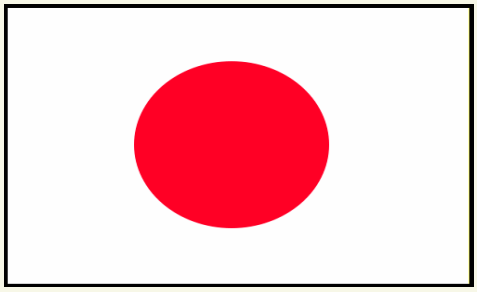
Japan's Challenges to Monetary and Fiscal Policy
Analytical Considerations



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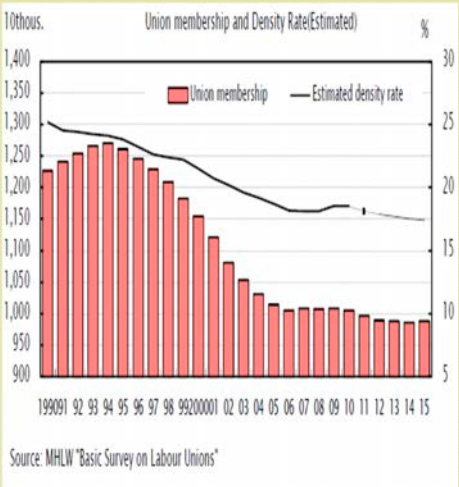
Outline

- Structural labor market features have helped push the economy in the liquidity trap
- Demographics impact productivity growth, inflation and the natural interest rate
- Japan is becoming less Ricardian and more cash constrained
- Economic policy uncertainty has been relatively high
- What does this mean for fiscal and monetary policy management and structural reform priorities?

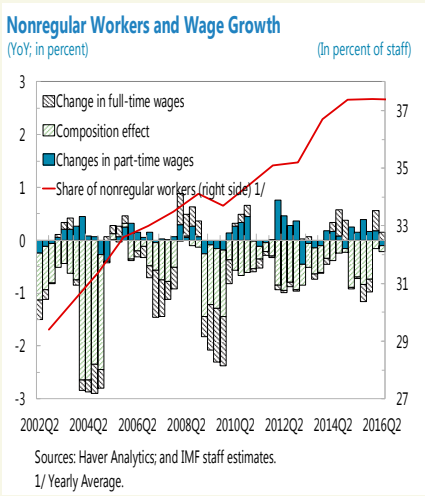
- Structural labor market features have helped push the economy in the liquidity trap

Labor unions have lost much of their bargaining power

Union membership has declined

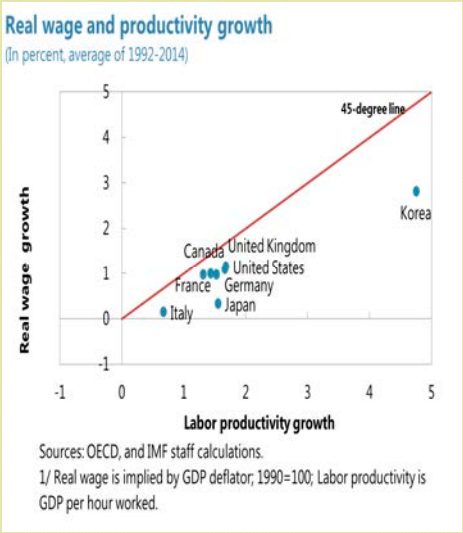


New hiring has taken place in lower-paying non-regular jobs



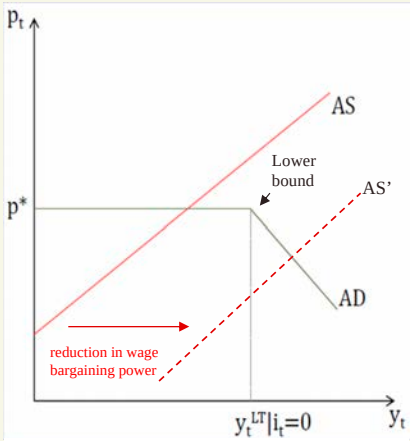
Wage bargaining power shifts the aggregate supply curve

Falling labor share and a deleveraging shock …



Sources: OECD, and IMF staff calculations.
1/ Real wage is implied by GDP deflator; 1990=100; Labor productivity is GDP per hour worked.

