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Canada's Inflation Target Renewal

Joint Central Bank Conference
Day-Ahead Meeting

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Deputy Governor

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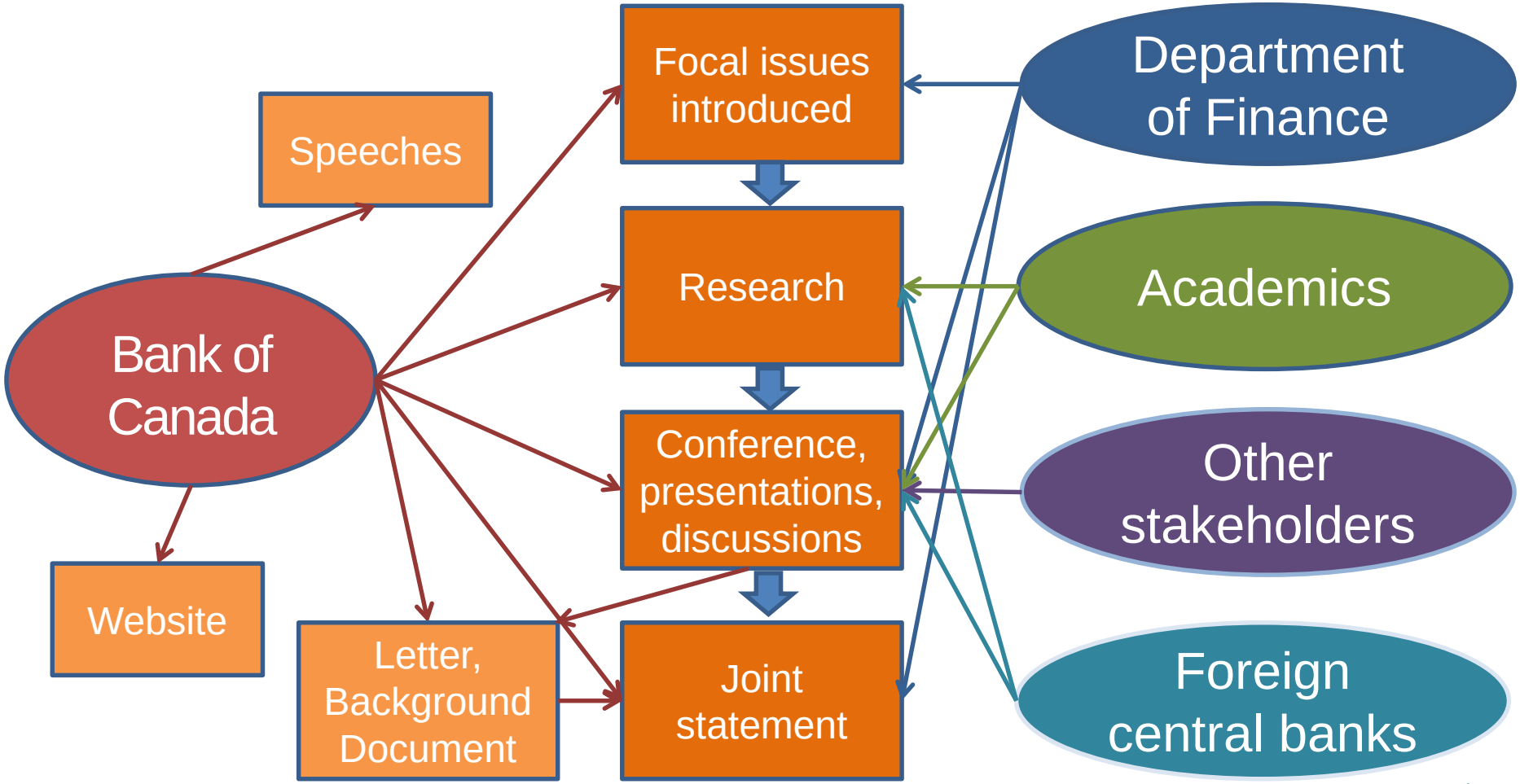
Outline

1. **The inflation targeting agreement**
2. **The renewal process**
3. **Canada's experience with Inflation Targeting**
4. **Focal issues**
   - Level of inflation target
   - Financial stability considerations in the formulation of monetary policy
   - Measurement and use of core inflation

The inflation targeting agreement

- 24 October 2016: **joint statement** by Bank of Canada and Government of Canada renewing the inflation target for another 5-year period
  - Target will continue to be defined in terms of 12-month rate of change in total CPI.
  - Target will continue to be the **2 per cent** mid-point of the **1 to 3 per cent inflation-control range**.

