

Business Sentiment in South Africa

Confidence and Uncertainty

Laurie Binge

GEM Presentation

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Business Sentiment



Business Sentiment

Confidence:

- Perceptions of the current and expected future business climate.

Uncertainty:

- Agents' inability to forecast the probability of future events occurring.
- Lack of knowledge of the set of possible outcomes and the probability of each occurring.

Global financial crisis & Great Recession

- associated with low levels of confidence and heightened uncertainty.



Confidence

Measurement:

- Qualitative surveys
- Current vs. forward-looking

Relationship:

- Animal spirits view vs. information/news view
- Useful as coincident/leading indicators
- Useful for now-casting and forecasting



Uncertainty

Measurement:

- volatility in the stock market, bond yields or exchange rates
- dispersion of professional forecasts
- references to “uncertainty” in the media
- dispersion of responses from qualitative forecasts

Relationship:

- Wait-and-see effect
- other channels
- generally has anti-cyclical relationship



Data



BER Business Tendency Surveys

Questionnaires completed by senior executives

Qualitative - *Up, The Same, or Down*

1,000 firms in manufacturing & services sectors

1,400 firms in construction & trade sectors (retail, wholesale and motor vehicles)

Around 1,000 obs each quarter = 106,274 obs

Panel sample: partly fixed & partly rotating

Advantages:

- Ask the relevant agents
- Available long before official stats
- limited revision (little seasonality)



Indicators



RMB/BER Business Confidence Index

leading indicator for SA business cycle

used by SARB as a component of the official composite leading indicator series

Constructed from a specific question that appears in all of the surveys:

(Q1): *“Are prevailing business conditions: Satisfactory, Unsatisfactory?”*

Weighted percentage of respondents that rated prevailing business conditions as *“Satisfactory”* in a particular sector.

Current conditions or “Activity”



Confidence Indicators

Derived from the same questions that are present in all surveys

Current and forward-looking:

(Q2A): “[Development in current quarter] Compared with the same quarter of a year ago, are General Business Conditions: Better, the Same, or Poorer?”

(Q2P): “[Development in next quarter] Compared with the same quarter of a year ago, will General Business Conditions be: Better, the Same, or Poorer?”

Cross sectional average of survey responses:

$$CC.Confidence_t = Frac_t(Up) - Frac_t(Down)$$

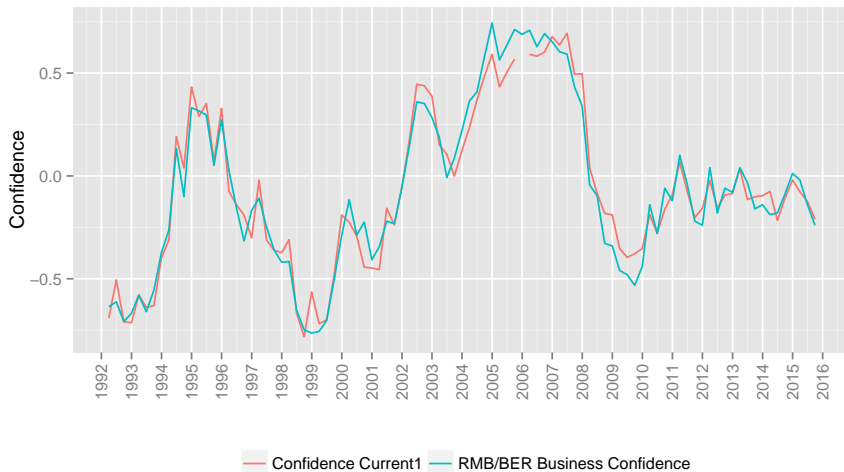
$$FL.Confidence_t = Frac_{t+1}(Up) - Frac_{t+1}(Down)$$

