Business Credit Programs in the Pandemic Era

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Motivation

- **Unprecedented government support for nonfinancial firms in response to COVID-19**
  - Range of approaches: corporate bond purchases, direct lending, equity infusions, cash grants

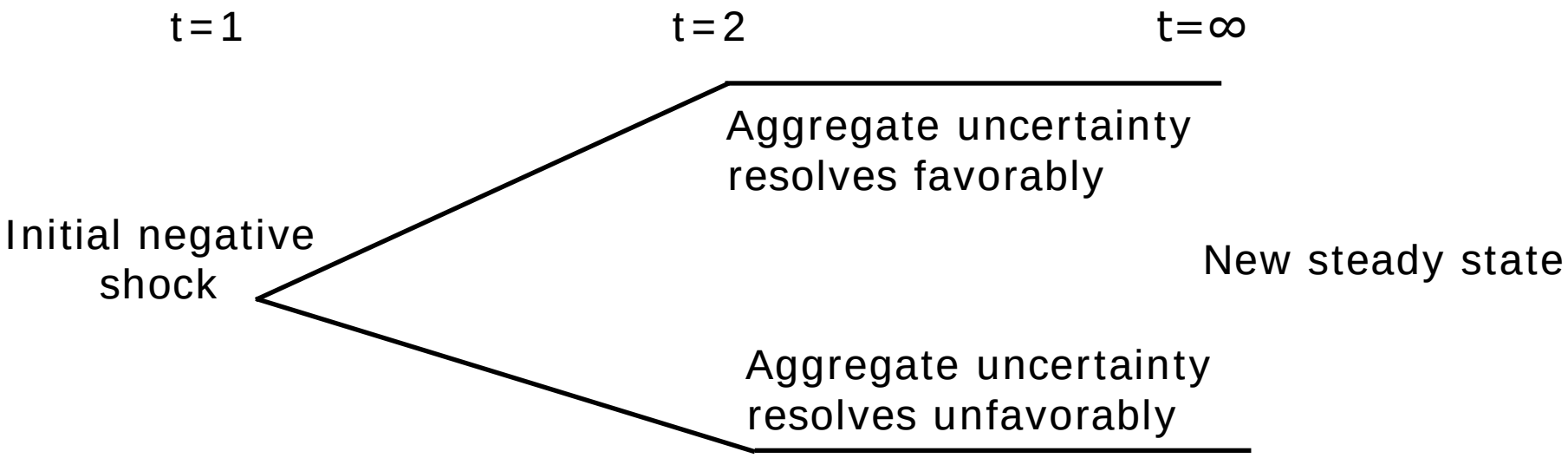
- **Stark contrast to response to a "garden variety" recession**
  - Typically expand social insurance programs for households, support financial institutions to maintain flow of credit, but do not directly support businesses

- **This paper: a conceptual framework for thinking about the rationale, goals, and design of business credit programs.**
  - Focus on two joint Fed-Treasury efforts: Main Street Lending Program and Corporate Credit Facilities

Key Takeaways

- **Multiple equilibrium lender-of-last-resort logic is not the right conceptual framework**
  - COVID-19 shock is a massive real economic shock
  - Large loss of economic output, some of which will be permanent
- **Two main rationales for government intervention**
  - Credit market frictions: low cashflows today are less informative than normal about a firm's long-run viability
  - High macro uncertainty: if there are aggregate demand externalities, high uncertainty creates *social option value*
  - Unlike lender-of-last resort, these rationales imply that government must take significant credit risk to be effective
- **Markets may be overestimating government's appetite for risk**
  - Significant rallies from lows in March 2020, despite the fact that programs cannot take much risk as currently designed

Model 1: Business Credit Programs



- **Continuum of firms that differ in their exposure to the shock**
  - If a firm shuts down at time t, generates 0 cash flow from then on
  - If a firm operates with negative cash flow, firm's investors need to invest to keep it alive. Positive cash flow may be paid out.
- **Two key frictions:**
  - Credit market frictions at t=1. Firms cannot borrow full expected value of future cash flows.
  - Aggregate demand externalities at t=2. Each firm's cash flow increasing in total firms operating, e.g., ZLB, labor market congestion, etc.

