the best way to save for retirement.	16	**44**	20	19	1
14. I prefer to live for today rather than plan for tomorrow.	3	14	18	**53**	12
15. It is important to have some money saved in case my life changes dramatically.	46	**49**	5	1	0
16. It is important for me to plan how to pay for the care I will need in my old age.	43	**50**	6	1	0
CHOOSING PRODUCTS					
17. It is important to compare prices before deciding whether to buy (especially for expensive items).	36	**52**	8	2	1
18. It is important to search for information before deciding to buy.	35	**56**	6	2	0
19. It is important to read carefully the agreement/contract before signing it.	50	**44**	4	2	0
STAYING UP-TO-DATE					
20. It is important for people like you to keep up-to-date with what is happening with financial matters generally, such as the economy and the financial services sector.	24	**50**	24	2	0

** Questions were adopted from Kempson and Collard,. (2006); MAS (2013; 2013b; 2015b)*

The average scores for the various dimensions of attitudes are presented in Table 6.7, while more details of statistics data is presented in Appendix 20. Table 6.7 shows that the mean attitudes score was 70. The highest mean score was in choosing products (82), while the attitudes toward risk and insurance was the lowest (56). Again, familiarity with the issue is a plausible explanation. According to the life-cycle hypothesis theory, respondents at the age of the respondents are still in the period of 'active consumer' (Furtuna, 2007). With regard to allocating money, they have started to become aware of saving and expenses, but they are more likely to use most of their income for consumption. More detail about statistical descriptive data is provided in Appendix 18.

Table 6. 7 Level of financial attitudes

Domain	Score (average/mean score)
Attitudes (general)	**70**
a) Managing money	71
b) Managing risk	56
c) Planning ahead	76
d) Choosing products	82
e) Staying informed	79

6.3 How does financial capability vary according to different groups?

In the section above this study discussed the differing financial attitudes of the students. To explore the effect of demographic and socioeconomic variables further, this section will discuss the level of financial attitudes among respondents differentiated according to a number of factors: gender, field of study, year enrolled, work experience, and income. Further analysis examined the differences between groups and financial attitudes (in comparison to the mean of the total score). The details of each category are presented below.

6.3.1 Field of study

Based on their field of study, respondents were classified into two groups, namely economics-business major (coded 1) and non-economics-business major (coded 0). As expected, respondents from the former group were more likely to record a higher score in all domains (see Appendix 19).

In the domain of managing money, about half of non-economics and business students tended to choose ‘agree’ rather than ‘strongly agree’. In addition, across all respondents, neutral opinions were relatively low, with a higher percentage recorded by non-economics and business students. Meanwhile, in the domain of managing risk, the number of respondents who chose the neutral position was higher compared to other domains. The attitudes in this domain varied between ‘agree’, ‘neutral’ and ‘disagree’, and there is no particular pattern between groups. Meanwhile, respondents from both groups tended to show their support of the statements about ‘planning ahead’, although a slightly higher percentage was shown by those from economics and business backgrounds, who scored lower in statement 11.

In addition, the majority of respondents agreed and strongly agreed with the statement about choosing products, with a higher percentage among those from economics and business backgrounds. A noticeable difference was shown in statement 19, where six out of ten of those from economics and business backgrounds tended to indicate ‘strongly agree’.

The results from the independent t-test analysis confirmed that based on the field of study, both groups showed a significant difference in terms of financial attitudes in general, therefore Ho was rejected (Table 6.8). From Table 6.8 it can be seen that the average score for economics-business major respondents was 73, while those from non-economics-business backgrounds scored 69.

Table 6.8 also shows differences were found within each domain, except for ‘planning ahead’ and ‘staying informed’. Both groups showed similar attitudes towards financial planning for their future. A bigger gap was found between economics-business and non-economics-business students in scores for managing money (70 vs 78, respectively), while the difference was closer when it came to planning ahead (76 vs 77).

Table 6. 8 Independent samples t-test between financial attitudes and field of study

Attitudes	Non-Economics and Business major (Score 0-100)		Economics and Business major **(Score 0-100)**		T-test (p)
	Mean	Standard Deviation	Mean	Standard Deviation	
Financial Attitudes	69	8	73	9	0.000***
a. Managing money	70	14	78	14	0.000***
b. Risk and c. insurance	56	12	61	13	0.003**
d. Planning ahead	76	11	77	10	0.352
e. Choosing products	82	13	86	12	0.030**
f. Staying informed	79	15	82	15	0.114

***significant at p<0.001
**significant at p<0.05

6.3.2. Personal Finance course

The study then examined the differences between those who had taken the personal finance module and those who had not. Appendix 20 presents all groups responses; those who had taken the course were coded as 1, while those who had not taken the course were coded 0.

In general, there is no specific pattern between those who had taken the personal finance course and those who had not when it comes to managing money (Appendix 20). The differences in answers between the two groups is not striking. A slight difference was found in the domain of managing risk; those who had taken the course tended to state ‘agree’ and ‘strongly agree’, especially in statements 5, 6, and 7, while the other group tended to record neutral opinions. Moreover, the domain of planning-ahead contained all positive statements; thus it was expected that those who had attended the course would record higher scores. However, the difference is not very marked. Both groups agreed and strongly agreed with the statements. Similarly, in the domain of choosing products, there is no noticeable difference between the groups. The majority of respondents agreed and strongly agreed with the positive statements about choosing products, with a higher percentage of those who had taken the course strongly agreeing. Meanwhile, in the domain of staying informed, two in ten respondents from both groups recorded a neutral position, while the rest supported the statement with a similar pattern.

However, after calculating all the responses, it was found that those who had taken the personal finance course were more likely to record higher scores in all domains, as shown by the mean score (see Table 6.9). The results of the independent T-Test analysis supported this finding, wherein the p-value was found to be less than 0.05. Therefore, Ho was rejected and we may therefore say that a significant difference was found in terms of attitudes in both groups (Table 6.9).

This study shows that students of economics and business, as well as those who took the personal finance class, had more positive attitudes towards money matters, shown by their higher mean scores (see Table 6.9). This is one key finding for our understanding of the influence of financial education; exposure to financial topics is assumed to affect attitudes and intention to conduct financial planning. Students will be more confident in making decisions when they have more information about related issues. This finding is in line with research conducted by Haryono (2013), who explains that taking such classes has a positive effect on developing the economic rationality of students. However, it should be noted it could also work the other way, wherein those with positive attitudes are more likely to take relevant courses.

Table 6. 9 Independent samples t-test between attitudes and the Personal Finance course

Area	Had not taken Personal Finance course (Score 0-100)		Had taken Personal Finance course (Score 0-100)		T-test (p)
	Mean	Standard Deviation	Mean	Standard Deviation	
1. Attitudes	69	8	75	9	0.000***
- Managing money	71	14	76	13	0.005**
- Risk and insurance	56	12	63	13	0.000**
- Planning ahead	75	11	78	10	0.005***
- Choosing products	82	13	86	13	0.046**
- Staying informed	79	15	80	15	0.651

***significant at p<0.001
**significant at p<0.05

6.3.3. Level of study/year enrolled

The differences between groups based on year enrolled were then examined. First year students were coded 0 and second year and above students were coded 1. As expected, the senior students showed a more favourable financial attitude, as shown by the higher average score (see Appendix 21).

Exploring the responses (Appendix 21), a similar pattern was found in respondents' attitudes across all years of study. As found in the other groups, respondents tended to choose 'strongly agree' and 'agree' for the positive statements, although a slightly higher level was found among senior students. In addition, more than half of senior students agreed with statements 8 and 9, while a lower number of first year students agreed. In all statements, among those who had neutral opinions, first-year students tended to have higher percentages.

As in other groups, in the domain of planning ahead, all respondents exhibited similar patterns, although, as predicted, the second year and above respondents were more likely to record a higher score. A slight difference might be found in statement 13, where a neutral opinion was found more frequently than in other statements, with a higher percentage found in the first-year students, wherein it was recorded by one in three, and it almost double up the senior students. Showing a similar pattern to other groups, the majority of respondents also agreed and strongly agreed with the statement about choosing products. The answers were found to vary, although a slightly higher percentage was recorded by those in the second year and above.

From the results of the independent samples t-test, it was noted that there was a significant difference between the groups and financial attitudes. Therefore, Ho was rejected. The difference was found in the domains of financial attitude, except in the domain of choosing products and staying informed. The study also shows that across all domains, first year students scored lower when it came to financial attitudes (Table 6.10).

The results indicated that financial attitudes increase with the level of study. This indicates that students in higher years tend to have more maturity and start thinking about financial planning to obtain prosperity in the future. This finding is in line with Volpe, 1998; Shaari, et al. 2013, whose results indicated that senior students were more likely to save and to think about their future.

Table 6. 10 Independent samples t-test between financial attitudes and level of study

Area	First Year (Score 0-100)		Year 2 and above (Score 0-100)		T-test (p)
	Mean	Standard Deviation	Mean	Standard Deviation	
Attitude	67	8	71	8	0.000***
- Managing money	69	14	72	14	0.036**
- Risk and insurance	53	11	57	12	0.000***
- Planning ahead	73	10	77	11	0.001**
- Choosing products	81	14	83	13	0.098
- Staying informed	78	14	80	15	0.183

***significant at p<0.001
**significant at p<0.05

6.3.4. Gender

As shown in chapter three, females and males tend to have different attitudes towards money. According to Barber and Odean (2001), men and women respond to risk differently, with men (especially single men) tending to show ‘overconfidence’ (p.262) and taking more risks than women. The term ‘gender’ is often linked to the stereotyping of male and female characteristics; for example, men are rational, while women tend to use emotions (Robb and Sharpe, 2009). There is a cultural belief ‘that men should, and do, take greater risks than women’ (Slovic, 1966, p.169). Stereotyping may establish different perceptions that result in different attitudes between men and women, including attitudes to finance. This may be because women tend to be more cautious when taking action and prefer to avoid risks that could lead to losses in the future (Crow et al., 1991; Grable and Roszkowski, 2007; Dwyer, et al, 2013).

Therefore, it was expected that there would be differences in financial attitudes between men and women. The findings of this study show that female students have a better attitude score (see Table 6.11). Comparing gender in each attitudes statement, Appendix 22 shows that women were more likely to choose ‘strongly agree’ than men in the domain of managing money. In general, women also showed higher support for the statements in the domain of managing risk (statements 4, 8, and 10), although they also offered a higher percentage of ‘neutral’ opinions (statements 5,6, and 9). Meanwhile, there is no specific pattern in other domains. For example, in attitudes towards choosing products, the majority of respondents agreed and strongly agreed with the statements, although a slightly higher percentage was recorded by women.

In the results of the independent t-test analysis, a significant difference was only shown in the domains of managing money, risk and insurance, and planning-ahead. However, in general there was a significant difference between genders when it came to attitude. The details are shown in Table 6.11.

Table 6. 11 Independent samples t-test between financial attitude and year of study

Area	Female (Score 0-100)		Male (Score 0-100)		T-test (p)
	Mean	Standard Deviation	Mean	Standard Deviation	
1. Attitude	71	9	68	8	0.000**
- Managing money	72	14	69	14	0.004*
- Risk and insurance	58	12	53	11	0.000**
- Planning ahead	77	10	74	11	0.005*
- Choosing products	82	14	82	13	0.818
- Staying informed	80	15	78	15	0.122

***significant at p<0.001*
**significant at p<0.05*

As the table shows, based on the mean score it was found that women have better scores when it comes to attitudes. Thus, female respondents showed better attitudes compared to males. They were more likely to score better in all domains of attitudes, except when it came to choosing products, where respondents in both groups recorded exactly the same score of 82. The results of the independent samples t-test analysis (Table 6.11) show that a significant difference was found across all domains, except choosing products and staying informed. However, in general there was a difference between gender and financial attitudes (p 0.000, less than alpha at the level of confidence of 5%). Therefore, Ho was rejected.

The focus groups also demonstrated that females tend to agree with positive statements on financial attitudes, for example in the excerpts below:

> *"I really agree that we have to prepare for the future, for example to buy a house, for retirement, or to take care of our parents. That's our obligation as their child. If my husband allowed me, I want to ask them to live with us when they are old..."(Female/ 19/ Personal finance and Economics I).*

> *"Savings are really important as a buffer if something happened to us, I really agree with that, no doubt about it… But, the problem is…it is hard to put the money in the saving account; I am often tempted to buy something that's not in my plan…" (Female/ 21/ Science II)*

Moreover, some participants' opinions about health insurance were also recorded, for example in the excerpts below:

> *"I am sure the insurance will cover the expenses if something happened to us as a policy owner. It is important to be protected by insurance. Especially if we remember that the cost of healthcare is very expensive. I know the government now provides us with public health insurance, but as we know, it is very basic and the queue is very long. Some hospitals often reject us if they know we use national health insurance…But, I am worried about the future, so for me being protected by insurance is important". (Female/ 21/ Personal finance and Economics I).*

> *"I don't think that we really need insurance… The process is very complicated. The process to claim, I mean. At the moment, the government provide us with a health care facility, although it only covers the very basic things, but I think it is enough… and later if we have a job, usually the company will provide us with insurance…" (Male/20/Common II).*

This finding is consistent with the previous study by Edwards et al, (2007), and Carpenter and Moore (2008), who showed that men tend to be more financially independent and more confident in managing their finances than women. Female students were less financially independent, less confident and less secure. Similarly, Grable and Roszkowski (2007), and Dwyer (2013), found that female students are less comfortable with debt than males, and women are more likely to have a lower risk tolerance than men.

Other previous studies have also shown that women are less tolerant of risk, and are more likely to have higher levels of anxiety, so they tend to be more alert and act more cautiously. (Roszkiwski et al., 1993). Other studies have revealed that men are better than women at managing finances, and have been found to have more self-confidence in financial decision-making than women, who are more likely to be risk-averse (Barber and Odeon, 2001; Atkinson et al., 2005; Ansong and Gyensare, 2012).

Men and women also had different motivations in terms of finance; for example, the findings across all focus groups in this study show that male participants were more interested when it came to planning-ahead, especially investing for the future, while female participants were more interested in managing money and were more likely to prioritise safety. This can be shown in female attitudes toward managing risk, which showed increased importance of having insurance. Differing gender roles may perhaps be one plausible explanation for these differences. Especially in Indonesia, many parents still raise boys and girls differently; men are expected to be the breadwinners and are more likely to have more autonomy in the family and society, whereas women are expected to focus more on managing the household chores.

6.3.5. Work experience

The next variable to be analysed is work experience. The study examines the differences between those who had work experience (coded 1) and those who did not (coded 0). As expected, those who had experience exhibited better financial attitude scores (Table 6.12). Among all statements the response patterns were broadly similar. Although there was variation in the domain of managing risk, in general there were no great differences between groups. However, those who had no work experience had a higher number of neutral answers when answering questions on managing risk (see Appendix 23).

As in other groups, both those with work experience and those without showed support for the positive statement concerning attitudes towards choosing products. However, those with work experience showed a slightly higher percentage in some statements (see Appendix 23). As expected, a better score was found among those with work experience (see Table 6.12).

Similarly, as documented in other groups, the majority of respondents agreed and strongly agreed with the statement about choosing products, with a higher percentage recorded by those with work experience.

Table 6.12. shows that there was a significant difference in terms of financial attitudes between the two groups. Respondents who had experience recorded higher scores in all domains except staying informed, as shown by the mean scores in Table 6.12. The t-test analysis confirmed that in general there was a significant difference between those with and without work experience and financial attitudes Therefore, Ho was rejected (see Table 6.12).

Table 6. 12 Independent samples t-test between financial capability and work experience

Area	No work experience (Score 0-100)		With work experience (Score 0-100)		T-test (p)
	Mean	Standard Deviation	Mean	Standard Deviation	
1. Attitude	68	8	71	9	0.000**
- Managing money	69	14	74	15	0.000**
- Risk and Insurance	55	12	58	12	0.025*
- Planning ahead	75	10	77	11	0.038*
- Choosing products	81	13	84	13	0.004*
- Staying informed	79	14	79	14	0.840

**significant at p<0.001; *significant at p<0.05

6.3.6. Income

As we saw in chapter three, those with higher incomes are more likely to record better financial attitudes. Therefore, it was expected that financial attitude would vary depending on the level of income. As in the previous chapter, in terms of income, respondents were classified into one of four quartiles. As was discussed there, the minimum income per month in Indonesia is Rp 300,000, whereas the maximum is Rp 4,000,000. The average income Rp. 1,069,481. Those who had an above average income were more likely to show better attitudes. Looking to each domain, significant difference were only found in the domains of managing risk and staying informed (Table 6.18). However, as seen in Table 6.13, the ANOVA test confirmed that there was a significant difference between income and financial attitudes in general. Table 6.18 shows a noticeable difference between income groups and the level of financial attitudes in general, which therefore means that Ho was rejected.

Table 6. 13 Analysis of Variance (ANOVA) of financial attitudes and income

Income		N	Mean	Std. Deviation	F	Prob.
Managing money	<= 800000	198	71	13.763	1.817	.143
	800001-1000000	160	70	14.381		
	1000001-1200000	42	75	16.472		
	>1200000	121	73	14.411		
Managing risk	<= 800000	198	56	12.275	2.799	.040**
	800001-1000000	160	55	12.202		
	1000001-1200000	42	61	12.451		
	>1200000	121	57	11.816		
Planning-ahead	<= 800000	198	75	10.153	2.284	.078
	800001-1000000	160	75	10.705		
	1000001-1200000	42	79	9.428		
	>1200000	121	77	11.282		
Choosing product	<= 800000	198	80	13.707	2.603	.051
	800001-1000000	160	83	13.363		
	1000001-1200000	42	85	10.816		
	>1200000	121	84	13.578		
Staying informed	<= 800000	198	76	15.394	4.564	.004**
	800001-1000000	160	81	14.070		
	1000001-1200000	42	83	13.910		
	>1200000	121	80	15.706		
Attitudes Total	<= 800000	198	69	8.185	4.982	.002**
	800001-1000000	160	69	8.270		
	1000001-1200000	42	74	7.772		
	>1200000	121	71	8.257		

***significant at $p<0.001$; **significant at $p<0.05$

As shown in Table 6.13, based on the mean scores, those with a higher income were more likely to have better attitudes. However, an interesting finding is shown with those in the highest income group (Q4), since the score was slightly lower than those in Q3. The ability to engage with personal finance activities might explain this.

Findings from Joo and Grable (2004) and Tang et al. (2006) demonstrate that people with higher incomes have more ability to make ends meet, have fewer economic difficulties, and they have a better evaluation of financial matters.

6.3.7. Financial knowledge

As we saw in chapter 3, we know that knowledge has a connection with attitudes. Thus, this study also examined the relationship between financial knowledge and financial attitudes. The result is showed in Table 6.14. Using a Pearson Correlation test, as expected, this study found that financial knowledge is positively associated with all domains of financial attitudes, although the correlation is moderate to weak (see the Pearson coefficient correlation in Table 6.14). Having a good understanding of a particular issue influences attitudes; for example, those who are less-informed will more likely express a ‘neutral’ opinion as they do not have a good understanding of the issue (Evans and Durant, 1995).

Table 6. 14 Correlation between financial knowledge and financial attitudes

		Attitude total	Attitude Managing money	Attitude Managing risk	Attitude Planning ahead	Attitude Choosing product	Attitude Staying informed	Financial Knowledge
Attitude total	Pearson Correlation	1	.707**	.678**	.752**	.578**	.235**	.380**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	521	521	521	521	521	521	521
Attitude Managing money	Pearson Correlation	.707**	1	.294**	.396**	.299**	.051	.355**
	Sig. (2-tailed)	.000		.000	.000	.000	.241	.000
	N	521	521	521	521	521	521	521
Attitude Managing risk	Pearson Correlation	.678**	.294**	1	.256**	.130**	.036	.195**
	Sig. (2-tailed)	.000	.000		.000	.003	.411	.000
	N	521	521	521	521	521	521	521
Attitude Planning ahead	Pearson Correlation	.752**	.396**	.256**	1	.417**	.151**	.282**
	Sig. (2-tailed)	.000	.000	.000		.000	.001	.000
	N	521	521	521	521	521	521	521
Attitude Choosing product	Pearson Correlation	.578**	.299**	.130**	.417**	1	.121**	.209**
	Sig. (2-tailed)	.000	.000	.003	.000		.006	.000
	N	521	521	521	521	521	521	521
Attitude Staying informed	Pearson Correlation	.235**	.051	.036	.151**	.121**	1	.102*
	Sig. (2-tailed)	.000	.241	.411	.001	.006		.020
	N	521	521	521	521	521	521	521
Financial knowledge	Pearson Correlation	.380**	.355**	.195**	.282**	.209**	.102*	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.020	
	N	521	521	521	521	521	521	521

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

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

6.4 Factors that determine financial attitudes

Multiple regression was applied in order to examine the factors that influence financial attitudes. Ten variables were included in the analysis, one dependent variable, financial attitudes, and nine independent variables: gender (male and female); year enrolled (first year and second year and above); attendance on the personal finance courses (yes or no); field of study (economics-business and non-economics-business); work experience (yes or no); discussing money with family (yes or no); discussing money with friends (yes or no); income; and financial knowledge. Financial knowledge also was included in the analysis, as it was predicted to be an influential factor in determining financial attitudes. The level of confidence was set at 95% (i.e. 0.05).

The results of the regression analysis indicate that gender, field of study, level of study/year enrolled, work experience and discussing money with family were the factors that had a significant positive influence on financial attitudes. As financial knowledge was also set as a dependent variable of financial attitudes, it was found that it has a positive and significant influence on attitudes (see Table 6.15).

The model for financial attitudes can be summarised by the following equation:

Financial attitudes = 58.663– 3.400 gender +1.684 year enrolled + 2.395 field of study + 1.765 working experience+ 2,868 discussing money with family + 0.137 financial knowledge

The results suggest that several dependent variables were important in determining financial attitudes. As seen from the model above, female students were 3.4 times more likely to have better financial attitudes, and if one unit of level of study increased, it would raise financial attitudes by 1.684. In terms of field of study, students from Economics or Business backgrounds were 2.395 times more likely to have a good financial attitude. Similarly, when students had work experience, this would lead respectively to 1.765 increases in the level of financial attitudes. Meanwhile, students who had the opportunity to discuss money with their family were 2.868 times more likely to have a better financial attitude. If one unit of financial knowledge increased, it would also raise the level of financial attitudes by 0.137.

Table 6. 15 Regression coefficients of financial attitudes

No	Dependent variable	B	Beta	Sig.
1	(Constant)	58.633		.000
2	Gender dummy (1=male, 0=female	-3.400	-.202	.000***
3	Year enrolled (1=year 2 and above; 0=year 1)	1.684	.088	.029**
4	Field of study category (1=Economics-Business major; 0=non-Economics-Business major)	2.395	.095	.016**
5	Personal finance category (1=had taken Personal Finance course; 0=had not taken Personal Finance course)	2.075	.074	.054
6	Work experience (1=had work experience; 0=no working experience)	1.765	.107	.008**
7	Discussing money with family (1= yes; 0= never)	2.868	.115	.004**
8	Discussing money with friends (1= yes; 0= never)	-.433	-.021	.586
9	Income	.199	.012	.764
10	Financial knowledge	.137	.319	.000***
	F	18.507		
	Sig	0.000		
	R	0 .496[a]		
	R2 adjusted	0.246		

***significant at p<0.05; ** significant at p<0.01*

The regression analysis also showed, interestingly, that personal finance had no significant influence on financial attitudes. One plausible explanation is because attitudes are not something that change rapidly. Changing attitudes involves not just the cognitive dimension, but the emotional one too. What’s more, they can also be influenced by things such as family influence, socio-cultural background and economic situation (Pickens, 2005, p.50).

Additional opinions given in the focus groups about the factors that influence financial capability included: attitudes towards money; character; motivation for a better future; behaviour (such as saving discipline); exposure to advertising and information; and the existence of role models, such as parents and peer groups. Some excerpts reflecting this are given below:

> *“Environment, such as friends and parents, can influence lifestyle; for example, someone who lives with parents who are disciplined in saving money will receive ideas about attitudes toward money and get positive values from them, so they adopt these values as well”* (Female, group 4/Sciences II).

> *“Character. Someone who likes to try something new, and is not afraid of challenge. In addition, the availability of information technology also influences it”* (Male, group 5/Common I)

This study shows that gender, attending the personal finance courses and discussing finance with the family have a stronger effect than other variables, as shown by the B coefficient (see Table 6.14). The effect of gender and study background, including attendance on the personal finance courses, have been discussed in the above section. Meanwhile, discussing money with the family appears as financial socialisation, which affects the development of positive financial attitudes. The findings are consistent with previous research, conducted by Jorgensen (2007), who found that students who learned about managing finances from their parents had better financial attitudes compared to those who did not. As discussed in chapter two, Ajzen (1991) explain that, in general, individuals will have a positive attitude toward a certain behaviour when they believe that it will be associated with something positive, and vice versa. They can be influenced by past experiences or by information from other parties, such as by observing the experiences of family and friends. Moreover, it also can be determined by other factors that can stimulate the feelings to perform a specific behaviour.

6.5 Conclusion

In the survey, respondents were more likely to give positive responses towards the statements. However, slightly different responses were recorded in statements about risk and insurance, where there was tendency to offer neutral responses. The findings from the focus groups showed that students still find it difficult to understand the concept of insurance. Participants discussed their weaknesses in financial understanding, and many of them reported that they found it difficult to manage risk. Among the participants who reported a weakness in this area, knowledge and understanding of the concept of risk management was the main issue. They felt that it was difficult to understand how insurance works and the costs and benefits of taking out insurance as a form of financial protection.

As documented during the discussion on financial knowledge in chapter five, familiarity with the concept is predicted to be one plausible reason for this finding. Participants in the focus groups argued that the cost of insurance was greater than the benefit, and in their opinion paying the insurance premium was a waste money. In Indonesia, having an insurance policy for health and wealth protection is still not popular and the percentage of people who buy insurance is still low, at less than 10% (Setiawan, 2013). Some of the reasons for this are that students are still young, healthy and able to work productively.

Overall, this study found a significant difference between financial attitudes and all the factors considered, namely field of study, attendance on the personal finance course, year of study, gender, work experience and income level. Respondents from economics-business majors were more likely to have a better score when it came to financial attitudes. What’s more, there was a significant difference in attitudes between those who attended the personal finance course and those who hadn’t, with respondents who had taken the module more likely to achieve an above average score. Gender also made a difference when it came to financial attitudes. Similarly, in terms of year enrolled, work experience and income, those in the second year and above with a higher income and who had work experience were more likely to have a more favourable attitude. However, one interesting finding was that although those who had attended the personal finance course were more likely to achieve a higher score, the regression analysis showed that the course did not have a significant influence on financial attitude.

Many factors can be attributed as the determining factors of financial attitude. In this study, it has been shown that year of enrolment, study background, attendance on the personal finance course, financial socialisation (from parents and friends) and work experience proved to be determining factors of financial attitude. Financial knowledge was also found to be one of the determining factors, but its effect was not as strong as the others. This suggests that one way to increase financial attitude is to encourage parents to be more involved in discussing money matters with children.

One of key contribution of this chapter is the revelation that direct experience may increase financial attitude. Thus, when developing financial education, it is suggested that more practical content be included, as this can have a longer and more stable effect on developing knowledge.

CHAPTER 7

FINANCIAL BEHAVIOUR OF INDONESIAN STUDENTS

The next area that will be discussed is financial behaviour. Positive financial behaviour, according to MAS (2015, p. 7), relates to ‘managing money well day to day; preparing for and managing life events; and dealing with financial difficulties’. As explained in chapter four, behaviour in this study is measured across several domains, namely managing money, planning-ahead, choosing products, and staying up-to-date. The aim of this chapter is to present data on these different aspects of financial behaviour among university students and to examine how behaviour varies according to different groups based on gender, year of enrolment, field of study, attendance on the personal finance course, work experience and income. The chapter will also identify the factors that influence financial behaviour among university students. Where possible, relevant findings from the focus groups will also be discussed.

This chapter will be divided into three parts. The first will examine financial behaviour across several domains: managing money, planning-ahead, managing risk, making choices, and staying informed. It will also explore the effect of financial socialisation by family and friends. The second part will examine differences in students’ financial behaviour within all groups. There will also a discussion about the link between financial knowledge, attitudes and behaviour. The final part will examine the drivers of financial behaviour.

7.1 Financial behaviour across domains

As discussed in previous chapters, the questions used in this study were mainly adapted from previous studies conducted in the UK for FSA (Kempson et al, 2005; Kempson and Collard, 2006; and Atkinson et al, 2006), and MAS (2013). Some questions were also modified from the section on attitudes, combined with some new questions. Therefore, where appropriate, comparisons with previous studies will be made here, including the results from a previous similar study in Indonesia conducted by Definit in 2013 for FSA Indonesia. It should be noted that, although MAS (2015) published a new study on financial capability, only limited similar data was found in the report, although this study will offer comparisons where applicable and possible. In order to compare across existing studies, the following terms will be used across comparison tables in this chapter:

No	Subject	Source
1	Indonesian undergraduate (UG) 2015	This study
2	Indonesian households 2013	Definit (2013)
3	UK All (general population) 2005	Atkinson et al, 2006
4	UK All (general population) 2013	MAS 2013
5	UK undergraduates (UG) 2015	MAS 2015
6	UK All (general population) 2015	MAS 2015

To begin with, the following section will present findings concerning student's behaviour when it comes to managing money. Their behaviour in other domains will be discussed later.

7.1.1 Managing money

In this study, the term managing money refers to behaviour related to keeping track of income and expenses, and how to make ends meet.

7.1.1.1 Keeping track of income and expenditure

In terms of keeping track of income and expenditure, respondents in the survey were asked whether they kept track of their money, with two options, 'Yes' or 'No'. It was found that fewer than two in ten respondents reported that they kept track of their money (Table 7.1). This seems surprising, given some of the findings in chapter six, where we saw that the majority agreed with the need to be organised with money. This shows that attitudes may not reflect actual behaviour. Women and men showed almost similar scores with regard to keeping track of their income and expenses (see Figure 7.1). Slightly different patterns were shown by other groups. First year students were the least likely to keep track of their income and expenditure, with only about one in ten doing so. Conversely, the economics and business students, and those who had attended the personal finance course, as expected, were more likely to keep track of their income and expenses (see Figure 7.1).

Table 7. 1. Keeping track of income and expenditure

No.	Question: *Do you keep track of your income and expenditure?*	Indonesia undergraduates (2015)	Indonesia households (2013)	UK All (2013)
		(%)	(%)	(%)
1	Yes	17	13	83
2	No	84	87	16
	Total	100	100	100
	Base (sample size) ALL	521	450	5079

Note: no frequency data were presented in UK 2005 survey (Atkinson et al, 2006) and MAS 2013.
**Questions were adopted from (Kempson and Collard, 2006), and MAS (2013; 2013b)*

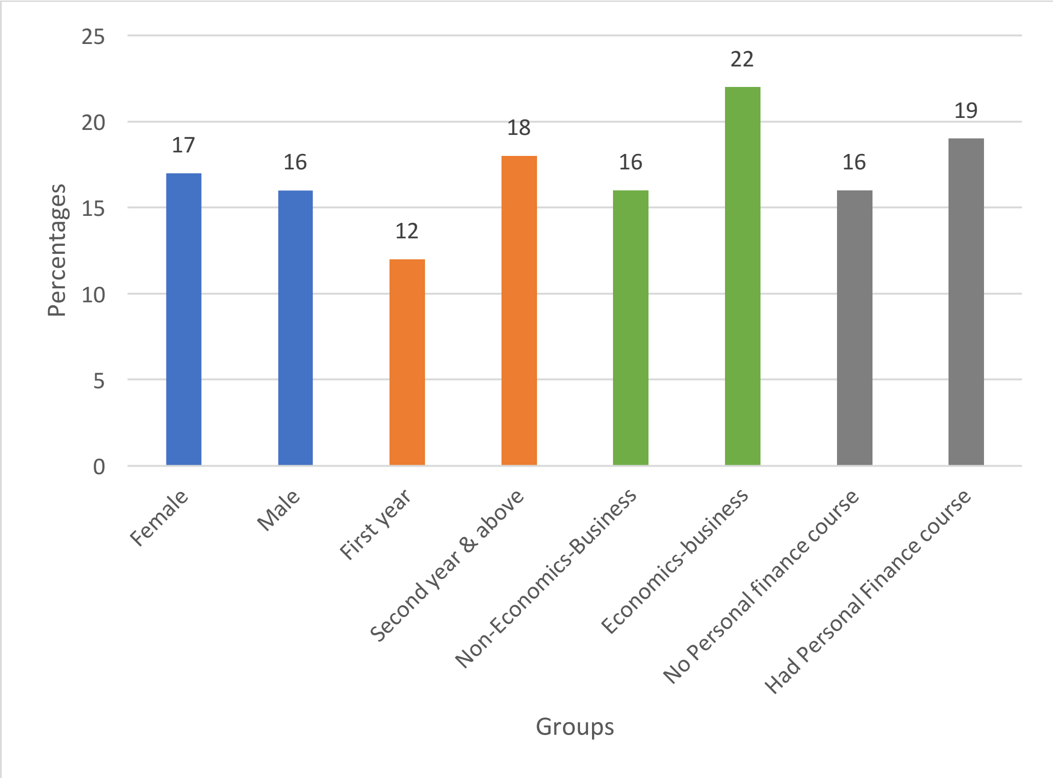


Figure 7. 1 Keeping track of income and expenditure across all groups

The survey also showed that for those who kept track, writing on a piece of paper was the most popular method (with nearly three quarters stating that they used this technique), followed by checking bank balances and keeping track in their head. Together, both of these methods were used by about four in ten of the respondents that kept track of their spending (see Table 7.2). Table 7.2 shows that the techniques used to keep track of spending were different to those discussed in MAS (2013). This is perhaps because online banking is still quite new for people in Indonesia and, at the moment, most people only use this facility to make a payment. In Indonesia, those who have a bank account usually check their statements using a cash machine, or go directly to the bank to print their current statement. This result is consistent with a previous study on Indonesian households (Definit (2013), (*see* Table 7.1).

Table 7. 2 Methods of keeping track of income and expenditure (multiple answer question)

No.	Question: *How do you keep track of your income and expenditure?*	Indonesian undergraduates (2015)	UK All (2013)*
1	A piece of paper	73	15
2	In my head (mentally)	40	24
3	By checking my bank balance	40	70
4	An account book or notebook	40	1
5	A spreadsheet	19	17
6	By reviewing my bank statements	17	50
7	A financial software package	9	1
8	An online budgeting tool	6	5
9	Other (specify)	6	2
		Base (sample size) = 81 *(all those who keep track)*	Base (sample size)= 4368 *(all those who keep track)*

*Note: *MAS (2013). *Other studies: no frequency data is presented.*
***Question was adopted from MAS (2013)*

This study then asked a more specific question to those who never engaged in keeping track of their money to confirm and unpack their answer (see Table 7.3). The figures show that nearly seven in ten of those who reported never keeping track of their income and expenses apparently kept track by recalling details from memory. Only 15 per cent reported never keeping track at all, with the remainder refusing to answer. This finding shows that actually, respondents are keeping track, although not very regularly. Perhaps they interpret the notion of keeping track differently to UK households. This result was consistent with the previous study of Indonesian households (Definit, 2013). Details of the responses are shown in Table 7.3 below.

