
Mizuho Economic Outlook & Analysis

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Factors behind Japan's sluggish capital investment growth

Capital investment targets have shifted to areas not yet captured by current GDP statistics

< Summary >

- ◆ One factor behind Japan's stalling capital investment growth may lie in the current GDP statistics that have not yet captured the recent changes in companies' investment targets.
- ◆ Firms are shifting their investments to intangible assets and stocks, among others, but neither are categorized as capital investment in the current GDP statistics.
- ◆ Furthermore, the improvement of capital investment efficiency due to more sophisticated production lines and the introduction of cloud computing technology in recent years may have served to curtail the capital investment figures in the GDP statistics.

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1. Capital investment growth remains slack compared with the rapid improvement of corporate earnings since the launch of Abenomics

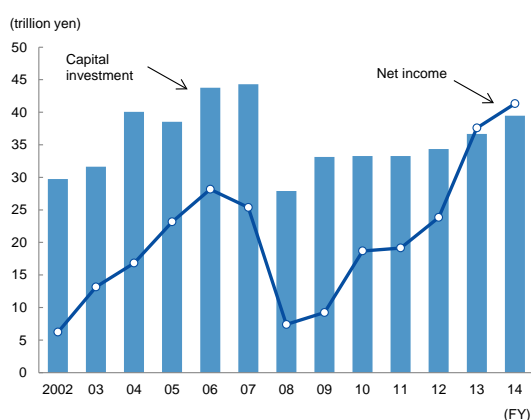
In contrast to the strong performance of corporate earnings, capital investment growth remains slack. **Chart 1** shows the trends in corporate net income and capital investment, based upon the *Financial Statements Statistics of Corporations by Industry* (annual survey). After the launch of the “Abenomics” policy measures to boost economic growth, net income grew by more than 14 trillion yen (change from FY2012 to FY2014), hitting a record high. On the other hand, the increase in capital investment was only 5 trillion yen, which is still lower than the level in FY2007 before the 2008 financial crisis triggered by the bankruptcy of Lehman Brothers.

GDP statistics also show that capital investment growth is stalling. The amount of capital investment in nominal terms in the latest available FY2014 figures stood at 68.4 trillion yen, which was down over 10% from 76.8 trillion yen recorded in FY2007. Even though capital investment should reach the FY2015 70 trillion yen target in the *Japan Revitalization Strategy*, this would still lack strength in comparison with the recovery of corporate earnings.

In many cases, the fall of companies’ expected growth rate due to the lack of demand and change in industrial structure is cited as a potential factor behind the sluggish capital investment growth in GDP. In particular, it may not be overlooked that manufacturers still remain reluctant from making investments stemming from their traumatic experience of the acute drop in demand and significant yen appreciation since the 2008 financial crisis.

However, this may not be the sole reason for the slowdown of capital investment growth. According to anecdotal evidence, Japanese companies are said to be making necessary investments for growth in areas such as R&D. However, such investments for corporate growth may be underestimated, since the value of such new investment does not fall into the category of capital investment in GDP statistics. Furthermore, the improvement of capital investment efficiency due to

Chart 1: Corporate earnings and capital investment



Note: Data above cover companies of all sizes in all industries (excluding finance and insurance companies).

Source: Made by MHRI based on the Ministry of Finance, *Financial Statements Statistics of Corporations by Industry, Annual Survey*.

innovations such as the spread of cloud computing technology may be serving as a drag upon the value of capital investment. This paper sheds light upon the possibility that capital investment in GDP statistics appears weaker than the actual investment activities conducted by firms due to the factors mentioned above. In other words, this paper shall explore the possibility of a discrepancy between investment recognized by companies and capital investment registered in GDP statistics.

2. Companies' investment targets are shifting to assets not yet captured by current GDP statistics

(1) The discrepancy between investment recognized by companies and capital investment in the GDP statistics stands at approximately 40 trillion yen

First, we shall look at the overall picture of the discrepancy between investment recognized by companies and capital investment in GDP statistics.

Corporate capital investment recorded in GDP statistics covers “tangible fixed assets, such as factory buildings and equipment and machinery, and some intangible assets such as software” (part [1] of **Chart 2**).

