On Financing Retirement, Health, and Long-term Care in Japan

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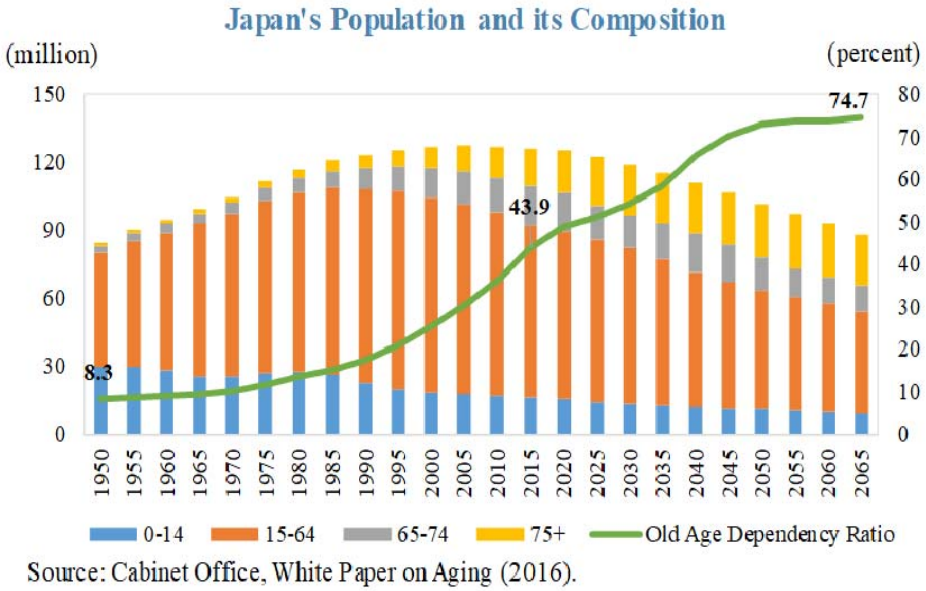
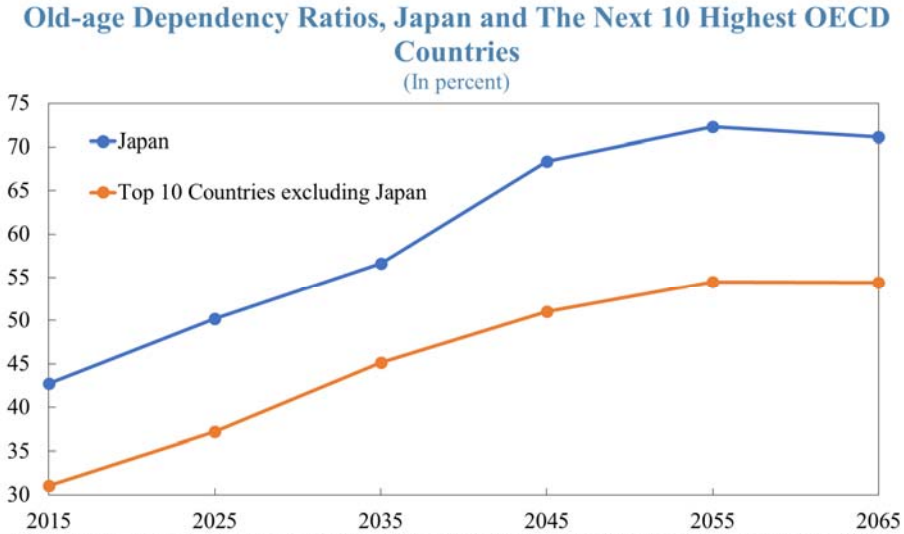
BACKGROUND: DEMOGRAPHIC HEADWINDS

- Japan's population has been declining since 2009.
- Old age dependency ratio will increase to 75 percent by 2060, more than 10 percentage points higher than the average of next ten-highest OECD countries.



Source: Cabinet Office, White Paper on Aging (2016).

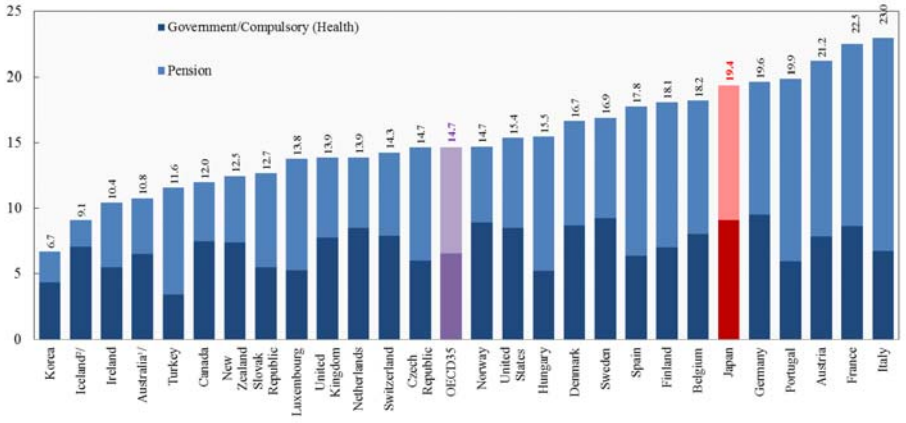


Source: United Nations, Department of Economic and Social Affairs, Population Division, *World Population Prospects: The 2017 Revision.*