Table 7. 3 Keeping track of income and expenditure (II)

No	Statements	Answer percentages	
		Indonesia undergraduates (2015)	Indonesia households (2013)
1.	I don’t track my income and expenditure, but I know in general how much money I have received and spent each month.	69	67
2.	I don’t track my income and expenditure, and I don’t remember how much money I have received and spent each month.	15	32
3.	Refused to answer.	16	1
	Base: (of those who answered NO in Table 7.1)	432	392

The findings from the focus groups also varied. Although the participants reported that they were less likely to record their expenses, some stated that they kept records of their spending. Those doing this said that they broke down their expenses into specific categories and made a budget.

> *“I keep records of all my expenses, and categorise my monthly expenses into two types, that is, daily expense, for all my daily expenses, and categorised expenses, such as education, transportation, leisure etc.”* (Female, group 1/ Personal finance and Economics I)

> *“I can manage my income and expenses and make a record of my expenses”* (Female, group 4/Sciences II, runs a small business)

> *“Not everyday and not for daily basis needs, but I try to do it when I have bought an expensive item or for non-regular spending.. I write it in my journal book”* (Female, group 2/ Personal finance and Economics I)

"No, I never do it. I am not an organised person, and not used to writing down my expenses and income" (Male, group 3/Sciences II)

The focus groups also revealed that although participants were less likely to make a written record of their income and expenses, some of them also reported that they could recall the details if they needed to track specific expenses.

"..but I know in general about my income and expenses for a month. I can recall a specific expense, especially the big ones in the latest month" (Female, group 3/Sciences II)

Participants realised that the recall process was limited, since they could only memorise specific expenses in the current month. The fact that the majority of students never engaged in keeping track of their financial activity should be taken into consideration, as it could show their awareness of where their money was going.

The survey then asked respondents about checking their bank balance. It was found that more than one third of respondents checked how much money was left in their account at least once a week (but not every day). 96% of respondents stated that they did this by using cash machines (see Table 7.4a and b).

Table 7. 4 Frequency and methods of checking bank balance

No.	(a) Frequency of checking balance of current account	Percentage
1	Every day	2
2	At least once a week, but not every day	36
3	At least once a fortnight, but not once a week	33
4	At least once a month, but not once a fortnight	20
5	Less than once a month	8
6	Other (quarterly, semester, yearly)	1
	Total	100
	Base = All (521)	

Table 7.4 (Continued)

No.	(b) Methods of checking account balance *(multiple choice question)*	Percentage
1	Using a cash machine	96
2	Asking for a balance or mini statement at the bank	8
3	A text message from my bank	7
4	Online through my bank's website	6
5	Using an app on a mobile or other electronic device	5
6	Phone banking	4
7	I do not check how much money is in this account (Single Answer/SA)	0
8	Don't know (SA)	0
9	Prefer not to say	0
	Base = All (521)	

***Question was adopted from Kempson, and Collard. (2006); MAS (2013; 2013b)*

Moreover, one in five respondents checked their balance before they withdrew money from their account. However, in total about one third of respondents reported that they hardly ever or never checked their balance (Table 7.5). This result is also similar findings in 2013 UK survey which showed that about a third of respondents never engaged in this activity (see Table 7.5). However, two thirds of the UK 2013 respondents said they checked the balance before withdrawing money'. It should be noted that the study only showed the two possible answers: 'yes' and 'no'.

Table 7. 5 Frequency of checking balance before withdrawing money

No.	Frequency of checking balance before withdrawing money	Indonesian undergraduates (2015) (%)	Indonesian households (2013) (%)	UK All (2013) (%)	UK All (2005) (%)
1	Always	20	34	66	38
2	Most of the time	22	21	n.a.	21
3	Sometimes	28	25	n.a.	16
4	Hardly ever	23	7	n.a.	11
5	Never	7	13	34	14
	Total	100.0	100.0	100.0	100.0
Base (of those who have an account)		521	255	5076	5328

***Question was adopted from Kempson, and Collard. (2006)*

Supporting findings from the focus groups were found in some participants' answers. For example:

> *"Yes, I check the balance before I withdraw the money, especially near the end of the month. I am afraid the balance is not enough for the withdrawal". (Female, 20/Group 1/Personal Finance and Economics I)*

> *"I check the balance at least once a month, every new month, to check the money from my parents. Usually, I just withdraw it straight away. The machine will issue the receipt after we withdraw the money, so we can know the balance we have". (Female, 22/Group 6/Common group I)*

The findings show that students are aware of the need to check their financial position.

7.1.1.2 Making ends meet

Six out of ten respondents in the study live in private rented accommodation, either in a shared house or private student accommodation. One in ten respondents live with parents, and a small number lived independently in their own house (see Table 7.6). Meanwhile, all first year students live in university accommodation. At IPB, students are required to stay in a student dormitory during their first year in order to prepare them for the transition from high school to college life, to experience campus life and to link to social networking. When they start their second year, they can choose to live in off-campus accommodation.

As they begin to live independently, bills and commitments need to be handled, such as rent, utilities, phone bills, credit cards, and tuition fees. The majority of the respondents were able to keep up with all their bills and commitments, although some groups reported that they struggled to make ends meet. Only a very small number of students reported that they faced financial problems when it came to paying bills (1.7%) (see Table 7.7).

Table 7. 6 Type of respondents' accommodation

No	Type of accommodation	Frequency (n)	Percent (%)
1	Private shared house	131	25
2	University accommodation	124	24
3	Private student flat	186	36
4	Stay with parents	63	12
5	Own house	17	3
	Total	521	100

In addition, when it comes to the topic of 'left over money at the end of the month', just over a third of respondents said that they always had some at least most of the time. However, an equal number reported the opposite. It was found that one in three respondents hardly ever had money left over at the end of the month (see Table 7.8). Table 7.8 shows that a different result was found with Indonesian households, where four in ten reported never having money left over at the end of month. Meanwhile, in the 2005 UK survey, the majority of respondents (all population) reported they still had money left over at the end of the month (see Table 7.8). Limited income, not being used to doing so, and the temptation to follow the trends were predicted to be some of the reasons why young people were not making any savings.

However, it should be noted that the choices given in previous study were different. Table 7.8 shows that the study on Indonesian households (Definit, 2013) only offered two ('always' and 'never'), while in UK 2005 all population, offered three ('always', 'most of the times', and 'never'). This could serve to restrict respondents' answers.

Table 7. 7 Keeping up with bills and commitments

No.	*Which one of the following statements best describes how well you are keeping up with your bills and credit commitments at the moment?*	Indonesian UG 2015	UK All (2013)	UK All (2005)
1	Keeping up with all bills and commitments without any difficulties.	47	39	65
2	Keeping up with all bills and commitments, but it is a struggle from time to time.	34	31	26
3	Keeping up with all bills and commitments, but it is a constant struggle.	4	15	6
4	Falling behind with some bills or credit commitments.	2	4	2
5	Having real financial problems and have fallen behind with many bills or credit commitments.	0	2	1
6	Don't have any bills or credit commitments.	10	4	n.a
7	Don't know (SA).	2	3	n.a
8	Prefer not to say.	1	3	n.a
	Total	100	100	100
	Base : ALL	521	5079	5328

***Question was adopted from Kempson, and Collard. (2006); MAS (2013; 2013b)*

What the students said they did with their left over money is shown in Table 7.9. 'Put it into savings account' was recorded frequently, with just over a half of the respondents reporting having done so, followed by 'keep it until next month', which four in ten said they did. However, spending the left over money was also a popular choice.

Table 7. 8 Money left over at the end of the month

No.	*In the past 12 months, how often have you had money left over at the end of the month?*	Percentage (%)		
		Indonesia undergraduates 2015	Indonesian households 2013	UK All (2005)
1	Always	15	58	52
2	Most of the time	22	n/a	31
3	Sometimes	30	n/a	n/a
4	Hardly ever	22	n/a	n/a
5	Never	12	42	16
	Total	100	100	100
	Base	521	450	5328

***Question was adopted from Kempson, and Collard. (2006); Definit (2013)*

As can be seen from Table 7.8, just over a third of respondents reported having ‘money left over at the end of the month’, and over half of them said they would put it into a savings account or invest it. It could be argued that this is a good sign, as it may mean that they can allocate their money wisely. However, Table 7.9 also shows that about one in four said they would spend the left over money. In comparison, Indonesian household responses indicated that only fewer than two in ten did this, and that they preferred to save any left over money (Definit, 2013). This result strengthens the notion that young people tend to spend. It should be noted that there was an important difference regarding the available choices in the Indonesian household survey, which only offered a single answer response, while this study offered multiple answer responses.

Table 7. 9 What to do with left over money

No.	*What respondents do with left over money (multiple answer question*	Indonesian undergraduates (2015)*	Indonesian households (2013)**
		%	%
1	Put it into/leave it in savings account/investments.	52	36
2	Keep it in purse/wallet for the next week/month.	40	n.a
3	Spend it.	40	15
4	Depends on amount left over/varies too much to say.	32	22
5	Save it in cash at home.	19	
6	Leave it in a current account and then put it into savings/investment.	15	19
7	Give it to someone else to save for me.	4	
8	Other.	3	8
	Base *(of those who had left over money/ those who answered ‘always-hardly ever’ in Table 7.5)*	459	261

**multiple answer question type*
***single answer question type*
****Question was adopted from Kempson, and Collard. (2006); Definit (2013)*

7.1.2 Planning-ahead

Planning-ahead was represented by questions that focused on things like setting personal budgets. We can see from the responses that, among those who kept track of their income and expenditure (see Table 7.1), about two thirds had set a personal budget, and of those who had done so, more than four in ten stuck to it at least most of the time (see Tables 7.10 and 7.11). In comparison, in the UK (MAS, 2013), the number of those who committed to their set budget was higher, with eight in ten reporting they ‘always’ or ‘most of the time’ stuck to it. Those who did not follow their budget were more likely to be adults aged 35-44. This shows that it is not just young people who have difficulty in following their plan. ‘External social pressures’ (MAS, 2013, p.14), such as treating their friends or having a holiday, were some of the reasons for not sticking to budget.

However, from the focus groups it was found that a few participants reported that they did not even understand how to make a good budget. For example,

> *“I don’t know how to make a good budget, and I never keep records of my spending”* (Female, group 6/Common II)

This is interesting, as nowadays the budgeting process has become easier. Besides writing on a piece of paper or in a book, many computer applications or gadgets have been developed, some of which are free to use. Creating a budget plan will help to ensure spending is kept on track and may avoid excessive or unnecessary expenditure. It is also beneficial to evaluate all expenses, as the students now have to control and be more responsible with their money. Later, when they graduate and get a job, this habit will be useful for managing their income. The ability to keep track will help to control where the money is spent.

Table 7. 10 Creating a personal budget

No.	<u>*Question:*</u> *You said earlier that you keep track of your expenditure. Do you set a personal budget of how much you can spend?*	Indonesian UG (2015) (%)	UK All (2013) (%)
1	Yes	66	46
2	No	34	54
	Total	100	100
Base (*of those who keep track of their money*)		94	4368

***Question was adopted from MAS (2013)*

Similarly, in the focus groups, some participants reported that they found it difficult to keep track of their expenses; they preferred to spend than to save or start to make a plan for their future.

> *"Staying on budget is also quite challenging for me, especially when we see further reductions everywhere. Many things look so tempting so that I just buy them, although afterwards I realise that I don't really need them"* (Female, group 1/ Personal finance and Economics I)

> *"It is so difficult to keep my spending on track. I am an impulsive buyer, especially when I see a promo or sale in my favourite store or brand"* (Female, group 1/ Personal finance and Economics I)

> *"I can't control my shopping habit. I cannot prioritise needs and wants"* (Female, group 3/Sciences I)

Furthermore, students' spending and savings patterns were also documented in the survey. Figure 7.2. indicates that only three percent of students saved regularly each month or saved for a rainy day and, in total, about four in ten admitted they did not save (those who answered ‘never’ and ‘hardly ever’) (Figure 7.2). This is similar to the findings in 2005 UK survey, where about four in ten of young people (18-29 years old) reported they had no savings (Atkinson et al, 2006, p.43).

This finding shows that for many students managing their finances is still challenging. This issue should be highlighted, as having a cash reserve is important considering that unexpected expenses can arise, such as paying the doctor or outstanding bills. This result is also in line with findings by Wood (1998), Shaari et al, (2013) Beal and Delpachitra, (2003) and Ibrahim et al. (2009) with regard to student financial practice. Broadly speaking, these studies found that young college students tend to be impulsive in spending money and many of them do not consider long-term needs.

Table 7. 11 How often respondents keep to their budget

No	Question: *How often, if at all, do you end up sticking to the budget you set?*	Indonesian UG (2015) (%)	UK All (2013) (%)
1	Always	11	80
2	Most of the time	32	
3	Sometimes	46	
4	Hardly ever	9	20
5	Never	2	
		100	100
	Base (*of those who make a personal budget*)	63	2366

***Question was adopted from MAS (2013; 2013b)*

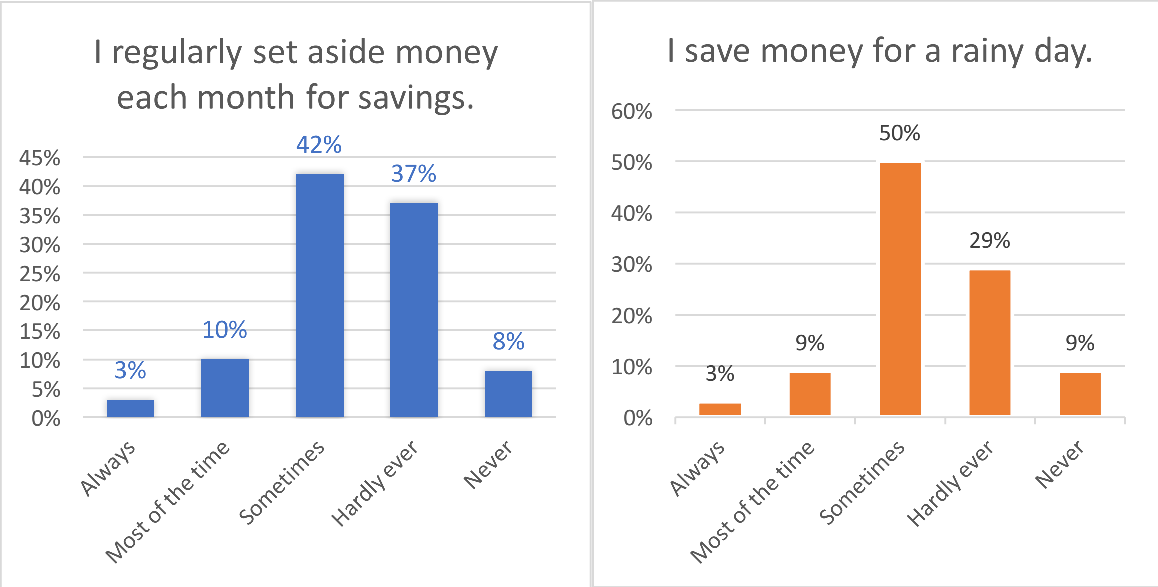


Figure 7. 2 Respondents' behaviour regarding spending money
Questions were adopted from Cude et al.(2006); and modification from Kempson and Collard (2006); MAS (2013; 2013b)

In addition, Figure 7.3. also shows that a third of respondents reported that they avoid overspending, while nearly four in ten do it 'most of the time'. This means that despite the tendencies 'to spend rather than to save', they also try to balance this and avoid overspending.

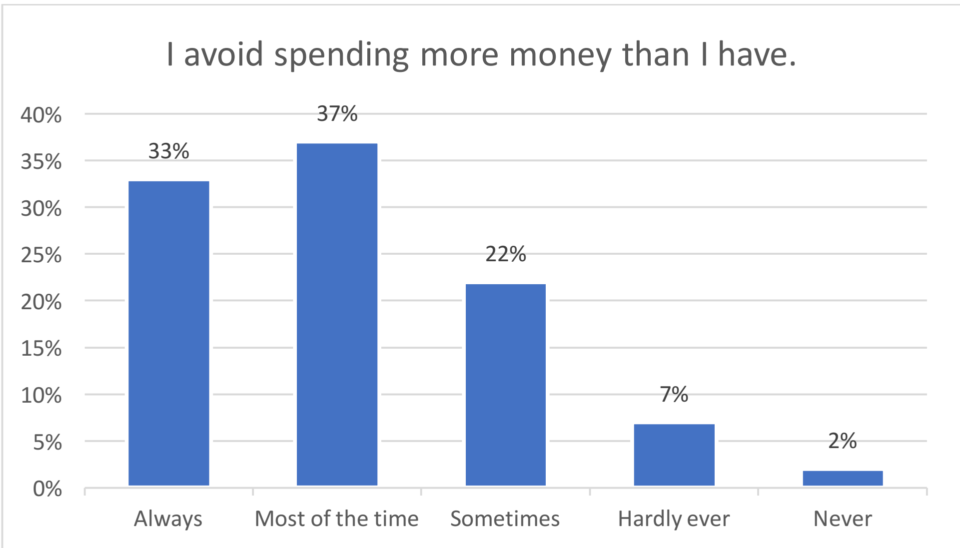


Figure 7. 3 Respondents' behaviour regarding spending money
Question was adopted from Cude et al.(2006)

An interesting finding also emerged when the survey asked about whether respondents had made any future plans and how they would finance these. This was a multi-answer type of question. Nearly eight in ten said that anticipating money for education had been taken into account, followed by preparing budgets for holidays, and taking care of their elderly relatives. Instead of preparing specific accounts for their plans, using their general savings was chosen by half as the way they financed their plans. Despite this, the finding shows that they had also started thinking about allocating some money for the future, making plans to achieve financial goals, or saving money. This shows that although they tended to spend rather than to save, students had thought about future planning. This finding is supported by Turnham (2010, p.13), who found that students continue to save money so they have “a financial cushion” to meet future needs, to use in an unexpected event, or to buy a particular thing. The details of the answers given are presented in Tables 7.12 and 7.13.

Table 7. 12 Planning for the foreseeable future (*multiple answer question*)

No.	Question: *Do you anticipate needing money in the foreseeable future for any of the following?*	Percentage of answers (%)
1	Education	77
2	Wedding	45
3	Holidays or travelling	68
4	Buying or replacing a car or other vehicle	42
5	Buying a home	44
6	Major house repairs or home improvements	12
7	Care of an elderly relative	54
8	Something else (starting own business, charity)	18
9	None of the above	3
	Base = All (521)	

***Question was adopted from Kempson, and Collard. (2006); MAS (2013; 2013b)*

In the survey, the percentages were higher when respondents were asked about saving for a big event (see Figure 7.14). About one in four answered ‘always and most of the time’. This means they will save the money in advance of special occasions.

Table 7. 13 Financing future plans (*multiple answer question*)

No.	Question: *How do you plan to pay for these expenses?*	Percentage of answer (%)
1	Using general savings	52
2	Using income saved especially to pay for this	45
3	By taking on a second job or doing overtime	43
4	Using an unexpected source of income, such as an inheritance	21
5	Through an insurance policy	4
6	Using a loan	2
7	Using a credit card	1
	Base = All (521)	

***Question was adopted from MAS (2013; 2013b)*

Meanwhile, the focus groups results recorded similar findings. Although some participants reported that they found it difficult to save because they tended to be tempted by adverts and purchase without prioritising needs (this will be explained in the following sections), other participants reported a more positive approach. That is, they try to keep a specific amount of money in their savings account for an emergency. Some of them said that they saved money to buy items that they had been dreaming about.

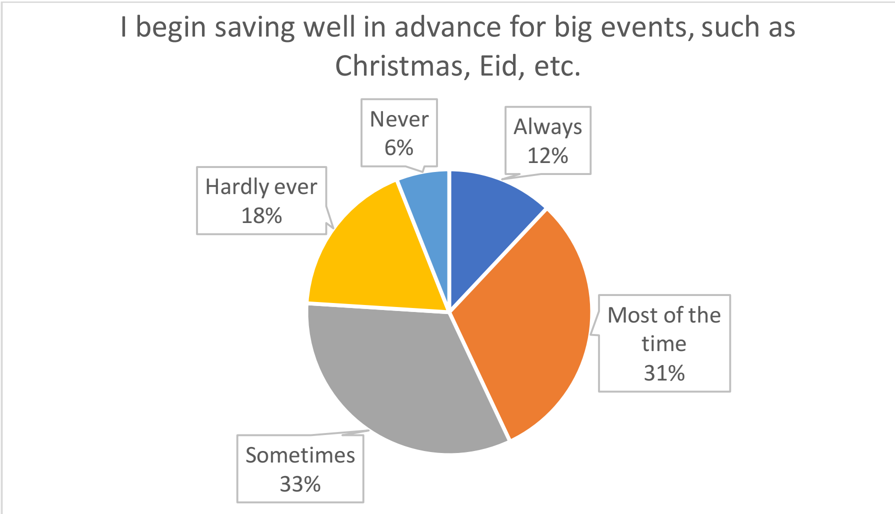


Figure 7. 4 Respondents' savings behaviour
Question was adopted from MAS (2013; 2013b)

> *"…I try to regularly put some money in my account for a rainy day"* (Male, group 2/ Personal finance and Economics II)

> *"I cut some expenses and put the money in my savings account, especially if I want to buy something, such as a new gadget or a holiday"* (Female, group 4/ Sciences II).

Some participants were also aware of the importance of saving money. Although only documented by a small number of them (approximately one in five), the participants said they set savings targets and tried to be disciplined about putting money into their account regularly.

> *"I try to be disciplined about saving money. I set a regular amount of money that I have to put in my account each month and try to meet that target."* (Male, group 2/ Personal finance and Economics II).

This finding indicates that students were more likely to be motivated about savings when the target was foreseeable or when they could reach it in the short term. This is consistent with Turnhaim (2010), who explained that students will save when they want to buy a specific thing.

It is worth asking why people still do not save even when they know it to be important. Schug and Reinke (2003) offers an answer, arguing that people are often slow to change their behaviour because the benefit is ‘invisible’, so cannot be recognised yet and, regarding savings, it is recognised that the benefits will be visible in the future, but may not be seen at the current time.

Moreover, income is also considered to be an important factor in spending and saving patterns. Dynan et al. (2004) found that those with lower incomes have a lower likelihood of saving. A higher income allows people to allocate their resources more flexibly, therefore they were more likely to have savings for the future (Gutter, et al, 2012; Joo and Grable, 2005). By having a higher income, students are more confident in preparing their plans. The higher the income, the easier it is to meet needs.

7.1.3 Protection/Risk Management

Nearly a quarter of respondents had experienced a major unexpected expense in the previous three years; that is, an expense equal to or more than one month’s income (see Table 7.14). From the findings of the focus groups, it is predicted that unexpected expenses in the survey mainly related to late scholarship payments.

Table 7. 14 Frequency of experiencing a major unexpected expense in the last three years

No	Question: *In the last three years, have you experienced a major unexpected expense? By major, we mean an expense equivalent to your whole income for a month, or more*	Indonesian undergraduates 2015	UK All (2013)
1	Yes	24	21
2	No	68	75
3	Don’t know	7	n.a
4	Prefer not to say	1	4
	Total	100.0	100.0
	Base	All (521)	All (5079)

**Question was adopted from Kempson, and Collard. (2006); MAS (2013; 2013b)*

When it comes to strategies to cope with difficult situations, respondents were most likely to *cut back on spending* and withdraw money from their account (both reported by more than a half). Moreover, family was also selected by over a third of respondents in order to help them to respond to financial hardship (see Table 7.15).

Table 7.15 Strategies for coping with a major unexpected expense (*multiple answer question*)

No.	Question: *How did you find the money to pay for this? If you have had more than one major unexpected expense in the past three years, please think about the largest. Tick all that apply.*	Indonesian undergraduates (2015) (multiple answers)	Indonesian households 2013 (single answer)	UK All (2013) (Multiple answered)
1	Cut back on spending	58	29	67
2	Withdrew money from my account	55	8	30
3	Family/friends gave me money to help out	38	n.a	n.a
4	Borrowed money from family/friends	35	30	18
5	Got a part-time job	13	1	15
6	Sold items I no longer needed	8	2	26
7	Another way (Please specify)	4	4	2
8	Took out a loan (including mortgage)	2	2	7
9	Claimed on an insurance policy	1	n.a	2
10	Used a credit card	1	1	15
11	I could not find the money/ I haven’t paid for it yet	0	n.a	7
	Base (*all those who experienced major expenses*)	125		1152

**Question was adopted from Kempson, and Collard. (2006); MAS (2013; 2013b)*

This finding is consistent with the study of Indonesian households (Definit, 2013), wherein this was also rated as the most popular answer. It was argued that borrowing from family was viewed as a lower risk strategy, as normally it does not have interest, so is safer (Definit, 2013). This pattern is also almost similar to findings in previous studies of behaviour in the UK, especially the strategy of cutting back on spending, which was also chosen as a popular method, along with withdrawing money from their account. The situation is a little different in the UK; instead of borrowing from family or friends, people prefer to sell unwanted items (MAS, 2013).

In addition, risks can also be experienced in a variety of events. Sumarwan (2011) argues that people need physical protection so they can live safely and comfortably, and insurance is one of the ways to cope with the risk of loss (Warsono, 2010). When it comes to ownership of insurance policies, half of the respondents had health insurance, and one in seven was protected by life insurance. The majority of them were covered by a facility from the company where their parents worked, or was paid for by their parents. However, nearly a third of respondents were not covered by any insurance at all (Table 7.16).

Table 7. 16 Possession of insurance policies (*multiple answer question)*

No.	Question: *Please could you look at these types of insurance, and indicate which, if any of these, you currently have, either in your own name or jointly with someone else?*	Indonesia Undergraduates (2015) (%)	FSA UK (2006) (%)
1	Health insurance	55	15 (private/dental)
2	None of these (SA)	32	n/a
3	Life insurance	14	47
4	Critical illness insurance	1	17
5	Home contents insurance	4	66
6	Don’t know (SA)	8	n/a
7	Prefer not to say (SA)	1	n/a
	Base = All	521	5328

***Question was adopted from MAS (2013; 2013b)*

Compared to developed countries, such as the UK (see Table 7.16), the rate of possession of insurance in Indonesia is still low, as we saw in previous chapters and as Swiss Re (2011) have shown. Although ownership of health insurance in the UK is lower, as the UK provides national health coverage., nearly half and two thirds of people are covered by life insurance and home contents insurance, respectively. Among all types of insurance, apart from health insurance, life insurance is the most popular in Indonesia. In 2010, there were 16.75 million life insurance policies (out of a total population of 237 million). What's more, life insurance policies grew by 28.7% (Finira, 2013).

7.1.4 Making Choices

As shown in Table 7.17, all respondents had a bank account. However, some of them reported that the account was only used for daily activities, such as to receive money transfers from their parents or scholarships. As explained in the previous section, all the participants had to open an account (similar to a current account in the UK) at a specific national bank when they enrolled at the university. This is one of the university's initiatives, which is run in collaboration with a national bank. When students open an account, they receive a savings book and a card that functions as a debit card and a student card. Students also use this account to pay their tuition fees. In the focus groups, it was found that some of the participants reported that they had more than one account. When this was the case, they had opened the other account before they enrolled as a student at the university.

Besides a bank account, a small number of respondents reported that they had other financial products, such as certificates of deposits (5%), stocks (2%), and unit links (1%). In addition, one in ten indicated non-financial products as investments, such as running a small business enterprise. It was also noted that some respondents chose jewellery as an investment (2%). (see Table 7.17). It should be noted that in Indonesian household study 2013 only offered 'single answer' question type, which is considered as very limiting, while this study 'offered multiple answer options'. The 'single answer' type questions indeed will make it easier to code and analyse, however it can restrict respondents' answer.

Similarly, across the focus groups, as well as financial products, a small number of participants also reported that they preferred to own gold jewellery that could be used as an investment or sold if they needed money in an emergency. When participants were asked about other financial products, such as bonds, mutual funds and shares, participants from groups 1 and 2 (Economics-Business and Personal Finance course) were more likely to recognise these products. However, the majority of participants without an educational background in economics or personal finance looked confused and said that they were not familiar with these products and only a few of them had heard of them.

Table 7. 17 Ownership of financial products (*multiple choice question*)

No.	Question: *Please tell me which, if any, of these you currently have, either in your own name or jointly with someone else?*	Percentage of answer: Indonesian undergraduates (2015)*	Indonesian households (2013)**
1	Savings account (*current account)*	100	50
2	Other: Running a small business	10	n/a
3	Certificate of deposits	5	1
4	Stocks	2	0.22
5	Other: investment in jewellery	2	n/a
6	Unit links	1	2
7	Mutual funds	0	0.22
8	Bonds	0	0
9	Personal pension	0	n/a
10	None of these	0	42
11	Don't know	12	n/a
12	Prefer not to say	6	n/a
	Base)	*All (521)*	

**multiple choice question type*
***single answer question type*
Question was adopted from Kempson, and Collard. (2006); Definit (2013)

Again, the varied results show that at their stage of life, students are still in the early stages of their financial cycle, and tend to spend rather than to save. Moreover, lack of familiarity with the terms and limited income were predicted as plausible explanations for the low ownership of financial products. The fact that they were full-time students restricted them from having a full-time job to earn more income. At the time, their main income was mostly from parents or sponsors, so they did not have much flexibility in managing their money.

It was showed in previous chapters that some respondents in the focus groups reported running a small business. When comparing answers about financial capabilities, it was found that those who ran a small business were more used to managing their day-to-day income and expenses.

Furthermore, when it came to choosing products, the questionnaire also asked about activities related to the purchasing. Here the findings showed that four in ten respondents said that they always collected information before deciding to buy a product (statement 10) and made complaints if they encountered unsuitable products or unfair business practices (statement 11). MAS (2013, p.14) reported similar findings; they found that the majority of respondents (93%) reported that they 'shop around' to collect information before purchasing something expensive.

Table 7. 18 Financial behaviour in the domain of making a choice

No	**Behaviour statement**	**Answer percentages**				
		Always	Most of the time	Sometimes	Hardly ever	Never
1	Before deciding to buy, I collect information about different products/services in more than one company, in order to compare them	40	38	18	4	-
2	I make a complaint if I have been sold a product that is clearly unsuitable for my needs.	11	28	34	20	7

Base= All (521)

In addition, the focus groups also documented similar findings. Participants said they made a product comparison before making a purchase. This finding shows that students were aware of their rights and duties as consumers.

> *"I always make product comparisons before buying a product, especially between the price and the features."* (Male, focus group 5/Common I)

Moreover, regarding complaints, this study is also consistent findings from FSA UK 2005 baseline survey (Atkinson et al, 2006), which reported that nearly half of respondents who had had an unpleasant experience with a product they bought would make a complaint.

7.1.5 Staying up-to-date/staying informed

When it comes to choosing the tools with which to monitor information about financial matters, the internet was ranked as the most popular medium (with more than three out of four respondents saying they used it to do so) (see Table 7.19).

Table 7. 19 Media used to keep up-to-date with financial matters (*multiple answer question)*

No.	Question: *How do you tend to monitor these things?*	Answer percentages	
		Indonesian undergraduate (2015)	UK All (2005)
1	Internet	78	18
2	Other TV or radio programmes	31	39
3	Newspapers (not the financial pages)	17	41
4	Specialist personal finance programmes on TV or radio	13	7
5	Financial pages in the daily or weekend newspapers	6	19
6	Specialist personal finance magazines (example)	2	2
7	Financial adviser/stockbroker	1	3
8	Refused to answer	1	0
9	Other	0	
10	Don't know	0	n/a
Base (of those who keep up-to-date with the news)		385	

**Question was adopted from Kempson, and Collard. (2006)*

This differs from findings in Atkinson et al (2006). Respondents in the UK rated newspapers and the television or radio (but not special financial programmes or publications) as the most popular medium through which they monitored financial issues. Watching national television programmes is free in Indonesia, without the need to pay for a license. This is different to the UK. Perhaps this is a plausible explanation for why newspapers are less popular (given that they cost money), although if this is linked to their internet access behaviour (see Table 7.20) it should not be an issue, as they can read the newspaper online. Perhaps they are just less interested in reading. Figure 7.5 might explain this. There we can see that only about two in ten respondents read to increase their financial knowledge.

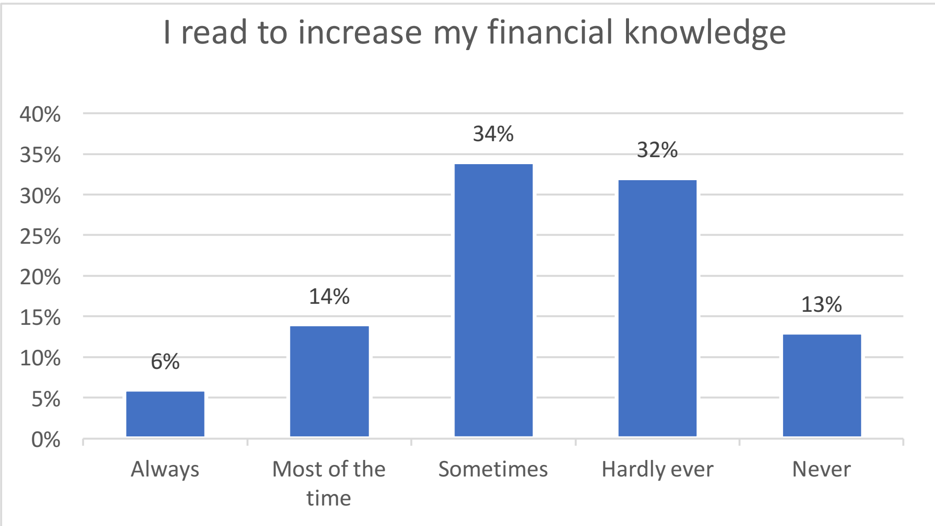


Figure 7. 5 Behaviour regarding staying informed (1)

Nowadays, the internet is used to spread information globally. Any kind of information can be shared easily in real time. In terms of staying up-to-date, the frequency of using the internet was used as one of the parameters of accessibility. Overall, the vast majority of respondents used the internet several times a day (see Table 7.20). It can be said that respondents in

Indonesia have widespread opportunities to gain access to knowledge and information, including access to financial information.

Table 7. 20 Frequency of using the internet

No.	Question: *How often do you use the internet?*	Percentage of answer
1	Several times a day	96
2	Once a day	2
3	2 to 5 times a week	2
4	About once a week	0
5	Less than once a week	0
6	I do not use the internet	0
	Total	100
	Base = All (521)	

Question was adopted from Kempson, and Collard. (2006); MAS (2015b)

From further examination of the responses, it was evident that students monitored financial issues (see Figure 7.6).

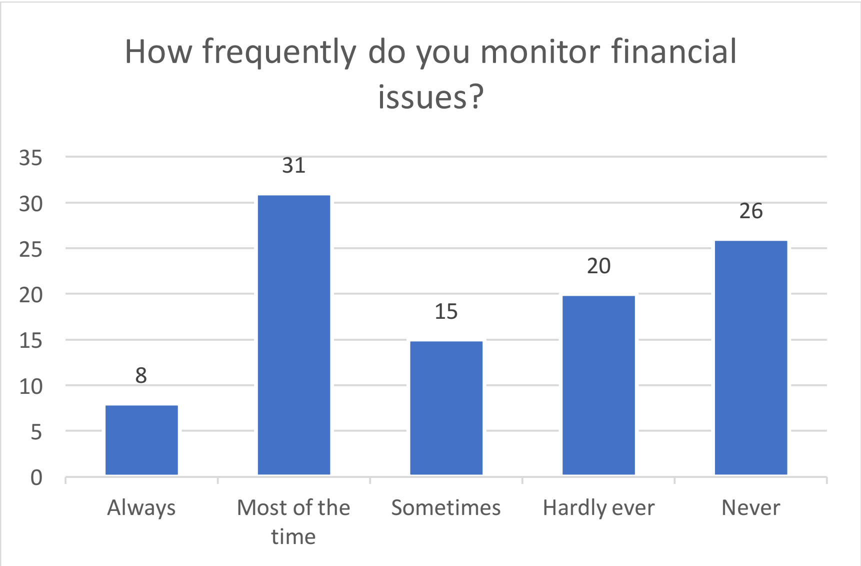


Figure 7. 6 Behaviour regarding staying informed (2)

Question was adopted from Kempson, and Collard. (2006)

The findings from the focus group also supported this finding. Participants reported that they actively search for information and keep up-to-date with the latest information related to financial products and services.

