Hometown Investment Trust funds: *an Analysis of Credit Risk*

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Abstract:

In Asia, small and medium-sized enterprises (SMEs) account for the major share of employment and dominate the economy. Asian economies are often characterized as having bank-dominated financial systems and underdeveloped capital markets, in particular venture capital. Hence looking for new methods of financing SMEs is crucial. Hometown Investment Trust funds (HIT) are a new form of financial intermediation that was only recently started and has now been adopted as a national strategy in Japan. In this paper, we explain about the importance of SMEs in Asia and will describe about HIT. Then, we provide a scheme for credit rating of SMEs employing two statistical analysis techniques, principal components analysis and cluster analysis, applying various financial variables to 1,363 SMEs in Asia. This comprehensive and efficient method would enable banks, to group their SME customers based on their financial health, adjust interest rates on loans, and set lending ceilings for each group. Moreover this method is applicable to HIT around the world.

Keywords: Hometown Investment Trust funds, SME credit rating, SME financing

1. Introduction

Small and medium-sized enterprises (SMEs) are the backbone of the economies in Asia, accounting for 98% of all enterprises, 66% of the national labor force and 38% of the gross domestic product on average during 2007–2012 (statistics in this paragraph from ADB, 2014). SMEs influence trade. Thirty percent of total export value was accounted for by SMEs in Asia on average in 2007–2012. In the People's Republic of China (PRC), SMEs accounted for 41.5% of total export value in 2012, up 6.8% year-on-year, while in Thailand they made up 28.8% of total export value, with 3.7% year-on-year growth**.** SMEs that are part of global supply chains have the potential to promote international trade and mobilize domestic demand.

Because of the significance of SMEs to Asian national economies, it is important that ways be found to provide them with stable finance. Asian economies are often characterized as having bank-dominated financial systems and their capital markets, in particular venture capital, are not well developed. This means banks are the main source of financing. Although the soundness of the banking system has improved significantly since the Asian crisis, banks have been cautious about lending to SMEs, even though such enterprises account for a large share of economic activity. Start-up companies, in particular, are finding it increasingly difficult to borrow money from banks because of strict Basel capital requirements. Riskier SMEs also face difficulty in borrowing money from banks (Yoshino, 2012). Hence an efficient credit rating scheme that rated SMEs based on their financial health would help banks to lend money to SMEs in a more rational way, while at that same time reducing the banks' risk.

Various credit-rating indexes, such as S&P, rate large enterprises. By looking at a large enterprise's credit rating, banks can decide to lend them up to a certain amount. However, for SMEs the issue is more complicated as there are no comparable ratings. Nevertheless, there is a useful model in Japan. In a government-supported project, 52 credit guarantee corporations collected data from Japanese SMEs. These data are now stored at a private corporation called Credit Risk Database (CRD), which contains data from 14.4 million SMEs, including default data from 1.7 million. If similar systems could be established in other parts of Asia to accumulate and analyze credit risk data, and to measure each SME's credit risk accurately, banks and other financial institutions could use it to categorize their SME customers based on their financial health. SMEs would also benefit as they could both raise funds from the banks more easily and gain access to the debt market by securitizing their claims.

In section 2, we describe the characteristics of Asian economies, in particular the important role played by SMEs. In section 3, we explain the advantages of preparing a complete SME database in each country. We then discuss stable ways of financing SMEs in Asia including Home Town Investment Trust Funds. In section 4, we propose a way of establishing SMEs' credit ratings using statistical techniques and financial ratios. This captures all the characteristics of SMEs, including leverage, liquidity, profitability, coverage, and activity. The method can be used by banks all around the world especially in Asia, to group SMEs based on their financial health, to adjust the interest rates on loans, and to set lending ceilings for each group. More over this method is applicable for Hometown Investment Trust funds. Section 5 contains concluding remarks.