BACKGROUND: GENEROUS AGE-RELATED OUTLAYS

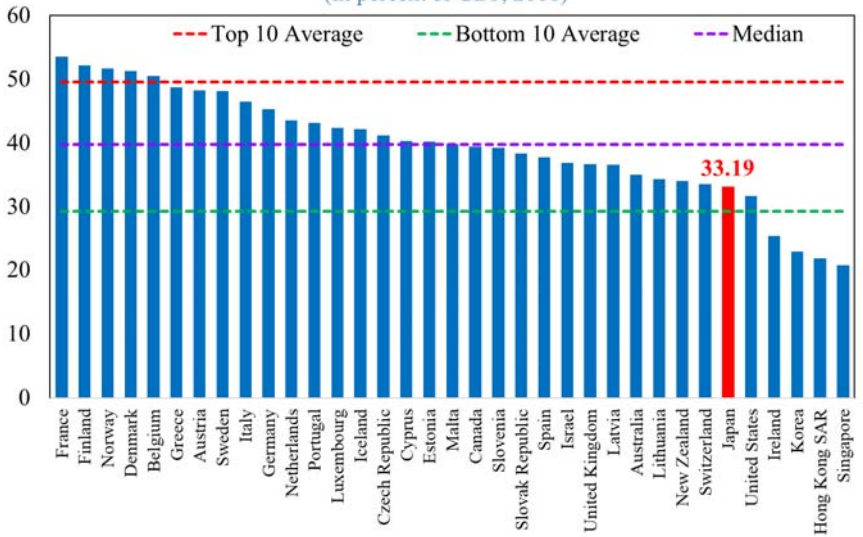
- Japan's age-related government outlays are already among the highest in the OECD
- While tax revenues are well-below the OECD average.

Old-age-related Spending, Japan and OECD Countries
(In percent of GDP)



Source: OECD Health Statistics 2017, WHO Global Health Expenditure Database.
1/ Australian expenditure estimates exclude all expenditure for residential aged care facilities in welfare (social) services.
2/ Includes investments.

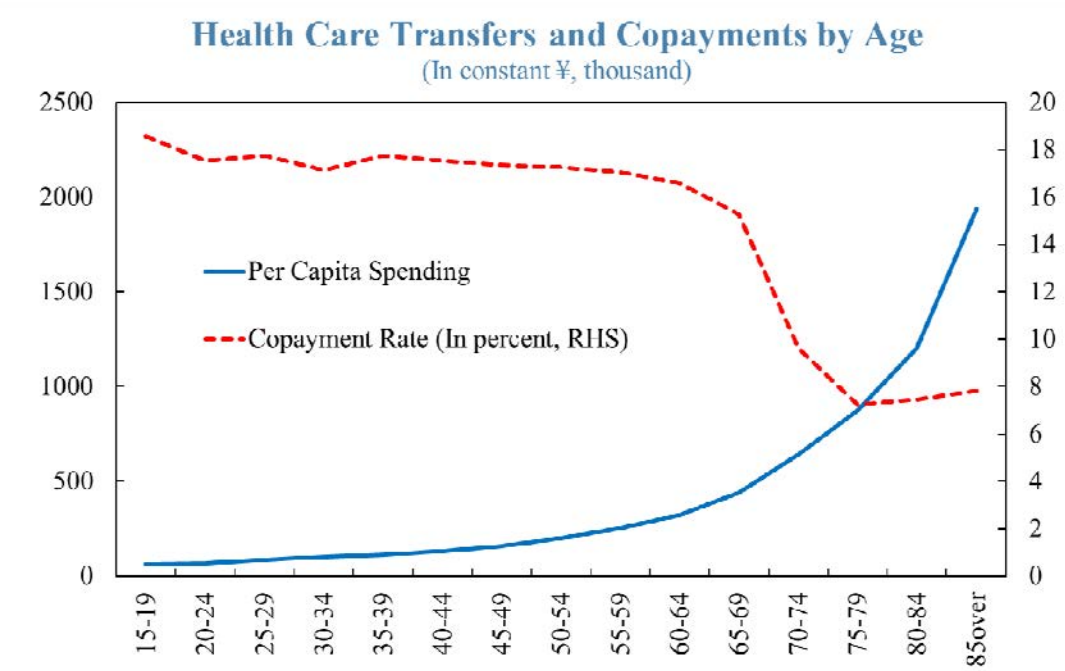
OECD Countries: Tax Revenues to GDP
(In percent of GDP, 2018)



Source: OECD, Tax Statistics.

