【Research Note】

Japanese Finance (1) : A Big Picture*

Mitsuaki Okabe#

【Abstract】

This paper first provides a definition of finance; then shows a big historical picture of Japanese finance or flow of funds; explains how and why there has been a big change in it; and finally shows a basic theoretical framwork to understand Japanese finance. The key message of the paper is that finance is a reflection, as well as a cause, of many important Japanese economic features.

Key words: Flow of funds, Ageing, Life-cycle theory of saving, Indirect finance

---

* This paper is a somewhat expanded summary of the first of the two lectures given by the author to a group of foreign students at Meijigakuin University on February 15, 2019. He would like to thank Professor Keiko Tanaka, Director of International Center of Meijigakuin University, for giving this opportunity of delivering these lectures. The other lecture is summarized as "Japanese Finance (2): Three Key Issues", and both of them can be downloaded from the website <https://meigaku.repo.nii.ac.jp/>.

Professor Emeritus, Keio University, Japan.

Introduction

It is quite a challenge for the speaker to present a good overview of the "Japanese Finance" in only two lectures, especially when the audience is a group of students from foreign countries.

I could focus, for example, on such contemporary issues as digital money in Japan, unsuccessful monetary policy, increased internationalization of financial activities, or the failure of corporate governance of Nissan Motor Corporation. Alternatively, I may broadly discuss the historical role of finance for the development of the Japanese economy, including the the mechanism of financing during the High-Growth Period (1953-1971). On the other hand, the students may be interested in how and to what extent the standard finance and monetary theories can hold and can be applied to understand Japanese finance and the Japanese economy.

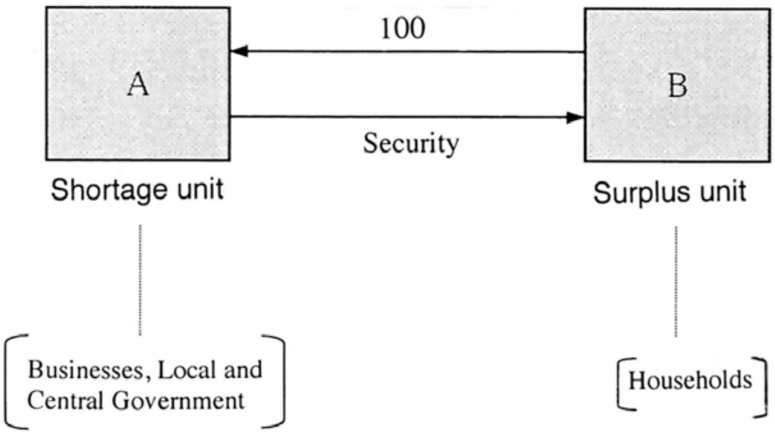
What I have come up as a reasonable way to present in this lecture is that I need and should: (1) use some of the basic theoretical frameworks of finance, (2) briefly review financial scene in relation to the historical development of the Japanese economy, and (3) point out the financial aspects that reflect some unique features of the Japanese economy. Put simply, what I would like to assert in two lectures is that finance is a *reflection*, as well as a *cause*, of many important Japanese economic features. I trust this is an interesting angle, or point of view, to understand both the Japanese finance and the Japanese economy.

In the first lecture, i.e. in this paper, I first (1) ask what is finance? Then, (2) provide a big historical picture of Japanese finance, and (3) summarize the historical development as a change from "indirect finance" to "direct finance". In the second lecture (Okabe 2019), three important issues of the Japanese economy relating also to Japanese finance, will be taken up. They are: (1) corporate finance and governance, (2) financing made easier: recent monetary policy, and (3) absorbing enormous funds by the government: fiscal policy.

1. What is Finance?

When students are asked "what is finace?", they usualy answer it by giving some specific aspects of finance with the images associated with the term. But these images quite often describe only some part of financial activities, and do not cover the basic aspect of finance.

Figure 1. Meanings of a Financial Transaction



(Source) Okabe (2012) Figure 1.

A crude, but fundamental, image of finance can be described as in Figure 1. Suppose Mr B has a monthly income of 1,000 dollars, and spend 900 dolars every month for living. That means he can retain 100 dollars cash in hand each month. On the other hand, it can be assumed that there exist such a person (or a business corporation) like Mr A, whose monthly income is 800 dollars but would like to spend 900 dollars for living and attending a school to learn (or to expand factories, in the case of a business corporation).