2. Characteristics of Asian Economies

2.1. High Potential Growth

Asian economies have had relatively high economic growth rates over the past two decades and further strong growth in Asia is expected over the next few years because of the growth of the middle class. Populations are young in most of Asia. If Asian economies continue to expand, the rate of return in the Asian region will be higher than in other regions. There is huge potential for growth and for financial investment in Asia (Yoshino, 2012).

2.2. High Savings Rates and Low Capital Flows in the Asian Region

Asia has very high savings rates, but most of these savings are invested in the US and Europe. They are not directly invested in the Asian region because of a lack of financial products and transparency. Paradoxically, it is clear that additional long-term investment in the Asian region will be required in future.

2.3. Where do Asian Savings Go?

Table 1 shows savings and investment ratios in Asia. It should be possible to direct some of these high accumulated savings toward infrastructure investments in the region. However, high savings in East Asian countries tend not to be distributed to other Asian countries. Rather, they are typically invested in domestic deposits, domestic stocks, and overseas government bonds such as US Treasury securities.

Table 1. Savings and Investment Ratios in Asia

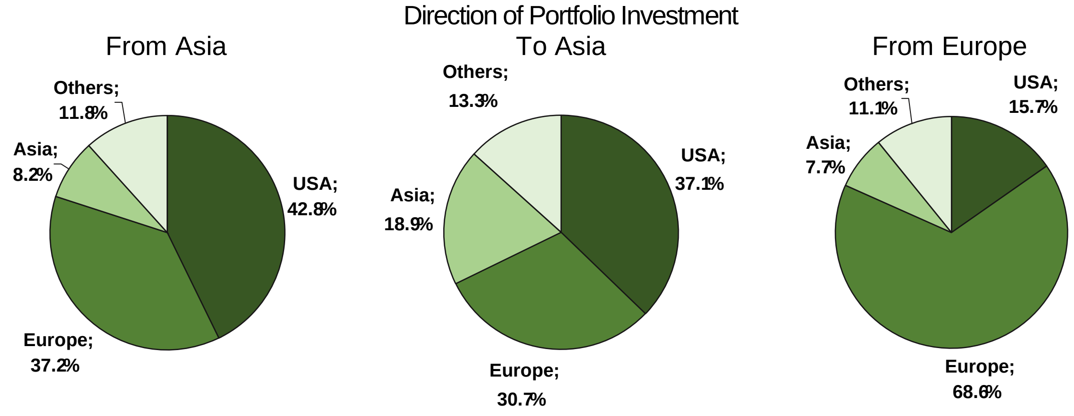
Economy	Savings/GDP Ratio (%)			Investment/GDP ratio (%)		
	2007	2010	2011	2007	2010	2011
PRC Mainland	51.9	53.4	53.8	41.7	48.2	48.7
Hong Kong, China	33.3	29.9	29.2	20.9	23.7	23.8
Indonesia	27.3	33.3	31.1	24.9	32.5	32.9
Japan	28.5	23.8	23.9	23.7	20.2	21.4
Republic of Korea	31.5	31.9	29.6	29.4	29.2	28.2
Malaysia	37.5	32.9	33.1	21.6	21.4	21.8
Philippines	22.1	24.8	22.3	16.9	20.5	20.5
Singapore	48.4	46.0	45.8	21.1	23.8	26.0
Thailand	32.8	30.6	30.4	26.4	25.9	25.6

Note: Savings rate = gross national saving/GDP; Investment rate = gross capital formation/GDP.

Source: IMF, *World Economic Outlook Database.*

Figure 1 contains three pie charts. The left-hand chart shows that 43% of Asian investments are in US securities and stocks, with another 37% invested in European financial instruments. Only 8% are invested in the Asian region (these investments tend to be longer term, such as long-term government securities). The middle chart shows that 37% of the money flowing into Asia is from the US and 31% from Europe (these funds are short-term). Only 19% of funds come from within Asia. Thus, Asia's high savings are directed at the US and Europe for long-term investments, while the portfolio investment that comes from overseas is short-term in nature and therefore inherently unstable. This lack of stability was one of the causes of the 1997 Asian financial crisis. Unfortunately, the situation has not improved since then. The right-hand chart shows that 69% of European funds invested externally are invested within Europe.

