

**SONY**

# **Financial Services Segment Small Meeting**

March 27, 2024

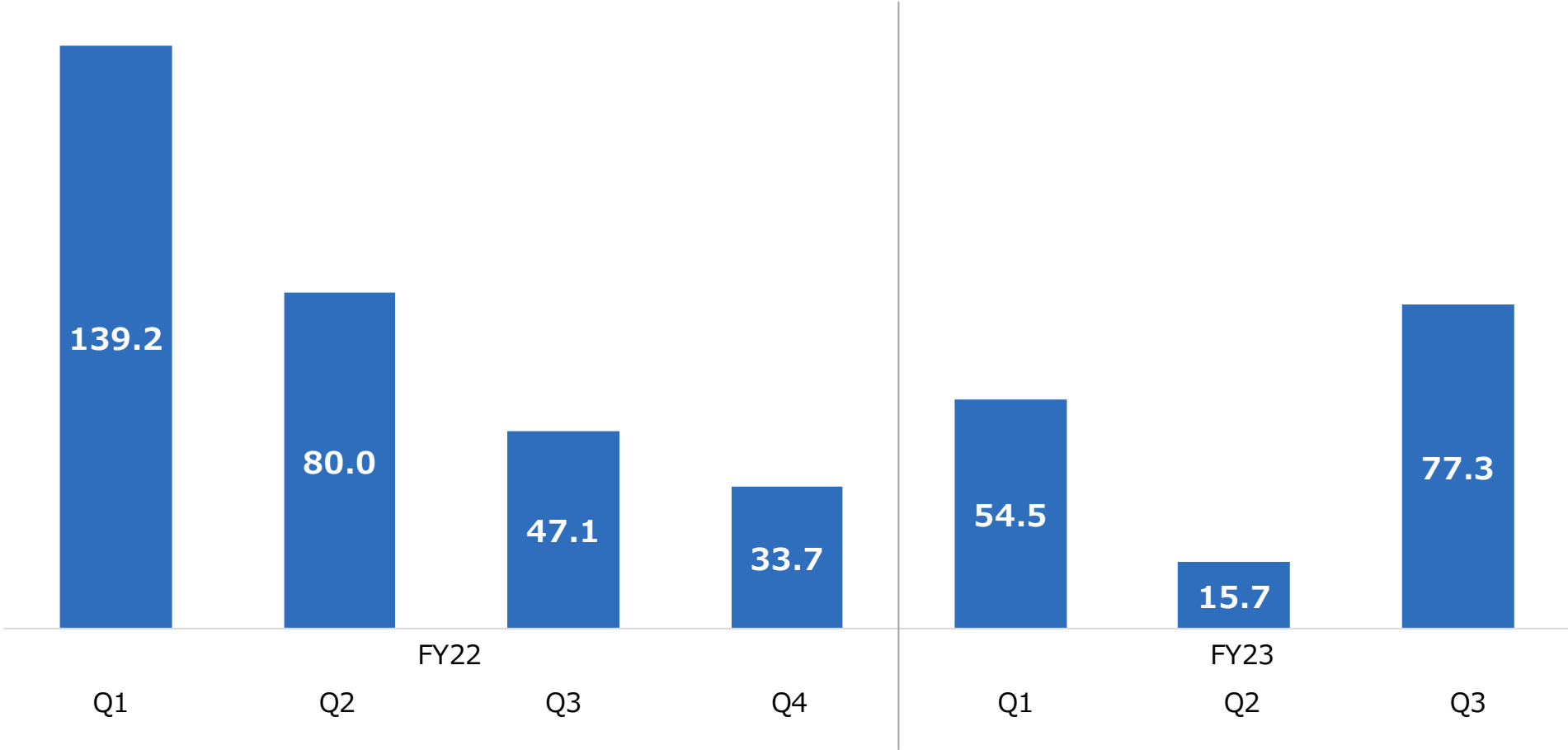
Sony Group Corporation

# Operating Income in Financial Services Segment

- Considerable fluctuations in operating income in the Financial Services segment following the adoption of IFRS 17

## Operating Income in the Financial Services Segment (IFRS 17)

(Bln yen)



# Operating Income for Sony Life

- While large fluctuations were noted in operating income for Sony Life, which comprises the bulk of operating income for the Financial Services segment, insurance service result arising from the life insurance business has been stable.