If these two individuals exist, as is very likely, it is beneficial for *both* of the two to conduct a transaction, called a financial transaction, because the transaction is likely to make *both parties* better off as follows. Mr B, called *a surplus unit*, can lend 100 dollars to Mr A, say for one year and can receive 103 dollars (3 dollars is an interest for lending) after one year. While Mr A, *a shortage unit*, is willing to pay back 103 dollars (3 dollars is the interest on borrowing 100 dollars) after one year, since he can expect that his increased skill, or earning ability hence income, is going to increase after one year (increased revenue owing to the expansion of the factory, in case of a business corporation).

Finance is, simply put, lending and borrowing. The important thing is that it is a bi-directional transaction: Mr B gives fund or cash of 100 dollars to Mr A, and Mr A gives a *security*, a paper (colloqually called an "IOU"[1] note promising to pay back) to Mr B.

With this simple transaction model, we can describe the nature of finace as follows[2]. Finance is:

(1) a flow of funds from a surplus unit to a shortage unit;
(2) a transfer of savings;
(3) a transfer of today's purchasing power for tommorow's purchasing power;
(4) an exchange of fund for a security, since tommorow's purchasing power is signified in terms of a security.

2. A Big Historical Picture of Japanese Finance

By using the above framework of finace, who have been acting like "Mr A" and "Mr B" in Japan? In order to understand the basic financing pattern, we need to ask, not the behavior of individuals like Mr A or Mr B, but economic "sectors" instead. A useful framework for understanding a macroeconomic finacial picture is a "three-sector model" of fund surplus and fund shortage: household sector, corporate sector, and government sector.[3] By using this model, we can summarize the picture of Japanese finance as in Figure 2.

Understanding by using a three-sector model

When we look at Japanese finance over the last 30 years or so, we can point out three basic features. First, the household sector (or individuals) has continuously been a surplus sector, like Mr B above, providing funds to other sectors. Also need to point out is that the size of surplus of this sector has been declining after around 1990. This trend needs not only to be emphasized, but is also closely related to the changing feature of the Japanese economy itself. We will see in some detail why that is the case, in the following section.

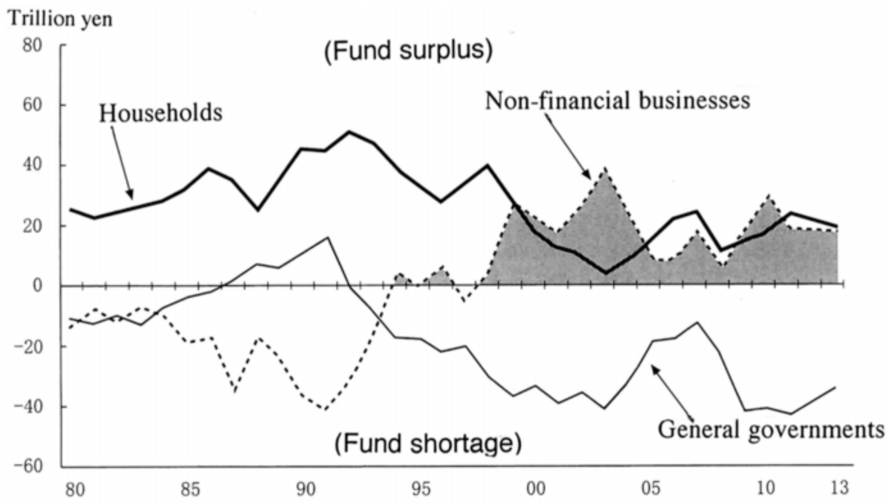
---

[1] IOU stands for "I owe you."

[2] See Chapter 1 of Okabe (1999a). For a full development of understanding of Japanese finance using this framework, see Okabe (1999a, 1999b) .

[3] A more general model is a "four-sector model", in which "foreign sector" is included besides the above three domestic sectors. See Okabe (1999a: chapter 2) .

Figure 2. Fund Surplus and Fund Shortage by Sector in Japan



(Source) Okabe (2012) Figure 1.

Second, the corporate sector (non-financial businesses) initially kept recording shortage of funds till mid-1990s, but turned to be a surplus sector thereafter. That is, the nature of financial position of Japanese businesses has changed dramatically in recent years. Why? The main reason is that, in recent years, there have not been such expansionary (physical investment) activities of private businesses as seen during the so-called "bubble period" (1986—1990) or during euphoria.

Third, the government sector (central and local governments) has generally remained a shortage sector, except for five years during the bubble period. The reason why it temporarily became a surplus sector is that, during the bubble-period, government was blessed with increased tax revenue coming from corporations and individuals. But after early 1990s, the government sector has become a sector with increasingly large shortage of funds, and it is now the sole sector of recording the shortage of funds.