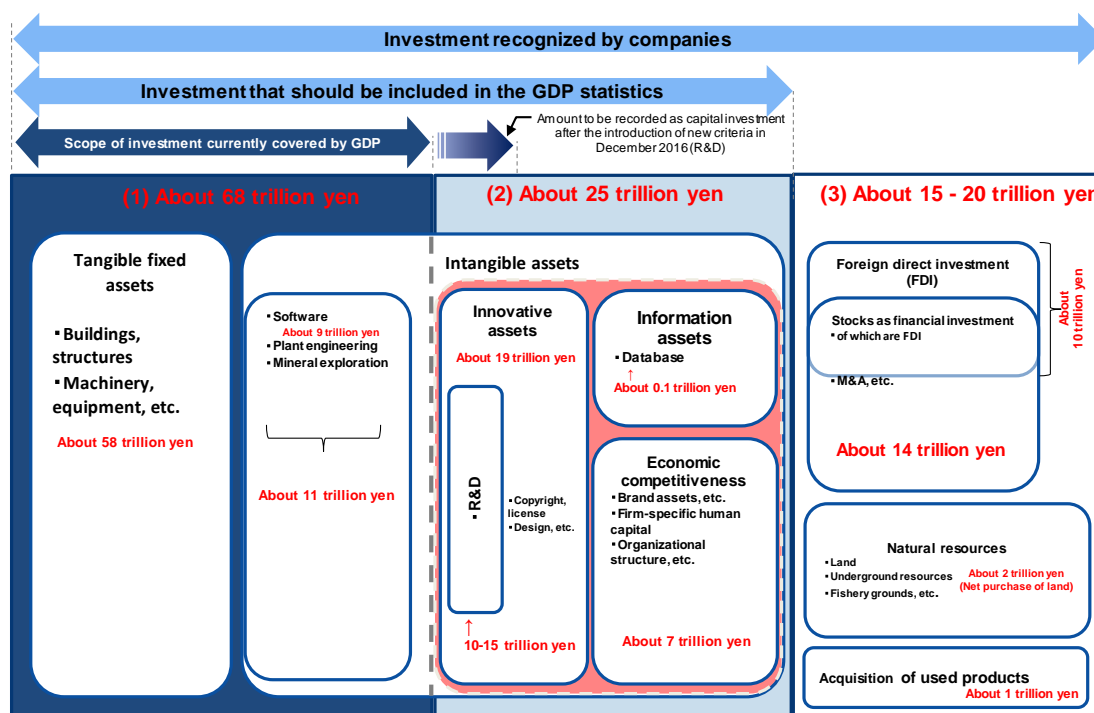
On the other hand, intangible assets such as “R&D investment and investment in brand assets and human capital” (part [2] of **Chart 2**) are not recorded as capital investment in GDP statistics. However, there are views that such intangible assets should be registered as capital investment in view of the fact that they are accumulated as assets and contribute to production activities. Actually, in the GDP statistics criteria revision scheduled in 2016, R&D investment will be included in capital investment.¹ Furthermore, note that “overseas investment, M&A, acquisition of used products,² etc.” (part [3] of **Chart 2**) are recognized in practice as investments by companies, even though they do not fall within the concept of capital investment in GDP statistics.

The value of the foregoing investments which are not officially recorded as capital investment in the GDP statistics - but are recognized as investments by companies - (the sum of [2] and [3]) amounts to nearly 40 trillion yen.

¹ In the 2008 SNA, which is the latest version of international criteria for the compilation of GDP, R&D expenses will be treated as investment. Countries such as the US and the UK already include R&D expenses in their GDP. Likewise in Japan, R&D expenses are scheduled to be included in its GDP following the GDP statistics criteria revision scheduled in 2016, and this is expected to push up Japan's GDP by 3.0% to 3.6% (estimated by the Cabinet Office). Since the criteria revision denotes a change in the calculation policy of investments which used to be unrecognized as investment, it does not affect the real state of the economy. However, it will enhance the accuracy of the GDP statistics since it will capture the actual investments conducted by companies.

² The utilization of used equipment is also following an upward trend; experts point out that the demand for used, older generation semiconductor manufacturing equipment is growing along with the shift into the IoT era.

