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Innovative Products for Liquidity Management

Can Unleveraged Green Investment Trusts (UGITs) promote Liquidity Management and Sustainable Development?

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Can Unleveraged Green Investment Trusts (UGITs) promote Liquidity Management and Sustainable Development?

Keywords: Investment Trusts, Green Energy, Liquidity Management, *Maqasid al-Shari'ah*

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Can Unleveraged Green Investment Trusts (UGITs) promote Liquidity Management and Sustainable Development?

Abstract

The main purpose of this paper is to explore a liquidity management solution for Islamic financial institutions (IFIs) that concurs with sustainable development and financial stability. Our innovative solution is based on the investment trust companies' model, i.e., a publicly tradable closed-ended fund. We analyse the Unleveraged Green Investment Trusts (UGITs) structure together with the key enabling factors, consistent with Basel III regulatory requirements. The findings allow us, first, to demonstrate how financial innovation can both meet financial stability and sustainable development objectives, therefore achieving the through spirit of Islamic finance. Second, we highlight the importance of regulatory and fiscal frameworks to enhance the liquidity and investor appeal for green financial instruments.

1. Introduction

“...the richness and dynamism inherent in the teachings of the Qur’an and the Sunnah should enable us to expand and refine the corollaries as needed to ensure that all human rights are duly honoured and that all the different human needs are adequately satisfied...the safeguarding of the maqasid does not need to be necessarily taken to imply preservation of just the status quo with respect to the realisation of the maqasid.”

Muhammad Umar Chapra (2008, p.5)

Liquidity management is one of the critical issues faced by Islamic financial institutions. This is due to the shortage of adequate instruments and markets, which exposes them to liquidity risk (Ahmed, 2015; Hasan and Dridi, 2010). This challenge is further exacerbated with the additional requirements imposed by Basel III regulations, i.e. the liquidity coverage ratio (LCR) and Net Stable Funding Ratio (NSFR), which aim to strengthen the stability of the financial system (BIS, 2013). Innovation is therefore important in developing a diversified range of financial instruments to meet the needs of IFIs. Innovation is also required in setting up the enabling infrastructure and ecosystem to promote cost effectiveness as well as deep and liquid secondary markets.

From social and environmental perspectives, climate change requires international mobilisation to mitigate its negative effects. In this regard, one of the easiest ways to introduce value to Islamic finance brand name is to supplement the obvious negative screens with some positive screens that contribute to economic development in the Islamic world (El-Gamal, 2006). While the potential of renewable solar energy is among the highest in the world with major concentration in the Middle East, North Africa, and some Sub-Saharan Africa countries (MIFC, 2017), a big majority of countries in these regions still heavily rely on fossil fuels, which have negative impacts on the environment and human well-being. Energy access and transition in these countries require considerable investments that public and concessional funds alone are unable to meet.

This paper suggests Unleveraged Green Investment Trusts (UGITs) as a model to enable Islamic financial institutions (IFIs) meet their liquidity management needs. Our research seeks to utilize the innovation inherent in infrastructure and renewable energy investment trusts to provide a solution for liquidity management for IFIs. UGITs represent a case of financial innovation that is motivated by two key factors: liquidity risk which impacts financial stability

and climate change, leading to serious implications on the achievement of the sustainable development goals (SDGs). UGITs are investment trusts that manage income generating green assets and offer regular income in the form of dividends. The income is derived from individual or pooled underlying green projects. Investment trusts have the advantage of securitizing illiquid assets thereby providing stable and predictable income. This often ensues from government-backed sources with a yield that can benefit from inflation linkage. We focus on the specific case of renewable energy to assess the potential of UGITs for liquidity management. Additionally, we demonstrate that an enabling framework is a key component of the financial innovation process, with its key pillars being regulation and taxation.

The model suggests an innovative solution for liquidity management while meeting the Basel III regulatory requirements. This can be achieved through the qualification of UGIT's common equity shares as Level 2B High Quality Liquid Assets (HQLA – described below), their eligibility for repo transactions with domestic Central Banks (CBs) and the development of domestic short-term *sukuk* with UGIT's shares as underlying assets.

The paper is structured as follows: First, we provide an overview on financial innovation drivers, liquidity management challenges for IFIs and green energy financing challenges. The UGIT solution is presented next followed by concluding remarks and policy recommendations.

2. Background Literature

Financial innovation implies seeking new products with unique features for existing financial needs (Sekhar, 2013). Iqbal (1999) describes the process of innovation as complex and sensitive, as it necessitates multidisciplinary considerations involving a deep understanding of Islamic jurisprudence. He argues that the survival and further development of Islamic financial markets largely depend on the nature of financial innovation introduced by market players. Financial innovation in Islamic finance must be within the *Shari'ah* parameters and tested against the '*Maqasid al-Shari'ah*' (objectives of the *Shari'ah*), both in form and substance, where the primary objective is the realisation of benefits to the people (IFSB-IRTI-IDB, 2010). In this regard, Siddiqi (2006) points out that "the overriding concern in inventing or adapting new financial instruments has been meeting the *Shari'ah* requirements legalistically while the *maqasid al-Shari'ah* (objectives of Islamic law) have not received due attention". This is the case of social and environmental considerations that are key dimensions in the *maqasid* theories.