Figure 1. Portfolio Investment from the Asian Region to the World and Vice Versa



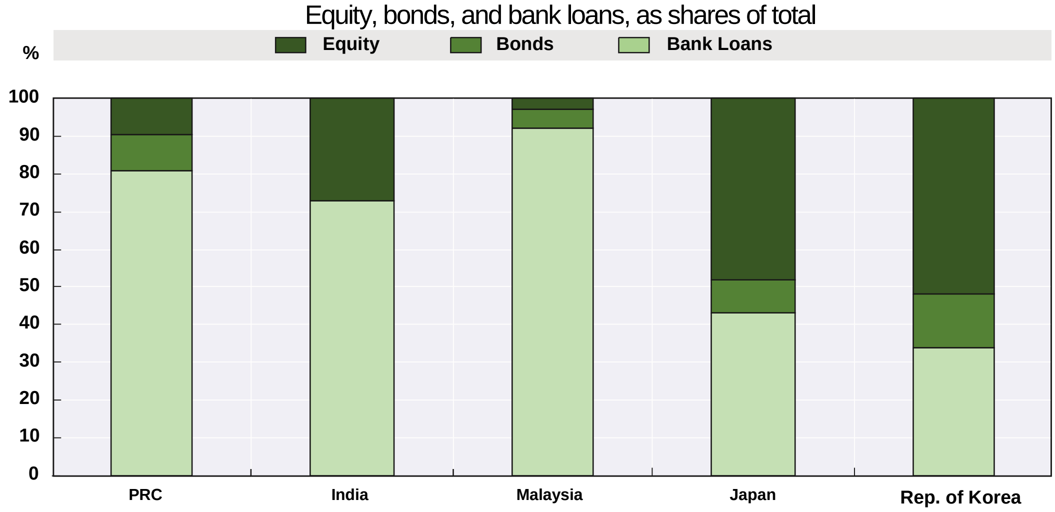
Source: IMF, Coordinated Portfolio Investment Survey (CIPS).

2.4. Bank-Dominated Financial Systems and the Economic Importance of Small and Medium-Sized Enterprises

Figure 2 shows the size of the equity and bond markets and bank loans in Asia.

Figure 2. Size of Financial Markets in Asia

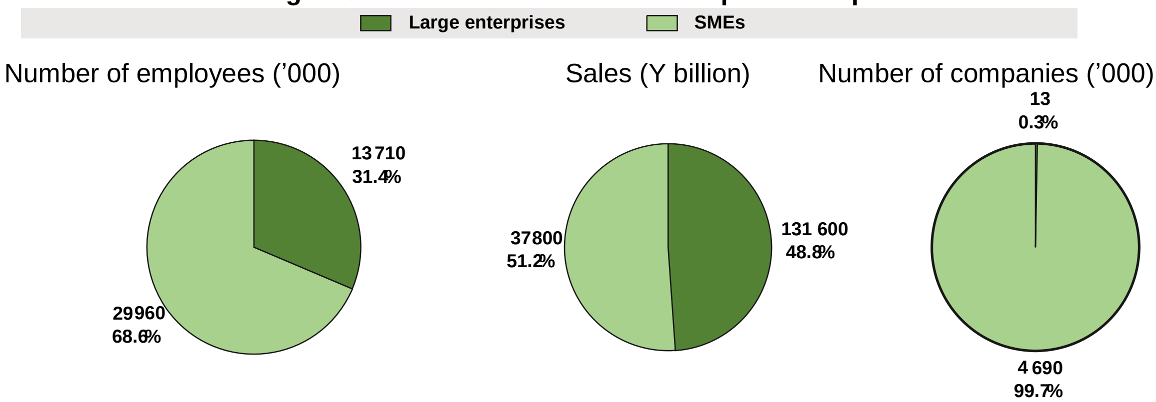
Equity, bonds, and bank loans, as shares of total



Source: Shigesuke Kashiwagi, Nomura Holdings Inc., FSA Financial Research Center International Conference, Japan, Tokyo, February 2011.

