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RICE

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I. Overview

Japan's economy has maintained a recovery trend since FY2002, and from FY2003 to FY2007 the economic growth rate continued at a rate of about 2% per year. However, due to the global economic downturn that began with the U.S. subprime mortgage issue in the summer of 2007 and the Great East Japan Earthquake of March 2011, the economy has slowed down.

Recently, the Japanese economy is showing signs of recovery after bottoming out in 2012, and in 2013, the weak yen and high stock prices caused by anticipation regarding financial/economic policies improved private sector investment and consumer psychology, attracting consumer spending, and recovery boosted by public investment centring on earthquake recovery/reconstruction works is expected to continue. Although recovery is forecast for private capital investment and external demand in 2014, there are concerns that rises in consumption tax would cause economic recovery to stall.

The contracting trend in public investment in Japan since the latter half of the 1990s has at last ended, and shifted to recovery. In FY2008, the year of the Lehman Shock, the total public investment was ¥47.2 trillion, just over half that of the peak in FY1992. Since then, due to increased recovery/reconstruction investment following the Great East Japan Earthquake and due to private investment, bottoming out in 2011, the Japanese economy is now experiencing a gentle recovery.

The status of the construction industry in Japan can be summed up as follows.

① The number of construction companies is still declining, with a drop of 21.8% compared to the peak in 2000.

② The number of construction industry employees in 2012 was 5.0 million. In comparison to the peak year of 1997, it is a decrease of 26.6%.

③ Rapid aging of construction workforce is observed, and currently one in three is over 55 years of age. In addition, fewer young workers are entering in the construction industry, compared to other industry section.

④ Japan's overseas construction orders were affected by the worldwide recession, but since then it has increased to ¥1.2 trillion in FY2012.

II. Macro-economic review and forecast

1. Overview of Japan's economy (Figure1,2)

Japan's economy has shown continuous growth at a rate of about 2% per year since 2003, with a continuous albeit gentle recovery. However, due to the global economic confusion that began with the U.S. subprime mortgage issue in the summer of 2007 and the effects of soaring resource prices, Japan plunged into negative economic growth rates during FY2008 and FY2009. The FY2011 economic growth rate was only 0.3% due to the Great East Japan Earthquake of March 2011.

For this fiscal year of 2013, robust consumer spending is happening, before rises in consumption tax towards the end of the fiscal year, as well a rally is anticipated for housing construction before tax rise. In addition, mainly due to earthquake recovery/reconstruction works, public fixed capital formation has increased by 5.9%. In total, real GDP is expected to increase by 2.7% during FY2013.

Figure 1　Macroeconomic Trends (FY)

(Unit: Billion yen)

Fiscal year	1995	2000	2005	2009	2010	2011	2012	2013 (Forecast)	2014 (Forecast)
Real GDP	459,058	476,723	507,158	495,492	512,310	513,689	519,673	533,917	537,106
(YoY change)	2.7%	2.0%	1.9%	-2.0%	3.4%	0.3%	1.2%	2.7%	0.6%
Real private final consumption expenditures	265,891	275,056	292,579	295,027	300,051	304,730	309,689	316,819	314,882
(YoY change)	2.3%	0.3%	1.9%	1.2%	1.7%	1.6%	1.6%	2.3%	-0.6%
(Contribution rate)	1.3	0.2	1.1	0.7	1.0	0.9	1.0	1.4	-0.4
Real government final consumption expenditures	73,617	83,960	92,363	95,951	97,901	99,288	101,339	103,824	104,031
(YoY change)	4.3%	4.8%	0.4%	2.7%	2.0%	1.4%	2.1%	2.5%	0.2%
(Contribution rate)	0.6	0.8	0.1	0.5	0.4	0.3	0.4	0.5	0.0
Real private housing	23,609	20,080	18,345	12,268	12,534	12,999	13,683	14,530	13,816
(YoY change)	-5.7%	-0.1%	-0.7%	-21.0%	2.2%	3.7%	5.3%	6.2%	-4.9%
(Contribution rate)	-0.3	0.0	0.0	-0.7	0.1	0.1	0.2	0.2	-0.1
Real private corporate facilities	60,326	64,986	70,599	62,516	64,791	67,446	66,518	67,864	70,118
(YoY change)	3.1%	4.8%	4.4%	-12.0%	3.6%	4.1%	-1.4%	2.0%	3.3%
(Contribution rate)	0.5	0.7	0.6	-1.7	0.5	0.5	-0.2	0.3	0.4
Real public fixed asset formation	41,704	35,071	24,113	22,124	20,716	20,261	23,291	24,670	22,123
(YoY change)	6.7%	-6.1%	-6.7%	11.5%	-6.4%	-2.2%	15.0%	5.9%	-10.3%
(Contribution rate)	0.6	-0.5	-0.3	0.5	-0.3	-0.1	0.7	0.3	-0.5
Real inventory increase	1,291	341	807	-5,070	-480	-2,609	-3,004	-3,601	-3,363
(YoY change)	-241.5%	-110.2%	-46.3%	-374.4%	-90.5%	443.3%	15.1%	19.9%	-6.6%
(Contribution rate)	0.6	0.8	-0.1	-1.5	1.0	-0.5	-0.1	-0.1	0.0
Real financial services net exports	-4,509	-2,087	8,349	11,719	16,844	11,958	8,268	9,865	15,555
(YoY change)	596.5%	102.6%	56.0%	-4.4%	43.7%	-29.0%	-30.9%	19.3%	57.7%
(Contribution rate)	-0.6	0.0	0.6	0.2	0.8	-1.0	-0.8	0.3	1.1
Nominal GDP	504,594	510,835	505,349	473,934	480,002	473,276	474,605	485,773	496,532
(YoY change)	1.8%	0.8%	0.5%	-3.2%	1.3%	-1.4%	0.3%	2.4%	2.2%