While several innovations have caused disenchantment among Islamic finance customers because of the contrived product differentiation between Islamic and conventional products, shorter lags in bringing conventional innovations to the Islamic finance sector have the undeniable positive effect of improving overall efficiency in the sector (El-Gamal, 2006). This is the case of several products such as asset-backed securitization, Real Estate Investment Trusts (REITs), mutual funds, etc. Similarly, the introduction of *shari'ah* compliant UGITs will expand the range of liquidity management and investment instruments available for investors while meeting the ethical principles of Islamic finance. This is because environmental and social goals are integrated with the UGIT innovative model.

2.1. Liquidity management of Islamic financial institutions: Challenges and impact on Financial Stability

A diversified financial system with deep and liquid markets for financial instruments enhances financial stability. The Islamic Financial Stability Forum (IFSF) identified several challenges that expose IFIs to liquidity risk as compared to their conventional counterparts. These include the limited liquidity of the instruments used, the underdevelopment of a liquidity management infrastructure in most of the jurisdictions where Islamic financial services are offered and the rudimentary tools used for liquidity risk management (IFSB-IRTI-IDB, 2010). These challenges are further exacerbated with the reforms introduced by Basel III regulation to enhance the resilience of the banking sector. Among the key reforms, two ratios are introduced: the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR). The objective of the LCR is to promote the short-term resilience of the liquidity risk profile of banks by ensuring that they have an adequate stock of unencumbered high-quality liquid assets (HQLA) that can be converted easily and immediately in private markets into cash to meet their liquidity needs for a 30-calendar day liquidity stress scenario (BIS, 2013). The LCR is calculated as outlined below:

Stock of HQLA	≥100%
Total net cash outflows over the next 30 calendar days	

The NSFR will require banks to maintain a stable funding profile in relation to the composition of their assets and off-balance sheet activities (BIS, 2014). The NSFR is calculated as outlined below:

Available amount of stable funding	≥100%
Required amount of stable funding	

Assets are considered to be HQLA if they can be easily and immediately converted into cash at little or no loss of value (BIS, 2013). The BIS highlights four fundamental characteristics of HQLA (low risk, ease and certainty of valuation, low correlation with risky assets and listed on a developed and recognised exchange) and three market-related characteristics (active and sizable market, low volatility and flight to quality). Level 2 assets comprise level 2A assets¹ and any level 2B assets (described below) permitted by the banking supervisor. IFIs should be able to access and hold sufficient levels of HQLA and have the capacity to raise funds in money markets to use in the event of a liquidity shortage or to fund new profitable investment (IMF, 2017). To address these challenges, the IFSF identified the development of a liquidity management infrastructure as the second building block in enhancing financial resilience and stability thereby encompassing the development of a framework to facilitate and offer liquidity solutions to market players (IFSB-IRTI-IDB, 2010).

As for monetary policy, the ban on *riba* severely restricts a central bank’s grip on the economy, with more restricted options than under conventional finance (Visser, 2009). Although several instruments have been developed in many jurisdictions in an attempt to develop *shari’ah* compliant money markets, a dearth of HQLA has undermined IFIs’ capacity to manage their liquidity and mitigate their liquidity risk. Examples include: *Musharaka* Certificates in Sudan, *Wadia* (safekeeping) in Indonesia, *Tawarruq* in Kuwait, Government Investment Issues (GII) in Malaysia, Islamic Certificates of Deposit (CDs) in UAE, *Sukuk al-Salam* and *Sukuk al-Ijarah* in Bahrain, etc. Commodity *murabaha* is considered as the main instrument used by IFIs to manage their liquidity. However, the dependence on the *murabaha* contract has been heavily criticized for impeding research and development of other *shari’ah*-

1 The BIS limits level 2A assets to the following, subject to satisfying certain conditions: (i) Marketable securities representing claims on or guaranteed by sovereigns, central banks, PSEs or multilateral development banks and (ii) Corporate debt securities (including commercial paper) and covered bonds.