BACKGROUND: PARTICULAR CONCERN ON HEALTH SYSTEM

- Japan's demographic trends will put additional pressures on fiscal sustainability
  - ✓ Japan has introduced a pension reform with the aim of controlling aggregate spending.
  - ✓ Particular concern is financing the cost of universal health and long-term care system.



Source: Ministry of Health, Labor, and Welfare; IMF staff estimates.

Per capita spending on health rises exponentially with age, while copayment rates are low for the elderly.

Baby boomer generation will reach 75 years old by 2025.

OBJECTIVES

- To address the following questions...
  - ✓ How much would the age-related outlays increase under the current policies?
  - ✓ What would be the impact of alternative financing options (e.g. VAT, taxes on labor income, debt financing) on the economy and welfare.

APPROACH

- We employ a general equilibrium overlapping generations model (drawn from McGrattan and Prescott(2017). Quantitative Economics) tailored for Japan.
  - ✓ Model matches future payments implied by the Japanese pension and health system (as time and age dependent transfers), as well as official demographic projections.
  - ✓ **Households** vary by generation and skill level, and face different levels of taxation and transfers.
    - Households receive age-dependent transfers—pension benefits as well as health and long-term care.
    - Households are subject to labor income tax and consumption taxes.

APPROACH

- **Government** budget constraint:
  Next period's debt = This period's debt + Interest payment
  + Public consumption + Transfers – Tax

  Financing instruments include time-varying progressive labor income taxation (including social security contributions), consumption tax, corporate income tax, and government debt.

  Interest rate on government debt:
  To match the model with Japan's low interest rate environment, we followed the assumption in Braun and Joines (2015) and Kitao (2015), and assumed an exogenous interest rate on government debt.
  Private capital interest rates and the proportion of private capital as a share of total financial assets will be determined endogenously.

- Attention is paid to the distortive impact on growth, intergenerational equity, and the fiscal and economic cost of delaying sufficient adjustment.

DESIGN OF THE QUANTITATIVE ANALYSIS

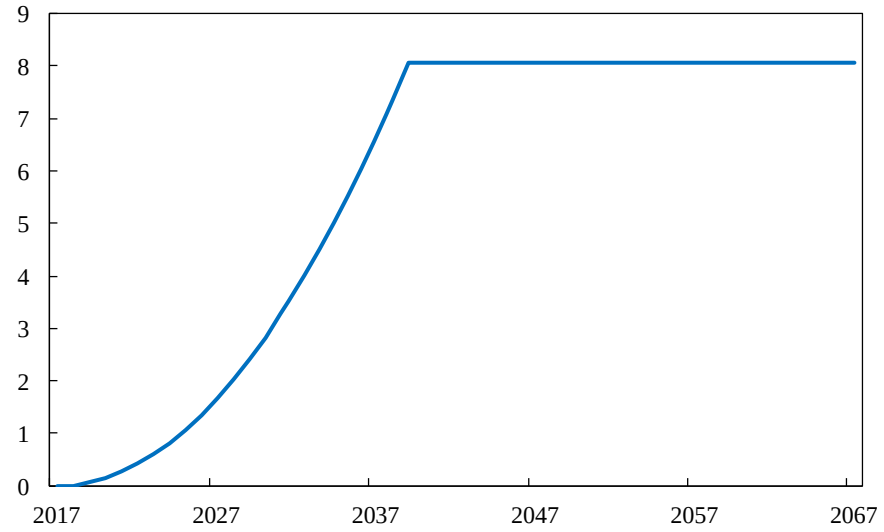
- Consider four financing options:
  - ✓ Debt stabilized at its current (2015) level, **consumption taxes fully finance** additional pension, health and long term care costs ("Baseline" scenario).
  - ✓ Debt stabilized at its current level, and **social security contributions are increased to cover higher health costs.** ("SSC" scenario)
  - ✓ **Debt stabilized after 2040** through gradual increases in the consumption taxes ("Debt" scenario).
  - ✓ Debt stabilized at its current level, and **the health and long-term care copayment rates are increased for the elderly**.

In all cases, consumption taxes adjust to make the government budget constraint hold (given other taxes and the debt path).