> *"I keep up to date with information about financial products and services from advertisements and peer groups"* (Male, group 3/Sciences I)

> *"From the lectures in the class and discussion with my dad at home" (Female, group II/Economics and Management).*

As documented in MAS (2013), 'access' is important in order for someone to become financially capable as it can increase the possibility that they take action. With the rapid development of technology, the use of the internet has also grown.

> *"From the internet and television, sometimes also from Facebook, especially for "breaking news", we can have the updated information from the friend status in Facebook, such as the increasing price of groceries before Eid, electronics products such as laptops, mobile phones, etc." (Female, group 5).*

> *"Although not often, I do try to stay up-to-date with information, including about economic issues, for example about the currency rate of the US Dollar and Rupiah. The media? Hmm…Usually I read online news when I access the internet, you know...from the headlines on Yahoo for example, when I open my email. Usually I can have the latest information, and if I am interested in the topic I will go directly to a news website such as detik.com to read the further information" (Male, group 1/Economic and Management II).*

7.1.6 Financial socialisation

The respondents were also asked how often they discussed money with friends and family. It seems that they were more likely to talk about financial issues with family than friends. Almost two thirds of respondents said that they often discussed money matters with family, whereas only one in five said they do so with friends (see table 7.21).

This is interesting, as at their age and considering their status as full-time students, one would think that they would be more likely to spend more time with friends rather than family. This shows that money is still viewed as a sensitive issue for discussion, except with the family. This finding is similar to those in the 2011 Consumer Financial Literacy Survey in the US (Harris Interactive, 2011), which highlighted that Americans' main source of learning about personal finance is from parents or others in the home.

Table 7. 21 Frequency of discussing money matters

No	Answer	Question: How often do you discuss money with :	
		Family	Friends
		(%)	(%)
1	Very often	33	4
2	Often	30	16
3	Fairly often	25	40
4	Not very often	9	30
5	Never	3	10
Total		100	100
	Base: All (521)		

Question was adopted from MAS (2013b; 2015b)

7.2 How does financial behaviour vary according to different groups?

As mentioned in chapter four, to measure the level of behaviour all the questions that used scales were grouped (see Table 7.22) and then added up and transformed into a scale from 0 to

100. Using this calculation, it was found that the average score for financial behaviour is 57. More detail of descriptive statistic is provided in Appendix 18.

Table 7. 22 Distribution of respondents' answers, as percentages

No.	Behaviour statement	Always (%)	Most of the time (%)	Some times (%)	Hardly ever (%)	Never (%)
1	How often, if at all, do you normally check the balance/ask for mini statements before withdrawing cash?	20	22	**28**	23	7
2	In the past 12 months, how often have you had money left over at the end of the month?	15	22	**30**	22	12
3	In the past 12 months, how often, if at all, have you kept track of your income and expenditure?	4	8	5	24	59
4	In the last 12 months, how often, if at all, have you run out of money before the end of the month?	2	15	**34**	25	25
5	I avoid spending more money than I have.	33	**37**	22	7	2
6	I begin saving well in advance for big events, such as Christmas, Eid, etc.	12	31	**33**	18	6
7	I save money for a rainy day.	3	9	**50**	29	9
8	I have a weekly (or monthly) budget that I follow.	7	16	**31**	29	17
9	I regularly set aside money each month for savings.	3	10	**42**	37	8
10	Before deciding to buy, I collect information about different products/services from more than one company, in order to compare them.	**40**	38	18	4	-
11	I make a complaint if I have been sold a product that was clearly unsuitable for my needs.	11	28	**34**	20	7
12	I read the contract carefully before signing it.	**58**	27	10	3	2
13	I read to increase my financial knowledge.	6	14	**34**	32	13
14	How frequently do you monitor financial issues?	8	**31**	15	20	26

***Question was adopted from Cude et al. (2006); Kempson, and Collard. (2006); MAS (2013; 2013b; 2015b)*

Based on the independent t-Test, the study found that financial behaviour varied according to different groups (see Table 7.23). A significant difference was found across all groups, except gender (p-value: 0.082; > alpha 5%). The details will be discussed in the following section.

Table 7. 23 Scores across groups and the results of the independent T-Test sample

No	**Groups**			**Mean (Score 0-100)**	**Standard Deviation**	**T-test (p)**
1	Field of study	a.	Non-Economic or Business major	56	10	0.002**
		b.	Economic or Business major	611	10	
2	Personal Finance course	a.	Had not taken Personal Finance course	56	10	0.015**
		b.	Had taken Personal Finance course	60	10	
3	Year enrolled	a.	First year of study	52	10	0.000***
		b.	Second year and above	58	9	
4	Gender	a.	Female	56	10	0.082
		b.	Male	58	10	
5	Work experience	a.	Has experience	54	10	0.000***
		b.	Has no experience	59	9	

****significant at p<0.001*
***significant at p<0.05*

7.2.1 Field of study

As we have seen elsewhere, respondents were classified into two groups according to their field of study (economics-business major and non-economics-business major). It was expected that respondents from the economic-business major group would demonstrate better financial behaviour. Looking at the details for each question (see Appendix 24) we can see a noticeable difference between both groups in some questions, especially Questions 7 and 9 about savings. Those with economics and business backgrounds were more likely to save either regularly or for a rainy day. They were also found to be more careful and involved in the process of purchasing products, and more likely to, for example, research information and submit complaints about unsuitable products, and keep up-to-date with information, including financial news.

Further analysis then examined the differences between economics-business majors and non-economics-business majors when it came to financial capability. As expected, economics-business majors were more likely to record a better than average score (see Table 7.22). This finding is not surprising, as students in the Faculty of Economics have studied topics such as accounting, finance and management in more depth than others. The results of the independent samples t-test also highlight this difference (see Table 7.22).; the mean scores of financial behaviour of those who came from economics-business majors and non-economics-business majors were 61 and 58 respectively. As shown in Table 7.21, there was a significant statistical value of 0.002 (less than the alpha value at the 5% confidence level); therefore, Ho is rejected. Thus we can conclude that there was a difference between the two groups when it came to financial behaviour.

7.2.2 Personal Finance Course

The differences between those who had taken the personal finance module and those who had not were then examined. Similar to when the field of study was analysed, it was expected that those who had attended the course would show higher scores with respect to their financial behaviour.

Looking at the details of each question (see Appendix 25), the results were varied. In some statements, those who had taken the course showed better financial practice, for example in keeping track (Question 3), checking their balance (Question 1), budgeting (Question 8), or saving. However, a slightly different was found, where those who had not taken the course were more likely to 'have money left over at the end of the month', and the percentage of those who always make complaints about unsuitable products they bought was also higher in this group (Question 13). As a reminder, the exact wording of the questions can be seen in Table 7.22, with the same number sequence.

However, as indicated by the average scores in Table 7.23, respondents who had taken the personal finance module scored higher across all questions. The results of the independent t-test support this finding (see Table 7.23). It was confirmed that there was a significant difference between those who had attended the personal finance course and those who had not when it came to financial behaviour (p=0.015, <0.05), therefore Ho is rejected.

As with the findings from the fields of study groups, this finding is not surprising, since the students who had completed the personal finance module had learned more in-depth about the basic concepts of managing money. This was also the case in the focus groups, where participants who had taken the personal finance course were more familiar with the topics discussed.

7.2.3. Level of study (Year Enrolled)

The research then examined the differences between groups based on year of enrolment. Similar to the findings for the areas of knowledge and attitude seen in chapters 5 and 6, respondents in their second year and above were expected to have better behaviour. This study found that they were more likely to obtain a higher score in the area of financial behaviour (see Appendix 26).

The mean score of first year respondents was 52, while for second year and above it was 58 (see Table 7.23). Table 7.26 also shows that across all questions, senior students were highly likely to display better financial practices. Further analysis revealed that there was a significant difference (p=0.000, at a confidence level of 5%) between the year groups with regard to behaviour (see Table 7.23). Therefore, Ho is rejected.

It is clear that academic experience affects financial behaviour. Moreover, older students were more likely to have more experience and life events, such as changing accomodation, paying bills, and other financial commitments. By learning from experience, students in the second year and above tended to be more mature, so were more likely to behave more responsibly. As seen in chapter three, Kotler (2000) explain that age contributes to the decision-making process, and adolescents tend to be more consumptive and easily persuaded by adverts. This finding is also in line with previous studies by Boyland and Warren (2013) and Marsh and Knight (2006), who found a significant difference between college students in their first and final years.

7.2.4. Gender

When it comes to gender, it was expected that there would be a significant difference in the financial behaviour of men and women However, the study found that across all questions, all respondents followed a similar pattern, except in questions 7 and 9, where men were more likely to answer ‘always’ or ‘most of the time’ with regards to saving. (Appendix 27).

Table 7.23 shows that although men achieved a slightly higher score (58), compared to women (56), the independent sample t-test showed that the significant statistic was 0.082, which is greater than the alpha at the 5% level of significance (see Table 7.23). Therefore, we may say that that there was no difference in terms of gender.

This finding is different to those in previous studies, such as Sabri et al. (2008), which found significant differences between sexes, with women more likely to score higher than men, especially when it came to spending, regular saving and emergency saving.

7.2.5. Work experience

The next variable to be analysed is work experience. In term of financial behaviour, as expected, those who had work experience were more likely to have savings, avoid over-spending, keep track of their money, shop around before buying, be more critical consumers, and stay up-to-date (see Appendix 28). A higher percentage response was presented by them.

Respondents who had work experience registered a higher score, as shown by the mean scores in Table 7.23. The results of the independent samples t-test confirm this finding; there was a significant difference in terms of financial behaviour between groups based on work experience (see Table 7.23). The significance value= 0.000 is less than p at the level of confidence of 5%, therefore Ho was rejected. It can be concluded that there was a difference in financial behaviour between those who had work experience and those with no experience.

Having work experience means they might earn additional income, thus they are more likely to have more practice and flexibility in managing their money. It was shown that learning from experience can help them to develop a better understanding of financial concepts. They will memorise them better, so they can be stimulated positively in building more responsible behaviour. As recommended by Sohn et al. (2012), the experiential learning model is probably the more effective exhibit of people's financial understanding.

Moreover, it has been shown that work experience gives people more exposure to personal finance. In this study, when comparing the answers in the focus groups, it was found that those who ran a small business were used to managing their day-to-day income and expenses because they implemented this process as part of their day to day business activities. This may be a result of the nature of self-employed work, which encourages respondents to get used to dealing with risks and gives them experience of how to minimise risk for higher gain. Working enables a person to obtain knowledge about managing money; by learning from experience, they can develop a sense of responsibility and increase their money-management expertise (Shim et al., 2009). This result is also consistent with previous studies. As presented in chapter three, Hilgert et al. (2003), Lowenstein, et al, (2001), Sohn et al. (2012) and Shalahuddinata and Susanti (2014) have shown that personal experience in financial practices is essential for developing an understanding of the relevant concepts, and students who work have more opportunity to manage their finances better, because the extra income they receive from work makes them more able to meet their needs. Those who have a job tend to feel more secure with their financial condition, thus they tend to demonstrate better financial behaviour (Xiao et al., 2006).

7.2.6. Income

As employed in chapters 5 and 6, respondents were classified into four quartiles, this time delineated on the basis of income. We saw elsewhere that the minimum income per month is Rp 300,000, that the maximum is Rp 4,000,000 and that the average Rp. 1,069,481. As discussed in chapter 3, income contributes to financial behaviour. As expected, this study found that respondents with higher incomes are more likely to have a higher score. A noticeable difference is shown in Table7.24.

Table 7. 24 Analysis of Variance of income and financial behaviour

	Income	**N**	**Mean**	**Std. Deviation**	**F stat.**	**Sig.**
Behaviour	<= 800000	198	53	9.99	14.941	.000***
	800001-1000000	160	57	10.44		
	1000001-1200000	42	59	12.60		
	>1200000	121	61	10.42		

****significant at p<0.1; **significant at p<0.05;*

The independent samples t-test strengthened this finding. The mean score for those in the highest quartile was 61, while it was only 53 for those in the lowest quartile (see Table 7.23). As seen in Table 7.24, because p=0.000 in the ANOVA test, it was confirmed that there was a significant difference between income and financial behaviour. Therefore, Ho was rejected.

From the results above, it is clear that respondents with higher incomes tend to achieve higher scores for financial behaviour. Those with higher incomes typically display more sound financial behaviour. This might be because they have more flexibility to allocate and manage money, including when planning for the future (e.g. education or retirement), so they tend to behave more wisely in order to achieve their financial goals. A study by Tsalitsa and Rachmansyah (2016) also shows that income has a positive influence on saving, and students on a higher income tend to save more frequently. According to Mahdzan and Tabiani (2013), a higher income motivated people to improve their understanding of how to use their resources more effectively to maximise the results. In general, higher income results in better economic status. Those with a higher income are more likely to have a greater intention to plan financially.

7.2.7 Relationship between financial knowledge, attitudes, and behaviour

As discussed in chapter three, sufficient financial knowledge could prove to be a positive influence on a person's financial behaviour. Knowledge could assist a person to make better financial decisions, and improving someone’s financial knowledge may increase their opportunities to behave in a more financially responsible way (Hilgert et al, 2003).

On that basis, this study then examined the relationship between financial knowledge, attitude and behaviour. Financial knowledge and attitude that employed in the analysis is the score that was gained from the survey has been presented in chapters 5 and 6. The relationship between these variables is shown in Table 7.25.

This study showed the significance value between financial knowledge, attitudes and behaviour. It means that there is an association between financial knowledge, attitudes and behaviour. This result is consistent with previous research by Hilgert et al. (2003), who concluded that those with a higher level of financial literacy scored better in the financial practice index, which points towards the relationship between financial behaviour and financial knowledge. The finding in this study is also similar to previous work by Bhushan and Medury (2013), who showed that financial literacy is correlated with positive financial behaviours, such as paying bills and loans on time, committing to regular savings, and using credit cards wisely. However, it should be noted that in this study, the relationship between the variables is weak, shown by the Pearson correlation coefficient in Table 7.25. The next section will discuss this in more detail.

Table 7. 25 Relationship between financial knowledge, attitudes, and behaviour

		Attitude Managing money	Attitude Managing risk	Attitude Planning ahead	Attitude Choosing product	Attitude Staying informed	Attitude total	Financial Knowledge	Financial Behaviour
Attitude Managing money	Pearson Correlation	1	.294**	.396**	.299**	.051	.707**	.355**	.239**
	Sig. (2-tailed)		.000	.000	.000	.241	.000	.000	.000
	N	521	521	521	521	521	521	521	521
Attitude Managing risk	Pearson Correlation	.294**	1	.256**	.130**	.036	.678**	.195**	.159**
	Sig. (2-tailed)	.000		.000	.003	.411	.000	.000	.000
	N	521	521	521	521	521	521	521	521
Attitude Planning ahead	Pearson Correlation	.396**	.256**	1	.417**	.151**	.752**	.282**	.197**
	Sig. (2-tailed)	.000	.000		.000	.001	.000	.000	.000
	N	521	521	521	521	521	521	521	521
Attitude Choosing product	Pearson Correlation	.299**	.130**	.417**	1	.121**	.578**	.209**	.204**
	Sig. (2-tailed)	.000	.003	.000		.006	.000	.000	.000
	N	521	521	521	521	521	521	521	521
Attitude Staying informed	Pearson Correlation	.051	.036	.151**	.121**	1	.235**	.102*	.274**
	Sig. (2-tailed)	.241	.411	.001	.006		.000	.020	.000
	N	521	521	521	521	521	521	521	521
Attitude total	Pearson Correlation	.707**	.678**	.752**	.578**	.235**	1	.380**	.309**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000
	N	521	521	521	521	521	521	521	521
Financial Knowledge	Pearson Correlation	.355**	.195**	.282**	.209**	.102*	.380**	1	.262**
	Sig. (2-tailed)	.000	.000	.000	.000	.020	.000		.000
	N	521	521	521	521	521	521	521	521
Financial Behaviour	Pearson Correlation	.239**	.159**	.197**	.204**	.274**	.309**	.262**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	
	N	521	521	521	521	521	521	521	521

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

7.3 Factors that determine financial behaviour

In the focus groups, some factors that contribute to a person becoming financially capable were also explored. The most common answer was education, as illustrated in the following excerpt:

> *"Education is the most important influencer to make a person become financially capable, since it can develop people's knowledge and skill in how to manage money, and develop the mindset"* (Male, group 4/Sciences II)

To examine the factors that determine financial behaviour, a regression analysis was run. 11 variables were employed in the analysis: one dependent variable, financial behaviour; and 10 independent variables: gender (female or male); year enrolled (first or second year and above); attendance of the personal finance course (Yes or No); field of study (economics-business and non-economics-business); work experience (Yes or No); discussing money with family (Yes or No); discussing money with friends (Yes or No); income; financial knowledge; and financial attitudes. Financial knowledge and financial attitudes, which were run as the dependent variables in the previous chapters, were included in the behaviour analysis as they were predicted to be influential factors in financial behaviour. The level of confidence was set at 95% (0.05).

The regression analysis found that gender, year of enrolment, work experience, discussing money with family and friends, income, financial knowledge, and financial attitude had a positive significant influence on financial behaviour at the 95% confidence level. However, field of study was not shown to influence financial behaviour, at the 95% confidence level. The same is true of attendance on the personal finance course, which showed an insignificant effect on financial behaviour (Table 7.26).

Table 7. 26 Regression coefficients of financial behaviour

No	Dependent variable	B	Beta	Sig.
1	(Constant)	20.571		.000
2	Gender dummy (1=male, 0=female)	2.381	.108	.007**
3	Year enrolled (1=year 2 and above; 0=year 1)	3.694	.148	.000***
4	Field of study category (1=Economics-Business major; 0=non-Economics-Business major)	2.404	.073	.062
5	Personal finance category (1=had taken Personal Finance course; 0=had not taken Personal Finance course)	.978	.027	.501
6	Work experience (1=had work experience; 0-no work experience)	2.880	.133	.001**
7	Discussion of money with family (1= yes; 0= never)	4.974	.152	.000***
8	Discussion of money with friends (1= yes; 0= never)	2.351	.087	.023**
10	Income	3.749	.170	.000***
11	Financial knowledge	.053	.094	.027**
12	Financial attitude	.248	.189	.000***
	F	16.984		
	Sig	0.000		
	R	0.500[a]		
	R2 adjusted	0.250		

****significant at p<0.1; **significant at p<0.05;*

The regression model can be expressed by the following equation:

Financial behaviour = 20.571 + 2.318 male + 3.694 year enrolled + 2.880 working experience + 4.974 discussing money with family + 2.351 discussing money with friend + 3.749 income + 0.053 financial knowledge + 0.248 financial attitudes

Interpreting the model, male students were 2.318 times more likely to gain a better level of financial behaviour, and for every unit increase in year of enrolment, the possibility of having better financial behaviour would increase by 3.694. Similarly, where students had work experience, this would lead to a 2.225 increase in the level of financial behaviour. Meanwhile, students who had the opportunity to discuss money with family and friends would be respectively 4.974 and 2.351 times more likely to have a better financial attitude. In addition, for one Rupiah increase in income, the possibility of having better financial behaviour would increase by 3.749. Furthermore, for a single unit increase in financial knowledge and financial attitudes, the possibility of having good financial behaviour would increase by 0.053 and 0.233, respectively.

Table 7.26 shows that the financial behaviour of a person can be influenced by various factors, namely level of study, gender, income, work experience, financial socialisation by family, and financial knowledge and attitude. Field of study showed a significant value at the 90% confidence level; however, since this study uses the 95% confidence level, field of study was not said to be a determining factor. This study is consistent with previous findings, which showed that the factors that may influence financial behaviour are financial socialisation by parents, income, work experience, and psychological and emotional factors (for example, Sohn et al., 2012; Palmer et al., 2001; Nababan and Sadalia, 2012).

The study has shown that financial knowledge has a positive effect on financial behaviour. Knowledge will assist a person in making better financial decisions, and improving someone's financial knowledge will increase their opportunities to behave in a more financially responsible way. This result is consistent with previous research by Hilgert et al. (2003), who concluded that those with a higher level of financial literacy scored better in the financial practice index, which indicates the relationship between financial behaviour and financial knowledge. Other similar findings were made in earlier studies, such as Chen and Volpe (1998), Beal and Delpachitra (2003), Roy Morgan Research (2003), and Robb and James (2009). These researchers found that financial knowledge had a positive influence on students' financial behaviour, such as their spending habits. Those who possess good knowledge tend to have good control of their spending, so they avoid unnecessary debt and impulse buying. However, it should be noted that in this study, the effect of financial knowledge is not strong, as shown by the B-value in Table 7.26. The results in Table 7.25 also strengthened this finding; there we can see that although there is a relationship between financial knowledge and behaviour, the correlation between them is weak.

Moreover, attending the personal finance course did not influence respondents' financial behaviour, although the independent samples t-test analysis showed that there was a difference in financial behaviour between those who had attended the course and those who had not, and that the average score of those who had attended was higher. However, the regression analysis showed that attending the course had no significant effect on financial behaviour.

This result reflects the fact that students' understanding was still at a cognitive level and they had not yet practised it in their daily life. The personal finance course could help to improve students' understanding and awareness of issues that are related to finance and help them identify possible financial choices. However, it does not guarantee that they will make the right financial decisions. One potential explanation for this finding is the duration of the course. Students learned about personal finance for one semester only. During that period, the module ran just once a week for three hours (for 150 minutes/lesson, with a teaching hour of 50 minutes). The duration may be just enough to provide basic knowledge and to build positive attitudes (see chapters 5 and 6). However, it may not be sufficient to establish positive behaviours. Compared to the development of knowledge and attitude, changing behaviour is a more complex process and takes longer. It should also be noted, as explained in chapter 6 that there could be a selection effect, where people who have positive behaviour go on the course, while those who need it most do not.

As discussed in previous chapters, it has been argued in some studies that knowledge is an important factor in supporting behavioural change (e.g. Robb and Sharpe, 2009; Robb and Woodyard, 2011). However, as seen in chapters two and three, knowledge alone is not a sufficient factor, as other factors have a stronger influence. Among all the variables that were measured, discussion of money with family was identified as the strongest factor that influenced financial behaviour, shown by the B value 4.472. Sumarwan (2011) argues that the reference group could affect decision-making. Research conducted by Gutter and Garrison (2008, p.84) found that financial education had a positive significant effect on the attitude towards finance, however they suggested including ‘financial socialisation’ in the program. The importance of financial socialisation by parents was strengthened by Johnson and Sherraden (2006), who encourage parents to set aside time to discuss money and teach their children how to manage it wisely.

Work experience also appeared as strong determining factors (see the B-value in Table 7.26). It was shown that learning from experience, can develop the understanding of financial concepts that will have a positive effect on building more responsible behaviour. The connection between personal experience and behavioural change was established by Loewenstein et al. (2001), who found that experience impacts on behaviour by stimulating strong and memorable feelings, possibly making them more dominant during processing.

In Table 7.26, income also showed a high B value. This study revealed that the most influential factors influencing financial behaviour are ‘discussing money with family’; ‘year enrolled’ and ‘income. This study showed that income has a significant positive effect on financial behaviour, which is in agreement with findings from Robb and Woodyard, (2011), It is also a predictor of financial behaviour (Hira, et al, 2009). The prospect theory of behavioural finance suggests that financial decision-making is an adaptive process that can be stimulated by the environment, and stronger socio-demographics, such as income, could lead to better financial decisions (John et al., 2009).

Table 7.25 also shows there is a positive significant influence between financial attitudes and financial behaviour. However, as we saw with financial knowledge, the effect of attitude is not as strong as with the variables above (see the B value). This study is consistent with the theory of behavioural finance, that is, the argument that financial decision-making is neurological, whereby emotional factors inform the decision-making process. Those with better attitudes were more likely to show more responsible financial behaviour. Madern and Schors (2012) argue that short-term thinking and the lack of willingness to save are attitudes that may cause financial problems. The results also support previous research by Robb and Woodyard (2011), Danes and Haberman (2007) and Mien and Thao (2015), who show that having confidence in financial knowledge will benefit sound financial behaviour, although care must be taken, as confidence can also be misplaced and greater risks are taken, which may lead to negative outcomes. Moreover, there might also be other factors not included in this study that influence financial behaviour, such as parents' income and other psychological factors.

7.4 Conclusion

Interesting findings were found in relation to behaviour. The study initially suggested that financial behaviour varied between all groups, except gender. However, according to the regression analysis, financial behaviour is only influenced by year of enrolment, work experience, income, gender, knowledge and attitude, and financial socialisation. Although there is a difference in financial behaviour between those from economics and business backgrounds and those who had taken the personal finance course, none of the courses actually made much difference. Apart from the duration and content of module, perhaps it is because of a selection effect, whereby people who were more interested in money decided to take the course in the first place, so the course itself had little effect once we control for other factors. The study also shows that although financial knowledge and attitude influence financial behaviour, the effect is not strong.

However, as financial education has little effect on increasing financial behaviour, it does not mean that education should be ignored; it is simply argued here that it is not the only solution. We have to work on the broader frameworks, such as consumer protection, better regulation, income levels and, as shown in this study, year of enrolment, financial socialisation, income and work experience, which are the stronger factors and are important in relation to behaviour. However, increasing income and work experience is also another challenging issue; therefore, currently, encouraging parents or family members to talk about money with their children is the most viable, and indeed also the strongest factor, even among all the variables examined in this study, in altering financial behaviour (see the B value in Table 7.26).

CHAPTER 8

DISCUSSION AND CONCLUSION

Introduction

As we saw in Chapter One, we are living in an increasingly financialised world where the role of government in providing social protection is reduced and individuals engage more directly with financial markets (Bryson, 1992; Harvey, 2007; Rowlingson and McKay, 2015). This increasing financialisation means that people must navigate a complex financial services market and an array of financial products themselves. As a result, better regulation of financial services is essential but people also need a higher level of financial capability.

As a baseline study, this thesis aims to measure financial capability in Indonesia with the focus on university students. This thesis makes a number of contributions to key debates on financial capability. In particular the new empirical data collected makes a significant contribution to the understanding of the drivers of financial capability to make policy recommendations. This final chapter presents the overall findings and key contributions of this study.

8.1 Key contributions of this study

The key contributions from this study should be considered within the broader context of financialisation which has brought increased complexity o the world of financial products and services (Remund, 2010), As Langley (2008, p.245) argued:

> '…*contemporary transformations in saving and borrowing routines introduce vulnerabilities, volatilities, and inequalities*…'

Therefore, better regulation of services is needed in order to reduce complexity and fraud. However, in such a financialised world, it is also important for people to increase their understanding and ability to manage their personal finances, as we now face a shift in responsibility from the state to the society, where people now have to take control of their financial matters, including for the retirement (Harvey, 2007; Rowlingson and McKay, 2015). In addition, as discussed in chapter two, living in a more financialised world means that we need to understand finance better, since individual now have to be more responsible for their financial affairs. Therefore, higher levels of financial capability are needed (Vitt, et al., 2000; Kempson, et al., 2005).

Within this broader framework, financial capability becomes increasingly important but there is still relatively a less discussion of what financial capability is, what drives it, and how it can be increased. This thesis makes a contribution to all these gaps in knowledge.

8.1.1 Conceptualising financial capability

A conceptualisation of financial literacy and capability was provided by chapter two. One of the gap in knowledge that would to fill by the chapter is there is still a lack of critical thinking of both concept. As mentioned in chapter one, this topic is a highly contentious subject, but nevertheless, some of the literature is very un-critical. There have been various studies about financial literacy and capability. However, despite the broader definition, there is no standardised definition, concept, and measurement that is universally accepted (Remund, 2010; Huston, 2010; and Hastings, 2012). As we saw, across previous studies that have been conducted, there are varying definitions of the concept of financial literacy and capability and it is complex over time. The terms are often used interchangeably and there is also overlap between them (Xu and Zia, 2012). Some authors defined financial literacy as one component of financial capability, and others defined the concept in a similar way to financial capability. Some authors defined financial literacy as ‘knowledge about financial concepts and numeracy skills’ that involves, for example, measuring knowledge about three basic financial concepts, ‘inflation’; ‘compound interest’; and ‘risk diversification’ (Lusardi and Mitchel, 2005, p.3). These have been referred to elsewhere as the ‘Big Three’ (Hastings, et al., 2013, p.7; Hastings, et al, 2012, p.11). Despite the fact that the concept is quiet narrow, it has had a great influence and the concept had been replicated in several studies, including Cole et al (2009), Klapper and Panos (2011), Sekita (2011) and Xu and Zia (2012). The other authors defined the concept more comprehensively; for example, Noctor et al (1992, p.4) defined it as ‘the ability to make informed judgments’ and financial decisions.

The term has also been developed into broader concept, such as the concept of financial literacy by Atkinson and Messy (2011); and OECD/INFE (2011, p.3) that offered a more holistic area, which includes a focus on ‘knowledge, skills, attitude and behaviour’ to make informed ‘financial decisions’ that may lead to ‘financial wellbeing’.

Meanwhile, Johnson and Sherraden (2007), argued that along with developing financial knowledge and skills, it is also important to include access to financial products and services in any definition of financial literacy. This broader concept is used interchangeably with ‘financial capability’.

The concept of financial capability has been established, as it was argued that depending only on knowledge and skills is not enough (Kempson et al, 2013). In this concept, financial literacy is used as just one component of financial capability (Kempson et al, 2005; MAS 2013; MAS 2015). To measure it in practice, an operational definition was needed. It was shown that financial capability covers a wide range of factors, such as: knowledge, skills, attitude, behaviour, motivation and the opportunity, managing money, planning-ahead, choosing products, and staying informed (Kempson, et al, 2005; Atkinson et al, 2006; McKay, 2011).

Chapter two also showed that although it seemed easier to discuss high or low levels of knowledge, yet it is not that simple to make a judgement since it depends on many factors, such as individual circumstances, times, nation, or places (Kempson, et al, 2013). Things get even harder when it comes to ‘attitude’ and ‘behaviour’, as they are very likely to be influenced by social norms. People tend to respond in a way that ensures that they will be accepted by others (Kaminska and Foulham, (2013). Similarly, when it comes to behaviour, addressing ‘good’ and ‘bad’ behaviour is challenging, as it depends on individual circumstances. For example, budgeting is viewed as a good behaviour in financial management. However, if someone did not engage in making a budget but do not have any difficulties in paying their bills, do they therefore have ‘bad’ behaviour? Obviously, most people want to be able to make ends meet, but if they can easily do this without keeping track of their finances or spend rather than save, it should not be automatically judged as an irresponsible behaviour.

Chapter two contributes to a more understanding of the concept of financial capability, that is through the discussion on the definition of the concept of financial capability, what constitutes a high or low level of knowledge is and what a good or bad attitude or behaviour is. Moreover, the chapter states that: in the issue of financialisation and the increasing of individual responsibility of their own personal finance, it would be helpful to develop a clear and standardised conceptual, operational definition, and define an appropriate measurement instrument so it can be used globally and so that, importantly, policy makers and practitioners can be better able to improve financial capability and better regulate financial services in the interests of society.

8.1.2 Financial capability across the globe

Chapter three compared the level of financial capability that has been conducted in several studies from around the world. We saw that there was a lack of comparative analysis of levels of financial capability in different countries and among different groups. This chapter aims to contribute to better understanding of financial capability by exploring the levels of financial capability in a comparative context, with different groups, and using different models of financial capability. By doing so, we were able to see why financial capability is higher in some countries or among some groups within populations.

This study used the term of financial capability that viewed financial literacy as a part of financial capability. As mentioned in chapter two, because different conceptualisations, operationalisations, and methods have been carried out in previous studies, it is difficult to make comparisons between them. However, this chapter tries to explore the levels of financial capability within different groups but focusing on several similar studies in comparative context. The chapter compared the level of financial literacy across studies that employed 'Big Three' questions, and studies of financial capability in 2005 for FSA UK (Kempson et al.,2005; Kempson and Collard, 2006; Atkinson et al., 2006), MAS (2013, 2015), and Definit (2013) for FSA Indonesia.

It was revealed that levels of financial capability, including financial literacy, varied, even when similar measurements were used, and this can be addressed to several factors, namely: financial education, the economic situation in each country, the country's economic system, for example, the provision of state-pensions. In addition, we saw that the wording of the question is also important, in cases where the concept underpinning the question is similar. Different numbers or words used may affect the difficulty of the calculations and thus have an effect on the results (Xu and Zia (2012).

However, the need of knowledge might be different depends on the circumstances such as person, time and places (Remund, 2010). People may have different views about how important it is to know about certain issues, such as an understanding about inflation, compound interest, or which kind of financial products and service to use. Therefore, the questionnaire can be modified with other questions that are more suited to the conditions in a specific country. Socio-demographic factors also appeared to be an influential factor that affects financial capability. These include age, gender, work experience, and income., for example, those with limited income might require different capability than those with higher income. There are also people's perception and risk profile that need to be considered.

In term of attitudes, what a good and bad attitude is is also not a simple question. Most people might probably agree a certain attitude to be the 'right' attitude. Similarly, in term of behaviour, there is some behaviour that is, arguably, more appropriate than others. However, as Remund (2010) and Kempson et al, (2005) have argued, it is not easy to build a consensus. In many cases, it depends on the 'individual's financial circumstances', 'life stage' and even 'geography' (Kempson et al., 2005, p.16; Remund, 2010; Vyvyan, 2014).

Chapter three also examined the important of conducting study among university students. Starting to live independently, college students face a new responsibility to manage their finance. Several studies on financial capability that have focused on college and university students have been conducted across countries (e.g. Chen and Volpe, 1998; Nellie Mae, 2005; Gutter and Copur, 2011; Beal and Delpachitra 2013), including in Indonesia (e.g. Krishna, 2010; Nidar and Bestari, 2012; Zahroh, 2014). However, some limitations were recorded, such as limited samples, only targeting specific groups (e.g. only targeting a specific faculty), minimal questionnaires (with limited question and conceptual reach), or only covering limited areas, such as only measuring knowledge or attitudes. This research contributed to filling this research gap. This study offers a rigorous method by applying a massive mixed-methods research--as presented in chapter four, that is six focus groups and 521 face-to-face interview survey, with a comprehensive questionnaire from major previous study, that is FSA UK 2005 base line study of financial capability (Kempson et al, 2005; Kempson and Collard, 2006; Atkinson et al, 2006) and MAS (2013).

Chapter three provides a key contribution by presenting a thorough review of previous studies from a range of countries and a range of disciplines, including economics, management, finance, psychology, family and consumer sciences, social marketing, financial education, and policy. The chapter reveals various macro and micro factors that have been shown to affect levels of financial capability. These include: economic condition; financial system such as support of social protection from the state; financial education; and socio-demographic factors, such as income, gender, education, background of study, work experience, and family socialisation. The chapter also contributed through a discussion on the relationship between knowledge, attitude and behaviour, where it was shown that there are inter-related associations between the three.