Figure 3, Table 2, and Figure 4 show the shares of SMEs in the economies of the PRC, Indonesia, and Japan. In all three countries, in terms of the number of firms and the share of employment, SMEs dominate the economy.

Figure 3. Small and Medium-Sized Enterprises in Japan



Source: White Paper on SMEs, Japanese Government, METI, 2011.

As shown in Figure 3, more than 99% of all businesses in Japan are small or medium-sized enterprises (SMEs); they also employ most of the working population and account for a large proportion of economic output.

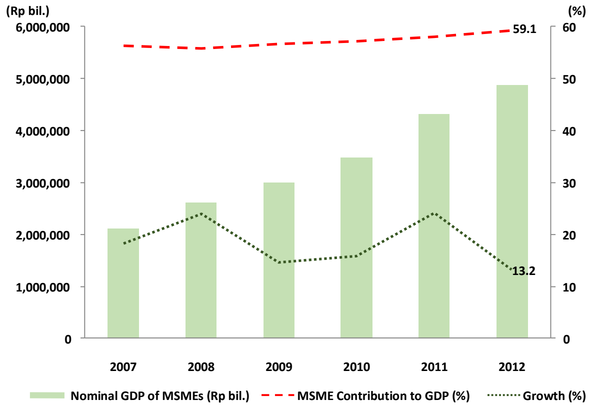
Table 2. Small and Medium-Sized Enterprises in the PRC

Item	2007	2008	2009	2010	2011*	2012*
Number of SMEs						
SMEs (number)	333,858	422,925	431,110	449,130	316,498	334,321
SMEs to total (%)	99.1	99.3	99.3	99.2	97.2	97.3
Employment by SMEs						
SME employees ('000)	60,521	68,671	67,877	72,369	59,357	...
SMEs to total (%)	76.8	77.7	76.9	75.8	64.7	...
SME Exports						
SME exports (CNY billion)	4,303	4,773	4,152	4,919	4,142	4,423
SMEs to total exports (%)	58.6	57.9	57.6	54.7	41.6	41.5

Notes: The data cover industrial enterprises above a certain operational scale. For 2007–2010, "above operational scale" refers to all industrial enterprises that generated a minimum annual income of CNY5 million from their core business. For 2011–2012, it refers to all industrial enterprises that generated a minimum annual income of CNY20 million from their core business. The industry sector includes mining; manufacturing; and electricity, gas, and water production and supply industries. Data for 2007–2010 are based on following criteria: number of employees fewer than 2,000, sales of CNY300 million or less, or total assets of CNY400 million or less. Medium-sized enterprises must have more than 300 employees, sales of more than CNY30 million, and total assets of CNY40 million or more; the rest are small businesses.
*Data for 2011–2012 are based on the 2011 SME classification criteria. Industrial micro, small, or medium-sized enterprises are defined as enterprises which employ fewer than 1,000 persons or whose annual turnover does not exceed CNY400 million. A medium-sized enterprise is defined as an enterprise that employs more than 300 persons and whose annual turnover exceeds CNY20 million. A small enterprise is defined as one that employs more than 20 persons and whose annual turnover exceeds CNY3 million. A micro enterprise is defined as an enterprise that employs fewer than 20 persons or whose annual turnover does not exceed CNY3 million. Data on micro enterprises in 2011–2012 are not available.
Source: ADB. 2014. *Asia SME Finance Monitor 2013*. Manila: ADB.

In the PRC, the number of SMEs has expanded steadily since the government introduced the reform and opening-up policy in 1978. As can be seen from Table 2, SMEs play a crucial role in boosting the economy, increasing employment opportunities, and creating industries. According the Ministry of Commerce, there were 12.5 million enterprises (most of which were SMEs) registered with the industry and commerce administration in the PRC and 37.6 million privately or individually owned businesses as of the end of 2011. SMEs contributed 50% of tax revenues and 60% of gross domestic product (GDP). They also provided 80% of urban job opportunities, introduced 75% of new products, and accounted for 65% of patents and inventions in the PRC (ADB, 2014).