Model 1: Business Credit Programs

- **In private market equilibrium, some firms with negative cash flows at t=1 choose to continue operating → private option value**

- **With credit market frictions, planner keeps more firms alive at t=1 than the private market**
  - Some firms with negative cash flows at t=1 but positive long-run expected value cannot borrow enough to survive
  - 2020 vs prior recessions: More such firms today than in a typical recession: short-run cash flow shortfalls are less informative than usual
    - Typical worries about supporting zombies don't loom as large here

- **With aggregate demand externalities, planner keeps more firms alive at t=1 than the private market**
  - Social option value: More firms alive at t=1 preserves the option of having larger positive spillovers at t=2 if uncertainty resolves favorably.
  - 2020 vs prior recessions: Much more aggregate uncertainty today.

Program Design

Model Implications

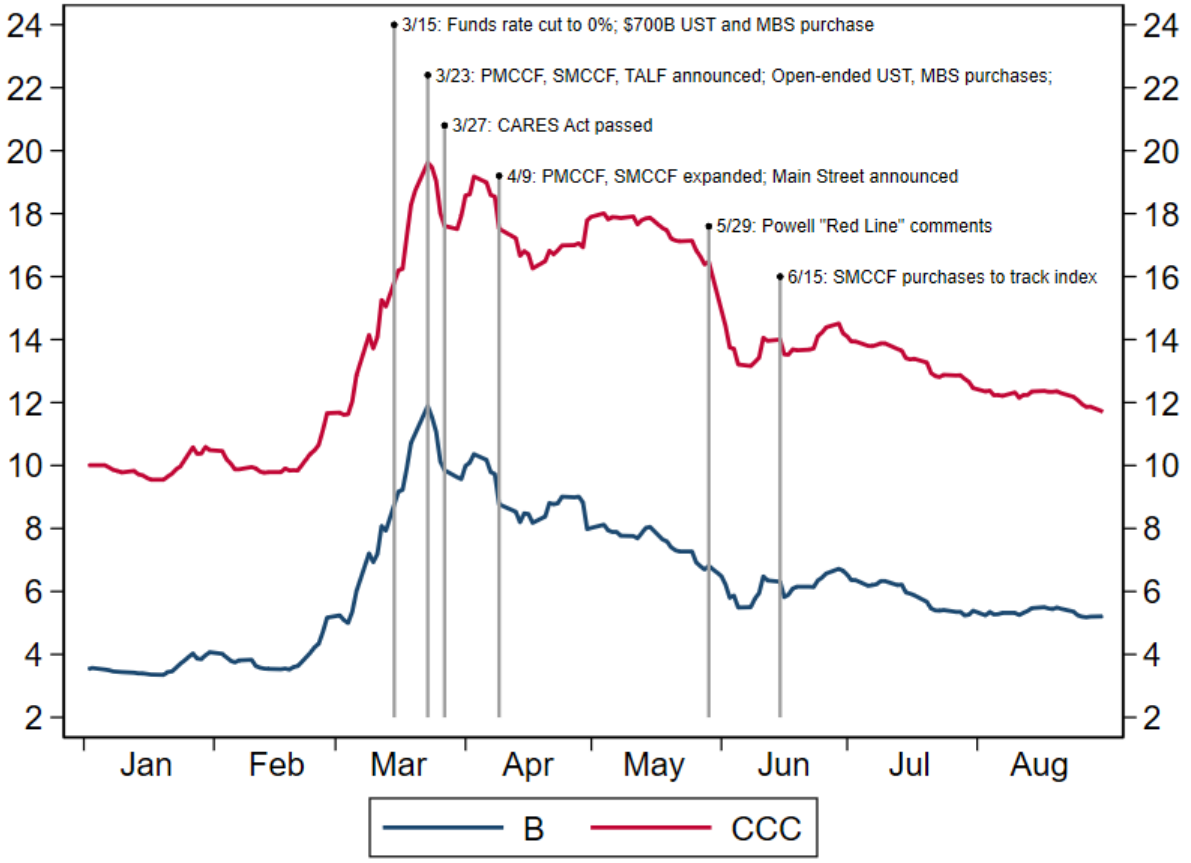
- **Aid widely available: lend to firms private market will not**
  - Planner keeps riskier firms alive
- **Expect to lose money on investments in some firms**
  - Planner faces same frictions as private market
- **Stage financing**
  - Planner lets firms fail if uncertainty resolves unfavorably
- **Soft lending terms**
  - Expect to lose money, mitigate debt overhang

