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Mutual Funds: Pathways to Promoting Sustainable Green Finance in Singapore

Introduction

Since the World Bank issued the first green bond in 2008 (Federal Ministry for Economic Cooperation and Development, 2018), the issuance of green bonds has taken off. The amount of green bonds was slightly lower than USD50 billion in 2015 but it had increased fourfold by October 2019 (Climate Bonds Initiative, 2019).

Despite active issuance of green bonds worldwide, there are still some challenges. They can be summarized as four challenges: the lack of contractual green protection (whether ‘green’ remains ‘green’ for the entire life of the bond); improper reporting of metrics and transparency or ‘greenwashing’; issuer fatigue and confusion; and the lack of pricing benefits to going green (Baker McKenzie, 2019). Apart from these challenges, there seems to be a narrower base of demand for green bonds, and increasing the base of demand for green bonds can help the green bond market.

Most of the World Bank’s green bond issuance is aimed at institutional

investors (Federal Ministry for Economic Cooperation and Development, 2018) and most active in the green bond market are pension funds and insurance companies (European Commission, 2016). The green bond market is still small compared to the total bond market, and public investment is a suggested solution to promote demand for green bonds (European Commission, 2016). There is far more demand for green bonds than supply of green bonds at this moment (European Commission, 2016). As issuance of green bonds is expected to increase, however, the gap between demand and supply will narrow or even disappear. Increasing the base of demand for green bonds can provide more liquidity to the market and the greater liquidity could eventually invite more issuers and make the green bond market more competitive.

Investors can use mutual funds to invest in single- or multi-asset classes of stocks, bonds or other securities (Fabozzi and Modigliani, 2003). In general, investors may benefit from pooling their funds with others to own a portfolio of assets that they may otherwise be unable to buy on their own with the same investible amount. Mutual funds could “democratize” investment opportunities to enable investors to invest in a variety of securities. This helps investors achieve more varied returns and reduce risk through diversification.

The words “green investments” are often used interchangeably with terms like “sustainable” or “responsible” invest-

ments. In this paper, we examine the challenges of using mutual funds to provide investors with access to such investments. For consistency, we shall use the term “green” in this paper.

Prospects are good that Singapore’s mutual fund industry can benefit from the growth of green investments. There is evident government support to push Singapore to the forefront of green investments. With the various initiatives, the mutual fund industry in Singapore is poised to grow in this segment and give small investors the chance to invest.

Following this introduction, this paper presents a brief discussion on green finance in the world along with a description of policy, incentives and obstacles to green financing in Singapore. It suggests how mutual funds can promote the green bond market and grow along with that market. Finally, it concludes with a summary of key findings and some recommendations on the role of mutual funds.

Green Finance in the World

Green bonds are defined as “any type of bond instrument where the proceeds will

be exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible Green Projects and which are aligned with the four core components of the G[reen] B[ond] P[rinciples]” (International Capital Market Association (ICMA), 2018, p.3). The four core components are: use of proceeds, process for project evaluation and selection, management of proceeds, and reporting. Eligible green projects include, but are not limited to, the following: renewable energy, energy efficiency, pollution prevention and control, environmental sustainable management of living natural resources and land use, terrestrial and aquatic biodiversity conservation, clean transportation, sustainable water and wastewater management, climate change adaptation, eco-efficient and/or circular economy adapted products, production technologies and processes, and, finally, green building (ICMA, 2018).

The size of the green bond market in 2017 was USD161 billion (Chang, 2019) and was expected to reach USD250 billion

in 2018 (Climate Bonds Initiative, 2018). However, the green bond market only reached the milestone of USD200 billion in October 2019, and more issuance of green bonds is expected to come in 2020 (Climate Bonds Initiative, 2019). The top five issuers of green bonds in 2019 were the Dutch State Treasury Agency, KfW, Industrial Bank, the Republic of France, and ACWA Power (Silk Road Fund) (Table 1).

The main uses of the proceeds from green bond issues are energy, low-carbon buildings and low-carbon transport, using 33%, 30% and 22% of proceeds, respectively. The US is the most active issuer of green bonds followed by France, China, Germany and the Netherlands. Supranational came after the Netherlands (Climate Bonds Initiative, 2019).

