

Discussion of:

Assessing the linkages between financial stress and
business cycles

by A. Pagan and T. Robinson

Luca Sala

Università Bocconi and IGIER

Oslo, September 2010

The financial crisis has stimulated interest in models with a realistic financial sector

It is then important to study whether these richer models can replicate features of the business cycle

This paper:

What financial conditions contribute to generate a business cycle?

Can we use this info to predict recessions?

a. Literature is reviewed and critically assessed

One thesis: residential investment (Leamer) is not the only channel → Evidence

b. Presents "stylized facts" of business cycles (from April 2009 WEO)

c. Model in Gilchrist, Ortiz and Zakrajsek, 2009 is considered. Data generated from the model: model's implications are compared with "facts" (WEO 2009)

→ Use of BBQ procedure. Why not starting from basics (autocov)?

→ Not convinced that the "facts" used are the right ones

→ Not convinced the way the comparison is done is the most interesting one

The "stylized facts" (as in the paper)

"...In the first 2 years of an expansion credit grows weakly, much more weakly than output..."

Model is in line with this (a lot of uncertainty, though)

The actual "fact": credit growth is weak ONLY in recoveries after a financial crisis

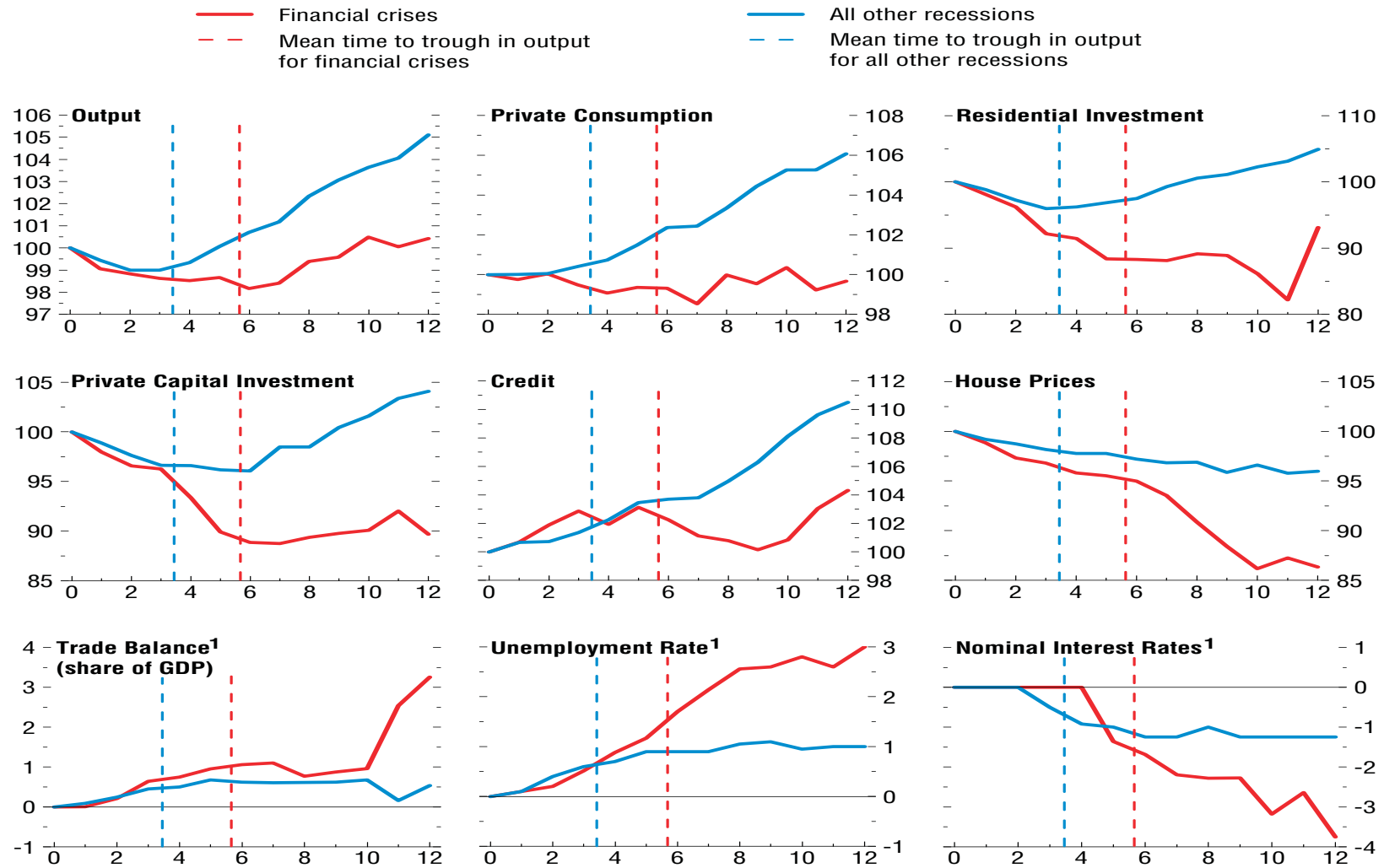
On the contrary, credit grows steadily in "normal" recoveries