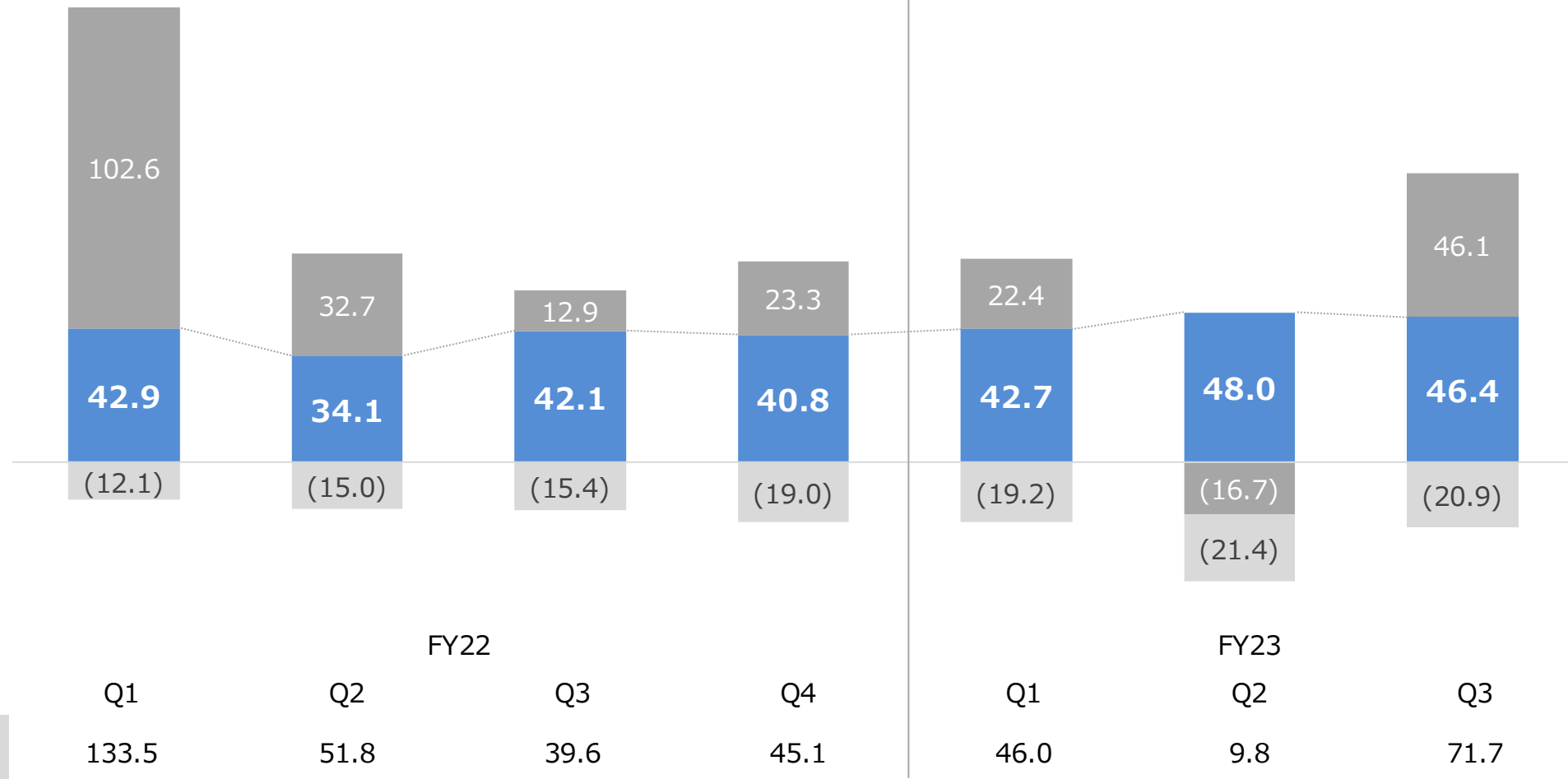
## Breakdown of Operating Income for Sony Life (IFRS 17)

(Bln yen)

■ Insurance service result

■ Investment result

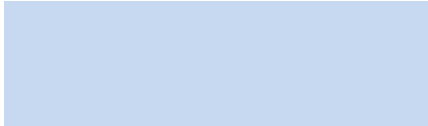
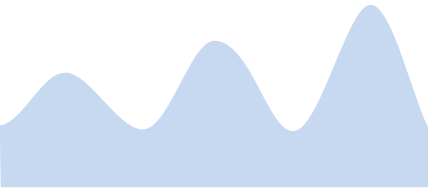
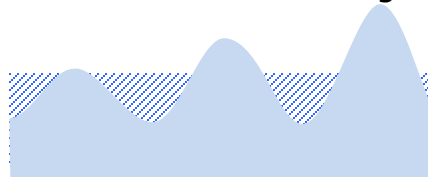
■ Other result