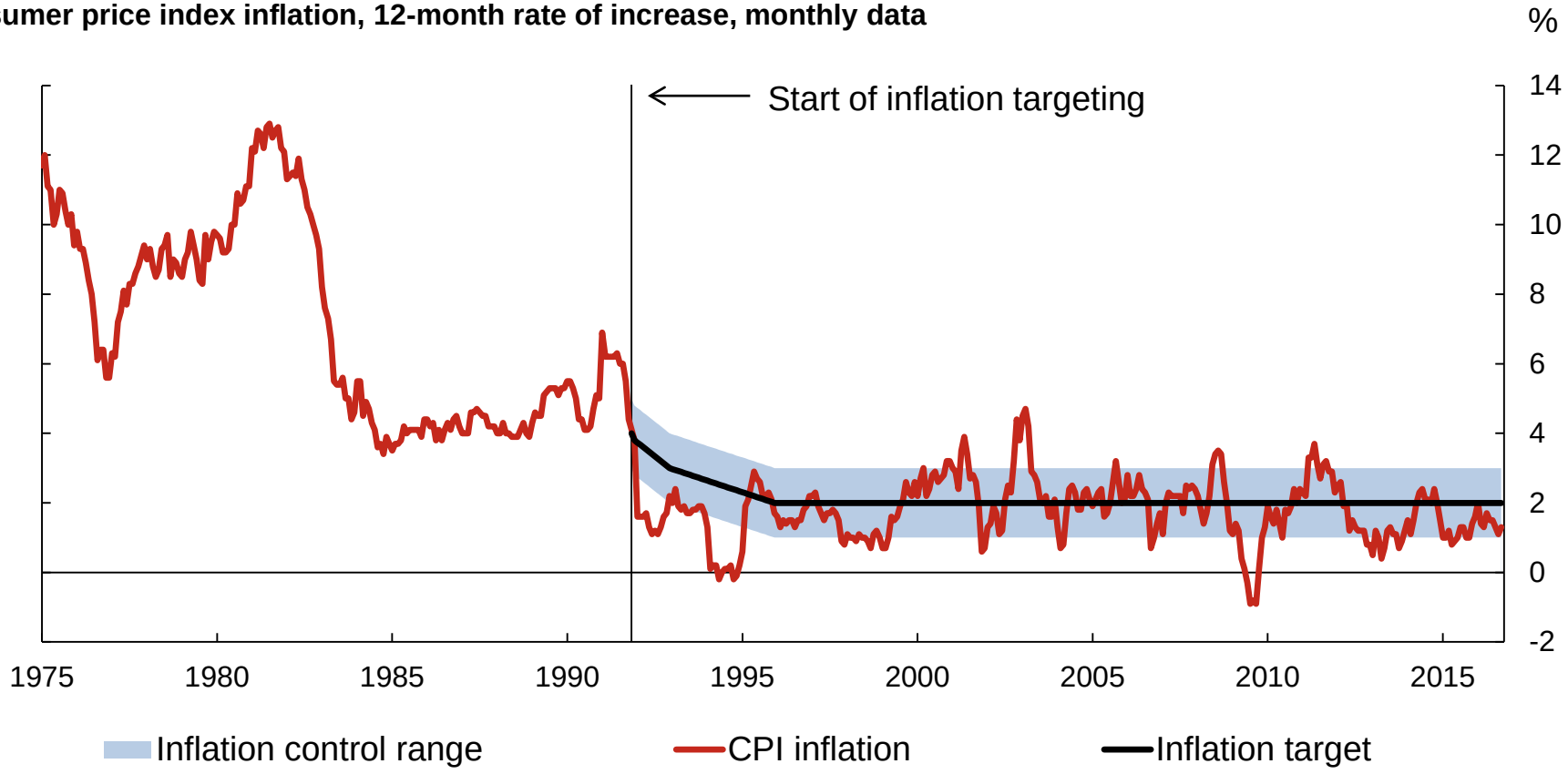
The Renewal process



Canada's Experience with Inflation Targeting

Total CPI inflation has been low and stable since 1991

Consumer price index inflation, 12-month rate of increase, monthly data



Sources: Statistics Canada and Bank of Canada calculations

Last observation: September 2016

Lower inflation and interest rates on average

Table 1: Canada's Econonic Performance

	Average (per cent)			Standard deviation		
	1975M1 to 1991M1	1991M2 to 2016M9	1995M1 to 2016M9	1975M1 to 1991M1	1991M2 to 2016M9	1995M1 to 2016M9
CPI: 12-month increase	7.1	1.9	1.9	2.9	1.1	0.9
Real GDP growth[1]	2.8	2.4	2.4	3.7	2.6	2.5
Unemployment rate	8.9	8.0	7.5	1.7	1.5	1.0
3-month interest rate	10.9	3.5	3.0	3.0	2.2	1.9
10-year interest rate	10.7	4.9	4.3	2.0	2.2	1.8