8.1.3 New empirical data on financial capability among Indonesian students

As mentioned earlier, there are very few comprehensive studies of financial capability among university students, especially in Indonesia. Those studies which have been carried out are limited within one particular area such as knowledge, attitudes, or behaviour, only; limited in size or type of sample, and using a very short questionnaire/instrument of measurement. This study fills this gap by measuring and analysing financial capability amongst university students in Indonesia using more comprehensive concept and rigorous empirical approach.

This study's empirical research covered financial knowledge, attitudes, and behaviour that encompasses several domains of financial capability, with a comprehensive questionnaire that mainly adapted from the framework of FSA UK 2005 (Kempson et al (2005), Kempson and Collard (2006)), and MAS (2013, 2013b), that is 'managing money', 'managing risk', 'choosing products', 'planning ahead', and 'staying informed'.

Employing a mixed methods approach, this study was conducted in Bogor Agricultural University (IPB), Bogor city, Indonesia. Respondents of this study were undergraduate students of IPB. The main component of the research was quantitative. In addition, it used the exploratory method, wherein qualitative data was gathered first, followed by quantitative data. For the qualitative data, six focus groups were carried out in August 2014 in the Department of Family and Consumer Sciences. The aim of focus groups was mainly to check whether the questionnaire of the survey was appropriate. On that basis, 521 face-to-face surveys were carried out from May until September 2015. Each was between 30 and 40 minutes in length. All respondents in the survey and participants in the focus groups received a reward for participating in the study. For the survey, this study employed the comprehensive questionnaire from the major national studies that have been explained previously.

In this study, the questionnaire was piloted twice in order to test its feasibility, especially since the questionnaire was translated to Indonesian. The first pilot was done in March-April 2015 to 6 Indonesian undergraduate students in Birmingham. Based on this piloting, some questions were revised. This is mainly due to translation issues. Using the revised questionnaire, the second pilot was conducted to 16 undergraduate students at Bogor Agricultural University who had similar characteristics to the target respondents. Due to sample size, complexity of questionnaire, limited time, and the method of administering the survey (face-to-face), this study also involved four paid interviewers who had some training in research methods and previous experience as an interviewer in other surveys. All interviewers were trained before the data gathering process. Regarding confidentiality agreements, all interviewers were also asked to sign an agreement form provided by the Research Contracts Department at the University of Birmingham.

The study received full ethical approval from the Humanities and Social Sciences Ethical Review Committee at the University of Birmingham. Quantitative data that gained from this study will be open access, after ensuring confidentiality and data protection. Qualitative data were transcribed and analysed manually using thematic analysis. The quantitative data obtained was processed by using the Microsoft Excel and SPSS. The analysis included (1) descriptive analysis, (2) correlation analysis, (3) difference tests, and (4) regression analysis.

To sum up, this thesis contributes new data based rigorous mixed methods research, with six focus groups and a large scale of 521 face-to-face interviews, each lasting about 30-40 minutes; employed a comprehensive questionnaire that was adapted mainly from the previous studies by Kempson, et al., (2005), MAS (2013), that was piloted twice; was conducted. In addition, the data will be made openly available via University of Birmingham repository, after ensuring the ethics such as data privacy and confidentiality of all respondents that involved in the survey.

8.1.4 Financial knowledge, attitudes, and behaviour: The empirical findings of study

Prior to this study, there is still a lack of detailed empirical data on financial capability in Indonesia, including among students. Chapters five to seven provided the empirical data to fill this gap. Analysis of financial knowledge was explored in chapter five, while financial attitudes and behaviour were discussed in chapters six and seven, respectively. The chapters provide key contributions and a new survey data which reveals drivers of knowledge, attitudes and behaviour (see Table 8.1). It also shows the links between them.

Research Question 1: Financial Knowledge and the determinant factors

In terms of financial knowledge, this chapter found that respondents were still unfamiliar with some financial terms, and that risk diversification (investment), advanced compound interest, inflation, and credit cards were recorded as being difficult questions by respondents. On average, respondents in the survey were only able to answer half of the nine questions about financial knowledge correctly. In total, a third of respondents answered less than half of the questions correctly.

This study showed that Indonesian students have a lower level of financial knowledge compared to the Indonesian population generally (as discussed in Cole et al., 2009), and general population in the US, Germany, and Japan (Lusardi and Mitchell, 2005; Bucher-Koenen and Lusardi, 2005; Sekita, 2011). Respondents' financial knowledge was also low in comparison to undergraduate students in the US (Lusardi, 2010). Meanwhile, Indonesian students showed a slightly higher score when it came to knowledge about compound interest than general population in the the UK (Kempson et al., 2005, MAS, 2015). Indonesian students also documented higher score compared to UK young population (MAS, 2015). In addition, this study showed that among Indonesian students, certain groups have a higher level of financial knowledge. Specifically, knowledge was higher amongst those from economics and business background, those who had attended the personal finance course, senior students, and those who had previous work experience. Moreover, the regression analysis that was carried out revealed that the key determinants of financial knowledge were year of study, field of study, attendance on the personal finance course, work experience, and whether they discussed financial issues with family.

Table 8. 1 Summary of coefficient of regression analysis

No	Dependent variable	Financial knowledge		Financial Attitude		Financial behaviour	
		B	Sig.	B	Sig.	B	Sig.
1	Gender (1=male, 0=female)	3.120	.061	-3.400	.000***	2.381	.004**
2	Year enrolled (1=year 2 and above; 0=year 1)	3.986	.041**	1.684	.029**	3.694	.000***
3	Field of study (1=Economics-Business major; 0=non-Economics-Business)	8.670	.001**	2.395	.016**	2.404	.062
4	Taken Personal Finance course (1=Yes; 0=No)	7.060	.013**	2.075	.054	.978	.501
5	Had working experience (1=Yes; 0=No)	5.150	.002**	1.765	.008**	2.880	.001**
6	Discussing money with family (1= yes; 0= never)	6.695	.007**	2.868	.004**	4.974	.000***
7	Discussing money with friend (1= yes; 0= never)	.411	.839	-.433	.586	2.351	.023**
8	Income	1.465	.385	.199	.764	3.749	.000***
9	Financial knowledge	NA	NA	.137	.000***	.053	.027**
10.	Financial attitude	NA	NA	NA	NA	.248	.000***

**** significant at 0.01%*
*** significant at 0.5%*
NA: Not Available

Research Question 2: Financial attitudes and the determinant factors

In term of financial attitudes, students were more likely to see certain attitudes as the 'right' attitude, except in the domain of managing risks, where the number of neutral responses was higher compared to other domains.

In general, the results of the survey show that in terms of attitude, the majority of respondents 'tended-to-agree' with managing money, planning ahead, and choosing products carefully. More than two thirds of the respondents agreed or strongly agreed with the need to save rather than spend, prepare retirement plans; plan for retirement; purchase life insurance; pay debts in full and on time; and save money. A slight difference in the results was shown in terms of the attitude towards insurance; even though the respondents tended to agree with the need to avoid risk, in some statements they tended to be neutral.

Similar patterns were found to those in the study by Atkinson et al. (2006) and MAS (2013 and 2015). Namely in the domain of managing money, especially when it came to 'being organised with money'.

It was found that financial knowledge has an association with financial attitude, however, the relationship is weak. Meanwhile, based on the findings from the regression analysis, the key determinant of financial attitudes was gender, year of study, field of study, work experiences, financial knowledge, and discussing money with family. This chapter showed that although those who had attend the personal finance course recorded higher than average scores of financial attitudes, attendance did not have a significant impact on financial attitudes, once other factors were controlled for.

<u>Research Question 3: </u>Financial behaviour and the determinant factors

In terms of behaviour, this study showed that students were the less likely to save regularly. Students were more likely to be motivated about savings when the target was foreseeable, such as for a holiday. The survey revealed that half of students have not regularly budgeted expenses, and students were more likely to keep track their money by recalling details from memory. Even though they all had a bank account, about one third of respondents reported that they only check their balance once a month or less.

The majority of respondents were able to keep up with all their bills and commitments, although some groups reported that they struggled to make ends meet. Just over a third of respondents have 'money left over at the end of the month'. 'Put it into savings account' was was the most likely answer when asked about where they put that money, followed by 'keep it until next month, and spend it'. Meanwhile, one in three respondents hardly ever had money left over at the end of the month.

Positive behaviour was found when it came to allocating money for future needs, and making plans to achieve financial goals. Despite the tendency 'to spend rather than to save', the students had thought about future planning. A third of respondents reported that they avoid overspending, while nearly four in ten save 'most of the time'. Meanwhile, nearly a quarter of respondents had experienced 'a major unexpected expense' in the previous three years; that is, an expense equal to one month's income, or more. Respondents were most likely to 'cut back on spending', withdraw money from their accounts or ask for help from family as a means to cope with such a situation. In addition, about half kept abreast with finance issues, typically by using the internet. In general, the vast majority of respondents used the internet several times a day for all purposes.

The regression analysis showed that the drivers of financial behaviour were gender, year of study, work experience, discussing money with family, financial knowledge, and financial attitudes. This chapter also showed that there was association between knowledge, attitudes, and behaviour, although the correlation between the variables was weak (see Table 7.29). The regression analysis also showed that field of study and attendance on the personal finance course had no effect on financial behaviour (Table 8.1).

Discussion on Findings: Research Questions 1,2,3

As documented in this study, students' relative lack of financial capability can be attributed to several factors. First, for the majority of them, being a university student also meant living away from home for the first time and becoming more independent, including in managing their finances. Some of the financial terms may have been completely new concepts to them. Moreover, it should be noted that the students were still in the early phase of their financial life cycle (Chen and Volpe, 1998; Furtuna, 2007), and were thus still learning and needed more experience to establish expected behaviour. Second, their low score may be the result of their low student incomes. Third, they lack of financial experience and have had limited exposure to financial products. In this study, although all the respondents owned a bank account, not all students took the initiative to open a bank account; as we saw in chapter five, students at IPB are provided with a savings account by the university when they register as new students. The account is compulsory, because students need to use it to pay their tuition fees. The majority reported that they used the account only to receive money transferred from their parents or sponsors. Fourth, in Indonesia, financial education has not been made a compulsory subject in the school curriculum, including at the college and university level. It is taught as part of economics and business majors. However, even in these subjects, the content that is related to personal finance, such as how to manage money and how to improve personal finances, is limited.

This study also documented the low exposure of financial education among the respondents, where only about one in ten attended the personal finance course. These were those who enrolled in the Department of Family and Consumer Sciences, where the course is a compulsory module, and those from other majors who chose the course as their elective module. This low exposure was also reflected by the data, wherein it was showed that one quarter of respondents never stayed up to date with information relating to financial issues (*see* Table 7.6). However, this study shows that personal finance course only appears to influence financial knowledge and attitude, whereas it does not have much of an impact on behaviour. The next sections will reflect on this issue in more detail.

Although students agreed that certain attitudes were important, this did not mean they would change their actual behaviour. For example, the majority of students agreed or strongly agreed that keeping track of income and expenses is important, however, in reality they didn’t do it. In another example, they believed that saving for rainy day is important, but in reality they did not save. As mentioned earlier in this chapter, several attitudes do not have a relationship with actual behaviour. This may be because attitude is a subjective area, and it often includes a social desirability bias. Attitudes might not reflect actual behaviour because respondents might give their answer they did just because they thought it was more socially acceptable, because attitudes are very likely to be influenced by social norms. People tend to responds differently in order to be accepted by the others (Kaminska and Foulham, (2013). Wilson and Zhang (1997) supports this finding. They argued that decisions are not always based on rational thought. Similarly, Mandel and Klein. (2007) revealed that a motivational aspect is also a determinant factor of financial behaviour

<u>Research Question 4</u>: How does financial capability vary among respondents?

Based on the Independent-Sample T-Test, this study found that financial capability varied according to different groups (Table 8.2). As mentioned earlier, this study found a significant difference between the field of study and all areas (financial knowledge, attitude and behaviour). Respondents from economics-business backgrounds were more likely to gain a higher score. In terms of attendance on the personal finance course, the result also showed a significant difference in the areas of knowledge, attitude, and behaviour between those who had taken the course and those who had not. Respondents that had taken the module were more likely to score above average. Similarly, based on year enrolled, it was revealed that respondents at later stages of study were more likely to have a better score in all areas (Table 8.2)

Table 8.2. The result of the difference test analysis

Groups	Knowledge	Attitude	Behaviour
Field of study	0.000***	0.000***	0.003**
Personal finance course	0.001**	0.000***	0.015**
Year of study	0.000***	0.000***	0.000***
Gender	0.101	0.000***	0.082
Working experience	0.000***	0.000***	0.000***
Income	0.236	0.002**	0.000***

**** significant at 0.01%*
*** significant at 0.5%*

Based on gender, men showed higher scores when it came to financial knowledge and behaviour, while women showed better scores when it came to financial attitude. However, based on the independent-sample t-test analysis, with the confidence level at 95%, a significant difference was only found when it came to attitude. In this study, there was a significant difference between men and women's attitude towards managing money, risk, insurance, and planning-ahead (see Table 6.11, chapter 6). Female respondents demonstrated a better attitude towards managing money and planning for future needs. The fact that women have higher scores in the area of risk and insurance could mean that female students tend to agree that it is important to have insurance as a form of protection. Meanwhile, female and male students had similar attitudes when it came to choosing products. Further regression analysis also identified that gender is one of the factors that determine students' financial attitudes. Details are displayed in Table 8.2.

The focus groups revealed that those without a background in economics or personal finance mostly viewed financial capability in terms of income and resources; the higher a person's income, the more opportunity they have to become financially capable. Meanwhile, the other groups argued that financial capability is not about how much money a person has; rather, it is more about their managerial skills. A person who is categorised as being on a low income can still be identified as financially capable if they can manage their money or resources wisely to meet their needs. In Atkinson, et al.'s study (2005, p.38), it was argued that:

> *"some of the most skilful money managers were on very low incomes, and if they failed to make ends meet this was often due to lack of money rather than lack of financial capability"*.

As Hilgert, et al. (2003) argued, those with lower incomes have a higher probability of not paying their bills on time compared to those on higher incomes, due to their limited resources.

Tables 8.1 and 8.2 show that financial attitude and behaviour vary based on a respondent's level of income, although the regression analysis showed that income only appears to be a determining factor for financial behaviour. It should be noted that although income is not an influential factor for knowledge and attitude, in this study, it does have a strong effect on financial behaviour (see Table 8.1). Similarly, as mentioned above, most people want to be able to make ends meet, that is, to have enough income to meet their basic needs. Thus, if people are not able to do this it suggests that there is a problem.

Living on a low income may mean that they are less likely to save a significant sum each month, to be able to access certain financial products such as insurance products, or to top up their pension fund. This study found that respondents with a higher level of income were highly likely to score better in measures of financial behaviour. Having a higher income helps an individual to meet their needs and manage their money more easily. Notably, this study found that income has a significant positive influence on financial behaviour.

Moreover, the independent-sample t-test (see Table 8.2) showed that there is a significant difference in the level of knowledge, attitude, and behaviour between the respondents who had work experience and those who did not. Similarly, the results of the regression analysis show that work experience has a significant influence in all areas of financial capability (again, see Table 8.1). Therefore, work experience is also recorded as one of the determining factors of financial capability.

Similarly, when comparing the discussions in focus groups on financial capability, it was found that those who run a small business were used to managing their day-to-day income and expenses because they implemented this process as part of their day-to-day business operations. This finding supports Hogan et al. (2013), who argued that experience correlates with financial literacy because it increases understanding and ability. Similarly, Shalahuddinata and Susanti (2014) posited that students who work have more opportunity to manage their finances better, because the extra income they receive from work makes them more able to meet their needs. Working enables a person to obtain knowledge and understanding of managing money; by learning from experience, a person can develop a sense of responsibility and increase their money-management expertise (Shim et al., 2009).

In addition, experience can also be gained through interaction with the family. In this study, it was found that the family occupied the highest percentage as the reference group (see Table 7.21, chapter seven). The regression analysis showed that discussing money with family has a positive effect on all areas of financial capability. Those who discussed money matters with family members were more likely to have a better level of knowledge, attitude and behaviour. This is also similar to what was found in the focus groups, as shown in chapter seven, wherein participants suggested that reference groups such as family could influence financial knowledge, attitudes and behaviour.

However, an unexpected result was found in this study with regards to the effect of personal finance course toward financial attitudes and behaviour. The regression analysis showed that the course only has a positive effect on the level of financial knowledge, while the course does not have a significant impact on respondents' financial attitudes and behaviour, once we control for other factors. As mentioned in chapter seven, this finding indicated that students' understanding was still at cognitive level. The independent t-Test (Table 8.2) showed a significant difference in the level of financial knowledge, attitude and behaviour between those groups of students. Attendance on the personal finance course perhaps affected the financial behaviour and attitude indirectly, that is, through influencing knowledge (see Table 8.1).

Table 8.1 showed that financial knowledge and attitude have a positive effect on financial behaviour. However, the effect of knowledge and attitude toward behaviour is not as great as with other factors.

<u>Research Question 5</u>: Topics that students find challenging

In terms of behaviour, this study showed that students were less likely to save regularly. The survey revealed that half of students have not regularly budgeted expenses. Positive behaviour was found in allocating money for future needs, making plans to achieve financial goals, and paying debt in full and on time. Meanwhile, in the area of knowledge, students tended to score lower when it came to time value of money, managing risk, and basic economic concepts such as inflation.

Meanwhile, based on the focus groups, the student' weaknesses and strength were also identified (see Appendix 29). There were six focus groups, who were organised on the basis of their field of study and background of personal finance course:

- Group 1: Personal Finance course; Economics and Business; Year 2 and 3
- Group 2: Personal Finance course; Economics and Business; Year 4
- Group 3: Sciences; Year 2 and 3
- Group 4: Sciences; Year 4
- Group 5: Common/Other; Year 2 and 3
- Group 6: Common/Other; Year 4

Across all the focus groups, there were a number of areas in which participants exhibited strength in financial management. Selecting products was the most common answer; many of the participants reported that they were quite good at choosing products and always compared products before buying. This is a good start for when participants want to buy financial products.

When discussing financial weaknesses, many participants in focus groups reported weaknesses in knowledge and understanding of the concept of risk management (see chapter 6). They felt that it was difficult to understand how insurance works and the costs and benefits of taking out insurance as a form of financial protection. It was noted that some answers that were categorised as strengths in the previous theme were found to be weaknesses for some of the participants. One example was managing money, which includes record-keeping, budgeting, and choosing products. Some participants also highlighted the importance of planning ahead, however, they noted some gaps in their knowledge about how to plan for the future, such as saving for a house or investing in a pension. Calculating compound interest and the time value of money were also weaknesses among participants. It should be noted that these are the perceived strengths and weaknesses as reported by participants, therefore they may differ from their actual strengths or weaknesses.

Comparing the results from the survey and focus groups, similar findings regarding students' self-identified weaknesses were found, as presented in Table 8.3. From Table 8.3, it was shown that students' perceived themselves to be weak in the domain of 'planning-ahead', 'managing risk', understanding the concept of time value of money, compound interest, and knowledge about fraud and scams.

Research Question 6: The need of financial education

Although attendance on the personal finance course had a significant effect on financial knowledge, this study also showed that it had very little impact in developing financial attitudes and behaviour, once other factors were controlled. As argued before, it might be because it was only a short module. However, neither students from Economics and Business major showed the similar finding. As suggested in chapter 7, this may also because of a selection effect, wherein people who are more interested in money decided to take the course in the first place.

Addressing the issues of financial capability, one key question was also raised: *how effective is financial education?*

Table 8.3. Topics that students find challenging

Focus groups	Survey
• Managing risk • Planning ahead: savings • Managing money: keeping track, budgeting • Concept of compound interest • Time value of money • Fraud and scams	• Knowledge about compound interest; inflation, time value of money; • Managing risk • Planning ahead: savings and investment • Managing money: keeping track • Staying informed • Fraud and scams

As knowledge and skills develop, positive attitudes and behaviours may also increase (Robb and Sharpe, 2009; Robb and Woodyard, 2011). However, different findings were found in this study. As discussed above, the regression confirmed that only financial knowledge was influenced by attendance on the personal finance course, whereas it had no effect on financial attitudes and behaviour once other factors were controlled. Similarly, although financial knowledge and attitudes showed significant influence on financial behaviour, the effect is not strong. However, it does not mean that financial education is not necessary to continue, but personal finance education is not the main determinant of behaviour, therefore, looking at other aspects is needed. Notoatmodjo, (2003) argued that behaviour is influenced by internal and external factors, and it was explained that the internal factors include knowledge, perception, motivation, and so on, which function to process external stimuli; while external factors such as income, environment, culture, and so on.

Table 8.1 also revealed that income and work experience had a strong influence on financial behaviour. However, financial socialisation by parents had the strongest effect on financial behaviour. This study therefore shows that parents play an important role in developing students financial knowledge, attitudes and especially behaviour. The exposure to knowledge, attitudes, and behaviour gained from home is therefore expected, in turn, to influence children's financial attitudes and behaviours.

This is in line with the theory of consumer socialisation, that suggest that 'individuals learn through their interactions with their environment, especially where they spend the most time and where they spent time in the early years of life' (Jorgensen, 2007, p.47). *Thus,* financial habits can be developed by watching how parents handle their financial matters, and how parents discussed about money with their children; those whose parents talked with them regularly about financial matters tend to have higher level of financial knowledge, positive financial attitudes, and in turn, behave in more financially responsible ways (Van Campen, et al, 2010). Sohn, et al. (2012), also revealed that financial experience and socialisation, such as by family members, will benefit the promotion of financial knowledge and skill.

As argued by Clarke, et al (2005), strong parenting practices such as implementing and discussing about financial goals, value, and money matters can benefit financial capability. Their research showed that those who were thoroughly taught about financial matters at home and those who financial behavior modelled at home, were more likely to feel well prepared for their own financial role (Clarke, et al, 2005, p. This creates some challenges for policy. How can policy encourage a 'virtous cycle' of financial education and socialisation within families?

Parents should be encouraged to talk about financial issues more often within home though it is not simple to know how to best achieve this. Parents clearly need to be aware of their important role in building positive financial habits of their children; ‘what they say about money and how they show financial behaviour stays with adolescents into young adulthood’ (Van Campen, et al., p.3). But, again, how can this awareness be raised in practice? Perhaps school could play a role here in raising such awareness, e.g joint financial education lessons for parents and children, though this will add to the many demands placed on schools.

There is also a potential risk in encouraging greater discussion within families if some parents have limited knowledge and perhaps attitudes and behavior, which are not particularly positive. Greater discussion in these families might lead to the continuation of attitudes and behavior which are not conducive to good money management. It is therefore important to both raise general levels of financial capability among adults (including parents) and then encourage greater discussion within families to ensure positive attitudes and behavior are transmitted.

However, not everybody, and in this context, young people, have the opportunity to engage with financial socialisation (Verhelst and Saskatcehwan, 2016), work experience, or financial products or services. Therefore, as shown by Borden et al. (2008), for those who lack financial experience, financial education is believed to be a way to enhance knowledge related to personal finance and increases an individual’s responsibility to manage finances.

The need of financial education among this group is also supported by the House of Lords (2017), as recommended in their report, page 39:

> *“while there is a certain degree of focus on the financial education needs of those who are under 16—even if provision is often lacking—there is less of a*

focus on the needs of the 16–24 age group. We believe that it is important that suitable provision is made available to these young people, who are often at a stage in their lives when they are making important decisions with long-term, far-reaching financial consequences"

Furthermore, 'it was suggested that financial education should be provided to this age group, perhaps through incorporation into apprenticeships or courses of study' (House of Lords, p.39). Moreover, it was also recommended to involve financial services providers to support the program, such as provides online resources.

With complex financial products and markets, educated consumers will be more likely to make the right decisions, feel more confident, and prevent them from falling victim to financial fraud or scams (Department Trade and Industry [DTI] and Department Work and Pension [DWP], (2004); Fatoki and Oni (2014). This is also very important issue for Indonesia, especially if we look at the population pyramid, wherein we see that the highest percentage of population are those in the younger groups. If knowledge is viewed as power, then the educated consumer will have a greater advantage in the marketplace, where the more accurate the information accessed, the more efficiently the information can be used (Greenwald and Stigitz, 1986). However, people should also be motivated to keep up-to-date with information and find appropriate products and services for them. Another question that arose then is, 'what design of financial education that should be implemented so it can be effective to enhance financial capability?'

As mentioned in chapter seven, the duration of the personal finance course is one of the potential reason why it does not affect financial behaviour. In IPB, the course is only taught for one semester (14 weeks) only, once a week, for three hours per week. The duration perhaps may not be sufficient to establish positive behaviours, given that changing a person's attitude and behaviour is a complex process that takes a long time. Llewellyn (2012, p. 36) explained that

> *"financial literacy is a science and takes time to master; it cannot be achieved by taking a seminar or five-month economic course in high school or college".*

Moreover, the content of the course perhaps needs to improve by addressing behavioural aspects. One of the findings in this study is that experience is one of the factors that influences financial capability, including financial behaviour. Hilgert et al. (2003, p.321) explained that financial education requires a combination of 'information, skill building and motivation, in order to lead to the desired behaviour. Again, as documented by Kempson et al. (2013), relying on knowledge and education only is not sufficient, as research within behavioural science shows that financial capability can be affected by several critical elements: skill, knowledge, attitude, motivation and opportunity. They argued that these elements explain why some existing interventions may not be as effective as had been hoped. For example, many people may have sound skills and extensive knowledge, but lack motivation, so they prefer to spend now rather than save for later. Therefore, design of pedagogy also should put consideration to stimulate the motivation.

Moreover, the findings in this study also showed that financial education should follow an experiential learning method and give students the opportunity to obtain more practice alongside learning about theory. As suggested by Sohn et al. (2012) and UNCF (2012), the experiential learning model has a better chance of boosting financial literacy among young people. Learning is more effective if the students are actively involved, rather than passively receiving information from teachers, as this enables them to develop a deeper understanding of the issues. Repetition and practice are applied in order to develop expected behaviour. It adopted from the theory of classical conditioning which argued that human behaviour is the result of the conditioning effect of exercises and habits (Peter and Olson, 1999).

As presented in chapter five, this study also explored the willingness of respondents to learn about personal finance. Both the quantitative and qualitative aspects of the study found that students showed an interest in increasing their financial knowledge. The majority of respondents in the survey and all of participants in the focus groups also reported that they wanted to continue with their financial education. In addition, this study also identified the key topics that were expected to be studied in financial education. Respondents in the survey were more likely to learn about saving and investing, followed by budgeting and insurance and risk management topics. Meanwhile, participants in the focus groups mentioned planning ahead, money management, selecting financial products for investment, knowledge and understanding about borrowing and understanding more about interest rates, as examples of topics that they need to learn about more comprehensively. From the focus groups, it was found that students expect financial education with more practical content. This is also consistent with previous studies, such as Sohn, et al (1998), Johnson and Sheraden (2007), Joo and Grable (2004), which reported that attitudes and behaviour developed through experience remain for longer. Developing experimental learning proved to contribute to stronger memory retention and to be more stable, thus it has a positive effect on developing he desirable behaviour.

This information will benefit the development of effective financial behaviour that meets students’ needs.

8.2 Limitation of study

There are a number of limitations that have become apparent during the course of this study. For one, when calculating financial knowledge, attitude, and behaviour scores, all questions were treated with equal weight. Meanwhile, the questions, especially concerning financial knowledge, were varied in term of their difficulty. Further research should consider weighting the questions based on their respective levels of difficulty.

Due to time and cost limitations, this study only focused on one location. To gain more comprehensive results, future research may consider more samples, locations, and or methods, such as employing another focus group after the survey to explore its findings.

This study was unable to compare directly with the latest of relevant Indonesian study that conducted by Indonesian government, that is FSA Indonesia (OJK 2014), since the data such as data of frequency was not published and the researcher was unable to receive the necessary permissions to access it. Therefore, further research may consider getting access to it in order to offer more robust comparison.

Further research may also consider employing more questions for financial knowledge that cover all domains of financial capability, as well as adding more independent variables, such as more variables that focus on financial socialisation by family, student GPA, familial or parental income, and so on. Having said that, the questionnaire was already very comprehensive, so this is a minor limitation.

8.3 Recommendations

This study showed that income, financial socialisation, and work experience are important in relation to financial behaviour, while education did not make much difference compared to those. However, this does not mean that we should not provide financial education but it should be recognised that it is not the only solution. This study also suggests that financial education is still needed with the suggestion to include the topics that students feel they need the most, such as budgeting, managing risk, long-term financial planning, and financial products and investment. It should also employ more experiential learning in the method.

However, as also revealed in this study, in this increasingly financialised world, education is only a part of the solution and the broader regulation of financial services as well as the role of the state are also need to be considered. It is important work on the broader frameworks of consumer protection, regulation, income levels etc. Financial educators need to work hand-in-hand with stronger regulation of financial service to reduce the complexity and fraud, and needs to be underpinned by better policy to reduce income inequality.

In this financialisation, more people gain the access to financial products and services, such as savings, investment, loan and credit services. Indeed, in order to make the right decision, consumer should familiar with the risks and benefits that associated with the products offered. However, as discussed in chapter 1, financial products and services are growing so quickly and become more complex with the agresive advertising, for example the instant loan. ‘Unclear fees, unclear and often very high risks, and return prospects that are hard to understand. The complexity makes it hard for consumers to assess risks, compare terms and understand return prospects’ (Finansinspektionen, 2014, p.4). Therefore, the regulation of financial institutions and markets are needed to protect consumer, that is to ensure the access of financial market more safely for consumer. As Mylenko, 2014, p.3 argues:

> *'Rapid progress toward widespread financial inclusion must be appropriately complemented with "checks and balances" that ensure a responsible provision of financial services and products. Consumer protection and financial literacy and capability can support financial inclusion by encouraging competition which leads to more cost-effective and higher quality products and by increasing consumer confidence and reducing risk when purchasing financial products and services, because they know remedies exist when things go wrong'.*

Regulation also needed so the products and services that offered meet the needs of consumer. A range of options and sufficient information should be provided to consumer so consumer able to choose the most suitable product or service (Mylenko, 2014).

As argued by House of Lords, p.82 :

> *"We recommend that the Government provide all necessary assistance, including legislation where needed, to further combat financial exclusion caused or exacerbated by high-cost credit.". "…Regulations should be put in place in other parts of the high- cost credit sector, particularly the rent-to-own sector."*

Additionally, this study also suggest that more encouragement needs to be provided to families to discuss finance and money. This is because financial socialisation by parents was shown in this study as a great influence for financial knowledge, attitude and behaviour. Therefore, parents should be encouraged to discuss more often about money with their children. However, it should be noted that not all parents are qualified to give good advice, as Jorgensen, 2007, p.47) argued, it depends 'on what parents know, what their attitudes toward money are, and the financial decisions they make', therefore, in this case, financial education plays a higher role in enhancing financial capability.

Addressing these issues are very important in order to provide the researcher, policy maker, and stakeholder a clear map on what to improve and develop further.

8.4. Conclusion

This study makes an important contribution to: (1) the way we might see the concept of financial capability, (2) The understanding of how financial capability varies across countries and between groups, and reveals that various macro and micro factors affect levels of financial capability, that is: economic condition; financial system such as support of social protection from the state; financial education; and socio-demographic factors, such as income, gender, background of study, work experiences; (3) the provision of data on financial capability through a rigorous mixed methods empirical study; and (4) our knowledge about the levels of financial capability among Indonesian students

Overall, this study found that in terms of financial knowledge, students tend to show lack of understanding in some basic concept such as of inflation, compound interest and 'time value of money'. In terms of attitude, students were more likely to agree certain attitude as the right attitude, except in the domain of managing risks, where the number of neutral respond was higher. In term of behaviour, students tend to show weakness in planning ahead, such as savings and controlling spending and managing risk. An interesting finding shown in this study is that although students agreed with certain attitudes, this does not mean they will implement them in their day-to-day-life. This study identified that financial knowledge, attitudes and behaviour were found to vary across all groups, namely: field of study, attendance on the personal finance course, year of study, gender, work experience, and income. However, there were only differences between genders when it came to financial attitudes and financial knowledge did not differ on the basis of levels of income.

A number of key points that revealed in the empirical findings is: (1) there are different drivers of financial knowledge and attitudes compared to financial behaviour. The key determinant for knowledge were year of study, field of study, attending Personal Finance course, work experiences, and discussing money with family. The key determinant for financial attitudes were gender, year of study, field of study, work experiences, discussing money with family, and financial knowledge. Meanwhile, the drivers of financial behaviour were gender, year of study, work experiences, discussing money with family, financial knowledge, and financial attitudes.; and (2) the financial education course had an impact on knowledge but not on attitudes and behaviour, once other factors were controlled for. This is not surprising in the context of the first set of findings, that knowledge and attitudes are not so important for determining behaviour as other factors, that is financial socialisation by family, year of study, income and work experiences.

Different possibilities might explain this finding, for example, the personal finance course may not be sufficient in terms of duration and delivery method. Given that experience was shown as a determinant factor of knowledge, attitudes and behaviour, experiential learning is recommended as the method of delivery for the course, besides, it was also chosen as the expected method by the students in the focus groups. However, it should be noted that, other factors like income are more important and have a bigger impact in terms of behaviour. Having sufficient income will make it easier to manage money, make ends meet and plan-ahead.

Finally, financial capability is vitally important in our increasingly financialised world but it is not simple to raise financial capability through education as other factors are more important. This is not to argue that we should not try to raise financial capability through education but we need to do it through experiential learning and we also need to consider ways to raise low incomes and help people discuss money matters with their families. Appropriate provision and regulation of financial services must also be considered as individuals, alone, cannot be expected to navigate our complex and changing financial world alone, without government support

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APPENDICES

Appendix 1. Syllabus of The Personal Finance Course at IPB

Meeting No	Topic	Meeting No	Topic
1	The Concept of Personal Finance 1. The importance of personal finance 2. Decision making process 3. Financial goals	8	Purchasing housing and vehicle 1. Consideration between buying in cash and taking a mortgage/ instalment 2. Estimating the cost
2	Financial Planning 1. Principle in financial planning 2. Financial life cycle 3. Financial ratio	9	Managing risk and insurance 1. The concept of risk 2. Managing risk 3. Insurance policy 4. Home and vehicle insurance
3	Budgeting and Cash Flow 1. The importance of budgeting 2. Organising budget 3. Implementing budget 4. Budgeting evaluation	10	Health insurance and life insurance 1. Determining the health risk 2. Health and life insurance 3. The cost and benefit of insurance
4	Managing income tax 1. Tax regulation 2. Types of compulsory tax 3. The purpose of paying taxes 4. The calculation of income tax	11	Principle of investment and investment in financial asset (Part 1) 1. The importance of investment 2. Investment philosophy 3. Introduction to the types of investment in financial assets (Certificate of deposit and obligation)
5	Tools of money management 1. The definition of money management 2. Money management tool 1: checking account 3. Money management tool 2: saving account 4. Money management tool 3: instrument of long-term investment (introduction)	12	Investment in financial asset (Part 2: stocks and mutual fund) 1. Stock: • General term • Buying and selling stock: Calculating the cost 2. Mutual Fund • General term • Types of mutual fund • Calculating the cost
6	Time value of money 1. Concept of time value of money 2. Simple interest 3. Compound interest	13	Investment on real asset and strategy in managing the investment portfolio 1. Types of investment on real asset 2. Asset diversification
7	Loan and credit card 1. Consumer loan 2. Payment by credit (credit card) 3. Issues related to loan and credit 4. Calculation of financial cost	14	Retirement plan 1. Source of income at pension time 2. Principle of pension fund 3. Calculating pension fund

Source: The syllabus of Personal Finance course, Department of Family and Consumer Sciences, IPB, 2015 (English translation)

Appendix 2. Ethic approval I

Note: Due to the confidentiality reason, this appendix has been removed from this file.