The main reason why the government sector has been facing a shortage of funds is the "ageing" of the Japanese population (Figure 3). Ageing, usually expressed as the increase of the people of 65 years or older, has necessitated the government to increase the public pension payments and public medical expenditure. So that the government expenditure, centering on these social insurance payments, kept expanding and resulted in an increasingly large fund shortage, or budget deficits (see also Figures 14 and 15 of Lecture 2).

Figure 3. Ageing in Japan

Year	Percentage of 65 years old or older
1990	12.1%
2000	17.4
2010	23.0
2017	27.7

In brief, the Japanese financial scene can be understood as experienced a big change : (a) household sector was a main provider of funds basically to corporate sector till mid-1990s, but (b) thereafter both household and corporate sectors are providing funds to government sector.

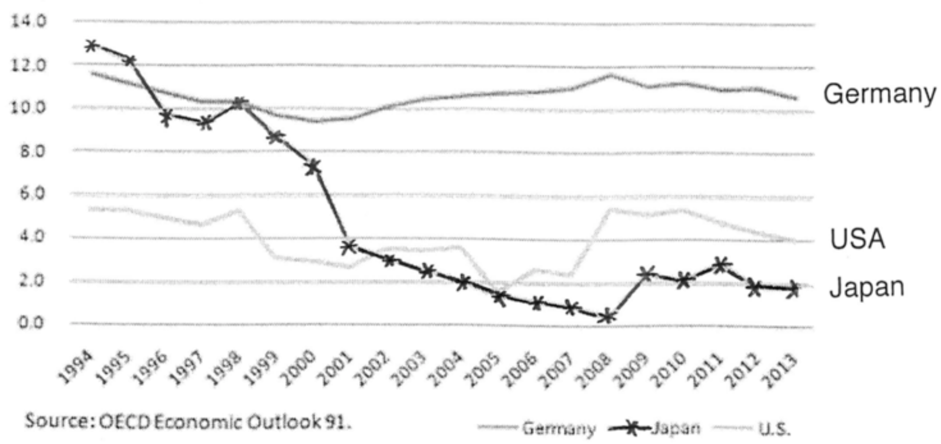
Figure 4. Drastic Change of the Financial Scene in Japan

Why has the Japanese household saving rate declined?

As seen earlier in Figure 2, the household saving (as percentage to GDP) has shown a declining trend. This tendency, when expressed as the household saving rate, as a percentage of saving out of income, is clearly seen also in international comparison (Figure 5). The household saving rates in Germany and in the United States do not show a declining trend, but that of Japan has clearly shown a declining trend, from around 12% in 1994 to around 2% in recent years. Why? How can we explain this tendency by utilizing an economic theory?

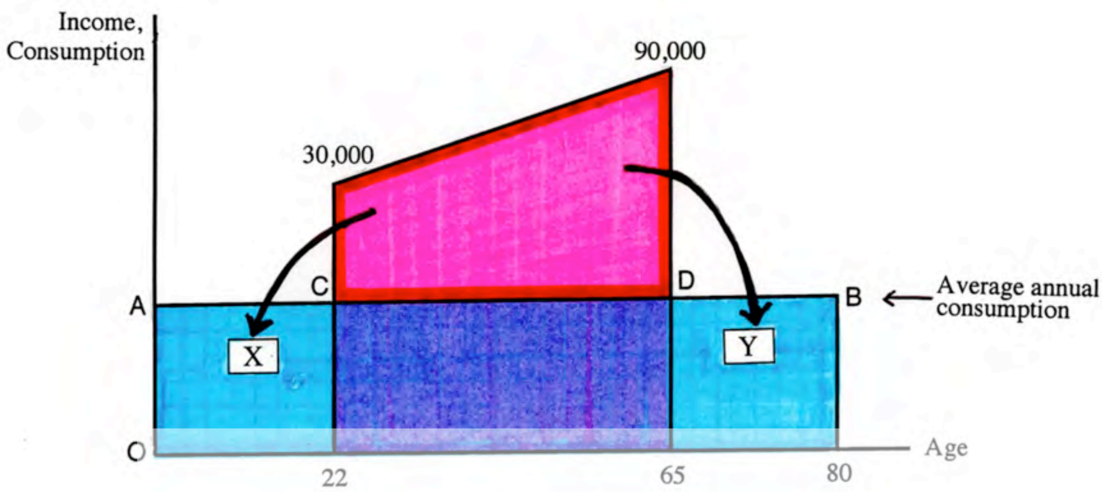
The answer is the "ageing" in Japan. That is, the increased composition of old-age people in Japan, has brought a clear tendency of the Japanese household saving to decline over the years. This can be nicely explained by utilizing the "life-cycle theory of saving," as follows.