Variability has declined

Table 1: Inflation targeting has reduced volatility

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	1975M1 to 1991M1	1991M2 to 2016M9	1995M1 to 2016M9	1975M1 to 1991M1	1991M2 to 2016M9	1995M1 to 2016M9
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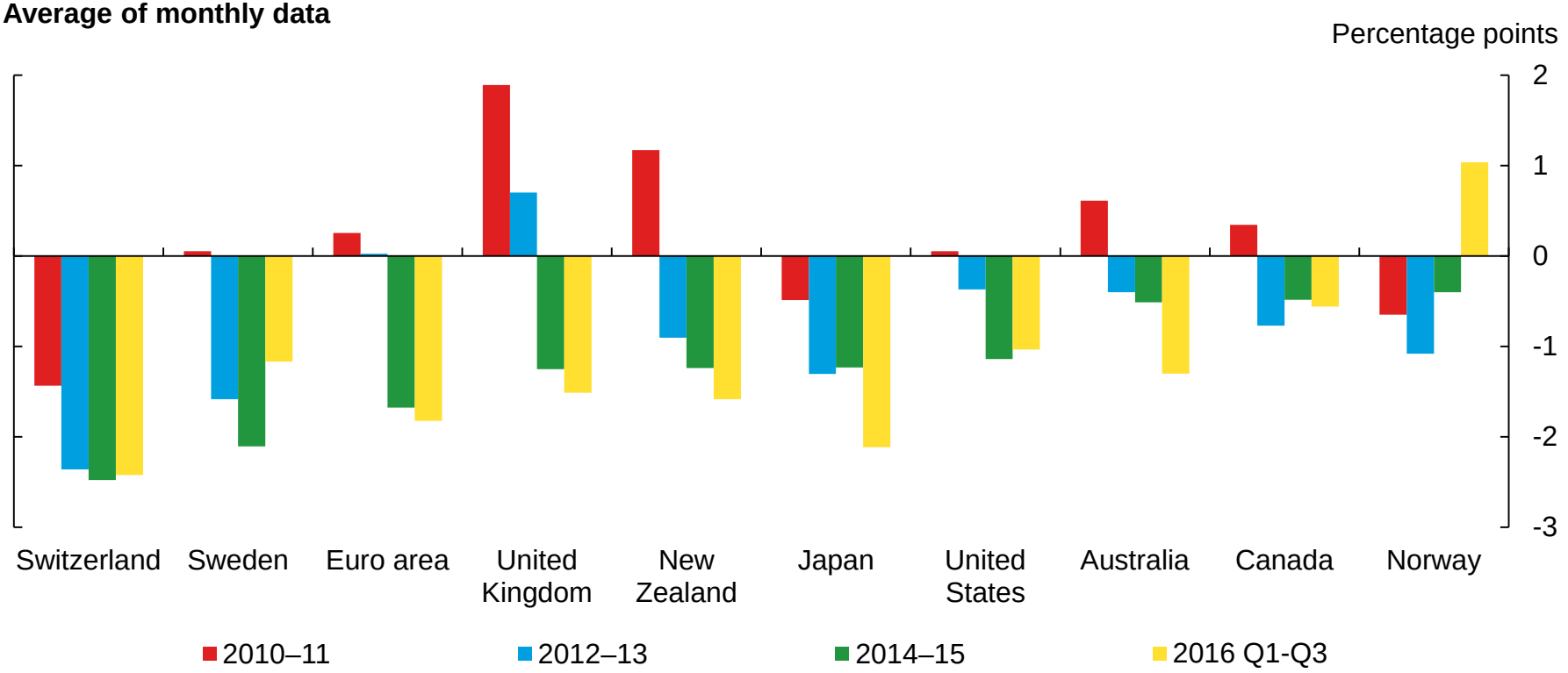
Targeting inflation has been more challenging since the GFC

Average of monthly data



Note: Deviation of total inflation is calculated based on personal consumption expenditures inflation for the United States, Harmonised Index of Consumer Prices inflation for the euro area and CPI inflation for all other countries. A time-varying inflation target is used in the calculations for Japan (i.e., a 2 per cent target since January 2013; a 1 per cent target from February to December 2012, and a 0 per cent target before February 2012).
Sources: National sources via Haver Analytics

Last observation: September 2016

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Is 2 percent the right target?

The level of the inflation target

2011: Should the target be lowered?