For each sector the responses are weighted by firm size and subsector weight

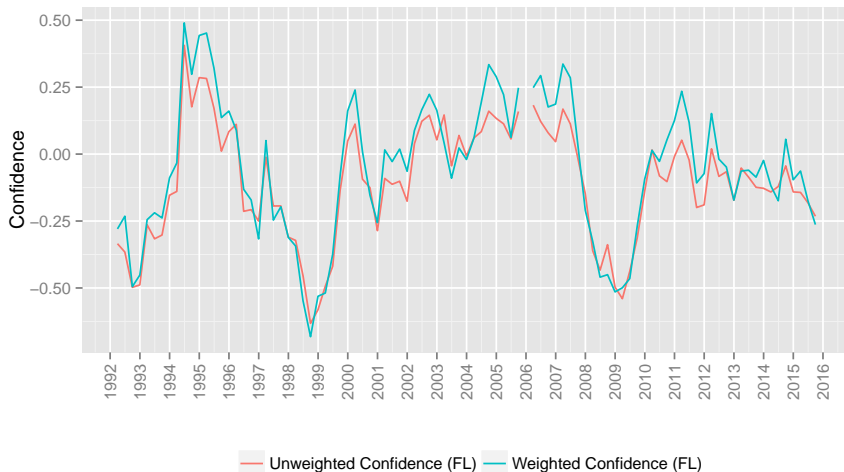
Sectoral indicators weighted by GDP share to form aggregate indicators



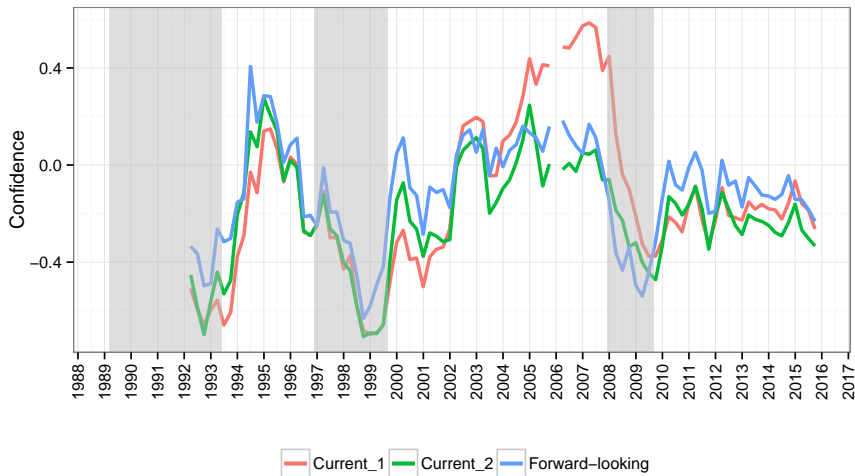
Confidence Indicators



Confidence Indicators



Confidence Indicators



Uncertainty Indicators

Two measure Capture a low level of predictability

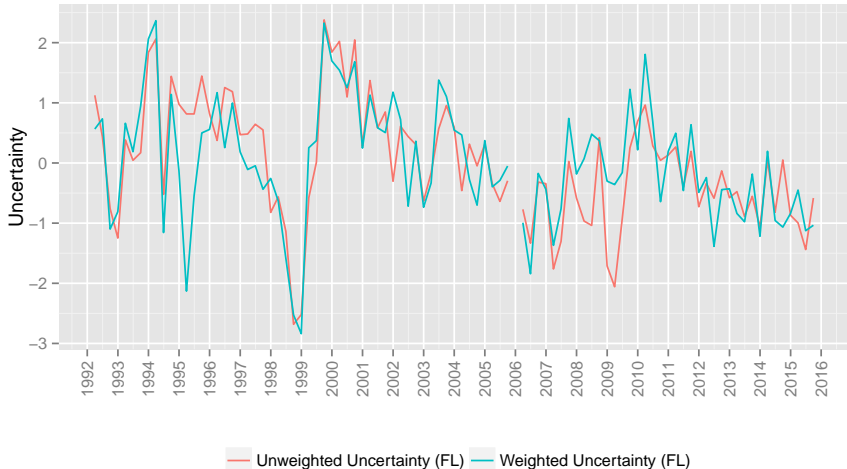
- ① Cross-sectional dispersion of forward-looking responses
- ② Cross-sectional dispersion in individual firm's expectation errors

(Q2P): *"[Development in next quarter] Compared with the same quarter of a year ago, will General Business Conditions be: Better, the Same, or Poorer?"*

$$U_t = \sqrt{(Frac_t(Up) + Frac_t(Down) - [Frac_t(Up) - Frac_t(Down)]^2)}$$



Uncertainty Indicators



Uncertainty Indicators

Potential problems:

- ① Time-varying cross-sectional dispersion in survey responses might simply be due to different firms reacting differently to aggregate shocks, even with constant uncertainty.
- ② Time variation in the dispersion of expectations might simply reflect time variation in the heterogeneity of expectations, without the degree of subjective uncertainty changing over time.