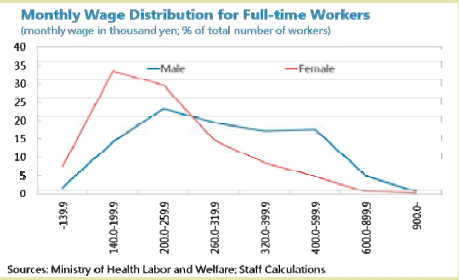
Help explain how an economy gets stuck in a liquidity trap



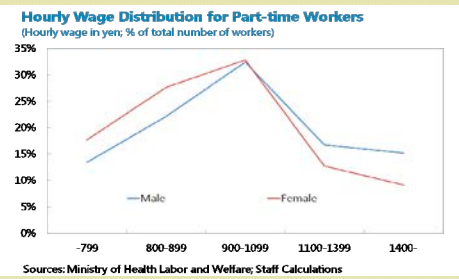
p=prices; y=output
y^{LT}=threshold beyond which economy enters liquidity trap

Minimum wage increases will produce some upward wage pressure

Substantial numbers of workers earn less than 1000 yen/hour



Sources: Ministry of Health Labor and Welfare; Staff Calculations



Sources: Ministry of Health Labor and Welfare; Staff Calculations

Econometric results suggest a significant pass-through

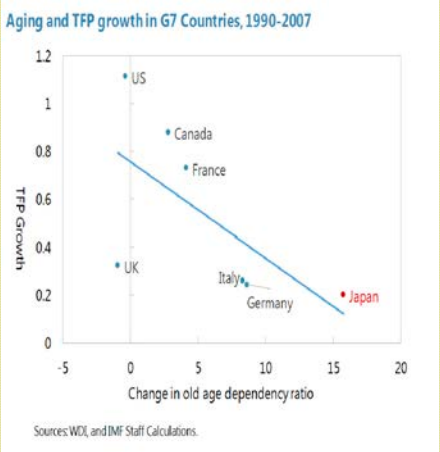
Table 1: Wage determinants in Japan (Prefectural Panel), Regression results using Instrumental Variables. (hourly), in logs

Period: 1997-2014	Dep. Variable: Real wages (total)	Dep. Variable: Real wages (Women)	Dep. Variable: Real wages (Men)
Minimum Wage	0.48** (1.92)	0.42** (2.28)	0.66** (2.42)
CPI Inflation	-0.008** (-2.36)	-0.001 (-0.31)	0.01** (02.31)
Prefectural GDP	0.0003 *** (4.33)	0.0004*** (6.20)	0.0004*** (5.09)
Share of part-time workers	-0.09 (-0.99)	0.12** (1.65)	-0.1 (-0.85)
Unemployment Rate	-0.009* (-1.75)	0.002 (0.52)	0.01* (1.69)
Share of employment in manufacturing	0.002*** (3.52)	0.001* (1.78)	0.003*** (3.21)
Average female age	-0.03*** (-6.22)	-0.02*** (-5.00)	---
Average male age	0.04*** (5.28)	---	0.03*** (4.27)
Constant	-2.41 (-1.30)	-1.93 (-1.36)	-6.23** (-3.14)
R-Squared	0.63	0.70	0.53

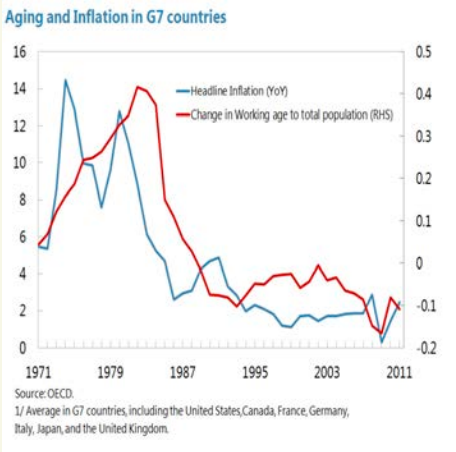
- Demographics impact productivity growth, inflation and the natural interest rate