Chart 2: Corporate investment activities and capital investment in GDP statistics



Note: We used the latest available data for each item. Since each figure is rounded off, the sum total of such figures may not equal the total amount presented above.
Source: Made by MHRI based on the Research Institute of Economy, Trade and Industry, *JIP Database*, among others.

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(2) The significance of intangible asset investment is rising worldwide

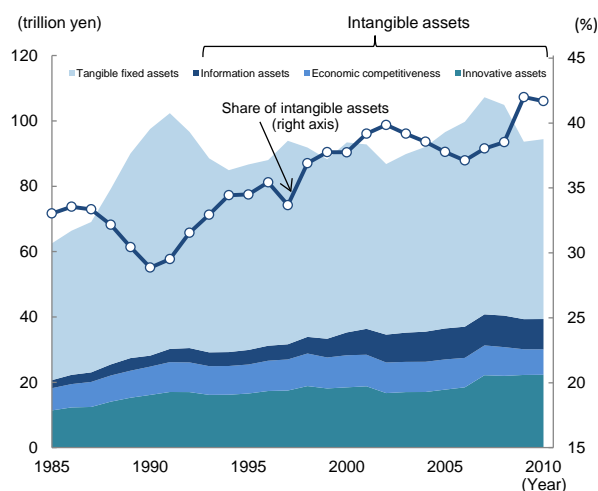
While Japan's GDP statistics do not cover the entire scope of capital investment yet, the significance of intangible assets is rising in the course of economic development. According to a survey conducted by the OECD, returns on investment in physical capital (tangible fixed assets) are declining. As such, the survey indicates the importance of innovations through investments in intangible assets in order to enhance long-term growth potential.

In light of the growing importance of investments in intangible assets, the share of intangible asset investment in overall investment is now rising. According to estimates by the *JIP Database* of the Research Institute of Economy, Trade and Industry (RIETI), corporate investment in intangible assets, such as R&D expenditure, is following a steady upward trend over the middle to long term. In 2010, the amount of such investment expanded to around 40 trillion yen and accounted for about 40% of overall corporate investment (**Chart 3**).

The rise of intangible asset investment is not unique to Japan but is a phenomenon observed widely among the developed countries. In the US, the share of intangible asset

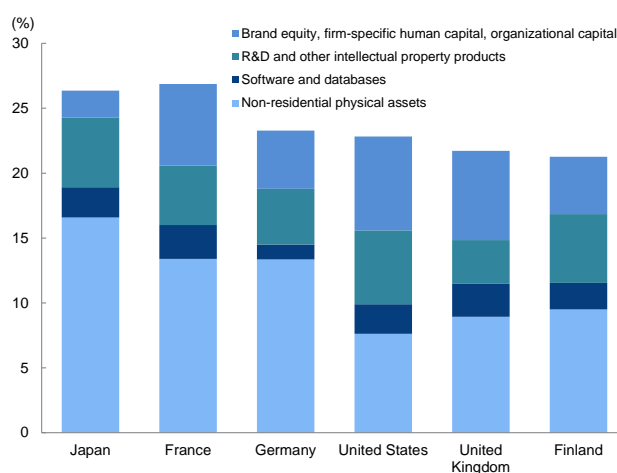
investment had already surpassed the share of tangible fixed asset investment as early as 2010. The same trend can be seen in other developed countries, with the share of intangible assets in total investment even greater than in Japan (**Chart 4**). In view of this global trend, it is highly likely that Japan will also see a greater portion of investment shift to the acquisition of intangible assets.

Chart 3: Tangible fixed assets and intangible assets



Notes: 1. Economic competitiveness include brand assets, human resources, etc. Innovative assets include R&D, copyrights, licenses, etc. Information assets refer to software and databases.
 2. Information assets and innovative assets include assets registered in GDP statistics (such as ordered software).
 3. Data in real terms (unadjusted for inflation)
 Source: Made by MHRI based on the Research Institute of Economy, Trade and Industry, *JIP Database*, and the Cabinet Office, *Gross Capital Stock of Private Enterprises*.