Source: Construction and Economic Forecasts (RICE) for 2013 and 2014, Annual Report on National Accounts(Cabinet Office) for 1995-2012

Note: Real values reflect 2005 prices.

2. Major economic indicators

Figure 2　List of Major Economic Indicators

Fiscal Year	2008	2009	2010	2011	2012	(Forecast) 2013
GDP (real, year(2005), billion yen)	505,803	495,491	512,310	513,689	519,673	533,917
GDP (nominal, year, billion yen)	489,520	473,934	480,002	473,276	474,605	485,773
GDP growth (year, %)	-3.7%	-2.0%	3.4%	0.3%	1.2%	2.7%
Agriculture, forestory, and fishery	7.2%	-9.4%	-1.0%	2.1%	－	－
Manufacturing	0.8%	-17.7%	19.6%	-2.7%	－	－
Services	1.1%	-4.7%	0.0%	0.4%	－	－
Mining	-12.5%	-43.6%	5.9%	1.1%	－	－
Construction	-7.2%	-2.0%	-2.3%	0.9%	－	－
Demographic Indicators						
Population (year, thousands)	127,692	127,510	128,057	127,799	127,515	127,398
Population growth rate (year, %)	-0.06%	-0.14%	0.43%	-0.20%	-0.22%	-0.09%
Total labor force (year, thousands)	66,740	66,500	66,320	65,910	65,550	65,660
Labor force growth rate (year, %)	-0.15%	-0.36%	-0.27%	-0.62%	-0.55%	0.17%
Unemployment rate (year, %)	4.0%	5.1%	5.1%	4.6%	4.3%	4.1%
Inflation rate (year(2010), %)	1.4%	-1.4%	-0.7%	-0.3%	0.0%	0.3%
Financial Indicators						
Interbank interest rate	0.74	0.46	0.34	0.34	0.31	0.23
Short-term interest rate (%)	0.10	0.09	0.08	0.08	0.08	0.07
Long-term interest rate (%)	1.52	1.36	1.19	1.15	0.86	0.75
Exchange rate against US$	103.33	93.53	87.77	79.78	79.79	96.34

Source: Construction and Economic Forecasts (RICE, October 2013), Annual Report on National Accounts (Final Report for 2012, Cabinet Office), Financial and Economic Statistics Monthly (Bank of Japan), Ministry of Internal Affairs and Communications website.

Notes:

1. *The GDP figure for FY2013 is a forecast.Real values: 2005 prices.*
2. *Population figures are estimates as of October 1each year. The FY2013figure is an average value for three months.*
3. *The workforce population and unemployment rates are average values for 12 months. For 2013, the figure is an average value for seven months.*
4. *The inflation rate is a percentage as compared with the previous year's consumer price index. For FY2013, the figure is the rate of increase between FY2012 and July 2013.*
5. *Interbank Interest rates for 2013 are as of the end of August. Others reflect the year-end rates.*
6. *Short-term interest rates are calculated using the average published interest rate for domestic commercial paper.*
7. *Long-term interest rates are the rates on 10-year government bonds.*
8. *Exchange rate for 2013 is as of the end of August. Others are annual averages.*

III. Overview of the Construction Industry

1. Construction investment outlook (Figure3)

Construction investment in Japan for FY2012 (nominal: same hereinafter) was approx. ¥44.9 trillion, of which ¥18.9 trillion was government investment and ¥26.0 trillion was private investment.