Operating Income  
(Bln yen)

# Distinct Features of Each Insurance Type

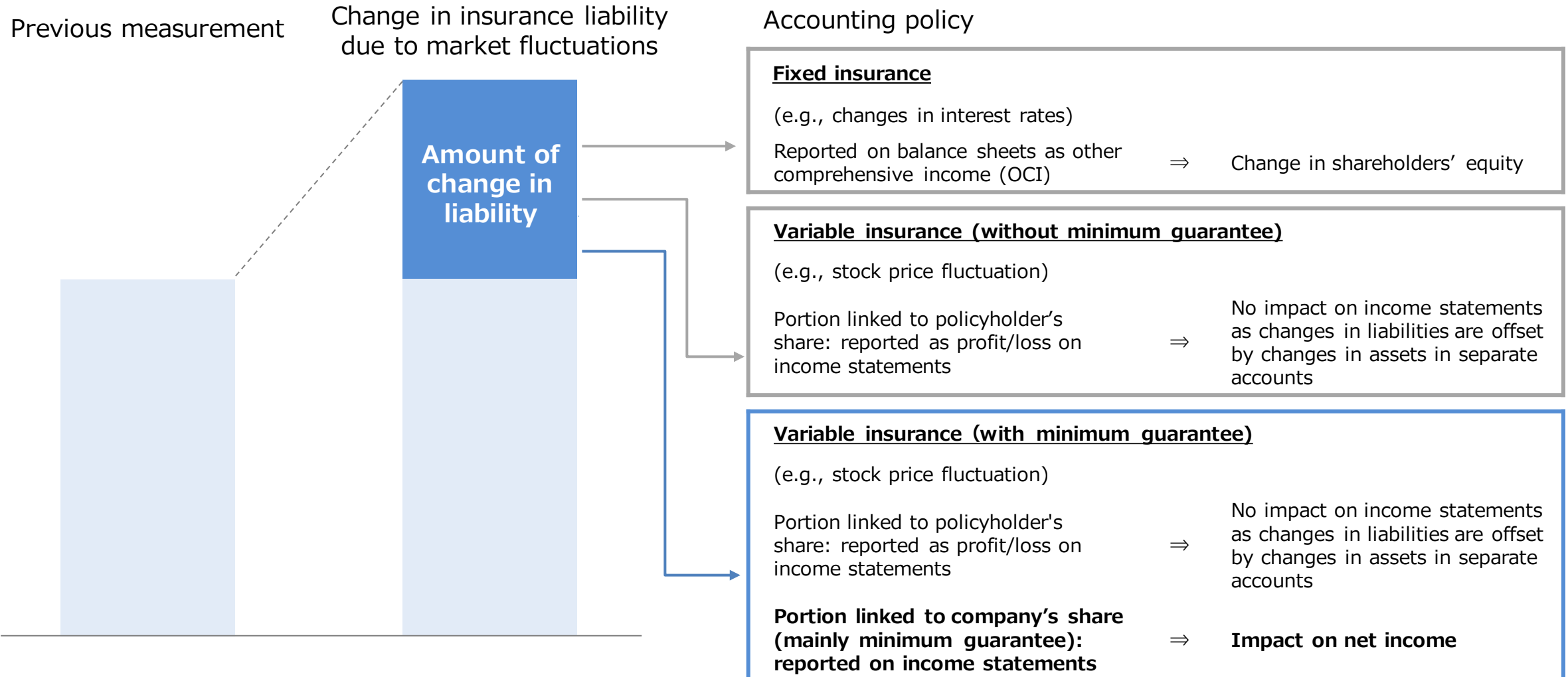
- With variable insurance (with minimum guarantee), the company bears any portion of investment performance falling below the minimum guarantee.

Insurance type	Insurance amount	Applicable asset account	Effect from market fluctuations / Attribution from investment performance
Fixed insurance	<p>No change regardless of investment performance</p> 	General account	<p>Small</p> <p>Effect appears on balance sheets</p>
Variable insurance (without minimum guarantee) <sup>1</sup>	<p>Changes based on investment performance</p> 	Separate account	<p>Large</p> <p>Changes attributed to policyholder</p>
<b>Variable insurance (with minimum guarantee)<sup>2</sup></b>	<p>Changes in response to investment performance but will not fall below certain amount (i.e., the amount of minimum guarantee)</p> <p>Minimum guarantee →</p> 	<p>Separate account</p> <p>However, minimum guarantee is a general account</p>	<p>Large</p> <p>Company bears portion falling below the amount of minimum guarantee</p>

