

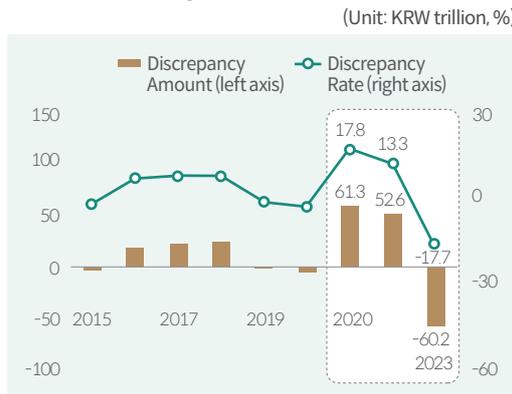
Reasons Behind Recent Tax Revenue Estimation Errors and the 2024 Revenue Forecast

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Challenges in Accurate National Tax Revenue Estimation

- **Recent uncertainties in the tax revenue landscape have resulted in significant estimation errors, posing challenges to effective fiscal management.**
 - In 2021 and 2022, despite the COVID-19 pandemic, factors like a robust real estate market and strong performance by semiconductor companies led to unexpected tax revenue surpluses.
 - Conversely, a substantial tax revenue shortfall is anticipated for 2023 due to a downturn in asset markets (such as real estate) and a marked decrease in corporate profits from late 2022.
 - The projected tax revenue deficit for 2023 is estimated at KRW 59.1 trillion by the government and KRW 60.2 trillion by NABO.

[Figure 1] Annual Tax Revenue Estimation Discrepancies



Note: 1) The discrepancy amount in tax revenue and the error rate are calculated using the difference between the main budget and the settlement of accounts, with the discrepancy amount divided by the settlement of accounts and then multiplied by 100 to yield a percentage.

2) The data for 2023 reflect projections made by NABO.

Source: Compiled by NABO using Ministry of Economy and Finance data.

[Table 1] Shortfalls in 2023 Tax Revenue by Item

(Unit: KRW trillion)

Comparison of projected revenue shortfalls against the main budget		
	Government estimates	NABO estimates
Total national tax	-59.1	-60.2
Income tax	-17.7	-17.7
- Transfer income tax	-12.2	-12.3
Corporate tax	-25.4	-25.9
Value-added tax	-9.3	-8.8
Other taxes	-6.7	-7.7

Note: Rounding of figures may result in slight discrepancies in totals. Source: Tax Revenue Outlook for 2023 and the Medium-Term, NABO, October, 2023.

- **Below demonstrates the reasons behind the significant revenue deficit in 2023 and assess the revenue projections for 2024, considering the persistence of the factors that led to the shortfall.**

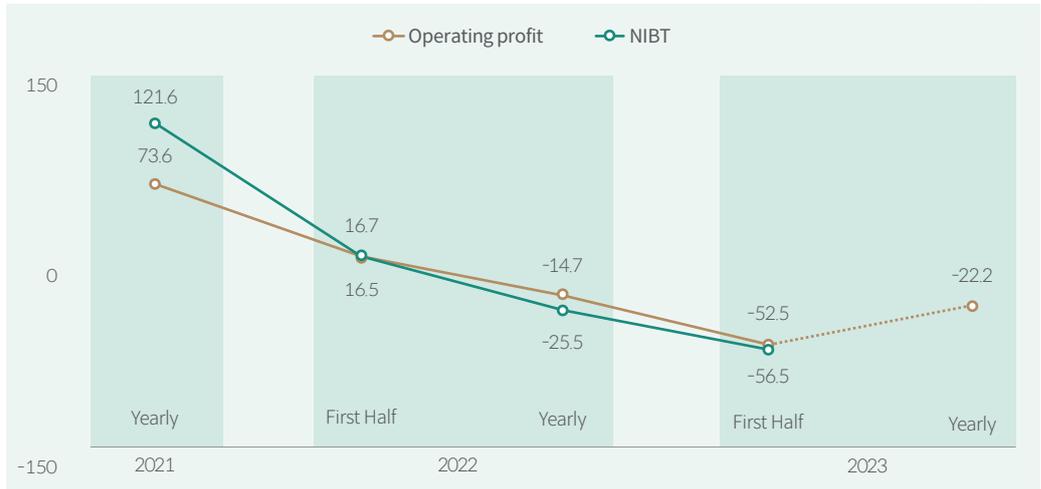
2023 Tax Revenue Deficit Origins

- **The predominant factors behind the 2023 tax revenue deficit are corporate and transfer income taxes.**
 - Together, corporate income tax, constituting 43.1% of the shortfall, and transfer income tax, making up 20.5%, contribute to approximately 63.6% of the total deficit in comparison to the main budget for 2023.
 - In addition, revised estimates by the government in September 2023 show that corporate and transfer taxes combined are responsible for 63.7% of the overall tax revenue shortfall.