The same question is used

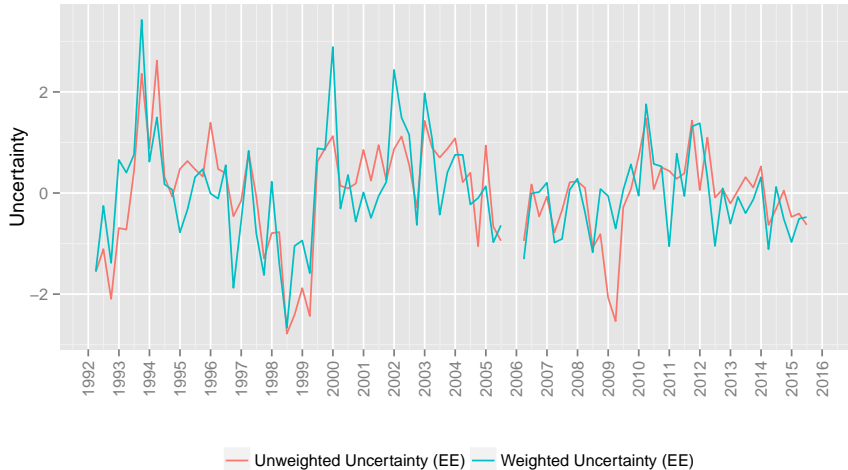
Survey in period t used to extract the expectations of general business conditions in time $t + 1$ relative to $t - 3$.

Errors calculated by subtracting these expectations from the actual realisations from the survey at time $t + 1$, relative to $t - 3$.