Chart 4: International comparison of intangible asset investment (% of GDP)



Note: Data on non-residential physical assets, software and databases, R&D and other intellectual property products, brand equity, firm-specific human capital, and organizational capital from various sources. Data of Japan is as of 2008, and data of other countries are as of 2010.
 Source: Made by MHRI based on OECD data.

(3) Acquisition of stocks as fixed assets grew sharply after the launch of Abenomics mainly among large corporate enterprises

While the rise in share of investment in intangible assets is a trend observed over the long term, a focus on recent trends indicates the increase of acquisition of investment stocks since the launch of Abenomics.

Chart 5 shows the share of capital investment in corporate demand for funds (flow). The latest FY2014 readings show that the demand for investment in company stocks has been growing since around FY2012. The share of investment stocks has also expanded on a stock-basis; in FY2014, the value of investment stocks exceeded the value of

tangible fixed assets (excluding land) (**Chart 6**).

The above-mentioned investment in company stocks (flow-basis) and investment stocks (stock-basis) is defined as investment securities acquired for the purpose of long-term holding. Hence the movement explained above reveals that the target of corporate investment is shifting from tangible fixed assets, including plant and machinery equipment located in Japan to stocks of foreign companies, including overseas subsidiaries. One form of such shift is the rise of domestic and overseas M&As by Japanese companies.

The background factor to this movement is the growing importance of overseas business developments, as well as the faster pace and rise in cost of technological developments centering around IT investment. In this context, it is growing more and more important to collaborate with other companies through capital alliances and acquisitions and to incorporate the results of such endeavors.

A closer look in terms of corporate size shows that while the majority of investments made by small and medium-sized enterprises (SMEs) still consist of conventional tangible fixed assets, large companies are increasing their spending on the acquisition of investment stocks. Also by industry, the share of investment stocks in total assets has grown larger among manufacturers compared with non-manufacturers. In the manufacturing industry, the share of investment stocks tends to be greater among export-oriented firms, such as transportation equipment manufacturers, than companies catering to domestic demand such as petroleum and coal product producers and printing firms.

As shown above, while companies are shifting their investment targets from conventional tangible fixed assets to intangible assets and investment stocks, the fact that official GDP statistics do not count them as capital investment appears to be one factor behind the discrepancy between the actual investment activities of companies and the official data.

3. Improvements in capital investment efficiency and outsourcing driven by cloud computing technology may be factors behind curtailment of capital investment

In addition to the shift in companies' investment targets, the improvement of capital investment efficiency may be another factor pushing down capital investment in GDP statistics. The rise of investment efficiency as a result of more sophisticated production lines realized through technological innovation may be serving as a drag upon the amount of capital investment deemed as necessary and sufficient. For example, the improvement of investment efficiency due to the realization of compact lines and

initiatives to use common parts may have contributed to reducing the size of investment.

Furthermore, the recent development of cloud computing technology has also prompted firms to virtually outsource their business equipment. Although capital investment will rise among providers of cloud services, the progress of cloud computing technology should lead to the decline in total value of capital investment, since one of the notable characteristics of cloud services is the pursuit of “economies of scale.”

Capital investment is expected to rise in the case of both the improvement of production line efficiency and the utilization of cloud services, by lowering the break-even level of investments through the expansion of business scale and new entries to the market. As a result, the improvement of investment efficiency may contribute to the rise of investment.

Chart 5: Corporate fund demand

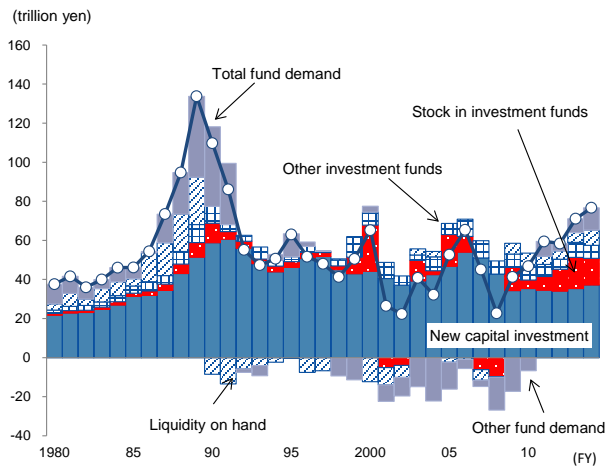
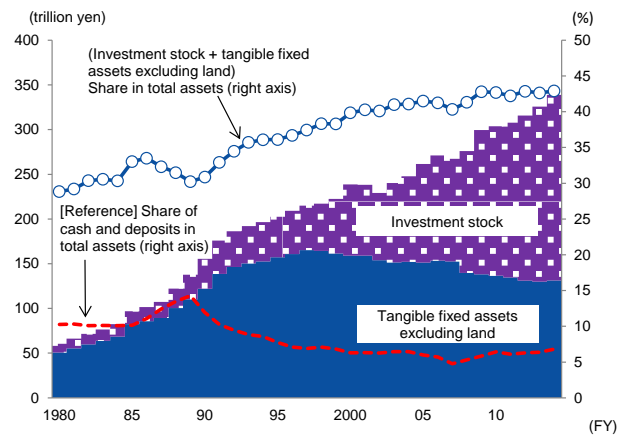