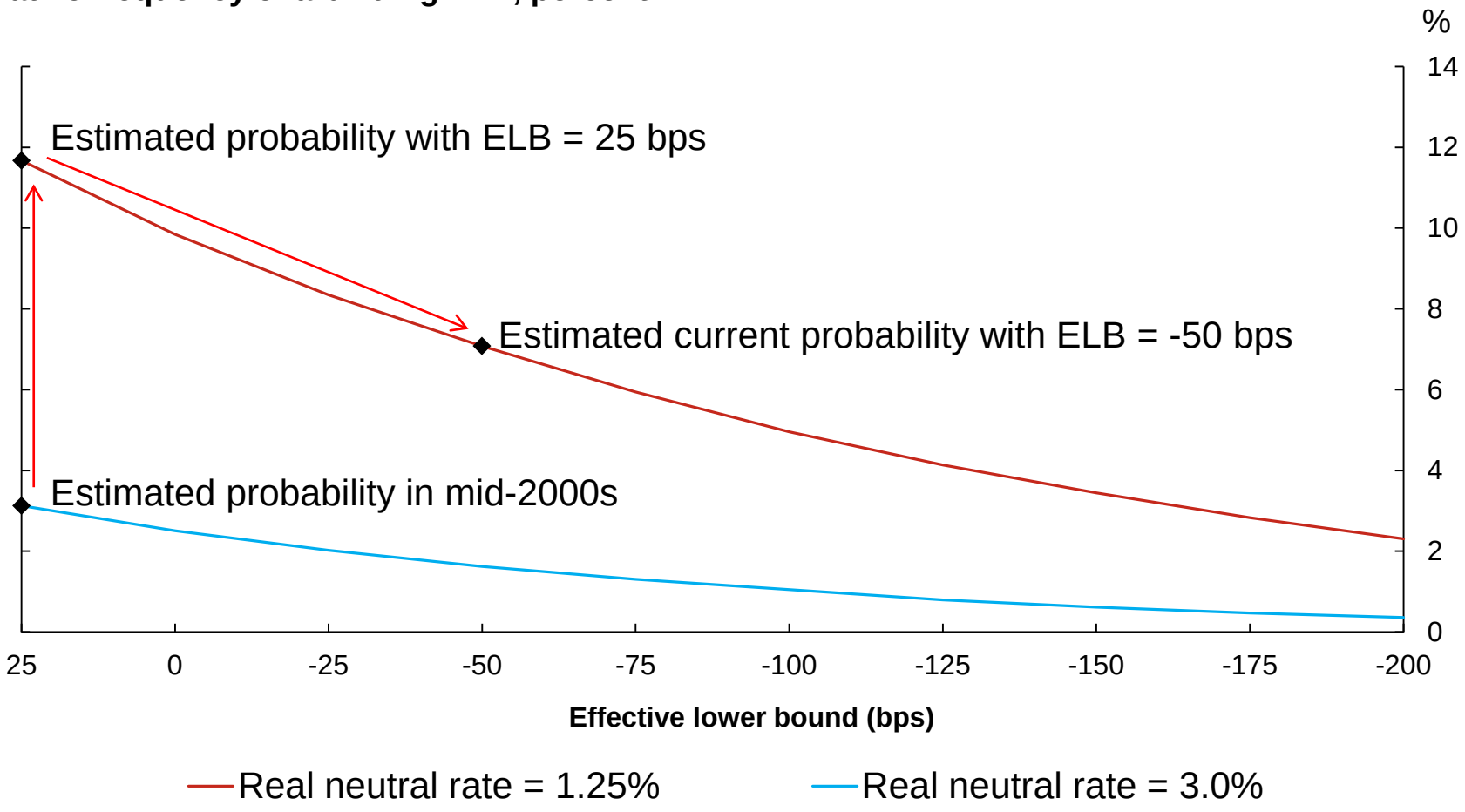
- Benefits of a lower target insufficient to offset constraints associated with effective lower bound

2016: Should the target be raised?

- Higher target would reduce probability of ELB episodes, at the cost of higher inflation

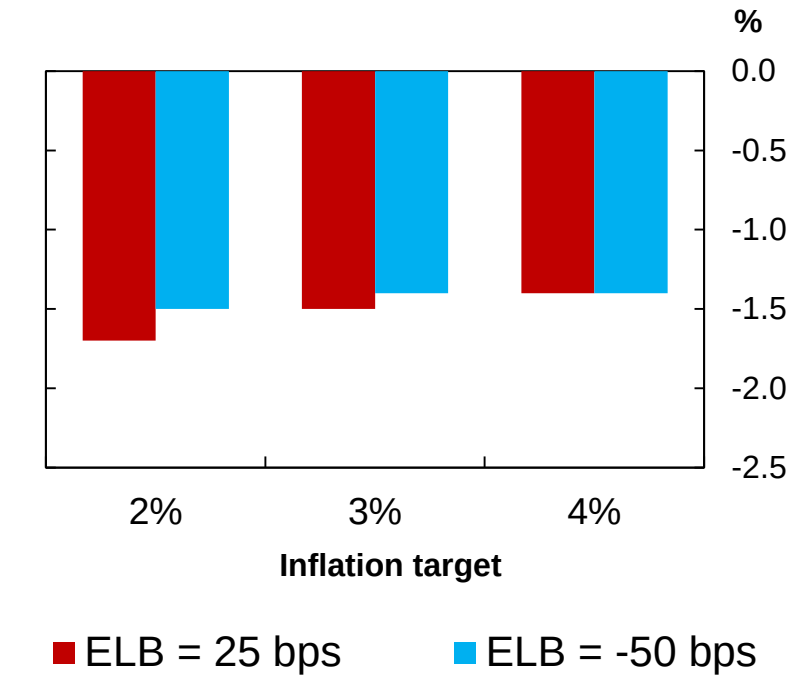
The neutral rate is lower, but so is the lower bound…

Relative frequency of a binding ELB, percent



Unconventional tools can provide further stimulus

Average output gap at the effective lower bound with unconventional monetary policy