Unlike in the US, Europe and China, the green bond market in Southeast Asia is still in an early stage. Singapore was the first country in the region that issued green bonds with issues by two companies. City Development Limited issued green bonds with a total value of USD100

million in 2017 and DBS Group Holdings Limited (DBS) issued green bonds with a total value of USD500 million in 2017 (Chang, 2019). Following Singapore, four other Association of Southeast Asian Nations countries issued green bonds, namely Indonesia, Thailand, Malaysia and the Philippines. Indonesia is the largest issuer of in ASEAN (Azhgaliyeva, Kapoor and Liu, 2019). Sindicatum in Singapore issued green bonds denominated in Indian rupees worth USD400 million in 2018 and in Philippine pesos worth USD20 million in 2019 (International Institute of Green Finance, n.d.).

Multinational banks or government-related entities were the major issuers of green bonds from 2007 to 2012 (Federal Ministry for Economic Cooperation and Development, 2018, p.30). For example, the investors in the green bonds issued by France in 2017, which totalled EUR7 billion with a maturity of 22 years, were asset managers, banks, pension funds, insurers, official institutions and hedge

Table 1: Top Ten Issuers of Green Bonds Issuers in 2019

Issuer	Amount Issued (billion)	Issue Currency	USD Equivalent (USD billion)	Sector
Dutch State Treasury Agency	5.99	EUR	6.66	Energy, Buildings, Transport, Water
KfW	3.00	EUR	3.36	Energy, Buildings
Industrial Bank	20.00	CNY	2.91	Energy, Buildings, Transport, Water, Waste
Republic of France	2.47	EUR	2.77	Energy, Buildings, Transport, Waste, Land Use, Adaptation & Resilience (A&R)
ACWA Power (Silk Road Fund)	2.69	USD	2.69	Energy
Industrial and Commercial Bank of China	2.50	USD	2.50	Energy, Transport, Water
Societe du Grande Paris	2.00	EUR	2.27	Transport
Republic of Poland	2.00	EUR	2.24	Energy, Transport, Land Use
National Treasury Management Agency	2.00	EUR	2.21	Energy, Buildings, Transport, Water, Land Use, A&R
KfW	2.00	USD	2.00	Energy, Buildings

Source: Climate Bonds Initiative

Table 2: Breakdown of Investors in France's Green Bonds Issued in 2017

Investors	Share (%)
Asset Managers	33
Banks	21
Pension Funds	20
Insurers	19
Official Institutions	4
Hedge Funds	3
Total	100

Source: Federal Ministry for Economic Cooperation and Development

funds. The breakdown of their shares is shown in table 2 (Federal Ministry for Economic Cooperation and Development, 2018, p.33-34).

There are four instruments for sustainable finance other than green bonds. They have similar characteristics but differ mainly in their objectives. They are: sustainability bonds, social bonds, green loans and sustainability-linked loans. All these instruments appeared to work well and complement to green bonds in fulfilling the objectives of financing green projects (International Institute of Green Finance, n.d.).

Going global can be a way to strengthen the green bond market in Asia. Three ways to achieve this goal are harmonization, policy support, and demonstrative issuance. Financial support as issuing bonds and verifications are costly (International Institute of Green Finance, n.d.).

Green Financing in Singapore: Policy, Incentives, and Obstacles

Singapore has focused on policy initiatives and incentives to provide the impetus for the growth of green financing. While there exist obstacles to Singapore's ambitions, the country is well-positioned to implement appropriate policy measures that

are augmented by a slew of incentives. These could provide the catalyst for the mutual fund industry to benefit from the growth in green investments.

Singapore has issued clearly defined policy guidelines in relation to environmental, social and governance (ESG) factors in investing, such as the Association of Banks in Singapore's (ABS) "Guidelines on Responsible Financing," which specifies three principles of responsible financing. The first principle requires senior management to disclose their commitment to responsible financing. The second principle dictates the governance of responsible financing. The third principle concerns the capacity building of responsible financing. In addition, the Singapore Exchange asks all listed companies to comply with the ESG principles strictly (Chang, 2019).

Singapore offers a few incentives in relation to green bonds. The Monetary Authority of Singapore (MAS), the central bank, provides the Green Bond Scheme to help bond issuers to reduce the cost of issuing bonds and of getting external reviews (Chang, 2019). The Green Bond Scheme does not apply to those green bonds issued outside Singapore by Singapore-registered companies (Federal Ministry for Economic Cooperation and Development, 2018).

There are still obstacles to the expansion of the green bond market in Singapore. As in other countries, the issuers of green bonds are mainly large companies; small and medium-sized enterprises do not have access or capacity to issue green bonds. The lack of awareness of green issues in general and of green bonds specifically remains, and raising the awareness of green bonds is a critical step to activating the green bond market in Singapore (Chang, 2019).