- **The significant deficit in tax revenue primarily resulted from a sudden and severe decline in corporate earnings and a slump in the real estate market.**
 - In the second half of 2022, corporate profits began to diminish due to a global economic slowdown and a decrease in semiconductor prices, factors that had earlier contributed to strong corporate tax revenues.

[Figure 2] Financial Performance of Listed Companies

(Unit: year-over-year, %)



Note: 1) The change in operating performance percentages is based on the annual consolidated financial statements of listed corporations with fiscal years ending in December.

2) The change in operating performance percentages for 2023 is derived from the consensus estimates of securities firms as of November 9, 2023.

Source: (Actual Performance) Korea Exchange data, (Projections) FnGuide data, compiled by NABO

- **The real estate market, which influences property tax revenues like transfer income tax, remains sluggish in 2023 due to reduced demand resulting from increasing interest rates.**

[Table 2] Trends in Real Estate Sales Prices and Transaction Volumes

(Unit: year-over-year, %)

		2022				2023		
		Q1	Q2	Q3	Q4	Q1	Q2	Q3
Price index	Housing	7.5	4.8	1.2	-4.7	-8.0	-8.8	-7.6
	Land	4.1	4.0	3.7	2.7	1.8	0.9	0.4
Transaction volume	Housing	-50.6	-44.5	-49.0	-49.9	-13.8	-11.5	1.4
	Land	-34.1	-31.4	-35.3	-37.8	-26.7	-24.7	-18.0

Note: 1) The price indices are derived from the national average composite indices for house sales (base value of 100 in June 2021) and land (base value of 100 in October 2022) at the close of each quarter.

2) Transaction volumes are based on the aggregate number of house and land sales recorded up to the end of each quarter.

Source: Korea Real Estate Board's Real Estate Statistics Information

Forecast for 2024 Tax Revenue and Its Implications

- **NABO forecasts the national revenue for 2024 to be KRW 361.4 trillion, which is KRW 6.0 trillion (or 1.6%) less than the government's proposed budget of KRW 367.4 trillion.**
 - This projection represents a KRW 21.1 trillion increase from the KRW 340.3 trillion anticipated for 2023.

- It's anticipated that the Korean economy will perform better in 2024 compared to 2023, leading to higher tax revenues primarily from taxes on consumption, such as income tax and value-added tax.
- Conversely, corporate tax revenues are expected to decline in 2024, reflecting a downturn in corporate financial results in 2023.

[Table 3] 2024 Tax Revenue Forecasts by NABO

(Unit: KRW trillion, %)

	2023 NABO Projection (A)	2024 Gov't Projection (B)	2024 NABO Projection (C)	Year-on-Year Change (C - A)		Compared with Budget (C - B)	
				Net Change	Percentage	Net Change	Percentage
Total national tax	340.3	367.4	361.4	21.1	6.2	-6.0	-1.6
Income tax	114.2	125.8	124.8	10.7	9.3	-1.0	-0.8
- Transfer income tax	17.4	22.4	21.1	3.8	21.6	-1.3	-5.7
Corporate tax	79.1	77.7	75.0	-4.1	-5.2	-2.7	-3.5
Value-added tax	74.4	81.4	81.1	6.7	9.1	-0.3	-0.4
Other taxes	72.6	82.5	80.5	7.8	10.8	-2.0	-2.4
- Other consumption tax revenue ¹⁾	35.5	44.2	43.4	8.0	22.4	-0.7	-1.7
- Other property tax revenue ²⁾	37.2	38.3	37.0	-0.1	-0.4	-1.3	-3.3

Note: 1) Other consumption taxes encompass individual consumption tax, transportation, energy and environmental taxes, education tax, customs duties, and the liquor tax.

2) Other asset tax revenues include inheritance and gift taxes, securities transaction tax, stamp duty, revenue from previous years, comprehensive real estate holding tax, and special rural development tax.

1. Minor discrepancies in total figures may arise due to rounding off.

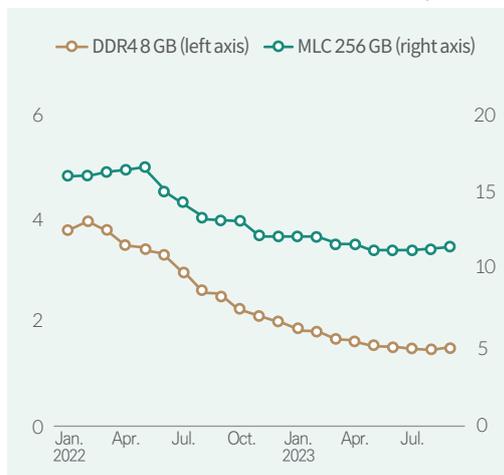
Source: Tax Revenue Outlook for 2024 and the Medium-Term, NABO, October, 2023.

