Discussion of ”The Role of Expectations in Sudden Stops” by Karel Mertens

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The paper in a slide

Q1: Can a flex-price open economy model with ”shifts in expectations” about future productivity induce Sudden Stops?

Q2: Does the dynamic of the main variables quantitatively match the 1998 Korean crisis?

A1: Yes, Sudden Stops arise when agents receive a bad signal about the future which ex-post turns out to be false

A2: Yes, as long as amplification mechanisms are introduced in the model

Relation with the previous literature

To generate Sudden Stops, we do NOT need:

- the bad state to be persistent (Aguiar Gopinath, 2007)
- the economy to be in a potentially vulnerable condition (Mendoza, 2006)
- the future bad state to actually occur (Aguiar Gopinath, 2007)

Main transmission mechanism

Additional ingredients to quantitatively match the Korean experience:

- $\uparrow$ the number of channels through which expected productivity affects current variables
- amplify the propagation mechanisms

3 out of 4 ingredients are related to hours worked:

- labor is predetermined (expected productivity $\rightarrow$ current labor demand)
- firms pay the wage bill in advance by issuing bonds
- risk premium (hence R_t) is decreasing in expected productivity

As $E_t g_{t+1} \downarrow$, two effects on labor demand:

$\Rightarrow$ labor demand $\downarrow$ (direct effect)

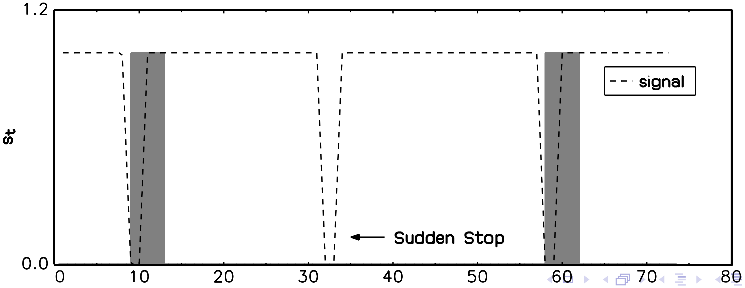
$\Rightarrow$ risk premium $\uparrow$ R_t $\uparrow$ cost of labour$\uparrow$ labor demand $\downarrow$ (indirect effect).

Key feature of the story

Problem: forming expectation on future state of an exogenous process by observing current state and an exogenous signal

Solution: bayesian updating (!)

- bad productivity state is expected every 50 years
- signals are relatively precise in anticipating future states
- bad signals in the good state are expected to occur every 23 years



Robustness of the results

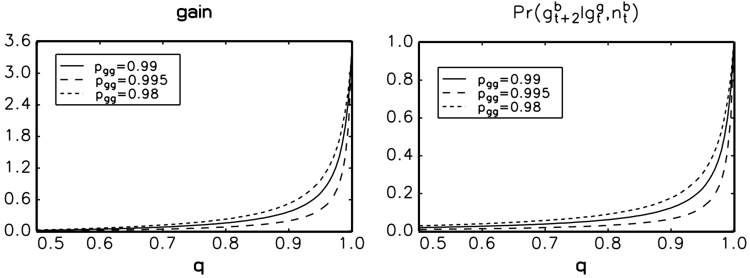
Period	Expected	q=0.99	q=0.95	q=0.93	q=0.90
t=1997:2	g_{t+1}	1.9	1.9	1.9	1.9
	g_{t+2}	0.0	1.2	1.4	1.5
t+1=1998:1	g_{t+2}	-1.3	0.3	0.8	1.2
	g_{t+3}	0.0	1.2	1.4	1.5
t+2=1998:2	g_{t+3}	0.4	1.4	1.6	1.7
	g_{t+4}	1.9	1.9	1.9	1.9

- problem: expected productivity is relatively sensitive to the precision of the signal
- cheap solution: alternative calibrations of μ_{bb} would still imply a low/negative expected productivity
- more general problem: q is a free parameter and it is difficult to think what a "reasonable" calibrated value should be

Robustness of the results

The "gain" by using the signal:

- is maximum when q=1 (current state disregarded)
- is zero when q=0.5 (signal disregarded)
- decays fast as $q \downarrow$
- is decreasing in p_{gg}



Robustness of the results

The "gain" by using the signal related to:

$$Pr(g^b_{t+2}|g^g_t, n^b_t) = \frac{Pr(n^b_t|g^b_{t+2}, g^g_t)Pr(g^b_{t+2}|g^g_t)}{\sum Pr(n^b_t|g^i_{t+2}, g^g_t)Pr(g^i_{t+2}|g^g_t)}$$

which depends on:

- the relative probability of observing the correct vs false signal
- frequency of changes of regimes (when signals are useful)

As $q \downarrow$, $Pr(g^b_{t+2}|g^g_t, n^b_t)$ is affected in two ways:

- $Pr(n^b_t|g^b_{t+2}, g^g_t) \downarrow$ *related to* $(Pr(n^b_t|g^b_{t+2}) = q) \downarrow$

$\Rightarrow$ bad signals are less precise in predicting bad states.

- $Pr(n^b_t|g^g_{t+2}, g^g_t) \uparrow$ $(Pr(n^b_t|g^g_{t+2}) = 1 - q) \uparrow$

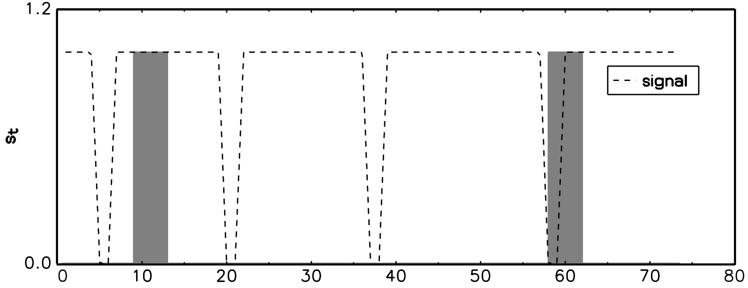
$\Rightarrow$ signals are more likely to predict bad states when those do not actually materialise.

Robustness of the results

The "gain" by using the signal ↓ because:

1) lower synchronisation of bad signals with bad states
2) the frequency of bad signals in the good state ↑ for a given degree of synchronisation

Graphically:



General Points

The model

- prediction: Sudden Stops are (inevitable) consequences of the occurrence of rare bad and false signals

$\Rightarrow$ there is nothing policy can do to avoid it (it is just bad luck !!)

$\Rightarrow$ there are no policy lessons to be drawn

- supporting arguments: pre- and post- crisis

Alternative frameworks/explanations

Back to the model

- there is not much agents can do given they observe an exogenous signal

Concluding Remarks

- the paper answers an important question
- the paper imposes a formal structure on the idea of ”shocks to expectations”
- it might be worth thinking about alternative ways of modelling the signal