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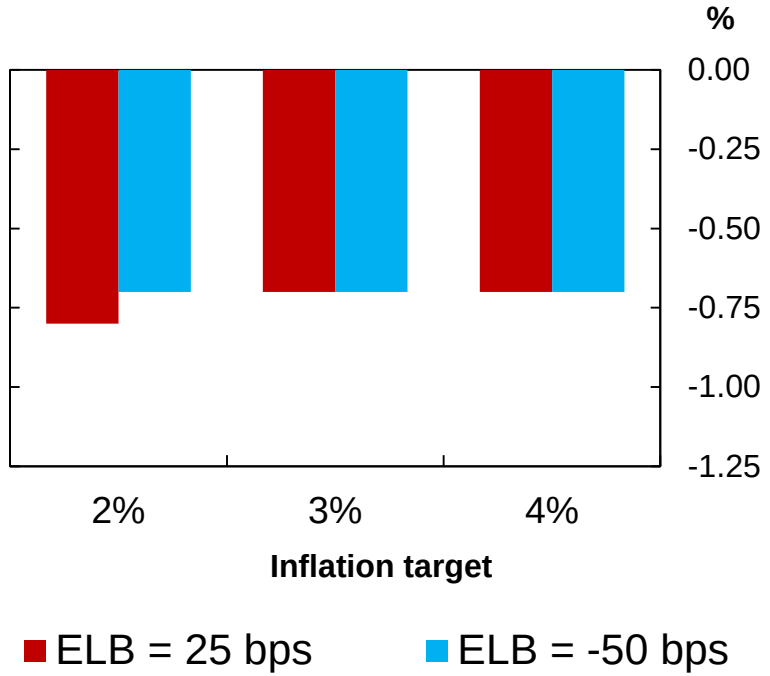

Raising the target implies gains but also has costs…

Higher inflation is costly

- Wage and price stickiness => arbitrary variations in relative prices and resource misallocation
- Inflation interacts with tax code => distortions
- Burden of higher inflation borne by households less able to hedge against inflation risk
- Incentives to shift to indexation (or other changes in wage and price-setting behavior)

Transition is costly

- Redistributive effects
- Credibility

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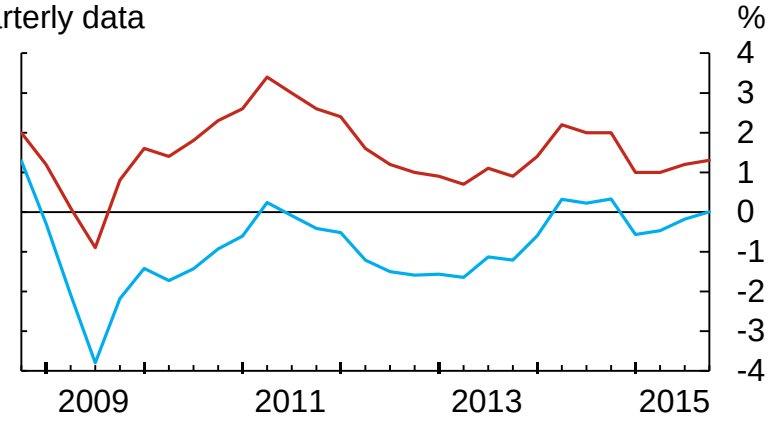
Nexus between financial stability and monetary policy

Financial Stability Considerations in Monetary Policy

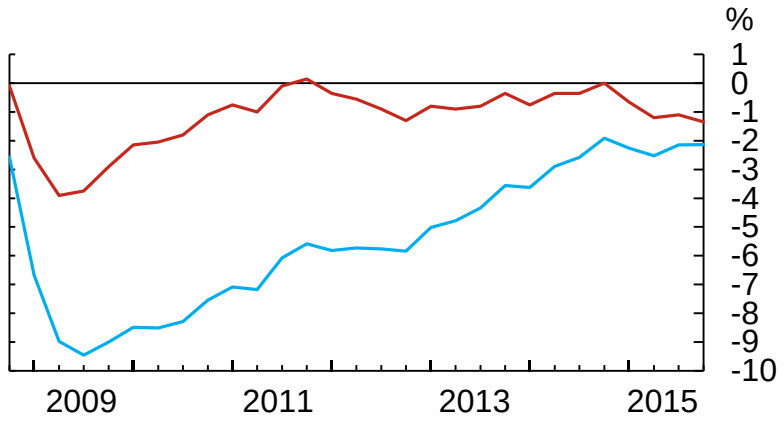
- Flexible inflation targeting gives some scope to take financial stability into account
- Financial stability and inflation objectives often aligned
- When tension does exist between these objectives, benefits of altering monetary policy may not exceed costs
- If macroprudential policies are available, a better policy assignment may be possible

Leaning against household indebtedness: What if the policy rate had been 100 bps higher?

