IDENTIFYING RISK IN *SHARIAH* COMPLIANT FINANCING FOR TRANSPORT INFRASTRUCTURE PROJECTS IN INDONESIA

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Abstract

The Government of Indonesia is seeking an alternative mode of finance to develop its transport infrastructure. Taking into account the large Muslim population in Indonesia, the strong domestic demand for Islamic finance products, and the growing potential of Islamic banking operations, the government has been promoting the use of *shariah* compliant financing. *Shariah* compliant financing is in its infant stages, with a variety of financing instruments from debt-based financing (*murabahah*, *istisna*, and *ijarah*), equity-based financing (*musharakah* and *mudharabah*), and service-based financing. Financing can also be obtained from issuing and selling *sukuk*, certificates that represents ownership of a tangible asset or its *usufruct*, to investors. *Shariah* compliant financing and conventional financing are distinguished on the principle of financing, asset ownership, and the involvement of *shariah* board as a technical and administrative body supervising relevant activities comply with *shariah*.

The literature to date has predominantly focused on risks in the Islamic banking industry and its operation. This research aims to identify the sources and types of risk exposure in *shariah* compliant financing for transport infrastructure projects in Indonesia. This research conducted thirteen semi-structured interviews with key transport stakeholders from the government, Islamic bank, academic, and consultant sectors. The research reveals that in Indonesia, debt-based *shariah* compliant financing instruments are the most utilised to finance transport infrastructure projects. The research identified that railways, roads, bridges, and seaports are the type of transport infrastructure facilities that are financed using *shariah* compliant financing instruments. The risks in *shariah* compliant financing are generally similar to the risks found in conventional projects with the addition of *shariah* compliance risk. These risks are identified into four categories: market, institutional and regulatory environment, *shariah* compliance, and project and structuring.

The government is recommended to provide higher return of investment and shorter maturity terms in *sukuk* to attract more investors and stimulate the secondary market to reduce liquidity risk for the investors. This research also proposes that the National *Shariah* Board should be involved not only in the structuring stage but also in the entire lifespan of financing to ensure the transaction complies with *shariah* and reduce the exposure to *shariah* compliance risk.

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List of Abbreviations

DIFC:	Dubai International Financial Centre
FGD:	Focus Group Discussion
IDB:	Islamic Development Bank
MM:	Managing Ministries
MNDP:	Ministry of National Development Planning
MOF:	Ministry of Finance
NSB:	National *Shariah* Board
PBS:	Project Based *Sukuk*
SNI:	*Sukuk* Negara Indonesia (foreign currency denominate state *sukuk* for international markets)

Definition of Terms

The following concepts and their definitions:

Aqad: a written agreement between two or more parties under Islamic law

Fatwa: religious decree or legal opinion issued by qualified jurist, *shariah* boards, or a *mufti* based on their interpretation and comprehension of Islamic law.

Gharar: speculative transaction that involves excessive risk and supposed to foster uncertainty and fraudulent behaviour.

Ijarah: leasing arrangement and contract between two or more parties on a specified asset available in for a payment without transferring the ownership.

Istisna: contract of sale in which the seller undertakes to manufacture or construct specified items for future delivery at pre-determined price.

Maysir: activities or transactions that involves gambling.

Mudharabah: agreement between capital provider to their partner to provide labor and expertise on commercial activities. Profit generated are shared on an agreed ratio.

Mufti: a Muslim legal expert who is authorized and empowered to give ruling based on Islamic law.

Murabahah: sale transaction of a commodity for cash/deferred price.

Musharakah: agreement where two or more parties agree to contribute to the capital to form partnership to establish new project or share in an existing one in agreed ratio. Involving parties have the right but are not necessarily obligated to participate in the management of the project.

Riba: activities or transactions that involves interest taking.

Sukuk: trust certificates where the holders have a proportion of ownership in the underlying asset and the right to receive cash flows generated from the underlying.

Tawarruq: transaction where buyer raise money by purchasing commodity for a deferred price from a bank and sells it to third party for immediate liquid (quick cash).

Statement of Original Authorship

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

QUT Verified Signature

Signature:

Date: 27 March 2017

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All praises to Allah SWT for all of His blessing. I am dedicating this thesis to Allah SWT and His prophet Muhammad (peace be upon him), to my religion and my way of life, Islam, and to my Motherland, Indonesia.

I also dedicate this thesis to the loves and joys of my life: my parents, my brother, and especially my late sister, Zenia Detishera Rianto. A sweet angel, she departed this world too soon but peacefully. The last smile in her eternal sleep will be my strength, will be my courage, and I will feel her love for me as I continue my life journey, until the day that she shows me around the house that she has built in His Jannah.

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Chapter 1: Introduction

1.1 RESEARCH BACKGROUND

Infrastructure development is seen as the fuel to drive a nation's economy forward. The Organisation of Economic Cooperation and Development in their Infrastructure to 2030 report estimates that the global world needs approximately USD 11 trillion over 2009-2030 for investment in roads, airports, ports, and railways. With a large amount of resources required to initiate infrastructure projects and maintain long operational lives, it will exceed the capabilities of governments alone to provide capital. By involving the private sector in providing long-term funds for infrastructure development, governments have the opportunity to reduce budget deficits and debts, and to free up funds for use in social sectors (Merna & Njiru, 2002; Dubai International Financial Centre (DIFC), 2009).

In October 2014, Indonesia's new government was formed under the presidency of Joko Widodo. Foreign investors are increasing their expectations for the standard upcoming facilities and infrastructure to aid their businesses in Indonesia. It is projected that Indonesia needs USD 468 billion of investment for their infrastructure development. However, with a fiscal deficit of 2.8 percent of GDP in 2014 (World Bank, 2015), alternative financing is required as a means to deliver best value.

Forming financing groups with private local or foreign investors allows a government to have alternative financial schemes to fund an infrastructure project, aside from using the state budget to wholly fund a project. Taking into account the large Muslim population in Indonesia, the strong domestic demand for Islamic finance products, and the growing potential of Islamic banking operations (Ismal, 2013; Suminto, 2015), the Government of Indonesia (GOI) is currently advancing and promoting s*hariah* (Islamic law) compliant financing as an alternative to fund their transport infrastructure projects.

Shariah compliant financing is a method of financing under a set of guiding principles interpreted in essence from the Qur'an (religious text as life guidance to Islamic believers) and Sunnah (Islamic scholars' interpretation of the sayings and deeds of the prophet Muhammad). It primarily prohibits practices in interest taking (*riba*), speculation (*gharar*), and gambling (*maysir*).

Utilisation of s*hariah* financing instruments to procure infrastructure projects in Indonesia is relatively new, and uncertainty involved in the method of *shariah* financing is inevitable. It is necessary to identify risks concerned with *shariah* compliant financing and take the appropriate actions to increase the chance of projects to succeed. This research will identify and explore the potential risks in *shariah* compliant financing of Indonesia's land, air, and sea transport infrastructure projects. It is expected that from the result of this research, stakeholders of transport infrastructure in Indonesia will have insight into risk assessment and this will lead to an effective policy from regulators to provide a favourable climate for *shariah* compliant investment in Indonesia.

1.2 RESEARCH PROBLEMS

Implementation of *shariah* compliant financing for transport infrastructure projects is in its early stages. Its scope, methods, practices, and findings are still to be settled. While some studies into the identification of risks in the practices of Islamic banking and project financing in a general context have been undertaken, little attention has been paid to studying risks in *shariah* compliant financing specifically for transport infrastructure projects in Indonesia. Filling the gap of study for risk management issues will assist stakeholders in analysing potential risks during the project's economic lifecycle and lead to increasing the chances of a project to succeed (Merna & Njiru, 2002; Benkovic *et al*., 2011).

With the research problem being addressed, this research seeks to examine the following questions:

1. What are the risks to be identified upon the implementation of *shariah* compliant financing to finance transport infrastructure projects in Indonesia?
2. How can the identified risks in *shariah* compliant financing for transport infrastructure projects in Indonesia be managed?

1.3 RESEARCH AIM AND OBJECTIVES

The aim of this research is to identify the source and type of risk exposure in *shariah* compliant project financing for Indonesian infrastructure transportation projects.

It will facilitate investors and the government of Indonesia (GOI) to gain sufficient knowledge of the fundamental risk issues in *shariah* compliant project financing. Another aim of this research is to provide appropriate counter measures to manage the identified risks. This research will lead to effective outcomes in the decision-making process of selecting a *shariah* compliant financing instrument and an improved investment planning during the initial phase of a transport infrastructure project.

Therefore, objectives of this research are:

1. To identify risks in *shariah* compliant financing implemented in funding transport infrastructure projects in Indonesia.
2. To explore the risk management strategies in *shariah* compliant financing for transport infrastructure projects.

1.4 RESEARCH SCOPE

This research, as its funded by Australia Indonesia Infrastructure Research Award (AIIRA), is only focusing on *shariah* compliant financing instruments that are currently available in Indonesia. Transport infrastructure projects covered in this research are seaports, airports, railways and roads projects that financed using *shariah* compliant financing instruments.

1.5 RESEARCH SIGNIFICANCE

This research compiles the knowledge from experiences and insights of practitioners related to *shariah* compliant financing and the risks associated with it. This research contributes to filling the gap of knowledge of risk management in *shariah* financing of transport infrastructure projects in Indonesia. Risk management is a process that significantly affects the chances of a project to succeed. The results of this research can be offered to the Indonesian policy makers and transport infrastructure stakeholders, especially governments and investors. This research would provide the government of Indonesia better strategy to regulate and provide an effective policy to attract and increase the *shariah* compliant investment to build transport infrastructure.

1.6 THESIS OUTLINE

The thesis is consisted of six chapters and each chapter is provided as follows.

Chapter 1 describes the background of the research study, research problems and questions, aims and objectives, the research limitations and its significance. Indonesia's current situation in infrastructure projects provision and the urgency for the government to find an alternative way to finance projects is briefly explained.

Chapter 2 presents a literature review of transport infrastructure procurement, *shariah* compliant financing instruments, and of the risks involved in utilising the particular financing method to procure infrastructure projects. The chapter gives a general discussion about transport infrastructure project financing in developing countries and government budget constraints to fund such projects. The chapter then examines in detail, *shariah* compliant financing as an alternative to assist the government in meeting infrastructure demand, and the possibilities of risk exposure in the particular practice.

Chapter 3 discusses the research methodology and design including the selection of research methods and research development. The chapter elaborates the justification for the methodology and semi-structured interview as the data collection instrument based on the research problem and literature review. It also describes the reasoning behind the selection of participants, the interview question design, method of sampling, and how the collected data was analysed and presented, including the use of qualitative data analysis software to store, organise, and code the data. Ethical consideration of this research is also clarified in this chapter.

Chapter 4 describes the results from data collection and the analysis conducted to interpret the data. The profile of participants and the results from QSR Nvivo qualitative analysis are presented.

Chapter 5 discusses interview analysis results, and the literature reviewed. The analysis of the *shariah* compliant mode of finance made by stakeholders is discussed in this chapter. The interview data validates the risks associated with *shariah* compliant financing instruments as identified from the literature reviews. This chapter then discusses how the current stakeholders in Indonesia manage the identified risks, with the comparison to literatures.

Chapter 6 concludes the research through a review of the research objectives and the findings from interviews. Contributions and limitations of this research are discussed and recommendations are made for future research studies related to *shariah* compliant financing for transport infrastructure projects.

Chapter 2: Literature review

Section 2.1 provides an overview of the impacts of growing infrastructure to countries' economy development. The outline discusses the responsibility of government in providing infrastructure facilities and the approach to involve private investors. Section 2.2 highlights the basic of *shariah* compliant financing practice to fund the provision of infrastructure projects. Section 2.3 endeavours to explain the government of Indonesia's plan to utilise *shariah* compliant finance for their infrastructure projects. Section 2.4 reviews the perceptions in the literature on the current identified risks associated with the *shariah* compliant banking and financing industry.

2.1 INFRASTRUCTURE PROJECT FINANCING IN DEVELOPING COUNTRIES

Ng and Loosemore (2007) divided infrastructure projects into two categories: economic infrastructure and social infrastructure. Social infrastructure includes facilities for education, prisons and health, to name a few. Economic infrastructure refers to the facilities that introduce and promote economic activities, including road, land, sea, and air transport facilities, electricity and telecommunications networks, and bridges. Infrastructure project investments, both economic and social infrastructures, have a number of common characteristics: these projects are long-lived and involve significant, time-consuming development processes; they are illiquid, capital intensive and difficult to value (Grimsey and Lewis, 2002).

Despite the constraints in providing infrastructure, economic infrastructure is seen as the catalyst for economic growth at national as well as regional and local levels. Thomsen (as cited in Kariuki, 2014) stated that infrastructure is vital for economic growth and poverty reduction, as it enhances competitiveness, facilitates trade and integrates countries with the rest of the world. Deng (2013) emphasises transport infrastructure with a well-tailored infrastructure policy, the right set of incentives, and suitable human capital can enhance overall economic performance. Transport infrastructure allows for a redistribution of people, resources, services, and goods across space, thus reducing transportation costs and increasing accessibility (Carlsson , Otto & Hall, 2013; Deng, 2013).

It is government's responsibility to provide infrastructure facilities and services to the public. The traditional way to finance infrastructure project is through public finance strategies obtained from general taxation and public borrowing. However, as the scale of infrastructure projects in most developing and developed countries are increasing in term of their complexity, risk, cost, and size to meet the increasing public demand, government encourages private entities to become involved in financing, providing, operating and managing such assets (Ng . et al., 2007). Forms of concession agreements of infrastructure procurement that involves private partners have several derivatives: Private Financing Initiative (PFI), Public Private Partnership (PPP), Build-Own-Operate-Transfer (BOOT), Leasing (Merna et al., 2002). These models of project financing involving private entities vary mainly by: ownership of capital assets, investment responsibility, risks assumptions, and contract duration (Kariuki, 2014).

In PFI and PPP financing, the arrangement is between government entity through their public agency either in federal, state or local level with private entities for an infrastructure-based services delivery mechanism. The difference is that PFI involves a private sector equity and debt funding to fund an infrastructure project and then leased to the public or the government repay in term payment to the private entity while PPP is a joint venture between government and private sector but does not require such private funding. PPP models are varied mainly by the asset ownership, financing responsibility, risks assumption, and contract duration (Kariuki, 2014). PPP can be attractive in theory due to possibilities of tapping into private sector's source of fund and experience in infrastructure delivery, but in practice their complexity of the long-term nature of partnerships, and the involvement of diverse entities with varying interests renders most projects controversial and risky (Biygautane, Hodge, & Gerber, 2016). Since the 2008 financial crisis, countries around the globe have been seeking alternatives to the conventional financing system. Countries that are applying Islamic law to their banking and financial systems were more resilient during the crisis, which has made the rest of the world turn to investigate and study the implementation of *Shariah* (Islamic law) into their economic and financial systems (Kayed & Hassan, 2011; Hasan & Dridi, 2010). Even in the western world, firms are actively seeking to convert their conventional loan agreements with commercial banks into *shariah* compliant loans, because the idea of

Islamic funding resembles an investment partnership and profit-loss sharing agreement where it implies greater flexibility and commitment for a longer term (West, 2013).

As discussed above, there is a lot of mode of financing to fund transport infrastructure projects from private financing such as PFI to public financing from government revenue received from taxes and non-taxes revenue, however, *shariah* compliant financing can come in two forms from private financing and public financing. To understand what defines *shariah* compliant financing and how are their structured for project financing, subsection 2.2 elaborates the essence and fundamental of *shariah* compliant financing.

2.2 *SHARIAH* COMPLIANT FINANCING

Shariah compliant financing is a method of financing under a set of guiding primary principles of Islamic law interpreted in essence from the *Qur'an*, the religious text that functions as a way of life guidance to Islamic believers, and *Sunnah*, the interpretation of the orders and practices of the Prophet Muhammad (peace be upon him). Other than the two primary principles, Islamic law also has secondary and minor sources such as *ijma,* a consensus among Islamic scholars about specific issues not included in the *Qur'an* or the *Sunnah* (Alshelfan, 2014).

Shariah law prohibits practices related to interest taking (*riba*), uncertainty or speculation (*gharar*), gambling (*maysir*), economic activity that is unethical and has corrupt purposes (*riswah*), involving non-*Halal* products, such as pork or alcohol (Khan, 2010; Ahmed, 2015), and generate inequality and injustice (Ullah, Djamali, and Harwood, 2014). Hassan and Kayed (2009) stated that to avoid *maysir*-based transactions and minimise *gharar*, *shariah* compliant financing requires contractual transparency and absolute certainty in the basic terms of the contract to avoid unnecessary risks. A distinction between Islamic practices with conventional financing is that *Shariah* proscribes a reward in the form of 'interest'. Prohibition of interest-based financing requires lenders and inventors to use profit-based structures involving asset ownership in one form or another (Alexander, 2011; Ahmed, 2015).

Islamic financial institutions and *shariah* compliant financing are required to form *Shariah* supervisory boards, and advisory committees consisting of one or more Islamic scholars with extensive experience in law, economics, banking systems and financial transactions (Al-Shakfa, 2010; McMillen, 2001). All of Islamic financial institutions have their own *shariah* supervisory boards, where their roles are to produce *fatwa*, a ruling on Islamic principle, and to ensure every activity in the micro level complies with *shariah*. In most global practices, *shariah* boards are only at an organisational level, however there are countries that have established *shariah* boards at the national level that set universal ruling for all of their countries' Islamic financial institutions, by which to mandatorily abide (Ahmed, 2009; Malik, Malik, & Mustafa, 2011). The presence of a neutral body that can oversee the *shariah* related issues of the *shariah* compliant financial sector on a national scale would ensure the healthy development of the industry (Ahmed, 2009).

Islamic finance has three types of financing: equity-based financing, debt-based financing and service-based financing. The former two are utilised for project financing, while the latter complements the services of an Islamic bank to its clients (Ismal, 2014). *Mudharabah* and *musharakah* can be considered as equity-based financing instruments, where both are based on a profit and loss sharing concept and are structured as a residual claim (Aggarwal and Yousef, 2000; Finnerty , 2013). *Murabahah, ijarah* and *istisna* are Islamic debt-based financing instruments commonly used for working capital financing with short term commitment of financing (Alexander, 2011; Ismal, 2014).

Noting that infrastructure is a physical asset, a number of *Shariah* compliant financing instruments have started being utilised as tools to fund infrastructure projects. Literature (Alexander, 2011; Biancone & Shakhatreh, 2015; West, 2013) suggests Islamic financial instruments that have been suitable to finance a project in the past decade are *murabaha* (mark-up sale), *istisna* (commissioned construction), *ijarah* (leasing), *mudharabah* (profit sharing), and *musharakah* (joint venture). Financing can be obtained by direct financing from investors or by issuing and selling Islamic bonds (*sukuk*), with various structures (DIFC, 2009). Table 2.1 summarises the financing instruments used for project finance.

The distinction between *shariah* compliant financing and conventional financing is that it needs to avoid *riba*. The true principle of *shariah* compliant financing is profit-loss sharing while in most conventional financing it is common and acceptable to take profit from interest. The involvement of *shariah* board in *shariah* compliant financing to supervise and monitor every activity comply with *shariah* law is one of the conditions that distinguish it with conventional financing.

2.2.1 Debt-based financing instruments (*murabahah, istisna, and ijarah*)

Murabahah financing is a mark-up sale of resellable purchased assets by a financial institution to the customer for a certain profit, which prohibits interest because the financial institution assumes the risk of purchasing and retaining title (Alexander, 2011; West, 2012). The margin price is determined and agreed by both parties upon the contract, and payment is made in the future, usually in instalments (Aggarwal & Yousef, 2000). The contract in *murabahah* occurs multiple times. Islamic banks as a financial institution very commonly offer short-term financing using *murabahah* rather than long-term financing because it involves little risk for the bank (Ariss, 2010; Beck, Demirgüç-Kunt, & Merrouche, 2013; West, 2013). It was also recorded that in the Indonesian Islamic banking industry for the period of 2004-2011, *murabahah* was the most favourite financial instruments utilised (Ismal, 2014). The use of *murabahah* in project finance is usually as an agreement between Islamic financial institutions with contractors to finance the purchase of equipment or raw materials (Alexander, 2011).