Appendix 3. Ethic approval II

Note: Due to the confidentiality reason, this appendix has been removed from this file.

Appendix 4. Consent Form: Focus Group (English version)

Focus Group
Consent to Participate in a Research Study

The study:

Title	**Financial Capability among University Students**
Researcher	**Irni Rahmayani Johan**
Supervisors	**1.** [redacted]
	2. [redacted]

2. **Signatures of consent**

1.	'I have read and understood the content of the participant information sheet for the study 'Financial capability among university students'	☐
2.	'I have been given the opportunity to ask questions about the research and my participation'	☐
3.	'I voluntarily agree to participate in the research'	☐
4.	'I understand I can withdraw within one week after participation without giving any reasons and that I will not be penalised for withdrawing'	☐
5.	'The procedures regarding confidentiality have been clearly explained (e.g. use of names, pseudonyms, anonymization of data, etc.) to me'.	☐
6.	'The use of audio of data collection have been explained to me'.	☐
7.	**'**The use of data in the research, publications, and archiving has been explained to me'.	☐
8.	'I allow for an anonymised data/transcript of my interviews to be archived for 10 years'.	☐
9.	'I, along with the Researcher, agree to sign and date this informed consent form'.	☐

Source (with some modification):
https://intranet.birmingham.ac.uk/finance/documents/public/GuidanceandConsentForm.pdf
http://www.ncl.ac.uk/res/research/ethics_governance/ethics/toolkit/consent/consent_form_example.doc

______________________________ ______________________

Signature of PARTICIPANT above printed name *Date*

______________________________ ______________________

(Signature of RESEARCHER above printed name) Date

Appendix 5. Consent Form: Focus Group (Indonesian version)

Focus Group
Lembar persetujuan partisipasi
(Consent to Participate in a Research Study)

The study:

Judul	**Financial Capability among University Students**
Peneliti	**Irni Rahmayani Johan**
Supervisors	**1.** [redacted]
	2. [redacted]

2. **Signatures of consent**

Saya, yang bertanda tangan di bawah ini menyetujui hal-hal berikut ini: (*berilah tanda pada box yang tersedia)*

1.	Saya telah membaca dan memahami isi lembar informasi yang tersedia mengenai studi 'Financial capability di kalangan mahasiswa'.	☐
2.	Saya telah diberikan kesempatan untuk bertanya mengenai partisipasi dan hal yang terkait dengan studi ini.	☐
3.	Saya secara sukarela setuju untuk berpartisipasi dalam studi ini.	☐
4.	Saya mengerti bahwa saya dapat membatalkan keterlibatan saya sebagai partisipan dengan jangka waktu maksimal seminggu setelah kegiatan Focus group ini selesai tanpa alasan apapun dan untuk ini saya tidak akan mendapatkan penalty ataupun masalah di kemudian hari.	☐
5.	Prosedur mengenai kerahasiaan data telah dijelaskan secara rinci kepada saya (misalnya penggunaan nama, alias, anonimiti data, dan lain-lain).	☐
6.	Penggunaan alat perekam dalam studi ini telah dijelaskan kepada saya.	☐
7.	Penggunaan data di dalam studi, publikasi, dan penyimpanan data telah dijelaskan	☐
8.	Saya mengijinkan data yang telah dianonimkan untuk disimpan selama 10 tahun.	☐
9.	Saya, bersama peneliti, menyetujui untuk menandatangani lembar ini.	☐

Source: Indonesian translation from (*with some modification):*
https://intranet.birmingham.ac.uk/finance/documents/public/GuidanceandConsentForm.pdf
http://www.ncl.ac.uk/res/research/ethics_governance/ethics/toolkit/consent/consent_form_example.doc

________________________________ ____________________

(Tandatangan **PARTICIPANT** berikut nama jelas) Tanggal

____

(Tandatangan **RESEARCHER** berikut nama jelas) Tanggal

Appendix 6. Participant Information Sheet: Focus groups (English version)

FOCUS GROUPS

Participant Information Sheet

The Study	
Title	**Financial capability among university students**
Researcher	**Irni Rahmayani Johan**
Lead Supervisor	[redacted]
Co-Supervisor	

You are asked to participate in this study conducted in partial fulfilment of the requirements in PhD in Social Policy for Irni Rahmayani Johan. In order to help you to decide, this information sheet outlines why the research is being done and what it will involve. Please read the following sections carefully and feel free to ask for clarifications or questions.

1. Who is conducting and funding the research?

The research will be solely conducted by Irni Rahmayani Johan. She was born and raised in Bogor, West Java, Indonesia. Irni is a staff at Bogor Agricultural University (IPB), Indonesia, and at the moment she is continuing her doctoral study at Department of Institute of Applied Social Studies, School of Social Policy, University of Birmingham, the United Kingdom. This study involves focus groups and survey. In conducting the focus groups, this study is funded by Indonesia Endowment Fund for Education (LPDP), Ministry of Finance, Indonesia.

2. What is the research about?

The purpose of this study is to examine financial capability among university students in Indonesia. According to HM Treasury (2007, p. 19), financial capability is:

> *'People's knowledge and skills to understand their own financial circumstances, along with the motivation to take action. Financially capable consumers plan ahead, find and use information, know when to seek advice and can understand and act on this advice, leading to greater participation in the financial services market'*

Financial capability is increasingly important, but there is little agreement about what kind of issues should be covered and how or when it is best to do this. The study will also explore students' specific needs to determine which topics should be taught so they can improve their understanding and become more financially capable.

Six focus group has been conducted in 2014, and the results from has been used to check the instruments for quantitative data collection. Moreover, the focus groups will also explore the different understandings of what financial knowledge, skills, attitudes and motivation students think are important, and what they think they already know and do not know. While, the aim of the survey is to measure financial capability among university students.

3. Who are the participants

This study will be conducted in Indonesia and will focus on university students, that is students in Bogor Agricultural University (IPB), Indonesia. Participant of focus groups is undergraduate students in the second year and above.

4. What will happen if I take part and what is involved?

If you agree to take part in the study, focus group, of at most 90-120 minutes, will be scheduled. A pen-drive will be rewarded as a gift for each participant of focus groups.
All discussions will be audio-recorded. If you do not wish such recording to take place or you do not want any part of the process being recorded, please let the researcher know before or during the focus group process at any point you wish. You will also have the right to withdraw up to one week after the data collection – please contact me at the above email address.

5. What are the risks involved?

It is estimated that there is no potential risk in this study.

7. Confidentiality and Anonymity

Your identity will remain anonymous and information about you will be properly coded. Pseudonyms will be used for all references to your narrative. However, you have the right to keep your name in immediate written outputs and publications that may arise from this research. No direct quote with participants' name will be made – all quotes will be anonymous.

8.Data Protection and archiving

All data arising from focus groups (i.e. audio files, transcripts, etc.) are treated as confidential. The personal data will only be accessible to the researcher and her supervisors; and will be kept in a locked storage. All files stored in the personal laptop, where data will be analysed, will be password and encryption protected.

9. Research dissemination

A major written output of the study is PhD thesis. The study may also be presented in academic conferences and be published in academic journals, and or other relevant publication.

10. Who has reviewed the study?

The study has clearance from the Ethics Committee at the University of Birmingham.

For further information and other concerns, please contact:

Irni Rahmayani Johan
Email : [redacted]

You can also contact the Academic Supervisor of the study as below:

[redacted]

.

Thank you for reading this information sheet and for considering taking part in the study

Appendix 7. Participant Information Sheet: Focus groups (Indonesian version)

Focus Group

Participant Information Sheet

Title	**Financial capability among university students**
Researcher	**Irni Rahmayani Johan**
Lead Supervisor	[redacted]
Co-Supervisor	

Anda diminta untuk berpartisipasi dalam studi ini yang diselenggarakan sebagai bagian dari riset studi doktoral di bidang Social Policy University of Birmingham atas nama Irni Rahmayani Johan. Lembar informasi ini disediakan untuk memberi penjelasan mengenai studi ini dan tingkat keterlibatan yang diharapkan dari partisipan. Mohon dibaca dengan seksama lembar informasi berikut ini dan silahkan ajukan pertanyaan jika ada yang kurang dipahami.

1. Penyelengara dan Pendanaan Studi

Studi ini dilaksanakan secara individu oleh Irni Rahmayani Johan. Lahir dan besar di Bogor, Jawa Barat, Indonesia, Irni adalah juga seorang staf pengajar di Institut Pertanian Bogor (IPB), Indonesia. Saat ini Irni sedang menempuh studi doctoral di Department Institute of Applied Social Studies, School of Social Policy, University of Birmingham, United Kingdom (UK) dengan pembiayaan/sponsor penuh dari Lembaga Pengembangan Dana Pendidikan (LPDP), Kementerian Keuangan, Indonesia.

2. Ruang lingkup studi

Tujuan dari studi ini adalah untuk menganalisis kemampuan dan pengetahuan pengelolaan keuangan pribadi di kalangan mahasiswa, dan mengidentifikasi secara focus wilayah dan area kritis yang perlu dikembangkan untuk perumusan dan pengembangan pendidikan keuangan pribadi di kalangan mahasiswa.

Dewasa ini isu financial capability semakin dirasakan penting, namun hanya sedikit ulasan tentang topic apa yang perlu untuk disampaikan dan kapan waktu yang tepat untuk menyelenggarakan pendidikan terkait. Studi ini akan menggali kebutuhan spesifik dari mahasiswa untuk kemudian merumuskan topic/materi pengelolaan keuangan yang perlu dipelajari oleh mahasiswa sehingga mereka dapat menjadi individu yang memiliki kemampuan yang memadai dalam hal pengelolaan keuangan pribadi. Sebagaimana yang ditunjukkan dalam berbagai literature bahwa kaum muda berada dalam kateori kelompok yang rentan dalam hal finansial iliterasi dan *capability*, maka adalah sangat penting untuk meningkatkan kemampuan pengelolaan keuangan di kalangan mahasiswa sebagai kaum muda melalui pendidikan keuangan. Pendidikan tentang manajemen keuangan pribadi akan membangun sensitivitas dan kesadaran kaum muda dalam mengelola keuangan untuk masa depan mereka.

Dalam pengambilan data, studi ini akan melibatkan metode *Focus Group Discussion* (FGD) dan survey. FGD dilakukan untuk mendapatkan masukan dan mengeksplor dari berbagai sudut pandang mahasiswa mengenai pengetahuan, keterampilan, sikap, dan motivasi mahasiswa mengenai pengelolaan keuangan pribadi serta menggali persepsi dan pemahaman mereka. Hasil yang diperoleh dari FGD akan digunakan untuk mengembangkan instrumen (kuesioner) untuk pengambilan data kuantitatif. Adapun tujuan dari survey yang akan dilakukan pada tahap berikutnya adalah untuk mengukur level financial capability di kalangan mahasiswa.

Partisipan dalam FGD ini mungkin tidak akan merasakan manfaat studi ini secara langsung, namun, keluaran dari studi ini akan membantu identifikasi topic apa yang perlu diajarkan kepada mahasiswa terkait pendidikan keuangan pribadi. Studi ini akan memberikan kontribusi kepada pengembangan pengetahuan di bidang ilmu personal finance/manajemen keuangan pribadi dan rekomendasi model pendidikan keuangan pribadi yang efektif untuk mahasiswa di Indonesia.

3. Partisipan

Studi ini dilakukan di Indonesia dengan focus mahasiswa, yakni mahasiswa jenjang Strata 1 (S1) tingkat dua hingga tingkat akhir di Institut Pertanian Bogor, Indonesia.

4. Tingkat keterlibatan peserta
Partisipan yang telah setuju mengikuti FGD ini akan mengikuti diskusi selama 90-120 menit. Sebagai kompensasi atas waktu yang dicurahkan oleh peserta FGD dan sebagai kenang-kenangan maka setiap pastisipan akan memperoleh sebuah flashdisk (pen-drive). Seluruh jalannya proses diskusi akan direkam dengan alat perekam suara/*recorder* yang telah disiapkan sebelumnya. Rekaman tersebut kemudian akan dipindahkan menjadi transkrip dan akan dianalisa bersama keseluruhan data riset. Data yang diperoleh akan digunakan untuk penulisan thesis peneliti. Jika partisipan menolak untuk direkam maka dapat menyampaikan keberatannya tersebut kepada peneliti kapan saja sebelum/selama kegiatan berlangsung. Partisipan juga memiliki hak untuk mundur dari keterlibatannya dalam FGD ini hingga satu minggu setelah acara FDG yang diikuti selesai. Untuk itu silahkan menghubungi peneliti di alamat yang telah tertera.

5. Potensi Risiko
Studi ini diperkirakan tidak memiliki risiko yang berpotensi membahayakan pihak-pihak yang terlibat.

7. Privasi dan kerahasiaan
Identitas peserta akan tetap dijaga kerahasiaannya (anonym/kode). Nama alias akan digunakan jika diperlukan untuk rujukan narasi. Tidak akan dimunculkan kutipan langsung dengan identitas peserta. Namun, jika partisipan menghendaki maka partisipan tetap memiliki hak untuk tetap menggunakan nama asli mereka di dalam keluaran studi ataupun publikasi yang muncul.

8. Proteksi data dan pengarsipan
Semua data yang muncul dari kegiatan FGD (rekaman audio, transkrip diskusi, dan lain-lain) akan dijaga kerahasiaannya. Hanya peneliti dan supervisor yang dapat mengakses semua personal data dan semua data tersebut akan disimpan di dalam tempat terkunci yang aman.

9. Diseminasi studi
Keluaran utama dari studi ini adalah thesis doctoral. Hasil dari studi ini juga kemungkinan akan dipresentasikan dalam konferensi akademik dan dipublikasikan dalam jurnal akademik ataupun publikasi dan riset terkait.

10. Reviewer Studi
Studi ini telah memperoleh persetujuan dari Komisi Etik Universitas Birmingham, UK.

Untuk informasi lebih lanjut dapat menghubungi:
Irni Rahmayani Johan
[redacted]

Atau dapat juga menghubungi pembimbing akademik peneliti di bawah ini:
[redacted]

Terima kasih atas perhatian dan partisipasinya.

Appendix 8. Informed Consent form: Survey (**English version)**

SURVEY
(Informed Consent)

1. The study

Title	**Financial Capability among University Students**
Researcher	**Irni Rahmayani Johan**
Supervisors	**1.** [redacted] **2.**

2. **Signatures of consent**

1.	I confirm that I have read and understand the information about the project of 'Financial capability among university students in Indonesia' as provided in the Information Sheet.	☐
2.	I have had the opportunity to ask questions if necessary about the project and my participation.	☐
3.	I understand that my participation is voluntary	☐
4.	I understand that I am free to withdraw within one week of my participation, without giving any reason. and that I will not be penalised for withdrawing.	☐
5.	The procedures regarding confidentiality have been clearly explained (e.g. use of names, pseudonyms, anonymisation of data, etc.) to me).	☐
6.	The use of the data in research, publications, sharing and archiving has been explained to me).	☐
7.	I agree for my anomised personal data to be kept for 10 years.	☐
8.	Based upon the above, I agree to take part in this study	☐

Source*: https://intranet.birmingham.ac.uk/finance/documents/public/GuidanceandConsentForm.pdf
http://www.ncl.ac.uk/res/research/ethics_governance/ethics/toolkit/consent/consent_form_example.doc *with some modification*

I agree to take part in the above project

Name of participant	Date	Signature
Name of person taking consent	Date	Signature

Appendix 9. Informed Consent form: Survey (**Indonesian version)**

<u>SURVEY</u>

Lembar persetujuan partisipasi
(*Informed Consent)*

1. The study	
Judul	**Financial Capability among University Students**
Peneliti	**Irni Rahmayani Johan**
Supervisors	[redacted]

2. **Signatures of consent**

Saya, yang bertanda tangan di bawah ini menyetujui hal-hal berikut ini: (*berilah tanda pada box yang tersedia)*

1.	Saya telah membaca dan memahami isi lembar informasi yang tersedia mengenai studi 'Financial capability di kalangan mahasiswa'.	☐
2.	Saya telah diberikan kesempatan untuk bertanya mengenai partisipasi dan hal yang terkait dengan studi ini.	☐
3.	Saya secara sukarela setuju untuk berpartisipasi dalam studi ini.	☐
4.	Saya mengerti bahwa saya dapat membatalkan keterlibatan saya sebagai partisipan dengan jangka waktu maksimal seminggu setelah partisipasi saya ini selesai tanpa alasan apapun dan untuk ini saya tidak akan mendapatkan penalty ataupun masalah di kemudian hari.	☐
5.	Prosedur mengenai kerahasiaan data telah dijelaskan secara rinci kepada saya (misalnya penggunaan nama, alias, anonimiti data, dan lain-lain).	☐
6.	Penggunaan data di dalam studi, publikasi, dan penyimpanan data telah dijelaskan kepada saya.	☐
7.	Saya mengijinkan data yang telah dianonimkan untuk disimpan selama 10 tahun.	☐
8.	Saya, bersama peneliti, dan atau enumerator, menyetujui untuk menandatangani lembar informed consent ini.	☐

Source*: Indonesian translation from (**with some modification*:
https://intranet.birmingham.ac.uk/finance/documents/public/GuidanceandConsentForm.pdf
http://www.ncl.ac.uk/res/research/ethics_governance/ethics/toolkit/consent/consent_form_example.doc

______________________________ ____________________

(Tandatangan **PARTICIPANT** berikut nama jelas) Tanggal

______________________________ ____________________

(Tandatangan **PENELITI** berikut nama jelas) Tanggal

Appendix 10. Participant Information Sheet: Survey (English version)

SURVEY
Participant Information Sheet

The Study	
Title	**Financial capability among university students**
Researcher	**Irni Rahmayani Johan**
Lead Supervisor	[redacted]
Co-Supervisor	

You are asked to participate in this study conducted in partial fulfilment of the requirements in PhD in Social Policy for Irni Rahmayani Johan. In order to help you to decide, this information sheet outlines why the research is being done and what it will involve. Please read the following sections carefully and feel free to ask for clarifications or questions.

1. Who is conducting and funding the research?

The research will be solely conducted by Irni Rahmayani Johan. She was born and raised in Bogor, West Java, Indonesia. Irni is a staff at Bogor Agricultural University (IPB), Indonesia, and at the moment she is continuing her doctoral study at Department of Institute of Applied Social Studies, School of Social Policy, University of Birmingham, the United Kingdom.
In collecting the quantitative data (the survey), this study is funded by (1) Indonesia Endowment Fund for Education (LPDP), Ministry of Finance, Indonesia; (2) Centre on Household Assets and Savings Management (CHASM), University of Birmingham.

2. What is the research about?

The purpose of this study is to examine financial capability among university students in Indonesia. According to HM Treasury (2007, p. 19), financial capability is:

> *'People's knowledge and skills to understand their own financial circumstances, along with the motivation to take action. Financially capable consumers plan ahead, find and use information, know when to seek advice and can understand and act on this advice, leading to greater participation in the financial services market'*

Financial capability is increasingly important, but there is little agreement about what kind of issues should be covered and how or when it is best to do this. The study will also explore students' specific needs to determine which topics should be taught so they can improve their understanding and become more financially capable.

The research involves focus groups and survey. Six focus group has been conducted in 2014, and the results from has been used to check the instruments for quantitative data collection. While, the aim of the survey is to measure financial capability among university students, that is financial knowledge, attitudes and behaviour students toward personal finance.

3. Who are the participants

Participants of the study is undergraduate students of Bogor Agricultural University (IPB), Indonesia.

4. What will happen if I take part and what is involved?

If you agree to take part in the study, please complete the attached questionnaire. The questionnaire will take time approximately 20-45 minutes to fill in. A book bag will be rewarded as a gift for each respondent of the survey.
Your participation is voluntary; you are free to withdraw your participation from this study within one week after participation– please contact me at the above email address. If you do not want to

continue while you are in the fill in process, you can simply quit at any point you wish. You also may choose to skip any questions that you do not wish to answer. The number of questions you answer will not affect your reward/gift.

5. What are the risks involved?

It is estimated that there is no potential risk in this study.

If you feel uncomfortable with a question, you can skip that question or withdraw from the study altogether. If you decide to quit at any time before you have finished the questionnaire, your answers will NOT be used.

6. What can I benefit from the study?

You may not directly benefit from participating in this research. However, the expected outcomes of this study will help to identify what topics should be taught in financial education for young group, especially university students. This study will contribute new knowledge in the area of personal finance and financial education, that is a picture of financial capability of university students in Indonesia and a recommendation for financial education of university students, especially in Indonesia

7. Confidentiality and Anonymity

Your responses will be kept completely confidential. We will ask you to include your name, student ID and an e-mail address when you complete the survey so that we can connect your survey answers to the data we collect. Your identity will remain anonymous and information about you will be properly coded. You will be assigned a participant number, and only the participant number will appear with your survey responses. Only the researcher (and authorised personnel involved in the study) that will see your individual survey responses.

8.Data Protection and archiving

All data arising from questionnaire are treated as confidential. The personal data will only be accessible to the researcher and authorised personnel involved in the study; and will be kept in a locked cabinet. All files stored in the personal laptop, where data will be analysed, will be password and encryption protected. All data that gained in this study will only be used for the research purposes and relevant further research.

9. Research dissemination

A major written output of the study is PhD thesis. The study may also be presented in academic conferences and be published in academic journals.

10. Who has reviewed the study?

The study has clearance from the Ethics Committee at the University of Birmingham.

For further information and other concerns, please contact:

Irni Rahmayani Johan

Email : [redacted]

You can also contact the Academic Supervisor of the study as below:

[redacted]

Thank you for reading this information sheet and for considering taking part in the study

Appendix 11. Participant Information Sheet: SURVEY (Indonesian version)

Survey
Participant Information Sheet

Title	**Financial capability among university students**
Researcher	**Irni Rahmayani Johan**
Lead Supervisor	[redacted]
Co-Supervisor	

Anda diminta untuk berpartisipasi secara sukarela dalam studi ini yang diselenggarakan sebagai bagian dari riset studi doktoral di bidang Social Policy University of Birmingham atas nama Irni Rahmayani Johan. Lembar informasi ini disediakan untuk memberi penjelasan mengenai studi ini dan tingkat keterlibatan yang diharapkan dari partisipan. Mohon dibaca dengan seksama lembar informasi berikut ini dan silahkan ajukan pertanyaan jika ada yang kurang dipahami.

2. Penyelengara Studi

Studi ini dilaksanakan secara individu oleh Irni Rahmayani Johan. Lahir dan besar di Bogor, Jawa Barat, Indonesia, Irni adalah juga seorang staf pengajar di Institut Pertanian Bogor (IPB), Indonesia. Saat ini Irni sedang menempuh studi doctoral di Department Institute of Applied Social Studies, School of Social Policy, University of Birmingham, United Kingdom (UK) dengan pembiayaan/sponsor dari Lembaga Pengembangan Dana Pendidikan (LPDP), Kementerian Keuangan, Indonesia. Untuk pelaksanaan survey ini, peneliti juga mendapat dukungan pembiayaan dari Centre on Households Asset and Savings Management (CHASM).

2. Ruang lingkup studi

Tujuan dari studi ini adalah untuk menganalisis kemampuan dan pengetahuan pengelolaan keuangan pribadi di kalangan mahasiswa, dan mengidentifikasi secara focus wilayah dan area kritis yang perlu dikembangkan untuk perumusan dan pengembangan pendidikan keuangan pribadi di kalangan mahasiswa.

Dewasa ini isu financial capability semakin dirasakan penting, namun hanya sedikit ulasan tentang topic apa yang perlu untuk disampaikan dan kapan waktu yang tepat untuk menyelenggarakan pendidikan terkait. Studi ini akan menggali kebutuhan spesifik dari mahasiswa untuk kemudian merumuskan topic/materi pengelolaan keuangan yang perlu dipelajari oleh mahasiswa sehingga mereka dapat menjadi individu yang memiliki kemampuan yang memadai dalam hal pengelolaan keuangan pribadi. Sebagaimana yang ditunjukkan dalam berbagai literature bahwa kaum muda berada dalam kateori kelompok yang rentan dalam hal finansial iliterasi dan *capability*, maka adalah sangat penting untuk meningkatkan kemampuan pengelolaan keuangan di kalangan mahasiswa sebagai kaum muda melalui pendidikan keuangan. Pendidikan tentang manajemen keuangan pribadi akan membangun sensitivitas dan kesadaran kaum muda dalam mengelola keuangan untuk masa depan mereka.

Dalam pengambilan data, studi ini melibatkan metode *Focus Group Discussion* (FGD) dan survey. FGD dalam rangka mendapatkan masukan mengenai persepsi, pengetahuan, sikap, dan motivasi mahasiswa mengenai pengelolaan keuangan pribadi telah dilakukan pada tahap sebelumnya. Adapun tujuan dari survey yang akan dilakukan pada tahap ini adalah untuk mengukur level financial capability di kalangan mahasiswa. Data yang diperoleh hanya akan digunakan untuk kepentingan riset dan relevan riset terkait.

Partisipan dalam riset ini mungkin tidak akan merasakan manfaat studi ini secara langsung, namun, keluaran dari studi ini akan membantu identifikasi topic apa yang perlu diajarkan kepada mahasiswa terkait pendidikan keuangan pribadi. Studi ini akan memberikan kontribusi kepada pengembangan pengetahuan di bidang ilmu personal finance/manajemen keuangan pribadi dan rekomendasi model pendidikan keuangan pribadi yang efektif untuk mahasiswa di Indonesia.

3. Partisipan

Studi ini dilakukan di Indonesia dengan focus mahasiswa, yakni mahasiswa jenjang Strata 1 (S1) tingkat satu hingga tingkat akhir di Institut Pertanian Bogor, Indonesia.

4. Tingkat keterlibatan peserta

Partisipan yang telah setuju mmenjadi responden pada survey ini akan diwawancara untuk menjawab pertanyaan yang diajukan dengan total waktu sekitar 30 menit. Sebagai kompensasi atas waktu yang dicurahkan oleh responden dan sebagai kenang-kenangan maka setiap responden akan memperoleh sebuah tas kain. Responden juga memiliki hak untuk mundur dari keterlibatannya dalam survey ini hingga satu minggu setelah wawancara yang diikuti selesai. Untuk itu silahkan menghubungi peneliti di alamat yang telah tertera.

5. Potensi Risiko

Studi ini diperkirakan tidak memiliki risiko yang berpotensi membahayakan pihak-pihak yang terlibat.

7. Privasi dan kerahasiaan

Identitas peserta akan tetap dijaga kerahasiaannya (anonym/kode). Tidak akan dimunculkan kutipan langsung dengan identitas peserta. Namun, jika partisipan menghendaki maka partisipan tetap memiliki hak untuk tetap menggunakan nama asli mereka di dalam keluaran studi ataupun publikasi yang muncul.

8. Proteksi data dan pengarsipan

Semua data yang muncul dari kegiatan ini akan dijaga kerahasiaannya. Hanya peneliti seorang diri yang dapat mengakses semua data dan semua data tersebut akan disimpan di dalam tempat terkunci yang aman. Semua file elektronik akan dilindungi dengan password dan kode. Semua data, baik data fisik maupun elektronik akan dimusnahkan setelah sepuluh tahun studi berakhir.

9. Diseminasi studi

Keluaran utama dari studi ini adalah thesis doctoral. Hasil dari studi ini juga kemungkinan akan dipresentasikan dalam konferensi akademik dan dipublikasikan dalam jurnal akademik.

10. Reviewer Studi

Studi ini telah memperoleh persetujuan dari Komisi Etik Universitas Birmingham, UK.

Untuk informasi lebih lanjut dapat menghubungi:

Irni Rahmayani Johan
Email [redacted]

Atau dapat juga menghubungi pembimbing akademik peneliti di bawah ini:

[redacted]

Terima kasih atas perhatian dan partisipasinya.

Appendix 12. Interviewer agreement form

INTERVIEWER AGREEMENT FORM

I, ____, an interviewer for the Financial Capability in Indonesia Project, understand and agree to the following statements:

- I understand the goals and purposes of this project and understand I am representing the researcher : Irni Rahmayani Johan, PhD Student of School of Social Policy, University of Birmingham, United Kingdom, when I am conducting an interview;
- I have participated in Financial Capability training sessions for interviewer and am familiar with the equipment;
- I understand the legal and ethical considerations regarding the interviews and will communicate them to and carry them out with each respondent I interview;
- I am willing to do the necessary preparation, including background research, for each interview I conduct;
- I will treat each respondent with respect and I understand each interview will be conducted in a spirit of openness that will allow each respondent to answer all questions as fully and freely as he or she wishes;
- I am aware of the need for confidentiality of interview content until such time as the interviews are released for public use per the repository's guidelines and I will not exploit the respondent's information;
- I understand my responsibilities regarding any archival materials or artifacts related to the interview that the respondent may want to include in the interview process; and
- I agree to turn all interview materials over to the repository in a very timely manner and to facilitate all necessary processing steps.

Signed

____ Date_________
(Interviewer)

____ Date_________
(Researcher)

Appendix 13. Topic guides for focus groups

Topic guides for focus groups

Section A: Introduction

1. To start off, please tell me your name, age, and who else lives with you
2. And from this list, can you tell me if you currently have any of these financial products or have had any of them in the past? (SHOW CARDS)
3. Describe your picture of someone who is **very** financially capable
   PROMPTS
   - What sorts of things do they do/not do?
   - What skills and knowledge do they have/not have?
   - What attitudes do they have?
   - What behaviour do they have?
   - Anything else?
   - Which of these has the biggest implication for someone's level of financial capability?
   - What if someone had all the knowledge and skills they needed, but did not act upon them—would you still describe them as being financially capable?'

   PROMPT all points raised fully and arrive at a consensus view if possible; identify minority view if not

Section B

1. What are your areas of strength in financial understanding?
2. What are your areas of weakness in financial understanding?
3. Overall, what have been the most important financial lessons learned?
4. Do you feel like you have enough financial knowledge to take care of yourself? Why or why not?
5. Would you like to continue to learn more financial information?
6. What else would you like to learn?

PROMPTS

No	Domain	No	Domain
A	**How to manage money**	**B**	**Becoming a critical consumer**
1	Borrowing money and managing debt	1	Using information and advice to make financial decisions : Advertising, peer, and media pressure
2	Calculating rates of interest	2	Consumer rights and responsibilities
3	Financial paper working and budgeting	3	Calculating value for money
4	Keep track money	4	Comparing and choosing financial products
C	**Managing risks and emotions associated with money**	**D**	**Planning ahead**
1	Avoiding scams and identify theft	1	Savings
2	Dealing with fraud	2	Investing for future
3	Identifying and reducing financial risk	3	Long term financial planning
4	Different types of insurance	4	Unexpected and anticipated major expenses
E	**Choosing producst**	**F**	**Staying Informed**
1		**1**	Financial issue
2		**2**	
3		**3**	
G	Other		

Source : PFEG, Kempson et al, (2005)

7. Are there other factors that influence how financially capable someone is?

   PROMPTS:
   1. Atitudes, e.g. interested/not interested in personal finances
   2. Personality, e.g. risk taker, organiser
   3. Upbringing, e.g. parental influence
   4. Experience of financial products and services
8. Is there anything else you think I should know?

Source : Donohue (2011); PFEG; Kempson, et al. (2005, 2013), Atkinson et al., (2006).

Appendix 14. Showcard for focus groups

SHOW CARD: Focus Groups (English version)

Financial Products (*multiple answer)*

1. Current account
2. Certificate of deposit
3. Life insurance (and who buy it?)
4. Health insurance (and who buy it?)
5. Unit link
6. Credit card
7. Investment in financial product such as stock/share, mutual funds
8. Investment in real assets, such as property, gold, etc
9. Running business/ own enterprise
10. None
11. I don’t know
12. Refused to answer

Appendix 15. Showcard for focus groups (Indonesian version)

SHOW CARD

PRODUK KEUANGAN DAN INVESTASI

1. Tabungan di bank
2. Deposito
3. Asuransi jiwa : beli sendiri atau tidak?
4. Asuransi kesehatan : beli sendiri atau tidak?
5. Unit link (asuransi yang digabungkan dengan investasi, misalnya reksadana)
6. Kartu kredit
7. Investasi keuangan, misal saham, atau lainnya, sebutkan
8. Investasi riil, misal tanah, perhiasan
9. Memiliki usaha
10. Tidak punya produk tersebut
11. Tidak mengerti satupun yang di atas
12. Menolak menjawab

Appendix 16. Matrix of qualitative data analysis (example of some analysis)
Note: Due to the confidentiality reason, some data have been removed from this appendix.

GROUP [redacted]

No	Participant		Themes and Sub-themes	Response (excerpts)
	Participant code	Characteristic		
			Topics that want to be learnt further	
1			managing money [1] keeping track [1a]	*· ..”Hmmm what I want to learn further is: What is the best way in managing money [1[and how to manage income and expenses [1a]”*
2			credit/loan [4a] Calculating the rate of interest [4b] Choosing products [4] Financial products [4c] Investment [4d]	*· ..”I want to learn about credit [4a], for example If we have to take a credit from bank or credit card, how to calculate the rate of interest [4b] and how to identified secured loan and unsecured loan. I also want to learn about financial products [4c], such as savings, investment products, etc [4d]” (male, group 1)*
3			managing risk [3] insurance [3a]	*..”I want to learn about how to manage the risks [3] and what is the benefit and cost of insurance [3a] so I can get full protection”*
4			Managing money [1] Identification of need and want [1c]	*"I really want to know about how to manage the money [1], managing between need and want [1c], and actually maybe we need to know how to identify between the need and want [1c]. I think that’s really important, because I often run out money before the end of the month [1b], perhaps because I easily get tempted by sale promotion"* (laugh)
5			managing money [1] method of learning [10] financial products [4c] choosing products [4]	*Same as what had been said by my friends, I want to learn about how to manage the money effectively [1], perhaps we can also have a session to practice it, not only the theory? [10] Is it possible? I also want to know about investment [4d], such as about various financial products, such as shares, bonds, insurance, etc [4c]. I mean what is the advantages and the drawbacks about each product [4]"*

6			Financial products [4c] Investment (shares/ stocks, bonds, etc) [4d]	*"I want to learn about financial products[4c] and topic about investment [4d]. Besides savings, for example, shares/stocks. How to trade; when to buy; when to sell; something like that"*
7			Managing money [1] Planning ahead [2] Choosing products [4] Financial products [4c]	*"Is managing money [1] including prepare for the future [2]? I want a topic about how to become secure in my old time [2]. I mean topic about retirement such as what is the best financial products for retirement [4];[4c]. As we all know that being old in this country is difficult* (laugh), I dont want to be a burden for my children (*laugh)"*
8			Managing money [1] Making ends meet [1b] Choosing products [4] Financial products [4c] Becoming smart and critical consumer [4e]	*"I agree with all my friend. Money management [1] is important so we can avoid running out money in the middle [1b] of the month. Financial products [4c] is also important so we can understand what is the important of the products [4]. Maybe I want to add one more, I think we also need to know about how to become a smart consumer. Don't get easily being influenced by advertising, and where should we go there is a scammer? [4e] Yeah something like that"*

GROUP [redacted]

No	Participant		Themes and Sub-themes	Response (excerpts)
	Participant code	Characteristic		
			Topics that want to be learnt further	
1			managing money [1] Keeping track [1a] Need and want {1c] planning ahead [2]	· *” I really want to know how to control unplanned spending [1a]and make prioritize between need and want [1c]. Moreover, I also want to learn more detail about how to make financial planning for my future” [2]*
2			Investment [4d] financial products [4c]	"Perhaps as an undergraduate student we also have to start thinking about investing money [4d]. So further topics about financial products [4c] would be good, such as investing in shares, or mutual funds, or maybe we

				also need about type of savings, or perhaps investing in property, land, [4c] something like that"
3			Planning ahead [2]	Hmmm… Longterm financial planning [2]. I think this is important. How to make financial plan for our future, such as after married, pensions [2], etc
4			Credit/loan [4a] Choosing products [4]	"Topic about credit card, or loan [4a] is important. Nowadays many loan offer or credit card, I often see in the mall, they persuade people to apply credit card. Even to me! (laugh). Yeah, topic about credit is very important so we can understand how it works and whats the risk or benefit [4]
5			Choosing products [4]; financial products [4c] Risk and insurance [3a]	"Topic that I want to learn is about choosing products [4]. How to choose product that suits our needs, for example, in term of financial product [4c], there is several type of insurance [3a; 4c]. I want to know what is the different between them [3a; 4} and how to choose the product that meet my need"
6			Credit/loan [4a] Choosing products [4]	"I agree with (female 2), topic about loan or credit [4a] is important. We need to know about the risk [3] of it. How to calculate the rate of interest [4b] of the loan; how safe is an instant loan?"
7			Credit/loan [4a] Choosing products [4] Financial products [4c]	"Yes, I think we need to understand about credit and credit card [4a]. I also want to learn about choosing products [4], financial products, such as savings, insurance, etc [4c]"
8			Calculate the rate of interest [4b] Investment [4d]	"Topic about investment [4d] I think is important . I mean, how to invest in financial products [4], how to calculate the return of investment products [4b; 4d]. We've been had that topic in the class, and I really enjoyed it. That's important topic!"