Chart 6: Share of investment stocks in corporate assets



- Notes: 1. Data above cover companies of all sizes and industries (excluding financial and insurance industries).
 2. Stock investment fund is calculated from changes in tangible fixed assets during the coverage period. Other investment funds represent intangible fixed assets, investment and other assets (such as loans), and deferred assets. Other funds show inventory investment and intercompany credit, among others (calculated from changes in total fund demand).

Source: Made by MHRI based on Ministry of Finance, *Financial Statements Statistics of Corporations by Industry*.

Note: Data above cover companies with capital stock over 1 billion yen as well as all industries (excluding finance and insurance industries).

Source: Made by MHRI based on the Ministry of Finance, *Financial Statements Statistics of Corporations by Industry*.

4. Future recovery in earnings is expected to have a positive impact on conventional capital investment

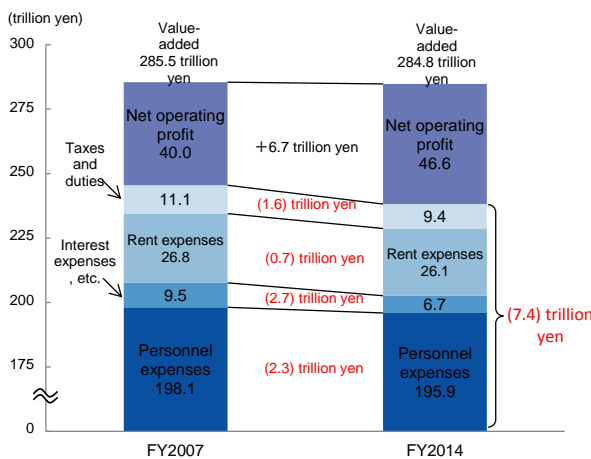
We have thus far discussed the possibility of a steadily widening discrepancy between

actual corporate capital investment and capital investment officially recognized in GDP statistics. In other words, companies are making more investments than what are shown in GDP statistics.

Looking forward, capital investment in tangible fixed assets in Japan which are recorded as assets in GDP statistics, should also pick up at a gradual pace. In FY2015, growth in capital investment remained strong as indicated in the Bank of Japan's (BOJ) *Short-term Economic Survey of Enterprises in Japan (Tankan)* in December. With regard to the purpose of capital investment, various surveys reveal that maintenance and renewal of existing facilities is greater than other purposes. As firms have curbed their capital investment activities in Japan until recently, facilities have become more obsolete, providing reasons to believe that the value of capital investment will not sink to a level significantly below corporate investment plans.

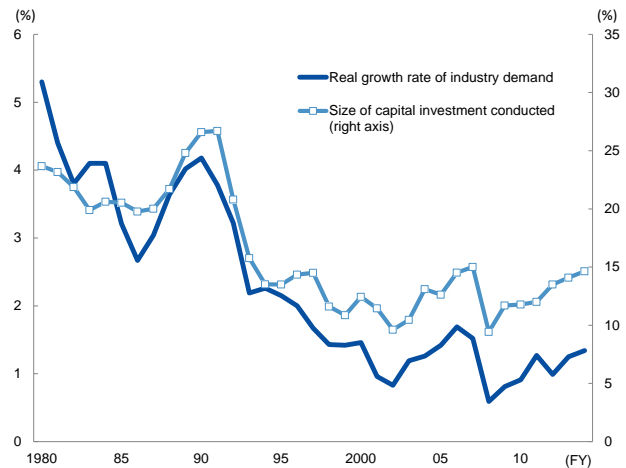
In addition, the recovery of Japanese corporate earnings is also projected to boost capital investment. As mentioned at the outset, corporate earnings in FY2014 surpassed the level recorded prior to the 2008 financial crisis, but the primary source came from controlling personnel costs and interest expenses. If we look at profit on a value-added