How Mutual Funds Can Be Utilized to Promote and/or Secure Green Finance – Potential

As described above, the Singapore government and MAS have demonstrated a clear intention to promote green investments. However, several remaining issues hinder the broader penetration of this investment philosophy and a few issues stand to dim

the promising prospects of growth.

First, a lack of awareness of the availability of collective investment schemes that allow retail investors to make green investments still present. The green bonds issued in Singapore so far have been targeted at high net-worth and institutional clients (City Development Limited, 2017; DBS, 2017). Due to the higher minimum investment sizes, such direct investment opportunities are out of reach for retail investors. Even if retail investors can fulfil the minimum transaction size, they are unlikely to be able to achieve portfolio diversification by owning multiple green assets. Mutual funds can help provide the access to such investments with the benefit of portfolio diversification as well.

Second, the nature and sheer size of green financing often force issuers and companies to prefer a small number of large investors as opposed to having to handle many small investors. The requirements for verification of the green standards for each project also make it much harder for non-institutional investors to conduct due diligence. Such intricacies make it inherently harder for retail investors to invest in green projects. Herein lies the important role that mutual funds can play to provide investment opportunities in green finance to retail investors.

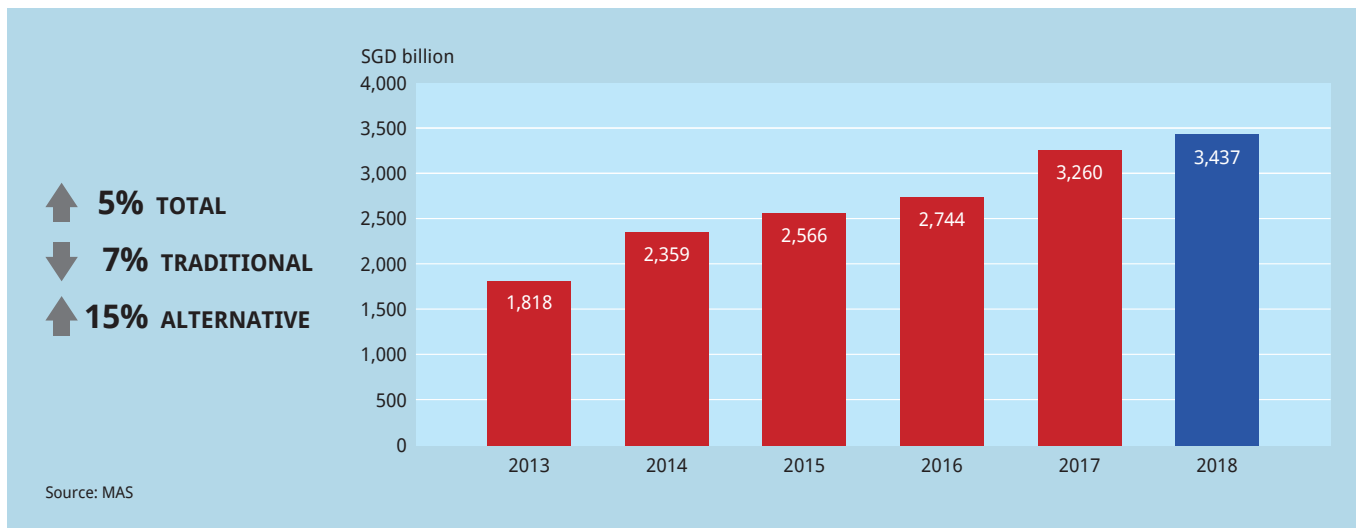
Third, without the opportunity to invest, the concept of green investments will remain far-fetched to many retail investors. This will limit green financing to "big ticket" institutional investors, excluding small investors. Thus, mutual funds can play an important role to "democratize" green investment.

Fourth, the generic concept of green investment remains abstract and, maybe even confusing, to retail investors. There are still no standard terms, so people continue to be confused by the various terms used within the segment. This includes definitions, standards for each type of green financing to be achieved and a lack of transactional turnover in green investment.

MAS 2018 Singapore Asset Management Survey

According to MAS's 2018 Singapore Asset Management Survey, overall assets under

Figure 1: AUM in Singapore



management (AUM) in Singapore rose 5% with a 15% increase in alternative assets being offset by a 7% decline in traditional managed funds (Figure 1).