Istisna or commissioned construction is an agreement that involves an Islamic bank or financer, a client, and a third party to produce specific goods or commodities for future delivery at a pre-determined price that is common in construction projects (Alexander, 2011; Chong & Liu, 2009). A financer in an *istisna* agreement assumes the construction risks, specifically the completion risk and cost-of-fund risk, on the first contract between the financer and the project company, and the risks are even greater compare to other *shariah* compliant financing instruments because the purchase price is fixed upon the contract and variable rates of return are not allowed (Alexander, 2011; Zawawi, Ahmad, Umar, Khamidi, & Idrus, 2014).

Often combined with *istisna* contract is *ijarah* agreement (Finnerty, 2013). Similar to conventional lease financing, *ijarah* agreement is a leasing arrangement in which a financial institution or investor purchases an asset, retains title of the asset while lease it to its client for a certain period at a certain fixed rental charge (Chong & Liu, 2009; Zawawi, et al., 2014). However, to ensure that the rental remains in line with market leasing rates, the lessor sometimes has the right to renegotiate the terms of lease payment at agreed intervals (Hassan & Lewis, 2007). In project finance, the client would agree to purchase the asset at the end of the lease term by means of a gift or a token consideration, or by instalments of a specified amount during the lease period (Hasan & Dridi, 2010).

2.2.2 Equity-based financing instruments (*musharakah* and *mudharabah*)

Musharakah is often perceived to be the preferred Islamic mode of financing, because it structured to the principle of profit and loss sharing (Malik, et al., 2011) where the profits and losses are shared between partners on a pre-agreed ratio and to the proportion of the capital invested (Hassan & Lewis, 2007). Involving parties have the right but are not necessarily obligated to participate in the management of the project.

Another *shariah* compliant equity-based financing instrument is *mudharabah.* It is an agreement between a financer (*rabb al-mal*) to provide all of the capital, and the other party (*mudarib*) managing the project, and the profits from the investment are distributed according to a fixed, predetermined ratio (Hassan & Lewis, 2007). In the case of loss in *mudharabah* financing, the party managing the project receives no compensation for their effort and the financer endures the losses unless they are the result of misconduct or negligence of the managing party (Aggarwal & Yousef, 2000; Beck, et al., 2013; Biancone & Shakhatreh, 2015). Unlike *musharakah* agreement, where all partners have the options to decide whose responsibilities they are for managing and/or delivery of the project, in *mudharabah* agreement the financer has no right to participate in the management (Usmani, 2002).

2.2.3 Islamic bonds (*sukuk*)

Islamic finance can be securitised as *sukuk* for raising large amounts of capital and subscribed to diverse pool of investors (Alexander, 2011; Zawawi et al., 2014). *Sukuk* are *shariah* compatible trust certificates only to be issued with the requirement of an underlying asset. Some *sukuk* features resemble conventional bonds with different underlying structure and provision. Unlike conventional bond holders, *sukuk* holders do not receive interest since *riba* (interest) is prohibited in Islam, but they have a proportion of ownership in the underlying asset and the right to receive cash flows from the underlying (Nanaeva, 2010). *Sukuk* can be structured by the nature of the project for the purpose of project financing, and it depends on the underlying *shariah* principles such as *ijarah, mudharabah, musharakah,* and others (Abdullah, Yazid, Abdullah, & Kamarudin, 2014; Dusuki, 2010; Tariq, 2004; Zawawi, et al., 2014). *Sukuk* structures also can be classified under two common classifications: asset-based *sukuk* or asset-backed *sukuk* (Biancone & Shakhatreh, 2015).

Studies have identified utilisation of various Islamic financing instruments to fund different types of project. Combinations of the Islamic financing structure are adopted to fund development of various infrastructure projects. The first offering of *musharakah* structured *sukuk* was made in the United States in 2006 to finance the East Cameron Gas project (Ahmed, 2015; Alexander, 2011). Zawawi et al. (2014) write that in Malaysia there are two cases of Islamic financing: Putra LRT II project and Kuala Lumpur International Airport. In Qatar, the Dolphin Gas Project was able to secure USD 1 billion in the form of *ijarah* and *istisna* bridge-financing (Javed & Fida., 2015).

Table 2.1 Summary of *shariah* compliant financing instruments

	Instruments	Definition	In project finance practice
Debt-based financing	***Murabahah***	Mark-up sale of resell purchased asset by financial institution to the customer for a certain profit.	Often used by Islamic banks to provide short term financing. Alexander (2011) has indicates the use of *murabahah* in project finance is to finance the purchase capital equipment or raw materials.
	Istisna	An agreement between financer and a counterparty for a future project delivery at pre-determined price and duration.	*Istisna* agreement is commonly used to provide advance funding for construction or development projects (Alexander, 2011; Chong & Liu, 2009. In project financing, the finance provider receives the end delivery of assets then sells it to the customer or leases it under *ijarah* agreement (Finnerty, 2013).
	Ijarah	A leasing agreement where the financer purchases an asset and leases it to the customer in return for a regular lease payment.	In project financing, *ijarah* is often used after the end of *istisna* agreement. It provides that the customer will purchase the asset at the end of leasing term (Finnerty, 2013).
Equity-based financing	***Musharakah***	*Musharakah* is a term that has the same nature as a joint venture. It is where a number of financers and their counterparties form an agreement to invest and deliver a project as well as sharing the profits and losses to the proportion of each investment and pre-agreed ratio.	*Musharakah* is adopted for long-term project financing (Finnerty, 2013). Partners may agree upon the condition that each of them is involved in the project delivery or decide on a certain party that would carry the work.
	Mudharabah	The structure of *Mudharabah* is similar to limited partnership. The financer provides the capital and counterparty managing and work on the delivery of investment.	*Mudharabah* is used when financers want to finance the whole project. In this agreement, the financer has no right to participate in the project management, which is the sole responsibility of the counterparty. (Usmani, 2002)
Islamic bonds	***Sukuk***	A securitization of tangible assets used as underlying, where the issuers sell the beneficial ownership to the buyers or investors. It is similar to conventional bond; however, the *sukuk* holders do not receive interest but receive earnings generated by the associated asset.	To finance a project, *sukuk* is often used to raise a large amount of capital by subscribing it to pool of investors (Alexander, 2011; Zawawi et al., 2014). It can be structured depending on the underlying *shariah* principles and the intention of finance (Abdullah et al., 2014; Dusuki, 2010; Tariq, 2004).

2.3 THE DEVELOPMENT OF *SHARIAH* COMPLIANT FINANCING FOR TRANSPORT INFRASTRUCTURE PROJECTS IN INDONESIA

Indonesia's economic condition has not been able to reach its full potential since recovering from the Asian Financial Crisis in the late 1990s. One of the reasons is the lack of quality and quantity of its infrastructure. To satisfy infrastructure demands and accelerate its economic growth with the envision of to be a developed, self-reliant, and a fair democratic country, the government of Indonesia (GOI) has promulgated through Law no. 17/2007, a National Medium Term Plan (RPJMN) 2015-2019 as the third phase of National Long Term Development Plan 2005-2025. It is projected that Indonesia needs investment of IDR 2,500 trillion for RPJMN 2015-2019, with approximately

Stated in RPJMN 2015-2019 that until 2019, the government requires IDR 233 trillion for 3,258 km railway lines construction on the Trans-Sumatra, Southern Java Cross, Kalimantan, Sulawesi, and Papua. However, budget allocated for 2016 is well below the estimated needs of IDR 39 trillion with the allocated of IDR 12.9 trillion. This financial gap not only occurred in the Ministry of Transportation project but also in Ministry of Public Works project.

Indonesia is a secular republic, with more than 80% of their total population Muslim. In concern for the need of large investment for their transport infrastructure, the growth of Islamic finance industry and the market potential for Islamic finance products in Indonesia, *Shariah* compliant financing is seen by the GOI as one of the effective alternative financing methods to fund the development of infrastructure projects.

In 2008, the Ministry of Finance (MOF), on behalf of the government, started to issue *sukuk* with a value of IDR 4.7 trillion after the enactment of State Law No. 19, Year 2008, on state *shariah* compliant securities (sovereign *sukuk*) following the issuance of *fatwa* or religious decree of No: 69/DSN-MUI-VI/2008, by the National *Shariah* Board (Ginanjar, 2014). Ismal (2013) writes that the approval of the *Sukuk* act marks the existence of corporate and sovereign *sukuk* in the Indonesian capital market. Sovereign s*ukuk* issuance was later found to be increasing to date, with a sharp increase of approximately 171% in 2011-2012. Furthermore, the GOI has utilised *sukuk* to fund development of government projects after the enactment of Government Regulation PP No. 56/2011 that governs the practice of public project financing using the issuance of sovereign *sukuk* and a guideline addressing the project criteria issued by the National *Shariah* Board.

In Indonesia, proposals of public project infrastructure developments are submitted by the managing ministries to the Ministry of National Development Planning (MNDP). The Ministry of Public Works and Public Housing is responsible for civil infrastructure development and maintenance, such as but not limited to, national and regional roads, bridges, dams, waste management and others. Projects related with transportation such as railways, airports, and seaports are governed and regulated by the Ministry of Transportation. Throughout this thesis, the ministries responsible for public infrastructures are referred as managing ministries (MM).

The MNDP assesses project proposals in terms of their feasibility, readiness, priority, and *shariah* aspects together with the Directorate General of Financing and Risk Management in the Ministry of Finance (MOF), taking the debt and fiscal conditions into consideration. The MOF then sets the maximum limit of *sukuk* issuance for project financing, and with that limit, the MNDP sets the priority list of projects based on their scale of importance for the national development. Using the priority list as reference, MM prepare work and allocation budget plan and submit it to the MOF. The Finance Minister then will include the proposed allocation of budget with the list of projects to be financed using sovereign *sukuk* in the National Budget Plan, and proposes it to the House of Representatives for approval. After receiving the approval, the MOF then prepares a plan for *sukuk* issuance.

The GOI have seen the growth of project financing using *sukuk*, from IDR 800 billion in 2013 to IDR 7.1 trillion in 2015 (Suminto, 2015). In 2015, there were 39 infrastructure projects under Indonesia's Ministry of Public Works and Housing with a value of IDR 3.5 trillion, 5 infrastructure projects under the Ministry of Transportation with value of IDR 2.9 trillion being funded by the issuance of *sukuk* and IDR 667 billion for non-infrastructure projects. In 2014, two railway projects were financed through the issuance of government *sukuk*: the development of a double track railway, Cirebon-Kroya, and the development of another double track railway, Manggarai-Bekasi.

Presently, projects funded by issuance of *sukuk* have not been exposed to risks that can jeopardize the chances of the projects' success. This research explores the potential risks in the practice of *shariah* compliant financing.

2.4 RISKS IN IMPLEMENTING *SHARIAH* COMPLIANT FINANCING

In this section, this research reviews previous studies of risks and challenges associated with *shariah* compliant financing. This section does not limit the scope of study to a specific financing instrument. McMillen (as cited in Hassan and Lewis, 2007, p. 232) and Finnerty (2013) saw the challenges in *shariah* compliant project financing in structuring financing scheme that comply with *shariah* principles, fit the risk-return characteristics of the project, and satisfies the economic, institutional, political, legal, and regulatory condition.

2.4.1 Risks Associated with the Market

Investors in a project development are mainly concerned with three risks: cash flow, interest rates, and market risk. Merna & Njiru (2002, p. 198) classified the principal sources of financial risks in project financing under the following: currency risk, interest rate risk, equity risk, commercial risk, liquidity risk, counterparty risk, political risk, and economic risk. In *sukuk* issuance and transaction, Yunita (2015) classified risks into two categories: systematic risk and idiosyncratic risk. Systematic risk, where it may arise as the result of economic policy shift and market conditions, includes market rates risk, currency exchange risk, and price risk. Abdullah, et al. (2014), in the same vein, also include liquidity risk in the subset of market risk. Idiosyncratic risk includes credit risk, *shariah* compliance risk, and operational risk. These risks are associated differently to different structures of *sukuk,* for example numerous credit risks identified associated generally in issuance of asset based *sukuk* structures such as *ijarah, istisna,* and *murabahah* contracts (Tariq, 2004).

Abdullah, et al. (2014) considers *sukuk* investors are exposed to liquidity risk due to the inactive of *sukuk* trade in the secondary market. In another study about risks in *shariah* compliant financing, Malik, et al. (2011) also indicate that, besides *sukuk* investors, Islamic banks as a financer or lender find a mismatch between their short-term liabilities and the usual long-term and illiquid tangible asset used as a backing in *shariah* compliant financial transaction (asset liquidity risk). Ahmed (2009) adds another cause of liquidity, risk which is the lack of available long-term funding sources in Islamic banks (funding liquidity risk).

Long-term funding is necessary to finance infrastructure projects. Islamic financing is still developing as well as Islamic banks in Indonesia. Most of the capital providers in the Islamic finance industry do not have sufficient funds to invest in large infrastructure projects (Javed & Fida, 2015; Bello 2014; DIFC, 2009). Javed & Fida (2015) have identified that Islamic banks in Pakistan have limited access to long-term investment, due to their restriction in investing in interest-based instruments such as treasury bills and bonds.

Another common risk in *shariah* compliant finance addressed under the type of market risk is foreign currency exchange risk. Wahyudi, Surya Putri, Prasetyo, and Rosmanita (2015) have categorised three types of currency exchange exposure associated with Islamic banks' operation. These are economic exposure, translation exposure and transaction exposure. In *sukuk* transaction that involves foreign currency, both investors and issuers have the possibility of being exposed to currency risk when the underlying asset is denominated in local currency and the *sukuk* is issued in foreign currency. The fluctuations in the exchange rate would cause a loss to investor or issuer (Nanaeva, 2010).

2.4.2 Risks Associated with *Shariah* Compliance

Contrary to conventional finance, Islamic financial transactions tend to be more complex because of the requirements to comply with *shariah* law and have increased cost due to higher legal and *shariah* compliance fees (Malik, Malik & Mustafa, 2011). El-Gamal (as cited in Ahmed, 2015) has also questioned the high fees incurred in the involvement of *shariah* supervisory boards.

With the requirement to have a *Shariah* board to examine in detail the operation of *Shariah* compliant financing, there is the possibility of multiple reviews to be conducted. Decisions or *fatwa*, a ruling on Islamic principle, to be made by *Shariah* boards, are based on *fiqh* (human comprehension of *Shariah* law), therefore opinions and interpretations among *shariah* scholars may be different to other scholars (Al-Shakfa, 2010; Alexander, 2011; Javed & Fida, 2015). Al-Shakfa (2010) gives an example, that few Islamic scholars oppose investment in a capital market as they believe the market is based on speculation, however another group of scholars accept stock market investment unless the equity comes from *Haram* (opposed to *Halal*) business activities. The situation of conflicting opinions between scholars may increase the possibility of legal risks (Ahmed, 2009). Consequently, Ahmed (2009) and Malik, et al. (2011) highlight the important of establishing a National *Shariah* Board to avoid complication in ruling *fatwa* and disputes among interpretations, and mitigating *shariah* compliance, reputation, and legal risks at the same time.

Another problem addressed by Mariyani (2014) is that the relatively small number of Islamic legal scholars specialising in financial and transport infrastructure matters dominate the lucrative *fatwa* market. Khan (2010) criticised this, as it gives the opportunity for a perception of scholars being purchased to satisfy the approval of *Shariah* certification. Malik et al. (2011) adds that *fatwa* shopping and different opinions between scholars pose a threat to the Islamic finance industry as it will increase the inconsistency between Islamic financing instruments and lead to a decreasing confidence level of investors.

A specific risk associated with the involvement of a *Shariah* Board and Islamic scholars was also identified by Abdullah, et al. (2014), Ahmed (2015), and Nanaeva (2010). A criticism came from a notable Islamic scholar, Muhammad Taqi Usmani, in 2008, on the 85% of *sukuk* structures available in the GCC for not being *shariah* compliant due to risk and reward not being shared properly, and thus not being able to be considered as Islamic instruments. This judgement has led confusion and instability not only in the GCC Islamic capital market but also global *sukuk* market where it was recorded that global *sukuk* issuances fell from USD 50 billion to USD 14 billon in a single year (Ahmed, 2015).

In this research, situations and conditions that related to the National *Shariah* Boards and breaching to comply with *shariah* that pose risk exposure to either financers or their counterparties, are included in *shariah* compliance risk.

2.4.3 Risks Associated with Institutional and Regulatory Environment

Ahmed (2009) suggests the need to minimise legal risk and provide an effective regulatory environment to provide a more stable *shariah* compliant financial industry. A *Shariah* compliant financial transaction consists of multilayered contracts and agreements, and without assurance in the implementation of agreements and contracts in Islamic project finance, creates the possibility of legal risk. Besides assurance, Ahmed (2015) points out that a weak legal framework lacking in the ability to resolve disputes also creates legal risk. In their study on the challenges of Islamic project financing faced in Pakistan, Javed and Fida (2015) found that the majority of their participants raised the importance of a well-built regulatory system and emphasised the necessity of strong cooperation between regulatory bodies and a *shariah* compliant finance industry in order to produce guidelines and regulatory frameworks.

Most countries with the majority of the population being Muslim, including Indonesia, have adopted either common law or a civil law framework. Ahmed (2009) highlights the importance of establishing specific laws and regulations that would support the unique features of *shariah* compliant financial activities and further suggests that conventional commercial laws would not be applicable. Ahmed (2015) and Salah (2010) provide examples of cases where an underdeveloped legal environment and security assurance has caused disputes between investors and their counterparty, such as the Investment Dar Company defaulting on its *sukuk* payment and the case in 2009 of delayed repayment of USD 4 billion *sukuk* by the Nakheel subsidiary of Dubai World to their investors. In the Dubai debt crisis, the case entails the assumption of *sukuk* holders, due to difficulties in understanding the complexity of the *sukuk* legal structure, that the government of Dubai as the full owner of Dubai World would guarantee the payment obligations but however specific legal limitations concerning governmental entities under United Arab Emirates law does not adequately give protection to investors (Salah, 2010).This case demonstrates that a weak legal framework and investment protection would leave investors loss their investments.

The development of human resources with expertise in Islamic banking and financing is unable to balance the rapid growth of industry (Malik et al., 2011). The shortage of Islamic finance experts is affecting the growth of the market and limiting the knowledge transfer to investors and markets. Rahman (as cited in Shafii , Salleh, Hanefah & Jusoff, 2013) adds that lack of qualified *Shariah* educated professionals introduces another challenge in implementing a *Shariah* audit. Camacho (as cited in Abdullah et al., 2014) also indicates the difficulty experienced in the Islamic banking industry in finding a professional banker who has both practical experiences of banking and firm understanding of Islamic finance and related concepts, and the same case was also observed with the appointed Islamic scholars involved in *Shariah* Boards.

Hakim & Rashidian (2004) states that *shariah* compliant investments are growing rapidly, however the exploration of academic literature in Islamic finance is not being maintained at the same pace. Limited information has left investors confused about the performance and risk characteristics of funds and the objectives of their Islamic investments.

Bello (2014) categorises challenges confronting Islamic banking operation in Nigeria into two categories: institutional challenges and operational challenges. In most parts of the world, Islamic finance is facing the same constraints and is exposed to similar risks. From the research literature that has been reviewed, the identified risks in *shariah* compliant financing practices in parts of the world can be generally classified into four categories, as shown in Table 2.2.

Table 2.2 Classification of risks in *shariah* compliant financing and banking

Risk Classification	Identified Risks
Project and Structuring	• Increased cost due to legal and *shariah* compliance fees. (Malik et al., 2011; DIFC, 2009).
***Shariah* Compliance**	• Different opinion among *Shariah* scholars (Al-Shakfa, 2010; Alexander, 2011; Javed & Fida, 2015). • *Fatwa* shopping (Khan, 2010; Malik et al., 2011; Mariyani, 2014).
Institutional and Regulatory Environment	• Legal and regulatory issues (Ahmed, 2009; Ahmed, 2015; Abdullah et al., 2014; Bello, 2014; Javed & Fida, 2015).
Market	• Limited number of sources in providing long term financing (Javed & Fida, 2015; Bello 2014; DIFC, 2009) • Limited number of professionals and experts in the *Shariah* compliant project financing industry (Abdullah et al., 2014; Bello, 2014; Malik et al., 2011). • Credit and liquidity risk (Abdullah et al., 2014; Malik et al., 2011).