Aging may dampen growth and inflation

Rising old age dependency is associated with weak TFP growth



There is a parallel between changes in working age population and inflation in G7



Japan's demographics lower productivity and tend to be deflationary

Higher old age dependency reduces productivity growth

	Total factor productivity
Old age Dependency (70+)	-0.745* (0.442)
Population density	0.272 (0.369)
Size of service sector	-2.252*** (0.241)
Fixed effects	Yes
First differences	Yes
Observations	799
R squared	0.42

Robust standard errors in parenthesis
*** p<0.01; ** p<0.05; * p<0.10

Higher old age dependency and declining population lower inflation

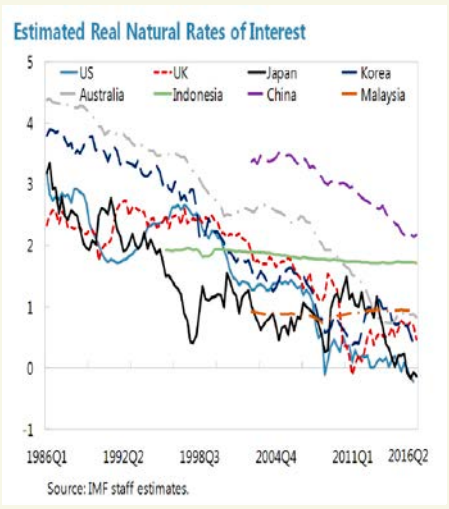
	Overall inflation
Old age Dependency (change)	-0.110*** (0.0401)
Population growth	0.304** (0.143)
Regional output gap	0.0506*** (0.00793)
Lagged inflation Rate	0.233*** (0.0353)
Observations	752

Robust standard errors in parenthesis
*** p<0.01; ** p<0.05; * p<0.10

Natural interest rates seem to be declining

Japan's natural rate of interest has recently become negative

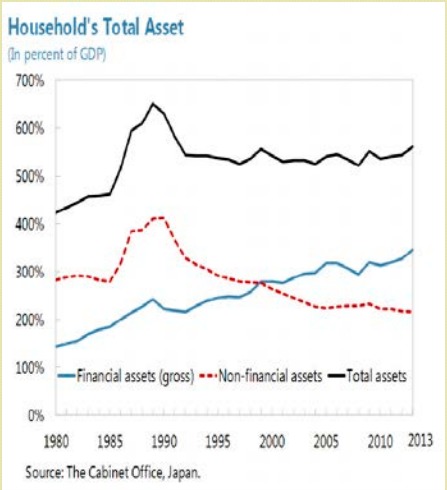
But the decline appears to be a global phenomenon



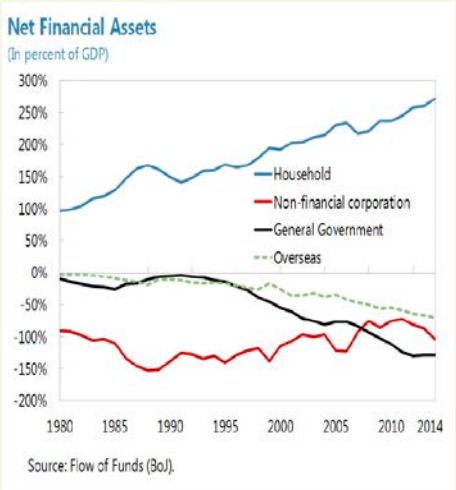
- Japan is becoming less Ricardian and more cash constrained