According to the recent RICE forecast, construction investment for FY2013 is expected to increase by 9.1% over the previous fiscal year to ¥49.0 trillion.

For government construction investment, government directed/subsidized public works expenditure is forecast to rise by 13.1%, and local government works expenditure 1.0%, for an 11.5% increase over the previous fiscal year. For private residential investment, housing rush before rises in consumption tax is also anticipated, and a year-on-year increase of 7.0% is forecast. For private non-residential investment, capital investment on civil engineering infrastructure is expected to remain at high levels, and a 7.7% overall year-on-year increase is forecast.

Figure 3　Construction Investment Forecast

(Unit: ¥1 billion)

FY	1995	2000	2009	2010	2011	2012	2013 (Forecast)
Nominal construction investment	79,017	66,195	42,965	41,928	41,890	44,900	48,980
(YoY change)	0.3%	-3.4%	-10.8%	-2.4%	-0.1%	7.2%	9.1%
Nominal government construction investment	35,199	29,960	17,935	17,982	17,210	18,860	21,030
(YoY change)	5.8%	-6.2%	7.3%	0.3%	-4.3%	9.6%	11.5%
(Contribution rate)	2.5	-2.9	2.5	0.1	-1.8	3.9	4.8
Nominal private residential construction	24,313	20,276	12,840	12,978	13,380	13,980	14,960
(YoY change)	-5.2%	-2.2%	-21.6%	1.1%	3.1%	4.5%	7.0%
(Contribution rate)	-1.7	-0.7	-7.4	0.3	1.0	1.4	2.2
Nominal private non-residential construction	19,505	15,959	12,190	10,968	11,300	12,060	12,990
(YoY change)	-1.8%	0.7%	-19.0%	-10.0%	3.0%	6.7%	7.7%
(Contribution rate)	-0.4	0.2	-5.9	-2.8	0.8	1.8	2.1
Real construction investment	77,727	66,195	41,181	40,050	39,444	42,870	46,230
(YoY change)	0.2%	-3.6%	-7.7%	-2.7%	-1.5%	8.7%	7.8%

Source: Construction and Economic Forecast (RICE), Construction Investment Forecasts (MLIT).

Notes:

1. *Real values reflect 2005 prices.*
2. *Private non-residential construction investment = private non-residential building investment + private civil engineering investment.*

2. Construction companies

The number of licensed construction companies in Japan as of end March 2012 was 470 thousand, a decrease of 2.9% from the same month of the previous year. (Figure4) In comparison to the peak of March 2000, it is a decrease of 21.8%.

The number of construction-related companies is also slightly declining in recent years. (Figure5)

Figure 4　No. of Construction Companies, and Composition Size,

Year	2009		2010		2011		2012		2013	
	(thousand)	Percent of total	(thousand)	Percent of total	(thousand)	Percent of total	(thousand)	Percent of total	(thousand)	Percent of total
No. of registered contractors (total)	509	100.0%	513	100.0%	499	100.0%	484	100.0%	470	100.0%
Breakdown of registered contractors by size classification										
8 Sole proprietor	106.1	20.8%	107.9	21.0%	102.4	20.5%	97.0	20.1%	91.8	19.5%
7 Corporation with less than ¥3 million in capital	4.3	0.9%	5.8	1.1%	7.2	1.4%	8.4	1.7%	9.7	2.1%
6 Corporation with ¥3 million up to ¥10 million in capital	187.2	36.8%	189.7	37.0%	186.2	37.3%	181.9	37.6%	178.2	37.9%
5 Corporation with ¥10 million up to ¥20 million in capital	130.2	25.6%	129.0	25.1%	123.6	24.8%	118.4	24.5%	113.5	24.2%
4 Corporation with ¥20 million up to ¥100 million in capital	75.3	14.8%	74.9	14.6%	73.6	14.8%	72.3	14.9%	71.0	15.1%
3 Corporation with ¥100 million up to ¥1 billion in capital	4.5	0.9%	4.4	0.9%	4.4	0.9%	4.3	0.9%	4.2	0.9%
2 Corporation with ¥1 billion up to ¥10 billion in capital	1.1	0.2%	1.1	0.2%	1.0	0.2%	1.0	0.2%	1.0	0.2%
1 Corporation with ¥10 billion or more in capital	0.4	0.1%	0.4	0.1%	0.4	0.1%	0.4	0.1%	0.4	0.1%

Source: Survey of on the Number of Licensed Construction Companies (MLIT)

The number of construction consultant businesses is shown in the figure below.