Main Street Lending Program

- **Government co-invests with private banks**
  - Must be profitable for banks
- **Leverage restrictions → lend only to low risk firms**
- **Relatively large loan sizes**
  - Cannot react to evolving public health conditions
- **Hard lending terms**
  - Senior, relatively short maturity

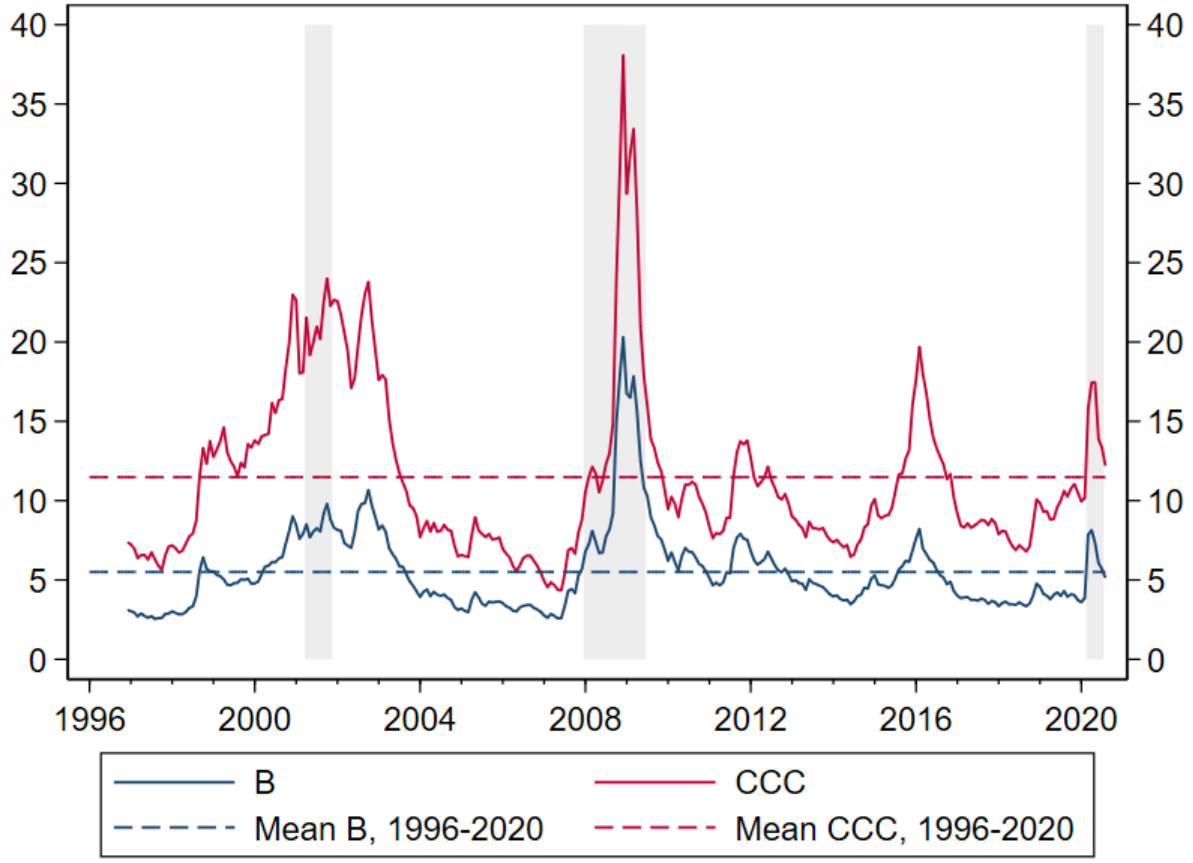
PPP closer to model in some respects: SBA guarantee, smaller loan sizes