Comparing conditional with unconditional evidence does not make much sense

Figure 3.8. Recessions and Recoveries Associated with Financial Crises and Other Shocks

(Median = 100 at $t = 0$; peak in output at $t = 0$; data in real terms unless otherwise noted; quarters on the x-axis)

Recessions associated with financial crises are longer and more severe than other recessions. During recoveries, private demand, credit growth, and asset prices are particularly weak. Historically, net exports have led the recovery.



Source: IMF staff calculations.

¹Difference from level at $t = 0$, in percentage points.

...restrictions on the supply of credit are related to the strength of the recovery...

Well documented in WEO chapter, conditioning on fin. crisis

Not tested in the paper

Need conditioning on financial crisis

...recessions caused by financial crisis are longer than "normal" recessions...

Documented in WEO

PR checks whether longer recessions are associated with higher external finance premia

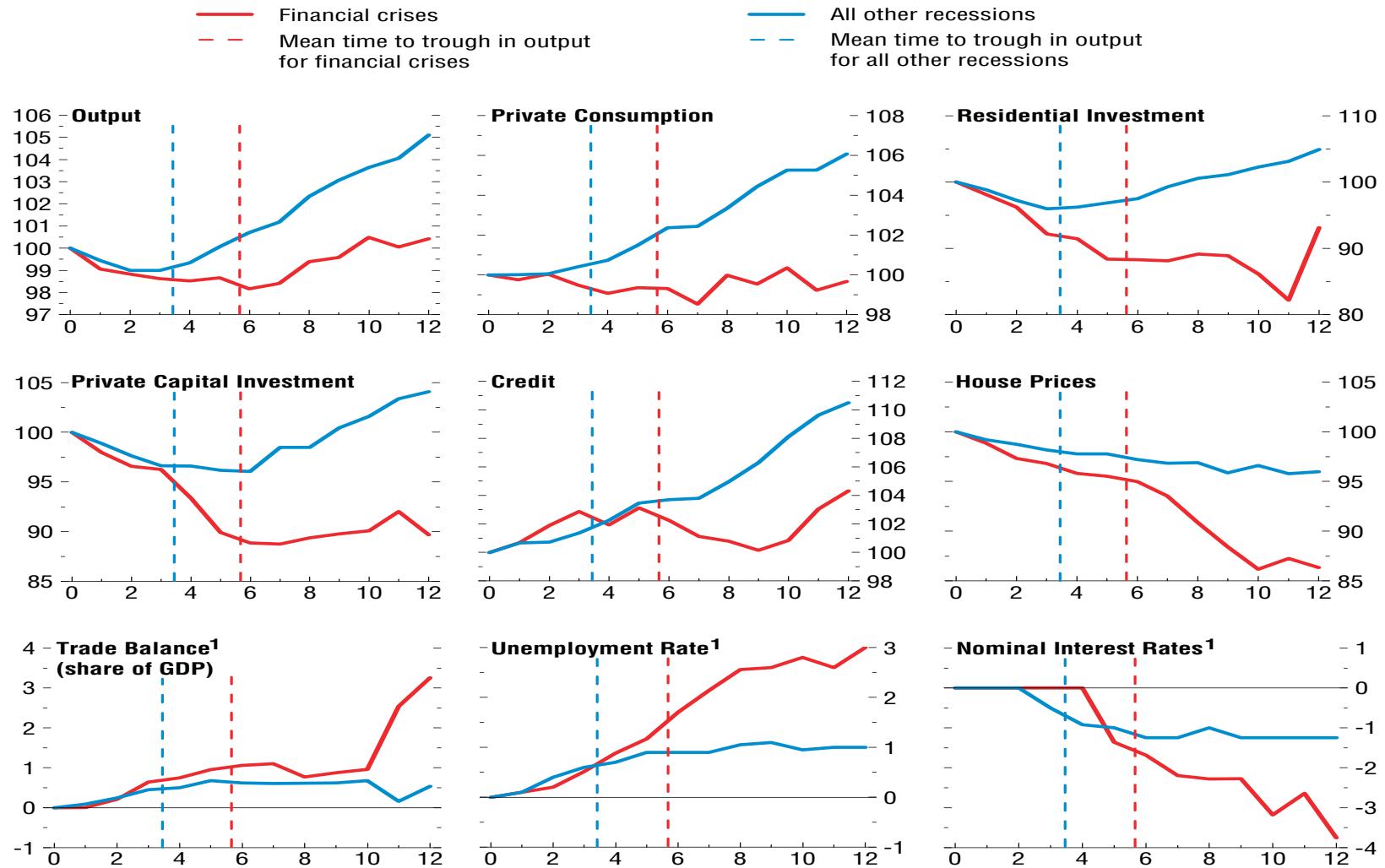
$$Prob(R_{t+m} | R_t = 1, s_t)$$

Need conditioning on financial crisis

Figure 3.8. Recessions and Recoveries Associated with Financial Crises and Other Shocks

(Median = 100 at $t = 0$; peak in output at $t = 0$; data in real terms unless otherwise noted; quarters on the x-axis)

Recessions associated with financial crises are longer and more severe than other recessions. During recoveries, private demand, credit growth, and asset prices are particularly weak. Historically, net exports have led the recovery.



Source: IMF staff calculations.

¹Difference from level at $t = 0$, in percentage points.

...annual output growth can be predicted by financial stress (for example, the external finance premium)...

The BAA-AAA spread does not seem to be a good forecaster (see GOZ)

In GOZ, this is true, but only when the external finance premium is computed using their refined measure

Not tested in the paper

...probability of recession increases markedly once the external finance premium exceeds some "crisis level"...

Where is the evidence?

Do you have in mind some form of non-linearities? What does it mean in a linear model?

Mendoza (2009) has something like that. Non-linearities play an important role there.

Financial crisis ("Sudden stops" in Mendoza) are rare endogenous events, nested in "normal" business cycles and arise when a collateral constraint becomes endogenously binding

A reasonable assumption in the paper:

\uparrow financial stress \Rightarrow \uparrow in ext fin. premium

The data:

Every recession is associated with rise in ext fin. premium

BUT not every recession is a financial crisis

Recessions WITH fin. crisis are different from normal recessions

WEO "facts" are related to financial crisis, not every period of financial stress is a fin. crisis (not even a recession)

Either you condition on recessions driven by financial crisis or you use different "facts"