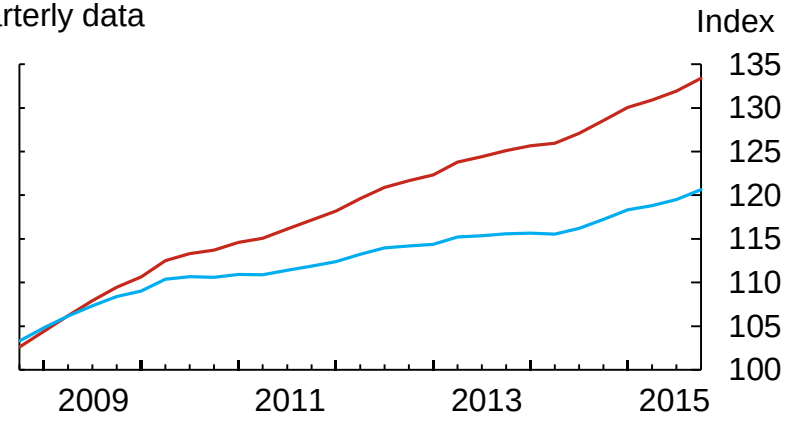
a. Total CPI, year-over-year percentage change, quarterly data



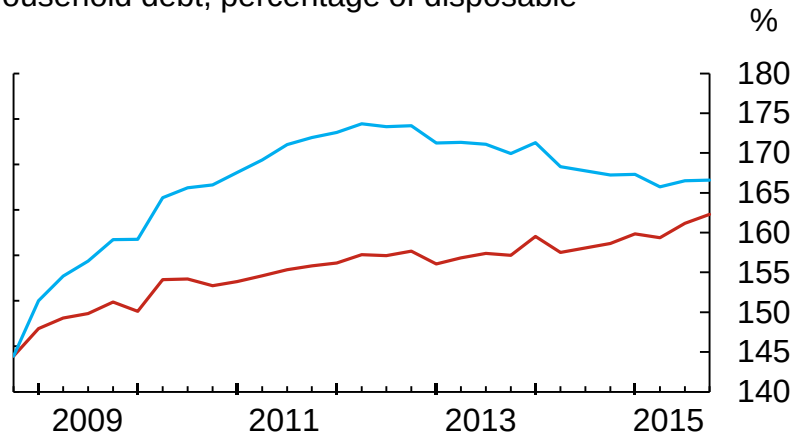
b. Output gap, quarterly data



c. Real household debt, index 2008Q3=100, quarterly data



d. Household debt, percentage of disposable



History Counterfactual (100 basis points higher)

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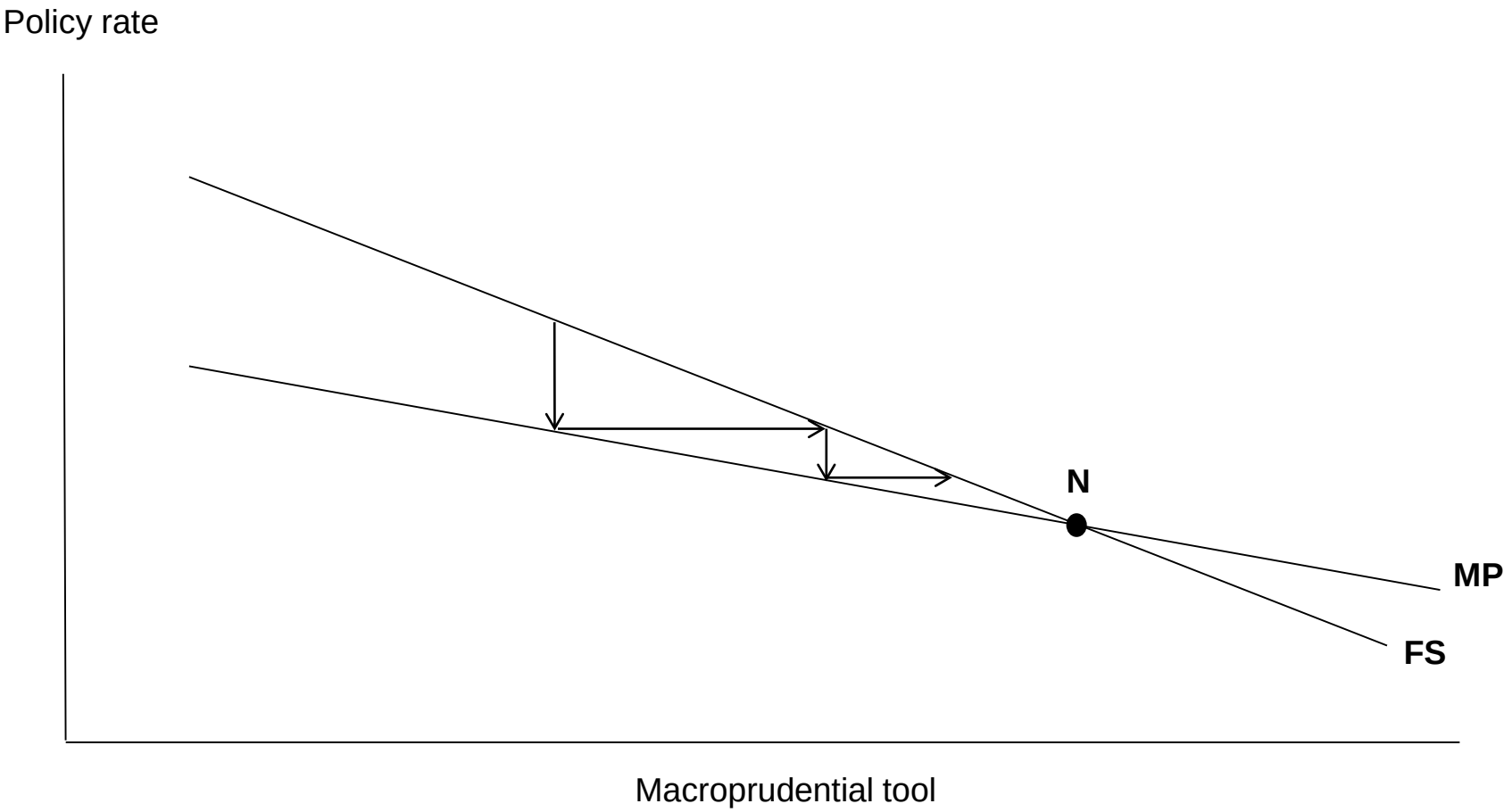
Policy assignment