The MAS survey also showed that globally, ESG investments grew 34% in two years to USD30.7 trillion. The guidelines for ESG investments in Singapore were first presented in 2015 and revised in 2018 by ABS (ABS, 2015 and 2018). Asset managers and institutional investors have since increased their efforts in tandem to integrate ESG considerations into their investments, with the aim of safeguarding reputational risks and generating long-term value through better alignment of their portfolios with global developments in ESG.

In line with a growing global call for financial institutions to promote green finance, Singapore has taken steps to implement sustainable practices and provide incentives. MAS is actively working with industry players to direct capital towards effective investments in climate action and sustainable activity. MAS is a founding member of the Network of Central Banks and Supervisors for Greening the Financial System (NGFS), which seeks to enhance the role of the financial system to manage risks and mobilise capital for green and low-carbon investments in the broader context of environmentally sustainable development (Chang, 2019).

The MAS survey showed that Singapore's share of ESG-managed assets stood at 27% of total AUM in 2018, up from 23% the previous year. SGD6 billion worth of green bonds have also been issued by local and foreign companies since the introduction of the Green Bond Grant Scheme in

June 2017. The Green Bond Grant Scheme was enhanced and renamed the Sustainable Bond Grant Scheme in February 2019 to include social and sustainability bonds while also lowering the minimum issuance size requirement. These changes augur well for mutual funds with green investments.

Conclusion

This overview of green finance in Singapore shows that there has been commendable progress. However, it is evident that more needs to be done, especially in making green investing more accessible to the masses. If the right steps are taken, Singapore's mutual fund industry can stand to ride on the future growth of green investing.

In conclusion, the following recommendations may help to further propel Singapore's mutual fund industry in the area of green investing. First, Singapore needs to clearly define the concept of "green". Second, it should release more information on the ESG performance of bond issuers to enhance transparency on the quality of green projects or green financial instruments. Third, it needs to create demand for green investments. Tapping on mutual funds for investors is one way

of creating the demand.

References

- Association of Banks in Singapore (ABS) (2015), ABS Guidelines on Responsible Financing, Version 1.0
- Association of Banks in Singapore (ABS) (2018), ABS Guidelines on Responsible Financing, Version 1.1
- Azhgaliyeva, Dina, Anant Kapoor and Yang Liu (2019), "Green bonds for financing renewable energy and energy efficiency in South-East Asia: a review of policies," paper presented at the workshop on Green Infrastructure and Financial Development in Asia: Investment, Policies and Economic Impacts, organized by ADBI, 14 – 15 November 2019, ADBI, Tokyo, Japan.
- Baker McKenzie (2019), "Critical challenges facing the green bond market," *IFLR.COM*, October/November 2019.
- Chang, Youngho (2019), "Green Finance in Singapore: Barriers and Solutions," in *Handbook of Green Finance: Energy Security and Sustainable Development*, edited by Jeffrey Sachs, Woo Wing Thye, Naoyuki Yoshino and Farhad Taghizadeh-Hesary, ADBI and Springer, pp. 659 – 674.
- City Development Limited (2017), *City Development Green Bond: Framework Overview and Second Opinion* by Sustainalytics.
- Climate Bonds Initiative (2018), *France Country Briefing*, April.



Climate Bonds Initiative (2019), “Green bond issuance tops \$200bn milestone—New global record in green finance: Latest Climate Bonds data,” October 21, 2019. <https://www.climatebonds.net/2019/10/green-bond-issuance-tops-200bn-milestone-new-global-record-green-finance-latest-climate>. Accessed on 17 December 2019.

DBS Group Holdings Limited (2017), DBS Green Bond Framework: Framework Overview and Second Opinion by Sustainalytics.

European Commission (2016), *Study on the potential of green bond finance for resource-efficient investment*, Brussels, Belgium.

Fabozzi, Frank J. and Franco Modigliani (2003), *Capital Markets: Institutions and Instruments*, 3rd edition, Prentice Hall, Upper Saddle River, New Jersey.

Federal Ministry for Economic Cooperation and Development (2018), *Green Bonds – Ecosystem, Issuance Process and Case Studies*, Bonn.

International Capital Market Association (ICMA) (2018), *Green Bond Principles: Voluntary Process Guidelines for Issuing Green Bonds*, Paris, June 2018.

International Institute of Green Finance (n.d.), *Sustainable Finance in Asia: Helping Asian Green Bond Issuers to Access International Capital Markets*, Beijing.

Monetary Authority of Singapore (MAS) (2018), *2018 Singapore Asset Management Survey, The Gateway to Asset Management Opportunities in Asia*.

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