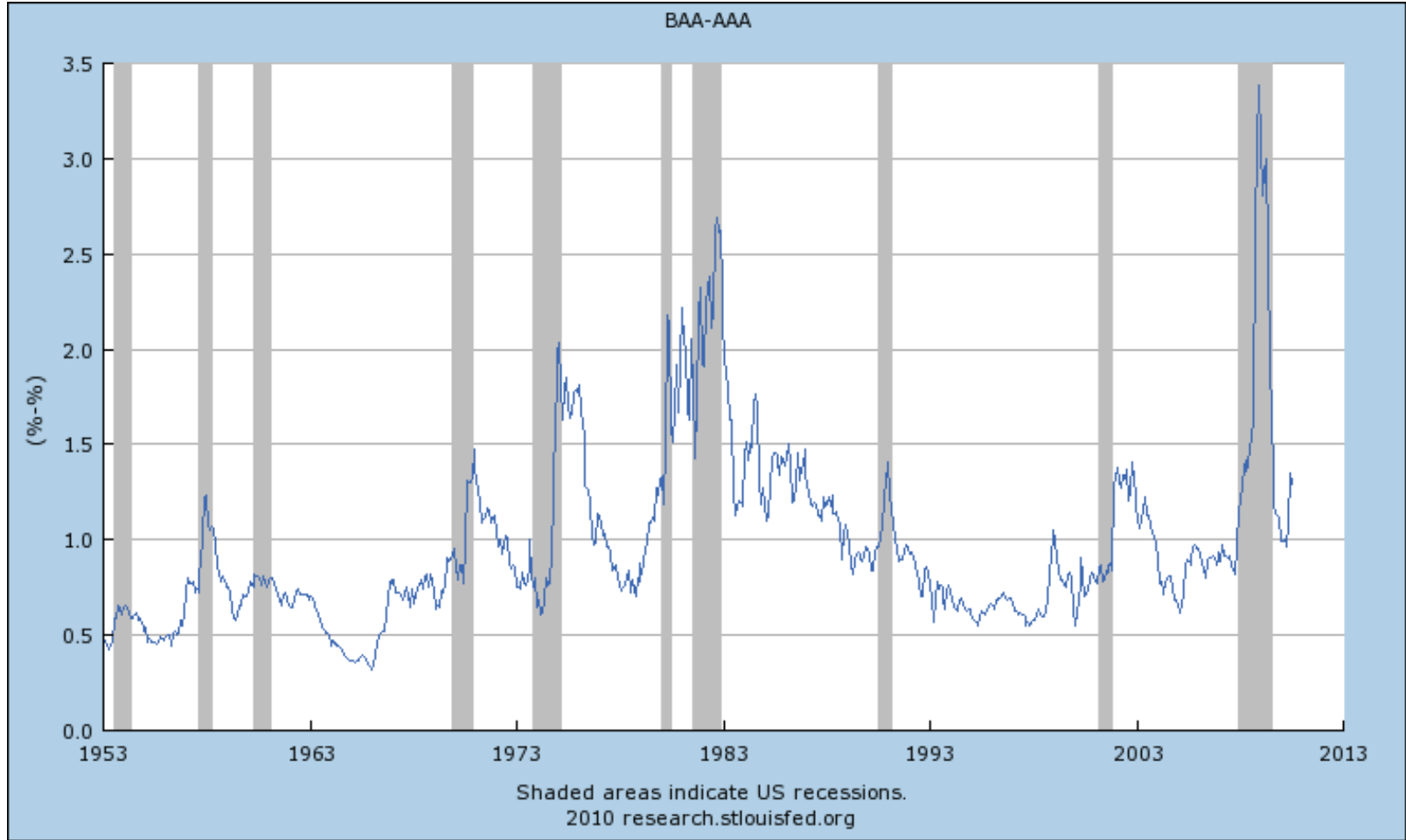