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The measurement and use of core inflation

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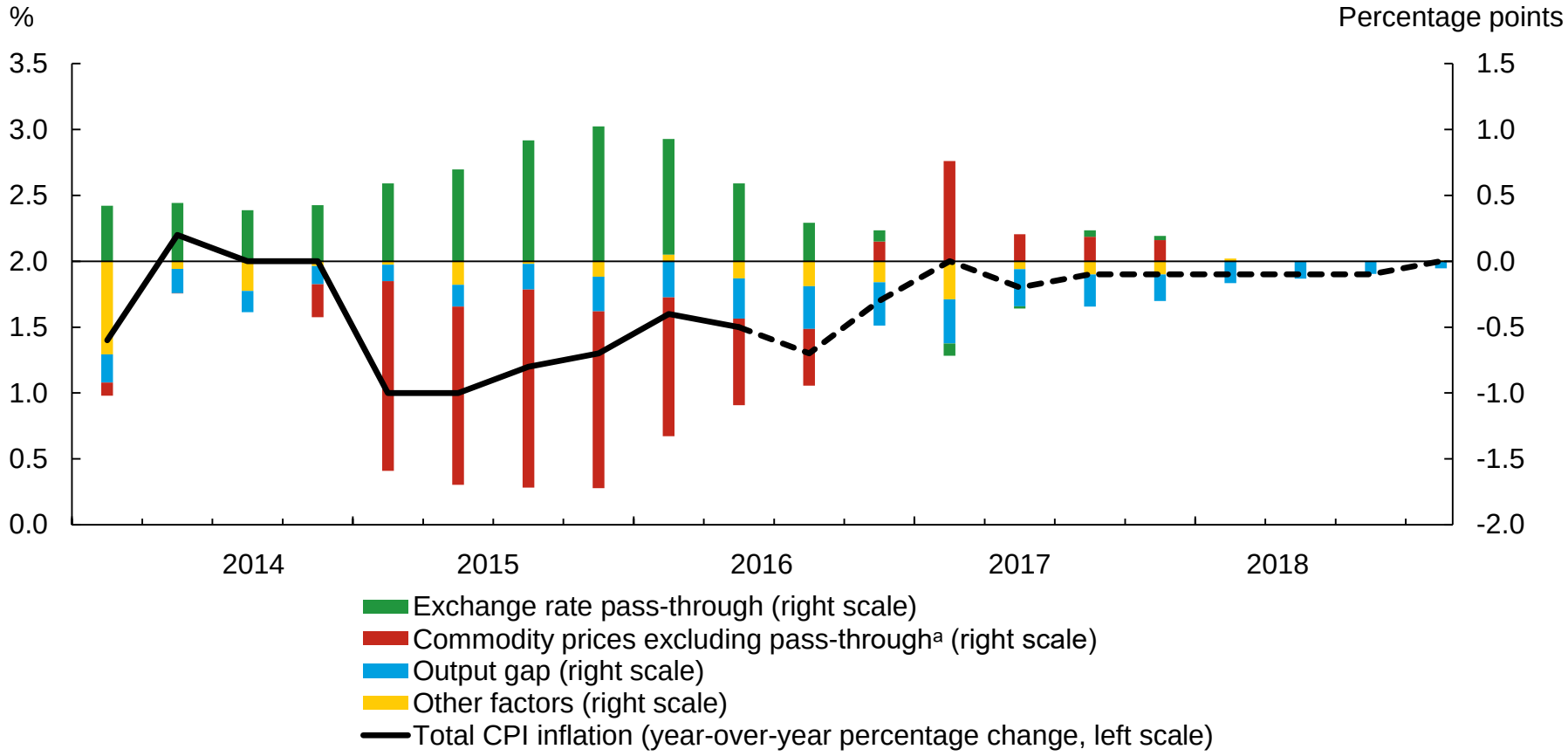
Total CPI inflation reflects transitory factors

Contribution to the deviation of inflation from 2 per cent



Sources: Statistics Canada and Bank of Canada estimates, calculations and projections

How do various measures of core inflation perform?