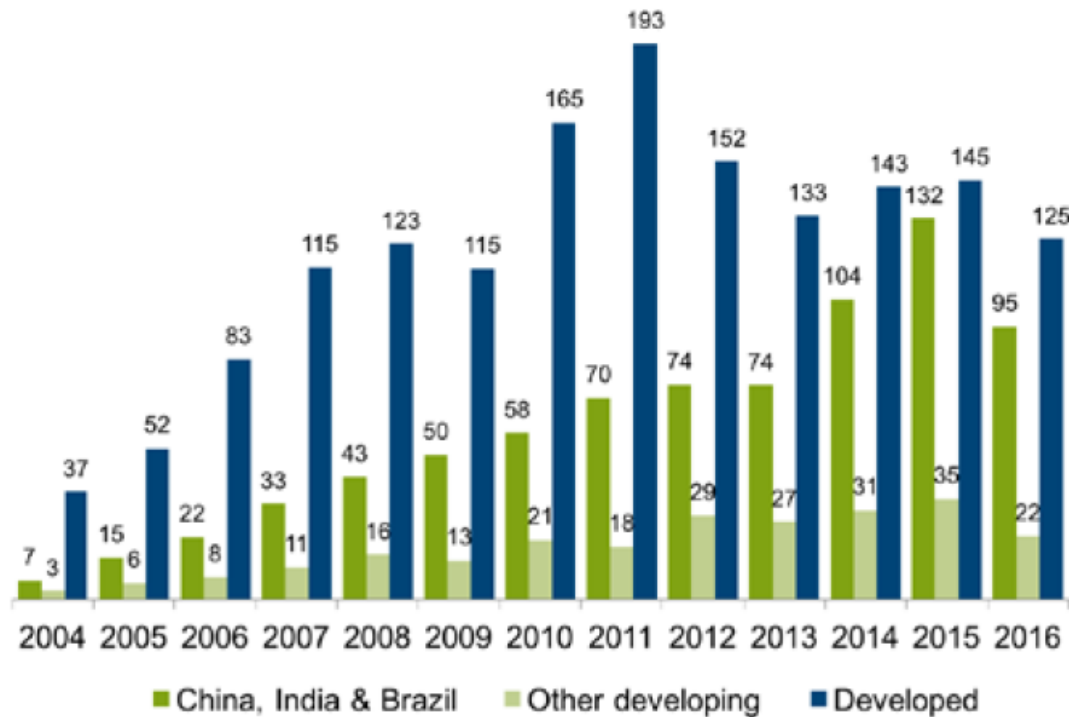
compliant instruments that might be securitized, and would therefore be better placed to support the development of the Islamic capital market (Thomas, 2005).

2.2. The Green Energy financing challenge

In 2016, more than 170 countries ratified the Paris agreement on climate change, bringing all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects². One of the key requirements of the climate agreement is energy transition in order to promote greater use of renewable energy. In fact, energy has a direct impact on socio-economic development given its crucial role for the development of several sectors such as manufacturing, infrastructure, agriculture, health and education, etc. Access to clean and sustainable energy became today a key objective that should be integrated in national development plans and international development initiatives. The International Renewable Energy Agency (IRENA) estimates the additional net investment required to implement renewable energy solutions at \$ 1.4 trillion, or about \$100 billion per year on average between 2016 and 2030 (IRENA, 2016). Because funding from public and concessional sources is scarce, an engaged private sector will be needed to make significant investments in renewable energy technologies (WB, CIF, 2015). Investment sources for renewable energy projects include development banks financing, bond issuance, commercial banks' lending and investment funds. Figure 1 below highlights how important the big three (China, India and Brazil) have been in investment terms in the last decade, accounting for \$94.7 billion, while the 'other developing' economies managed only \$21.9 billion (Frankfurt School-UNEP, 2016).

2 United Nations Framework Convention on Climate Change (www.unfccc.int).

Figure 1. Global New Investment in Renewable Energy: Split by Type of Economy, \$Bn (2004-2016)



Source: Frankfurt School-UNEP, 2017

Traditionally utilities and project developers have provided the majority of equity in large renewable projects through their balance sheet. However, in the past five years a large number of institutional investors have notably recognised infrastructure investments through debt and equity as a source of inflation-linked, long-term and stable cash flows (OECD, 2016). In addition, the capital and liquidity requirements of Basel III are likely to limit the amount of capital available for renewable energy financing from banks (Narbel, 2013). Institutional investors include mainly pension funds, insurance companies, asset managers, private equity firms, yieldcos (described below) and other listed vehicles, and investment funds (OECD, 2016). Yieldcos are among the several yield-based investment vehicles that have been developed to raise financing for renewable energy projects. This terminology is common in the United States where the vehicle is classified as corporation for US federal income tax purposes (with an ownership of an equity interest being the ownership of corporate stock) (EY, 2015). Other vehicles include quoted project funds, master limited partnerships (MLPs) and infrastructure investment trusts. A YieldCo is a publicly traded corporation that, like an MLP, provides stable and growing distributions for investors from operating assets that generate a

predictable stream of cash flow (EY, 2015)³. This structure, akin to a green infrastructure investment trust, has gained prominence for the past years as a liquid means to generate exposure to renewable energy assets. Investment trust companies are closed-end funds that are publicly traded. A recent report by the UNEP shows that Yieldcos and quoted project funds sold a record \$7 billion of equity, mainly to institutional and retail investors in 2015, to acquire operating-stage renewable energy projects (Frankfurt School-UNEP, 2016). Investment trusts companies represent a good source for financing renewable energy projects given the constraints faced by banks and utilities to fund long-term projects. Their investments are usually directed to operating-stage projects, which enable financing from Multilateral Development Banks (MDBs), utilities and governments to be directed to early-stage development phases of projects where institutional investors are reluctant to invest in.