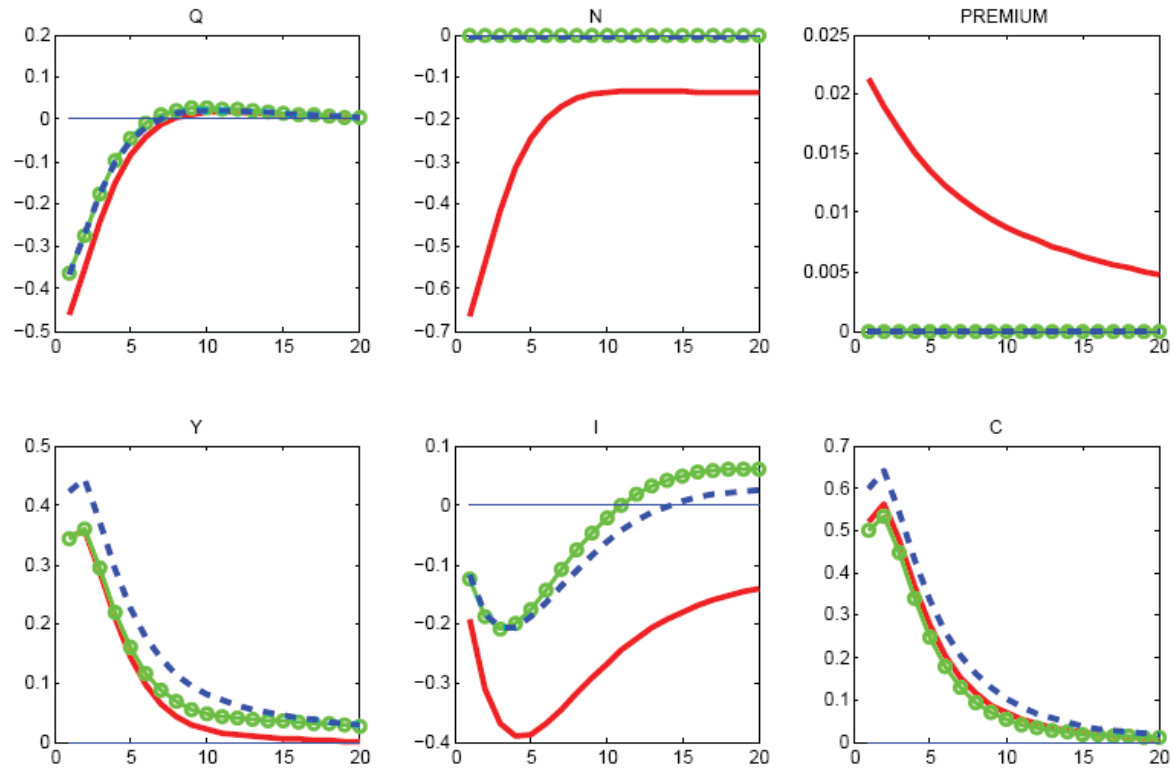