Table 2.2 above shows the risks in the Islamic banking and finance industry that have been studied in most of the relevant literature. This research will explore whether these classified risks are foreseen by stakeholders in Indonesia's transport infrastructure projects or if there are others risks yet to be identified, in Indonesia particularly.

2.5 SUMMARY

This chapter reviewed the needs for infrastructure development and an alternative mode of financing to move development forward. *Shariah* compliant financing is seen as one alternative considering the potential of Muslim markets and the resilience of the economy and financial systems that comply with Islamic law during economic crisis (Hasan & Dridi, 2010; Kayed & Hassan, 2011). Several studies have shown that there are debt-based and equity-based *shariah* compliant financing instruments that can be used to finance from energy to transport infrastructure projects.

GOI have utilised *sukuk* and *istisna* for transport project financing. In *sukuk* for financing, GOI issues *sukuk* for investors and buyers, and pools the money to finance government operations and their projects. GOI have also received finance in the form of *istisna* agreement with multilateral agents to develop the Belawan Port Project. Considering there are other options for financing instruments, this research explores whether Indonesia has implemented other financing instruments such as *musharakah* and *mudharabah* to finance transport infrastructure projects. From this investigation, this study has identified the involvement of Ministry of Finance, Ministry of National Development Planning, Ministry of Public Works and Housing, and Ministry of Transportation in the practice of using sovereign *sukuk* to finance public transport infrastructure projects.

This chapter has shown the risks associated in *shariah* compliant financing in general. However, existing literature on risks are mostly focussed on Islamic banking operation and industry. This research tries to identify the risks faced by potential parties that may be involved in *shariah* compliant financing for transport infrastructure projects in Indonesia, such as the government, Islamic banks and investors. The following chapter presents the methodology selected to meet this research objective.

Chapter 3: Research design

This chapter outlines the research design adopted to achieve the research aims and objectives, and their development in the process. Section 3.1 describes the research problems and revisits the research aim, questions, and objectives. Section 3.2 details the methodology used in the study, the stage by which the methodology was implemented, and the research design suited to the nature of the research questions. Section 3.3 details the process of data collection and selection criteria of the participants recruited for the study. Section 3.4 outlines the procedure of analysing the data. The last section discusses the ethical considerations of the research.

3.1 RESEARCH PROBLEMS AND RESTATEMENT OF RESEARCH AIMS, QUESTIONS, AND OBJECTIVES

Chapter 2 has discussed the early stage of using *shariah* compliant financing to finance transport infrastructure projects in Indonesia. As the GOI started using *sukuk* for project finance since 2012, it is still too early to declare that the practice is without risks. In Indonesia, most of the transport infrastructure projects are executed by the government entities, either by the managing ministries, such as Ministry of Transportation, or state-owned enterprises. Sources of funding for government projects can be from multilateral banks or *sukuk* buyers. These entities are the ones that could be exposed to risks as they are directly involved either as financer or project executor.

While some studies have identified and discussed risks in the practices of Islamic banking and their *shariah* compliant financial instruments in general, there are only a few addressed risks related to *shariah* compliant financing for transport infrastructure projects. Abdullah et al. (2014) have identified in their study of *sukuk* for infrastructure projects that investors and issuers are exposed to liquidity risk, currency exchange risk, *shariah* compliance risk, and legal risk. Studies also have found that *shariah* compliant financial industry, notably Islamic banks, lack the long-term funds to finance transport infrastructure projects (Bello, 2014; Javed & Fida, 2015).

Therefore, to understand the presence of risks that the involved parties, such as government and/or investors, may be exposed to, and to add more surface knowledge into the area of dealing with the risks, the research main questions are articulated as follows:

1. What are the risks to be identified upon the implementation of *shariah* compliant financing to finance transport infrastructure projects in Indonesia?
2. How can the identified risks in *shariah* compliant financing for transport infrastructure projects in Indonesia be managed?

These main questions are addressed in order to achieve the research aim of identifying the source and type of risks in *shariah* compliant financing for transport infrastructure projects in Indonesia. During the process of achieving the aim, this research also identifies what type of *shariah* compliant financing instruments are being utilised in Indonesia and what type of transport infrastructures are being financed with those instruments. This research also aims to provide general counter measures to manage the identified risks. The objectives of this research are as follows:

1. To identify risks in *shariah* compliant financing implemented in funding transport infrastructure projects in Indonesia.
2. To explore the risk management strategies in *shariah* compliant financing for transport infrastructure projects.

3.2 METHODOLOGY

Semi-structured interviews were used in this study to answer the research questions. The literature review has uncovered the list of risks associated with *shariah* compliant financing in general. The interviews were conducted to verify the presence of the proposed risks in Indonesia with stakeholders of *shariah* compliant financing for transport infrastructure projects; as this research has the purpose of identifying the potential risk exposure in Indonesia's current practices, it was necessary to collect information from the identified stakeholders as potential participants (criteria of participants are discussed in the Section 3.3.2 of this chapter). This instrument is suited to supporting the exploratory nature of this research. It was explained by Barriball and While (1994) that the semi-structured interview is suitable for exploring perceptions and opinions based on participants' experience and knowledge. Interviews were conducted with one individual participant at a time. The decision to have one-on-one interviews rather than a group interview was made to ease the process of creating transcripts and analysing data, which can be time consuming, as mentioned by Harvey -Jordan and Long (2001). Figure 3.1 illustrates the process of this research.

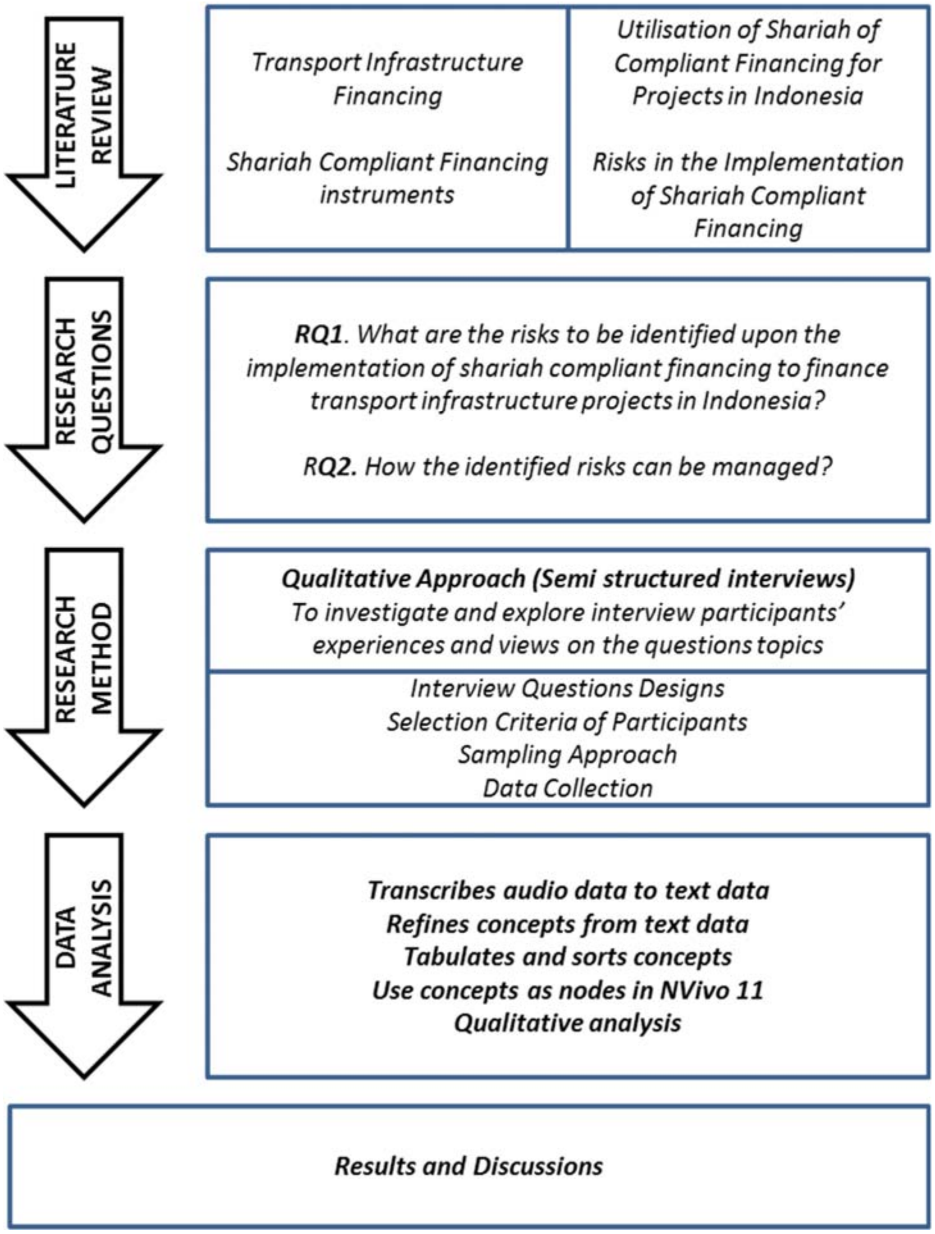

Figure 3.1 Research Process

Following the group variety of qualitative interviews summarised by Rubin & Rubin (2012), as shown in Table 3.1, the qualitative interviews conducted were in the manner of an investigative approach. This research scope falls in-between but leans towards the narrowly focused category, with main objectives being to identify the specific risks that can occur in various *shariah* compliant financing instruments when they are practised to finance transport infrastructure projects in Indonesia. This research is focused mainly on events and processes in a way that the qualitative interview was focusing on the descriptions and processes related to risk.

Table 3.1 Variety of Qualitative Interviews (Rubin & Rubin, 2012)

	Narrowly Focused Scope	**In-between**	**Broadly Focused Scope**
Focused mainly on meaning and frameworks	Concept clarification	Theory elaboration	Ethnographic interpretation
In-between	Exit interview	Oral histories Organisational culture	Life history
Focused mainly on events and processes	Investigative interviewing	Action research Evaluation research	Elaborated case studies

3.3 DEVELOPMENT OF DATA COLLECTION

Semi-structured interviews were adopted as a data collection technique. It was applied in this research to elaborate and investigate the potential risks exposure in *shariah* compliant financing for transport infrastructure projects based on participants' experiences and views. A semi-structured interview allows the researcher to organise a set of predetermined open-ended questions and can allow for the researcher to propose other questions emerging from the dialogue with participants (DiCicco-Bloom & Crabtree, 2006).

3.3.1 Interview Questions Design

The questions were designed based on the research questions and results from literature reviews. They were designed and structured into three main parts, as can be seen in Table 3.2. The first part of the interview focuses on sorting the profile of the participants and their role in the industry. Participants are identified based on their experiences in transport infrastructure projects developments, *shariah* compliant project financing, or in both situations. The pattern was to give one of the three parts of the next questions, based on the participant profile.

The second part is designed and was given to the participants according to their profile results from the first part of the interview questions. In this part, participants are asked to share their last five years of experiences and to detail their involvement in transport infrastructure projects financing, *shariah* compliant financing or *shariah* compliant financing in transport infrastructure projects. The goal of this part is to have the participants to elaborate their experiences in identifying the risks that occurred during their involvement, and the process taken to manage those risks. This part of the interview question also seeks information about the *shariah* compliant financing instruments adopted to finance the project as well as the type of transportation infrastructures that were financed. During this part, because of the nature of broad and open-ended predetermined questions, the interviewer is able to probe participants for clarification of unclear sentences and for richer detail on certain points arising from the answers.

In the third part of the interview, the questions cover the potential risks that may occur in Indonesia. The content of the questions in this part was set to be focused and narrowed, and was designed based on the research literature that was reviewed. Most of the literature discussed the fundamental risks in *shariah* compliant financing, and this part of the interview was to see the participants' point of view, as to whether the same risks are occurring in Indonesia. The content of questions in this part was designed based on the classification of risks summarised in Table 2.2: market, *shariah* compliance, institutional and regulatory environment, and project and structuring.

Participants can respond to the interview questions based on their experiences and/or knowledge. If participants did not have exact answers to the questions, they were allowed to skip the questions. Rubin & Rubin (2012) describe that the main questions in a qualitative interview can be structured with several patterns. One of the most common in an early study is the opening-the-locks pattern where the goal is to obtain a broad portrait of the current situations to suggest further exploration in depth later; this research adopts this pattern in the design of interview questions, as the main objective of this research is to identify risks. The detailed content of interview questions can be seen in Appendix A.

Table 3.2 Outline of semi-structured interview questions

Interview Question Parts	Questions related to
Part 1: General questions to profile participants	• Involvement in transport infrastructure project financing. • Involvement in *shariah* compliant project financing. • Involvement in *shariah* compliant financing in transport infrastructure projects.
Part 2: Brief detail of participants' involvement related to Part 1	• Participants' capacity during their involvement in the project addressed in Part 1 • Brief details of the project. • The *shariah* compliant instruments utilised to finance the project. • The risks that arise during the project financing. • The approach taken by the participant or the project stakeholders to identify and manage the risks.
Part 3: Potential risks in *shariah* compliant financing for transport infrastructure projects	**Project and Structuring** • The impact to the cost of legal and project structuring. ***Shariah* Compliance** • National *Shariah* Board involvement in the practice and how their decision on *fatwa* affects the process of *shariah* compliant project financing. **Institutional and Regulatory Environment** • Influence of current law and regulatory environment to the practice. **Market** • The capability of Islamic banks to finance transport infrastructure project development. • Influence of the number of qualified human resources to the industry growth. • Current market condition for *shariah* compliant project financing. • Advantages and difficulties in the implementation of *shariah* compliant project financing for transport infrastructure projects.

3.3.2 Selection Criteria of Participants

In the pre-interview stage, several stakeholder groups were identified. The plan was to have three types of group of participants in order to create a successful mix, as suggested by Linstone and Turoff (1975). The first type of participant group is a set of people who have directly affected the decision in implementing *shariah* compliant financing for infrastructure project development in Indonesia. The second group is a set of experts who have relevant experience in the transport infrastructure projects financing or *shariah* compliant financing. The third group of participants is one of facilitators who have competencies to clarify and stimulate the concept.

Oliver (2002) suggests that participants should be chosen based on their expertise, institutions, and their role in the business or industry. As described in Chapter 2, most public transport infrastructure project developments in Indonesia are initiated, and executed by the government. Therefore, several lines of government ministries are approached and invited to be participants of this research. In Indonesia, the Ministry of National Development Planning with the Ministry of Transportation, and Ministry of Public Works and Housing are responsible to plan, prepare and sometimes execute the delivery most of the public infrastructure projects.

Islamic scholars who are members of the National *Shariah* Board were approached and invited in order to have a wide spectrum of viewpoints across the participants. National *Shariah* Board is a non-governmental organisation that consists of Islamic scholars and economists who issue *fatwa* in Indonesia. Individuals who have worked or are still working in Islamic banks or *shariah* compliant banks are also considered to be potential participants for this research. In a study by Rarasati (2014), the Islamic banks play a significant role as financers in financing energy infrastructure projects. To summarise, the participants are selected if they have met two or more of the following criteria:

- Have experience and/or comprehensive knowledge in transport infrastructure projects (risk management or project financing).
- Have experience and/or comprehensive knowledge in *shariah* compliant financing.
- Have directly and/or indirectly been involved in a project development financed using *shariah* compliant instruments.
- Have been involved in one of the following institutions:
  - Ministry of Finance, Ministry of Transportation, Ministry of Public Works and Housing, and Ministry of National Development Planning.
  - Islamic banks that operate in Indonesia (such as: BNI Syariah Bank).
  - Non-bank financial institutions that are involves in infrastructure project financing (such as: Multi Infrastructure Finance).

- Educational institutions that offer Islamic economic and finance studies.

3.3.3 Sampling Approach

Initial recruitments were conducted by contacting the participants from a focus group discussion (FGD) organised in Jakarta, 27th April 2015. The group discussion was a part of another research project "*An investigation of Shariah-compliant financing in Indonesia infrastructure projects: acceleration of transport sector development*" by Queensland University of Technology and University of Indonesia, and funded by AIIRA (Australia Indonesia Infrastructure Research Award). The goal of the FGD was to establish a *shariah* compliant financing framework for Indonesian transport infrastructure development. In this FGD, several participants were identified to fit the participant criteria required for this research, thus were approached and invited to be interview participants for this research. Through this method, two participants from academic sector and non-bank financial institution respectively were. Another method to recruit participants was by being introduced to potential participants referred by networking means to which the researcher has access. By this means, there were seven participants from various sectors recruited.

The sampling for this research also involves snowball techniques. Snowball sampling started after successful recruitment of participants through initial means; the practice was to ask the first initial participants to recommend other potential individuals. Through the snowball technique, the research was able to grow the number of participants by adding four more participants to the pool and have the privilege to invite individuals who evidently by suggestion are related to the industry and matched criteria. Therefore, the sampling process has successfully recruited a total of thirteen participants (see table 4.1).

Most of initial participants were approached via email with the attachments of interview questions sheet (Appendix A), the cover letter (Appendix B), and Participant Information sheet (Appendix C). The whole interview process took place in Indonesia from September to November 2015. Interviews were conducted face-to-face and audio recorded. Each interview lasted approximately one and half hours, and was delivered in Indonesian language.

3.4 ANALYSIS

Analysis proceeded in two phases, as suggested by Rubin & Rubin (2012), focusing on data preparation in the first phase and pulling out the descriptive narratives and working toward theory in the second phase. In the data preparation, the interview audio recorded data was transcribed manually and transcribed in Indonesian language. Transcripts were then analysed by examining, categorising, tabulating and combining evidence from interview results to address the initial propositions.

After the audio data was fully transcribed, the next step was to examine and highlight the text that answers the interview questions. Even though the participants received the questions in order, there are times that answers and information related to the interview questions were given by the participants but not after the question. This way the researcher was able to filter the full text of interview transcripts into simple sentences or paragraphs and extract them for further analysis.

The results were then tabulated in excel software. In this process, the highlighted sentences and paragraphs are stored and grouped in accordance to their content and whether it conveys each interview question. This process is to recognise the concepts in the interviews based on the predetermined general categories created around the interview questions. After tabulating, recognising, and sorting concepts and themes in excel, the analysis is then taken to NVivo qualitative analysis software.

3.4.1 Coding Process

Concepts are derived from the interview data and coded by coding process using NVivo. The process involves systematically labelling concepts so that the data units that refer to the same subject across all of the interviews can be easily retrieved and examined (Rubin & Rubin, 2012). The distinct label used for each concept is termed a *code*. The overall relationship between the codes is called a coding structure.

To establish concepts in this research, the initial method to develop code is through establishing concepts from the pre-existing categories such as published literature or interview questions, for example, concept label (or code) of '*risk management*' can be derived from the interview question of how the participant manages the risks in *shariah* compliant financing. Other ways to derive concepts from the qualitative data are through investigating terms that were explicitly raised frequently by the participants, concepts that emerged from comparing interviews, and also suggested from stories told by the participants.

Microsoft Excel and QSR International NVivo 11 were used to support the coding process and data analysis. In NVivo, codes are stored in nodes and can be organised structurally as parent and child nodes. Coded data were thus analysed by finding patterns and linkage between concepts that have been grouped around particular events, or sorted by groups of participants. These data also can be stored in multiple nodes in Nvivo.

The phase of open coding is by extracting the data passage from the interviews into a set of codes. These codes then became child nodes and grouped into parent nodes in Nvivo. Example of the coding process is can be seen in figure 3.2. The research then took more investigation in finding patterns between nodes and categorising the nodes into more a comprehensive structure. The data sources from the interviews are also separated per interview participants' background. The qualitative findings in this study are presented as descriptive summary, followed by important quotes and researcher's analysis.