Figure 5　No. of Registered Construction-Related Businesses
(by Business Type and Net Registered Number)

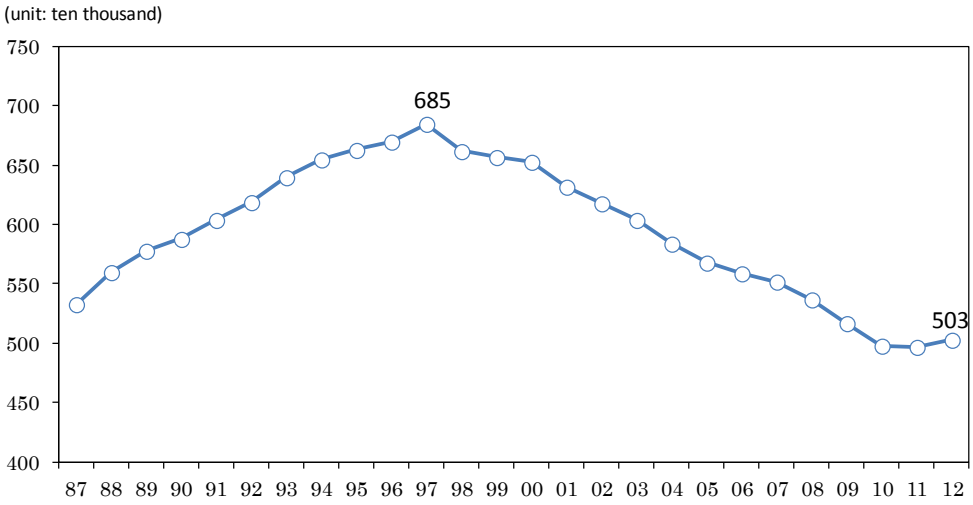
Business Type	Fiscal Year[2]	2009	2010	2011	2012	2013
Surveying[1]	No. of registered companies	13,324	12,974	12,695	12,566	12,436
	YoY change (%)	-2.6	-2.6	-2.2	-1.0	-1.0
Construction consulting[1]	No. of registered companies	3,993	3,952	3,991	3,935	3,941
	YoY change (%)	-1.2	-1.0	1.0	-1.4	0.2
Geological surveying[1]	No. of registered companies	1,305	1,286	1,289	1,265	1,263
	YoY change (%)	-2.3	-1.5	0.2	-1.9	-0.2
Net number of companies	No. of registered companies	15,057	14,605	14,200	13,951	13,773
	YoY change (%)	-0.5	-3.0	-2.8	-1.8	-1.3

Source: Registration Status of Construction-Related Companies (MLIT)
Notes:
1. Including companies with multiple registrations.
2. As of the end of March in each fiscal year.

3. Employees and construction labour

The number of construction industry employees in 2012 was 5.0 million. In comparison to the peak year of 1997 (6.9 million), it is a decrease of 26.6%.(Figure6)

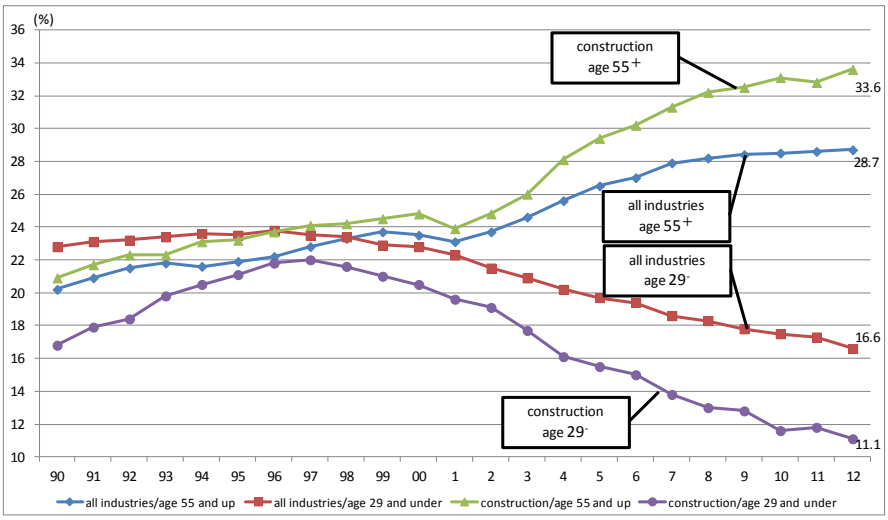
Figure 6　Number of Construction Industry Employees



