Are Bank Bailouts Welfare Improving?

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The views expressed in this presentation are those of the authors and not necessarily those of the Bank of Canada.

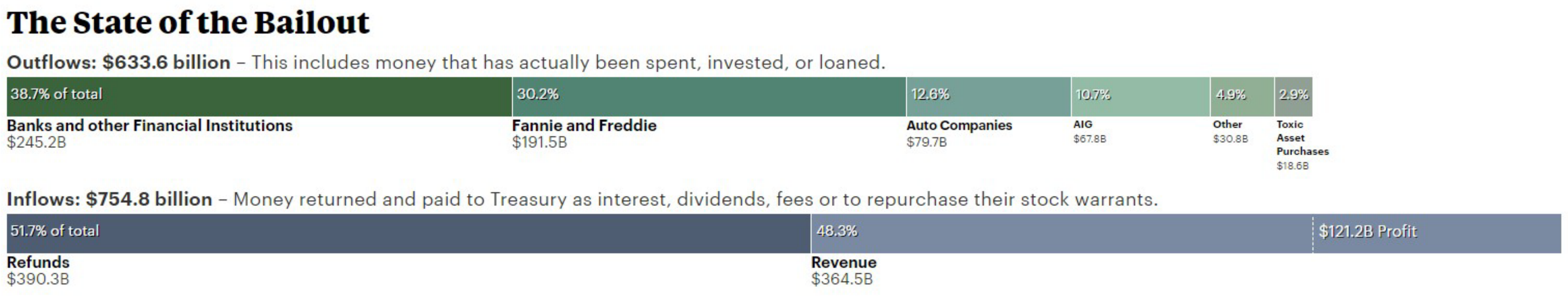
SUMMARY

- The financial sector bailouts seen during the Great Recession generated substantial opposition and controversy. We assess the welfare benefits of government-funded emergency support to the financial sector, taking into account its effects on risk-taking incentives.
- In our quantitative general equilibrium model, the financial crisis probability depends on financial intermediaries' balance sheet choices, influenced by capital adequacy constraints and ex ante known emergency support provisions.
- These policy tools interact to make financial sector bailouts welfare improving when capital adequacy constraints are consistent with the current Basel III regulation, but potentially welfare decreasing with looser capital adequacy regulation existing before the Great Recession.

MASSIVE BAILOUTS DURING GREAT RECESSION

Possibly averted severe depression (Bernanke 2009)

Turned out less costly than initially feared ...



Source: ProPublica Bailout Tracker

BAILOUT ANTICIPATION COULD HAVE LONG-TERM COSTS

Enhanced expectations of future bailouts ⇒ More reckless financial risk-taking ⇒ More frequent and more severe future financial crises

QUESTION AND RESULTS

Q: Are bank bailouts welfare improving, once their effect on crisis risks is taken in account?

YES, as long as equity capital buffers are sufficiently high

- Bailouts yield welfare gains if Capital Adequacy Ratio (CAR) is 10.5%, as per Basel III
- Bailouts could lower welfare if CAR is 8% (Basel II)

Basel III enhancements in equity buffers are highly beneficial generating a:

- welfare gain equivalent to 1.69 % life-time increase in consumption
- 3.65 % increase in average wealth