1. Includes variable annuities such as SOVANI
2. In principle, death benefit and serious disability benefit only

# Management under IFRS 17

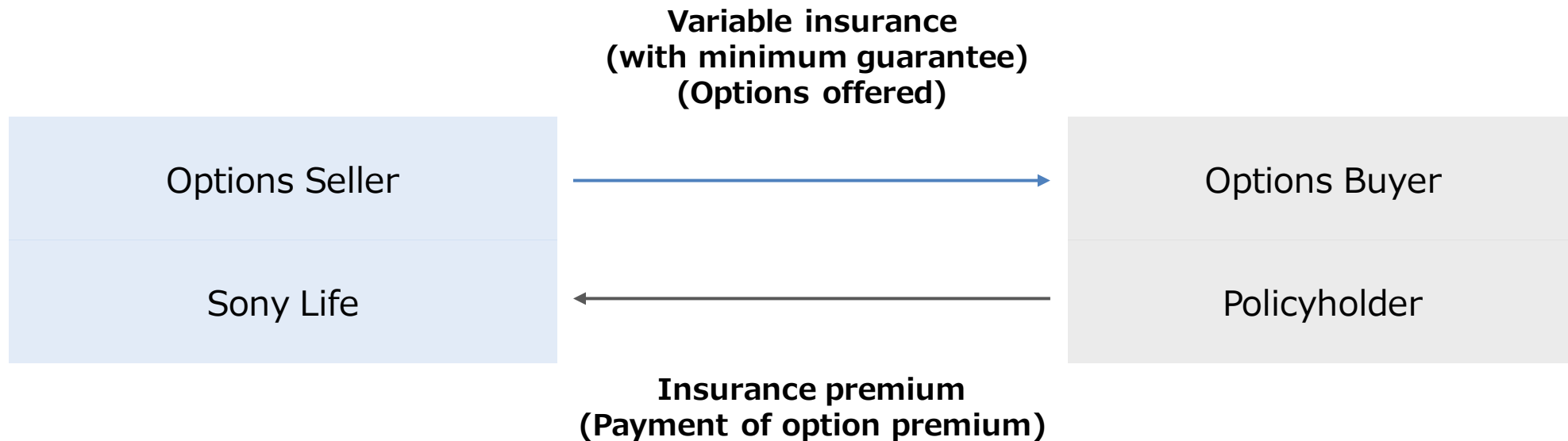
- Under IFRS 17, accounting policies differ based on insurance type.
- For variable insurance (with minimum guarantee), net income is affected since changes in insurance liability pertaining to the minimum guaranteed portion appear as profit/loss on income statements.



# Relationship Akin to Options Trading

- If variable insurance (with minimum guarantee) is viewed as a type of option, the insurance premiums Sony Life collects as option seller are comparable to an options premiums.