Ricardo may have left town

Households total assets to GDP are relatively stable

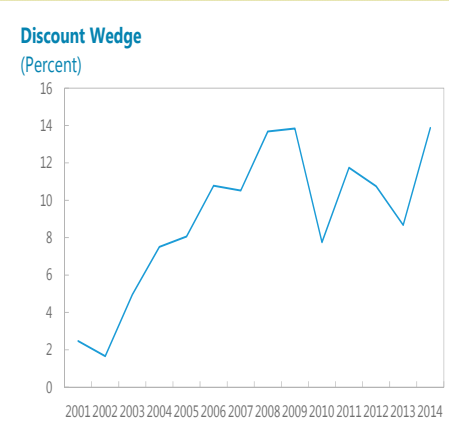


Despite the steady increase in net government debt

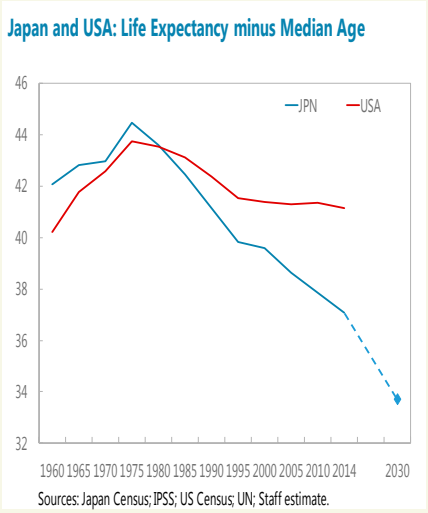


Households are becoming more myopic

Households' time horizon appears to be shrinking

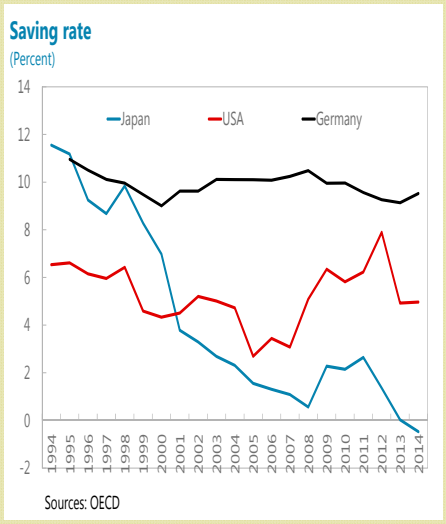


As remaining life expectancy is set to decline

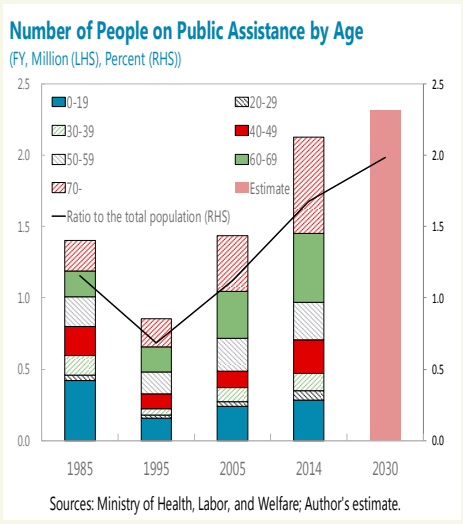


Households are facing tighter purse strings

Households savings are turning negative



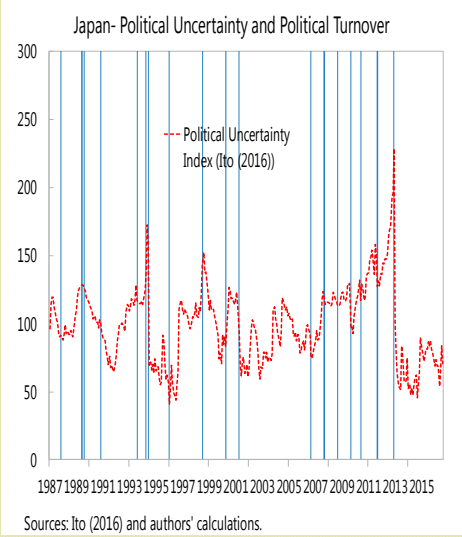
And the share of people on public assistance is rising



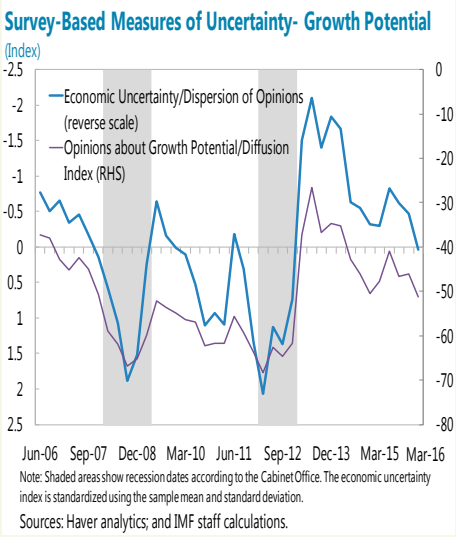
- Economic policy uncertainty has been relatively high

Uncertainty: politics or economics?