Appendix 16b. Summary of answer from transcript about topics that need to be learned

No.	Theme	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
1	Topics that need to be learned next	• Future planning • Investment in financial products (shares/ stocks, bonds, etc.) • How to manage money • How to balance needs and wants • Future planning • Identifying needs • Financial planning • How to become a smart and critical consumer	• Planning ahead • Investment • Managing money • Long-term financial planning • Credit • Choosing products	• How to manage money • Future planning • How to become a smart consumer • Risk manageme nt • Types of investment s • Future planning	• Stocks • Insurance • Financial service/ institutions • Application /putting theory into practice • Investment in financial products • Debt/credit • Risk manageme nt • Financial planning	• How to manage money • How to be a critical consumer • Financial planning	• Investment • Risk manageme nt • Managing income • Financial planning • the role of money • Investment • Insurance, especially health insurance • Credit cards • Planning ahead

Source: Author's research

Appendix 17. Analysis of Reliability

a. Financial Attitudes

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	521	100.0
	Excluded[a]	0	.0
	Total	521	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.736	20

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
ATT_1	71.858	41.191	.432	.715
ATT_2	72.054	41.997	.381	.720
ATT_3	72.326	42.078	.278	.729
ATT_4	71.879	41.826	.393	.719
ATT_5	72.885	43.898	.178	.737
ATT_6	72.626	43.519	.242	.731
ATT_7	72.917	43.672	.204	.734
ATT_8	72.422	42.379	.294	.727
ATT_9	72.359	42.769	.241	.732
ATT_10	72.470	43.069	.248	.731
ATT_11	71.582	42.505	.400	.719
ATT_12	71.846	42.857	.314	.725
ATT_13	72.324	43.850	.143	.742
ATT_14	72.301	42.761	.244	.732
ATT_15	71.484	42.735	.443	.718
ATT_16	71.524	42.354	.464	.716
ATT_17	71.662	42.478	.379	.721
ATT_18	71.635	42.878	.386	.721
ATT_19	71.449	42.625	.419	.719
G2	71.916	44.843	.136	.738

B. Financial behaviour

```
RELIABILITY
  /VARIABLES=A9 A14 BVR_3 BVR_2 BVR_4 BVR_6 BVR_7 BVR_9 BVR_10 D8
BVR_8 G3 A16 A3
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /SUMMARY=TOTAL.
```

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	521	100.0
	Excluded[a]	0	.0
	Total	521	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.560	14

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
A9	43.392	30.354	.117	.564
A14	43.572	30.061	.138	.559
BVR_3	42.718	28.834	.339	.517
BVR_2	43.372	28.107	.366	.509
BVR_4	43.939	28.542	.434	.504
BVR_6	43.981	28.973	.257	.532
BVR_7	43.985	28.419	.448	.502
BVR_9	42.497	29.981	.280	.531
BVR_10	43.459	29.456	.238	.536
D8	42.267	30.996	.154	.552
BVR_8	43.937	28.798	.307	.522
G3	43.875	28.182	.239	.537
A16	43.075	31.785	.039	.576
A3	42.117	34.380	-.170	.618

```
RELIABILITY
  /VARIABLES=A9 A14 BVR_3 BVR_2 BVR_4 BVR_6 BVR_7 BVR_9 BVR_10 D8
BVR_8 G3 A16
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
  /SUMMARY=TOTAL.
```

Reliability

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	521	100.0
	Excluded[a]	0	.0
	Total	521	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.618	13

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
A9	38.879	31.268	.120	.627
A14	39.060	30.929	.144	.623
BVR_3	38.205	29.590	.356	.582
BVR_2	38.860	28.755	.390	.574
BVR_4	39.426	29.422	.438	.572
BVR_6	39.468	29.053	.330	.585
BVR_7	39.472	29.211	.462	.568
BVR_9	37.985	30.996	.271	.598
BVR_10	38.946	30.409	.237	.603
D8	37.754	32.078	.142	.617
BVR_8	39.424	29.468	.330	.586
G3	39.363	29.132	.237	.606
A16	38.562	32.643	.048	.636

Appendix 18. Statistic descriptive: Financial knowledge, attitude, and behaviour

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Financial_knowledge_score	521	11	100	56.39	19.295
Financial_attitude_score	521	45	96	69.94	8.290
a. Attitude managing money	521	25	100	71.22	14.369
b. Attitude managing risk	521	13	100	56.36	12.224
c. Attitude planning ahead	521	38	100	75.80	10.580
d. Attitude choosing products	521	25	100	82.41	13.425
e. Attitude staying informed	521	40	100	79.08	15.112
Financial_behaviour_score	521	25.00	87.00	56.6583	10.87050
Valid N (listwise)	521				

Appendix 19. Detailed responses of attitudes based on field of study (%)

	Statements	Field of study	SA	TA	N	TD	SD	Total %
	Managing Money							
1	I am very organised when it comes to managing my money day to day.	0	28	50	13	8	1	100
		1	41	48	5	6	0	100
2	I am more of a saver than a spender.	0	16	54	22	7	1	100
		1	36	45	13	6	0	100
3	I prefer to buy things on credit rather than wait and save up.	0	3	19	16	50	12	100
		1	0	6	5	64	25	100
4	Prefer cut-back than spending on a credit card couldn't repay.	0	24	59	10	6	1	100
		1	30	55	6	8	1	100
	Managing risk							
5	I can trust the information provided by insurance companies about policies.	0	3	27	37	30	3	100
		1	2	34	36	26	2	100
6	I am confident that insurance policies would pay out if I ever needed them to.	0	3	38	39	18	2	100
		1	0	52	34	14	0	100
7	I accept the risks and choose not to pay for home content insurance	0	1	28	36	31	4	100
		1	0	39	37	22	2	100
8	Paying for life insurance is not necessary.	0	5	54	23	15	3	100
		1	16	48	17	17	2	100
9	credit cards are safe and risk free.	0	9	51	19	18	3	100
		1	20	48	22	8	2	100
10	Not paying full billing of credit card as long have made the minimum payment	0	7	46	27	19	1	100
		1	11	44	36	9	0	100
	Planning ahead							
1 1	I always make sure I have money saved for a rainy day	0	41	52	4	3	0	100
		1	31	62	3	2	2	100
12	I always begin saving well in advance for a big event (Christmas, Eid, etc).	0	26	56	12	6	0	100
		1	28	61	9	2	0	100
13	Pension funds are the best way to save for retirement.	0	16	45	20	18	1	100
		1	17	39	19	25	0	100
14	I prefer to live for today rather than plan for tomorrow	0	3	15	18	52	12	100
		1	2	11	14	61	12	100
15	Having rainy day saving is important	0	45	49	5	1	0	100
		1	50	47	3	0	0	100
16	Planning how to pay for the old care is important.	0	43	50	6	1	0	100
		1	48	47	5	0	0	100
	Choosing products							
17	Comparing prices before buying is important).	0	35	53	8	3	1	100
		1	45	42	13	0	0	100
18	Searching information before deciding to buy is important	0	34	57	6	3	0	100
		1	44	50	6	0	0	100
19	It is important to read carefully the agreement/contract before signing it.	0	49	45	4	2	0	100
		1	62	36	0	2	0	100
	Staying up-to-date							
20	Keep up-to- date with financial matters is important	0	23	50	24	3	0	100
		1	31	47	22	0	0	100

Note:
(1) The exact wording of the questions is provided in Table 6.6
(2) SA=Strongly Agree; A=Agree; N=Neither Agree or Disagree; D=Disagree; SD=Strongly Disagree
(3) Questions were adopted from Kempson and Collard (2006); MAS (2013; 2013b; 2015b)

Appendix 20 Detailed responses of attitudes based on Personal Finance course

	Statements	Attend Personal finance course	SA	TA	N	TD	SD	Total %
	Managing Money							
1	I am very organised when it comes to managing my money day to day.	No	30	50	12	8	0	100
		Yes	32	50	10	6	2	100
2	I am more of a saver than a spender.	No	18	53	21	8	0	100
		Yes	20	52	24	4	0	100
3	I prefer to buy things on credit rather than wait and save up.	No	3	18	15	51	13	100
		Yes	4	10	8	62	16	100
4	Prefer cut-back than spending on a credit card couldn't repay.	No	23	59	10	7	1	100
		Yes	38	54	2	4	2	100
	Managing risk							
5	I can trust the information provided by insurance companies about policies.	No	2	26	38	31	3	100
		Yes	8	38	30	24	0	100
6	I am confident that insurance policies would pay out if I ever needed them to.	No	2	38	40	19	1	100
		Yes	8	56	26	10	0	100
7	I accept the risks and choose not to pay for home content insurance	No	1	28	38	30	3	100
		Yes	6	38	26	26	4	100
8	Paying for life insurance is not necessary.	No	5	54	22	16	3	100
		Yes	22	50	18	8	2	100
9	credit cards are safe and risk free.	No	10	51	19	17	3	100
		Yes	20	48	20	12	0	100
10	Not paying full billing of credit card as long have made the minimum payment	No	6	45	30	18	1	100
		Yes	16	48	18	18	0	100
	Planning ahead							
1 1	I always make sure I have money saved for a rainy day	No	41	52	4	3	0	100
		Yes	30	64	2	2	2	100
12	I always begin saving well in advance for a big event (Christmas, Eid, etc).	No	26	56	12	6	0	100
		Yes	32	54	8	6	0	100
13	Pension funds are the best way to save for retirement.	No	16	43	21	19	1	100
		Yes	20	50	14	14	2	100
14	I prefer to live for today rather than plan for tomorrow	No	3	14	19	53	11	100
		Yes	4	12	10	60	14	100
15	Having rainy day saving is important	No	45	49	5	1	0	100
		Yes	44	50	2	4	0	100
16	Planning how to pay for the old care is important.	No	43	50	6	1	0	100
		Yes	45	50	1	2	2	100
	Choosing products							
17	Comparing prices before buying is important).	No	36	53	8	2	1	100
		Yes	44	44	6	4	2	100
18	Searching information before deciding to buy is important	No	34	57	7	2	0	100
		Yes	46	46	2	6	0	100
19	It is important to read carefully the agreement/contract before signing it.	No	49	45	4	2	0	100
		Yes	60	32	4	4	0	100
	Staying up-to-date							
20	Keep up-to- date with financial matters is important	No	24	50	24	2	0	100
		Yes	26	48	26	0	0	100

Note:
(1) The exact wording of the questions is provided in Table 6.6
(2) SA=Strongly Agree; A=Agree; N=Neither Agree or Disagree; D=Disagree; SD=Strongly Disagree
(3) Questions were adopted from Kempson and Collard (2006); MAS (2013; 2013b; 2015b)

Appendix 21. Detailed responses of attitudes based on year of study

	Statements	Year of study	SA	TA	N	TD	SD	Total %
	Managing Money							
1	I am very organised when it comes to managing my money day to day.	First year	28	49	17	6	0	100
		Senior	30	50	11	8	1	100
2	I am more of a saver than a spender.	First year	15	55	20	8	2	100
		Senior	20	52	21	7	0	100
3	I prefer to buy things on credit rather than wait and save up.	First year	3	21	17	51	8	100
		Senior	3	16	14	52	15	100
4	Prefer cut-back than spending on a credit card couldn't repay.	First year	18	64	8	8	2	100
		Senior	27	57	9	6	1	100
	Managing risk							
5	I can trust the information provided by insurance companies about policies.	First year	2	27	37	31	3	100
		Senior	3	28	37	30	2	100
6	I am confident that insurance policies would pay out if I ever needed them to.	First year	2	35	41	20	2	100
		Senior	2	42	38	17	1	100
7	I accept the risks and choose not to pay for home content insurance	First year	0	20	39	41	0	100
		Senior	2	32	36	26	4	100
8	Paying for life insurance is not necessary.	First year	0	47	25	23	5	100
		Senior	9	55	21	13	2	100
9	credit cards are safe and risk free.	First year	8	41	28	20	3	100
		Senior	12	54	17	15	2	100
10	Not paying full billing of credit card as long have made the minimum payment	First year	3	49	31	16	1	100
		Senior	9	45	27	18	1	100
	Planning ahead							
1 1	I always make sure I have money saved for a rainy day	First year	40	52	5	2	1	100
		Senior	40	53	3	3	1	100
12	I always begin saving well in advance for a big event (Christmas, Eid, etc).	First year	18	57	14	10	1	100
		Senior	29	56	11	4	0	100
13	Pension funds are the best way to save for retirement.	First year	8	39	30	22	1	100
		Senior	19	46	17	17	1	100
14	I prefer to live for today rather than plan for tomorrow	First year	2	21	21	48	8	100
		Senior	3	12	17	55	13	100
15	Having rainy day saving is important	First year	42	54	4	0	0	100
		Senior	47	47	5	1	0	100
16	Planning how to pay for the old care is important.	First year	45	47	7	1	0	100
		Senior	42	51	5	1	1	100
	Choosing products							
17	Comparing prices before buying is important).	First year	30	57	8	4	1	100
		Senior	38	51	8	2	1	100
18	Searching information before deciding to buy is important	First year	29	63	5	3	0	100
		Senior	37	54	6	3	0	100
19	It is important to read carefully the agreement/contract before signing it.	First year	47	48	2	3	0	100
		Senior	52	42	4	2	0	100
	Staying up-to-date							
20	Keep up-to- date with financial matters is important	First year	18	52	29	1	0	100
		Senior	26	49	22	3	0	100

Note:
(1) The exact wording of the questions is provided in Table 6.6
(2) SA=Strongly Agree; A=Agree; N=Neither Agree or Disagree; D=Disagree; SD=Strongly Disagree
(3) Questions were adopted from Kempson and Collard (2006); MAS (2013; 2013b; 2015b)

Appendix 22 Detailed responses of attitudes based on gender

	Statements	Gender	SA	TA	N	TD	SD	Total %
	Managing Money							
1	I am very organised when it comes to managing my money day to day.	Female	33	48	12	7	0	100
		Male	25	53	13	8	1	100
2	I am more of a saver than a spender.	Female	22	50	21	7	0	100
		Male	15	56	21	7	1	100
3	I prefer to buy things on credit rather than wait and save up.	Female	3	15	16	53	13	100
		Male	3	21	14	50	12	100
4	Prefer cut-back than spending on a credit card couldn’t repay.	Female	28	59	7	6	0	100
		Male	20	59	12	7	2	100
	Managing risk							
5	I can trust the information provided by insurance companies about policies.	Female	3	29	40	26	2	100
		Male	2	26	33	35	3	100
6	I am confident that insurance policies would pay out if I ever needed them to.	Female	3	43	41	12	1	100
		Male	2	36	36	25	1	100
7	I accept the risks and choose not to pay for home content insurance	Female	2	32	35	30	1	100
		Male	0	26	39	29	6	100
8	Paying for life insurance is not necessary.	Female	8	56	22	12	2	100
		Male	4	49	22	21	4	100
9	credit cards are safe and risk free.	Female	13	48	23	14	1	100
		Male	7	55	14	20	4	100
10	Not paying full billing of credit card as long have made the minimum payment	Female	9	49	25	16	1	100
		Male	5	41	33	20	1	100
	Planning ahead							
11	I always make sure I have money saved for a rainy day	Female	42	53	3	2	0	100
		Male	38	52	5	4	1	100
12	I always begin saving well in advance for a big event (Christmas, Eid, etc).	Female	26	59	10	4	1	100
		Male	26	52	13	8	1	100
13	Pension funds are the best way to save for retirement.	Female	18	46	20	15	1	100
		Male	14	41	20	23	2	100
14	I prefer to live for today rather than plan for tomorrow	Female	3	13	19	55	10	100
		Male	2	16	17	51	14	100
15	Having rainy day saving is important	Female	48	47	4	1	0	100
		Male	42	51	5	2	0	100
16	Planning how to pay for the old care is important.	Female	45	49	5	1	0	100
		Male	40	51	7	1	1	100
	Choosing products							
17	Comparing prices before buying is important).	Female	37	52	8	2	1	100
		Male	36	52	8	3	1	100
18	Searching information before deciding to buy is important	Female	33	58	7	2	0	100
		Male	37	55	5	3	0	100
19	It is important to read carefully the agreement/contract before signing it.	Female	52	42	4	1	1	100
		Male	47	46	4	3	0	100
	Staying up-to-date							
20	Keep up-to- date with financial matters is important	Female	25	51	22	2	0	100
		Male	22	48	27	3	0	100

Note:
(1) The exact wording of the questions is provided in Table 6.6
(2) SA=Strongly Agree; A=Agree; N=Neither Agree or Disagree; D=Disagree; SD=Strongly Disagree
(3) Questions were adopted from Kempson and Collard (2006); MAS (2013; 2013b; 2015b)

Appendix 23 Detailed responses of attitudes based on work experience

	Statements	Work experienc e	SA	TA	N	TD	SD	Total %
	Managing Money							
1	I am very organised when it comes to managing my money day to day.	No	25	52	16	7	0	100
		Yes	34	48	8	9	1	100
2	I am more of a saver than a spender.	No	25	52	9	0	0	100
		Yes	23	53	17	6	1	100
3	I prefer to buy things on credit rather than wait and save up.	No	3	20	20	46	11	100
		Yes	3	15	9	58	15	100
4	Prefer cut-back than spending on a credit card couldn't repay.	No	19	62	11	7	1	100
		Yes	30	56	7	6	1	100
	Managing risk							
5	I can trust the information provided by insurance companies about policies.	No	2	28	40	27	3	100
		Yes	4	27	34	33	2	100
6	I am confident that insurance policies would pay out if I ever needed them to.	No	2	39	39	18	2	100
		Yes	3	41	38	17	1	100
7	I accept the risks and choose not to pay for home content insurance	No	0	27	37	33	3	100
		Yes	2	31	36	27	4	100
8	Paying for life insurance is not necessary.	No	5	54	23	15	3	100
		Yes	8	52	21	16	3	100
9	credit cards are safe and risk free.	No	8	46	23	21	2	100
		Yes	14	55	16	12	3	100
10	Not paying full billing of credit card as long have made the minimum payment	No	6	43	30	20	1	100
		Yes	8	49	27	15	1	100
	Planning ahead							
1 1	I always make sure I have money saved for a rainy day	No	36	56	5	2	1	100
		Yes	43	50	2	4	1	100
12	I always begin saving well in advance for a big event (Christmas, Eid, etc).	No	24	58	12	6	0	100
		Yes	29	54	11	6	0	100
13	Pension funds are the best way to save for retirement.	No	14	46	21	17	2	100
		Yes	18	42	19	20	1	100
14	I prefer to live for today rather than plan for tomorrow	No	0	3	15	20	52	100
		Yes	1	3	13	15	55	100
15	Having rainy day saving is important	No	41	55	4	0	0	100
		Yes	50	43	5	2	0	100
16	Planning how to pay for the old care is important.	No	39	53	8	0	0	100
		Yes	47	47	4	2	0	100
	Choosing products							
17	Comparing prices before buying is important).	No	33	54	9	3	1	100
		Yes	39	51	8	2	0	100
18	Searching information before deciding to buy is important	No	32	58	7	3	0	100
		Yes	38	54	5	3	0	100
19	It is important to read carefully the agreement/contract before signing it.	No	44	49	5	2	0	100
		Yes	57	38	3	2	0	100
	Staying up-to-date							
20	Keep up-to- date with financial matters is important	No	22	52	25	1	0	100
		Yes	26	48	23	3	0	100

Note:
(1) The exact wording of the questions is provided in Table 6.6
(2) SA=Strongly Agree; A=Agree; N=Neither Agree or Disagree; D=Disagree; SD=Strongly Disagree
(3) Questions were adopted from Kempson and Collard (2006); MAS (2013; 2013b; 2015b)

*Appendix 24 Detailed responses of behaviour based on field of study (*0=Non-Economics-Business; 1=Economics and Business)

	Statements	Field of study	Percentage of answer (%)					Total %
			Always	Most of the time	Some time	Hardly ever	Never	
1	checking the balance/ask for mini statements before withdrawing cash	0	20	21	28	24	7	100
		1	16	30	31	14	9	100
2	In the past 12 months, had money left over at the end of the month	0	16	21	30	22	11	100
		1	6	28	28	23	14	99
		1	2	12	8	0	78	100
3	In the last 12 months, run out of money before the end of the month	0	2	15	34	23	26	100
		1	0	17	34	33	16	100
4	I avoid spending more money than I have.	0	32	36	23	7	2	100
		1	33	42	16	8	2	101
5	I begin saving well in advance for big events, such as Christmas, Eid	0	12	31	33	18	6	100
		1	11	34	36	17	2	100
6	I save money for a rainy day.	0	4	6	50	30	10	100
		1	0	25	52	20	3	100
7	I have a weekly (or monthly) budget that I follow.	0	6	16	31	30	17	100
		1	9	13	33	25	20	100
8	I regularly set aside money each month for savings.	0	3	9	43	37	8	100
		1	2	19	42	34	3	100
9	collect information about different products/services before buying	0	40	37	19	4	0	100
		1	44	42	8	6	0	100
10	I make a complaint for unsuitable product	0	11	25	35	22	7	100
		1	14	47	30	9	0	100
11	I read the contract carefully before signing it	0	57	27	10	4	2	100
		1	69	23	6	2	0	100
12	I read to increase my financial knowledge.	0	6	14	34	33	13	100
		1	9	19	34	27	11	100
13	Monitor financial issues	0	8	29	15	20	28	100
		1	11	42	12	22	13	100

Note:
(1) The exact wording of the questions is provided in Table 7.22
(2) Questions were adopted from Cude et al (2006); Kempson and Collard (2006); MAS (2013; 2013b; 2015b)

Appendix 25 Detailed responses of behaviour based on Personal Finance course (*No=had not taken the course; Yes=had taken the course)*

	Statements	Personal finance course	Percentage of answer (%)					Total %
			Always	Most of the time	Some time	Hardly ever	Never	
1	checking the balance/ask for mini statements before withdrawing cash	No	18	22	28	24	8	100
		Yes	32	20	30	16	2	100
2	In the past 12 months, had money left over at the end of the month	No	16	21	30	22	11	100
		Yes	6	26	30	24	14	100
3	In the last 12 months, run out of money before the end of the month	No	1	14	34	25	26	100
		Yes	6	24	36	22	12	100
4	I avoid spending more money than I have.	No	33	36	22	7	2	100
		Yes	28	44	20	4	4	100
5	I begin saving well in advance for big events, such as Christmas, Eid	No	11	30	34	19	6	100
		Yes	18	46	22	10	4	100
6	I save money for a rainy day.	No	3	9	50	29	9	100
		Yes	4	12	54	24	6	100
7	I have a weekly (or monthly) budget that I follow.	No	6	15	31	30	18	100
		Yes	14	18	38	22	8	100
8	I regularly set aside money each month for savings.	No	3	10	42	37	8	100
		Yes	4	18	44	32	2	100
9	collect information about different products/services before buying	No	40	37	18	5	0	100
		Yes	38	42	16	2	2	100
10	I make a complaint for unsuitable product	No	12	27	34	20	7	100
		Yes	6	34	32	26	2	100
11	I read the contract carefully before signing it	No	58	27	10	4	1	100
		Yes	60	24	10	4	2	100
12	I read to increase my financial knowledge.	No	6	14	34	34	12	100
		Yes	10	18	38	20	14	100
13	Monitor financial issues	No	8	31	15	19	27	100
		Yes	6	32	14	30	18	100

Note:
(1) The exact wording of the questions is provided in Table 7.22
(2) Questions were adopted from Cude et al (2006); Kempson and Collard (2006); MAS (2013; 2013b; 2015b)

Appendix 26 Detailed responses of behaviour based on year of study (*first year= first year student; senior=second year and above student)*

	Statements	Year of study	Percentage of answer (%)					Total %
			Always	Most of the time	Some time	Hardly ever	Never	
1	checking the balance/ask for mini statements before withdrawing cash	First year	13	27	21	26	13	100
		Senior	22	21	30	22	5	100
2	In the past 12 months, had money left over at the end of the month	First year	10	17	30	27	16	100
		Senior	16	23	31	20	10	100
3	In the last 12 months, run out of money before the end of the month	First year	2	9	36	32	21	100
		Senior	2	17	33	22	26	100
4	I avoid spending more money than I have.	First year	28	40	18	13	1	100
		Senior	34	35	24	5	2	100
5	I begin saving well in advance for big events, such as Christmas, Eid	First year	8	22	36	23	11	100
		Senior	14	34	31	17	4	100
6	I save money for a rainy day.	First year	2	7	50	30	11	100
		Senior	4	9	50	29	8	100
7	I have a weekly (or monthly) budget that I follow.	First year	4	9	34	26	27	100
		Senior	7	18	30	31	14	100
8	I regularly set aside money each month for savings.	First year	2	8	39	37	14	100
		Senior	4	11	43	36	6	100
9	collect information about different products/services before buying	First year	37	41	16	6	0	100
		Senior	41	36	18	4	1	100
10	I make a complaint for unsuitable product	First year	10	21	40	18	11	100
		Senior	12	30	32	21	5	100
11	I read the contract carefully before signing it	First year	55	28	11	4	2	100
		Senior	59	26	10	4	1	100
12	I read to increase my financial knowledge.	First year	6	11	29	34	20	100
		Senior	6	16	36	32	10	100
13	Monitor financial issues	First year	5	12	15	25	43	100
		Senior	9	37	15	19	20	100

Note:
(1) The exact wording of the questions is provided in Table 7.22
(2) Questions were adopted from Cude et al (2006); Kempson and Collard (2006); MAS (2013; 2013b; 2015b)

Appendix 27 Detailed responses of brhaviour based on gender

	Statements	Gender	Percentage of answer (%)					Total %
			Always	Most of the time	Some time	Hardly ever	Never	
1	checking the balance/ask for mini statements before withdrawing cash	Female	20	20	28	25	7	100
		Male	19	24	28	21	8	100
2	In the past 12 months, had money left over at the end of the month	Female	14	21	30	24	11	100
		Male	16	22	30	20	12	100
3	In the last 12 months, run out of money before the end of the month	Female	1	16	34	24	25	100
		Male	2	15	33	25	25	100
4	I avoid spending more money than I have.	Female	32	39	21	6	2	100
		Male	34	34	23	7	2	100
5	I begin saving well in advance for big events, such as Christmas, Eid	Female	13	31	33	18	5	100
		Male	10	32	32	19	7	100
6	I save money for a rainy day.	Female	2	6	56	26	10	100
		Male	5	13	41	33	8	100
7	I have a weekly (or monthly) budget that I follow.	Female	7	16	31	31	15	100
		Male	6	15	31	28	20	100
8	I regularly set aside money each month for savings.	Female	2	7	46	37	8	100
		Male	5	15	36	37	7	100
9	collect information about different products/services before buying	Female	38	39	19	4	0	100
		Male	43	35	15	6	1	100
10	I make a complaint for unsuitable product	Female	9	24	36	23	8	100
		Male	14	33	31	17	5	100
11	I read the contract carefully before signing it	Female	60	25	11	3	1	100
		Male	57	29	8	4	2	100
12	I read to increase my financial knowledge.	Female	5	12	34	35	14	100
		Male	8	17	35	29	11	100
13	Monitor financial issues	Female	7	30	16	21	26	100
		Male	10	33	13	19	25	100

Note:
(1) The exact wording of the questions is provided in Table 7.22
(2) Questions were adopted from Cude et al (2006); Kempson and Collard (2006); MAS (2013; 2013b; 2015b)

Appendix 28 Detailed responses of behaviour based on work experience (*No=no work experience; Yes=with work experience)*

	Statements	Work expernce	Percentage of answer (%)					Total %
			Always	Most of the time	Some time	Hardly ever	Never	
1	checking the balance/ask for mini statements before withdrawing cash	No	16	21	29	27	7	100
		Yes	23	23	27	19	8	100
2	In the past 12 months, had money left over at the end of the month	No	11	22	29	23	15	100
		Yes	18	21	31	22	8	100
3	In the last 12 months, run out of money before the end of the month	No	2	15	34	26	23	100
		Yes	2	15	33	23	27	100
4	I avoid spending more money than I have.	No	30	36	24	8	2	100
		Yes	35	38	20	6	1	100
5	I begin saving well in advance for big events, such as Christmas, Eid	No	9	26	37	21	7	100
		Yes	16	37	28	15	4	100
6	I save money for a rainy day.	No	2	6	53	28	11	100
		Yes	4	12	47	30	7	100
7	I have a weekly (or monthly) budget that I follow.	No	5	15	30	30	20	100
		Yes	9	16	31	29	15	100
8	I regularly set aside money each month for savings.	No	2	5	43	38	12	100
		Yes	4	15	42	36	3	100
9	collect information about different products/services before buying	No	37	38	20	5	0	100
		Yes	44	37	15	3	1	100
10	I make a complaint for unsuitable product	No	10	27	33	22	8	100
		Yes	12	29	35	18	6	100
11	I read the contract carefully before signing it	No	57	28	9	5	1	100
		Yes	59	25	11	3	2	100
12	I read to increase my financial knowledge.	No	5	10	33	36	16	100
		Yes	8	18	36	29	9	100
13	Monitor financial issues	No	7	26	17	22	28	100
		Yes	9	36	13	19	23	100

Note:
(1) The exact wording of the questions is provided in Table 7.22
(2) Questions were adopted from Cude et al (2006); Kempson and Collard (2006); MAS (2013; 2013b; 2015b)

Appendix 29. Summary of answer from transcript across themes

No.	Theme	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
1	Perceived strengths	• Future planning/ planning ahead • Making ends meet • Record-keeping • Managing money: budgeting • Keeping up to date	• Choosing products • Saving • Financial planning	• Generating income • Choosing products • Saving • Financial planning	• Choosing products • Prioritising needs over wants/ keeping track of spending	• Choosing products • Budgeting • Financial planning • Savings • Prioritising needs over wants • Record-keeping	• Managing money • Prioritising needs over wants • Saving
2	Perceived weaknesses	• Managing money, keeping track of spending • Risk management • Prioritising needs over wants • Financial planning • Calculating the rate of interest, time value of money • Identifying and dealing with fraud • Future planning	• Saving • Financial planning • Managing money • Keeping track of spending	• Keeping track of spending • Budgeting • Planning ahead • Prioritising needs over wants	• Financial planning • Budgeting • Risk management • Being a smart consumer • Choosing products	• Still dependent on parents • Prioritising spending • Managing money • Being a smart consumer • Prioritising needs over wants	• Being a smart consumer • Prioritising needs over wants • Keeping track of spending, allocating spending • Financial planning
3	Ownership of financial products	• Savings account • Investment (property) • Loan and credit card • Jewellery (gold) • Health insurance (benefit from parents' employer)	• Savings account	• Savings account • Health insurance (benefit from parents' employer)	• Savings account • Health insurance (benefit from parents' employer) • Run a small business	• Savings account	• Savings account • Investment (property) • Credit card • Jewellery (gold)

Appendix 30. Questionnaire for Survey (English version)

Questionnaire code:

Date : ....../......./......
Enum code :…………..….
Entri editor :……………...

QUESTIONNAIRE

FINANCIAL CAPABILITY AMONG UNIVERSITY STUDENTS

Personal Information

1. Name : ....
2. Faculty : ....
3. Age : .... year old
4. Gender : [1] Male [2] Female
5. What is your housing arrangement?
   1 On-campus (student accommodation)
   2 Off-campus rent : sharing house
   Off-campus flat
   3 Off-campus own
   4 Live with parents/relatives
   5 Other, specify

6. Have you take a module of Personal Finance (IKK431)?
   1 Yes
   2 Yes, on going
   3 No

7. How many years of working experience do you have? (Include full or part-time experience, internships, summer jobs, etc.)
   1 None
   2 Less than 1 years
   3 One to less than 2 years
   4 Two years or more

8. Income/month : ....
9. What is the main source of your monthly income: (SA)
   1. Pocket money from parents
   2. Scholarship
   3. Other family members, specify…
   4. A part time job
   5. Others, specify……

10. Email : ....

PART I. FOR THE FIRST PART OF THIS SURVEY, WE WOULD LIKE YOU TO ASK THE RESPONDENTS TO RATE THE FOLLOWING ITEMS THAT ARE LISTED IN THE TABLE. SIMPLY TICK THEIR ANSWER, THEN MOVE ONTO THE NEXT QUESTION. (INSTRUCTIONS TO INTERVIEWER ARE IN CAPITALS).

A. FINANCIAL ATTITUDE (*ASK ALL*)

1. SHOWCARD A. **I will read out you some statements made by other people about financial attitude. Please indicate how strongly you agree or disagree with them, by telling the number on the card.** SINGLE ANSWER (SA)

Code	STATEMENT	Strongly Agree	Tend to Agree	Neither agree nor disagree	Tend to disagree	Strongly disagree
		1	2	3	4	5
	MANAGING MONEY					
ATT_1	I am very organised when it comes to managing my money day to day.					
ATT_2	I am more of a saver than a spender					
ATT_3	I prefer to buy things on credit rather than wait and save up.					
ATT_4	I would rather cut back than put everyday spending on a credit card I couldn't repay					
	RISK AND INSURANCE					
ATT_5	I can generally trust the information provided by insurance companies about their policies.					
ATT_6	I am confident that insurance policies would pay out if I ever needed them to.					
ATT_7	I accept the risks and choose not to pay home contents insurance					
ATT_8	Paying for life insurance is not necessary					
ATT_9	I feel credit cards are safe and risk free					
ATT_10	I feel comfortable not paying the full billing amount of my credit card as long I have made the minimum payment					
	PLANING AHEAD					
ATT_11	I always make sure I have money saved for a rainy day					
ATT_12	I always begin saving well in advance for a big event (Christmas, Eid, etc)					
ATT_13	Pension funds are the best way to save for retirement.					
ATT_14	I prefer to live for today rather than plan for tomorrow.					
ATT_15	It is important to have some money saved in case my life changes dramatically.					
ATT_16	It is important for me to plan how to pay for the care I will need in my old age.					