Figure 5. Household Saving Rates: An International Comparison



For the sake of simplicity, let us assume (1) that a person has no inherited assets from his/her parents, and (2) that he/she is a "rational" person in the sense that he/she uses his/her life-time income only for himself/herself and make no bequest to his/her children. Under these assumptions, a person's total expenditure during his/her lifetime must be equal to total income earned during his/her working life. This is the essence of the life-cycle theory of saving, which may be shown graphically as in Figure 6.

Figure 6. Life-cycle Theory of Saving



The horizontal axis measures the age of a person; and the vertical axis measures income and comsumption at each age. Here, let us suppose that a person starts working at the age of 22, upon graduation from a college, and keeps working until 65 years old. Let us assume further that this person is expected to live till 80 years old.

In this setting, let us consider this person's income, expenditure, and saving, in the course of his/her life-cycle. First, let us assume for simplicity's sake that his/her annual average consumption is OA, so that this person's life-time consumption can be expressed by a rectangle "O-80-B-A".

How about this person's income? Since he/she starts working at the age of 22, he/she begins receiving income (say, annual income of 30,000 dolllars) from that point onwards. And he/she keeps receiving larger and larger income till 65 years old (say, annual income prior to retirement is 90,000 dolllars) . The increase in income can generally be expected, because he/she is surely going to accumulate knowledge and skills of the job, so that his/her income naturally increase along with his/her productivity growth, and possibly also with the promotion to higher position in a corporation.

Accordingly, this person's life-time income can be expressed by a trapezoid "22-65-90,000-30,000". It is important to note two things here. First, during his/her working years, the amount of consumption remains only the purple area (C-22-65-D) and, accordingly he/she is saving the red area (30,000-C-D-90,000) out of his/her totoal lifetime income. Second, the saving during his/her working years (red area) must be used for two purposes: (1) to pay back the earlier borrowing for his/her college tuitions and fees (O-22-C-A), and (2) to pay for the living after retirement at the age of 65 till 80 years old (65-80-B-D).

That is, the following equation need to be satisfied, which is shown graphically also as above.

Saving during working life	=	Repayment of the borrowing	+	consuming (biting off) the saving
(red area)		(area X)		(area Y)

Ageing and the decline of household saving rate

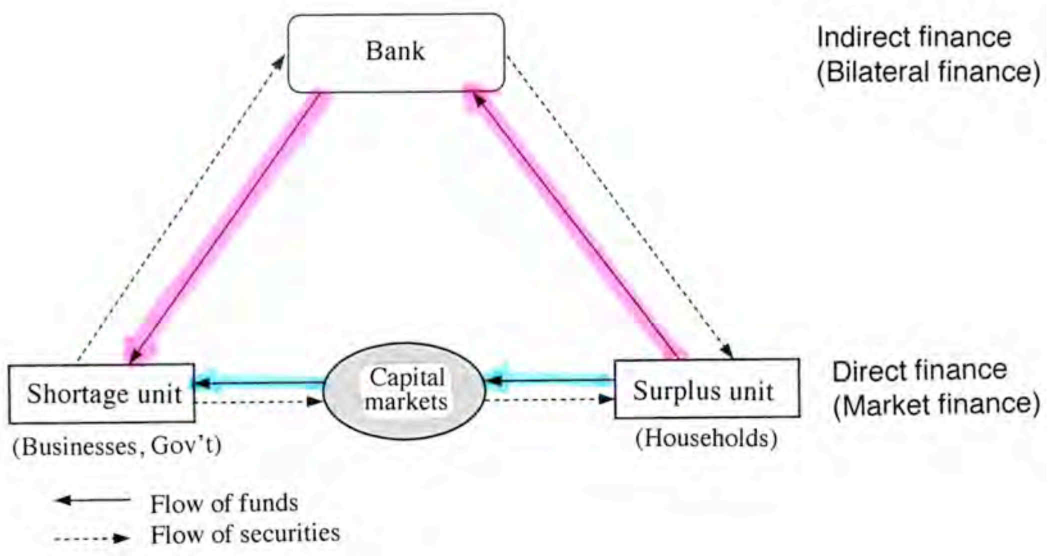
Above theoretical analysis readily implies that the decline of household saving rate in Japan can be explained mainly by "ageing." More formally, we can argue as follows:

First, older (retired) people save far less than younger people, or simply consume and make no saving, as suggested by life-cycle theory of saving. Second, the composition of older people in Japan has rapidly increasing after 1990. Thus, the household saving rate in Japan has been clearly declining. It is interesting to know that a simple economic theory sometimes helps a great deal to understand an actual economic development.