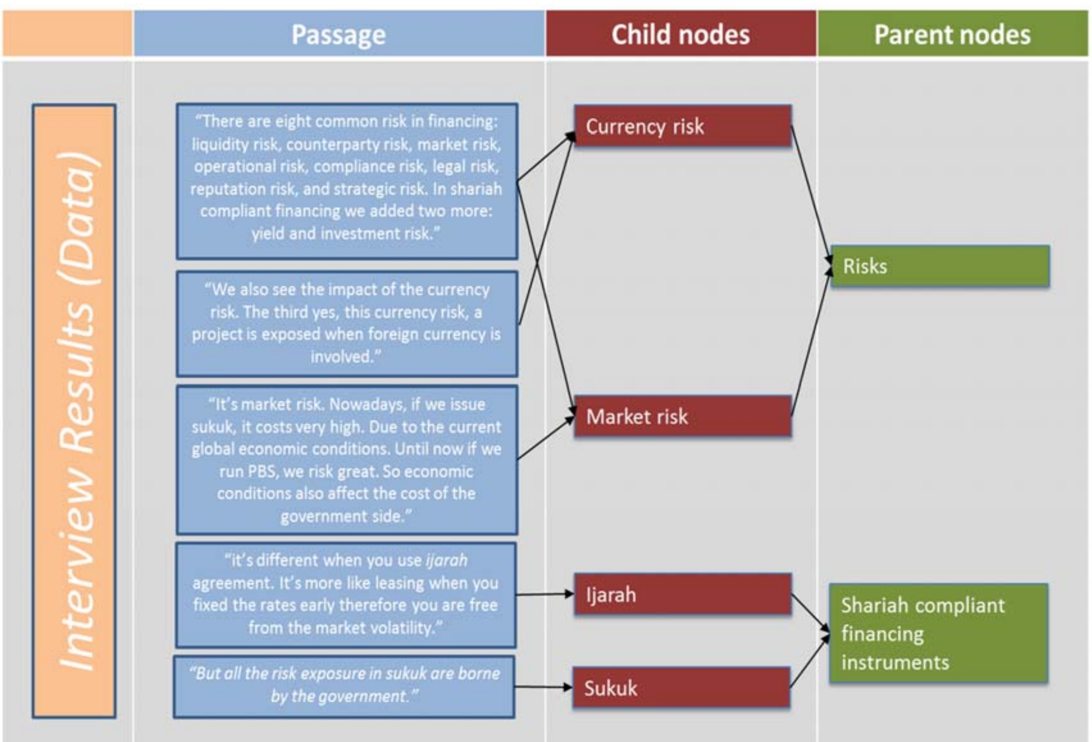

Figure 3.2 Example of coding process

3.5 ETHICAL CLEARANCE

The ethical considerations of qualitative research involving interviews are focusing on the collection of data from human subjects and the storage, use and disposal of those data. Ethical clearance was approved by the QUT research ethics committee (reference approval number 1500000635), prior to the commencement of approaching and interviewing participants. A participant information sheet that briefly describes the research project and explains the purpose of participation, expected benefits, risks and confidentiality relevant to the interview process was supplied to the potential participants before each interview.

Chapter 4: Interview Results & Analysis

Qualitative interviews were conducted to seek and elaborate the views and perspectives of participants, based on the designed research questions. The discovery from interviews explores stakeholders' understanding of *shariah* compliant financing for transport infrastructure projects in Indonesia and risks associated with the practices.

This chapter presents the results from semi-structured, face-to-face interviews with participants involved in the government, Islamic banks, National *Shariah* Boards, academics and infrastructure project-related sectors. Section 4.1 presents the profile of interview participants and a short background of their role in the industry. Section 4.2 provides findings of the participants' perception on specific *shariah* compliant financing instruments and their application for funding transport infrastructure projects in Indonesia. Section 4.3 presents the type of transport infrastructure projects that are financed using *shariah* compliant financing instruments. Section 4.4 elaborates the risks identified from the interviews with participants. Section 4.5 presents factors that influence the growth of the *shariah* compliant financing industry, as perceived by the participants. Section 4.6 presents findings on how Islamic banks and governments approach the risks that have been identified.

4.1 PARTICIPANTS BACKGROUND

In the first part of the interview, participants were asked to elaborate their current experiences and knowledge in infrastructure project financing and *shariah* compliant financing, and how they were involved. Participants were identified and classified based on their area of knowledge or expertise in *shariah* compliant financing (SF), transport infrastructure projects (TP), and/or *shariah* compliant financing for transport infrastructure projects (SFTP). Table 4.1 listed participants' profiles and their background role in the industry.

Table 4.1: Participants Qualifications

No	Participant	Experience/ knowledge in			Background
		SF	TP	SFTP	
1	A1	✓			Academics in Islamic finance studies
2	B1	✓			Islamic bank
3	B2	✓	✓		Islamic bank
4	B3	✓	✓		Islamic bank
5	B4	✓			Islamic bank
6	C1	✓	✓		Consultant for Islamic finance and banking industry (a member of National *Shariah* Board)
7	C2		✓	✓	Consultant for Belawan Port Project
8	G1			✓	Government (Ministry of Finance)
9	G2			✓	Government (Ministry of Finance)
10	G3			✓	Government (Ministry of National Development Planning)
11	G4		✓		Government (Ministry of Public Works)
12	I1		✓		Non-bank financial institution
13	I2		✓		Non-bank financial institution

Participants from the academic sector are coded with letter ‘A’. Participants who are working as a consultant to either Islamic banks or government are coded with letter ‘C’. Letter ‘G’ represents participants who work for the government of Indonesia (GOI). Participants that have previously or are currently working in Islamic Banks are coded with letter ‘B’. Participants who work in an industry related to transport infrastructure financing but in neither a *shariah* compliant financial institution nor a governmental unit are coded with letter ‘I’.

Participants included in SF have been involved in *shariah* compliant financing project(s). Their exposure to *shariah* compliant financing can be from their education or their experiences in the industry of Islamic financial institutions. Involvement in *shariah* compliant financing is not specified to one particular Islamic financing instrument but to any of them. A1 is the only academic participant in Islamic economy and finance, who has interest in *sukuk* studies, *sukuk* ratification in particular. However, A1 has never been involved in any infrastructure project.

Participants included in TP are the participants who have experiences in conventional transport infrastructure project financing. Participants I1, I2, G1, G2, G3, and C2 (SFTP) groups are people who have directly or indirectly been involved in financing transportation projects using *shariah* compliant instruments. All participants in the SFTP group are working for the government of Indonesia, either being a consultant or as government staff, notably because most of the current infrastructure projects financed using *shariah* compliant financing are government projects.

Participant C1 is currently leading a consultant company providing consultation and education to *shariah* compliant businesses and banks. During the time of interview, participant C1 is still involved as a member of the National *Shariah* Board. Both B1 and B4 are the only participants who work in Islamic banks. B1 has experience as member of an Islamic bank syndication team to finance a certain toll road project in Java province. Participants B2 and B3 are working closely with the industry where currently B2 is overseeing a company in the merger and acquisition of micro *shariah* banks business, and B3 is assisting Islamic banks in the management of Indonesian Islamic Banks Associations.

4.2 *SHARIAH* COMPLIANT FINANCING INSTRUMENTS IN INDONESIA

This section reports *shariah* compliant financing instruments available in Indonesia and their aptness in financing transport infrastructure projects. As mentioned in Chapter 2, the five most common direct financing instruments (debt and equity based) to finance transport infrastructure projects are *murabahah, ijarah, istisna, mudharabah,* and *musharakah.* These financing instruments can also be securitised as *sukuk*.

4.2.1 Debt-based financing instrments (*murabahah, ijarah,* and *istisna*)

Participants from the Islamic bank group mutually agreed that *murabahah* is commonly used in Islamic banking for short term financing and never to finance a long term project. Participants B1 and B2 state that the *murabahah* characteristic to set the transaction price in the early agreement stage makes it difficult for investors or lenders to calculate the cash flow projection, considering the large variables in long-term infrastructure construction projects. B1 further argues that it is difficult for Islamic banks to calculate margin price and market volatility for a long-term period of investments. However, according to participant B1, a number of Islamic banks in Indonesia are financing micro hydro power plant projects using a *murabahah* arrangement.

Ijarah and *istisna*, on the other hand, are notable for financing infrastructure projects. B1 states that Islamic Banks in the Middle East tend to use *ijarah* scheme, not *murabahah*, to finance long-term projects. A1 added that a *ijarah* transaction is free from the market volatility because the price of leasing is agreed upon contracts, and to finance long-term projects, *ijarah* combined with *istisna* is much simpler to structure than equity-based financing, such as *mudharabah* and *musharakah*. In practice, according to A1, *ijarah* is combined with an *istisna* instrument when financing infrastructure projects. However, from the interview data, there are no transport infrastructure construction projects in Indonesia that have been financed through *ijarah* arrangements.

Through *istisna* agreement with the government of Indonesia (GOI), the Islamic Development Bank (IDB) is currently financing a reclamation work of the Belawan port project in Medan. On the government side is Ministry of National Development Planning, Ministry of Finance, and Ministry of Transportation, who act as the project agent. IDB also formed *istisna* agreement with GOI to finance a regional road development project in Central Java. Government agencies for this project are the Ministry of Public Works and Ministry of Finance. According to participant G4, *istisna* financing should cover civil works and consultancy services for three road sections: from Tambak Mulyo to Wawar, from Wawar to Congot, and from Girowoyo to Duwet.

Participants B1, B3, and A1 have the same opinion that *istisna* is a common agreement that is suitable for financing Greenfield construction projects. B3 and C1 have contradicted opinion on the application of *istisna* in the Indonesia Islamic finance industry. B3 stated that *istisna* is not favoured by investors or banks in Indonesia because the return is generated after the project is finished. On the contrary, C1 stated that during his experience in Islamic banking, they often financed private projects through *istisna* agreement. B4 also added that MSI (a private Islamic bank in Indonesia) has financed micro hydro power plant projects through *istisna* agreement.

Key findings:

- *Murabahah* is widely used by Islamic banks for short-term financing, and is not suitable for financing large and long-term projects.
- Islamic banks in the Middle East tend to use *ijarah* agreement to finance long-term projects.
- *Istisna* is a common agreement that is suitable for financing Greenfield construction projects.
- *Ijarah* is usually combined with *istisna* agreements in the post-construction phase.

4.2.2 Equity-based financing instruments (*mudharabah* and *musharakah*)

Participants from the GOI indicate that the GOI has never received direct finance through *mudharabah* or *musharakah* schemes from investors to fund infrastructure projects in Indonesia. Even in the banking industry, according to the participant from Islamic banks, equity-based financing had never been their first option to provide capital.

Participant B4 stated that MSI never financed projects using an equity-based scheme due to the nature of profit-loss sharing where the bank would be exposed to a high level of risk. Participant B3 also added, based on the participant's experiences in Islamic micro banking, consumer, and commercial banking, *mudharabah* is not favourable in Indonesia. Contradicting participant B4's statement, participant B3 indicated that the banks hardly formed *mudharabah* agreement because it is still under-regulated by the financial services' authority (OJK). Furthermore, participant B3 explained it is difficult for stakeholders in Indonesia to use *shariah* compliant equity-based financing because even though *shariah* compliant state-owned banks may have the capabilities, sometimes the obstacle will be on the customers' side. BSM (a state owned Islamic bank), according to participant B1, is currently unwilling to finance using *musharakah* or other equity-based instruments because of the exposure to displace commercial risk and undeliverable risk.

Musharakah is considered to be suitable for financing infrastructure projects by the majority of participants. Participant B3 stated this scheme is compatible when financing projects for a long-term period but it is uncommon in Indonesia's Islamic banking practice. However, as stated by participant B4, in 2014-2015 MSI was trying to participate in the expansion project of Soekarno-Hatta airport terminal 3 through *musharakah* agreement with Maybank Indonesia and Angkasa Pura, but ended their involvement due to an unmatched pricing agreement with the state-owned enterprise (SOE) promoting and managing the project.

Key findings:

- Islamic banks in Indonesia never finance transport infrastructure projects using equity-based instruments.
- The high risk in equity-based financing instruments makes lenders or investors hesitant to conduct transaction using them.
- Use of under regulated, equity-based, *shariah* compliant financing instruments such as *mudharabah* in Indonesia, is also one of the reasons for Islamic banks' hesitation.

4.2.3 Islamic bonds (*sukuk*)

The government of Indonesia can finance infrastructure projects using *shariah* compliant instruments in two main ways. The first method is by seeking direct finance from external sources; an example has been given above where GOI formed an *istisna* agreement with IDB to construct projects in exchange for financing. Another way is by issuing Islamic bond or *sukuk* to pool money from local and foreign investors, and use the funds to finance government projects.

Participant G1 states GOI issues *sukuk* in four different *aqad* (contract structure): *ijarah* (sale and lease back), *ijarah* (asset to be leased), *ijarah al-khadamad* (*hajj* fund), and *waqalah*. From these four structures, the government diversified *sukuk* instruments in accordance to the issuance method, e.g., auction, private placement, and bookbuilding (Sovereign *Sukuk* Manual Book, 2014). Table 4.2 shows the variety of sovereign sukuk instruments based on their structures, underlying assets, method of issuance, and tenor durations.

Interview data suggested that Project Based *Sukuk* (PBS) is the type of *sukuk* utilised to finance public transport infrastructure projects in Indonesia. Participant G3 notices, even though there is no mandate from the government that obliges *sukuk* financing for infrastructure development, the trend to use *sukuk* for project finance is increasing. Participant B2 added that the government has issued an increasing volume of sovereign *sukuk*, including foreign currency (FCY-denominated) *sukuk*, each year, and they are appealing to the international market.

Table 4.2: Sovereign *Sukuk* in Indonesia (source: Sovereign *Sukuk* Manual Book, 2014)

	Sovereign Sukuk					
	Domestic market					International market
Sukuk type	Islamic Fixed Rate	Project Based *Sukuk*	Shariah Treasury Bills	Hajj Fund *Sukuk*	Retail *Sukuk*	*Sukuk* Negara Indonesia
Structure	• Ijarah Sale & Lease Back • Ijarah Asset to be leased • Wakalah	• Ijarah asset to be leased	• Ijarah Sale & Lease Back • Ijarah Asset to be leased • Wakalah	• Ijarah al-Khadamat	• Ijarah Sale & Lease Back • Ijarah Asset to be leased • Wakalah	• Ijarah Sale & Lease Back • Ijarah Asset to be leased • Wakalah
Underlying	• State owned asset • Government project	Government project	• State owned asset • Government project	Hajj fund management	• State owned asset • Government project	• State owned asset • Government project
Issuing method	• Bookbuilding • Auction	• Auction • Private placement	• Auction • Private placement	Private placement	Bookbuilding	• Auction • Private placement
Tenor	medium - long	medium - long	6 months	-	3 - 3.5 years	5 - 10 years
Tradability	Tradable	Tradable	Tradable	Non-tradable	Tradable	Tradable
Description	Intended for institutional investors	Intended for institutional investors	Intended for Islamic financial market and fund management	Intended for *hajj* fund management	Intended for retail investors	Intended for international markets

Participant G1 stated the government has used *sukuk* to finance construction of social infrastructure facilities for Ministry of Religion, railway tracks for Ministry of Transportation, roads and bridges expansion projects for Ministry of Public Works in 2013-2015. Participant G3 made further comments that railway construction is not complicated to finance using *sukuk* because the land already belongs to the government. Participant G4 added that in 2015-2016, the Ministry of Public Works used *sukuk* fund to finance several road and bridge projects. Most of the projects were expansion and maintenance works.

In terms of using *shariah* compliant financing instruments, both participants G1 and G3 state the GOI is focusing on using *sukuk* to finance railway and road maintenance or expansion projects because of the requisite of *shariah* compliance to avoid uncertainty in land acquisition status. From the first time *sukuk* was used to finance infrastructure projects, the GOI has never financed airport or seaport projects using *sukuk*. Participant G3 elaborates, because airports and seaports in Indonesia are controlled and maintained by the state-owned enterprises where asset transfer to third party are not allowed in *sukuk* issuance.

Participant G3 perceives obstacles in the attempt of financing large infrastructure projects using *sukuk*. The requirement to have physical assets for underlying in *sukuk* issuance hinders the fund from *sukuk* issuance to be used for finance preparation and technical assistant works such as detailed engineering design or feasibility study. This requirement also hinders *sukuk* to be used in a project situation where the land status of ownership and function is still unclear for the reason that *ijarah* and *waqalah* structured *sukuk* have to have physical assets to be leased.

At the time of data collection, participants G1 and G2 state that *sukuk* can only commit to finance a single year contract project. This means if the project is projected to finish in multi-years, the government needs to renew the contract annually. However, this is subject to change as the Ministry of Finance is preparing and planning to commit for multi-years' projects as long as the project is well prepared.

To some extent, as stated by participant A1, the central government is currently preparing legislation for the municipal government to lawfully issue municipal *sukuk* to provide financial resources for their local projects.

Key findings:

- PBS issued by the Ministry of Finance is the type of *sukuk* to finance public transport infrastructure projects in Indonesia.
- *Sukuk* in Indonesia has been used to finance road, bridge, and railway projects. The Ministry of Finance cannot finance seaports and airports using *sukuk* because those infrastructures are operated and maintained by state owned enterprises.
- Currently, *sukuk* is only able to finance single year contract projects. It can finance multi-years' projects but the contract needs to be renewed at a minimum of once a year.

4.3 TYPE OF TRANSPORT INFRASTRUCTURES FINANCED USING *SHARIAH* COMPLIANT FINANCING INSTRUMENTS

Participant G4 stated that the Ministry of Public Works have road and bridge projects financed using sovereign *sukuk* in 2014 and 2015. Participant G4 stated further that IDB with the Ministry of Public Works has formed *istisna* agreement to finance a regional road development project in Central Java. Government agencies for this project are the Ministry of Public Works and Ministry of Finance. According to participant G4, *istisna* financing covers civil works and consultancy services for three road sections: from Tambak Mulyo to Wawar, from Wawar to Congot, and from Girowoyo to Duwet.

Sukuk financing also has been used to finance railway projects. Participant G3 felt that railway projects are more preferable for the government to finance using *sukuk* than other mode of transportation infrastructure due to the reason that railway sections and the land where they exist is already a government asset. The first infrastructure project ever financed using sovereign sukuk in Indonesia was the construction of a double track railway Cirebon – Kroya route. In the following year, 2014, the government financed another double track railway construction using *sukuk* route Manggarai – Jatinegara. Furthermore, in 2015, the government has allocated budget of IDR 2.924 trillion from *sukuk* sales for railway constructions in Jakarta, Central Java, and Sumatra.

As indicated by participant G3, seaport and airport projects are currently unable to be financed using *sukuk* due to them being managed by the state-owned enterprises (SOE). In *sukuk* transaction, the asset cannot be transferred to a third party. It is not lawful in *sukuk* transaction for a government (i.e. Ministry of Finance) to finance the project and then transfer the facilities upon project completion to the SOE.

Even though seaports cannot be financed using *sukuk*, the GOI has another way to finance them using *shariah* compliant instruments. The GOI formed *istisna* agreement with Islamic Development Bank (IDB) to develop Belawan Port project. In the agreement, according to participant C2, this project is the pioneer infrastructure project for IDB to finance in Indonesia. However, due to economic and financial conditions, IDB currently only finances the reclamation work with future planning on financing the port construction as well. After the project is finished, the government will give the concession to Pelindo 1 (i.e. SOE that manages seaports) to manage and operate the port, while the revenue generated from the operation would then be used to recover the investment.

MSI (one of the private Islamic banks that operate in Indonesia) was trying to participate to finance the Soekarno-Hatta Terminal 3 Airport expansion project but participant B4 revealed that the parties involved were not able to agree on the price. The participant expressed that the SOE was unable to accept the low rates offered by MSI because the Parliament would question them if they accepted it. In Indonesia, SOE is accountable to report their activities to the Ministry of State-Owned Enterprises and to the House of Representatives. Participant I1 commented it is uncommon in regard of private investors to invest in Indonesian airport, seaport, and railway projects because of the strong presence of SOE in these public infrastructures.