IMPLIED DEBT AND LABOR INCOME TAXES

Financing Aging Costs Through Increases in Contributions[1/]

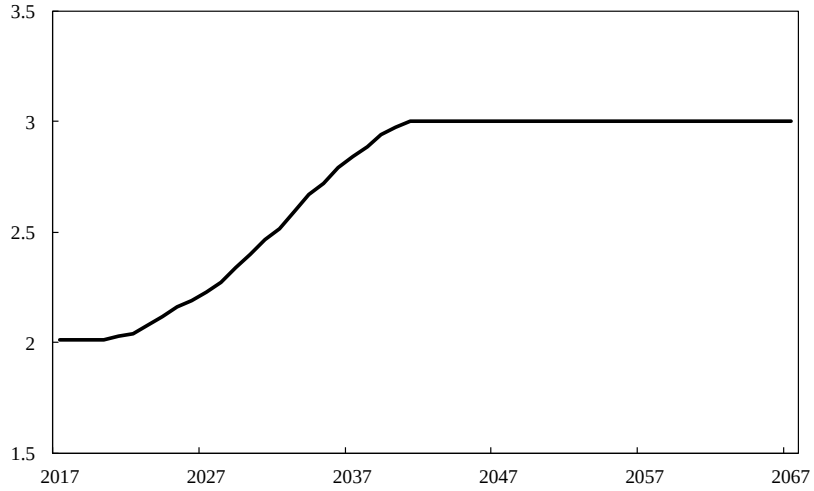
Change in Personal Income Tax (For All Income Brackets) Change in Contribution Scenario (In percent)



Source: IMF staff simulations.
1/ Note that increased contributions cover higher health and long-term costs.

Debt Financing Scenario

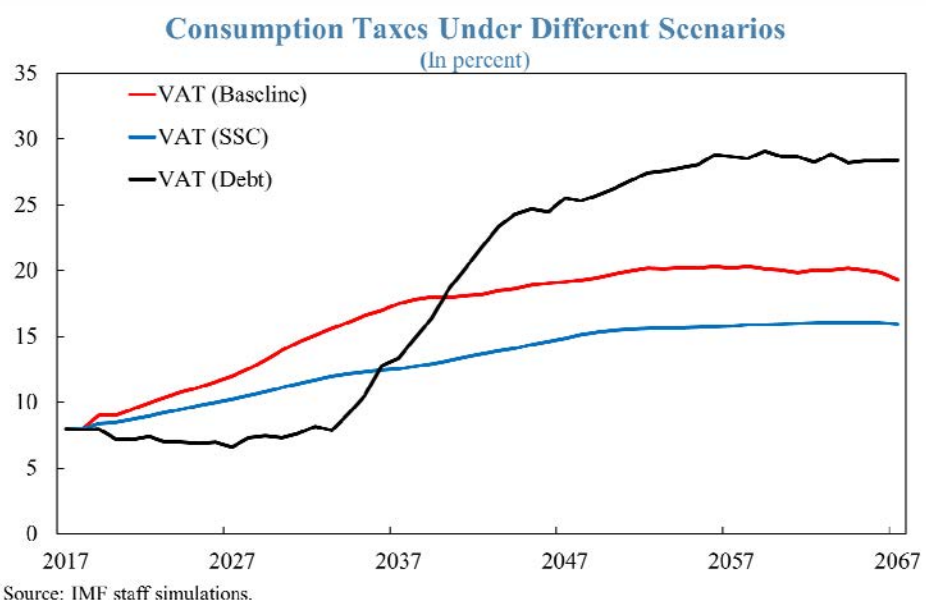
Debt-to-GDP Ratio



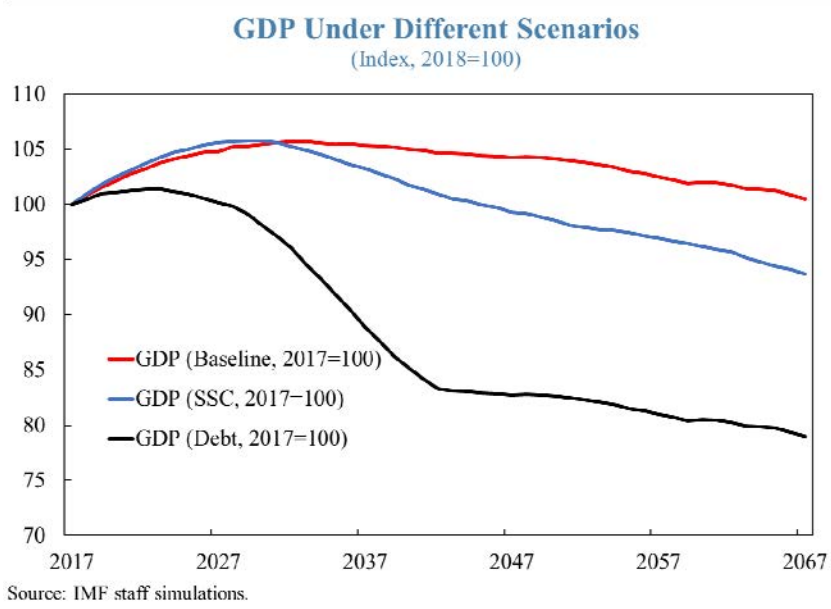
Source: IMF staff simulations.