Significant Market Rallies Since March



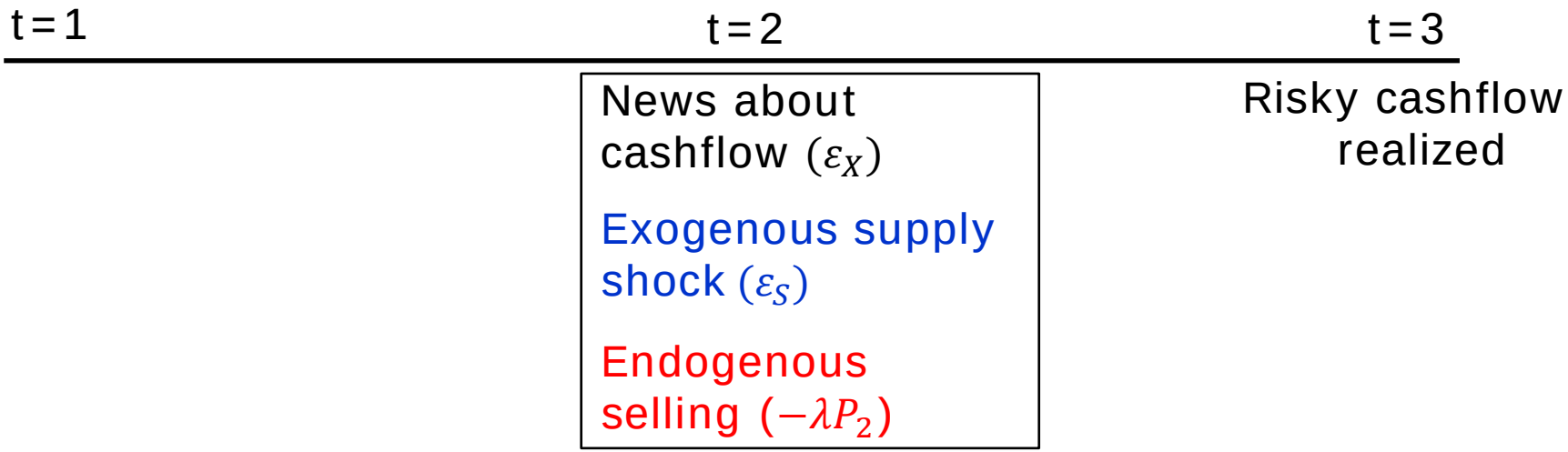
- **Timing consistent with rally driven by Fed/Treasury announcements, rather than macro or public health fundamentals**