In the Islamic capital markets, the fund management industry is still at its infancy with only about 2% of the total assets. As of 2016, more than 1100 Islamic Investment Funds have been established globally managing total assets of approximately US\$56 Billion with approximately 85% of assets under management (AuM) concentrated in five jurisdictions (IFSB, 2017). The managed assets include a broad spectrum of equity (43%), Money Market (25%), commodities (12%), sukuk (11%) and real estate (1%). Alternatives represented only 0.47%, which remains small in contrast with conventional funds (IFSB, 2017). Usmani (1998) defines Islamic investment fund as a joint pool wherein the investors ‘the subscribers of the fund’ contribute their surplus money for the purpose of its investment to earn *shari’ah* compliant pro-rated profits. The funds are managed on the basis of either *mudaraba* or *wakala* contracts. Islamic investment funds are similar to socially responsible funds in that they select their placements not on the basis of profitability alone but on non-economic criteria (Warde, 2000), which offers an embedded risk-management mechanism within the screening process. The approach is based on a two-level filtering mechanism: (i) qualitative by excluding non-permissible activities such as alcohol, tobacco, gambling, etc.; and (ii) quantitative by applying thresholds on the level of leverage and income from non-*shari’ah* compliant activities. Innovation in the Islamic fund management segment is best exemplified in the development of *shari’ah* compliant mutual funds, hedge funds and Real Estate Investment Trusts (REITs) (El-Gamal, 2006).

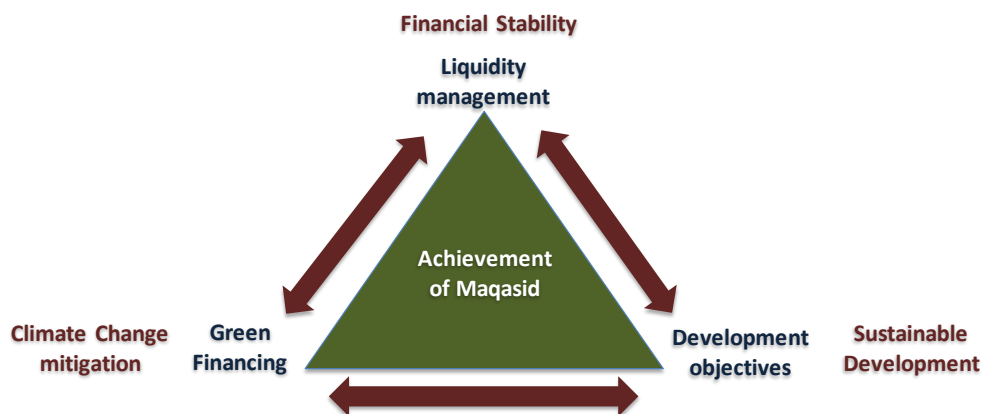
3 According to EY (2015), the classification as a corporation is important in the sense that such classification likely broadens the investor base in this yield-based vehicle to non-US investors and tax-exempt investors.

Conventional renewable energy investment trusts⁴ are by nature *shari'ah* compliant under the qualitative screening approach. However, from a quantitative filtering perspective, a number of their operations may not comply with *shari'ah* requirements. These include their financing structure such as interest-based loans; their cash placements in interest generating instruments and the use of conventional insurance for their activities.

3. Proposing UGITs as a liquidity management and green energy financing solution

In this research, we seek to utilize the innovation inherent in infrastructure and renewable energy investment trusts to provide a solution for IFIs' liquidity management. Within this context, we suggest a developmentalist approach that aims to fulfil the objectives of *shari'ah* 'the *maqasid*' through three key objectives: financial stability, climate change mitigation and sustainable development (see Figure 2 below). The Trust focuses on real economic activities, which have direct impact on sustainable development, therefore giving investors the opportunity to invest their money in alignment with their core beliefs and while promoting environmental and social good along with a good financial return on their investment:

Figure 2. The UGITs Triangle: A Developmentalist approach of liquidity management



Source: Authors

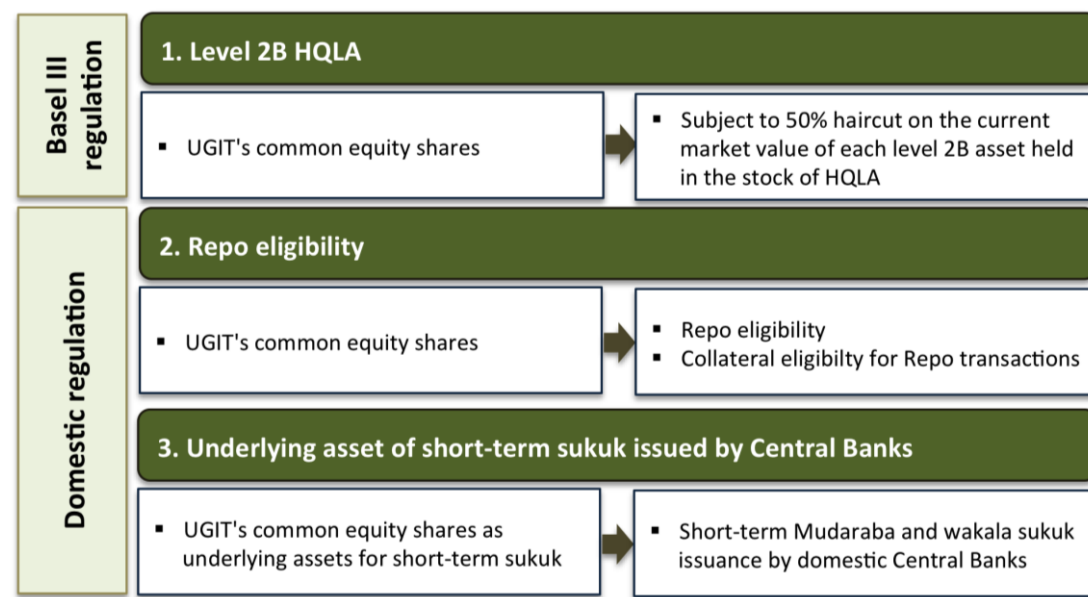
4 In the UK, for example, there are six renewable energy investment trusts launched in 2013 and 2014 that are listed in the London Stock Exchange:

- Renewables Infrastructure Group (TRIG): Wind and solar energy;
- Foresight Solar (FSFL): Solar energy;
- John Laing Environmental Assets (JLEN): Wind, solar and waste management;
- Greencoat UK Wind (UKW): Wind energy;
- Bluefield Solar Income (BSIF): Solar energy;
- NextEnergy Solar (NESF): Solar energy.