Chart 7: Value-added of companies (FY2007-2014)



Note: Value-added = Net operating profit (operating profit - interest expenses, etc.) + personnel expenses (directors' salaries + employee salaries + employee bonuses + welfare expenses) + interest expenses, etc. + rent expenses on movable properties and real estate + taxes and duties. Rent expenses in the above chart represent rent expenses on movable properties and real estate.
Source: Made by MHRI based on the Ministry of Finance, *Financial Statements Statistics of Corporations by Industry*.

Chart 8: Expected growth rate and capital investment



Notes: 1. Size of capital investment is calculated based on the amount of capital investment conducted in the corresponding FY / tangible fixed assets excluding land as of the end of the previous FY.
2. Amount of capital investment conducted is calculated by changes in tangible fixed assets excluding land + depreciation.
3. Real growth rate of industry demand is taken from the forecast data over the next five years of all industries.
Source: Made by MHRI based on the Ministry of Finance, *Financial Statements Statistics of Corporations by Industry*, and the Cabinet Office, *Annual Survey of Corporate Behavior*.

basis, it fell short of the level prior to the 2008 financial crisis. The strong corporate performance in FY2014 was only made possible through cost cuts (**Chart 7**). On the other hand, the odds are high that profit in FY2015 will exceed the level before the 2008 financial crisis even on a value-added basis. We expect to see many companies formulating new capital investment plans in the near future based on their strong corporate earnings. Despite the necessity to pay attention to fluctuations in the financial markets that may affect corporate earnings and business sentiment, the investment recovery should continue unless real economic conditions overseas take a sharp downturn.

Furthermore, in order to realize a sustainable recovery of capital investment on a longer term perspective, an outlook on the future course of the industrial sector and ongoing improvement in corporate profitability would be necessary. In terms of investment recovery, firms will hesitate to undertake large-scale capital investments unless they have a sanguine view of the future. According to the *Industry Forecast for the Next Five Years* in the *Annual Survey of Corporate Behavior* of the Cabinet Office, the business outlook in FY2014 has not yet recovered to the level recorded before the 2008 financial crisis (**Chart 8**). It goes without saying that improvement in corporate earnings is important. Overcoming deflation is also imperative. Lingering concerns of a fall back into deflation would raise the incentive to pay back debts, resulting in less cash flowing to capital investment.