3. Two Financing Systems: Direct Finance and Indirect Finance

We presented, in Figure 1, that in finance the saving goes from surplus unit to shortage unit directly. But it is not the only way for funds to flow. There are distinctively two ways as shown in Figure 7: one is "direct finance", as already shown, and the other is "indirect finance."

Figure 7. Two Distinctive Financing Channels



(Source) Okabe (2012) Figure 2.

When funds go from surplus unit (typically households) to shortage unit (typically business corporations) as shown in blue arrow, the surplus unit receives in return some kind of security, typically company stocks (shares) or bonds[4] issued by the shortage unit. Since finance is a bi-directional transaction, there is always two kinds of flows going to different directions. The botttom half of Figure 7 shows direct

[4] A bond is a paper or security issued by borrower, expressing the amount of borrowing, the maturity date, and the interest on the borrowing, and promising that the fund will be duly redeemed.

finance. And this is a dominant financing pattern in the United States and United Kingdom, thus we may call it "Anglo-American financing model."

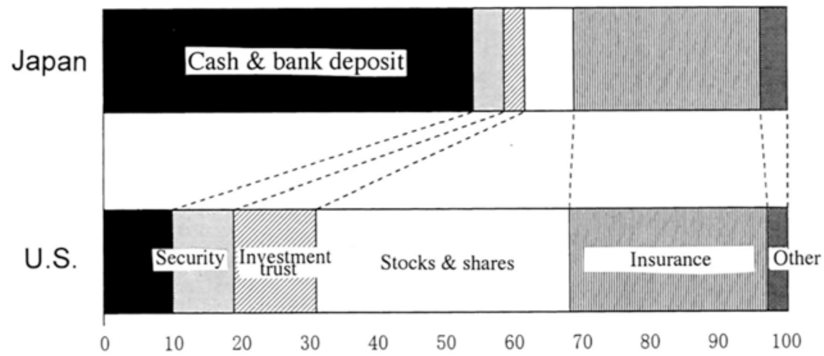
The other way to channel surplus fund is to put the the fund first to a bank as shown in red arrow, and in return the surplus unit (depositor) receives a deposite certificate (or a check book) signifying that the depositor has a claim on the bank. Subsequently, the bank extends the fund to the shortage unit, by lending the fund or by acquiring company stocks (shares) or bonds. This type of flow of funds is called indirect finance, since the fund goes to the ultimate user of the fund indirectly via bank[5]. Since this used to be a dominant financing pattern in Japan and Germany, we may call it "Japanese-German financing model."

Although this typology may be too simple a dichotomy, it explains not only the basic nature of a nation's financial system but also the basic characteristics of the industry of a nation. We will be discussing these issues shortly below, and also in Lecture 2 (Okabe 2019). One thing to note, however, is that the flow of saving in direct finance, expressed by a blue arrow, involves relatively high-risk channel; while the flow of saving from households in indirect financing as expressed by the red arrow on the right, bears less risk. Thus, we can intuitively understand that banks (financial intermediaries, in general) play an important role for the development of various industries from financial aspect, because bank is an attractive institution for the surplus unit to deposit funds.

How can we actually say empirically that there exist two contrasting financing models? And how can we provide a convincing evidence for the two major systems, especially the contrasting system in Japan and in the United States? The answer and a clear-cut evidence to these questions are given by Figure 8. It does not show the type of funds flowing, but shows the result of what type of funds actually flowed over the years.

[5] Although we called this intermediating institution a "bank" for the sake of simplicity, there are other types of financial institutions performing the same role, such as an insurance company. A general term performing this role of a "middle man" is financial intermediaries.

Figure 8. Composition of Household Financial Assets: Japan and US, 1999



(Source) Okabe (2012) Figure 3.