## Relationship Akin to Options Trading

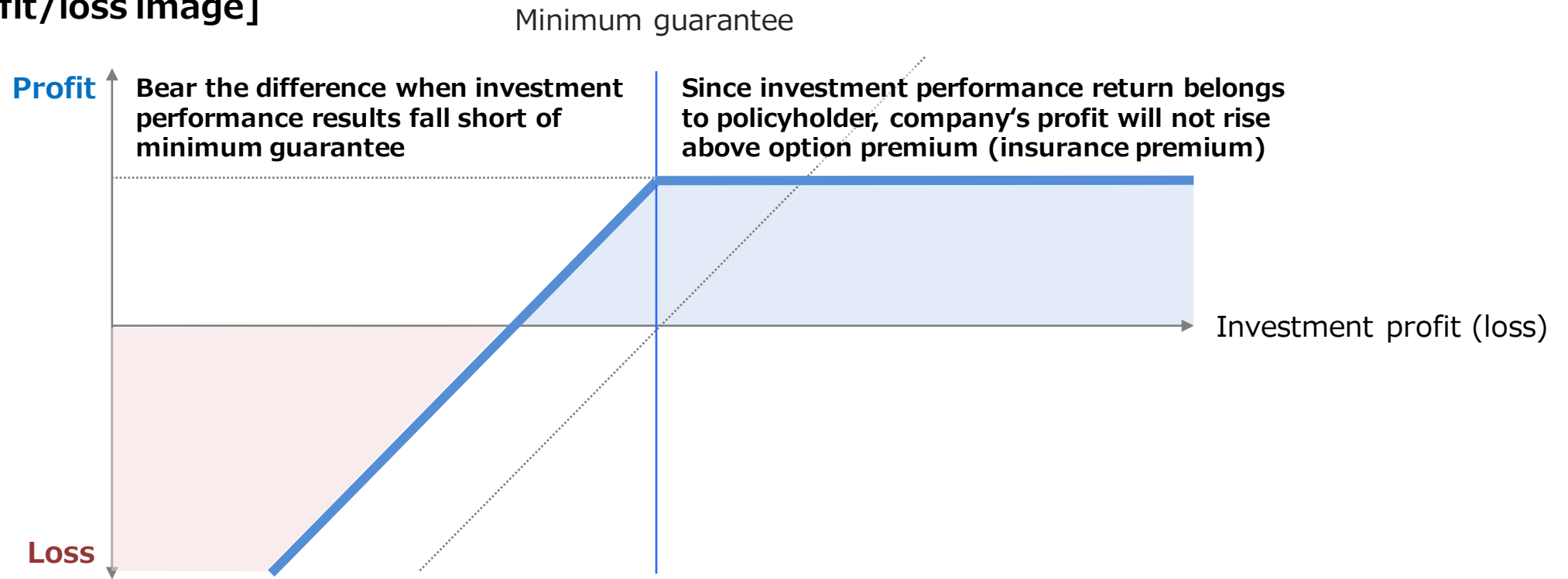


# Option-like Characteristic of Variable Insurance (with Minimum Guarantee)

- Variable insurance (with minimum guarantee) is a type of put option.

## Variable insurance (with minimum guarantee)

[Company profit/loss image]



Use of hedge to mitigate loss

One type of put option

- <Reference> Profit/loss on put option
- Profit: Maxes out at option premium
  - Loss: Payment of exercise price, less price at maturity

# Key Factors in Market Fluctuation

- Among market fluctuation factors, implied volatility is one such factor that is difficult to hedge.

## Key Market Fluctuation Factors and Corresponding Hedge Status

### Hedge Applicable<sup>1</sup>

Fluctuation factors	Item risk	Hedge procedure
Interest rates	Interest decline	Fair value option (FVO) applied Bonds with selected bonds
Exchange rates	Yen appreciation	US treasury bond repurchase agreements, FX contracts
Stocks	Stock price drop	Stock index futures transactions

### Hedge Not Applicable

Fluctuation factors	Item risk	Nature and response
Implied volatility	Rise in implied volatility for interest rates, stock prices, exchange rates	<ul style="list-style-type: none"> <li>• Currently not hedged due to difficulty in applying hedge procedures</li> <li>• Because effect of implied volatility appears as valuation gain/loss arising from a type of option, risk decreases with approaching maturity</li> </ul>
Inflation	Rise in inflation rate <sup>2</sup>	<ul style="list-style-type: none"> <li>• Currently not hedged due to difficulty in applying hedge procedures</li> </ul>

1. The portion attributable to the company as the minimum guarantee pertaining to variable insurance is covered
2. Rise in inflation rate negatively affects the income through an increase in anticipated future business expenses

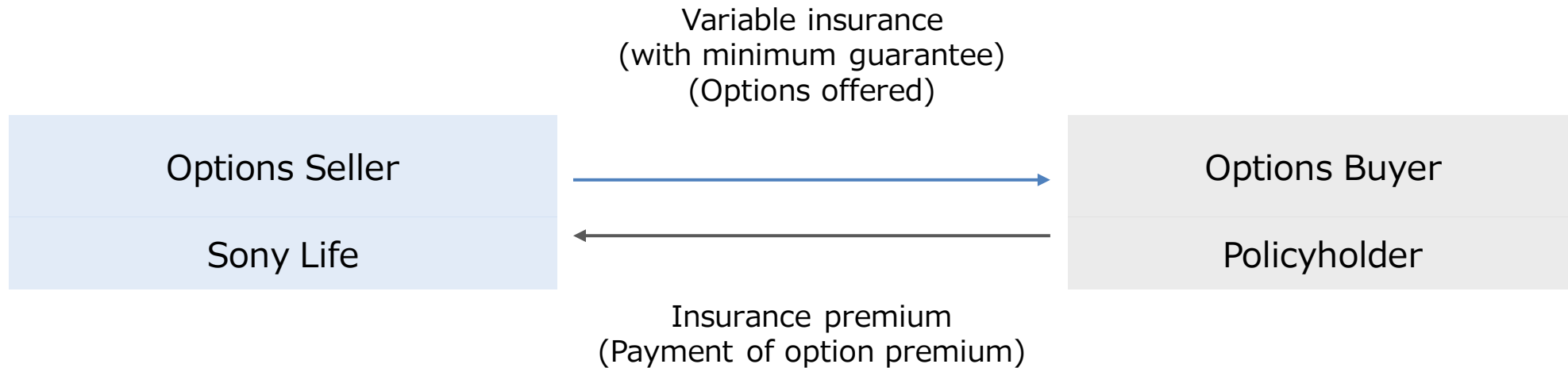


See, Appendix: Rationale for why Implied Volatility Hedging is Difficult



# Impact of Fluctuations on Implied Volatility

- In contrast to an increase in option price, when implied volatility increases, the insurance premium (equivalent to the option premium) remains fixed.