3.1. The three-layer solution for liquidity management

UGITs have the potential of providing a three-layer solution for liquidity management while meeting Basel III regulatory requirements. This is described in Figure 3 and depends largely on the prevailing regulatory environment. Domestic Central Banks' support is therefore an important milestone in achieving these objectives:

Figure 3: The UGIT's three-layer solution for liquidity management



Source: Authors

3.1.1. Level 2B HQLA

Investment in common equity stocks makes the investor share in the profits and losses of a firm; it is akin to profit and loss (PLS) arrangements (Visser, 2009). Under Basel III regulation, Common equity shares may be included in level 2B assets held by IFIs subject to meeting the following criteria (BIS, 2013):

- exchange traded and centrally cleared;
- a constituent of the major stock index in the home jurisdiction or where the liquidity risk is taken, as decided by the supervisor in the jurisdiction where the index is located;
- denominated in the domestic currency of a bank's home jurisdiction or in the currency of the jurisdiction where a bank's liquidity risk is taken; and
- traded in large, deep and active repo or cash markets characterised by a low level of concentration;

In addition, UGIT's common equity shares need to have a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions. We assume that UGIT's inherent features contribute to fulfilling this objective: First, UGIT's are unleveraged and their income is mainly derived from the underlying assets, which decreases their volatility as compared to leveraged investment trusts.⁵ Second, the Trusts benefit from local governments' sponsorship and their underlying assets represent income-generating and high-quality operating projects, which mitigates investors' exposure to early development stage risks and therefore allows for the stability and predictability of their cash flows. Third, the reserve fund established by the Trust mitigates late payment risk and allows for the smoothing of dividend payments. Fourth, the revenue risk is mitigated by the Power Purchase Agreements (PPA) between the Operating Companies and the Clean Energy Distributors for the sale of the electricity generated. Finally, the eligibility of UGIT's shares for repo transactions increases investor confidence and promotes open market operations.

3.1.2. Repo eligibility

Islamic Repurchase agreements (Repos) are financial instruments introduced for the purpose of enhancing liquidity in the interbank money markets (IMM) and providing avenue for IMM participants to source their funding requirements (BNM, 2013). Repos involve the sale and repurchase of securities between a purchaser (the lender), usually the Central bank, and a seller (the borrower) at a fixed price on a fixed date. The underlying securities are typically high-quality and liquid instruments with a value at least amounting to the provided facility. To expand the development of liquidity management instruments, Central Banks can include common equity shares issued by UGITs in their list of eligible securities for repo transactions.

From a *shari'ah* perspective, the repo is based on *rahn* agreement whereby the borrower "the IFI" pledges UGIT's shares against a liquidity facility by the facility provider "the Central Bank". *Rahn*, which is also termed as pawning, mortgage, collateral, charge, lien and pledge, refers to taking a property as a security against a debt, whereby the secured property can be utilized to repay the debt in the case of non-payment (ISRA, 2011). In this case, the

5 Volatility of shares is contingent on the variability of the income of the underlying shares. The unleveraged structure of UGITs helps in lowering the variability of their income and thus their underlying share prices (see Brealey, Myers and Allen, 2006).

Central Bank can enjoy the prorated dividends of the pledged shares; which can be qualified as gift (*hiba*).

3.1.3. Eligibility as underlying asset for short-term *sukuk* issuance

In a study on liquidity management issues facing IFIs, the Islamic Financial Services Board (IFSB) recommends that monetary authorities should actively use Islamic Government finance instruments in market-based monetary operations of the central bank to manage liquidity in Islamic money market in addition to supervisory guidance and incentives for effective liquidity risk (IFSB, 2008). In the recent years, several initiatives based on *sukuk* have attempted to address liquidity management challenges for IFIs. These include: (i) short-term *sukuk* issued by the International Islamic Liquidity Management Corporation (IILM), Central Bank of Bahrain (CBB) and Bank Negara Malaysia (BNM); (ii) *sukuk* trading platforms to promote secondary market trading; and (iii) *wakalah* fund based arrangements proposed by Bank of England (BOE). The last model is particularly interesting as it allows Central Banks to provide a *wakalah* facility to Islamic banks whereby Islamic banks can place deposits with BOE on a term basis that can be breakable by Islamic banks at any time and for an expected profit rate (EPR), which would be set at the start of the transaction. BOE will then invest the deposits in high quality *sukuk*⁶. However, the deposits represent a guaranteed claim against BOE, which gives rise to *shari'ah* compliance issues, as the guarantee of the *muwakkil*'s funds by the *wakeel* contravenes *Shari'ah* principles.