Significant Market Rallies Since March



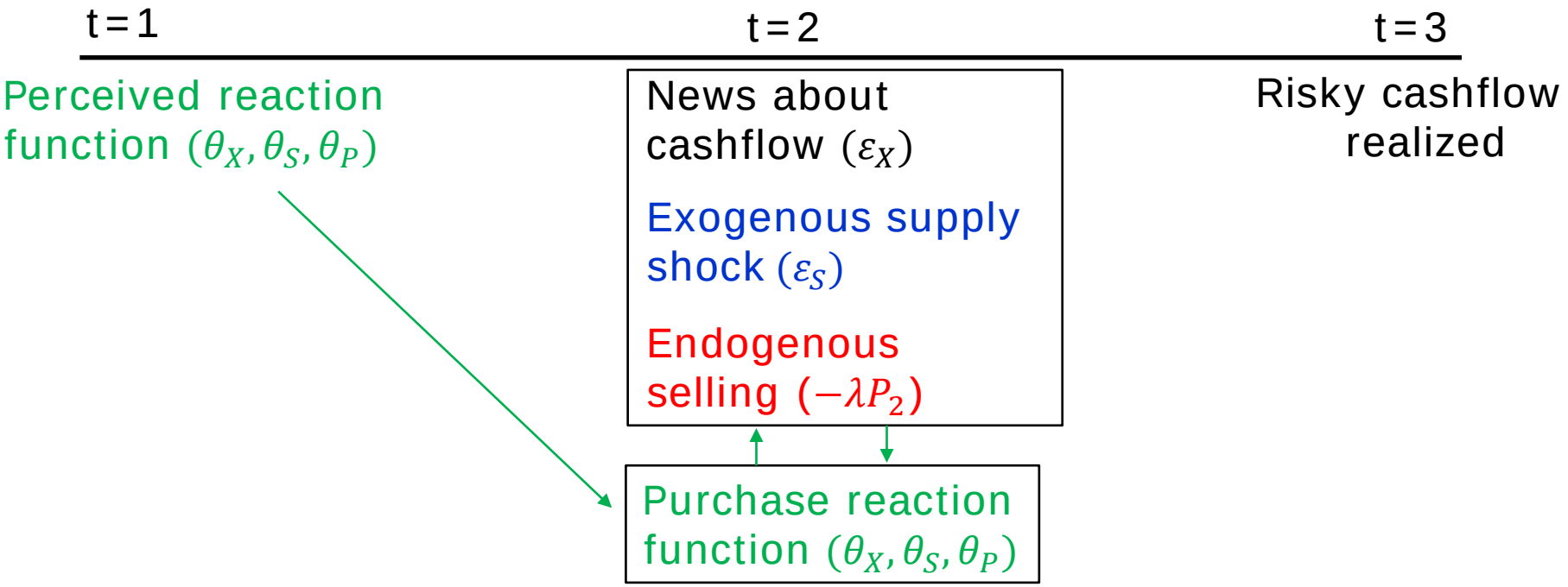
- **Markets may have overreacted: corporate bond spreads are now at their <u>unconditional</u> average over the last 25 years**