OUR ANALYTICAL FRAMEWORK

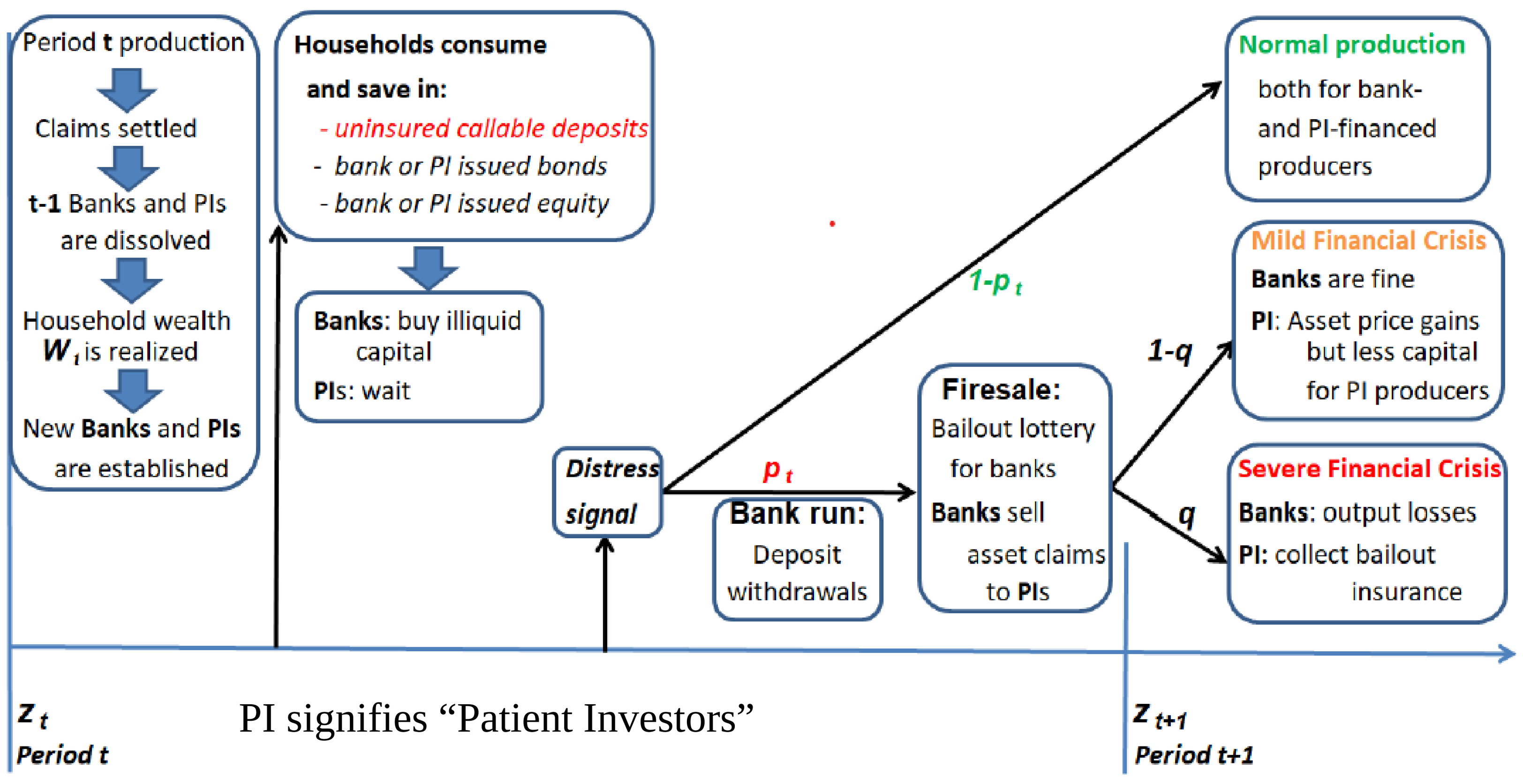
Calibrated quantitative General Equilibrium model in which:

- Banks are partly funded with **callable** deposits **collaterized** by illiquid assets
- In a financial crisis, early withdrawals trigger **firesale** of asset **claims**
- Probability of a financial crisis is EQUAL to the **endogenous** default probability
- Government partially insures returns on firesale assets (i.e. ex ante known bailout insurance)

POLICY TOOLS

1. Minimum bank equity-to-assets ratio (CAR)
2. Ex ante anticipated bailout insurance policy with the following features:
   - eligibility is randomized across banks with probability $\eta \in [0,1]$
   - fraction $\chi \in [0,1]$ of a bailout eligible firesale transaction is government-insured