## Effect When Implied Volatility Changes

Implied volatility	Option premium (insurance premium)	Option value for policyholder	
Rise ↑	Fixed →	Rise ↑	Worsening profitability
Fall ↓	Fixed →	Fall ↓	

# Current Issues and Countermeasures

- Policies in force include substantial variable insurance (with minimum guarantee); market fluctuations could thus significantly impact on business results.
- We have been proceeding with revisions of product strategy, and considering more advanced hedge procedures and utilization of reinsurance.

## Background

In the past, whole-life insurance including variable insurance (with minimum guarantee) has been largely sold (approx. 40% of new policies in FY12 ((Annualized premium basis))

## Management issues

Substantial portion of policy amount in force consists of variable insurance (with minimum guarantee)  
--> Market fluctuations have a significant impact on business results

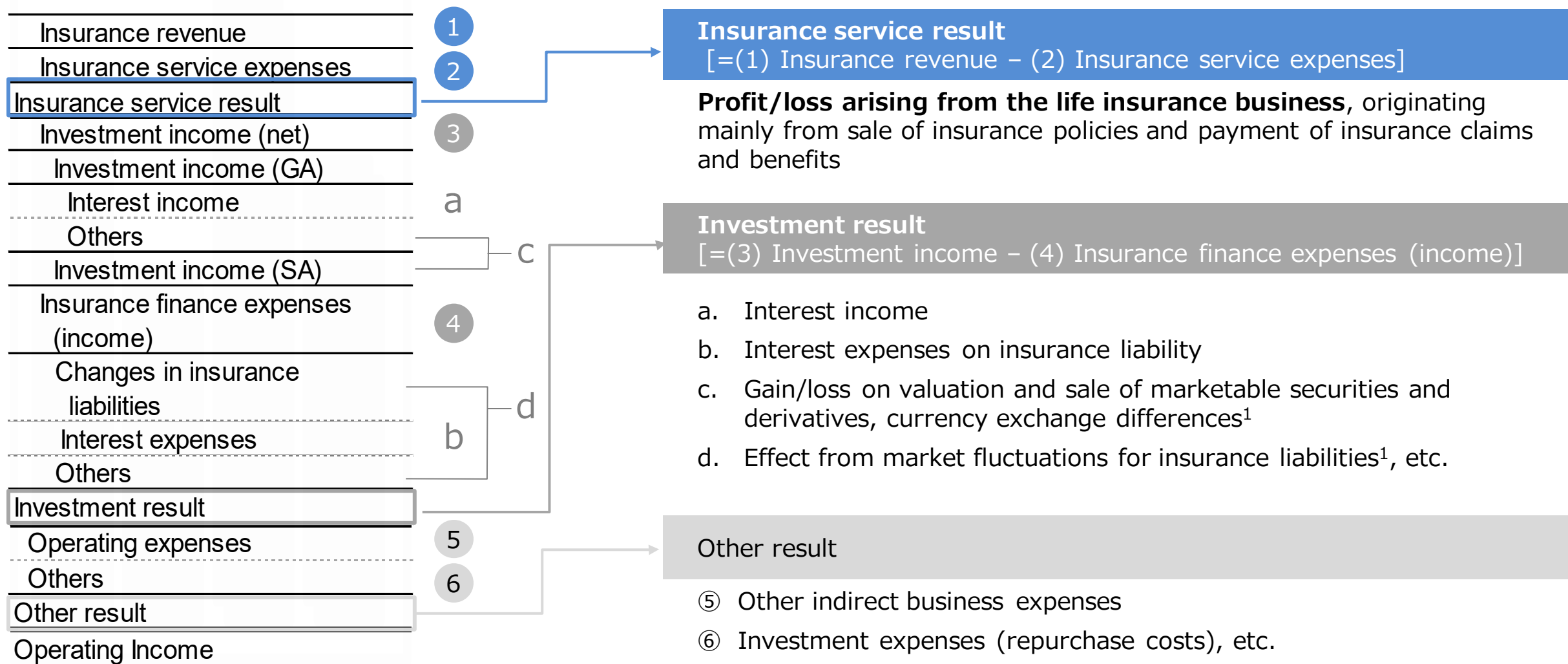
## Measures

Revise product strategy --> Currently, whole-life insurance has declined to roughly 10% of new policies in FY22 (Annualized premium basis)  
Consider more advanced hedging instruments  
Consider utilization of reinsurance