BASELINE: FINANCING THROUGH CONSUMPTION TAXES

- Baseline scenario requires gradual increases in the consumption tax rates
- … and delivers a better long-run macroeconomic performance.



Source: IMF staff simulations.

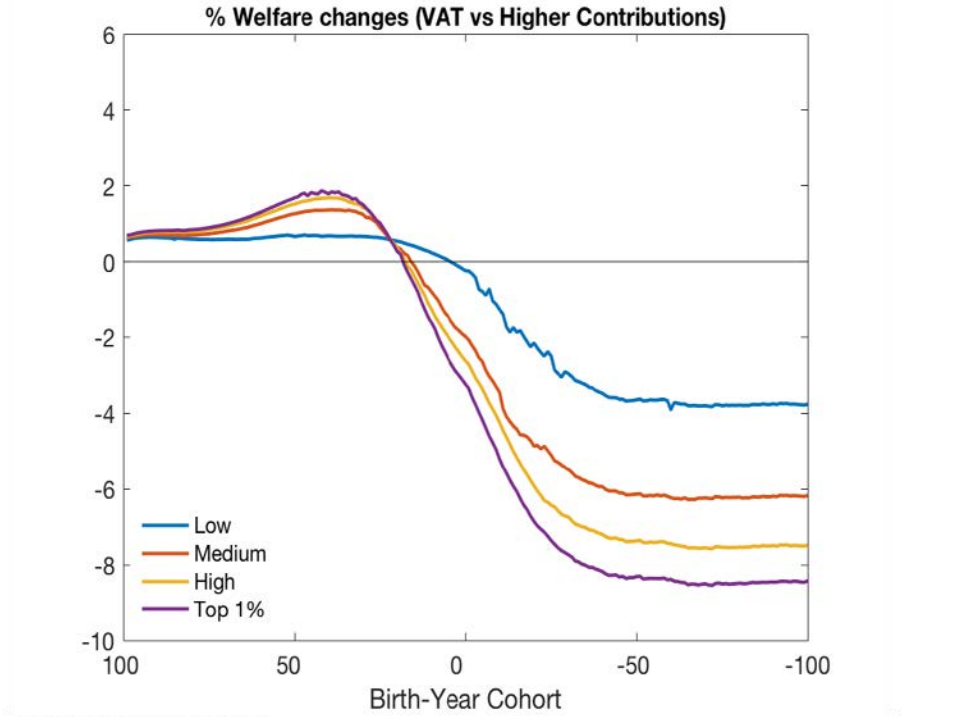


Source: IMF staff simulations.

INCREASING SOCIAL SECURITY CONTRIBUTIONS

- Increasing social security contributions is more distortive in the long-run.
- In terms of welfare, retirees and older workers gain since they care mostly about consumption. On the other hand, young workers and future generations suffer losses.

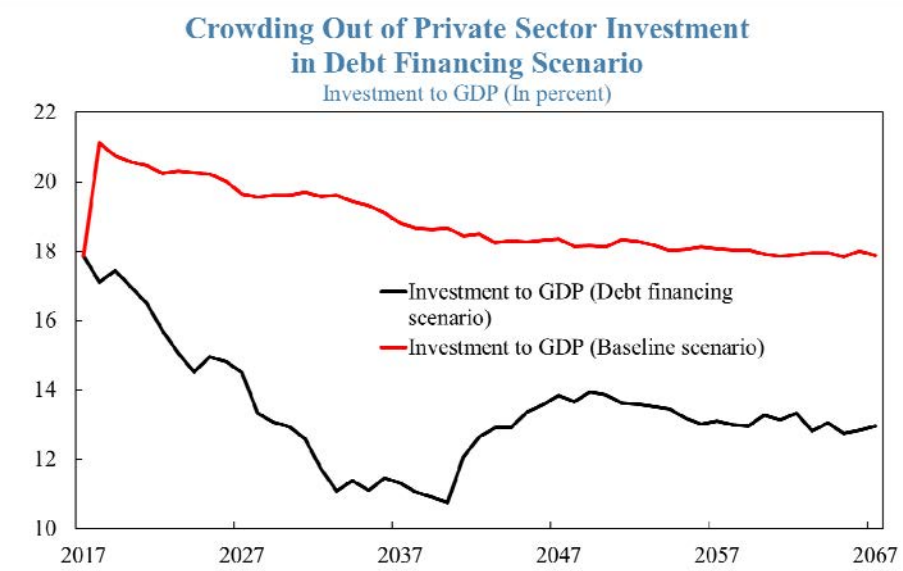
Welfare Effects of Financing Aging Costs Through Increases in Contributions (Relative to Baseline Scenario)