TIMING OF EVENTS IN THE MODEL



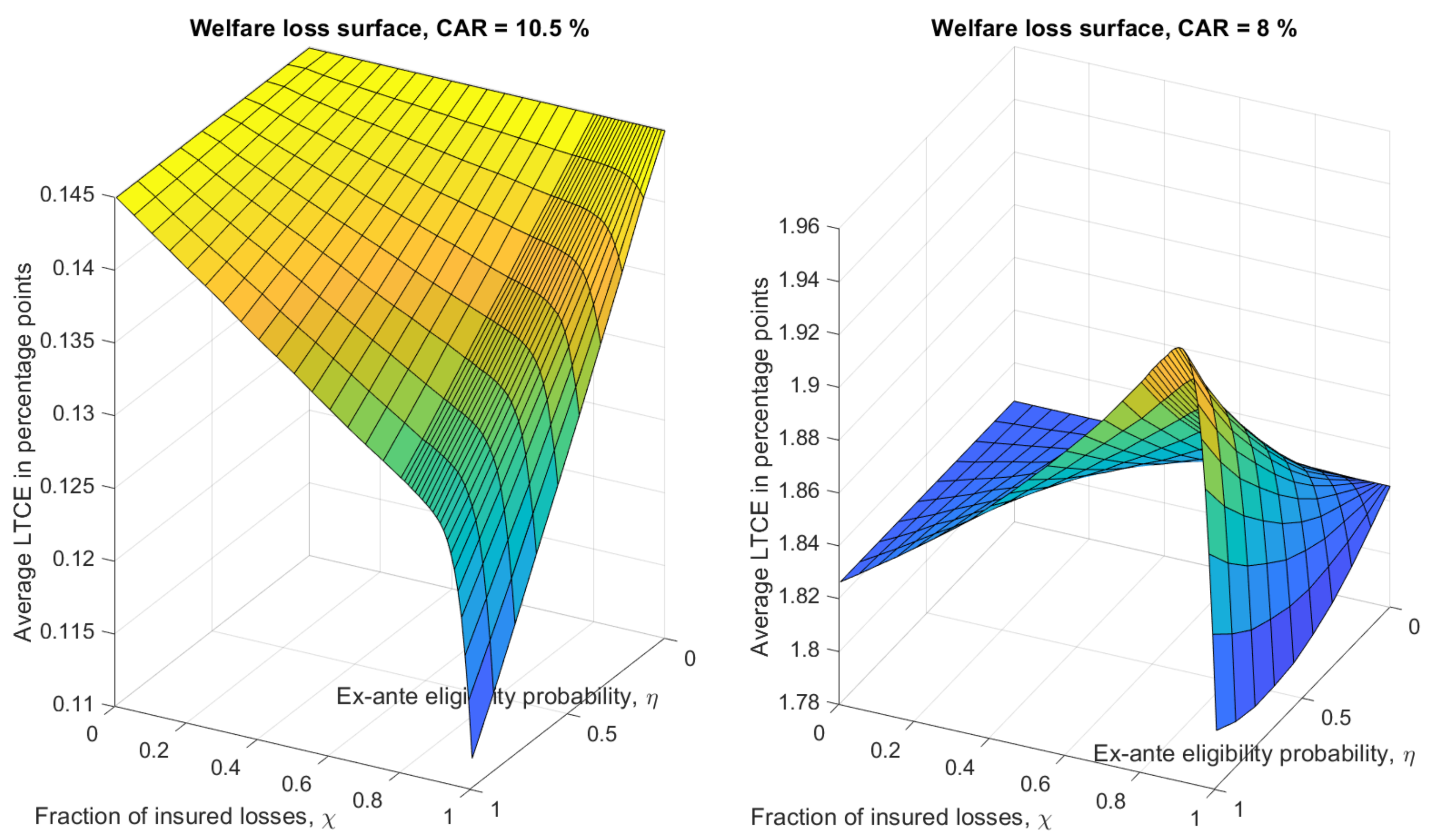
PI signifies "Patient Investors"