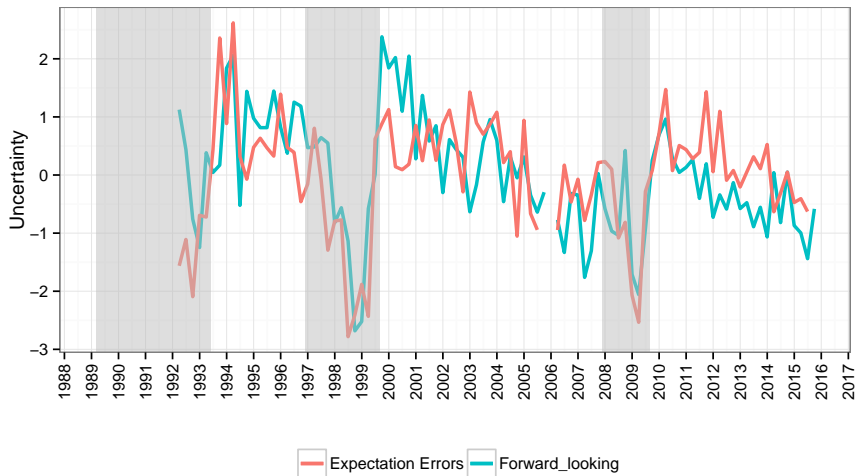
Table 1: Possible Expectation Errors



Uncertainty Indicators



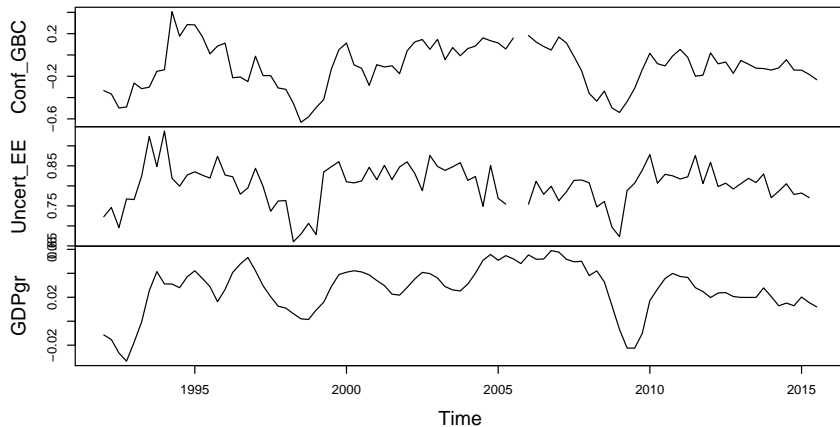
Uncertainty Indicators



Cyclical Analysis and Comovement

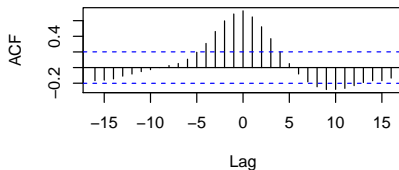


Comovement

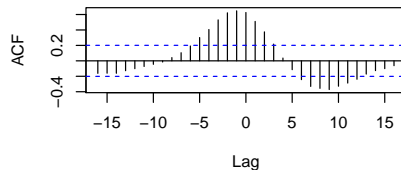


Comovement

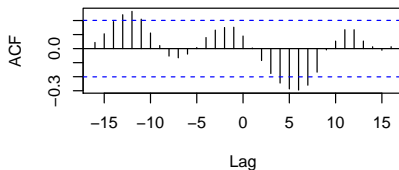
Act_GBC & GDPgrowth



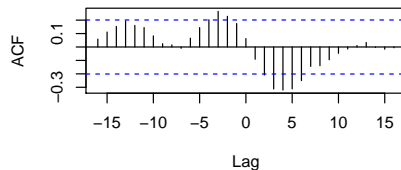
Conf_GBC & GDPgrowth



Unc_fl & GDPgrowth



Unc_ee & GDPgrowth



VAR Analysis



VARs

The specification aims at providing preliminary evidence on the dynamic effects of confidence and uncertainty shocks on real activity. In the bivariate case, both variables are treated as endogenous:

$$y_t = \beta_{10} - \beta_{12}z_t + \gamma_{11}y_{t-1} + \gamma_{12}z_{t-1} + \epsilon_{yt}$$

$$z_t = \beta_{20} - \beta_{21}y_t + \gamma_{21}y_{t-1} + \gamma_{22}z_{t-1} + \epsilon_{zt}$$



Granger causality tests

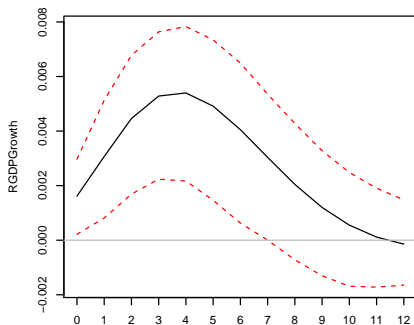
Table 2:Granger causality tests

Granger causality H0:	statistic	p-value
Conf_CC do not Granger-cause RGDPGrowth	3.939**	0.02
RGDPGrowth do not Granger-cause Conf_CC	3.563**	0.03
Act_GBC do not Granger-cause RGDPGrowth	2.351*	0.10
RGDPGrowth do not Granger-cause Act_GBC	2.95*	0.06
Conf_GBC do not Granger-cause RGDPGrowth	4.316**	0.01
RGDPGrowth do not Granger-cause Conf_GBC	2.645*	0.07
Uncert_fl do not Granger-cause RGDPGrowth	0.605	0.55
RGDPGrowth do not Granger-cause Uncert_fl	1.375	0.26
Uncert_ee do not Granger-cause RGDPGrowth	0.552	0.58
RGDPGrowth do not Granger-cause Uncert_ee	2.908*	0.06
unw.Uncert_ee do not Granger-cause RGDPGrowth	3.004*	0.05
RGDPGrowth do not Granger-cause unw.Uncert_ee	3.341**	0.04