# Appendix

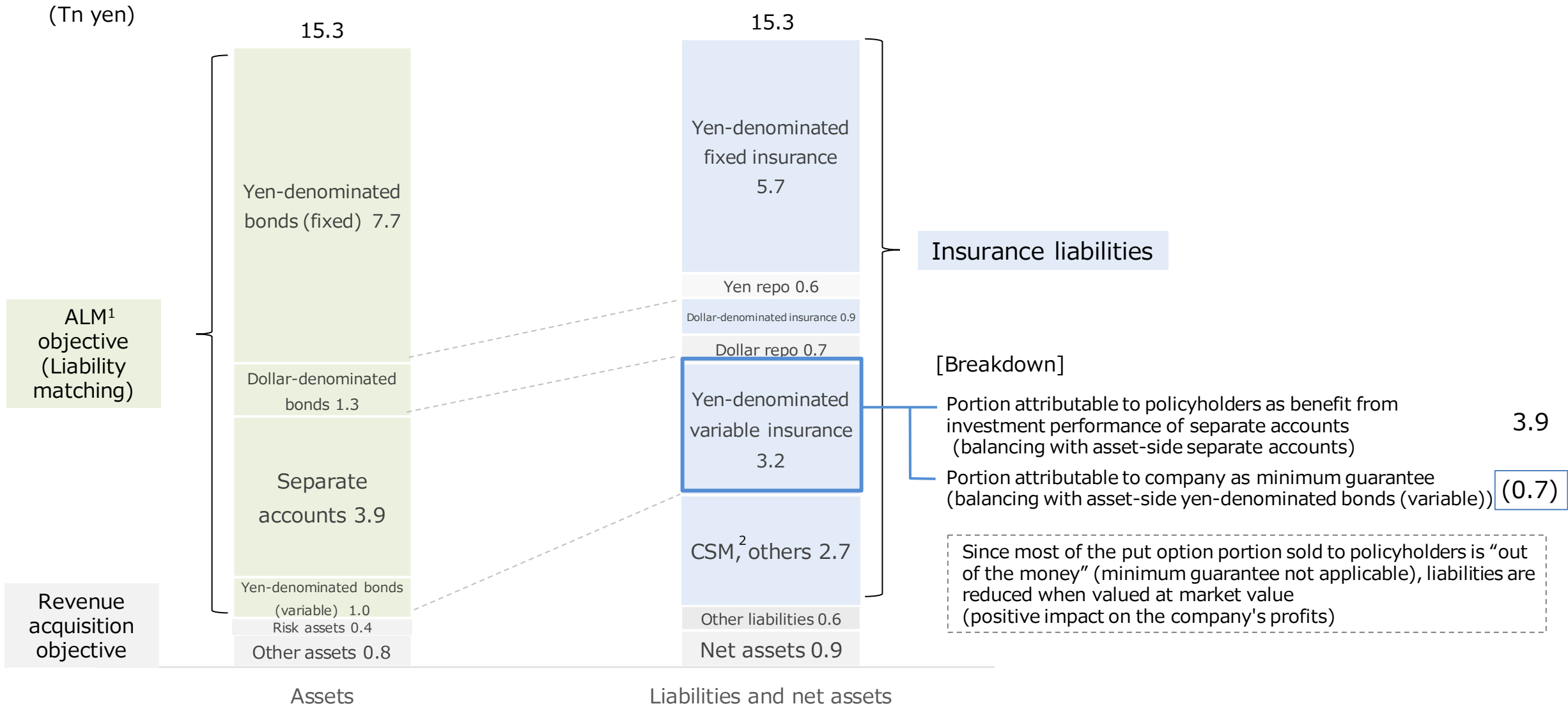
# Breakdown of Operating Income

## Items for Disclosure in Supplemental Materials



1. Includes effect of exchange rate fluctuations on foreign currency-denominated insurance

# Balance Sheet Image for IFRS 17 (as of Dec. 2023)<sup>1</sup>



1. Asset Liability Management  
2. Contractual service margin

# Rationale for Why Implied Volatility Hedging is Difficult

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## 1. Difficulty of quantifying effects of implied volatility

- Insurance payout timing is equivalent to a put option coming to maturity, which is affected by the occurrence of death or other triggering events, as well as policyholder behaviors such as surrender
- The assets of the policyholder are allocated and switched to eight funds that combine stock prices, foreign exchange rates, and interest rates. Further, the status of reserves (source of insurance payouts) also differs from each policyholder (probability of meeting the minimum guarantee requirement also differs from each policyholder)