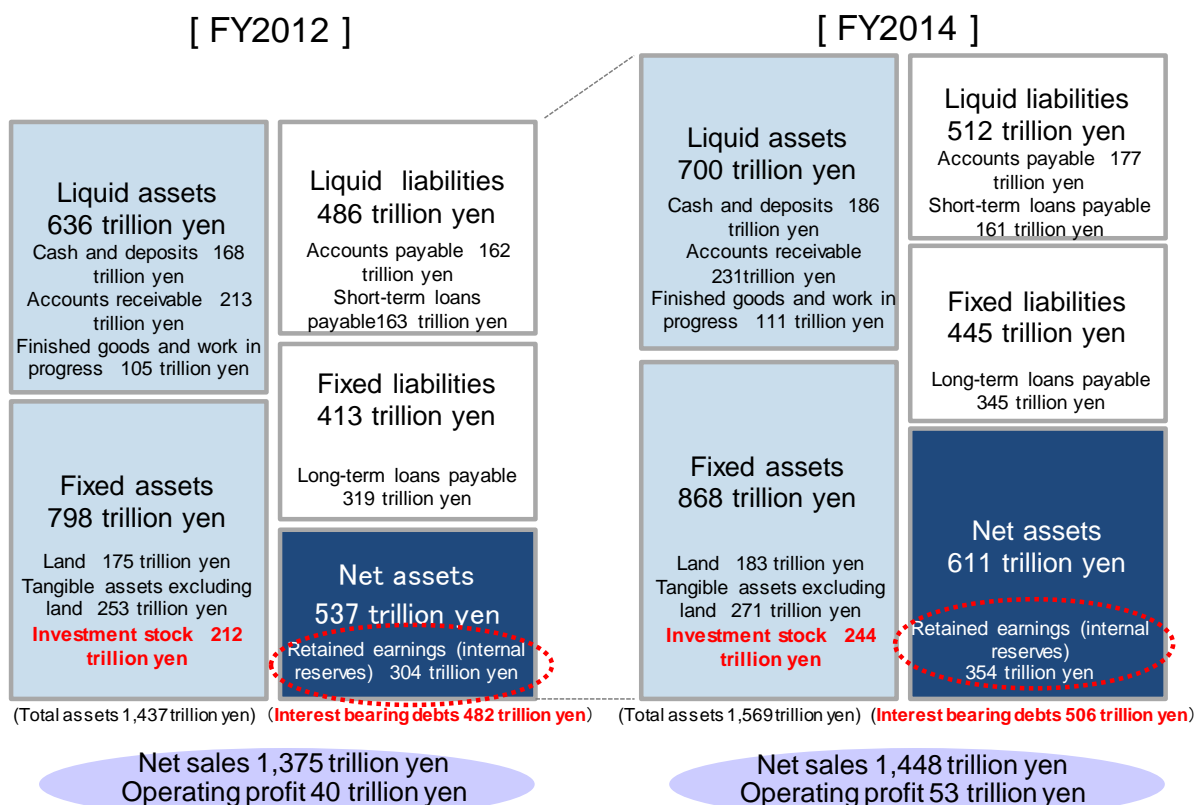
Japanese companies have continued repaying their debts thus far and strengthened their financial position. If growth strategies are implemented and deflation eliminated at the same time, we can expect capital investment within Japan to also grow to a certain extent.

Supplementary Discussion: Relationship between internal reserves, cash and deposits on hand and capital investment

Among the views on corporate capital investment trends, there are criticisms that large enterprises are inclined to preserve their internal reserves and avoid making capital investments, leading to assertions that internal reserves should be taxed. Others claim that excessive cash and deposits are a problem. Looking at actual corporate balance sheets, internal reserves and cash and deposits on hand soared by 50 trillion yen and 18 trillion yen respectively from FY2012 to FY2014 (**Chart 9**).

Therefore, we shall take a closer look and clarify the relationship between capital investment and internal reserves and cash and deposits on hand, which are often subject to criticism.

Chart 9: Balance sheets of Japanese companies (FY2012-2014)



Source: Made by MHRI based on the Ministry of Finance, *Financial Statements Statistics of Corporations by Industry* (annual survey).

(1) Internal reserves are a means to achieve corporate growth

In general, internal reserves are defined narrowly as retained earnings. In the field of accounting, internal reserves refer to the accumulation of the remaining portion of net

income after subtracting cash outflows such as dividend payments. Companies basically accumulate a certain amount of internal reserves each fiscal term unless they have a net loss or pay out excessively high dividends. Therefore, the constant increase in internal reserves itself should not always be a target of criticism.

In addition, there is no direct relationship between the amount of cash and deposits on hand, explained below, and internal reserves. Of course, companies with ample internal reserves may generally carry more than enough cash; but companies could also have little cash on hand despite abundant internal reserves, and some could even possess excessive cash on hand while carrying zero internal reserves.

From the standpoint of shareholders, internal reserves should serve as a source of company growth, so companies should retain a certain amount of profit on their balance sheets and refrain from paying out the entire profit as dividends. In light of this logic, companies may be criticized by shareholders if they do not use their internal reserves appropriately for reinvestment. And this could lead to the argument that “companies should return all profit to shareholders if they do not allocate the internal reserves to growth investment.” Returning profit to shareholders may be one option when promising investment targets are lacking, since steady corporate growth is not always achievable and has various stages.