The Figure shows the composition of household financial assets in Japan and in the US, as of the year 1999. In Japan, overwhelmingly large part (more than 50%) of households' financial assets are held in the form of cash and bank deposits. While in the US, the dominant part of assets are held in the form of stocks and shares (nearly 40%) and securities (about 10%). These contrasting portfolio compsition of houleholds implies that in Japan household savings go primarily to banks and banks in turn lends out the funds or acqure stocks and shares of corporations. Hence, the dominance of indirect finance. Contrastingly, US households acquire stocks, shares, or securities directly in financial markets, thus providing funds to the issuers of these securities. Hence, direct finance.

Implications of Japanese Finance to the Japanese Economy

We have so far painted a big historical picture of Japanese finance. Next question is what this kind of finance means to the entire Japanese economy. That is, how the finance has influenced to form some unique characteristics of the Japanese economy and, in recent years, how various forces are in action to change the finance and accordingly the characteristics of the economy. In order to take up these issues, we first need to notice three aspects of finance.

First, the way how business corporations raise funds strongly influence the way how businesses are actually governed, monitored or disciplined. In bank finance (indirect finance), bank has a strong influence on the client corporation and its behavior, since bank is a lender and often a shareholder of the client corporation. In contrast, in the case of capital market finance (direct finance), the movement of the stock price of a corporation can be interpreted as a direct evaluation of corporate behavior. So, managers of a company may be compelled to change the corporate strategy completely, or sometimes are obliged to resign, if the stock price comes down showing a market disapproval of the management. In short, corporate finance is synonymous to corporate governance. And in the case of Japanese finance, banks have been tightly linked to Japanese corporate governance, in contrast to US corporations where the stock market is strongly linked (Okabe 2002, 2007).

Second, there has been a steady trend of deregulation and financial globalization over the last 30 years or so. This trend has attracted foreign investors to acquire Japanese stocks, thus adding a flavor of direct finance in financing and the governance of Japanese corporations. This trend can be described broadly as "from indirect finance to direct finance" to characterize the nature of the change.

Third, a drastic and successive easing of general finance was required to stimulate the Japanese economy, after the burst of the "bubble" in 1990. This required unprecedented easy monetary policy and, on the other hand, it has contributed to the Japanese fiscal policy to be unduly expansive by easily relying on raising funds by issuing government bonds (Okabe 2015).

Above points are actually related to important issues of today's Japanese economy. So, in Lecture 2 (Okabe 2019), we will take up these three issues. Namely (1) Japanese corporate finance and governance, (2) extremely easy monetary policy (zero-interest rate policy and quantitative easing policy), and (3) accumulation of government bond outstanding to finance the gap between government expenditure and revenue.

【Referance】

Okabe, Mitsuaki (1999a) *Gendai Kin-yuu no Kiso Riron (Theory of Contemporary Finance and the Financial System)*, Tokyo: Nihon Hyoronsha.

Okabe, Mitsuaki (1999b) *Kankyou Henka to Nihon no Kin-yuu (Finance and the Financial System of Contemporary Japan: Changes in the Environment and Required Public Policy)* , Tokyo: Nihon Hyoronsha.

Okabe, Mitsuaki (2002) *Cross Shareholdings in Japan: A New Unified Perspective of the Economic System*, Cheltenham, Glos., UK, and Northampton, Mass., USA: Edward Elgar Publishing.

Okabe, Mitsuaki (2007) *Nihon Kigyo to M&A: Henbou suru Kin-yuu Shisutemu to Sono Hyouka (Financial Markets and the Japanese Company: Theoretical and Empirical Analyses of the Coevolutionary Process) ,* Tokyo: Toyo-Keizai Shimposha.

Okabe, Mitsuaki (2012) "Gendai Kin-yuu no Tokucho, Hyouka, Kadai: Kihon ni Tachikaetta Kousatsu" (Contemporary Financial Landscape: Characteristics, Evaluation, and Policy Issues), *International and Regional Studies*, vol.42, Meiji Gakuin University, October, pp.57-80. <http://hdl.handle.net/10723/1257>

Okabe, Mitsuaki (2015) "Saikin no Nihon no Kin-yuu Seisaku: Ryouteki-Shitsuteki Kanwa no Kouka to Mondaiten" (Japanese Monetary Policy in Recent Years: Effects and Problems of Quantitative and Qualitative Monetary Easing), *International and Regional Studies*, vol.48, Meiji Gakuin University, October, pp.1-24. <http://hdl.handle.net/10723/2554>

Okabe, Mitsuaki (2019) "Japanese Finance (2): Three Key Issues", Research Note, downloadable from Institutional Repository, Meiji Gakuin University. <https://meigaku.repo.nii.ac.jp/>.