Another option could be the issuance of short-term *sukuk* by CBs using a pool of shares issued by UGITs or a mixed pool comprising shares together with other tangible assets. These could qualify as short-term green *sukuk* as they target environmental impact projects. From a *shari'ah* perspective, a share represents an undivided share in the capital of a corporation, just as it represents an undivided share in its assets and the rights associated with it upon conversion of the capital into tangible things, benefits, debts and so on (AAOIFI, 2010)⁷. Equity shares have been used, for example, as underlying assets in the Government of Malaysia's *wakala sukuk* issued in 2016 and IDB *wakala sukuk*. In the government of Malaysia *sukuk*, the issue price to the Government of Malaysia was allocated to the purchase of shares of Pengurusan

6 The Fund's initial purchases of *sukuk* will be funded by a deposit from the Bank rather than a conventional interest-based loan.

7 Shari'a Standard No. (21). Financial Paper (Shares and Bonds).

Aset Air Berhad under a Share Sale and Purchase Agreement⁸. The AAOIFI sets two general conditions for *sukuk* to be tradable⁹: (i) Sukukholders must have the rights and obligations of ownership of real underlying assets (whether tangible, usufructs or services), which must be capable of being owned and sold legally, and (ii) *sukuk* must not represent purely receivables or debt. The UGIT's shares represent *'ayn* and therefore allow for the tradability of the short-term *sukuk* issued by CBs.

3.2. The UGIT structure

The structure involves the UGIT raising cash from institutional investors through an initial public offering (IPO) of its stock, and using the IPO proceeds to buy green assets. Typically UGITs will invest in operational revenue-generating high quality assets, which presents several advantages: (i) Efficiency in the use of public and multilateral funds by directing them to early project development and preparation phases, which results in the development of a pipeline of high quality government backed bankable green energy projects; (ii) Promoting investor confidence, which attracts private sector investments for projects in the execution phase; (iii) Providing IFIs, especially banks and *takaful* companies, with high quality liquidity management instruments, and thus contributing to financial stability; and (iv) Tax incentives for investors, which has a direct impact on their investment appetite.

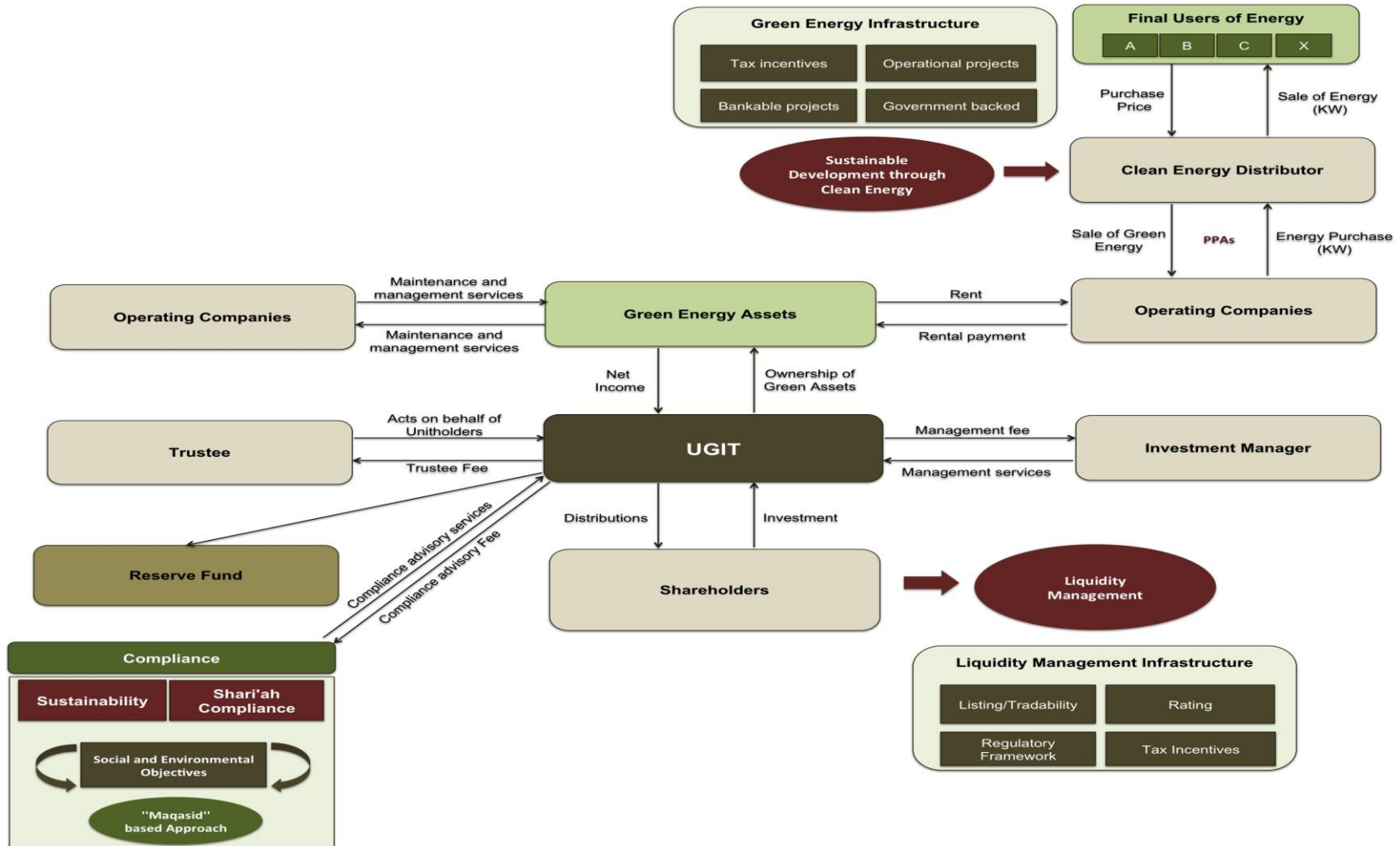
The vehicle is structured as an actively managed investment trust company with publicly quoted shares. In general, close-ended Investment Trusts are more attractive for investors than open-ended investment companies (OEICs) as they are endowed with the advantage of owning illiquid assets. This is attributed to the process of securitization, which facilitates the transformation of illiquid assets into tradable capital market instruments (see Mullineux and Murinde, 2005).¹⁰ Furthermore, the listing of investment trusts facilitates their continuous pricing, which enhances their liquidity.