	CHOOSING PRODUCT					
ATT_17	It is important to compare prices before deciding whether to buy					
ATT_18	It is important to search information before deciding to buy					
ATT_19	It is important to read carefully the agreement/contract before sign it					

(3) Questions were adopted from Kempson and Collard (2006); MAS (2013; 2013b; 2015b)

B. FINANCIAL BEHAVIOR

ASK ALL

1. SHOWCARD B. **Now I would like to ask about financial behaviour such as experience and management practice. Please just tell me the number on the card that best describes your current situation**. SA.

Code		Always	Most of the times	Someti mes	Hardly ever	Never
		1	2	3	4	5
BVR_1	I tend to buy things even when I can't really afford them					
BVR_2	I always begin saving well in advance for Big event such as Chrismast, Eid, etc					
BVR_3	I avoid spending more money than I have					
BVR_4	I save money for a rainy day					
BVR_5	I have little or no difficulty managing my money					
BVR_6	I have a weekly (or monthly) budget that I follow					
BVR_7	I regularly set aside money each month for savings					
BVR_8	I read to increase my financial knowledge					
BVR_9	Before decided to buy, I collect information about different products/services in more than one company, in order to compare them					
BVR_10	I make complaint if I had been sold a product that was clearly unsuitable for my needs.					

(2) Questions were adopted from Cude et al (2006); Kempson and Collard (2006); MAS (2013; 2013b; 2015b)

PART II

FOR THE NEXT FOLLOWING PART, WE WOULD LIKE YOU TO ASK THE RESPONDENTS TO ANSWER THIS SET OF QUESTIONS. PLEASE NOTE, IF NO DIRECT INSTRUCTION, PLEASE CONTINUE WITH NEXT QUESTION. INSTRUCTIONS TO INTERVIEWER ARE IN CAPITALS.

SECTION A: MANAGING MONEY

The next questions are about your views on money and managing money. Please be assured that ALL the information collected is confidential – it is not shared with anyone and it is only used for the purposes of research.

ASK ALL

A1. Do you keep track your income and expenditure?

1 Yes
2 No

ASK IF ANSWER "NO" AT A1

A2. Which of the following statement that describe your circumstance?

1 I did not keep track my income and expenditure, but I know in general how much money that I received and expense each month
2 I did not keep track my income and expenditure, and I don't at all how much my income and expenses each month.

ASK IF ANSWER YES AT A1

A3. SHOWCARD C. **How often, if at all, do you keep track your income and expenditure?**

1. Always
2. Most of the time
3. Sometimes
4. Hardly ever

ASK IF CODE 1 AT A1

A4. SHOWCARD D**. How do you keep track of your income and expenditure? Please select all that apply.**
MA

1. An online budgeting tool
2. A spreadsheet
3. A piece of paper
4. In my head (mentally)
5. By checking my bank balance
6. By reviewing my bank statements
7. An accounts book or notebook
8. A financial software package
9. Other (specify)
10. Don't know

11. Prefer not to say

I'd now like to ask a few general questions about any bank accounts you have and how you use them. I will not ask for any details about the accounts themselves.

ASK ALL

A5. Beside current account that provided by university, do you have any other account? (SA)

1. Yes
2. No
3. Prefer not to say

ASK ALL

A6. What is the main use of your account? (*If have more than one account, please think about the one from which you use most).* SA.

1. As a saving account
2. As a current account: for day-to-day money management
3. To receive money transfer from parents/scholarship
4. Other, specify
5. Prefer not to say

The next few questions are about the current account that you use most often. If you have more than one, please think about the one from which you use most.

ASK ALL

A7. SHOWCARD E. **How often do you normally check how much money is in this account? Please choose one option only.** READ OUT. SINGLE CODE ONLY. (SA).

1. Every day
2. At least once a week, but not every day
3. At least once a fortnight, but not once a week
4. At least once a month, but not once a fortnight
5. Less than once a month
6. Never *(Go to A9)*
7. Don't know (*Go to A9)*
8. Prefer not to say

ASK IF ANSWER CODE 1-6 AT A7

A8. SHOWCARD F. **And which, if any, of the following methods do you use to check how much money is in your current account? Please select all that apply.** MULTICODE OK. (MA).

1. Ask for a balance or mini statement at the bank
2. using a cash machine
3. Online through my bank's website
4. Phone banking
5. A text message from my bank
6. Using an App on a mobile or other electronic device
7. I do not check how much money is in this account (SINGLE CODE ONLY)
8. Don't know (SINGLE CODE ONLY) SA
9. Prefer not to say

ASK ALL

A9. SHOWCARD G. **How often, if at all, do you normally check the balance/asking for mini statements before withdraw cash?**

1. Always
2. Most of the time
3. Sometimes
4. Hardly ever
5. Never

Now, I would like to ask the next set of questions about regular bills that you get and how you pay for them.

ASK ALL

A10. SHOWCARD H. **Which one of the following statements best describes how well you are keeping up with your bills and credit commitments at the moment? Please just read out the number that applies.** SA

1. I am keeping up with all bills and commitments without any difficulties
2. I am keeping up with all bills and commitments, but it is a struggle from time to time
3. I am keeping up with all bills and commitments, but it is a constant struggle
4. I am falling behind with some bills or credit commitments
5. I am having real financial problems and have fallen behind with many bills or credit commitments

6. I don’t have any bills or commitments
7. Don’t know
8. Prefer not to say

ASK IF CODES 4 OR 5 AT A10, *otherwise GO to next question.*

A11. Which bills payments, if any, are you currently behind with? MA

1. Mortgage
2. Rent
3. Utilities (electricity, gas, water, phone, internet)
4. Credit cards
5. Loans
6. Tuition fees
7. Other (please specify)

Now a few questions about money left.

ASK ALL

A12. SHOWCARD I. **In the past 12 months, how often have you had money left over at the end of the month?** READ OUT (SA).

1. Always
2. Most of the time
3. Sometimes
4. Hardly ever
5. Never (*go to A16)*

ASK IF A12 = ALWAYS OR MOST OF THE TIME OR SOMETIMES OR HARDLY EVER

A13a. DO NOT SHOW SCREEN. What do you usually do with the money left over? **PROBE: what else? DO NOT PROMPT**

A13b. Then prompt: what else?

1. Spend it
2. Put it into/leave it in savings account/investments
3. Leave it in current account and then put it into savings/investments
4. Keep it in purse/wallet for the next week/month
5. Save it in cash at home
6. Give it to someone else to save for me
7. Depends on amount left over/varies too much to say
8. Other (SPECIFY) ____
9. Don’t know
10. Prefer not to say

ASK ALL, **EXCEPT** THOSE WHO ANSWER “ALWAYS” AT A12

A14. SHOWCARD J. **And in the past 12 months, how often, if at all, have you run out of money before the end of the month?**

1. Always
2. Most of the time
3. Sometimes
4. Hardly ever
5. Never (*go to section B)*

ASK IF A14 = ALWAYS OR MOST OF THE TIME OR SOMETIMES OR HARDLY EVER

A15. DO NOT SHOW SCREEN. (a) What do you usually do, if any, when you run out of money?

(b). PROBE: what else? (SHOWCARD)

1. Borrow from family/friends
2. Cut back spending
3. Use credit card
4. Take out commercial loan
5. Draw money out of savings

6. Do overtime/earn extra money
7. Depends on amount needed/varies too much to say
8. Don't know
9. Prefer not to say
10. Other (SPECIFY) ____

SECTION B. PLANNING AHEAD

Now, I would like to discuss various aspects of planning ahead, including planning for unexpected events as well as making plans for things that you know will occur in the medium or long term. Again, please be assured that the information collected is confidential – it is not shared with anyone and it is only used for the purposes of research.

ASK IF ANSWER YES (CODE 1) AT A1, IF NOT CODE 1 AT A1, continue to B3.
B1. You said earlier that you keep track of your expenditure. Do you set a personal budget of how much you can spend? SA

1. Yes
2. No (*go to B3)*
3. Don't know (*go to B3)*
4. Refused (*go to B3)*

ASK IF ANSWER YES AT B1.
B2. How often, if at all, do you end up sticking to the budget you set? SA

1. Always
2. Most of the time
3. Sometimes
4. Hardly ever
5. Never
6. Don't know
7. Refused

ASK ALL
B3. SHOWCARD K. **Do you anticipate needing money in the foreseeable future for any of the following?** MULTICODE OK. MA

1. Education (study fees)
2. A wedding
3. Holidays or travelling
4. Buying or replacing a car or other vehicle
5. Buying a home
6. (If have a child/children) Providing some sort of financial support for your child/children
7. (If own a house) Major house repairs or home improvements
8. The care of an elderly relative
9. Something else (Please specify)
10. None of the above (SINGLE CODE ONLY) SA
11. Don't know (SINGLE CODE ONLY) SA
12. Refused (SINGLE CODE ONLY) SA

ASK IF MULTICODE AT B3.
B4. Which of those things (B3) is likely to occur first? (SA*)*

B5: I'd now like to ask you some questions about how you expect to pay for <INSERT ACTIVITY FROM B3 (IF SINGLE CODE) OR B4>.
Have you made any plans to help you meet this expense? SA. (*Source: MAS)*

1. Yes
2. No *(go to B7)*
3. Don't know *(go to B7)*
4. Refused *(go to B7)*

IF ANSWER YES AT B5

B6. SHOWCARD L. **How do you plan to pay for this expense?** MULTICODE OK. (MA)

1. Using income saved especially to pay for this
2. Using general savings
3. Using an unexpected source of income, such as an inheritance
4. Through an insurance policy
5. Using a loan
6. Using a credit card
7. By taking on a second job, or overtime
8. Another way (Please specify)
9. Don't know
10. Refused to answer

ASK ALL

B7. And, in the last three years, have you experienced a major unexpected expense? By major, we mean an expense equivalent to your whole income for a month, or more. SINGLE CODE ONLY (SA)

1. Yes
2. No *(go to section C)*
3. Don't know *(go to section C)*
4. Prefer not to say *(go to section C)*

ASK IF ANSWER YES AT B7

B8. SHOWCARD M**. How did you find the money to pay for this? If you have had more than one major unexpected expense in the past three years, please think about the largest. Tick all apply.** (MA)

1. Cut back on spending
2. Drew money from a bank account (current/savings account)
3. Claimed on an insurance policy
4. Used a credit card
5. Took out a loan (including mortgage)
6. Borrowed money from family/friends
7. Family/friends gave me money to help out
8. Got a part time job
9. Sold items I no longer needed
10. Another way (Please specify) OE
11. I could not find the money/ I haven't paid for it yet SA
12. Don't know (SINGLE CODE ONLY) SA
13. Prefer not to say (SINGLE CODE ONLY) SA

SECTION C. PROTECTION/RISK MANAGEMENT

ASK ALL

I would now like to ask you a question about insurance.

C1. SHOWCARD N. **Please could you look at these types of insurance, and indicate which, if any of these you currently have, either in your own name or jointly with someone else?**
MULTICODE OK. RANDOMISE 1 TO 4

1. Life insurance
2. Health insurance
3. Critical illness insurance
4. Home contents insurance
5. None of these SA
6. Don't know SA
7. Prefer not to say SA

SECTION D. MAKING CHOICES

Now for the next section, I would like to ask some questions that related to making choices.

ASK ALL
D1. SHOWCARD O. **I would now like to ask about the financial products that you have. Please look at each of these cards and tell me which, if any, of these you currently have, either in your own name or jointly with someone else? Please just tell me the letter on the card. Code all that apply.**

No	Financial products	Tick all apply
1	Certificate of Deposits	
2	Bonds	
3	Stocks	
4	Mutual funds	
5	Unit links	
6	Personal pension	
7	Insurance	
8	*Nonfinancial products: Running small business enterprise*	
9	*Nonfinancial products: Jewellery*	
10	Others, specify………	
11	None of these (*GO to D4)*	

ASK IF ANSWER CODE 1-9 AT D1.
D2. SHOWCARD P. **Why did you decide to put your money in the {type of product from D1} you bought most recently, rather than invest it in some other way?** ***Tick all apply*** **(MA)**

1. Past performance
2. High potential returns
3. Guaranteed returns
4. Guaranteed income
5. Had used this company/provider before
6. Recommended by family member/friend/colleague
7. Reputation/had heard of company
8. Did not consider any other investments
9. Other (SPECIFY) ____
10. Don't know
11. Prefer not to say

ASK ALL
D3. SHOWCARD Q. **If you needed advice about money, who would you ask? Please select all that apply.**
Multicode Allowed (MA)

1. My parents
2. My friends
3. My teachers
4. Other family members (write in)
5. Internet site (write in)
6. A bank, building society or other financial organisation
7. TV programmes (write in)
8. Newspaper
9. Specialized magazine/publication
10. Financial advisor
11. Other (write in)
12. I do not ask for advice about money (SA)
13. Don't know (SA)
14. Prefer not to say (SA)

ASK ALL
D4. How often do you discuss money with :
  a. friends
  b. family

SHOWCARD R. SINGLE CODE FOR EACH
1. Very often
2. Fairly
3. Not very often
4. Hardly ever
5. Never

ASK ALL
D5. SHOWCARD S**. Before you signed the agreement/contract, did you read terms and conditions?**
1. Always
2. Most of the time
3. Sometimes
4. Hardly ever
5. Never
6. Never experienced sign the agreement/contract

SECTION E – STAYING UPDATE

ASK ALL
E1. SHOWCARD T. **How often do you use the internet?** SA
1. Several times a day
2. Once a day
3. 2 to 5 times a week
4. About once a week
5. Less than once a week
6. I do not use the internet

ASK ALL
E2. SHOWCARD U. **In your opinion, how important or unimportant, if at al, is it important for people like you to keep up to date with what is happening with financial matters generally, such as the economy and the financial services sector?** SA.
1. Very important
2. Quite important
3. Neither important or not important
4. Not very important
5. Not at all important

ASK ALL
E3. SHOWCARD V. **And how frequently do you monitor it?** SA.
1. Everyday
2. At least once a week, but not everyday
3. At least once in fortnight, but not once a week
4. At least once a month, but not once in fortnight
5. Less than once a month

ASK ALL
E4. SHOWCARD W. **Which, if any, of these things do you personally keep an eye on?** CODE ALL THAT APPLY.
1. Changes in the housing market
2. Changes in the stock market
3. Changes in interest rates
4. Changes in inflation

5. Changes in taxation, e.g. income tax, capital gains tax
6. Changes in the job market
7. Changes in state pension, benefits and tax credits
8. Best buys in financial products
9. None of these (SA, GO to section I)

ASK IF ANSWER CODE 1-8 AT E4.
E5. DO NOT SHOW SCREEN. **How do you tend to monitor these things?** PROBE FULLY. DO NOT PROMPT.

1. Financial pages in daily or weekend newspapers
2. Newspapers (not financial pages)
3. Specialist personal finance magazines (example..)
4. Specialist personal finance programmes on TV or radio
5. Other TV or radio programmes
6. Internet
7. Financial adviser/stockbroker

SECTION F

ASK ALL
Now I would like to ask you some questions that related to your own circumstances about personal finance and courses. Please tell me the first of these that best describes your current situation.

ASK ALL
F1. SHOWCARD X**. How sure do you feel about your ability to manage your own finances?** (SA)

1. Not sure at all - I wish I knew a lot more about money management
2. Not too sure - I wish I knew more about money management
3. Neither sure or not sure
4. Somewhat sure - I understand most of what I'll need to know
5. Very sure - I understand money management very well

ASK ALL
F2. SHOWCARD Y. How interested if at all are you in increasing your financial knowledge? (SA)

1. Very uninterested
2. Somewhat uninterested
3. Not sure
4. Somewhat interested
5. Very interested

ASK ALL
F3. SHOWCARD Z1. **Which of these topics, if any, would be of interest to you? (Check all that apply)**

Tick	No	Topic
	1	Budgeting
	2	Investment
	3	Taxes
	4	Insurance and risk management
	5	Loans/debt
	6	Credit cards
	7	Saving
	8	Interest rates
	9	Retirement/pensions fund
	10	Other, specify
	11	None of these

ASK ALL
Thinking firstly about how you feel personally at the moment…
Z. SHOWCARD Z2**. how satisfied or dissatisfied would you say you are with your overall financial circumstances?** (SA) (*source: MAS)*

1. Very satisfied
2. Fairly satisfied
3. Neither satisfied nor dissatisfied
4. Fairly dissatisfied
5. Very dissatisfied
6. Don't know
7. Prefer not to say

G. FINANCIAL KNOWLEDGE AND SKILL

ASK ALL
SHOWCARD Z3. **The next few questions are a bit different, they are designed as quiz questions. Please do not worry if you cannot answer them, some of these questions are designed to be difficult. But it is not an exam. It does not matter whether the answers you give are right or wrong.** SA

1. If the inflation rate is 5% and the interest rate you get on your savings is 3%, will your savings have more, less or the same amount of buying power in a year's time?

F. More
G. The same
H. Less
I. Don't know
J. Refused

2. Suppose you had Rp 100,000 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?

6. More than Rp102,000
7. Exactly Rp 102,000
8. Less than Rp 102,000
9. Do not know
10. Refuse to answer

3. Suppose you saw the same television on sale at a discount in two different shops. The original purchase price of the television was Rp. 2,500,000. One shop is offering a discount of Rp 300,000 off the original price, the other is offering a discount of 10% off the original price. Which is the better deal – Rp 300,000 off or 10% off?

1. Rp 300,000 off
2. 10% off
3. Don't know
4. Refused

4. Please tell me whether this statement is true or false. "Buying a single company's stock usually provides a safer return than a stock mutual fund

E. True
F. False
G. Do not know
H. Refuse to answer

5. Rob and Molly are the same age. At age 25 Rob began saving Rp 2,000,000 a year for 10 years and then stopped at age 35. At age 35, Molly realized that she needed money for retirement and started saving Rp 2,000,000 per year for 30 years and then stopped at age 65. Now they are both 65 years old. Who has the most money in his or her retirement account (assume both investments had the same interest rate

A Molly, because she saved more money overall

B Rob, because his money has grown for longer period of time
C They would each have about the same amount
D Unable to determine with information provided
E Don’t know

6. **The best age to start paying into a pension is...**
   1. In your twenties
   2. In your fifties

As far as you know, are the following statements true, false, or are you not at all sure? SA

No	Question	True	Not sure	False
7	If I am in physical possession of my credit card, no fraudulent charges can occur.			
8	If I don’t use credit cards, I can’t be a victim of identity theft.			

Source: NFCC 2014

9. SHOWCARD Z4. **Looking at this example of a bank statement, please can you tell me how much money was in the account at the end of February?**

PLEASE WRITE IN YOUR ANSWER TO NEAREST RUPIAH.
Numeric range (PERMITTED RANGE 1 TO 9,999) ___________________

DON’T KNOW
SINGLE CODE ONLY

#Thank you for taking the time to complete this survey#

Source:

Cude, B.J., Lawrence, F.C., Lyons, A.C., et.al., (2006). College Students and Financial Literacy: What They Know and What We Need to Learn. Eastern Family Economics and Resource Management Association 2006 Conference.

Lusardi, A., and Mitchell, O. S. (2006). Financial literacy and planning: Implications for retirement wellbeing. Final Report.

Kempson E. and Collard S. (2006) ‘Financial Capability baseline survey: questionnaire’. The Personal Finance Research Centre, University of Bristol in collaboration with Jenny Turtle and Alan Worley at BMRB Limited and the FSA. London: Financial Services Authority.

The Money Advice Service (MAS) (2015) Financial Capability in the UK 2015: Initial results from the 2015 UK Financial Capability Survey. London: Money Advice Service.

The Money Advice Service (MAS) (2013b). 'Financial Capability Tracker Wave 3. Draft Questionnaire'. MAS

The Money Advice Service (MAS) (2015b). 'Financial Capability Tracker 2015 Wave Draft– v0.2'. Draft Questionnaire. MAS

Lusardi, A., and Mitchell, O. S. (2006). Financial literacy and planning: Implications for retirement wellbeing. Final Report.

Virginia Tech (n.d). College Student Financial Literacy Survey. Virginia Tech.

Appendix 31. Questionnaire for Survey (Indonesian version)
Questionnaire code:

Tanggal	: ....../......./......
Enum code	:…………..….
Entri editor	:……………...

KUESIONER PENELITIAN
FINANCIAL CAPABILITY AMONG UNIVERSITY STUDENTS

KARAKTERISTIK INDIVIDU

1. Nama : ....
2. Semester : ....
3. Fakultas : ....
4. Mayor/Minor/SC : ....
5. Usia : .... tahun
6. Jenis kelamin : [1] Laki-laki [2] Perempuan
7. Selama masa kuliah dimanakah Anda tinggal? (SA)
   1 Asrama di dalam kampus
   2 Kost di luar kampus
   3 Mengontrak/sewa rumah
   3 Rumah milik sendiri
   4 Tinggal bersama orang tua
   5 Lainnya, sebutkan….

8. Pernahkan Anda mengambil mata kuliah Manajemen Keuangan Konsumen (IKK431)? (SA)

	1	Pernah
	2	Ya, saat ini sedang mengambil
	3	Tidak/belum

9. Berapa banyak pengalaman kerja Anda (kerja paruh waktu, magang, wirausaha, dsb)

	1	Tidak punya pengalaman kerja
	2	Kurang dari satu tahun
	3	1-2 tahun
	4	Lebih dari 2 tahun

10. Jumlah uang saku (termasuk beasiswa) : ....(Rp/bulan)
11. Sumber pendapatan (uang saku) utama saya yaitu berasal dari: (SA)
    a. Orang tua
    b. Beasiswa
    c. Dari keluarga (selain orang tua), sebutkan…
    d. Pekerjaan sampingan
    e. Lainnya, sebutkan…

12. Biaya kuliah (SPP dan biaya hidup) saya dibiayai oleh:

	1	Sendiri (100%)
	2	Orang tua (100%)
	3	Sebagain besar oleh saya sendiri (lebih dari 50%)
	4	Sebagian besar dari orang tua (lebih dari 50%)
	5	50% sendiri, 50% orang tua
	6	Dibiayai penuh dari beasiswa (SPP dan biaya hidup)
	7	Beasiswa hanya menanggung SPP
	8	Lainnya, sebutkan…………………………………….

13. Email : ....

PART I
UNTUK BAGIAN INI, ANDA DIMINTA MENANYAKAN KEPADA RESPONDEN MENGENAI SIKAP MEREKA DALAM HAL KEUANGAN. BERILAH TANDA "TICK" PADA KOLOM YANG TERSEDIA SESUAI JAWABAN RESPONDEN. UNTUK SELANJUTNYA, INSTRUKSI BAGI ENUMERATOR (INTERVIEWER) DISAJIKAN DALAM HURUF KAPITAL.

A . FINANCIAL ATTITUDE

TANYAKAN KE SEMUA
SHOWCARD A. Berikut adalah apa yang ORANG LAIN KATAKAN MENGENAI PENGELOLAAN UANG. Anda diminta menyatakan SIKAP mengenai <u>SEBERAPA SETUJU ATAU TIDAK SETUJU ANDA TERHADAP PERNYATAAN ORANG LAIN TERSEBUT.</u> (SINGLE ANSWER/ SA)

	Pernyataan	Sangat setuju	Setuju	Netral	Tidak setuju	Sangat tidak setuju
	Mengelola uang					
ATT_1	Saya sangat teratur dalam mengelola keuangan saya sehari-hari					
ATT_2	Saya tipe orang yang cenderung menabung daripada berbelanja					
ATT_3	Saya lebih baik berbelanja secara kredit daripada menunggu hingga saya punya uang dan menabung lebih dulu					
ATT_4	Saya lebih baik menghemat pengeluaran daripada berbelanja sesuatu secara kredit yang belum tentu dapat saya bayar.					
	Risiko dan Asuransi					
ATT_5	Saya dapat memercayai segala informasi yang diberikan oleh perusahaan asuransi mengenai polis mereka					
ATT_6	Saya yakin polis asuransi akan membayarkan klaim (menanggung biaya/penggantian) jika saya membutuhkannya					
ATT_7	Saya dapat menerima semua risiko sehingga memilih untuk tidak membeli asuransi rumah					
ATT_8	Membeli polis asuransi jiwa adalah kurang penting					
ATT_9	Kartu kredit merupakan produk yang aman dan bebas risiko					
ATT_10	Saya merasa nyaman tidak membayar tagihan kartu kredit saya secara penuh asalkan sudah membayar tagihan minimumnya					
	Perencanaan masa depan dan hari tua					
ATT_11	Saya selalu memastikan memiliki tabungan untuk kebutuhan tidak terduga					
ATT_12	Saya menabung lebih dulu untuk keperluan/acara besar seperti hari lebaran, natal, dll					
ATT_13	Dana pensiun adalah cara terbaik dalam menabung untuk hari tua					
ATT_14	Saya lebih memilih hidup untuk hari ini daripada merencanakan hari esok					
ATT_15	Memiliki tabungan adalah penting untuk berjaga-jaga jika terjadi sesuatu yang dramatis dalam hidup saya					

ATT_16	Bagi saya merencanakan pembiayaan hari tua adalah penting					
	Memilih Produk					
ATT_17	Adalah penting untuk membandingkan harga sebelum memutuskan membeli sesuatu					
ATT_18	Adalah penting untuk mencari informasi terlebih dahulu sebelum memutuskan membeli sesuatu					
ATT_19	Adalah penting untuk membaca secara teliti setiap perjanjian/kontrak sebelum menandatanganinya.					

B. PERILAKU

TANYAKAN KE SEMUA

SHOWCARD B. Sekarang saya akan bertanya mengenai perilaku dan pengalaman Anda di dalam mengelola uang. Pilihlah salah satu jawaban berikut ini yang sesuai dengan kondisi Anda. SINGLE ANSWER/ SA)

Code	Pernyataan	Selalu	Hampir selalu	Kadang-kadang	Jarang	Tidak pernah
		1	2	3	4	5
BVR1	Jika menginginkan sesuatu saya akan membelinya walaupun saya tidak mampu membayarnya					
BVR2	Saya menabung lebih dulu untuk keperluan/acara besar seperti hari lebaran, natal, dll					
BVR3	Saya menghindari berbelanja/pengeluaran yang melebihi uang yang saya miliki					
BVR4	Saya menabung untuk kebutuhan tidak terduga					
BVR5	Saya tidak menemui kesulitan dalam mengelola keuangan saya					
BVR6	Saya membuat/memiliki anggaran (rencana pengeluaran dan pemasukan) sebagai panduan dalam mengatur semua pengeluaran saya					
BVR7	Saya menyisihkan uang secara teratur tiap bulan untuk ditabung					
BVR8	Saya senang membaca untuk meningkatan pengetahuan keuangan saya					
BVR9	Saya membandingkan harga sebelum memutuskan membeli sesuatu					
BVR10	Saya melakukan complain jika produk yang saya beli tidak sesuai dengan yang saya harapkan					

PART I

SECTION A: MANAGING MONEY

TANYA KE SEMUA

A1. Apakah Anda mencatat semua pengeluaran dan pemasukan Anda?

1 Ya (LANJUT KE A3)

2 Tidak (LANJUT KE A2)

BAGI YANG MENJAWAB "**TIDAK"** PADA **A1**, *SELAIN ITU LANJUT KE A3*

A2. Yang manakah yang menggambarkan kondisi Anda?

1 Saya tidak mencatat pengeluaran dan pemasukan, namun saya mengetahui secara umum berapa jumlah uang yang saya terima dan saya belanjakan setiap bulannya (LANJUT KE A5)

2 Saya tidak mencatat pengeluaran dan pemasukan, dan saya tidak mengetahui berapa jumlah uang yang saya terima dan saya belanjakan setiap bulannya (LANJUT KE A5)

BAGI YANG MENJAWAB "**YA"** PADA **A1**, *SELAIN ITU LANJUT KE A5.*

A3. [**SHOWCARD C] Selama setahun belakangan ini, seberapa sering Anda mencatat pemasukan dan pengeluaran Anda?** (SA)

1. Selalu
2. Sering
3. Kadang-kadang
4. Jarang

BAGI YANG MENJAWAB "**YA"** PADA **A1**, *SELAIN ITU LANJUT KE A5.*

A4. [**SHOWCARD D] Bagaimana cara Anda mencatat pemasukan dan pengeluaran Anda?** ***Jawaban boleh lebih dari satu*** (MA)

1. Mengunakan aplikasi online
2. Menggunakan excel
3. Mencatatnya di kertas
4. Mengingatnya di kepala
5. Dengan memeriksa saldo akhir tabungan di bank
6. Dengan memeriksa semua aliran uang/transaksi pada tabungan di bank
7. Mengunakan buku khusus (buku kas)
8. Mengunakan software khusus tentang anggaran
9. Lainnya, jelaskan….

10. Tidak tahu
11. Menolak menjawab

TANYAKAN KE SEMUA

A5. Di samping tabungan yang dibuka pada saat mendaftar ke IPB, apakah Anda memiliki akun tabungan lain? (SA)

1. Ya
2. Tidak

TANYAKAN KE SEMUA

A6. Apa fungsi utama dari akun bank yang Anda miliki? ***Pilih satu jawaban saja.*** (SA).

1. Sebagai alat menabung
2. Untuk transaksi sehari-hari (misalnya untuk berbelanja dengan menggunakan kartu debit, membayar tagihan, membeli pulsa, dll)
3. Untuk menerima transferan dari orang tua/pemberi beasiswa/pemasukan lainnya
4. Lainnya, jelaskan….

TANYAKAN KE SEMUA

A7. [**SHOWCARD E] Seberapa sering Anda mengecek jumlah uang yang ada di dalam akun bank Anda? (Bisa melalui cek saldo di ATM, cek melalui teller, SMS/Phone banking, online banking, dll).** ***Pilih satu jawaban saja.*** (SA).

1. Setiap hari
2. Setidaknya satu kali dalam seminggu, namun bukan setiap hari

3. Setidaknya satu kali dalam dua minggu, namun bukan seminggu sekali
4. Setidaknya satu kali dalam sebulan, namun bukan dua minggu sekali
5. Kurang dari sebulan sekali
6. Tidak pernah (LANJUT KE A9)

JIKA MENJAWAB ANTARA KODE 1-5 PADA A7, *SELAIN ITU LANJUT KE A9.*
A8. [**SHOWCARD F] Bagaimana cara Anda mengecek jumlah uang yang tersedia di dalam akun bank (tabungan) Anda?** ***Jawaban boleh lebih dari satu*** (MA).

1. Menanyakannya melalui teller bank
2. Mengeceknya di mesin ATM
3. Mengeceknya secara online melalui website bank
4. Menelepon bank (Phone banking)
5. Menggunakan fitur pesan di handphone/SMS dari bank Anda
6. Menggunakan aplikasi khusus di handphone/gadget Anda.
7. Saya tidak pernah mengecek jumlah uang dalam akun saya (SA)
8. Tidak tahu (SA)
9. Menolak menjawab (SA)

TANYAKAN KE SEMUA
A9. [**SHOWCARD G] Sebelum Anda mengambil uang di tabungan Anda, seberapa sering Anda mengecek jumlah uang/saldo yang tersedia di tabungan tersebut?** ***Pilih satu jawaban saja.*** (SA).

1. Selalu
2. Hampir selalu
3. Kadang-kadang
4. Jarang
5. Tidak pernah

TANYAKAN KE SEMUA
INTRO: **Untuk pertanyaan berikutnya (A11), saya akan bertanya mengenai kebiasaan Anda dalam hal pembayaran tagihan. Tagihan yang dimaksud disini dapat berupa kewajiban pembayaran, misalnya salah satu pilihan berikut: sewa kost/kontrak rumah, cicilan rumah, tagihan iuran bulanan seperti listrik/air/ telepon/ intenet, kartu kredit, SPP, hutang, dan sebagainya.**

TANYAKAN KE SEMUA
A10. [**SHOWCARD H] Pilihlah salah satu pernyataan berikut yang menggambarkan keadaan Anda saat ini terkait dengan tagihan/komitmen pembayaran.** SA

1. Saya dapat membayar semua tagihan dan atau komitmen kredit tanpa kesulitan (
2. Saya dapat membayar semua tagihan dan atau komitmen kredit, namun terkadang mengalami kesulitan Saya dapat membayar semua tagihan dan atau komitmen kredit, namun sering mengalami kesulitan Saya tidak dapat membayar BEBERAPA tagihan dan atau komitmen kredit
3. Saya berada dalam kesulitan keuangan dan tidak dapat membayar SEMUA tagihan dan atau komitmen kredit***)***
4. Saya tidak memiliki tagihan dan atau komitmen kredit

5. Tidak tahu
6. Menolak menjawab

BAGI YANG MENJAWAB ANTARA KODE 4 DAN 5 PADA A10. *SELAIN ITU LANJUT KE A14.*
A11. Tagihan apakah yang mengalami masalah?

1. Cicilan rumah
2. Sewa kost/kontrakan tempat tinggal saat ini
3. Tagihan bulanan (listrik, air, telepon, internet, dll)
4. Kartu kredit
5. Pinjaman/hutang
6. SPP
7. Lainnya, sebutkan..

8. Tidak tahu
9. Menolak menjawab

BAGI YANG MENJAWAB ANTARA KODE 4 DAN 5 PADA A11. *SELAIN ITU LANJUT KE A14.*

A12. Apa yang Anda lakukan untuk mengatasi hal di atas? Jawaban boleh lebih dari satu

1. Saya tidak melakukan apa-apa (SA)
2. Saya sudah dapat membayarnya/mengatasinya
3. Saya mulai mengelola keuangan saya sehingga tidak ada tagihan yang tidak terbayar lagi
4. Membicarakannya dengan perusahaan/pihak yang bersangkutan
5. Membicarakannya dengan teman/keluarga

6. Tidak tahu (SA)
7. Menolak menjawab (SA)

TANYA KE SEMUA

A13. [**SHOWCARD C] Selama setahun belakangan ini, seberapa sering uang Anda bersisa di akhir bulan? (**SA)

1. Selalu (*LANJUT KE A14, LALU KE SECTION B)*
2. Sering
3. Kadang-kadang
4. Jarang
5. Tidak pernah *LANJUT KE A15)*

TANYA KE SEMUA, **KECUALI** MEREKA YANG MENJAWAB KODE 1 ("SELALU") PADA A13.

A14. [**SHOWCARD J]** Selanjutnya, selama 12 bulan terakhir ini, seberapa sering Anda kehabisan uang ditengah bulan atau sebelum akhir bulan? (SA)

1. Selalu
2. Sering
3. Kadang-kadang
4. Jarang
5. Tidak pernah (*LANJUT KE SECTION B)*

BAGI YANG MENJAWAB ANTARA KODE 1-4 *(selalu, hampir selalu, kadang-kadang dan jarang*) PADA A14. *SELAIN ITU LANJUT KE SECTION B.*

A15a. Apa yang biasanya Anda lakukan saat kehabisan uang di tengah bulan?

____

(TULIS JAWABAN SPONTAN PERTAMA YANG DIUCAPKAN RESPONDEN DI TEMPAT YANG DISEDIAKAN DI ATAS).

A15b. LALU PANDU: **Apalagi?** RESPONDEN BOLEH MEMILIH LEBIH DARI SATU PILIHAN BERIKUT (MA).