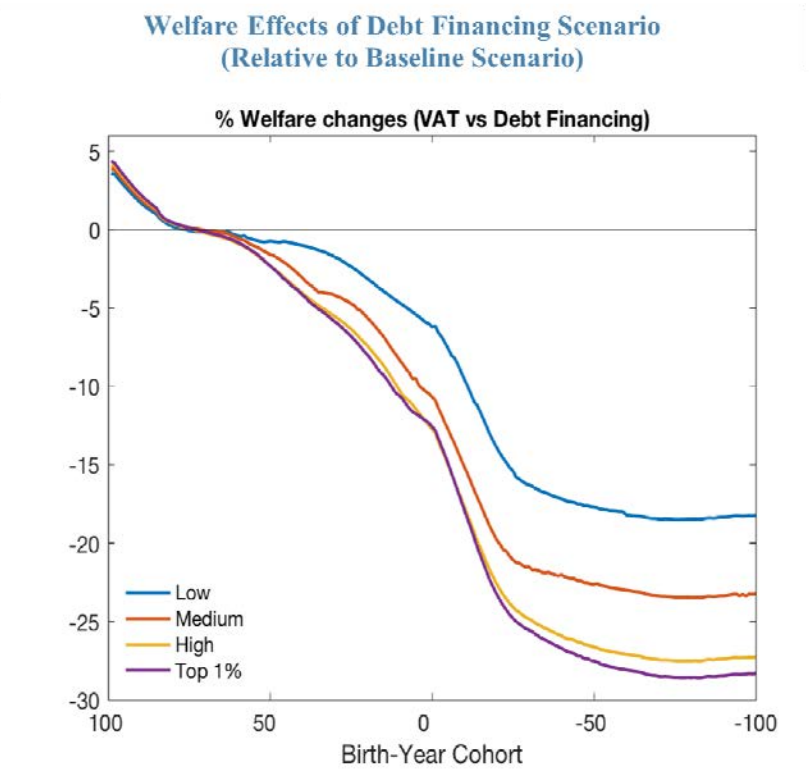
Source: IMF staff simulations.

DEBT FINANCING

- Debt financing results in large crowding out of private sector investment.
- Debt financing is costly for all except elderly retirees.



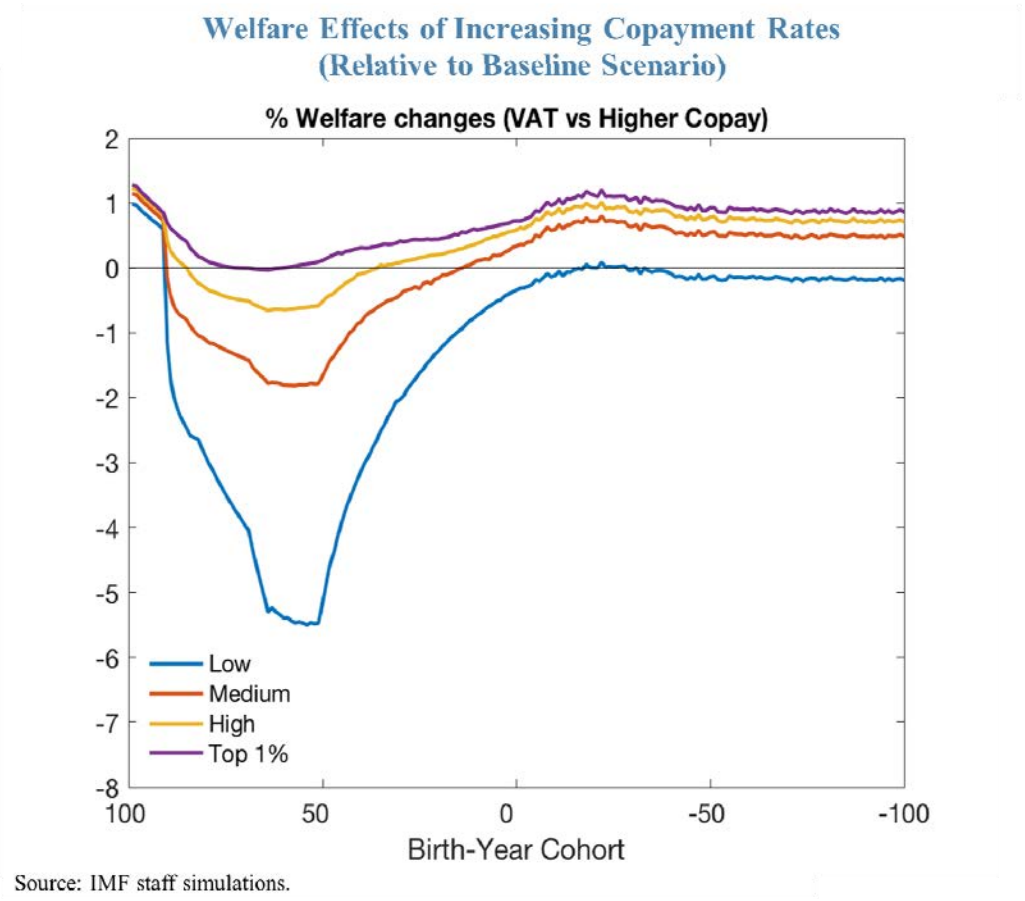
Source: IMF staff simulations.



