Comments: Gilchrist, Yankov, Zakrajšek

*Credit Market Shocks and Economic Fluctuations.*

Jon Faust

http://e105.org/e266
1. Amazing variables
Great paper

- 1. Amazing variables
- 2. Marginal info. content
- 3. Realtime info. content
Great paper

1. Amazing variables
2. Marginal info. content
3. Realtime info. content
4. Kick at Egon’s ankle’s a bit
1. Amazing variables

- Some of these variables have an amazing fit to future IP and NFP
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- Some of these variables have an amazing fit to future IP and NFP
- Graph an EDF variable at $t$ with subsequent 12 month change in the real variable
  real variables: IP12, NFP12
- Spread is maturity=4 (long) risk quintile=2
At first, I suspected EDF simply had dates shifted 12 months
What about traditional spreads?

- Baa minus Treasury 10-year constant maturity
EDF(4,2) looks shifted left about a 12 mo.
But note EDF(1,2) looks like Baa spread
EDF(2,2) shifting left
EDF(3,2) shifting left
Conclusion

- Amazing variables
- Duration matters for how forward looking these spreads are
- Traditional Baa presumably index has fairly short duration
Paper’s premise is that spreads have some predictive power for real activity.

Of course, this result pretty shaky.

Lots of papers; DePace, 2009.
Much of this work doesn’t pay careful attention to other predictors

We may care most about marginal information

Do we need to bother constructing these complicated spreads?
Existing evidence

- In realtime, large dataset context, the spreads don’t seem to add much for U.S. DePace, 2009 building on Faust and Wright, forthcoming

- So let’s see how these new spreads do I stuck them in the machinery from Faust-Wright
These results only suggestive
No stat. sig.; thrown together
Data

- IP, NFP, and the spreads from the paper
- Other predictors: Stock-Watson 110 variable monthly dataset (1990-2006)
Pseudo-realtime exercise

- Initial estimation, all but last 3 yrs of data (36 obs.)
- Estimate, forecast; roll estimation sample forward one obs.; repeat
- Similar to paper, shorter forecast period prefer to see the paper use longer est. period
Models

- Univariate AR
- Several factor methods
  not reported
- Bayesian model averaging (BMA)
  this performed consistently the best
Forecast using many simple models

Average the resulting forecasts
use data-based posterior weights

Note: Equal weighting been shown to perform freakishly well
and BMA seems to do about same or a bit better
Each model is the AR plus one lag of one extra predictor

We do this for each extra predictor
Three versions of other predictors

- Just the 110 Stock-Watson variables
- Just the 20 EDF variables
- Both: All 130
## Monthly, RMSE

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<th>EDF</th>
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- These variables amazing
- And the other variables don’t help
This somewhat allays overfitting concerns
Treated equally among 130 predictors, these still come through
Quarterly data

- Much work in this area is quarterly and on GDP
- No reason not to predict quarterly variables in this framework
  All the LHS variables span at least a quarter
Quarterly data

- Can still keep monthly data
  In any month, you can predict, say the annual change in GDP or IP from the current quarter

- For comparability to quarterly work, I crunched to quarterly data
  annual growth in quarterly average real variable, spread is the final month of quarter
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<td>gdp</td>
<td>0.76</td>
<td>0.72</td>
<td>0.62</td>
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Same conclusion as above
3. Realtime data

- So far this is pseudo realtime
  Where as usual, pseudo means not

- Realtime data often matters a lot
  e.g., Faust-Wright, forthcoming
Small exercise

- Faust-Wright datasets updated through 2003
- Predict 2001-2003
  end in 2003 b/c of Greenbook blackout
**Small exercise**

- **Realtime**

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<td>gdp</td>
<td>0.81</td>
<td>0.91</td>
<td>0.70</td>
<td>0.90</td>
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- **Note:** Greenbook 0.80
Realtime caveats

- Timing of the EDF variables not clean within the quarter
- EDF variables constructed using full sample
May be substantial marginal realtime predictive power of the EDF variables
Egon’s ankle

- The sample period is 1990 to present
- Some variables have behaved uniquely over this period
- If you believe this sample representative, I have a risk model I’d like to sell you
More specifically

- This sample has 2 events
- The EDF variables essentially are flat in normal times and then spike
Spike shifting

- By changing the maturity, we seem to be able to shift the timing of the spikes
  In limit, allow us to build a spanning set of spikes!? 

- Big danger of overfitting 

- Allayed a bit by results above
Conclusions

- I’d be a bit wary at this point
- Like to see longer data series
  Maybe can approximate with smaller sample of longer bonds
Egon’s other ankle: structural results

- I like the impulse response data summary and found it very useful
- Natural way to look at the dynamic factor structure of the data
But

- The **structural** interpretation is, in my view, utter nonsense
- Perfectly sensible to report relation between orthogonalized EDF shock and other variables
  
  but there is no structural interpretation
‘Indeed, shocks emanating from the corporate bond market account for more than 20 percent of the forecast error variance in economic activity’

This is typical of the way it is discussed.
I don’t like this

- Many familiar reasons
I don’t like this

- Many familiar reasons
- For fi. market variables in partic.
I don’t like this

- The orthogonalization makes no structural sense
I don’t like this

- The orthogonalization makes no structural sense
- Further, fi. market variables are supposed to be first place all info publicly reflected
- With enough fi. data, all shocks emanate from financial markets
- Talking this way a bad habit to get into.
The bootstrap: not clearly justified
I wish folks would either state that something is an ‘informal bootstrap’ or give argument under which valid

Asymptotic $p$-vals. for DM-stats very suspicious in this context
Wrapping up

- Brilliant work bringing our attention to these variables
- Look forward to much work with them