Source: Labour Force Survey (Ministry of Health, Labour and Welfare)

Looking at trends in age composition among construction industry employees, in 2012, about 34% of employees were aged 55 or higher, while about 11% were aged 29 and under, indicating that aging in the employee population is progressing. In addition, the percentage in the young adult age group has dropped significantly. (Figure7)

Figure 7　Age composition of Construction Industry Employees



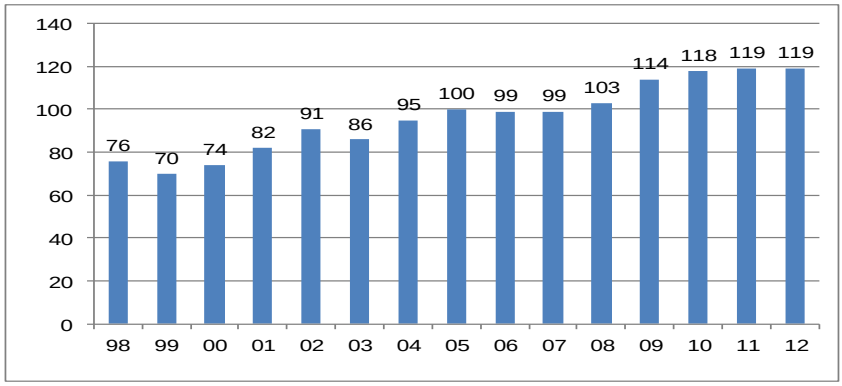
Source: Labour Force Survey (Ministry of Health, Labour and Welfare)

4. International transactions in the construction market

① Overseas construction companies in Japan (Figure8)

As of FY2012, the number of overseas construction companies (overseas corporations and Japanese corporations with over 50% foreign capitals) holding construction licenses in Japan was 119.

Figure 8　No. of International Construction Companies Holding Construction Licenses in Japan

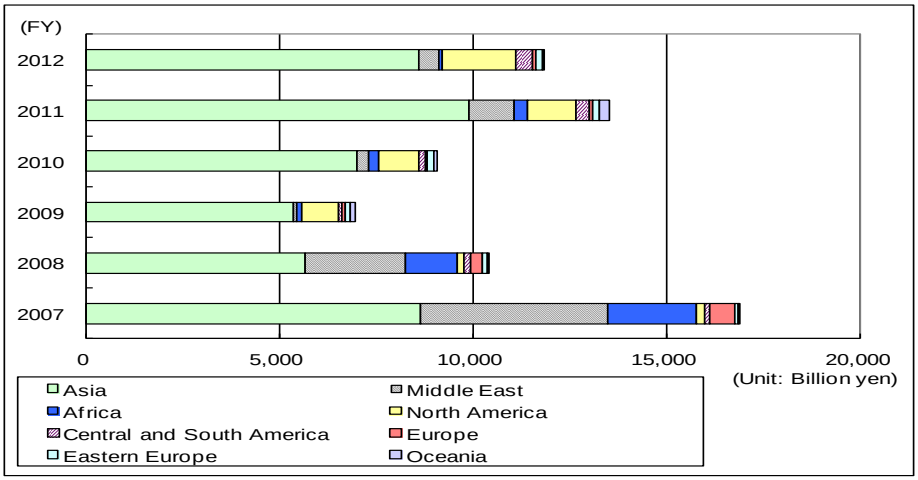


Source: MLIT

② Japanese construction companies overseas (Figure9)

The value of Japan's overseas construction orders received exceeded ¥1 trillion for the first time in 1983. Since then, this remained at around ¥1 trillion for about twenty years, and in FY2007, the value of orders received reached the highest recorded value of ¥1.682 trillion. With the effects of the global recession, the figure dropped to ¥0.697 trillion in FY2009, but this recovered to ¥1.1828 trillion in FT2012.

Figure 9　Overseas Construction Orders of Japanese Companies



Source: The Overseas Construction Association of Japan. Inc

③ Japanese construction consultant companies overseas (Figure10)

The overseas sales of Japanese construction consultant companies has recovered since the world recession and has remained at around ¥400 billion from FY2009 onwards, with sales for FY2012 reaching ¥458 billion.