Source: IMF staff simulations.

INCREASING COPAYMENT RATES

- A uniform increase in health and long-term care copayment rates for the elderly could help mitigate tax increases for future generations
- …but at the risk of regressive consequences.



Source: IMF staff simulations.

COMPLEMENTARY REFORM OPTIONS (1)

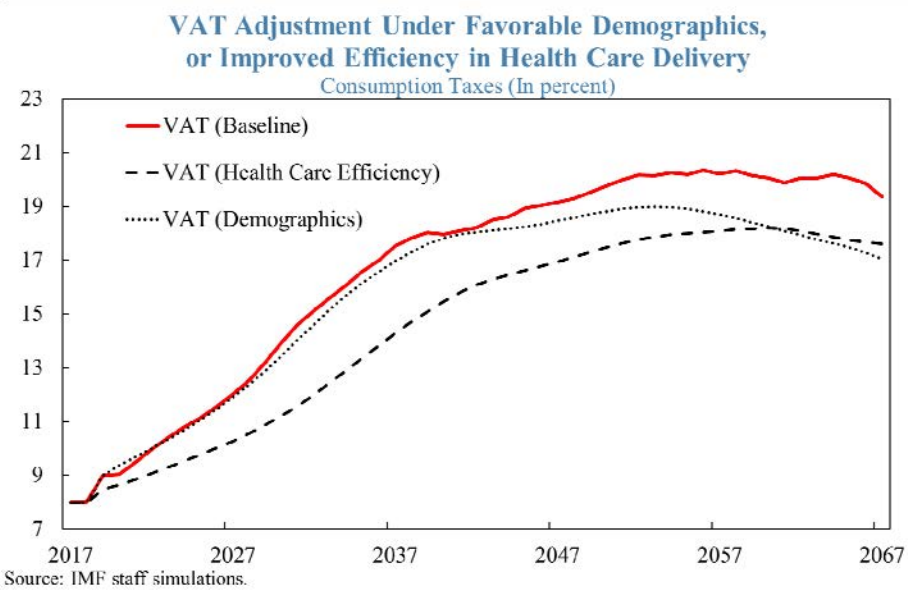
- Consider complementary reform options:
  - ✓ Higher fertility rate:

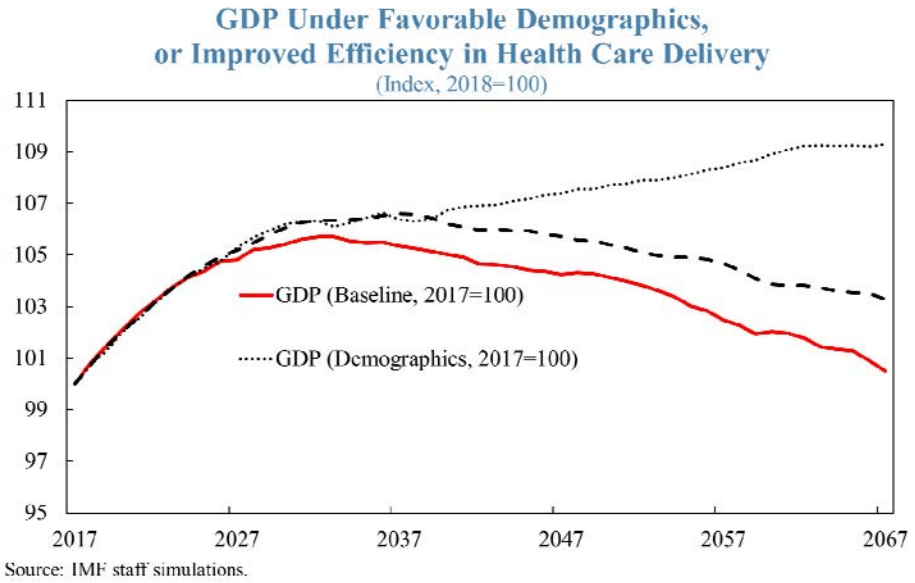
    A favorable demographic scenario of a high fertility rate and medium mortality
  - ✓ Improving efficiency of health services