Key findings:

- S*ukuk* issued by MOF can be used to finance railways, roads and bridges projects.
- *Sukuk* cannot be used to finance projects where the SOE would manage the infrastructure operations such as airport and seaport.
- The GOI has formed *istisna* agreement with IDB, as the financer, to deliver the development of the Belawan Port project.

4.4 RISKS IN *SHARIAH* COMPLIANT FINANCING

Participants from Islamic banks and academics share the mutual opinion that the risks in *shariah* compliant financing are similar with conventional financing. Participant B1 elaborates that in terms of business and financial analysis to identify risks, an Islamic bank operates as a conventional banking operates. On the government side of operations, risks in issuing *sukuk* for project financing are similar with the risks in issuing government bonds or receiving loans for the same purposes.

Most of the participants agreed that each *shariah* compliant financing instrument is exposed to different risks because each of the instruments have different structures. Therefore, both borrowers and lenders are exposed to different sets of risks. The interviews have revealed a number of different types of risk associated with *shariah* compliant financing. Using the classification of risk produced in Table 2.2, the list of risks mentioned by participants is grouped into four different risk categories. Table 4.3 remarks on the risks identified from the interviews. This research also discovered two risks that are not covered in literature reviews, which are country risk and reputation risk, and classified them into an additional risk category.

4.4.1 Risks in Institutional and Regulatory Environment

Legal and compliance risk

A common view amongst participants was that the GOI tends to fall behind in regulating the rules and laws associated with *shariah* compliant financial activities. *Murabahah* transaction was previously burdened by the double taxation treatment because of the two sale transactions to transfer the asset to the borrower (purchaser). According to participant B2, the tax treatment led the market to protest because of the confusing law and procedures, and gave a disadvantaged position for Islamic banking to compete with conventional banking industry.

Another concern of Participant B3 in regard to legal risk in Islamic banking is the dispute settlement in the Religious Court. However, from 2008 to 2013 there were contradicting articles in the law that allowed the District Court the same authority to resolve Islamic banking disputes. Through judicial review in 2013, the Constitutional Court of Indonesia invalidated the Article 55 (2) & (3) 2008 of *shariah* banking, and gave the Religious Court full authority to settle Islamic banking and all *shariah* related disputes and removed the District Court jurisdiction. This decision further cemented the existence of the Religious Court in Indonesia; on the other hand, it raises another concern to participants from Islamic banking. Many doubt the ability of the Religious Court in resolving commercial disputes due to their lack of experience in commerce and financial law, and to eliminate the hesitation, Participant B3 further added that the Islamic banking industry is partnering with the government to establish a credible commercial court system within the Religious Court through several measures, such as providing education and training related to *shariah* compliance commerce practice for the key persons working within the Religious Court judiciary system.

The government of Indonesia also had faced legal proceedings related to the use of state assets as underlying in *sukuk* transaction in 2009. Fortunately, the Constitutional Court decided not in favour, with the individual challenged on the law of using public assets, as underlying for *sukuk* issuance may impair the constitutional rights to use the particular public asset if the government has failed to repay the return for *sukuk* investors. Participant G1 strongly made an indication that sovereign *sukuk*, in regard to law, has been thoroughly governed and regulated by the law even in the Presidential Decree. Participant G1 added that legal issues associated with government bonds and *sukuk* are different. Before the enactment of State Law No. 19/2008 of state *shariah* compliant securities, there was no governance that defined the differences of beneficial ownership of government assets with legal ownership status.

These results suggested that whether in projects financed using *shariah* compliant instruments by the Islamic bank, non-bank financial institution or the government, there are possibilities of legal risk occurring in *shariah* compliant financing.

4.4.2 Risks in Market Environment

Credit and counterparty risk

Credit risk or counterparty risk in Islamic banking or conventional banking operation is common, as long as it involves two parties. Participant B3 described some notable examples of activities that may lead to credit risk in Islamic banking, for example when the borrower defaults in repayment to the lender, fraud activities or management issues in the counterpart. Participant B2 added that not only the lender, but also the borrower, can be exposed to counter party risk in the situation such as the lender being unable to meet their agreed commitments.

Infrastructure project financing through *sukuk* issuance involved a large number of investors. Participant A1 emphasises the availability of government in repayment to investors is very crucial as it can damage the government reputation as well. The situation where the government is unable to repay a reward to investors is beyond the bounds of possibility because, as stated by participants from the government group, *sukuk* investors are guaranteed through regulation to receive rewards. The debt-based instrument, *murabahah* as an agreement of trade, is also exposed to credit risk.

Currency risk

The government or Islamic banks will be exposed to currency risk if they come into a financial transaction in foreign currency. In the issuance of SNI (*Sukuk Negara Indonesia*, i.e. foreign currency denominated sovereign sukuk for international markets), the government faces currency risk unless, participant G2 adds, the positions are hedged.

Participants B2 and B4 also acknowledge if foreign currency is used either in sovereign sukuk issuance or loan agreement with a foreign party, and the source of income in Indonesia is in rupiah, the government should be aware of the currency exchange risk. Participant C2 gave an example of how the volatility of the Rupiah exchange rate affects *shariah* compliant projects financing, where IDB reconsidered their plan from financing the port construction of Belawan projects to the reclamation work alone.

Liquidity risk

Participant B1and B3 from the Islamic bank group state that liquidity risk is one of the risks faced by Islamic banks. However, with the recent government regulation that obligates a *hajj* fund to be managed by Islamic banks, participant B1 believes this policy will increase the balance sheets and assist Islamic banks in liquidity constraint.

To date, according to participant G1, *sukuk* is an illiquid investment instrument in a secondary market. Participant G1 and G2 stated one of the reason *sukuk* is illiquid because of the investors' passive investment strategy, for example, several SNI investors are mostly from Middle East (ME) countries and ME investors on average exhibit the behaviour of holding their *sukuk* until maturity date rather than trade them in the secondary market.

Participant G2 criticised the small number of *sukuk* investors as another reason why *sukuk* trading is inactive in the secondary market. The participant further suggested that the GOI can assist the *sukuk* market to be active by giving an interesting tenure to investors and providing a dedicated fund to grow the *sukuk* market and maintain *sukuk* liquidity.

Market risk

No participants from banking sectors mentioned market risk during the interview. However, participants from the government group indicated market risk as one of the concerns for the investors when trading *sukuk* in the secondary market. An increase in market interest rates will cause *sukuk* to be less attractive for investors and lower their price in the secondary market.

Participant G2 elaborates that the government considers market conditions, domestic and global economy as factors that would affect the cost of sovereign *sukuk* issuance. In a condition where the government has foreseen economic shifts into an unfavourable market in the future, the government would engage front loading. The participant G2 affirms this case occurred in 2015; to anticipate foreseeable economic downturn mid-2015 the government issued *sukuk* in high volume at the beginning of the year when the market was more active.

4.4.3 Risks in Project and Structuring

Planning risk

Planning risk is a subset of construction or operational risk. Participant I1 stated that coordination and planning are considered to be ‘expensive’ in government projects. There are boxes in the government between ministries. The participant further suggested that the Ministry of National Development Planning has to be the coordinator between other ministries in public infrastructure construction projects to eliminate the uncertainty in coordination between project stakeholders.

Project and operational risk

Any uncertain events or conditions that have an effect on at least one of the project objectives are defined as project risk. The majority of participants define that project risk can be synonymous as operational risk or construction risk. Participant C1 states that non-deliverable risk in *istisna* agreement is a subset of project risk.

The Ministry of National Development Planning is responsible to assess the project risk in every public infrastructure project while the financial risk is assessed by the Ministry of Finance. Participant G2 provides an example of recurring issues in the planning and construction phases of government projects. One of them is that the long process of procurement in every government project sometimes delayed the project.

Another crucial issue that was indicated by all of the participants relating to government projects is the land acquisition phase. The result of interview analysis regarding land acquisition and purchase problems is discussed in section 4.6.2 of this chapter.

4.4.4 Risks in *Shariah* Compliance

Shariah compliance risk

All of the participants agreed that *sukuk* transaction or other *shariah* compliant financial transactions are vulnerable to *shariah* compliance risk. Every *sukuk* product developed by the government went through the National *Shariah* Board (NSB) for approval. NSB has issued *shariah* compliant guidelines to assist governments to evaluate the project proposed to be financed using *sukuk*. Participant G3 stated that practically all of the public infrastructure projects have already complied with *shariah*.

However, participant G1 stated the interpretation and ruling from NSB is conditional based on the source materials. The ruling judgement of Islamic financial products is based on *fatwa* where there are possibilities of *fatwa* to be withdrawn or replaced. Therefore, current lawful *sukuk* structures may not be *shariah* compliant in the future. Participants G2, A1, and C1 gave an example case where in 2008 *Mufti* Muhammad Taqi Usmani, a globally recognised Islamic scholar, criticised *musharakah, mudharabah,* and *istisna* structured *sukuk* available in the international market as not compliant with *shariah* law. His statement alone led to a sharp decline in the number of global *sukuk* sales in the following years. This case has shown that the present valid *shariah* compliant financing instruments might be ruled to fail to meet *shariah* requirements in the future and would have an impact on the investors' level of confidence with the instrument.

4.4.5 Additional Risks

Country risk and political risk

Country risk, as understood by participant B2, includes riot, natural disaster, and regime change. However, the participant further commented that these situations are considered as uncertainty instead of risk. Participant C2 has commented that the movement of officer from IDB to the MoF may influence the opening of IDB branch office in Jakarta in 2014. It has been seen as political influence on strengthening the Islamic financing presence in Indonesia. The participant suggested that the influence of politics in the government could affect the presence and growth of the *shariah* compliant financing industry in Indonesia.

Reputation risk

To a business or government, damages to their reputation will create negative images in investors' expectation. The government is able to replace underlying projects in *sukuk* contract with another project that has the same value in a case where the first project defaults. However, even though such mitigation process is acceptable, participant G1 argues the investors will question the government credibility in fulfilling their commitment.

Participant B3 emphasised that the reputation risk is very vital because once it is exposed it will create a ripple effect and trigger other risks. Participants C1 and G2 mentioned the reputation risk issue by giving an example of a Dubai project case but not in detail.

Table 4.3: Major remarks on the identified risks in *shariah* compliant project financing

Risk Classification	Type of risk	Remarks
Institutional and Regulatory Environment	**Legal risk**	• The GOI is not responsive in regulating the policy and law for *shariah* compliant financial activities. • Participants from Islamic banks have concerns about the ability of the Religious Court to settle commercial disputes in the industry.
Market	**Credit and counterparty risk**	• In Islamic banking, both borrower and lender are exposed to credit risk that is similar to conventional banking. • In sovereign *sukuk* issuance, default risk of the government unable to repay investors would damage government reputation.
	Currency risk	• GOI is exposed to currency exchange risk in SNI (i.e. FCY-denominated *sukuk* for international market) issuance. • The currency exchange rate has made IDB reconsider financing all the whole construction project
	Liquidity risk	• Exposure to liquidity risk in Islamic banks is lower due to GOI policy on *hajj* funds to be managed by Islamic banks. • For investors, *sukuk* is still considered as an illiquid investment instrument due to a passive secondary market
	Market risk	• Both domestic and global market conditions are affecting the attractiveness of *sukuk* to investors
Project and Structuring	**Planning risk**	• Planning and coordination between ministries are scarce in government projects.
	Project and operational risk	• Land acquisition and procurement process are the common issues that are included in government project risk
***Shariah* Compliance**	***Shariah*-compliance risk**	• A present valid *shariah* compliant financing instrument is still at risk of being ruled not compliant to *shariah* in the future
Additional risks	**Country risk**	• Riot, natural disaster, and regime change is included in country risk. • Politics influence could affect growth of *shariah* compliant finance industry.
	Reputation risk	• Both bank and government are exposed to reputation risk

4.5 FACTORS AFFECTING THE UTILISATION AND GROWTH OF *SHARIAH* COMPLIANT PROJECT FINANCING

Interview participants also revealed critical factors that they recognised influencing the growth of general practice of *shariah* compliant financing and also for financing transport infrastructure projects in particular. The factors that are presented in this section may pose a challenge or a benefit to the industry. These factors are the land acquisition process during the pre-construction phase of government projects, the presence of the National *Shariah* Board in Indonesia, the available human capital in the industry, international and domestic markets' appetite for *shariah* compliant investments, taxation and regulatory quality, inclusive additional cost in complying with *shariah*, and limitation of fund resources in Islamic banking. Table 4.4 summarises the factors and influences indicated by participants.

Land acquisition

Participants from the government constantly mentioned that disputes during land acquisition in the start of the project may hinder the project to finish according to schedule. Participant G2 reported that from 2013 to 2014 there are numbers of government projects delayed mostly due to the reason that the land is not yet acquired and permitted for work to commence. In talking about this issue, Participant I1 from outside the government also indicated that the land acquisition phase is very crucial to address in transport infrastructure projects. Furthermore, to issue *sukuk* the process of land acquisition has to be completed first before the asset can used as underlying.

National Shariah Board (NSB)

The NSB in Indonesia has an important role in assisting the Islamic banks or the government as issuers of *sukuk*. The participants mutually agreed that Islamic scholars have a strong influence on the validity of financing instruments to *shariah* law. An example of an international case that has been stated by several participants is the declining global *sukuk* sales after Mufti Muhammad Taqi Usmani criticised that *sukuk* in *mudharabah* and *musharakah* were not complying with all the precepts of *shariah*.

Participants A1 and C1 expressed that the existence of NSB can minimise the risk of disagreement between scholars and reassure investors of the investment instruments complying with *shariah* law. It can be suggested that with the NSB, meeting *shariah* compliance requirements were made more stringent but more certain in contrast to other countries, such as Malaysia, where the scholars issue *fatwa* and opinion in regard to Islamic financial industry independently. The high certainty of *shariah* compliant instruments to comply with Islamic law is one of the edges of Indonesia's Islamic finance industry compared to other countries.

According to C1, the NSB has two primary roles associated with *sukuk* issuance. First is to issue *fatwa* as a foundation for the government to issue *sukuk* with certain structure. Second is to publish a *shariah* compliance statement after the government has set the projects to be financed. To publish the statement, the NSB reviews whether the project and the *sukuk* fulfil the *fatwa* and then issue the statement. This procedure is required every time the government is going to issue a new *sukuk* type.

The NSB does not play a direct role in Islamic banking operations. Every Islamic bank in Indonesia has their own *shariah* supervisory board to issue a *shariah* compliance certificate for every financial product produced by the banks as regulated by the government and complied with *fatwa* issued by the NSB. Participant B3 has positively remarked about the presence of the NSB and the *shariah* supervisory board in the industry to prevent *fatwa* shopping activity. The participant further expressed the view that the establishment of the *shariah* supervisory board is already properly governed. This finding has important implications for developing the human capital and the National *Shariah* Board to advance the Islamic finance industry in Indonesia.

Human capital

Overall, participants indicated that the collection of resources (e.g. related experiences, education, skill sets, etc.) possessed by the population in the industry does not significantly affect *shariah* compliant finance growth in the market. Even though the minimum of resources available does not necessarily inhibit the industry growth, participant A1 stated that it would be better if the GOI supported the investment to enhance the skill set and knowledge of the professional and government staffs working in the industry through education and trainings. Participant B4 made the same statement implying that it is necessary for the people to have basic knowledge of *shariah* economy and finance or the network to tap into the *shariah* compliance fund from petrodollar countries to see the successful implementation of *shariah* compliant financing of transport infrastructure projects in Indonesia.

Several participants stated that the government and Islamic bank are experiencing difficulty in finding qualified and experienced professionals to sustain the growing industry. Participant B1 deplored that Islamic banking is in shortage of experienced employees for positions such as relationship manager or credit analyst. Another observation was made by Participant G1 that there is still room for improvements in the ability of stakeholders to understand the aspects of *shariah* and the aspects of project financing with *shariah* compliant financial instruments. The current situation is that professionals with different knowledge are collaborating and this can be improved by sharing the knowledge in courses or training that educates the stakeholders of *shariah* compliant project financing. Even the Indonesian Financial Services Authority (OJK) is having difficulties in finding qualified professionals for their *shariah* unit.

Market conditions

There are many ways for Indonesia to receive *shariah* compliant investment from foreign countries. Participant B3 described that project promoters can raise money through various *shariah* compliant investment vehicles from *hajj* fund to issuing *sukuk*. *Shariah* compliant financing instruments have high potential and diverse innovative structures.

Most of the participants agreed that *sukuk* sales in the domestic and international markets are increasing. Participant G1 from the Ministry of Finance admitted *sukuk* issuance has met with huge investor interest and ended up being oversubscribed on several occasions. The government has concern not to over issue *sukuk* in the international market, which would eventually lead to an increasing debt in the government portfolio and exposure to currency exchange risk.

Even though sovereign *sukuk* sales are increasing, the market share of countries' Islamic banks has remained low. Participant A1 identified that the Muslim Indonesian population still reluctant carries out transactions through *shariah* compliant banks despite that the *fatwa* has stated *riba* (interest transaction) practised by conventional banks is prohibited in Islam. Therefore, efforts from the government to promote and raise people's awareness of *shariah* compliant transaction that would provide long term advantages are necessary. Incentives and tax relief programs are also expected from the government by the industry because without equal market condition the infant Islamic banks would not be able to grow and compete in the market shared with the established and mature conventional banking industry.

Taxation and regulatory quality

Shariah compliant financial transactions and products are relatively new as well as the laws and tax policy that is imposed on them. Participants from Islamic banks reported that the Government is supporting the *shariah* compliant financial industry with effective regulation that creates equal conditions for Islamic banks to compete with conventional ones, even though in the past, several Islamic bank products that have multiple transactions, such as *murabahah,* had been imposed with multiple tax treatments. However, the participants stated that the support from the government always came at a considerably slower pace.

In regard to the tax issue, Participant G2 added that unlike selling bonds with a simple transaction, a *sukuk* sale has multiple transactions because of several number of *aqad* (contracts) and multiple asset transfers, which can make each transaction subject to repeated instances of taxation. The participant considered that without imposing tax adjustment to not only *sukuk* transactions, but also to the *shariah* compliant financial products and activities from insurances to capital markets, the industry would not be able to grow. *Shariah* compliant financing industry will continue to grow and innovate, so lawmakers and the authorities need to cope with the rapid changes and treat them equally to the conventional financing industry.

Additional cost

Structuring financial transaction to comply with *shariah* law can be complicated and cost more than conventional law. Unlike issuing government bonds, when issuing *sukuk* the government needs to hire a consultant and have gone through several reviewal processes with the NSB. This affects the duration as well; participant G2 gave an illustration that if issuing government bonds takes four weeks, issuing *sukuk* takes an additional two weeks. Extra documentation for every *aqad* has to be thoroughly prepared. However, the participant further commented although there are extra costs and duration to issue *sukuk*, it still can compete with the government obligation market. Participant G1 specifically indicated that issuing SNI (i.e. FCY-denominated sovereign *sukuk* for international markets) costs more money than issuing *sukuk* to the domestic market. Participant A1 also commented that for obtaining a *shariah* compliance statement for an asset to be leased, the *sukuk* structure took a series of back and forth review processes by the NSB.

However, compared to taking out a foreign loan or grant to finance infrastructure projects, *sukuk* can be more cost efficient. Most of the time in foreign or multilateral lending agreements, the project has to involve a foreign consultant or contractor where they charge more than local hire. Using *sukuk* fund to a finance project, the government has the flexibility to minimise foreign cooperation. Participant G3 commented that the above related situation occurred when the government financed double track railway Cirebon – Kroya and Manggarai – Jatinegara projects using *sukuk*.

Preparing a *shariah* compliant financial product with multiple transactions for Islamic banks also costs more money. In *murabahah* there are many transactions conducted; each transaction would also cost extra for legal preparation, moreover, a conventional legal advisor would not normally understand the legal obligation. Previously, these multiple transactions were taxed by the government. As such, Participant B4 pointed out that *aqad* structuring in *shariah* compliant financing instruments requires multiple levels of works.