11. Meminjam dari keluarga/teman
12. Menghemat pengeluaran
13. Menggunakan kartu kredit
14. Mengambil pinjaman dari bank/lembaga lain
15. Mengambil uang di tabungan
16. Mencari pekerjaan sampingan
17. Tergantung seberapa banyak uang yang dibutuhkan
18. Lainnya, jelaskan____

19. Tidak tahu
20. Menolak menjawab

SECTION B. PERENCANAAN (PLANNING AHEAD)

JIKA MENJAWAB YA (KODE 1/ MENCATAT PENGELUARAN DAN PEMASUKAN) PADA A1, *SELAIN ITU LANJUT KE B3.*

B1. Anda mengatakan bahwa Anda mencatat pemasukan dan pengeluaran Anda. Apakah Anda membuat anggaran pengeluaran (rencana/alokasi tertulis mengenai pengeluaran Anda)? SA

1. Ya
2. Tidak (*LANJUT KE B3*)
3. Tidak tahu (*LANJUT KE B3*)
4. Menolak menjawab (*LANJUT KE B3*)

JIKA MENJAWAB “YA” PADA B1. *SELAIN ITU LANJUT KE B3.*

B2. Seberapa sering Anda mematuhi anggaran yang telah Anda buat tersebut? SA

1. Selalu
2. Sering
3. Kadang-kadang
4. Jarang
5. Tidak pernah

TANYA KE SEMUA

B3. [**SHOWCARD K] Apakah Anda mengantisipasi kebutuhan masa depan yang terdapat dalam list berikut ini? Jawaban boleh lebih dari satu (**MA). BERIKAN TANDA TICK (V) JIKA MENJAWAB “YA” PADA DAFTAR BERIKUT.

No	Jenis kebutuhan masa depan	Tick
1	Pendidikan	
2	Pernikahan	
3	Liburan atau jalan-jalan	
4	Membeli kendaraan atau memperbaiki kendaraan	
5	Membeli rumah	
6	(Jika memiliki anak) menyiapkan sejumlah dana untuk anak	
7	(Jika memiliki rumah) biaya perbaikan/renovasi rumah	
8	Perawatan orang tua/keluarga	
9	Lainnya, sebutkan…..	
10	Tidak ada satupun pilihan di atas (SA) (*LANJUT KE B7)*	
11	Tidak tahu (SA) (*LANJUT KE B7)*	
12	Menolak menjawab (SA) (*LANJUT KE B7)*	

JIKA MENJAWAB LEBIH DARI SATU PILIHAN PADA B3. SELAIN ITU LANJUT KE B5.

B4. Sebutkan kebutuhan yang paling dekat akan terjadi :……………………………..

JIKA MENJAWAB ANTARA KODE 1-9 PADA B3, *SELAIN ITU LANJUT KE B7*

B5. Sekarang saya akan bertanya mengenai bagaimana Anda membiayai kebutuhan yang Anda sebutkan pada pertanyaan B4 atau B3 jika jawaban tunggal <*MASUKKAN JAWABAN B4 ATAU MASUKKAN JAWABAN B3 JIKA JAWABANNYA TUNGGAL……………………….*>. **Apakah Anda memiliki rencana membiayai kebutuhan masa depan tersebut?**

1. Ya
2. Tidak (*LANJUT KE B7)*
3. Tidak tahu (*LANJUT KE B7)*
4. Menolak menjawab (*LANJUT KE B7)*

JIKA MENJAWAB “YA” PADA B5. *SELAIN ITU LANJUT KE B7.*

B6. [**SHOWCARD L] Bagaimana Anda akan membiayai kebutuhan tersebut? Jawaban boleh lebih dari satu** Dari tabungan yang memang khusus disediakan untuk keperluan tersebut

1. Menggunakan tabungan yang ada (tabungan umum/tidak khusus diperuntukkan untuk keperluan tertentu)
2. Dari sumber yang tidak terduga, seperti dari warisan
3. Melalui polis asuransi
4. Mengajukan pinjaman

5. Menggunakan kartu kredit
6. Mencari pekerjaan tambahan
7. Cara lain, sebutkan….

8. Tidak tahu
10. Menolak menjawab

TANYA KE SEMUA

B7. Selanjutnya, dalam tiga tahun terakhir ini, apakah Anda pernah memiliki pengeluaran tidak terduga dalam jumlah yang besar? (pengertian disini yaitu pengeluaran yang setara dengan pemasukan Anda sebulan atau lebih) (SA)

5. Ya
6. Tidak (*LANJUT KE SECTION C)*

7. Tidak tahu (*LANJUT KE SECTION C)*
8. Menolak menjawab (*LANJUT KE SECTION C)*

JIKA MENJAWAB "YA" PADA B7. *SELAIN ITU LANJUT KE SECTION C.*

B8. [**SHOWCARD M] Bagaimana Anda membiayai pengeluaran tersebut? (*Jika Anda memiliki lebih dari satu pengeluaran tidak terduga, pilihlah satu pengeluran yang paling besar*).**
Jawaban boleh lebih dari satu (MA).

1. Menghemat pengeluaran
2. Mengambil uang di tabungan
3. Mengajukan klaim (permintaan pembayaran) ke asuransi
4. Menggunakan kartu kredit
5. Mengajukan pinjaman ke bank/lembaga keuangan
6. Meminjam ke keluarga/teman
7. Keluarga/teman akan menolong dengan memberikan uang kepada saya
8. Mencari pekerjaan sampingan
9. Menjual barang yang tidak saya gunakan
10. Lainnya, jelaskan____
11. Saya tidak dapat mengatasinya (JAWABAN TUNGGAL/ SA)

12. Tidak tahu (SA)
13. Menolak menjawab (SA)

SECTION C: PROTECTION/RISK MANAGEMENT

TANYA KE SEMUA

C1 [**SHOWCARD N] Asuransi berikut manakah yang Anda miliki? (Baik atas nama Anda sendiri, maupun gabung dengan orang lain misalnya fasilitas dari orang tua/sekolah/pihak lain). *Pilih semua jawaban yang sesuai.*** MA

1. Asuransi jiwa
2. Asuransi kesehatan
3. Asuransi penyakit kritis
4. Asuransi rumah
5. Tidak satupun di atas (SA)

6. Tidak tahu (SA)
7. Menolak menjawab (SA)

SECTION D: MEMBUAT PILIHAN (MAKING CHOICES)

TANYA KE SEMUA

D1. [**SHOWCARD O] Dari daftar di bawah ini, manakah produk keuangan yang Anda miliki saat ini, baik atas nama Anda sendiri maupun gabung dengan orang lain? *Pilih semua jawaban yang sesuai* (MA).**

No	**Produk keuangan**	**V (Tick)**

1	Deposito	
2	Obligasi	
3	Saham	
4	Reksadana	
5	Unit links	
6	Dana pensiun	
7	Asuransi	
8	Menjalankan usaha/bisnis	
9	Investasi perhiasan	
10	Lainnya, sebutkan………….	
11	Tidak ada satupun pilihan di atas (*LANJUT KE D4)*	

JIKA MENJAWAB LEBIH DARI SATU PILIHAN PADA D1, *SELAIN ITU LANJUT KE D3.*
D2. Yang manakah yang paling baru Anda beli/miliki? ……………………………………………(SA)

Financial Advices
TANYA KE SEMUA
D3. [**SHOWCARD Q] Jika Anda membutuhkan nasihat/saran terkait keuangan, kepada siapakah Anda bertanya? (Jawaban boleh lebih dari satu / MA)**

1. Orang tua
2. Teman
3. Guru/Dosen
4. Anggota keluarga lain, sebutkan..
5. Mencari informasi di internet
6. Bank atau lembaga keuangan lain
7. Dari acara program TV, sebutkan…
8. Surat kabar
9. Majalah khusus
10. Penasihat keuangan profesional
11. Lainnya, sebutkan……………………
12. Saya tidak pernah bertanya terkait uang (SA)

13. Tidak tahu (SA)
14. Menolak menjawab (SA)

TANYA KE SEMUA (SA)
D4. [**SHOWCARD R]**

No	**Seberapa sering Anda mendiskusikan masalah keuangan dengan :**	Selalu	Hampir selalu	Kadang-kadang	Jarang	Tidak pernah
		1	2	3	4	5
1	Teman					
2	Keluarga					

TANYA KE SEMUA
D5. [**SHOWCARD S] Sebelum menandatangani kontrak/perjanjian, apakah Anda membaca syarat dan ketentuannya terlebih dahulu? (**SA)

1. Selalu
2. Sering
3. Kadang-kadang
4. Jarang
5. Tidak pernah

SECTION E: STAYING UPDATE

TANYA KE SEMUA
E1. [**SHOWCARD T] Seberapa sering Anda menggunakan internet?** SA
1. Beberapa kali dalam sehari
2. Satu kali dalam sehari
3. Dua hingga lima kali dalam seminggu
4. Seminggu sekali
5. Dua minggu sekali atau lebih
6. Saya tidak menggunakan internet

TANYA KE SEMUA
E2. [**SHOWCARD U] Menurut pendapat Anda, seberapa penting atau tidak penting seseorang untuk tetap *up-date* dengan informasi terkait keuangan, seperti perubahan ekonomi, suku bunga, inflasi, dan isu tentang jasa keuangan?** (SA)
1. Sangat penting
2. Penting
3. Netral
4. Tidak penting
5. Sangat tidak penting

TANYA KE SEMUA
E3. [**SHOWCARD V] Seberapa sering Anda memonitor informasi-informasi tersebut?** (SA)
1. Setiap hari
2. Minimal seminggu sekali, tapi bukan setiap hari
3. Minimal dua minggu sekali, tapi bukan seminggu sekali
4. Minimal sebulan sekali, tapi bukan dua minggu sekali
5. Dua bulan sekali atau lebih

TANYA KE SEMUA
E4. [**SHOWCARD W] Dari pilihan berikut, informasi manakah yang Anda ikuti? *Jawaban boleh lebih dari satu*** (MA)
1. Pergerakan informasi /isu di pasar perumahan
2. Pergerakan informasi/isu di dunia saham
3. Pergerakan informasi/isu tentang suku bunga
4. Pergerakan informasi/isu tantang inflasi
5. Pergerakan informasi/isu tentang pajak
6. Pergerakan informasi/isu tentang dunia kerja
7. Pergerakan informasi/isu tentang pension
8. Berbagai pilihan tentang produk finansial
9. Tidak satupun di atas (JAWABAN TUNGGAL, LANJUT KE SECTION G)

JIKA MENJAWAB ANTARA CODE 1-8 PADA G4, *SELAIN ITU LANJUT KE SECTION G.*
E5. **Melalui media apa Anda memonitor informasi tersebut?*Jawaban boleh lebih dari satu*** (MA)
1. Kolom keuangan pada surat kabar
2. Surat kabar (tidak spesifik kolom keuangan)
3. Majalah khusus keuangan
4. Program khusus keuangan di TV atau radio
5. Program lain di TV atau radio
6. Internet
7. Penasihat keuangan professional

SECTION F

F1. [**SHOWCARD X] Seberapa yakin Anda terhadap kemampuan pengelolaan keuangan yang Anda miliki saat ini? (**SA)

1. Sama sekali tidak yakin– Saya masih harus menambah banyak hal tentang pengetahuan pengelolaan keuangan
2. Tidak begitu yakin – Saya masih harus menambah beberapa hal lagi pengetahuan mengenai pengeloaan keuangan
3. Moderat- antara yakin dan tidak yakin
4. Cukup yakin – Saya memahami hampir semua hal mengenai pengelolaan keuangan yang saya butuhkan
5. Sangat yakin – Saya sangat memahami semua hal mengenai pengelolaan keuangan dengan baik

F2. [**SHOWCARD Y] Seberapa tertarik Anda untuk meningkatkan pengetahuan keuangan Anda?** (SA)
1. Sangat tertarik
2. tertarik
3. Netral
4. Tidak tertarik
5. Sangat tidak tertarik

TANYA KE SEMUA
F3. [**SHOWCARD Z1] Dari daftar berikut, topik manakah yang menarik atau Anda anggap penting? (Jawaban boleh lebih dari satu/MA)**

No	**Topic**
1	Anggaran (Budgeting)
2	Investasi (Investing)
3	Pajak (Taxes)
5	Asuransi dan manajemen risiko (Insurance and risk management)
6	Pinjaman (Loans/debt)
7	Kartu kredit (Credit cards)
8	Tabungan (Saving)
9	Suku bunga (Interest rates)
11	Dana pension (Retirement/pensions fund)
12	Lainnya, sebutkan
13	Tidak satupun di atas

TANYAKAN KE SEMUA
SHOWCARD Z2. Seberapa puas atau tidak puaskah Anda dengan kondisi keuangan Anda secara umum saat ini? SINGLE ANSWER/ SA)
1. Sangat puas
2. Puas
3. Netral
4. Tidak Puas
5. Sangat tidak puas
6. Menolak menjawab

SECTION G. FINANCIAL KNOWLEDGE

TANYA KE SEMUA
Pertanyaan bagian ini agak berbeda dengan pertanyaan sebelumnya. Bagian ini merupakan pengetahuan tentang manajemen keuangan. Beberapa soal merupakan soal hitungan, namun jangan khawatir ini bukan kuis atau ujian, tidak masalah apakah jawaban Anda benar atau salah.

[**SHOWCARD Z2]**

1. Jika tingkat inflasi adalah 5 persen dan tingkat suku bunga tabungan Anda adalah 3 persen, bagaimanakah dengan nilai daya beli uang di tabungan Anda tersebut?

1 Lebih tinggi
2 Sama
3 Lebih rendah
4 Tidak tahu
5 Menolak menjawab

2. **Seandainya Anda memiliki tabungan Rp 100.000,- dengan tingkat suku bunga majemuk 2 persen per tahun. Setelah 5 tahun berapakah uang tabungan Anda tersebut? (asumsi tabungan tidak ditambah ataupun diambil, dan mengabaikan biaya administrasi/pajak).**
   1 Lebih dari Rp 102.000,-
   2 Persis Rp 102.000,-
   3 Kurang dari Rp 102.000,-
   4 Tidak tahu
   5 Menolak menjawab

3. **Misalkan Anda melihat promo dua buah televisi di dua toko yang berbeda (Toko A dan B). Harga asli televisi tersebut Rp 2.500.000,-. Toko A menawarkan potongan harga Rp 300 ribu dari harga asli, sementara toko B memberikan diskon 10% dari harga asli. Tawaran manakah yang lebih menguntungkan?**
   5. Potongan Rp 300 ribu
   6. Diskon 10%
   7. Tidak tahu
   8. Menolak menjawab

4. **Berikan pendapat Anda apakah pernyataan berikut ini benar atau salah: "berinvestasi saham pada sebuah perusahaan lebih aman daripada berinvestasi pada reksadana saham"**
   1. Benar
   2. Salah
   3. Tidak tahu
   4. Menolak menjawab

5. **Roby dan Molly memiliki usia yang sama. Pada usia 25 tahun, Roby mulai menabung Rp. 1 juta per tahun selama 10 tahun, yakni hingga usia 35 tahun, dan setelah itu tidak pernah mengisi tabungannya lagi. Sementara itu di usia 35 tahun Molly mulai menyadari bahwa ia pun membutuhkan tabungan untuk hari tuanya, sehingga ia memutuskan untuk mulai menabung Rp 1 juta per tahun selama 30 tahun, dan berhenti menabung saat usianya 65 tahun. Saat ini keduanya sama-sama telah berusia 65 tahun, siapakah yang memiliki saldo tabungan lebih besar? (asumsi suku bunga tabungan mereka sama)**
   1 Molly, karena secara total ia menabung lebih banyak
   2 Roby, karena uangnya berkembang untuk jangka waktu yang lama
   3 Mereka berdua akan memiliki jumlah uang yang sama
   4 Tidak dapat diketahui karena informasinya terbatas
   5 Tidak tahu

6. **Usia yang tepat untuk mulai menabung dana pensiun adalah pada saat:**
   1. Usia 20-an
   2. Usia 50-an
   3. Tidak tahu
   4. Menolak menjawab

Berikan pendapat Anda terhadap pernyataan berikut ("benar", "tidak yakin", atau "salah").

No		**Benar**	**Tidak yakin**	**Salah**
7	Sebagai pemilik kartu kredit, jika kartu kredit tersebut ada di tangan saya maka saya akan terhindar dari kejahatan penipuan kartu kredit.			
8	Jika saya tidak menggunakan kartu kredit maka saya tidak dapat menjadi korban pencurian identitas.			

9. SHOWCARD Z3. **Perhatikan contoh halaman buku tabungan ini (***PERLIHATKAN LEMBAR BUKU TABUNGAN YANG TERSEDIA),*
   Dapatkah Anda sebutkan berapa jumlah uang yang tersedia pada bulan April 2010?

TULISKAN JAWABAN DISINI ..……………………………………………………………..

#Terima kasih atas partisipasi Anda menjawab pertanyaan kuesioner ini#

Pustaka:

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Virginia Tech (n.d). *College Student Financial Literacy Survey. Virginia Tech.*

Appendix 32. Showcards for questionnaire for Survey (English version)

SHOWCARD A.

Please indicate how strongly you agree or disagree with them, by telling the number on the card.

STATEMENT	Strongly Agree	Tend to Agree	Neither agree nor disagree	Tend to disagre e	Strongly disagree
	1	2	3	4	5
MANAGING MONEY					
1. I am very organised when it comes to managing my money day to day.					
2. I am more of a saver than a spender					
3. I prefer to buy things on credit rather than wait and save up.					
4. I would rather cut back than put everyday spending on a credit card I couldn't repay					
RISK AND INSURANCE					
5. I can generally trust the information provided by insurance companies about their policies.					
6. I am confident that insurance policies would pay out if I ever needed them to.					
7. I accept the risks and choose not to pay home contents insurance					
8. Paying for life insurance is not necessary					
9. I feel credit cards are safe and risk free					
10. I feel comfortable not paying the full billing amount of my credit card as long I have made the minimum payment					
PLANING AHEAD					
11. I always make sure I have money saved for a rainy day					
12. I always begin saving well in advance for a big event (Christmas, Eid, etc)					
13. Pension funds are the best way to save for retirement.					
14. I prefer to live for today rather than plan for tomorrow.					
15. It is important to have some money saved in case my life changes dramatically.					
16. It is important for me to plan how to pay for the care I will need in my old age.					
CHOOSING PRODUCT					
17. It is important to compare prices before deciding whether to buy					
18. It is important to search information before deciding to buy					
19. It is important to read carefully the agreement/contract before sign it					

SHOWCARD B.

Please just tell me the number on the card that best describes your current situation. SA.

No	Statements	Always	Most of the times	Sometimes	Hardly ever	Never
		1	2	3	4	5
1	I tend to buy things even when I can't really afford them					
2	I always begin saving well in advance for Big event such as Chrismast, Eid, etc					
3	I avoid spending more money than I have					
4	I save money for a rainy day					
5	I have little or no difficulty managing my money					
6	I have a weekly (or monthly) budget that I follow					
7	I regularly set aside money each month for savings					
8	I read to increase my financial knowledge					
9	Before decide to buy, I collect information about different products/services in more than one company, in order to compare them					
10	I make complaint if I had been sold a product that was clearly unsuitable for my needs.					

SHOWCARD C.

How often, if at all, do you keep track your income and expenditure?

1. Always
2. Most of the time
3. Sometimes
4. Hardly ever
5. Never

6. Prefer not to say

SHOWCARD D.

How do you keep track of your income and expenditure? Please select all that apply.

1. An online budgeting tool
2. A spreadsheet
3. A piece of paper
4. In my head (mentally)
5. By checking my bank balance
6. By reviewing my bank statements
7. An accounts book or notebook
8. A financial software package
9. Other (specify)

10. Don’t know
11. Prefer not to say

SHOWCARD E.

How often do you normally check how much money is in this account? Please choose one option only.

1. Every day
2. At least once a week, but not every day
3. At least once a fortnight, but not once a week
4. At least once a month, but not once a fortnight
5. Less than once a month
6. Other (Please specify)
7. Never

8. Don't know
9. Prefer not to say

SHOWCARD F.

And which, if any, of the following methods do you use to check how much money is in your current account? Please select all that apply.

1. Ask for a balance or mini statement at the bank
2. using a cash machine
3. Online through my bank’s website
4. Phone banking
5. A text message from my bank
6. Using an App on a mobile or other electronic device
7. I do not check how much money is in this account

8. Don’t know
9. Prefer not to say

SHOWCARD G.

How often, if at all, do you normally check the balance/asking for mini statements before withdraw cash?

1. Always
2. Most of the time
3. Sometimes
4. Hardly ever
5. Never

6. Prefer not to say

SHOWCARD H.

Which one of the following statements best describes how well you are keeping up with your bills and credit commitments at the moment? Please just read out the number that applies.

1. I am keeping up with all bills and commitments without any difficulties
2. I am keeping up with all bills and commitments, but it is a struggle from time to time
3. I am keeping up with all bills and commitments, but it is a constant struggle
4. I am falling behind with some bills or credit commitments
5. I am having real financial problems and have fallen behind with many bills or credit commitments
6. I don’t have any bills or commitments

7. Don’t know
8. Prefer not to say

SHOWCARD I.

In the past 12 months, how often have you had money left over at the end of the month?

1. Always
2. Most of the time
3. Sometimes
4. Hardly ever
5. Never

6. Don’t know
7. Prefer not to say

SHOWCARD J.

And in the past 12 months, how often, if at all, have you run out of money before the end of the month?

1. Always
2. Most of the time
3. Sometimes
4. Hardly ever
5. Never

6. Don’t know
7. Prefer not to say

SHOWCARD K.

Do you anticipate needing money in the foreseeable future for any of the following

1. Education (study fees)
2. A wedding
3. Holidays or travelling
4. Buying or replacing a car or other vehicle
5. Buying a home
6. (If have a child/children) Providing some sort of financial support for your child/children
7. (If own a house) Major house repairs or home improvements
8. The care of an elderly relative
9. Something else (Please specify)

10. None of the above
11. Don't know
12. Refused

SHOWCARD L.

How do you plan to pay for this expense? (MA)

1. Using income saved especially to pay for this
2. Using general savings
3. Using an unexpected source of income, such as an inheritance
4. Through an insurance policy
5. Using a loan
6. Using a credit card
7. By taking on a second job, or overtime
8. Another way (Please specify)

9. Don’t know

SHOWCARD M

How did you find the money to pay for this? If you have had more than one major unexpected expense in the past three years, please think about the largest. Tick all apply.

1. Cut back on spending
2. Drew money from a savings account
3. Drew money from a current account
4. Claimed on an insurance policy
5. Used a credit card
6. Took out a loan (including mortgage)
7. Borrowed money from family/friends
8. Family/friends gave me money to help out
9. Got a part time job
10. Sold items I no longer needed
11. Another way (Please specify) OE
12. I could not find the money/ I haven’t paid for it yet

13. Don’t know

14. Prefer not to say

SHOWCARD N

Please could you look at these types of insurance, and indicate which, if any of these you currently have, either in your own name or jointly with someone else?

1. Life insurance
2. Health insurance
3. Critical illness insurance
4. Home contents insurance
5. None of these SA
6. Don’t know SA
7. Prefer not to say SA

SHOWCARD O

I would now like to ask about the financial products that you have. Please look at each of these cards and tell me which, if any, of these you currently have, either in your own name or jointly with someone else? Please just tell me the letter on the card. Code all that apply.

No	Financial products	Tick all apply
1	Certificate of Deposits	
2	Bonds	
3	Stocks	
4	Mutual funds	
5	Unit links	
6	Personal pension	
7	Insurance	
8	*Running small business enterprise*	
9	*Jewellery*	
10	Others, specify………	
11	None of these	
12	Prefer not to say	

SHOWCARD P.

Why did you decide to put your money in the {type of product from D1} you bought most recently, rather than invest it in some other way? ***Tick all apply***

1. Past performance
2. High potential returns
3. Guaranteed returns
4. Guaranteed income
5. Had used this company/provider before
6. Recommended by family member/friend/colleague
7. Reputation/had heard of company
8. Did not consider any other investments
9. Don’t know
10. Prefer not to say
11. Other (SPECIFY)

    ____

SHOWCARD Q

If you needed advice about money, who would you ask? Please select all that apply

1. My friends
2. My teachers
3. Other family members (write in)
4. Internet site (write in)
5. A bank, building society or other financial organisation
6. TV programmes (write in)
7. Newspaper
8. Specialized magazine/publication
9. Financial advisor
10. Other (write in)
11. I do not ask for advice about money

SHOWCARD R

D5. How often do you discuss money with :

a. friends

b. family

. SINGLE CODE FOR EACH

1. Very often
2. Fairly
3. Not very often
4. Never
5. Don’t know
6. Prefer not to say

SHOWCARD S**.**

Before you signed the agreement/contract, did you read terms and conditions?

1. Always
2. Most of the time
3. Sometimes
4. Hardly ever
5. Never
6. Never experienced sign the agreement/contract

SHOWCARD T.

‘How often do you use the internet?’

1. ‘Several times a day’
2. ‘Once a day’
3. ‘2 to 5 times a week’
4. ‘About once a week’
5. ‘Less than once a week’
6. ‘I do not use the internet’

SHOWCARD U.

'In your opinion, how important or unimportant, if at al, is it important for people like you to keep up to date with what is happening with financial matters generally, such as the economy and the financial services sector?' SA.

1. 'Very important'
2. 'Quite important'
3. 'Neither important or not important'
4. 'Not very important '
5. 'Not at all important'

6. Don't know
7. Prefer not to say

SHOWCARD V.

‘**And how frequently do you monitor it?’** SA.

1. ‘At least once a week’
2. ‘At least once a month, but not once a week’
3. ‘Less than once a month ‘

4. Don’t know
5. Prefer not to say

SHOWCARD W.

‘Which, if any, of these things do you personally keep an eye on?’
MA

1. ‘Changes in the housing market’
2. ‘Changes in the stock market’
3. ‘Changes in interest rates’
4. ‘Changes in inflation’
5. ‘Changes in taxation, e.g. income tax, capital gains tax’
6. Changes in the job market’
7. Changes in state pension, benefits and tax credits’
8. ‘Best buys in financial products’
9. ‘Don’t know’
10. ‘Prefer not to say’
11. ‘None of these’

SHOWCARD X**.**

‘How sure do you feel about your ability to manage your own finances?’ (SA)

1. ‘Not sure at all - I wish I knew a lot more about money management’
2. ‘Not too sure - I wish I knew more about money management’
3. ‘Neither sure or not sure’
4. ‘Somewhat sure - I understand most of what I'll need to know’
5. ‘Very sure - I understand money management very well’
6. ‘Don’t know’
7. ‘Prefer not to say’

SHOWCARD Y.

‘How interested if at all are you in increasing your financial knowledge? (SA) ‘

1. ‘Very uninterested’
2. ‘Somewhat uninterested’
3. ‘Not sure’
4. ‘Somewhat interested’
5. ‘Very interested’
6. ‘Don’t know’
7. ‘Prefer not to say’

SHOWCARD Z1.

‘Which of these topics, if any, would be of interest to you? (Check all that apply)’

Tick	No	Topic
	1	Budgeting
	2	Investing
	3	Taxes
	4	Credit
	5	Insurance and risk management
	6	Loans/debt
	7	Credit cards
	8	Saving
	9	Interest rates
	10	Investment
	11	Retirement/pensions fund
	12	Other, specify
	13	None of these

SHOWCARD Z2**.**

‘How satisfied or dissatisfied would you say you are with your overall financial circumstances?’

J. ‘Very satisfied’
K. ‘Fairly satisfied’
L. ‘Neither satisfied nor dissatisfied’
M. ‘Fairly dissatisfied’
N. ‘Very dissatisfied’
O. ‘Don’t know’
P. ‘Prefer not to say’

SHOWCARD Z3.

FINANCIAL KNOWLEDGE AND SKILL

1. ‘If the inflation rate is 5% and the interest rate you get on your savings is 3%, will your savings have more, less or the same amount of buying power in a year’s time?’

K. ‘More’
L. ‘The same’
M. ‘Less’
N. ‘Don’t know’
O. ‘Refused’

2. ‘Suppose you had Rp 100,000 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?’

11. ‘More than Rp102,000’
12. ‘Exactly Rp 102,000’
13. ‘Less than Rp 102,000’
14. ‘Do not know’
15. ‘Refuse to answer’

3. ‘Suppose you saw the same television on sale at a discount in two different shops. The original purchase price of the television was Rp. 2,500,000. One shop is offering a discount of Rp 300,000 off the original price, the other is offering a discount of 10% off the original price. Which is the better deal – Rp 300,000 off or 10% off? ‘

9. ‘Rp 300,000 off’
10. ‘10% off’
11. ‘Don’t know’
12. ‘Refused’

5. ‘Please tell me whether this statement is true or false. “Buying a single company’s stock usually provides a safer return than a stock mutual fund’

I. ‘True’
J. ‘False’
K. ‘Do not know’
L. ‘Refuse to answer’

SHOWCARD Z3 (*Cont.*)

5. 'Rob and Molly are the same age. At age 25 Rob began saving Rp 2,000,000 a year for 10 years and then stopped at age 35. At age 35, Molly realized that she needed money for retirement and started saving Rp 2,000,000 per year for 30 years and then stopped at age 65. Now they are both 65 years old. Who has the most money in his or her retirement account (assume both investments had the same interest rate'

- **A 'Molly, because she saved more money overall'**
- B 'Rob, because his money has grown for longer period of time'
- C 'They would each have about the same amount'
- D 'Unable to determine with information provided'
- E 'Don't know'

7. **'The best age to start paying into a pension is...'**
   3. 'In your twenties'
   4. 'In your fifties'

'As far as you know, are the following statements true, false, or are you not at all sure? '

No	Question	True	Not sure	False
7	'If I am in physical possession of my credit card, no fraudulent charges can occur'.			
8	'If I don't use credit cards, I can't be a victim of identity theft'.			

Source: NFCC 2014

SHOWCARD Z4.

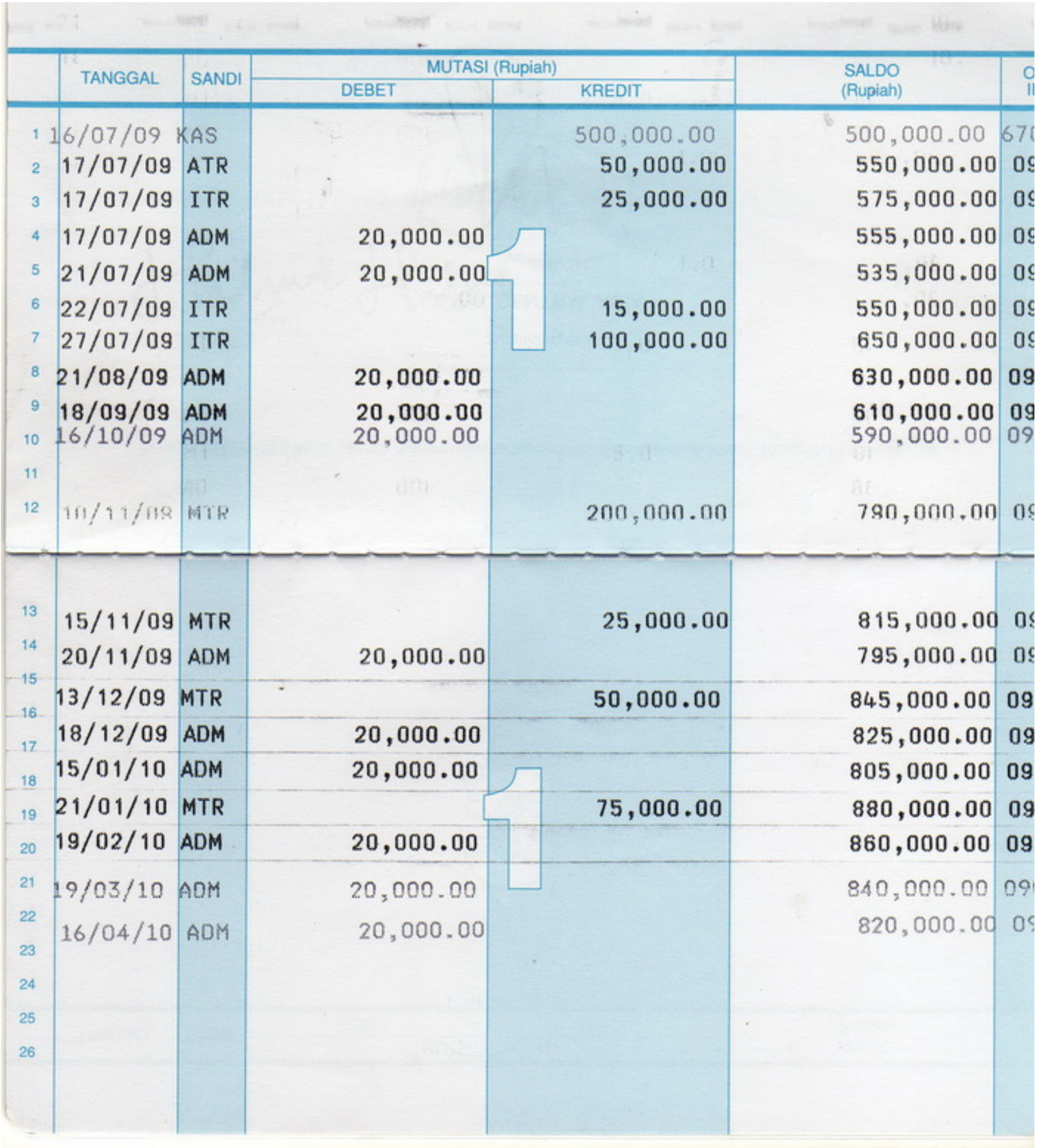
Looking at this example of a bank statement, please can you tell me how much money was in the account at the end of February?

PLEASE WRITE IN YOUR ANSWER TO NEAREST RUPIAH.

Numeric range (PERMITTED RANGE 1 TO 9,999) ___________________

DON'T KNOW

SINGLE CODE ONLY



	TANGGAL	SANDI	MUTASI (Rupiah) DEBET	MUTASI (Rupiah) KREDIT	SALDO (Rupiah)	O II
1	16/07/09	KAS		500,000.00	500,000.00	67
2	17/07/09	ATR		50,000.00	550,000.00	09
3	17/07/09	ITR		25,000.00	575,000.00	09
4	17/07/09	ADM	20,000.00		555,000.00	09
5	21/07/09	ADM	20,000.00		535,000.00	09
6	22/07/09	ITR		15,000.00	550,000.00	09
7	27/07/09	ITR		100,000.00	650,000.00	09
8	21/08/09	ADM	20,000.00		630,000.00	09
9	18/09/09	ADM	20,000.00		610,000.00	09
10	16/10/09	ADM	20,000.00		590,000.00	09
11						
12	10/11/09	MTR		200,000.00	780,000.00	09
13	15/11/09	MTR		25,000.00	815,000.00	09
14	20/11/09	ADM	20,000.00		795,000.00	09
15						
16	13/12/09	MTR		50,000.00	845,000.00	09
17	18/12/09	ADM	20,000.00		825,000.00	09
18	15/01/10	ADM	20,000.00		805,000.00	09
19	21/01/10	MTR		75,000.00	880,000.00	09
20	19/02/10	ADM	20,000.00		860,000.00	09
21	19/03/10	ADM	20,000.00		840,000.00	09
22	16/04/10	ADM	20,000.00		820,000.00	09
23						
24						
25						
26						