Table 5-A: Summary evaluation of different core inflation measures

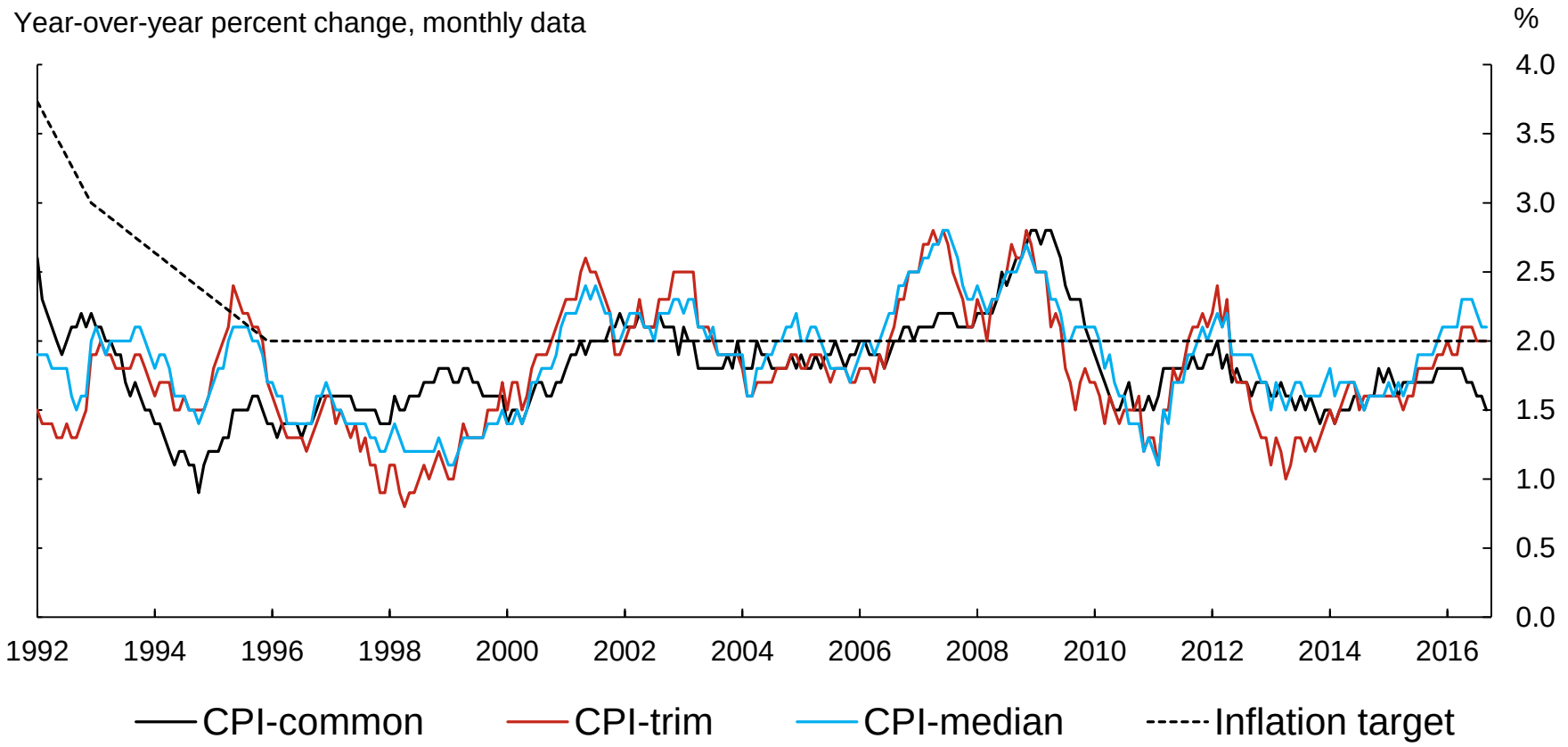
	CPIX	CPIXFET	CPIW	CPI-trim	CPI-median	CPI-common
Unbiased?	✓	✗	✓	✓	✓	✓
Persistent?	✗	✓	✗	✓	✓	○
Moves with output gap?	✗	✗	✗	✓	✓	○
Looks through sector-specific shocks?	✗	✗	✗	✓	✓	✓
Easily understood?	✓	✓	✓	✓	–	✗

○ = top performer

3 new preferred core measures

Preferred alternative measures of core inflation

Year-over-year percent change, monthly data



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Future research

- Effectiveness of conventional and unconventional monetary policies, particularly in a small open economy
- Implications of regulatory changes for effectiveness of macroprudential policies
- Optimal mix of monetary, macroprudential, and fiscal policies

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Questions?