Figure 10　Overseas Sales of Major Japanese Construction Consulting Companies (by Region)

(Unit: ¥1 billion)

Fiscal year	2009	2010	2011	2012
Domestic sales	383.7	318.5	375.7	415.5
(YoY change)	11.8%	-17.0%	18.0%	10.6%
Public sector	334.7	270.7	332.4	370.1
(YoY change)	12.2%	-19.1%	22.8%	11.4%
Private sector	49.0	47.8	43.4	45.3
(YoY change)	9.3%	-2.4%	-9.3%	4.5%
Overseas sales	49.1	49.7	46.3	42.5
(YoY change)	28.7%	1.4%	-6.9%	-8.2%
total	432.7	368.3	422.0	458.0
(YoY change)	13.5%	-14.9%	14.6%	8.5%

Source: The Overseas Construction Association of Japan. Inc

IV. Recent trends – Airport concessions

Introduction

In the "Japan Revitalization Strategy" approved by the Cabinet in June 2013, the Japanese government announced that over the next ten years, the business scale of PPP/PFI projects that utilize private sector funds and knowledge to develop, operate and update public infrastructure, will be increased to ¥12 trillion. (Currently ¥4.1 trillion)

Specifically, on the airport sector, "The Act for the Utilization of Private Sector Capability for the Operation of Government Administration Airports" was passed through the Diet in June 2013, and the "right to operate public facilities, etc." (so called "concessions") was established through the revision of "The Act on Promotion of Private Finance Initiative" (hereinafter the "PFI Act"). The PFI Act enabled the public airport authorities to retain ownership of airports while commissioning their operation to private sector businesses through concession contracts.

1. What are concessions?

"Concessions" refers to a public infrastructure administration system widely used in European countries such as France, etc. Specifically, while the state or local authority retains ownership, the "right to operate public facilities, etc." is set for public infrastructure that has the potential for revenue such as water and sewerage supply systems, toll roads, airports, etc. These rights are then purchased from the government by private sector companies who undertake the operation of said infrastructure, and continue operation while drawing revenue.

On the authorities' side, the merits are that the ownership of the facilities remains in their hand, while the risks of operation are transferred to the private sector, and concession payments paid by the private investors can be utilized for the early recovery of facility construction costs.

Meanwhile, concessionaires can increase revenues by combing their own business and by creating synergy with the operation of their own facilities.

By providing better services, private sector businesses will be able to achieve greater satisfaction among the users.

2. Current status of national and local airports

According to a Japanese government committee report on airport operation, there are 97 airports in service, of which 4 are under the administration of airport companies such as Narita International Airport Corporation, 28 are under the administration of national government (of which 9 are joint-use airports shared with the self-defense forces, etc.), and 65 are under the administration of local authorities.

Figure 11　Overview of Airports in Japan

Type		Founder and Administrator	No.	Overview
Hub Airports	Private administration airports	Airport companies	4	Narita Intl. Airport, Kansai Intl. Airport Osaka Intl. Airport, and Chubu Intl. Airport
	National government administration airports	Minister of Land, Infrastructure and Transport	19	Tokyo Intl. Airport and airports that serve as hubs for the international air transportation network or the domestic air transportation network
	Specific local government administration airports	(Founder) Minister of Land, Infrastructure and Transport (Admin) Prefectural governor, etc.	5	Asahikawa, Obihiro, Akita, Yamagata and Yamaguchi Ube airports
Local government administration airports		Prefectural governor, etc.	54	Airports other than hub airports, that serve important roles in the formation of international air transportation networks and the domestic air transportation network.
Joint-use airports		Minister of Defence, etc.	9	Airports used by the Japanese government and Japanese citizens, that are available for public duties (Misawa Airport, Komatsu Airport, etc.)
Other airports		Minister of Land, Infrastructure and Transport, Prefectural governor	6	Airports specified under Article 2 of the Airport Act, excluding hub airports, local government administration airports and joint-use heliports