Figure 7: Preference Shock IRF: Baseline (solid), Baseline without financial friction (o), DSGE estimated without financial friction (--).



The role of housing markets

In recessions with financial crisis:

1. different behavior of house price-to-rental ratios
2. mortgage mkts deregulation (11 out of 15)

Figure 3.6. House Price-to-Rental Ratios for Recessions Associated with Financial Crises and Other Shocks
(Peak in output at $t = 0$; quarters on the x-axis)

Expansions before recessions associated with financial crises show rapid rises in house price-to-rental ratios. The ratio declines steeply in recessions.



Source: Organization for Economic Cooperation and Development.

Table 3.6. Financial Crises and Deregulation in the Mortgage Market

Country	Year	Measure
Australia	1986	Removal of ceiling on mortgage interest rates
Denmark	1982	Liberalization of mortgage contract terms; deregulation of interest rates
Finland	1986–87	Deregulation of interest rates; removal of guidelines on mortgage lending
France	1987	Elimination of credit controls
Germany	1967	Deregulation of interest rates
Italy	1983–87	Deregulation of interest rates; elimination of credit ceilings
Japan	1993–94	Reduction of bank specialization requirements; deregulation of interest rates
New Zealand	1984	Removal of credit allocation guidelines; deregulation of interest rates
Norway	1984–85	Abolition of lending controls; deregulation of interest rates
Sweden	1985	Abolition of lending controls for banks; deregulation of interest rates
United Kingdom	1980–86	Elimination of credit controls; banks allowed to compete with building societies for housing finance; building societies allowed to expand lending activities; removal of guidelines on mortgage lending

Source: Debelle (2004).