Model 2: Bond Purchase Programs



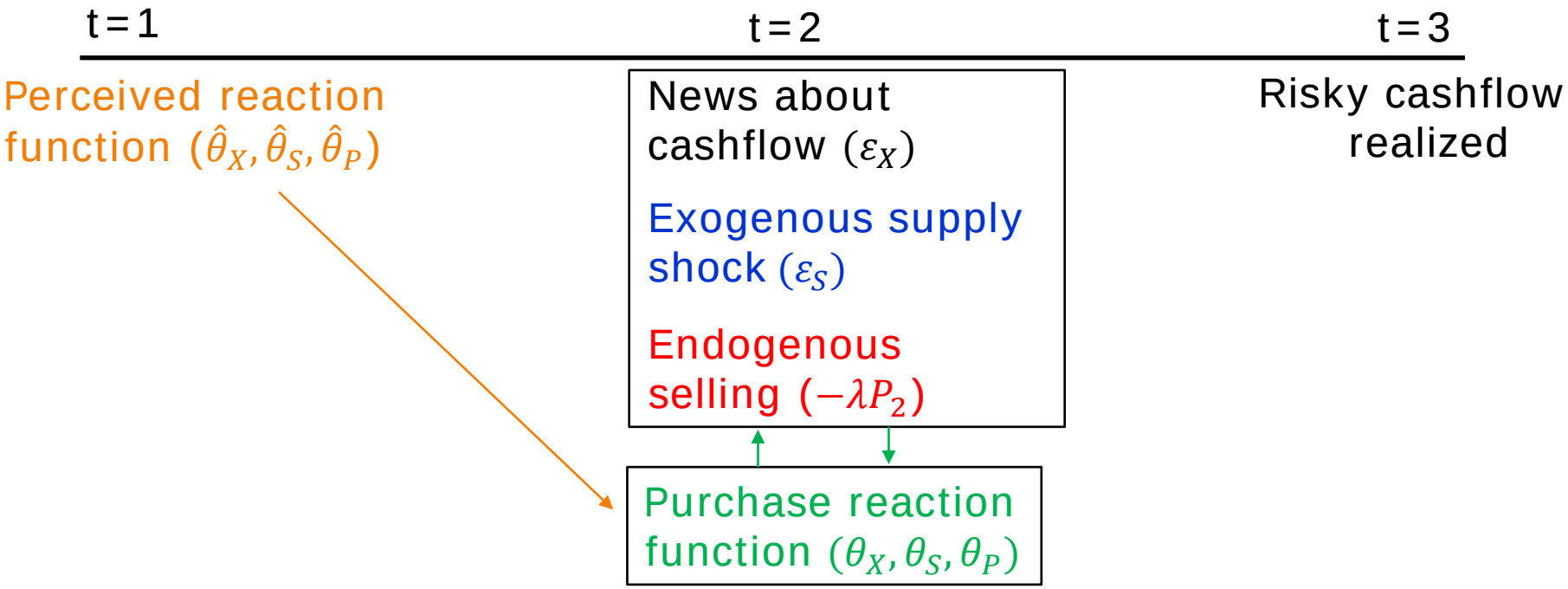
- **Marginal bond investors have mean-variance preferences over one-period ahead wealth**
  - **Bond price at t=1** reflects **expected future cashflow** minus a **risk premium** that compensates investors for (i) fundamental risk, (ii) exogenous supply risk, and (iii) endogenous selling risk

Model 2: Bond Purchase Programs



- **Introduce a "purchase reaction function": government purchases of bond as a function of either shocks or t=2 price**
- **If investors correctly understand reaction function, t=1 price higher because investors understand that there is less risk**
- **Note that purchases involve bearing some fundamental risk**

Model 2: Bond Purchase Programs



- **If investors believe that purchase reaction function is more aggressive than it actually is, t=1 prices even higher**
- **Now a negative shock at t=2 can have two effects:**
  - Direct due to news
  - Indirect b/c news reveals less aggressive purchase reaction function

Is the Market Misperceiving the Reaction Function?

- **Two main pieces of evidence:**
  - At present, Corporate Credit Facilities largely (though not entirely) prevented from buying the riskiest, low-rated bonds
  - Unlikely that government will offset fundamental, cash flow shocks.
    - But default rates typically rise in recessions, so spreads should rise.
    - Conservative estimate: w/ historical defaults expect B-rated bonds to underperform Treasuries unless government absorbs losses

- **Alternative hypothesis:** multiple equilibrium for nonfinancials
  - Market rally accompanied by significant issuance
    → firms now have enough cash to survive
  - However, defaults are already starting to rise

- **If market is misperceiving the reaction function, risk of a significant correction going forward.**
  - Though real consequences may be less severe because firms have built up financial buffers.

Conclusion

- **Government interventions in financial markets are often motivated by multiple equilibrium logic**
  - Strong commitments shift equilibrium with little follow-up action
  - Mario Draghi's "whatever it takes" speech
- **This logic is unlikely to apply in the current environment**
  - The pandemic is creating real economic losses that must be borne, regardless of financial market conditions
- **Still, there are compelling rationales for government intervention**
  - Revenue losses less informative than usual + credit market frictions
  - Social option value associated with unprecedented macro uncertainty
- **But government must be willing to take credit risk for these interventions to be fully effective**