Political uncertainty has declined post Abe

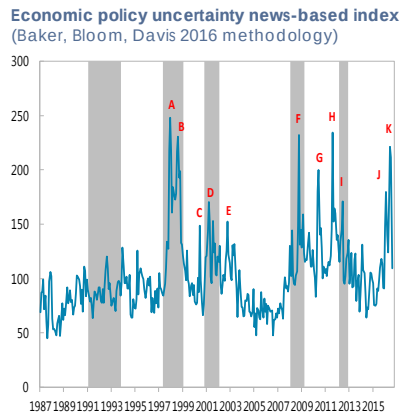


But favorable opinions of the economy are fading



Economic policy uncertainty matters

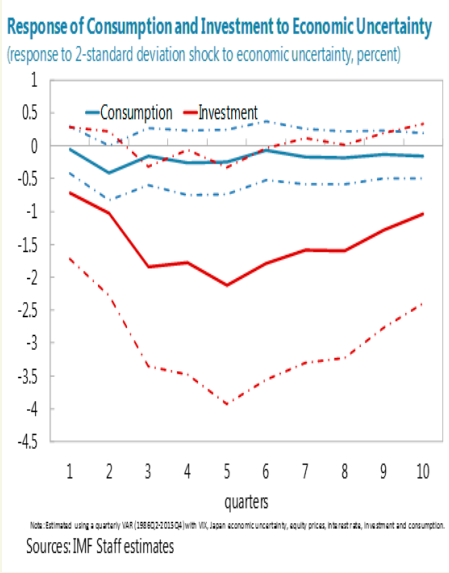
Economic policy uncertainty has surged



Sources: Authors' calculations.

A: Asian Financial Crisis, **B**: LDP's defeat at Upper House election causing the "Twisted Diet"; Russian crisis, **C**: Large corporate bankruptcies, **D**: Introduction of Quantitative Easing, **E**: Introduction of Financial Revitalization Program, **F:** Lehman shock, **G**: DPJ's defeat at Upper House election causing the "Twisted Diet"; European debt crisis, **H**: U.S. Senate conflict, **I**: Conflict within DPJ on tax and social security reform, **J**: Introduction of negative interest rates, **K**: Consumption tax hike delay and Brexit.

With adverse effects on investment and consumption



Sources: IMF Staff estimates

❑What does this mean for fiscal and monetary policy management and structural reform priorities?

Taking account of the analytical findings:

	Monetary Policy	Fiscal Policy	Structural and Income Policies
Labor market rigidities	Continue efforts to lift Inflation expectations; Support incomes policies and wage increases through additional easing;	Support overall wage increases: public sector wage increases; administrative price increases; larger tax incentives for private sector wage increases (penalties if needed). Remove spousal deduction; Support nursing care; Support labor contract reform;	Continue to increase minimum wages; Deploy "comply or explain" mechanism for private sector wage increases; Reform contracts: introduce "intermediate contracts" aimed at: reducing the gap between regular and non-regular workers; phasing out life-time contracts and improving working conditions and bar-gaining power for non-regular workers.
Rising dependency, Declining population	Increase magnitude of policy response; Take into account lower power of credit and asset price channels;	Focus on productivity enhancing fiscal policies;	Step up growth enhancing reforms
Waning Ricardianism, Increased cash constraints	Take into account lower power of interest rate/ credit channel	Need less fiscal action for a given stabilization objective; Target cash constraint people to increase effectiveness; Consolidate very gradually and early;	Promote access to financial markets
Economic policy uncertainty	Improve communication Clarify medium-term framework	Avoid stop-go policies; Pre-announce medium-term fiscal consolidation measures; Strengthen fiscal institutions;	Define reforms up-front with clear implementation times

Thank You!

References

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