## 2. Difficulty of maintaining hedge procedures

There is no ultra-long-term options traded in the market that match to the length of the insurance policy (liquidity is extremely low)

# Glossary (1)

Term	Explanation	Related area
Insurance liability	The book value of an insurance contract. The sum total of the “contractual service margin” (CSM) and “fulfillment cash flow.”	Balance sheets (Liabilities)
Contractual service margin (CSM)	Unearned profit recognized in conjunction with provision of “insurance contract services.” Amortized through the insurance period, the amount amortized each term is recognized as “insurance revenue.”	Statements of Income Balance Sheets (Liabilities)
Fulfillment cash flow	Money for fulfilling the insurance contract. The sum of the current value of future cash flow and “risk adjustment.” “Insurance service expense (reversal amount)” for the fiscal year under review projected (anticipated) at the end of the previous fiscal year reported as “insurance revenue.”	Statements of Income Balance Sheets (Liabilities)
Risk adjustment	Refers to a counter value to money required in line with insurance contract fulfillment, or to cope with uncertainty during a given time period. Any reportable item triggered by non-financial risk. Expense (reversal amount) for the fiscal year under review projected (anticipated) at the end of the previous fiscal year reported as “insurance revenue.”	Statements of Income
Financial asset OCI	Primarily, a line item for reporting valuation changes (unrealized income or loss) due to fluctuations in interest rates for bonds held. If the “fair value option” (FVO) is used, it is not reported in this line item. “OCI” is an abbreviation of “other comprehensive income.”	Balance Sheets (Net Assets)
Insurance liability OCI	Primarily, a line item reported when the decision is made not to recognize valuation changes (unrealized profit/loss) for “fulfillment cash flow” in PL (not recognized as net income or loss) due to fluctuations in interest rates.	Balance Sheets (Net Assets)
Fair value options (FVO)	An available accounting policy when elimination of, or significant reduction in, accounting mismatches is possible, with price changes in bonds, etc. recognized as net profit. For variable insurance, the fair value option (FVO) is applied and an accounting hedge created with respect to certain applicable bonds in order to mitigate changes in net income or loss due to interest rate fluctuations.	Statements of Income Balance Sheets (Net Assets)

# Glossary (2)

Term	Explanation	Related area
Insurance revenue	<p>Revenue reported in response to reductions in insurance liabilities from service provision during period under review.</p> <p>Primarily, this is comprised of “CSM” amortization, “insurance service expenses” anticipated as “fulfillment cash flow,” and expenses for the period under review anticipated as “risk adjustment.”</p> <p>Reported after deduction of any cash surrender value or other deposits.</p>	Statements of Income
Insurance service expenses	<p>Composed mainly of insurance payouts and benefits, and “direct maintenance expenses.” Reported after deduction of any cash surrender value or other deposits.</p> <p>Reporting under the revenue portion of expenses (reversal amount) for the period under review projected (anticipated) at the end of the previous fiscal year as “fulfillment cash flow,” and reporting under the expense portion of any actual expenses incurred.</p> <p>“Direct new contract expense” is not reported in full in the term incurred; instead, deferral treatment is applied, with the amount amortized reported annually.</p>	Statements of Income
Insurance finance expenses (income)	<p>Changes in insurance liabilities accompanying fluctuations in interest rates, exchange rates, stock prices and the inflation rate are reported as insurance finance expenses/income.</p> <p>The following accounting policies are selected.</p> <ul style="list-style-type: none"> <li>• Changes in valuation (unrealized income or loss) from interest rate fluctuations, which account for the bulk of changes in all fixed-rate products and reinsurance contracts, are reported as OCI; all other items (mainly accrued interest, exchange rate differences) are reported under net income or loss.</li> <li>• Changes in risk adjustment are not reported in (disaggregated into) insurance finance expenses (income).</li> </ul>	Statements of Income
Direct business expenses	<p>Expenses that fall within the scope of business expenses that should be included in “fulfillment cash flow” and “insurance service expenses.”</p> <p>This classification is made after determining whether the expense is directly related to contract fulfillment. Comprised of direct new policy expense (formally known as insurance acquisition cash flow) and direct maintenance expenses.</p>	Statements of Income
Indirect business expenses	<p>Expenses outside the scope of direct business expenses. Representative example here would be costs for the development of certain products and for education/training.</p>	Statements of Income
Insurance contract service	<p>Insurance contract service refers to the provision of protection against insured events and service to generate investment returns (investment return service) for insurance policyholders.</p>	Glossary “CSM”