Limitations of shariah compliant funds in Islamic banks

Islamic banks are regarded as access points to Islamic capital sources for financing transport infrastructure projects. However, as all Islamic banks in Indonesia are commercial banks, their capital resources are limited from their customers' (third party) short maturity funds, such as deposits or saving accounts. The majority of participants from Islamic banking groups mutually agreed that using short-term funding to finance long-term and large-scale projects such as transport infrastructure construction will consequently expose the debtor to an asset-liability mismatch.

Traditionally, an Islamic bank can facilitate a syndicated loan to overcome the limited funds for financing long term projects either by forming a group with other Islamic banks or conventional banks. However, a number of issues were identified when Islamic banks form syndication. Participant B1 commented that in a case where Islamic banks are syndicating with conventional banks, there are the possibilities of unequal treatments in the structuring. Another issue was raised by both Participant B1 and B3; they both commented that the total assets of all Islamic banks forming syndication in Indonesia are not capable of financing a large infrastructure project. Indonesia's Islamic banks can try to form syndication with overseas Islamic banks, but this also is not an effortless option. Islamic banks in other countries might have different schemes and practices to Indonesian banking. Participant B1 gave an example where in the Middle East, Islamic banks do not use *murabahah* for long-term financing because of the fixed price nature of the instrument, but in Indonesia, *murabahah* can still be modified. The scheme differences in both the local and foreign *shariah* compliant financial industries are a constraint in forming syndication with overseas banks.

Participant B1 suggested that the inability to finance long-term and large value infrastructure projects can be solved by allowing commodity *murabahah* or *tawarruq* in Indonesia. In Malaysia and the Middle East, lots of Islamic banks conducted *tawarruq* even though this transaction is deemed highly controversial because of the mixed opinion of scholars. *Tawarruq* is prohibited in Indonesia by the NSB because it is made up transactions of commodity trade intended to obtain cash.

Table 4.4: Factors affecting growth of *shariah* compliant financing industry

Factors	Relevant influences summarised from the interview
Land acquisition	• Unable to acquire land clearance for work in the early phase of a project would risk and undermine the project in abiding the *shariah* law
National *Shariah* Board	• Islamic scholars and the National *Shariah* Board in Indonesia have a strong influence in validating *shariah* compliant financing instruments and on the market. • The presence of the NSB prevents fatwa shopping activity and the rise of disagreement between Islamic scholars.
Human capital	• Lack of human resources does not necessarily hinder the growth of Islamic finance industry.
Market conditions	• Lots of untapped *shariah* compliant funds from the Middle East. • Sovereign *sukuk* sales are increasing in domestic and international markets. • Market share of Islamic bank remained low. • Government support for Islamic bank such as tax relief and promotion is necessary to expand Islamic bank market.
Taxation and regulatory quality	• *Shariah* compliant financing has multiple transactions and each transaction has tax imposed to it. • Tax treatment for *shariah* compliant financial products are improving slowly but steady. • *Shariah* compliant financing industry innovates at a rapid pace, therefore the policy makers have to elevate their level of issuing effective and equal policy at the same pace to sustain the industry growth.
Additional cost	• It requires additional cost and longer duration to structure *shariah* compliant financial instruments, though the additional cost and time are not significant. • There is extra documentation and several reviewal processes in *sukuk* issuance that would add extra cost • Financing infrastructure projects using sukuk funds is more cost efficient than using foreign loans because of the flexibility to minimise foreign cooperation.
Limitations of funds in Islamic bank	• Domestic Islamic banks are currently unable to finance long term and large value transport infrastructure projects because their capital resources are from customers' short-term maturity funds such as deposits and saving accounts. • Current total assets of Islamic banking industry do not have the capacity to facilitate syndicated loans for financing large and long-term projects.

4.6 MEASURES TO ADDRESS RISK IN SHARIAH COMPLIANT FINANCING FOR TRANSPORT INFRASTRUCTURE PROJECT

During the interviews, participants were encouraged to share and provide solutions to the counter challenges that have been addressed or the way to mitigate risks that have been mentioned. However, not all of the participants had the experience or the knowledge related to risk management nor had all of the risks identified been provided with real solutions. Therefore, this section only presents the countermeasure for project and operational risk, currency risk, market risk, *shariah* compliance risk, legal risk, and land acquisition challenge. This section separates the interview results between participants from the Islamic bank and participants from the government.

4.6.1 Islamic banks' approach to manage risks

Before agreeing to facilitate a loan, Islamic banks will assess the management performance of their counterpart. The bank will cross check and analyse the prospective borrower's track record, their management character, and their capability in handling the projects. Participant B4 added that the bank will also review the counterpart capability to fulfil its contractual obligations. The bank will look, in detail, at their revenue pricing model, forecast income and the market demand.

Islamic banks also put currency risk into consideration when lending money to finance a project. In terms of risk associated with currency exchange, Islamic banks analyse rupiah performance to the US dollar and whether the project will use foreign currency. Another necessity is to manage the project and its operational risk. Related to this term, the bank will assess the contractor portfolio and history, the latest technology to be used and their impact of performance. Islamic banks also contract a third party consultant to review and monitor the project progress. Essentially, participants from Islamic banks stated that managing risks associated with *shariah* compliant financing is similar to managing risks associated with conventional financing. However, they are different in terms of legal matters, according to participants B2 and B3, where a transaction in *shariah* compliant transactions consists of numbers of contracts (*aqad*) and has its own legal binding and court system.

4.6.2 Government of Indonesia approach to manage risks

To identify risks before issuing *sukuk* for project finance, the government conducted a trilateral meeting between the Ministry of Finance, Ministry of National Development Planning, and other involved ministries (i.e. the ministry associated with the project). This forum can be considered as the final review of the project, before proceeding to finance it with *sukuk*. This forum was recently initiated in 2015 to involve MOF in reviewing the project preparation. Previously, MOF was not involved in project preparation planning, however, after several internal difficulties in the construction during financing, MOF felt they needed to be considered and be included to monitor the project preparation. Participants stated that there is an increased rate of the project absorbing the allocated fund received from foreign loans and grants, after conducting trilateral meetings.

In the whole process, the Ministry of National Development Planning has the role to externally monitor the project procurement and construction progress conducted by the involved ministry and the MOF has a role in monitoring the financial spending progress. The relevant involved ministry as the project promoter has to report every one-to-three month to both the Ministry of National Development Planning and the MOF. This treatment is only applied to *sukuk* funded projects where non-*sukuk* funded projects are only evaluated internally by the project promoter. Participant G4 stated with the mandatory requirement to report monthly and quarterly to the Ministry of National Development Planning and the MOF, the projects become systematically administered.

Summarised from the interview data, several measurements are planned or conducted by the government to resolve the following issues:

Project and operational risk

If a *sukuk* funded project fails due to any reasons, the mitigation process taken by the government is by side-funnelling the funding to other projects currently running, with the same economic value. However, according to participant G1, this is not considered as a best practice and may affect the government's reputation. The participant further elaborates that this mitigation method is accepted from an Islamic point-of-view, but the consequences will lead to legal disputes in the ministry that has the responsibility as the project promoter. This situation would damage Indonesia's *shariah* compliant investment reputation.

In an event that the tangible asset cannot longer be used as underlying, the MOF can replace the underlying with another asset that has the same value. The process starts from the involved ministry reporting the asset situation to the directorate general of state asset management, and then they continue the report to the directorate general of *shariah* financing.

Currency risk

In the issuance of SNI (i.e. foreign currency denominated sovereign *sukuk* for international markets), the government faces currency risk unless, participant G2 adds, the positions are hedged. However, the participant did not clearly elaborate on how the government performed hedging to reduce the risk of adverse currency exchange movements.

Market risk

In a condition where the government foresees economic shifts into an unfavourable market in the future, the government would have a strategy called front loading. Participant G2 affirms that this case occurred in 2015, so to anticipate foreseeable economic downturn mid-2015 the government issued *sukuk* in high volume while the market condition still attractive.

Shariah compliance risk and legal risk

Predominantly, *shariah* compliance risk is mitigated by acquiring *fatwa* or *shariah* opinion from NSB. In a case where *sukuk* that has been issued were found not compliant with *shariah* law due to changes in the interpretation by the NSB, MOF has several arrangements for the *sukuk* investors affected by the situation. They would replace the *shariah* non-compliance *sukuk* belonging to the investors with other *sukuk* that are still credible, according to the NSB. Another arrangement could be that the MOF would buy back all the affected *sukuk* from the investors and reissue *sukuk* with the new structure that has been accepted by the NSB. However, this case situation has never occurred in Indonesia.

One way to mitigate legal risk in *shariah* compliant financing is to hire a notary, who is *shariah* compliant certified. Participants from Islamic banks shared that *shariah* compliant financing and conventional financing are different in terms of legal matter; for example, the contracts are consisted of multiple *aqad*, and have their own legal binding and own court system. B3 further adds stakeholders need to make a checklist of legal matters to mitigate the risk.

Land acquisition

Even though land acquisition is one of the preliminary tasks for infrastructure development projects, land status in *sukuk*-funded projects has to be cleared before financing commences, to reduce the element of uncertainty (*gharar*). The NSB has included the requirement of positive assurance of land cleared for projects in their guidelines No. 01/DSN-MUI/III/2012 of project criteria in accordance with Islamic principles.

4.7 SUMMARY

Thirteen participants contributed to the interviews, and for analysis purposes, the participants were grouped by four backgrounds (government, Islamic bank, academic, and consultants). The interviews explored the current practices in Indonesia of financing transport infrastructure projects using debt-based and equity-based *shariah* compliant financing instruments including *sukuk*.

This chapter identified risks associated with *shariah* compliant financing suggested from the interviews. Table 4.3 summarised the type of risks mentioned by each participant group. These risks are grouped into four categories based on the classification of risk that has been produced in Chapter 2. Legal risk is included in the institutional and regulation environment category. Credit and counterparty risk, currency risk, liquidity risk and market risk are included in the market category. Planning risk, project risk and operational risk are included in the project and structuring category. *Shariah* compliance risk is included in the *shariah* compliance category. An additional risk category is also included, due to the country risk and reputation risk mentioned by participants. Interview participants also revealed the factors that they perceived to influence or hinder the advancement of *shariah* compliant financing, as described in table 4.4. The interview data also has indicated the current Islamic bank and government approach to handling several identified risks.

On the basis of findings from interviews, the next stage of this research is to integrate the analysis results with the literature and provide exploratory discussion on the risks in *shariah* compliant financing as well as the feasible actions that can be taken by the involved party to reduce and manage risk exposure.

Chapter 5: Discussion

Section 5.2 presents the discussion of the stakeholders' preference of using a debt-based *shariah* compliant financing instrument rather than an equity-based financing instrument. Section 5.3 discusses how the government of Indonesia utilises *sukuk* for financing certain transport infrastructure projects. Section 5.4 outlines the discussion of what risks are associated with *istisna* and *sukuk,* the two particular *shariah* compliant financing instruments used in Indonesia. The last section of 5.5 discusses how the stakeholders manage those risks, and includes the suggestions from literature and those derived from this study.

5.1 *SHARIAH* COMPLIANT DEBT-BASED OVER EQUITY-BASED FINANCING INSTRUMENTS TO FINANCE TRANSPORT INFRASTRUCTURE PROJECTS

From the interview, it was found that the only transport infrastructure construction projects in Indonesia that have been financed using *shariah* compliant financing are road, bridges, railways, and seaports. Road, bridges and railway projects are financed using *sukuk* whereas seaport projects are financed using an *istisna* agreement.

Prior studies have noted that *murabahah* is the most used instrument in Islamic banks for short term financing (Aggarwal & Yousef, 2000; Ariss, 2010). In Indonesia, Islamic banks facilitated credit in the form of *murabahah* to industry for more than 55% of financing in 2010, and 74% of the loans went to micro, small, and medium business (Huda, 2012). However, even though it has been proven by Rarasati (2014) that *murabahah* can facilitate financing to mini-hydro power plant projects, the current study found that *murabahah* is not favoured by Islamic banks to finance construction of transportation facilities with large, complex and long term characteristics. Predetermined prices of the original cost and additional negotiated profit margin are difficult to measure for an extensive project horizon.

Islamic banks' preference to provide short-term loans using debt-based instruments such as *murabahah* rather than long-term financing with equity-based instruments (Aggarwal & Yousef, 2000; Ariss, 2010; Huda, 2012) inhibit their involvement in financing transport infrastructure projects. This phenomenon has also occurred in Indonesia's Islamic banks. Up until the time when the interviews were conducted, no Islamic banks have provided long-term capital loans for transport infrastructure construction. This finding has confirmed studies by Camacho (2005) and Jobst *et al*. (as cited in Abdullah, 2014) that reveal Islamic banks' reluctance to finance a long-term infrastructure project with relative tenure in over 10 years because it will impact the leverage of bank balance sheets.

The dominant form of using *murabahah*, which is convenient for short-term finance, in Islamic banks, is very likely due to their limited funding sources from the client short maturity deposits. Participants from Islamic banks agreed that using short-term funds to finance projects with long-term commitment have consequences, such as exposure to asset-liability mismatch, creating the potential for liquidity shock and financial instability (Hassan & Kayed, 2009; Wahyudi, et al., 2015). Islamic banks dependency on *murabahah* transactions is also due to the low risk associated with such structures. Under other *shariah* compliant financing structures such as *mudharabah*, *musharakah* and *istisna*, the bank as financer is risking the entire amount of capital as well as the opportunity cost for the entire period until the capital is returned with the profit (How, Melina Abdul, & Verhoeven, 2005).

Apart from *murabahah*, most participants and the literature agreed that *ijarah* and *istisna* as debt-based financing instruments are also suitable for financing infrastructure projects. However, the participants were unable to provide an example of *ijarah* utilised in Indonesia for financing transport infrastructure constructions. *Ijarah* as a leasing arrangement is commonly used in the post construction phase combined with an *istisna* arrangement for financing the early construction process (Alexander, 2011; Javed & Fida, 2015).

On the other hand, the government of Indonesia has formed a number of *istisna* agreements with the Islamic Development Bank to develop several major transport infrastructures. For instance, the Ministry of Transportation as project agent under *istisna* agreement with the Islamic Development Bank is to develop the Belawan Port project in Medan, North Sumatra and the Ministry of Public Works has also come to an agreement with IDB to undertake regional road developments in Central Java that are connecting Tambak Mulyo to Wawar, Wawar to Congot, and Girowoyo to Duwet.

By interpretation of Islamic Law, financial instruments should emphasise profit-loss sharing or equity-based financing, *musharakah* and *mudharabah*, rather than use of debt contracts (Malik, et al., 2011). However, it was found from the interview results that both banking and government sectors are reluctant to use *musharakah* and *mudharabah* for financing long-term transport infrastructure projects, due to the high risk associated with equity-based financing, and this is still under regulated in Indonesia. This reason further supports the idea suggested by Febianto (2009) that great complexities of the profit-loss sharing mode of finance and the *shariah* compliant financing concept leaves stakeholders with difficult in recognising and handling specific risks such as equity risk. The quality and viability of equity investment are affected by the policies pertaining to tariffs, quotas, taxation or subsidies and any policy changes (Febianto, 2009).

From the findings, this research concluded that in Indonesia, *shariah* compliant debt-based financing is preferred by Islamic banking and government sectors to finance transport infrastructure projects rather than equity-based financing, because of the lower risk character to investors. Besides involving foreign investment through *istisna* agreement to finance government projects, the government of Indonesia (GOI) is also traditionally pooling money from the public through the issuance of *sukuk*.

5.2 FINANCING GOVERNMENT PROJECTS USING SUKUK

Sukuk is an option for project finance because the flexibility of it can be structured and issued in large amounts to raise capital over a numerous and diverse pool of investors (Alexander, 2011). GOI has managed to issue six types of *sukuk* structures where the pooled fund from each sale is used for financing different government purposes (Table 4.3). Project Based *Sukuk* (PBS) structure is used to finance public transport infrastructure projects in Indonesia and had accounted for USD 5.9 billion as of November 2015 (Ministry of National Development Planning, 2015).

The GOI have financed railway construction and expansion projects, and roads and bridges construction and maintenance projects since 2013, the year GOI for the first time used *sukuk* to finance transport projects. These projects have one common characteristic, which is that the government does not need to go through the land acquisition process because all public civil infrastructures are state property. This condition meets the requirement of being *shariah* compliant and avoids *gharar* and *maysir*.

Using *sukuk* to finance transport infrastructure projects also has some restrictions. For instance, funding pooled from *sukuk* sales is not allowed to finance preparation such as purchasing land for work, and for technical assistant works because of the natural term of having physical assets as underlying. The findings from the interview also indicated that at this moment the government can only use *sukuk* to finance single year contract projects with a renewal contract every single year for multi-year projects. In time, issuing *sukuk* is more costly and time consuming than issuing government bonds, however it does not significantly influence the government decision to utilise *sukuk*. Sovereign *sukuk* also cannot be used to finance seaport and airport projects, due to the fact that these terminal infrastructures are managed and operated by state-owned enterprises.

The legal fee, issuing cost, and the cost of involving National *Shariah* Boards (NSB) to attain *shariah* compliant requirements are higher than the cost of preparing conventional financing. However, interview participants agreed that the involvement of the NSB is not significantly affecting the stakeholders to utilise *shariah* compliant financing. This finding was unexpected, because several studies suggested that actually, the cost of applying *shariah* compliant financing is limiting some stakeholders to utilise *shariah* compliant financing. El-Gamal (as cited in Ahmed, 2015) and Abdullah, et al. (2014) hold a critical view about the presence of *shariah* boards because of the additional fees and durations incurred in the process of attaining the demands and requirements from a *shariah* board. Therefore, this research can infer that the standard procedure of *sukuk* issuance that involves the NSB in Indonesia has reached the level where it is not being considered as a limitation.

The current study found that the majority of participants agreed that other than *istisna* financing, *sukuk* is another instrument that is suitable for financing infrastructure projects. The market is always ready every time the government has issued *sukuk* and *sukuk* investors have the benefit that they are guaranteed to receive the return of investment.

5.3 RISKS IN *SHARIAH* COMPLIANT FINANCING INSTRUMENTS FOR TRANSPORT INFRASTRUCTURE PROJECTS

This research has found that the only instruments that have been used to finance transport infrastructure projects in Indonesia are *istisna* and sukuk. This section presents discussion on the risks in transport project financing using *istisna* and *sukuk*.

5.3.1 Risks in Project Financing using *Istisna*

The involvement of the Islamic Development Bank (IDB) as a financer in *istisna* agreements has made the multilateral bank exposed to risk. However, with the small sample size of participants involved in a transport infrastructure project financed using *istisna* agreement, the findings related to risk in *istisna* is limited.

On the question of risks associated with *istisna* as one of the utilised *shariah* compliant financing instruments for transport infrastructure projects, this study found that in *istisna* agreement for financing government projects, particularly in the Belawan Port project and regional road projects, the stakeholders at risk are IDB as the financer and GOI as the project promoter. Most of the time during the construction phase the financer or investor is usually bearing the risk of the project if they remain liable for the construction of the assets (Alexander, 2011).

Participants stated that in *istisna* transactions, an investor is particularly exposed to non-deliverable risk. Delay in the delivery of a project may involve cost overruns (Merna & Njiru, 2002). One of the causes of non-deliverable risk is that construction work does not run smoothly. Participants gave common examples of situations before and during the construction phase that may delay the delivery of project objectives, such as disputes in acquiring the land for work, mismanaging construction operation, and poor project team coordination. The construction phase under *istisna* agreement is when the risk is very high and becomes even greater because the project price must be fixed when financer and project promoter enter into the contract, and variable rates of return are not allowed (Alexander, 2011).

5.3.2 Risks in Project Financing using *Sukuk*

This research has categorised risks and challenges identified in *shariah* compliant financing into four categories based on the summary of classification listed in Table 2.2, which are: Market, Institutional and Regulatory Environment, *Shariah* Compliance, and Project and Structuring. Thus, this section discusses the findings from the interviews related to risks in sovereign *sukuk* for project financing and uses the four categories as the framework.