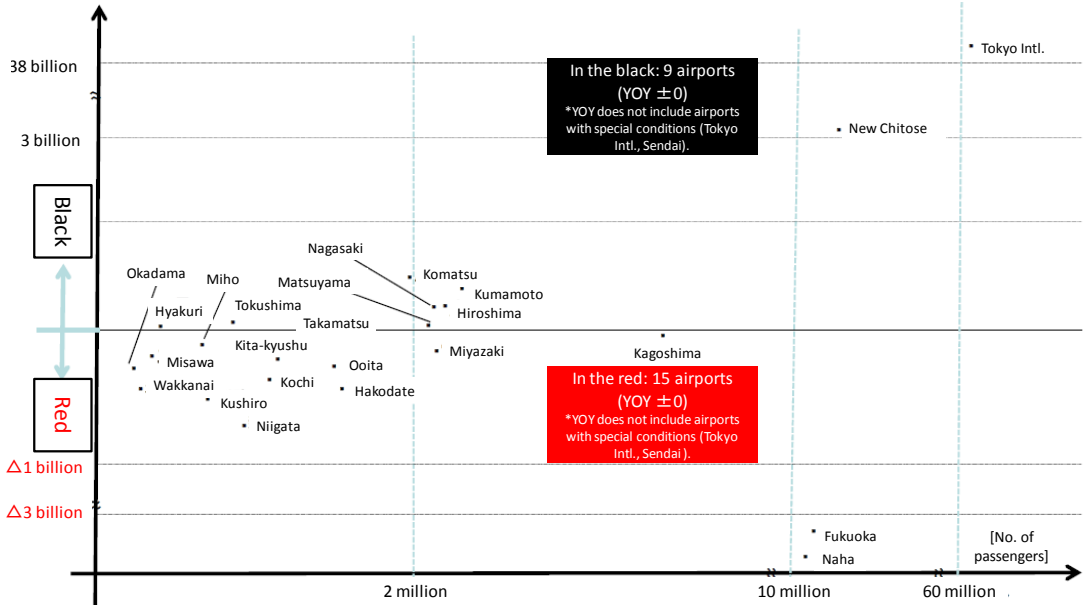
Source: MLIT

With national government administration airports, the MLIT manages the "Aviation related business" pertaining to basic airport facilities such as runways, taxiways, aprons, etc. (in joint-use airports, joint-use facilities such as runways are managed by the Ministry of Defense). Although landing fees, etc. which comprise the sources of revenue have preset deductions depending on route, taking the balance of payments for all airports in a fiscal year into consideration, basic national uniform tariffs (fare schedule data needed to calculate fares) are determined through notices. Consequently, in addition to a lack of usage fee settings that flexibly exploit airport characteristics, since the landing fee income of all airports nationwide is managed as a pool, there is

little transparency concerning the income and expenditure of each airport, and the absence of incentives to increase revenue and reduce costs (efficiency incentives) has been highlighted.

MLIT opened estimate of each airport's balance sheet in FY2011 including income and expenditure. The estimate shows operating profit and loss figures for 26 airports, of which 90% were in the red. In addition, according to EBITDA[1] (earnings before interest, taxes, depreciation, and amortization) calculations, for "Aviation related business only", 9 airports were in the black and 15 were in the red. Even adding "Non-aviation related business" such as retail revenues, 18 airports were in the black and 6 were in the red. As is apparent, optimization of management efficiency has not been realized for each airport.

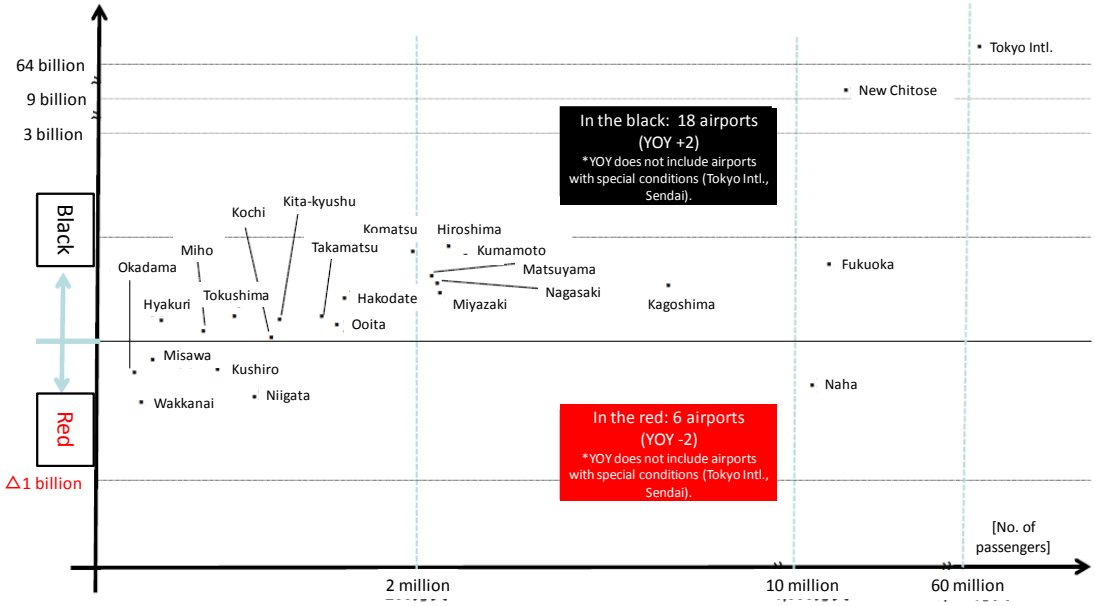
Figure 12　Income/expenditure for each airport (before EBITDA) – Before total



※This graph does not include 2 airports. (Sendai, Yao)

[1]Table showing cash-flow for each airport derived through business over one year. The formula is ordinary profit and loss + interest paid + depreciation. Before total (aviation related business), non-operating income "local authority contribution for construction income" and "receipts in to general accounts" were subtracted.