    Reducing per capita spending by 10 percent through improving efficiency
  - ✓ Improving economy wide productivity

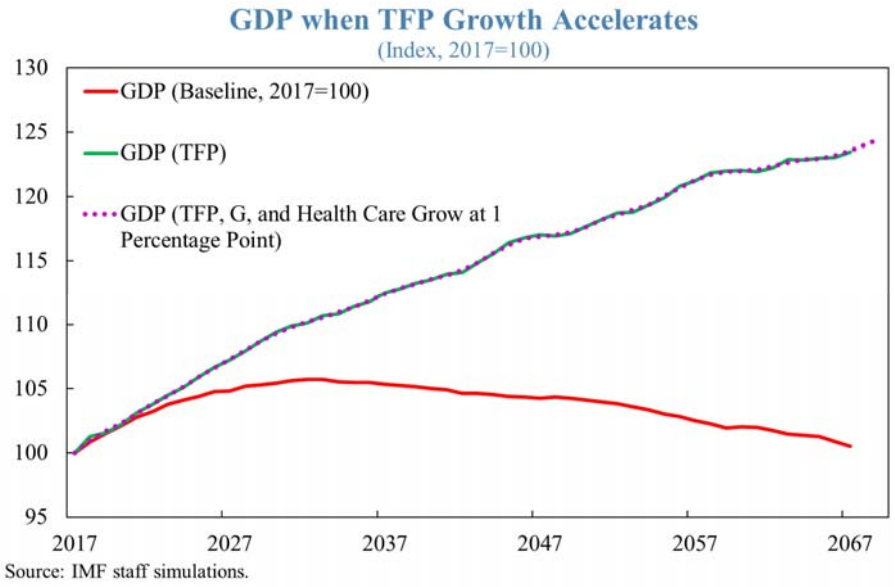
    A permanent acceleration of TFP growth

COMPLEMENTARY REFORM OPTIONS (2)

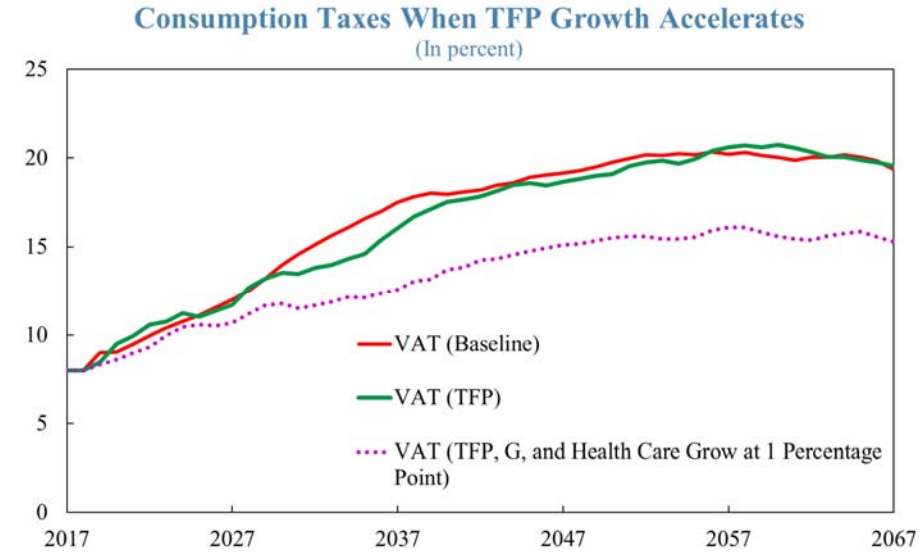




COMPLEMENTARY REFORM OPTIONS (3)



Source: IMF staff simulations.



Source: IMF staff simulations.

CONCLUSIONS

- A challenging economic policy issue facing Japan and many other nations is the financing of age-related government spending as the population ages.
- Among the options considered, a continuous and gradual adjustment of consumption taxes delivers a better macroeconomic performance and higher welfare for most individuals, by having a relatively smaller adverse effect on long-run GDP and welfare.
- There is certainly an intergenerational tension across policies, as increasing social security contributions or delaying adjustment(debt financing) benefit current retirees and old workers at the expense of all future generations.