Risks associated with market

With the increasing sales of SNI (*Sukuk Negara Indonesia*, i.e. FCY-denominated sovereign *sukuk* for international markets), the government is more and more exposed to foreign currency exchange rate risk. The fluctuation of the exchange rate causes a difference between the currency units of underlying assets, and currency units of the pooled *sukuk* fund would also leave *sukuk* investors exposed to currency exchange rate risk. However, with the regulation in Article 1 Paragraph 19 of Law No. 19 Year 2008 of

Sovereign *Sukuk,* the *sukuk* investor is guaranteed by the law to received return of investment and principal cost, within the valid period, from the *sukuk* issuer. As a result, it is almost certain that the only entity exposed to any risks in sovereign *sukuk* transaction is the government as the issuer and guarantor for investors (Tariq & Dar, 2007). This condition can be found in the Tariq & Dar (2007) study, as they indicated that guarantor and originator of *sukuk* mostly would protect investors from any exchange rate fluctuations to attract investors. This protection from the government means the investors can expect to receive the initial value of their capital instead of the terminal market value of the asset backing the *sukuk*; this treatment according to Usmani (as cited in Malik, et al., 2011) is not *shariah* compliant because the investors do not share market risk exposure.

The exposure to currency risk is low if the *sukuk* is liquid or relatively short term in nature (Abdullah, et al., 2014). SNI is tradeable in a secondary market and might be considered as a liquid investment for investors if *sukuk* trading is active in a secondary market. It also has medium-to-long-term maturity; therefore, the government is still exposed to currency risk. Diversification of *sukuk* issued by the Ministry of Finance (MOF), however, can be seen as a way to reduce the exposure, not only to foreign currency exchange risk, but also overall market risk (Nanaeva, 2010).

Providing discussion about the foreign exchange risk would also include the risks that exist on the market. Changes in the market, such as fluctuating market interest rates, declining demand for *sukuk* investment, obsolete financial products or new *sukuk* structure, may occur. The interviews revealed that these factors will affect the government spending to issue *sukuk*. Factors of these changes can be influenced by the global and domestic economic conditions. This increasing interest rate, in general, is one of the subset of market risk beside foreign exchange rate risk and liquidity risk (Misnen as cited in Abdullah et al., 2014). *Sukuk* is similar to conventional bonds in that it is based on fixed rates that are exposed to risk where there is an increased market interest rate that leads to a fall in the value of fixed-income *sukuk* (Abdulah et al. 2014; Nanaeva, 2010).

A stagnant secondary market may expose investors of long term maturity *sukuk* to liquidity risk. The interviews revealed that sovereign *sukuk* investors, mostly from Middle East investors, tend to keep their *sukuk* until maturity. Abdullah et al. (2014) states the lack of diversity in the *sukuk* structure issued and the limited number of issuances as other reasons of why *sukuk* trading is not active in a secondary market. This holding type of investment strategy and the limited diversity produces illiquid secondary markets (Yunita, 2015), and will eventually lower future investors' appetite for *sukuk*. However, seeing the trend of increasing *sukuk* issued by the MOF and increasing demand, it can be assumed that the possibility of liquidity risk exposure is shrinking. The GOI, as explained by participants, is also trying to maintain *sukuk* circulation in the market to avoid a crowding-out effect.

Government involvement is indispensable to activate the *sukuk* secondary market. As one participant suggested, the government should give interesting tenure to investors and allocate dedicated funds to grow and maintain *sukuk* liquidity. Tariq (2004) recommended that the central bank or the security commissioner - in Indonesia the entity is OJK (i.e. Indonesia Financial Services Authority) - mediates interactions between brokers and traders as well as supervises markets functioning. Increasing the issuance of *sukuk* with a variety of maturity, types, and risk-bearing also can develop secondary market to be more liquid, according to Saidi (as cited in Nanaeva, 2010).

Risks associated with institutional and regulatory environment

Apart from the changes in market conditions that may risk the *sukuk* investors or originator, the fluid regulation and law relating to *shariah* compliant financing can also create legal risk. However, unlike the uncertain development of policy governing *shariah* compliant transaction in Islamic banking, the legal framework for sovereign *sukuk* for project financing is already well-established by the lawmakers in Law No. 19/2008 and Presidential Decree No. 56/2011.

In 2009, an article of the Law No.19/2008 that regulates use of government assets as underlying for *sukuk* issuance was challenged in the Constitutional Court. As described by the participant from government, the pleader felt the arrangement may potentially violate constitutional rights to use a public facility if the particular asset or the facility is transferred to other party in the event of *sukuk* default. If the article was invalidated, it would jeopardise the core of *sukuk* where an asset as underlying is binding in *shariah* law. Fortunately, the Constitutional Court through Constitutional Decision No. 143/PUU-VII/2009 decided that the plea is not correct because in *sukuk* issuance, a state owned asset is used as underlying, not as an object of trade, and it is only as an object of dependence in the form of the right to obtain benefits. The asset is not being used as a collateral, as the applicant claimed.

Risks associated with shariah compliance

Another risk that was commonly addressed by the participants is *shariah* compliance risk. The procedure to issue *sukuk*, the structure, the underlying asset, and the project funded using the pooled proceeds from the sale need to be responsible with respect to compliance with *shariah*. Even though it has been noted in previous studies, very little was found on the actual case of *shariah* compliant financing breaching the rules of *shariah*. Establishing a National *Shariah* Authority to oversee *shariah* related issues in the social and economy window, and ensuring the consistency of standards, regulations and rules of *shariah* compliance is a way to mitigate *shariah* compliance risk (Ahmed, 2009; Yunita, 2015). However, most of participants were aware and to some point worried about the possibility of an already issued *fatwa* to be revised or maybe annulled in the future and as a result it will affect the credibility of *sukuk* and any other *shariah* compliant financial products. This finding was unexpected and suggests that even though there is a strong presence of an exclusive independent National *Shariah* Board that issue *fatwa* at a national level in Indonesia, *shariah* compliance risk remains a possibility.

Risks associated with project and structuring

The risks discussed above are risks associated with investing but using *sukuk* for project financing also certainly put investors and guarantors exposed to project risk. Risks relating to the project or operation may involve a situation that causes a negative consequence to the project completion (Abdullah, 2014; Merna, 2002). Project risk in sovereign *sukuk* structuring and issuance include default risk, coupon payment risk, asset redemption risk, SPV specific risk, investor specific risk, and risk related to the asset (Tariq & Dar, 2007). However, as investors are protected by law to receive return of investment and principal cost, they are not exposed to all the risks mentioned. The government, on the other hand, as described by participants from the Ministry of Finance, is exposed to asset redemption risk and risks related to the asset. When the asset can no longer be used as underlying, it would be replaced with an asset that has the same nominal value.

Risks included in project risk by previous studies (Tariq & Dar, 2007) are looked at from the investor’s perspective and this differs with the example of risks described by participants from the government as the *sukuk* issuer and project promoter. When asked about project risks, participants suggested that the recurring issues in government projects included in project risk are the land provision and procurement process.

5.4 RECOMMENDATIONS ON RISK MANAGEMENT STRATEGIES

This section presents recommendations, mostly for the government, on risk management strategies in the practice of project financing using *sukuk*. Recommendations are made for the risks that have been discussed most by the participants. Aside from the strategies indicated from the interviews, suggestions were also drawn from literature.

Risk Management Strategies for Risks Associated with Market

From the interview results, it is uncertain how the government manages the risk from volatility of exchange rate in the issuance of *sukuk* in the international market. The findings, however, indicated that both (foreign) investors and government are exposed to foreign currency risk. For example, for *sukuk* issued in denominations of US dollars, in the case of depreciation of the dollar against the rupiah, the dollar value received by investors will be smaller. Conversely, when there is a decline of the rupiah against the dollar, then the burden of *sukuk* issuer obligations to settle both coupon and principal payments becomes larger to investors. The best risk coverage strategy government can do, as advised by Gatti (2008) in his study on conventional project financing, is currency matching. Furthermore, if it's impossible due to strong counterparties' bargaining power, the following derivatives also can be used to hedge risk: swaps, options, forwards and futures (Finnerty, 2013; Gatti, 2008). Further research should be undertaken to investigate whether the hedging strategies that can be taken by the government to handle currency risk are approved under *shariah* law.

Keeping *sukuk* sales active in a secondary market is a way to reduce the exposure of liquidity risk to investors. Lower liquidity risk would interest the investors in having more secure investment where they can trade *sukuk* at fair value. The interviews and literature present several strategies for the government to stimulate the secondary market, such as giving interesting tenure to investors, allocating dedicated funds to grow and maintain *sukuk* liquidity, providing sole entity to mediate interactions between brokers and traders as well as supervising the market, and increasing the issuance of *sukuk* with various maturity period and types (Muhammad Al-Amine & Hunt-Ahmed, 2013; Nanaeva, 2010; Tariq, 2004).

Risk Management Strategies for Risks Associated with Institutional and Regulatory Environment

In every *shariah* compliant financial transaction, appropriate enabling laws to protect the interest of investors and issuers are one way to reduce exposure to legal risk (Biancone & Shakhatreh, 2015). Providing assurance for investors to participate in Islamic project finance and reducing exposure to legal risk can be done by facilitating an efficient judiciary system to enforce Islamic contracts that are the basis of the financial instruments (Ahmed, 2015; Hassan & Lewis, 2007). It was indicated in the interview that the GOI is establishing an effective dispute resolution institution for the *shariah* compliant financing industry within the Religious Court of Indonesia.

The results of this study also show that the industry perceives the GOI to be moderate in providing supporting laws, regulations, and dispute-resolution institutions, particularly in tax treatment for multiple transactions conducted in *shariah* compliant financial transactions. There is a need for the lawmakers and authorities to facilitate effective policy for *shariah* compliant finance in general, and infrastructure project in particular, in order to provide equal conditions for Islamic financial institutions and non-Islamic financial institutions that have interest in *shariah* compliant financial transactions, to compete with conventional finance industry.

Risk Management Strategies for Risks associated with Shariah Compliance

The interviews have indicated that in order to assure *shariah* compliant finance instruments such as *sukuk* to be eligible and comply with *shariah*, the GOI always involves the NSB in the early stage of *sukuk* issuance. The NSB would issue *shariah* opinion after they have reviewed the overall *sukuk* structure that would be used, the *aqad* and agreement prepared as legal binding for *sukuk* issuance, issuance method and other supporting documents. *Shariah* opinion is essential to give assurance for the investors that the *sukuk* issued is compliant with *shariah*. The NSB also has issued project criteria guidelines that would assist the GOI in the selection of projects to finance. These findings are consistent with previous research that indicates that the establishment of the NSB ensures the healthy development of a *shariah* compliant finance industry (Ahmed, 2009; Malik et al., 2011; Yunita, 2015). The research also found a consensus among participants that the presence of NSB has avoided *fatwa* shopping activity as there was no case for such an event in Indonesia.

However, as *fatwa* and *shariah* opinion are made by the ability of humans to comprehend and interpret the sources of *shariah* law and a particular area of knowledge from which to generalise the situation and draw conclusions, it is subject to change because studies of *shariah* law are evolving as the financial or any system evolves. This would create the possibility of the *sukuk* available in market still being at risk of breaching the *shariah* law. The interviews with participants from government did not provide solutions to handing this situation, however the Accounting and Auditing Organisation for Islamic Financial Institution (as cited in Nanaeva, 2010) has provided the recommendation that *shariah* boards, in Indonesia's case, the NSB, to be active and involved not only in early stages but all stages of *sukuk* operation to ensure the entire life span of *sukuk* complies with *shariah* law.

Risk Management Strategies for Risks Associated with Project and Structuring

Besides the financial risk, the government as the project promoter with the construction team also has to put construction and project risk into consideration when identifying and mitigating risks. Project risk, construction risk and operational risk shared the same definition. Identifying risks during pre-financing and pre-construction in a government project is mostly the responsibility of the Ministry of National Development Planning (MNDP) and the Ministry of Finance (MOF). Participants from government stated that the process of procurement before and during the construction phase, and achieving land clearance status for work, are the risks that are common and can be included in project risk.

The foundation level of risk management is to identify risks associated with sovereign *sukuk* for project financing. In Indonesia, it is conducted by trilateral meetings between the MNDP, MOF, and the managing ministry as the key project personnel. The trilateral meeting is a recent initiative by the government to reduce exposure of risks related to preparation and construction work. Interview participants from government have a very positive view that a trilateral meeting can minimise the risks by identifying them first in the project preliminary phase then taking precautionary measures. Merna and Njiru (2002) recommended that in a brainstorming meeting situation, the principal objective has to be identifying the risks before solving a problem and therefore meeting members must have an understanding of risk management. The limitation in this risk identification approach is the dependence on the group composition (Merna & Njiru, 2002).

Sukuk funded projects could fail due to any possibilities of risks as classified by Merna and Njiru (2002): completion risk, operation and maintenance risk, input and output risk, and financing risk. In a situation where the project being financed is at risk of default, the government, as of their response during the interview, would funnel the pooled money from *sukuk* sales to another project with the same value. Similarly, the asset used as underlying in *sukuk* issuance is subject to risk of loss of the assets, and the government according to the law, as described by participants from the government, can replace another asset with the same value as underlying, or buyback the *sukuk* from the certificate holder.

Table 5.1 Summary of risks in *sukuk* for project financing and recommendations on risk management

Categories	At risk		Highlights of risks and issues	Recommendations to counter risks and issues
	GOI	Investors		
Market				
Foreign exchange risk	✓	✗	• The fluctuation of exchange rate causes a difference between the currency units of underlying asset and currency units of the pooled *sukuk* fund	• Currency matching or hedging derivatives such as swaps, options, forwards, and futures. However, further research is required to identify which hedging derivatives comply to *shariah* law
Liquidity risk	✗	✓	• *Sukuk* is tradable but inactive in secondary market • Less diverse characteristics of investors	• GOI should allocate dedicated funds to grow and maintain *sukuk* trade and liquidity in the secondary market • Interesting tenor or return to attract more diverse investors
Interest rate risk	✓	✓	• An increased in interest rate would drop the value of fixed-income *sukuk* and vice versa.	• As sovereign *sukuk* returns are based on market interest, there is no solution provided for this risk, unless *sukuk* returns are calculated based on real profits from underlying asset (Nanaeva, 2010), which is not the case.
Institutional and Regulatory Environment				
Legal and regulatory risk	✓	✓	• In the application of *shariah* concepts, such as structuring *sukuk* and the use of underlying assets, there is a possibility of non-compliance with the applicable law.	• Appropriate law enforcement would protect both the interest of investors and government • An efficient judiciary system to enforce Islamic contracts that are the basis of *shariah* compliant financial instruments (Ahmed, 2015; Hassan & Lewis, 2007)
	✗	✓	• Tax treatment. Transactions and contracts in *shariah* compliant financing are more layered and complex thus several transactions are subject to repeated instances of taxation.	• The GOI and lawmakers need to be able to innovate policy that levels the changes and demands within the market. • Imposing tax adjustment.

Categories	At risk		Highlights of risks and issues	Recommendations to counter risks and issues
	GOI	Investors		
***Shariah* compliance**				
Fatwa shopping	×	×	• In Indonesia, the presence of National *Shariah* Board as the sole issuer of fatwa avoids the activity of fatwa shopping altogether	• The result from the interview reveals that presence of the National *Shariah* Board, which consisted of Islamic scholars from various local Islamic organisations, avoids the practice of *fatwa* shopping.
Shariah compliance risk	✓	✓	• Fatwa is produced based on interpretation of Islamic scholars and it does not avoid the possibility of fatwa to be revised or annulled due to changes in the concept and interpretation of Islamic scholars involved in National *Sharia*h Board to the structures of modern financial instruments	• National *Shariah* Board is recommended to be active and involved in the entire lifetime of *sukuk* operation to ensure all stages complies with *shariah* law (Nanaeva, 2010).
Project and structuring				
Construction risk	✓	×	• Common construction risks identified based on the interviews are during the procurement and land acquisition process.	• Ministry of National Development Planning, Ministry of Finance, and involved ministries held trilateral meetings to identify risks related to the preparation and construction work before project commence. It is recommended that the composition and experience of meeting members be solid (Merna & Njiru, 2002)
Project default risk	✓	×	• The project defaults due to any events.	• The practice to handle this issue, the Ministry of Finance on behalf of the GOI would side funnel the fund to another running project that have same economic value.
Asset related risk	✓	×	• The asset used as underlying is might be exposed to risk of damage to the asset or loss a portion or the complete asset.	• The research found that in this situation, GOI would replace the asset with another government owned asset that has the same value as underlying.

Table 5.1 has summarised the identified types of risks associated with *sukuk* for project financing in general, and the suggestions made as a result from this study. It can be seen that government has a vital role to reduce or avoid the exposure of risks in *shariah* compliant financing for transport infrastructure projects.

As investors protected by the law to receive initial value of their capital along with the return of investment, government are more exposed to risks rather than the investors. In risks related to market, the investors are not exposed to the risk of loss of investment value in the event of fluctuation of exchange rate. However, as *sukuk* trading is not very active in secondary market and have a fixed payment in their maturity, the investors are exposed to liquidity risk and interest rate risk. The government is recommended to allocate dedicated funds to grow and maintain *sukuk* trade in secondary market, and also provide interesting tenor or returns to attract more diverse customers and increase the number of *sukuk* holders in order to maintain the liquidity of *sukuk*.

In institutional and regulatory environment, government's involvement is important to reduce the exposure of legal and regulatory risk for the investors and the government itself by enforcing a law that would protect the investment and establishing judiciary system for dispute-resolution. In order to advance the industry as well as avoiding legal risk, innovative policy is also expected from the government.

5.5 SUMMARY

This research found that Islamic banks, as one of the potential source of *shariah* compliant funds in Indonesia, are still reluctant to provide long-term financing due to their capital resources being from their customers' short-term maturity funds such as deposits or saving accounts. According to this finding, this research can infer that the current Islamic banks' total assets would not be able finance transport infrastructure projects as they are usually have long operational lives and require finance with longer tenures.

Debt-based financing instruments are more widely used rather than equity-based financing instruments in Indonesia. The government of Indonesia (GOI) have received finance from the Islamic Development Bank (IDB) to develop the Belawan Port project and several regional road networks in Central Java. The GOI is also raising funds by issuing Islamic securities or *sukuk* to finance railway and road constructions.

Chapter 6: Conclusions

As discussed in Chapter 1, this research aims to identify the source and type of risk exposure in *shariah* compliant project financing for transport infrastructure projects in Indonesia and provide appropriate counter measures to identified risks. The objectives to fulfil the research aim are:

1. To identify risks in *shariah* compliant financing implemented in funding transport infrastructure projects in Indonesia.
2. To explore the risk management strategies in *shariah* compliant financing for transport infrastructure projects.

Semi-structured interview was adopted to collect data for this research. Thirteen individuals taken as a mixture from the government, Islamic banks, academics, and consultants involved in transportation projects financing and Islamic banking, participated in the interview. The data collected from the interview facilitated the discussion of the risks that had been perceived by the participants during their involvement in *shariah* compliant project financing and their knowledge on the study, which fulfilled the first and second objective of this research. This research has also developed recommendations derived from the interview and literature studies on the potential actions to reduce the exposure of identified risks.

6.1 RECONCILIATION TO RESEARCH QUESTION

To address the objectives, this research established two research questions. They are revisited in the following sections, and the findings and conclusions related to questions are presented.

RQ1: What are the risks to be identified upon the implementation of shariah compliant project financing for transport infrastructure projects in Indonesia?

The research defines the selections of *shariah* compliant financing instruments chosen by stakeholders of transport projects in Indonesia, identifies the potential source of fund or financer, and investigates what transport projects can be financed using *shariah* compliant financing instruments.

The research suggested that stakeholders in Indonesia, may it be banking or the government of Indonesia (GOI), tend to use a debt-based financing instrument rather than an equity-based financing instrument because the former has lower exposure to risks. The research findings have indicated that *istisna* and *sukuk* are the only two *shariah* compliant financing instruments convenient for the government of Indonesia to access for financing transport infrastructures. The findings have further revealed that Islamic banks in Indonesia have no major involvement in financing airport, seaport, and railway construction projects due to their core business in commercial banking.