- NABO's projection is KRW 6.0 trillion (1.6%) lower than the government projection of KRW 367.4 trillion due to different views on corporate performance and real estate market recovery expectations.

- NABO anticipates that, due to an ongoing slump in corporate earnings, including a persistent decline in semiconductor prices and unstable raw material imports, corporate tax revenue for the latter half of 2023 will fall short of the government's budgeted figure by KRW 2.7 trillion (a decrease of 3.5%). This is because the second-half performance is unlikely to offset the weaker results seen in the first half of the year.

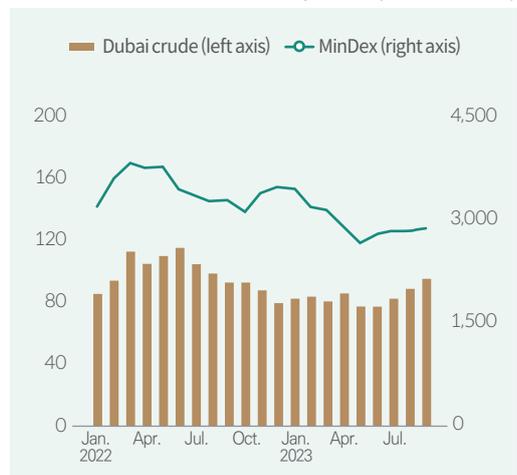
[Figure 3] Trends in Semiconductor Prices

(Unit: USD)



[Figure 4] Crude Oil and Mineral Price Trends

(Unit: USD/bbl, 2016=1000)



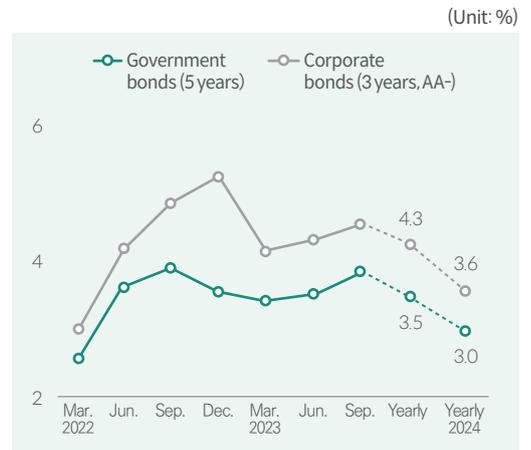
Source: (Semiconductors) DataGuide; (Crude Oil and Mineral Prices) Compiled by NABO using information from the Korea Mineral Resources Information Service (KOMIS)

- The real estate market is anticipated to face challenges in rebounding, both in terms of transaction volumes and property prices, due to limited loan demand stemming from elevated interest rates. In line with this, NABO projects that transfer income tax revenues will fall short of the government’s budgeted figures by KRW 1.3 trillion, a decrease of 5.7%.

[Figure 5] Real Estate Consumer Sentiment Index



[Figure 6] Trends in Interest Rate



Note: 1) The Real Estate Consumer Sentiment Index above 100 signifies a general expectation of market improvement.
 2) Interest rate forecasts are derived from NABO’s Economic Outlook (October 2023).

Source: Real Estate Market Consumer Sentiment Survey, Statistics Korea; Economic and Statistical System (ECOS), Bank of Korea; Tax Revenue Outlook for 2024 and the Medium-Term, NABO, October 2023; Projections by Bank of Korea and NABO

- The economic forecasts made by NABO for indicators like the growth rates in 2023 and 2024, which form the basis for predicting tax revenues, are more modest than the estimates provided by the government.

[Table 4] 2024 Economic Indicator Forecasts: NABO vs. Government

(Unit: %)

	Nominal Growth Rate	Real Growth Rate	Private Consumption Growth	Export Growth (Net)	Import Growth (Net)	Nominal Wage Growth
NABO (A)	4.2	2.0	2.2	7.2	5.7	3.0
Government (B)	4.9	2.4	2.2	8.8	3.0	3.8
Difference (A-B)	-0.7	-0.4	0.0	-1.6	2.7	-0.8

Note: GDP component growth rates are calculated using real prices.
 Source: Economic Outlook for 2024 and the Medium-Term, NABO, October, 2023

▪ In the event of a deteriorating tax revenue situation in 2024 due to negative economic factors, it will be important to explore policy options to address potential revenue shortfalls.

- These downside risks may include a sluggish rebound in manufacturing, ongoing trade disputes between the US and China, fluctuations in global oil prices, and a slowdown in China’s economic growth.
- The government must diligently monitor economic conditions and tax revenue trends. If substantial changes in revenue conditions are noted, it is crucial for the government to actively revise and update the tax revenue forecast in advance of the National Assembly’s deliberation and approval of the revenue budget.