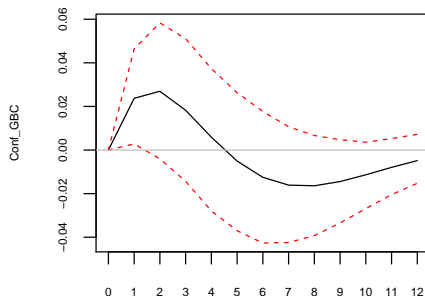
Confidence IRFs

Orthogonal Impulse Response from Conf_GBC



95 % Bootstrap CI, 1000 runs

Orthogonal Impulse Response from RGDPGrowth



95 % Bootstrap CI, 1000 runs



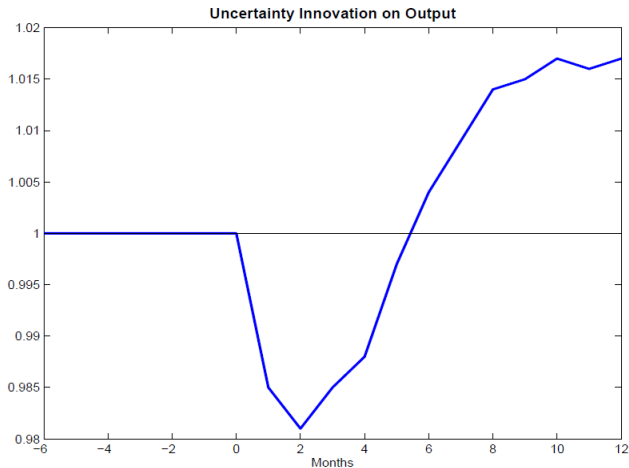
Further analysis

Confidence: - Are they useful as leading or coincident indicators of the business cycle (more than BER BCI) - Are they useful for now-casting and forecasting (even after fundamentals) - Estimate in levels - Non-linear and asymmetric



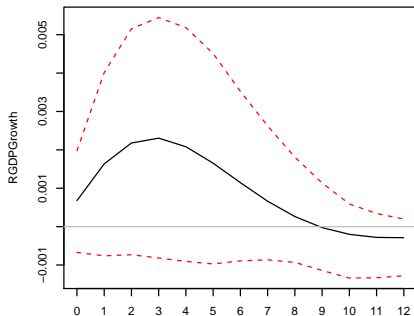
Wait-and-See Effect

Figure 2: Replication of Wait-and-See in Bloom (2009)



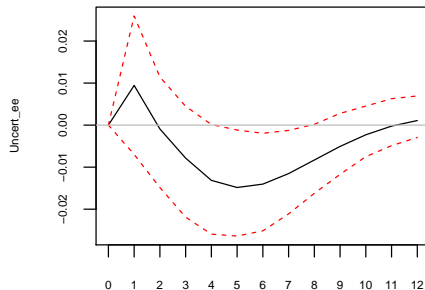
Uncertainty IRFs

Orthogonal Impulse Response from Uncert_ee



95 % Bootstrap CI, 1000 runs

Orthogonal Impulse Response from RGDPGrowth

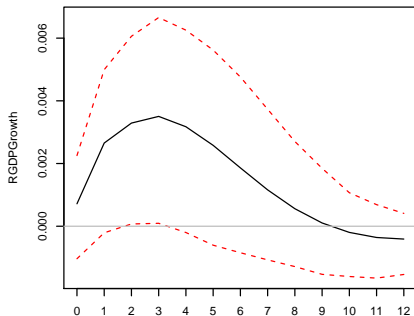


95 % Bootstrap CI, 1000 runs



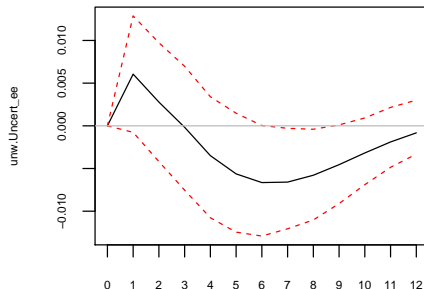
Uncertainty IRFs

Orthogonal Impulse Response from unw.Uncert_ee



95 % Bootstrap CI, 1000 runs

Orthogonal Impulse Response from RGDPGrowth



95 % Bootstrap CI, 1000 runs



Further analysis

Uncertainty (puzzle): - Why is the timing different - Other uncertainty measures - Aggregate data differently - Noisy (dummy or forecastable component) - Misspecified VAR - larger system - Estimate in levels - Non-linear and asymmetric - survey data full of errors - low frequency data



Conclusion