This research concluded that Islamic banks in Indonesia have an asset-liability mismatch if providing loan or finance for long-term period construction projects due to their resources being from short-term maturity funds such as a customer deposit or saving account, as the nature of their business is in commercial banking not development banking. Previous studies have indicated that in 2010, the banks facilitated credit in the form of *murabahah* for more than 55% of financing given. The research suggested that Islamic banks are reluctant to use equity-based financing such as *musharakah* and *mudharabah* because of their high risk characteristic and the associated complexities. Factors of intricacy of profit-loss sharing agreement and the lack of clarity regulation leaves stakeholders finding it difficult to recognise and handle the risks in *shariah* compliant equity-based financing, and eventually lowering their interest in the particular instruments.

Sukuk for project financing is the primary source of *shariah* compliant finance for the government. Increasing sales of *sukuk* in both domestic and international markets causes the government to invent more diverse *sukuk* structure and issue more of them. The GOI has utilised *sukuk* to finance railway, road, and bridge constructions both for upgrade and new development. These modes of transport projects are easy to finance because of the area of the project is already owned by the state, therefore cutting the process of acquiring land for work. However, despite the advantages, this research finds obstacles faced by the GOI, such as the inability to finance preliminary engineering and technical works. This research has also shown that the GOI has received finance in the form of an *istisna* agreement from the Islamic Development Bank to develop regional roads in Central Java and a commercial port in North Sumatra.

This research identified visible financial and project risks in *istisna* and *sukuk* financing observed and experienced by interviewees. In *istisna* financing, the financer, as they remain liable for the construction, bears most of the risk of the project. Risks may include project and operational risk, country risk, currency risk, credit and counterparty risk, reputation risk, and, specifically to this instrument, non-deliverable risk. *Sukuk* for project financing has similar risks for the government and investors with government bonds. Both are exposed to currency risk, market risk, legal risk, project and operational risk.

As the government also issued *sukuk* in foreign currency for the international market, the fluctuation of exchange rate leaves *sukuk* investors and issuers exposed to currency risk. Every *shariah* compliant financial transaction is exposed to *shariah* compliance risk. Even though there is an independent National *Shariah* Board that oversees and ensures all *shariah* compliant transactions in government or private industry are up to standard, it does not completely avoid *shariah* compliance risk. It is still possible for changes in *fatwa* to occur, and this may affect the credibility of the *shariah* compliant financial products that are already available in the market.

This research has identified risks in *shariah* compliant financing for transport infrastructure projects that can be classified into four categories and one additional category. The risks that have been discussed in this research are not solely inclusive to a *sukuk* instrument for project financing but also other instruments that are used in Indonesia such as *istisna*. Furthermore, the results of this research are more inclined to the government approach as most of transport infrastructure projects in Indonesia are delivered by the government.

RQ2: How can the identified risks in shariah compliant financing for transport projects in Indonesia be managed?

This research analysed results from interviews to review the current Islamic banks and government engagement with risks and their risk management practices. Both Islamic banks and the government have different risk management strategies because they are exposed to different risks depending on what financing instruments were used in the project.

Members of government projects often consist of different lines of the ministries. Two consistent ministries are the Ministry of Finance and the Ministry of National Development Planning with other technical and managing ministries such as Ministry of Public Works or Ministry of Transportations. The government initiates trilateral meetings before commencing a project with the objective of identifying risks before solving problems that may arise in the future.

This research has shown that some general preventative and mitigation measures could be taken by the government to handle identified risks such as, but not limited to, liquidity risk, legal risk and currency risk. The recommended action for the government to undertake in favour of reducing exposure to foreign currency risk, as advised by Finnerty (2013) and Gatti (2008) in their study is to use hedging derivatives. However, the compliance of several hedging derivatives to *shariah* law is still debatable among Islamic scholars. On the subject of managing the liquidity of *sukuk* in the market, this research suggests that the GOI, the Ministry of Finance in particular, provides higher return of investment or more various maturity terms to attract diverse investors and allocates earmarked funds to maintain active trading, in order to stimulate the *sukuk* transaction in the secondary market. In regard to overseeing the legal risk and *shariah* compliance risk, the GOI has to facilitate an efficient judiciary system to enforce Islamic contracts and this can be seen in the manoeuvre taken by the government, with the assistance from the Islamic banking industry, to establish a credible commercial court system within the Religious Court. Table 5.1 has highlighted the recommendations made in this research.

6.2 RESEARCH CONTRIBUTIONS

This research reduces the existing gap in knowledge due to the limited literature about risks in implementing *shariah* compliant financing for transport infrastructure projects in Indonesia. It provides the reader with the concept of *shariah* compliant project financing practice in Indonesia, the risks associated with the instruments, and proper management of those particular risks. These findings enhance our understanding on the preference of the potential *shariah* compliant financing instruments for transport infrastructure in Indonesia and their limitations. The findings of this research also confirm that the current feasible projects to finance using *sukuk* are road, bridge, and railway development, due to the area or land of the project work already being a government owned asset. An identification of risks associated to the *istinsa* as well as *sukuk* has been presented to highlight the industry concerns. This research also contributes to the industry by providing recommendations especially for the government of Indonesia, within Ministry of National Development Planning and Ministry of Finance, on strategies to avoid or manage the identified risks and to establish better policy in certain area, such as tax adjustment, to advance *shariah* compliant financing industry.

6.3 RESEARCH LIMITATIONS

Before data collection started, the scope of the research was to consider all types of financing instrument available in the *shariah* compliant financing market. As the research progressed, through literature reviews, interviews, and analysis, the research limitations were found to be overly broad. There are various financing instruments and each has their own particular risks, and this research considered all of the types of financing instrument to be included in the questions during the interviews. Since the research was limited to a short duration, it was not possible to uncover more in-depth examples of the risks and the management practice to approach those risks.

As *shariah* compliant project financing in Indonesia is still in its infant stage, this research found that the government is still managing risks by trial and error. The number of people working closely related to *shariah* compliant project financing is also limited and this has affected the diversity of data collected from the interviews. The interview data received from Islamic bank participants was not as comprehensive as from the government participants due to Islamic banks in Indonesia evidently not financing transport infrastructure projects. The data related to *istisna* agreement for project financing is also not comprehensive as the interview data related to *sukuk* for project financing.

All data in this research was collected in Indonesia. Risks in *shariah* compliant financing are similar in their theory but have differences in their practice around the world. There are some points of the research results that may and may not be applicable to other countries' *shariah* compliant financing industry, depending on the details of the industry conditions, such as the presence of the National *Shariah* Board to oversee *shariah* related issues at national level, where not all countries have this type of governing body.

6.4 RECOMMENDATIONS FOR FUTURE RESEARCH

In light of the results and limitations of this research, it is recommended that future studies consider the following issues:

- This research has explored risks in *shariah* compliant financing. Further detailed investigation into the behaviour of each instrument, their specific risks and appropriate risk management integrating conventional project financing with *shariah* compliant practices, would yield valuable outcomes for transport stakeholders. A noted example is whether the GOI could use the derivatives such as swaps, options, forwards, or futures to handle currency risk, by following the principles of *shariah*.

- The interview results have shown that government and private sectors only utilised debt-based financing instruments to finance transport infrastructure projects, exploratory research into the possibility of financing using an equity-based instrument and co-financing between conventional and *shariah* compliant financing instruments is recommended to develop knowledge and encourage the industry to open up opportunities for a wider range of investors in Indonesia's infrastructure.
- More specific study into each infrastructure project type would give more detail of risks faced, particularly by stakeholders such as financers, governments, project promoters, contractors, and others. This can be done in the future when more number of *shariah* compliant financing projects are conducted and succeed by carrying out more number of interview participants and case study on government projects such as the development of Cirebon-Kroya and Manggarai-Bekasi double track railways, or ongoing projects such as the development of Belawan Port and Tambak Mulyo-Wawar, Wawar-Congot, or Girowoyo-Duwet regional road developments, to be used as case studies.
- Research into ways of advancing *shariah* compliant project financing would generate findings that may assist stakeholders to promote and expand the utilisation of *shariah* compliant financing. Future research can investigate how governments plan for issuing *sukuk al-istisna,* and propose regulations that would allow local governments to issue municipal *sukuk* for financing government operations and infrastructure development in their local area.

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Appendices

Appendix A: Interview Questions

Part 1. Respondent Profile/General questions

The first part of this interview is to identify your knowledge and experience in transportation infrastructure projects procurement and in project *shariah* compliant financing

I. Have you ever been directly or indirectly involved in transport infrastructure projects financing? (if yes, please provide answers to the questions of section B)

II. Have you ever been directly or indirectly involved in *shariah* compliant project financing? (if yes, please provide answers to the questions of section C)

III. Have you ever been directly or indirectly involved in *shariah* compliant financing of transport infrastructure projects in Indonesia? (if yes, please provide answers to the questions of section D)

Part 2. Brief Detail of Participants' Involvement in:

I. Transport infrastructure projects

1. What was your specific role or in what capacity have you involved in transport infrastructure projects financing?
2. What transport infrastructure projects have you been directly or indirectly involved in the past 5 years?
3. Based on your experience and/or knowledge, what are the risks that can occur in the transport infrastructure project financing?
    a. How do you identify the risks?
    b. How do you or your company manage the risks?

II. *Shariah* compliant projects financing

1. What was your specific role or in what capacity have you involved in *shariah* compliant project financing?
2. What *Shariah* compliant project financing have you been directly or indirectly involved in the past 5 years?
    a. What was the *shariah* financing instrument?
3. Based on your experience and/or knowledge, what are the risks that can occur in the implementation of *shariah* compliant project financing?
    a. How do you identify the risks associated with shariah compliant project financing?
    b. How do you or your company manage the risks?

III. *Shariah* compliant financing of transport infrastructure projects

1. What was your specific role or in what capacity have you involved?
2. What projects have you been directly or indirectly involved in the past 5 years?
3. Based on your experience and/or knowledge, what are the risks that can occur in the implementation of *shariah* compliant project financing to procure transport infrastructure?

   a. How do you identify the risks associated with shariah compliant project financing?
   b. How do you or your company manage the risks?
4. How effective is the decision of government to use shariah compliant financing in the delivery of transport infrastructure?
5. How successful do you consider shariah compliant financing to be related to the provision of transport infrastructure projects? What are your parameters for a project to success?
   a. If it is successful, what are the indicators for the success?
   b. If it is unsuccessful, what are the possible reasons or explanations?
   c. If it is only partly successful, what are the aspects that are considered successful and what aspects are regarded as unsuccessful?

Part 3. Potential risks

From the research literatures that have been reviewed, Islamic finance in most parts of the world is facing the same constraints and is exposed to similar risks. In this section of interview, the research will try to see if the risks associated with *shariah* compliant banking and financing that occurs in other countries are occurring in Indonesia.

I. How does Shariah compliant financing affect the cost of legal and project structuring process in transport infrastructure project development?

II. How does the National Shariah Board (*Dewan Syariah Nasional*) contribute to the shariah compliant project financing of transport infrastructure projects?

III. How does the decision (*fatwa*) from National Shariah Board affect the process of *shariah* compliant project financing?

IV. How does the current Indonesian law and regulations affect the investment climate in *shariah* compliant financing of transport infrastructure projects? (promote or hinder?)

V. How the limitations of fund in *shariah* compliant investment affect the capability of Islamic bank or financial institution to support transport infrastructure projects development?

VI. Does the growth of *shariah* compliant financing of transport infrastructure projects affected by the number of qualified human capitals in the industry?

VII. Does the market situation of *shariah* compliant financing affect the use of *shariah* compliant financing to fund transport infrastructure projects in Indonesia?

VIII. Do you see any other challenges or risks in *shariah* compliant financing of transport infrastructure project that are yet to be identified?

IX. What are the advantages and difficulties in the implementation *shariah* financing of transport infrastructure projects in Indonesia?

Appendix B: Cover Letter

Subject Title:
Participate in a research study looking into the risks in *shariah* compliant financing of transport infrastructure projects in Indonesia

Dear [Participant]

My name is Sultan Rianto, I'm a Master by research student from School of Civil Engineering and Built Environment, Science and Engineering Faculty, Queensland University of Technology. I am working on my Master thesis entitled "Risk Identification in *Shariah* Compliant Financing of Transport Infrastructure Project in Indonesia". The aim of this research is to provide list of potential risk exposure in the implementation of *shariah* compliant financing to fund a transport infrastructure project for the stakeholders.

This study is looking for experts and experienced individual who have comprehensive knowledge and/or experience in transportation projects procurement and/or financing. The research team is also looking for individual who have comprehensive knowledge of *shariah* compliant financing and/or have been involved in projects that were funded using *shariah* financing scheme.

It is my pleasure to invite you to be a respondent for a video call or face-to-face interview. If you are interested in participating in this research, please read the enclosed "Participant Information Sheet" and if you accept this invitation to participate please complete and sign the enclosed "Consent Form" and send it back to me. Please note that your confidentiality will be preserved and any data gathered will be used for this research only.

Please note that this study has been approved by the QUT Human Research Ethics Committee (approval number 1500000635).

Kind regards

Sultan Akbar Rianto
Masters student
+61 451 933129
sultan.rianto@hdr.qut.edu.au

Connie Susilawati
Principal Supervisor
+61 7 3138 1853
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Enclosed: Participant Information Sheet and Consent Form

Appendix C: Participant Information Sheet and Consent Form

Queensland University of Technology Brisbane Australia	PARTICIPANT INFORMATION FOR QUT RESEARCH PROJECT – Interview –

Risk Identification in *Shariah* Compliant Financing of Transport Infrastructure Project in Indonesia

QUT Ethics Approval Number 1500000635

RESEARCH TEAM

Researcher:	Sultan Akbar Rianto	Master (Research) Student	Queensland University of Technology (QUT)
Principal Supervisor:	Dr Connie Susilawati	PhD	QUT
Associate Supervisor:	Dr Fiona Lamari	PhD	QUT
External Supervisor:	Dr Ayomi Dita	PhD	Universitas Indonesia

DESCRIPTION

This project is being undertaken as part of Masters Study for Sultan Akbar Rianto. The purpose of this project is to identify the risks associated with the implementation of *shariah* compliant financing of transport infrastructure projects in Indonesia.

Shariah compliant financing is a method of financing under a set of guiding principles interpreted in essence from the *Qur'an* (religious text as a way of life guidance to Islamic believers) and *Hadith* (Islamic scholars' interpretation to the saying and deeds of the prophet *Muhammad*). It primarily prohibits practices in interest taking (*riba*), speculation (*gharar*), and gambling (*maysir*). *Shariah* compliant financing is being considered by the government of Indonesia as an alternative financing method taking into account the large Muslim population in Indonesia, strong domestic demand for Islamic finance products, and the growing potential of Islamic bank operations. However, funding transport infrastructure project using *shariah* financing scheme is relatively new and the *shariah* compliant financing body of knowledge is still developing. Therefore, this project attempts to identify and explore the potential risks in *shariah* compliant financing of Indonesia's land, air, and sea transport projects.

You are invited to participate in this project because you may have met two or more of the following criteria: have comprehensive knowledge and/or experience in transportation projects procurement (in risk management or project financing), comprehensive knowledge and/or experiences in *shariah* compliant financing, and have been directly or indirectly involved in projects that were funded using *shariah* financing scheme.

PARTICIPATION

Your participation will involve a video call or face-to-face audio recorded interview depends on your convenience. If you agree for a face-to-face interview, the process will be conducted at your workplace or other agreed location and will take approximately one hour of your time. The interview will be conducted in Indonesian.

The questions will cover:

1. Risks in funding transport infrastructure projects using *shariah* compliant financing scheme.
2. The process to identify and manage the risks associated with the *shariah* compliant financing scheme.
3. Role of your work in the organisation/institution in associate with the *shariah* compliant financing of transport infrastructure projects.

Your participation in this project is entirely voluntary. If you do agree to participate you can withdraw from the project without comment or penalty. If you withdraw within 4 weeks, on request any identifiable information already obtained from you will be destroyed. However, 4 weeks after the interview your comments and responses cannot be retracted once the results from the interview has been analysed and integrated into the report paragraphs.

Please note that non-identifiable data collected in this project may be used as comparative data in future projects or stored on an open access database for secondary analysis. Your decision to participate or not participate will not impact your current or future relationship with QUT or with associated external organisation.

EXPECTED BENEFITS

This project will not benefit you directly. However, it may contribute to fill the gap of the knowledge of risk management in *shariah* compliant financing. This will give the government of Indonesia better information to regulate and provide an effective policy to attract and increase the *shariah* compliant investment in building transport infrastructure. This project will provide useful input for transport infrastructure project stakeholders in Indonesia, National *Shariah* Board, and academics to establish an effective risks management practice in *shariah* compliant project financing.

To compensate you for your contribution should you choose to participate and if the interview is being held outside your workplace, the research team will reimburse a set of return local transport and parking capped at IDR 50,000.

RISKS

There are no risks beyond normal day-to-day living associated with your participation in this project. Only inconveniences have been identified including that you may have to give up your time to participate in the interview, reply email, and answer phone calls from the researcher.

PRIVACY AND CONFIDENTIALITY

All comments and responses are potentially re-identifiable only by the researcher but will be treated confidentially unless required by law. You and your organisation will not be individually identified in the report. The identifiers will be replaced by a code when reported.

The project involves audio recording. The audio recording contents will be transcribed and integrated to the project report. Only the research team will have access to the audio recording. The audio recording, the transcription and analysis will be kept for 5 years after the project completion.

The project is funded by Indonesia Infrastructure Initiative through Dr Fiona Lamari's AIIRA (Australia Indonesia Infrastructure Research Award) Grant Project (Activity P255.01). The funder will have access to the data obtained from the study in the format of aggregate reports.

CONSENT TO PARTICIPATE

We would like to ask you to sign a written consent form (enclosed) to confirm your agreement to participate.

QUESTIONS / FURTHER INFORMATION ABOUT THE PROJECT

If you have any questions or require further information please contact one of the researchers listed below.

Sultan Akbar Rianto	+61 451 933129	sultan.rianto@hdr.qut.edu.au
Connie Susilawati	+61 7 3138 1853	c.susilawati@qut.edu.au
Fiona Lamari	+61 7 3138 1339	fiona.lamari@qut.edu.au
Ayomi Dita	+62 8 12812 0721	ayomidita@gmail.com

CONCERNS / COMPLAINTS REGARDING THE CONDUCT OF THE PROJECT

QUT is committed to research integrity and the ethical conduct of research projects. However, if you do have any concerns or complaints about the ethical conduct of the project you may contact the QUT Research Ethics Unit on +61 7 3138 5123 or email ethicscontact@qut.edu.au. The QUT Research Ethics Unit is not connected with the research project and can facilitate a resolution to your concern in an impartial manner.

Thank you for helping with this research project. Please keep this sheet for your information.

Queensland University of Technology Brisbane Australia	CONSENT FORM FOR QUT RESEARCH PROJECT – Interview –

Risk Identification in *Shariah* Compliant Financing of Transport Infrastructure Project in Indonesia

QUT Ethics Approval Number 1500000635

RESEARCH TEAM CONTACTS

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STATEMENT OF CONSENT

By signing below, you are indicating that you:

- Have read and understood the information document regarding this project.
- Have had any questions answered to your satisfaction.
- Understand that if you have any additional questions you can contact the research team.
- Understand that you are free to withdraw until 4 weeks from the interview without comment or penalty.
- Understand that after 4 weeks from the interview, your comments and responses may have already been analysed and integrated to the project report.
- Understand that non-identifiable data collected in this project may be used as comparative data in future projects or stored on an open access database for secondary analysis
- Understand that you can contact the Research Ethics Unit on +61 7 3138 5123 or email ethicscontact@qut.edu.au if you have concerns about the ethical conduct of the project.
- Understand that the project will include an audio recording.
- Agree to participate in the project.

Name ______________________________

Signature ______________________________

Date ______________________________

Please return this sheet to the investigator.