Figure 4. SME Contribution to GDP in Indonesia



MSME = micro, small, and medium sized enterprise.
Note: Data include micro enterprises.
Source: Ministry of Cooperatives and SMEs of Indonesia.

The Indonesian economy has been growing resiliently amid rapid changes in the global economy, backed by strong domestic demand and driven by the micro, small, and medium sized enterprise (MSME) sector. In Indonesia, there were 56.5 million MSMEs, accounting for 99.9% of total enterprises in 2012. The MSME sector has regularly recorded about 2% year-on-year growth in number of enterprises, even during and after the 2008–2009 global financial crisis. Primary industries such as agriculture, forestry, and fisheries account for about 50% of MSMEs, followed by wholesale and retail trade and the hotel and restaurant sector (28.8% combined in 2011). The MSME sector absorbs 97% of the total business workforce, employing 107.7 million employees in 2012, 5.8% year-on-year growth. The sectors employing the greatest number of MSME workers are primary industries (42.4% of MSME employees in 2011), followed by trade (21.7%), manufacturing (11.7%), and services (10.5%). These have underpinned the national economy, regularly contributing about 60% of gross domestic product (GDP), of which the trade sector contributes the most (26.7% of MSME GDP in 2011)—see Figure 4. Indonesian MSMEs accounted for 14.1% of total export values in 2012. Small-scale export-oriented manufacturers, e.g., handicrafts and wooden furniture industries, exist all over Indonesia and often organize in clusters, which helps to make their production process more efficient. MSME exports were directly affected by the global financial crisis, registering a sharp decrease of 8.9% in 2009. Although the business environment is gradually recovering, the growth of MSME exports remains volatile, as shown by the 11.1% year-on-year decrease in 2012 (ADB, 2014).

3. Small and Medium-Sized Enterprise Database and Stable Finance

3.1. Small and Medium-Sized Enterprises Database

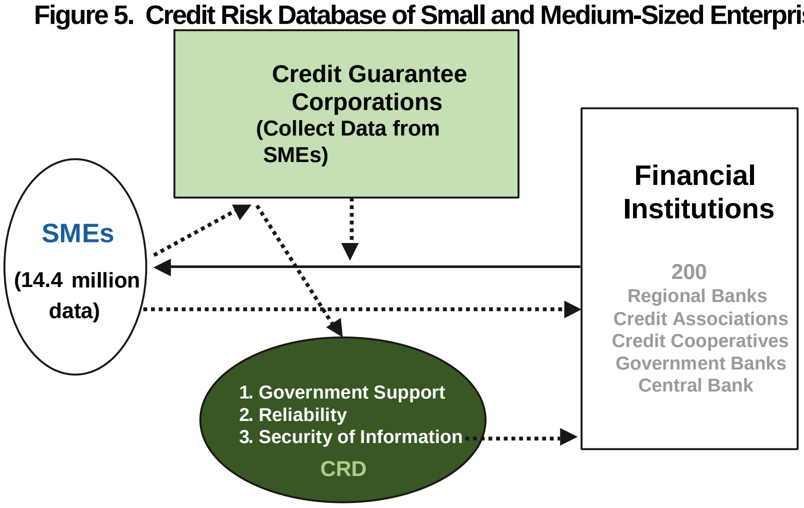
Considering the importance of SMEs to many dimensions of Asian economic activity, further efforts need to be made to offer them access to finance. Their financial and non-financial accounts are often difficult to assess, but the Credit Risk Database (CRD) in Japan shows how SMEs can be rated based on financial and non-financial data. The CRD collected a huge amount of data from SMEs and used it to rate SMEs based on statistical analysis.

3.2. Database provided by the Credit Risk Database

The CRD Association was established in 2001 as an initiative of the Japanese Ministry of Economy, Trade and Industry (METI) and the Small and Medium Enterprise Agency (SMEA). The initial membership was 52 credit guarantee corporations as well as financial and non-financial institutions. Its aim was to facilitate fund-raising for SMEs and to improve their operational efficiency. The association's membership increased from 73 institutions at the end of March 2002 to 200 at the end of 2010.