8 Government of Malaysia Wakala Sukuk Offering Memorandum.

9 Shari'a Standard No. (17) Investment Sukuk-Appendix B: Basis of the Shari'a Rulings

10 Investment trusts trade at a discount or premium to their underlying net asset value (NAV). Academic research describes this as a puzzle (see Lee, Shleifer and Thaler, 1991). When investment trusts own illiquid assets, it can be difficult to accurately price their constituent assets based on market value. One is compelled to 'appraise' their illiquid assets thereby biasing their NAV (see Geltner, 1989, 1991).

Figure 4. The UGIT structure: Enhancing Liquidity Management through Green Infrastructure



Source: Authors

The Trust illustrated above in Figure 4 uses the subscription amounts to invest in green energy long-term income-generating assets for the purpose of leasing them. The assets' high quality is derived from the long-term lease contracts with the operating companies, which offer regular and predictable cash flows. The key parties in the UGIT structure are described below:

The Trust: The UGIT invests in income-producing green assets used to generate clean energy, in line with *shari'ah* principles. The UGIT's portfolio comprises domestic high quality green assets.

The Investment Manager: The Trust is managed by an investment manager 'The Manager', a wholly owned subsidiary by the UGIT with expertise in the green energy sector. The Manager sets the strategic direction for the UGIT, manages its assets, and makes recommendations to the Trustee on issues related to the asset pool management. The Manger should also ensure compliance with the guidelines as set out by the sustainability committee.

The Sponsor: The sponsor offers expertise to help identify and source suitable green assets for the UGIT's portfolio. The 'Sponsor' also provides a pipeline of potential green assets for future acquisitions.

The compliance committee: The compliance committee is composed of *shari'ah* scholars and sustainability experts who can assess the 'ethical' compliance of transactions. Based on the 'Maqasid' approach, *shari'ah* scholars should assess the 'ethico-legal' compliance of the transactions based on the sustainability reporting provided by the sustainability committee.

The reserve fund: The reserve fund allows investors to enjoy a steady income whereby the UGIT can hold back a percentage of the income generated by the underlying assets each year to build up a reserve to be used to smooth dividend payments in tougher times.

3.3. Shari'ah considerations and underlying contracts

UGITs offer equity instruments that are based on the principle of partnership. The activities of the Trust comply by nature with the principles of *shari'ah* as they do not involve activities in illicit sectors. From a quantitative screening perspective, the Trust is *unleveraged* unlike conventional trusts. The Trust, in its legal entity, owns the assets and collects rentals from the operating companies (lessees). The rentals (*ujrah*) represent the main source of income of the fund, which will be distributed to the shareholders in the form of dividends on a pro rata basis. Each shareholder holds a percentage in the Trust assets, and is, thus, entitled to

a pro rata share in the Trust's income, allowing for the tradability of shares. The Trust's financing is mainly derived from the offering of shares and subsequently the cash flows generated from the underlying assets. The relationship between the Trust's parties can be construed based on the *ijarah* and *wakala* contracts:

The *Ijarah* contract can be used between the investment manager and the operating companies. An *ijarah* contract incorporates a fixed-term or periodically re-fixed income stream, or rental, from the economic use of a physical underlying asset (Thomas, 2005). The Trust invests exclusively in leased assets with fixed tenure and regular income, facilitating the use of the *Ijarah* structure, which enjoys global *shari'ah* acceptance. Taqi Usmani highlights several requirements for the acceptability of *ijarah* (Usmani, 1995):

- The leased assets must have some usufruct, and the rental must be charged only from that point of time when the usufruct is handed over to the lessee;
- The leased assets must be of a nature that their *halal* (permissible) use is possible;
- The lessor must undertake all the responsibilities consequent to the ownership of the assets;
- The rental must be fixed and known to both parties at the time of entering into the contract;

The *Wakala* contract is used between the investment manager as *wakeel* and the shareholders as *muwakkil*. Under the *wakala* contract, the shareholders (certificate holders) are contributors of subscription amounts that would be used to purchase leasable assets for the purpose of leasing them to operating companies (lessees). In this case, the Trust, as *wakeel*, is entitled to a fee for its services.