Nonetheless, the logic that “companies must make capital investments because they have ample internal reserves” mistakes the means for the end. If the accumulation of excessive internal reserves is the subject of criticism, the correct response would be to we return these reserves to the market through shareholder returns, rather than shifting the unused risk money directly to capital investment. This would create an environment where risk money flows more smoothly to companies taking on new business investments, including venture firms.

It goes without saying that for the sake of sound company growth, companies need to reserve an adequate amount of net assets (including internal reserves) as a risk buffer in a given operating environment. Therefore, paying out more-than-necessary internal reserves can also impede company growth.

In any case, what should be decided first is capital investment deemed necessary; internal reserves are just one means to realize the necessary investment. An attempt to define the amount of capital investment companies from the amount of internal reserves is a fallacy.

(2) The level of internal reserves should be defined from the perspective of its balance with liabilities

The adequate level of internal reserves should be discussed from the perspective of

the balance between net assets (including internal reserves) and liabilities. As mentioned above, net assets function as a risk buffer, so the adequate balance between net assets and liabilities will vary depending on the business risk carried by each firm. For example, semiconductor manufacturers, which may take huge losses during a recessionary period affected by the silicon cycle, tend to have a high net asset ratio, especially overseas. In contrast, industries operating in a stable business environment may find less need to maintain a high net asset ratio.

This means that a company with excessive internal reserves relative to its business risk is paying unnecessary capital costs, and that from a market perspective, risk money is being accumulated in areas that do not essentially need funds.

(3) In the future, companies will move toward controlling the level of their internal reserves

Even if companies are now inclined to accumulate excessive internal reserves, this situation should improve gradually in the future, mainly among listed companies. Thanks to the announcement of JPX400 in 2014, followed by the introduction of Japan's Corporate Governance Code in 2015, the market is now more focused on ROE. If more company managers think that excessive internal reserves (net assets) hinder a higher ROE and negatively affect company growth, unnecessary internal reserves will be eventually distributed as return to shareholders.

There is also a movement among listed companies to optimize the amount of net assets. Such companies seem to aim at not only improving their ROE but also making comprehensive judgments in light of the overall operating environment. Some companies even allocate 100% of their net income as remuneration to shareholders through dividend payments and acquisition of their own stock for a certain period. Furthermore, stock buybacks using debt procured through the issuance of bonds with subscription rights to shares (convertible bonds), a method called “Recap (recapitalization) CB,” has gained popularity among listed companies as a financial strategy to restructure the right balance of capital and liabilities.

By accelerating the smooth flow of risk money from internal reserves to investment in companies with strong growth potential by paying out excessive internal reserves as shareholder returns, corporate governance reform may contribute to the invigoration of corporate activities through the efficient flow of risk money.

(4) Preserving too much cash on hand is more the result of a lack of investment projects

Outstanding cash and deposits increased by 18 trillion yen, or about 10%, from

FY2012 to FY2014, and net sales also grew 5% in the same period. This suggests that the level of cash on hand in FY2014 relative to monthly sales is 1.54 months (1.47 months in FY2012). Thus, since the level of cash owned by companies is not excessive, the criticism that companies hold too much cash is not necessarily justifiable.

Companies do implement capital investment only after saving enough cash; if they do, they run the risk of falling behind competition while waiting for cash to accumulate. Companies usually procure external funds whenever there is the imminent need to invest capital. In view of the fact that companies have limited their investment activities in a financial environment where external funds are easy to procure, the natural reasoning would be that the bottleneck in capital investment is not a financial problem but a lack of investment projects (at least from a macro point of view).

In other words, companies have not curtailed their capital investment activities in order to preserve cash; rather, the shortfall in new investment targets, including capital investment projects, has prompted companies to accumulate cash and deposits, implying a reverse causal relationship.

If such is the case, companies daring to allocate their ample funds to less attractive investment targets would only face the deterioration of profitability.

Accumulating unnecessary cash and deposits is undesirable as it can lead to lower efficiency of company assets. Companies aiming to improve their ROE should consider retuning profits to shareholders, and if they wish to secure net profits, they should prioritize repaying their external debts. There are companies, however, which reserve a certain amount of cash so that they do not miss a golden M&A opportunity. In light of such possibilities, the reduction of the amount of cash on hand would not always be the appropriate financial strategy.