Figure 13　Income/expenditure for each airport (before EBITDA) – After total



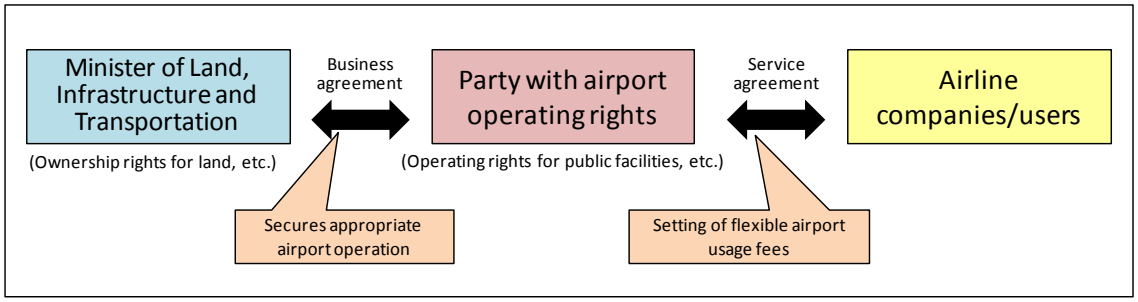
※This graph does not include 2 airports. (Sendai, Yao)

(Source: MLIT, Results of income/expenditure estimation per airport, FY2011)

In Japan, apart from Narita, Kansai and Chubu Intl. Airports which are operated by private companies, “Non-aviation related business” are separately managed from airport management. Thus, there was no scheme to integrate both businesses for more efficient use of airport facilities.

To improve this situation and realize truly attractive airports, it is considered necessary to construct a mechanism that will bring in private sector knowledge and funds, as is the case with overseas airports, so the concession system is introduced. “The Act for the Utilization of Private Sector Capability for the Operation of Government Administration Airports” was enacted in June 2013. The act clearly states that “In order to promote airport operation, etc. by utilizing private sector capabilities, the Minister of Land, Infrastructure and Transportation (MLIT) shall take the necessary measures to establish basic policies, and, in relation to airports, etc. under the administration of the MLIT, specify operating rights for public facilities, etc. and where operation, etc. will be undertaken, establish special provisions under related laws, etc.”. The act also states that, “Regarding local government administration airports, in accordance with the judgments of the local authorities that are the airport’s founder and administrator, similar special measures shall be established under the PFI Act, the Civil Aeronautics Act and the Airport Act.”

Figure 14　Basic concessions scheme



(Source: MLIT)

3. Concessions to Kansai International Airport and Osaka International Airport

The first law to apply concessions to airport operation is the "Act on the Integration of Kansai International Airport and Osaka International Airport". The act was brought into effect on the 1st of July in 2012.

As shown in Figure 16, this law aims to utilize concessions, following the integration of Kansai International Airport and Osaka International Airport in FY2014, for the purpose of allowing the national government to retain ownership of both airports (national government is the shareholder of the newly established New Kansai International Airport Company, Ltd.) while transferring operational rights to the private sector. The Kansai International Airport has currently debt at ¥1.0062 trillion for the past. This amount will be repaid once concession is realized and the further revitalization of both airports through private sector know-how is anticipated.

New Kansai International Airport Company, Ltd. will acquire the terminal building operations from Osaka International Airport Terminal (OAT). After integrated operation of both airports and terminal buildings is achieved, then concession transaction process will start, which is expected to take place in FY2014.

Figure 15　Operational schemes for the two airports

※Passenger terminal building ,etc. at Osaka International Airport are operated by Osaka International Airport Terminal Co.,Ltd.

(Source) New Kansai International Airport Company, Ltd. Overview

4. Conclusion

The key for the success of concessions system is that whether private sector businesses can deliver corporate value and improve business balance through integration of airport activities. In case of large-scale disasters, airports serve extremely important roles as hubs for rescue/medical activities, so close cooperation between concessionaires and administrative authorities is essential.

The concession of the Kansai International Airport and Osaka International Airport will be a test case for Japan, and future progress of this endeavour will be worth keeping a close eye on.