KEY CALIBRATION MOMENTS

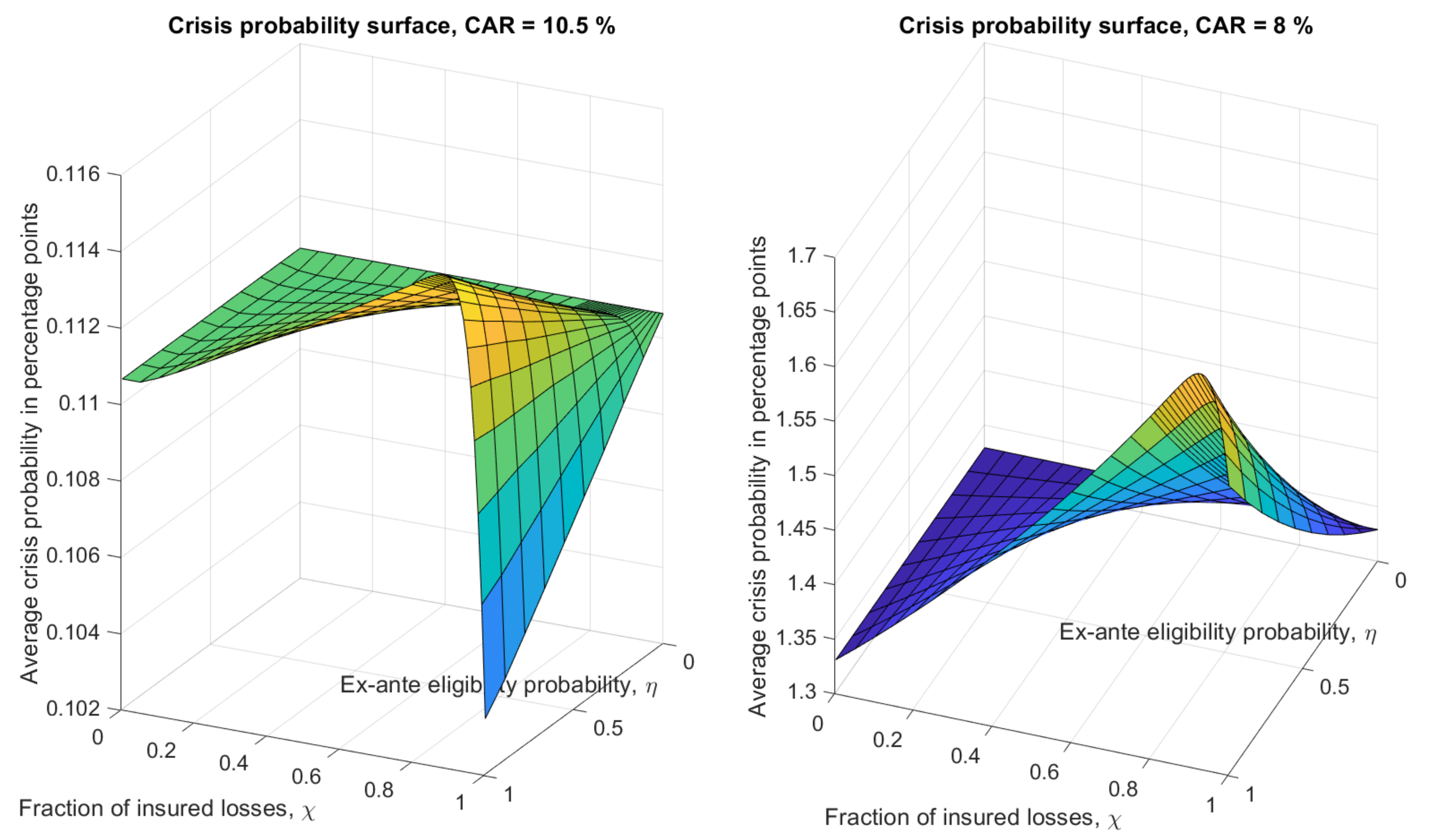
MOMENTS IN PER CENT	DATA	MODEL
Average liquidity spread*	1.50	1.50
Average real return on bonds*	3.94	3.93
Average share of callable funding*	31.54	31.78
Real GDP Drop during Great Recession	8.65	8.60
Real GDP Drop during Great Depression	34.75	34.98
Average financial crisis probability	1.266	1.266

*Period: 1986Q1-2007Q4; Source: Financial Accounts of the United States, NIPA data, FRED database

WELFARE CONSEQUENCES OF BAILOUT POLICIES



BAILOUT POLICY EFFECTS ON CRISIS PROBABILITY



MAIN POLICY IMPLICATIONS

- Basel III enhancements in bank equity buffers are highly beneficial
- Bank bailouts are beneficial if complemented with effective regulation, but detrimental to financial stability and welfare without it
- Policy makers should resist rollbacks of Capital Adequacy Regulations

REFERENCES

Bernanke (2009) refers to remarks made by Federal Reserve Chairman Ben Bernanke to an investigative panel in November 2009.

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