The CRD database covers SMEs exclusively (Figure 5). It included data on 14.37 million corporations and 1.737 million sole proprietors as of March 2010, more than 50% of all SMEs in Japan, and it is by far the largest database for SMEs in Japan. The database for enterprises in default covered 3,289,000 corporations and sole proprietors. The CRD Association receives active support from both private and public sectors, which has contributed to its success. For example, the SMEA nominates representatives of the CRD Association to government councils, which gives the association an opportunity to promote its activities and increase its membership. Credit guarantee corporations and private financial institutions use the CRD database when they create a joint guarantee scheme. Before the CRD database was formally established, the government invested Y1.3 billion from the supplementary budgets for fiscal years 1999 and 2000 to finance the setting up of the CRD's computer system and other operational costs. The association provides sample data and statistical information as well as scoring services.

Figure 5. Credit Risk Database of Small and Medium-Sized Enterprises



Source: Yoshino (2012).

Member financial institutions use scoring models to evaluate credit worthiness, check the validity of internal rating systems, and align loan pricing with credit risk. In addition, the CRD Association provides consulting services to support the management of SMEs on the assumption that if SMEs are better managed, this will reduce the credit risk for member financial institutions and strengthen the SME business operations. Consulting services have also been offered to member financial institutions to help them promote implementation of Basel II.

If such systems could be established in other parts of Asia to accumulate and analyze credit risk data, and to measure each SME's credit risk accurately, SMEs would not only be able to raise funds from the banking sector they could also gain access to the debt market by securitizing their claims.

3.3. Hometown Investment trust Funds,

Given the bank-dominated financial systems in Asia, the creation of regional funds (or Hometown Investment trust funds) to promote lending to start-up companies and riskier borrowers such as SMEs would help to maintain the soundness of the banking sector, as banks would not be exposed to the risks that lending to such companies inevitably poses. If these regional trust funds were sold through branch offices to regional banks, post offices, credit associations, and large banks, this would increase the opportunities for regional companies to raise funds.

However, such trust funds would not be guaranteed by the Deposit Insurance Corporation and risks would be borne by investors. The terms of a trust fund would have to be fully explained to investors (e.g., where their funds would be invested and what the risks associated with the investment would be) in order to strengthen trust fund investors' confidence and help the trust fund market to grow (Yoshino 2013). Examples of such funds in Japan include wind power generators and musicians' funds. In first example, in Japan in order to construct 20 wind power generators private–public partnerships were launched and local residents invested \$1,000–\$5,000 in a fund. They receive dividends every year through the sales of electricity by each wind power generator that they invest in. Musicians' funds gather many small investors buy units for \$150–\$500. If the musicians become successful and their DVDs sell well, the sales will generate a high rate of return for the fund.

Examples can be found of both successful and failed funds. Project assessors play a key role in evaluating each project to limit the number of nonperforming investments and losses by investors. Some of Japan's funds are regarded as charities, with some investors seeing them as a way to invest in their region to support new business ventures.

Such new ventures pose a problem for banks as, although some will have high expected rates of return, the high risks involved make it difficult for banks to finance them. However, if the projects are financed by Hometown Investment Trust funds rather than by deposits transformed into bank loans, they will not create nonperforming loans for banks. Banks can still benefit, and compete with each other, by selling Hometown Investment Trust funds through their branch offices, although it has to be made clear to investors in these funds that their investment is not guaranteed, although they may receive a high rate of return. If a bank sells successful Hometown Investment Trust funds, it will be able to attract more investors; if it sells loss-making funds it will lose investors in future. Competition will improve the quality of projects and enhance the risk-adjusted returns for investors.

Figure 6 shows how trust funds can increase investment in riskier projects (Figure 6).

Figure 6. Bank-Based Small and Medium-Sized Enterprise Financing and Hometown Investment