3.4. Key Enabling Factors: The Ecosystem

The key enabling factors include an innovative ecosystem to mitigate barriers that can hold back the development of UGITs and their use as an efficient liquidity management tool for IFIs. These include:

a. Incentives: Incentives enhance cost effectiveness and increase demand for financial instruments. Examples include tax exemptions¹¹ such as tax neutrality, stamp duty exemption

11 In the case of Tadau *Sukuk*, the first green *sukuk* in Malaysia, several incentives were put in place to attract green issuers. These include (i) Tax deduction until year of assessment (YA) 2020 on issuance costs of SRI *sukuk* approved or authorised by or lodged with the SC; (ii) Tax incentives for green technology activities in

and reductions in withholding taxes; and policy support such as green subsidies and capital grants¹².

b. Instruments that mitigate revenue risks: One of the key challenges in investing in green energy projects is to secure a predictable stream of revenue to reward investors. This can be achieved by the setup of long-term contracts with energy off-takers, usually in the form of Power Purchase Agreements (PPAs) and/or Feed-in Tariffs (FITs). PPAs are legally binding standardized contractual agreement by which an entity, such as single buyer or a distribution company, undertakes to purchase the power generated by an independent or affiliated small-scale renewable energy power producer under specified terms for a multiyear period (Azuela and Barroso, 2011). FITs drive market growth by providing developers long-term purchase agreements for the sale of electricity generated from renewable energy sources (Couture et al., 2010).

c. Regulatory framework: enabling regulatory frameworks are important to allow banks to invest in infrastructure investment trusts. A good example is India, where the Reserve Bank of India (RBI) decided in April 2017 to allow banks to participate in Real Estate Investment Trusts (REITS) and Infrastructure Investment Trusts (InvITs) within the overall ceiling of 20 per cent of their net worth permitted for direct investments in shares, convertible bonds/ debentures, units of equity-oriented mutual funds and exposures to Venture Capital Funds (VCFs) subject to few conditions¹³. Another good example evidencing the importance of regulatory frameworks to promote financial innovation is Malaysia. With guidelines on Islamic REITs, Socially Responsible Investing (SRI) and Green Sukuk, the country is continuously developing its infrastructure to allow for the development of the Islamic finance industry.

d. High quality asset pipeline: The Trust can only invest in viable and bankable projects that have already passed the pre-investment stage and reached financial close. While this mitigates the early development stage risks¹⁴, it requires the availability of high quality asset pipeline. In

energy, transportation, building, waste management and supporting services activities; and (iii) Financing incentives under the Green Technology Financing Scheme (GTFS) with total funds allocation of RM5 billion until 2022.

12 Subsidies foster green innovation, stimulate demand for clean energy and facilitate the entry of new players (Nesta et al., 2014).

13 www.rbi.org.in

14 An example of institutions that provide support to the early development stages of infrastructure projects is Africa 50. Africa 50 aims to increase the pipeline of bankable private and PPP infrastructure projects in Africa through strategic investments in infrastructure projects with a development impact.

fact, the availability of sufficient and predictable portfolio of projects is critical to attract private sector investors, with pre-investment facilitated by Multilateral Development Banks (MDBs) in the form of project facilities (Griffith-Jones and Kollatz, 2015). Recent initiatives suggest the consolidation of global project pipelines in order to facilitate the private sector investment decision process¹⁵.

e. Listing and green indexes: In an attempt to promote sustainable practices, several indexes tracking the clean energy sector have been developed in the past years. Among them the Nasdaq Clean Edge Green Energy Index (CELS), the FTSE Green Revenues Index, the S&P Global Clean Energy Index, etc. The development of domestic green indexes promotes transparency and sustainable investment by facilitating the tracking of companies that are engaged in clean energy activities

4. Conclusions and policy recommendations

The global mobilisation to enhance financial stability, achieve the sustainable development goals (SDGs) and mitigate climate change requires innovative structures and frameworks in order to develop new financing instruments and increase the efficiency of the existing ones. Islamic finance's inherent ethical principles and legal contracts offer different avenues for financial innovation that incorporate the *maqasid*.

Unleveraged Green Investment Trusts (UGITs) represent a case of financial innovation as they allow for the pooling of investment funds and their allocation to development projects in addition to facilitating liquidity management for IFIs and open market operations for CBs. The article examines the particular case of renewable energy. However, the model can be extended to other environmental issues such as transport, water and waste management.

The exploratory research highlights two key areas for regulators' focus. First, the development of standardized guidelines and frameworks on green and infrastructure investment trusts by local regulators and international standard setting bodies such as the IFSB. Second, the importance of favourable regulatory frameworks to promote banks' ability to invest in UGITs and the qualification of their shares as HQLA. We intend to extend our

15 A recent initiative by the Brisbane G20 leaders' summit has led to the creation of the "Global Infrastructure Hub Project Pipeline", a dynamic database of future and current government infrastructure projects, allowing projects to be tracked from conception to completion (<https://pipeline.gihub.org/>).

research in the future to investigate the employment of unleveraged real estate investment trusts (UREITs) for the purpose of liquidity management.

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