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FORECASTING PRINCIPLES AND PRACTICE

A comprehensive introduction to the latest forecasting methods using R. Learn to improve your forecast accuracy using dozens of real data examples.



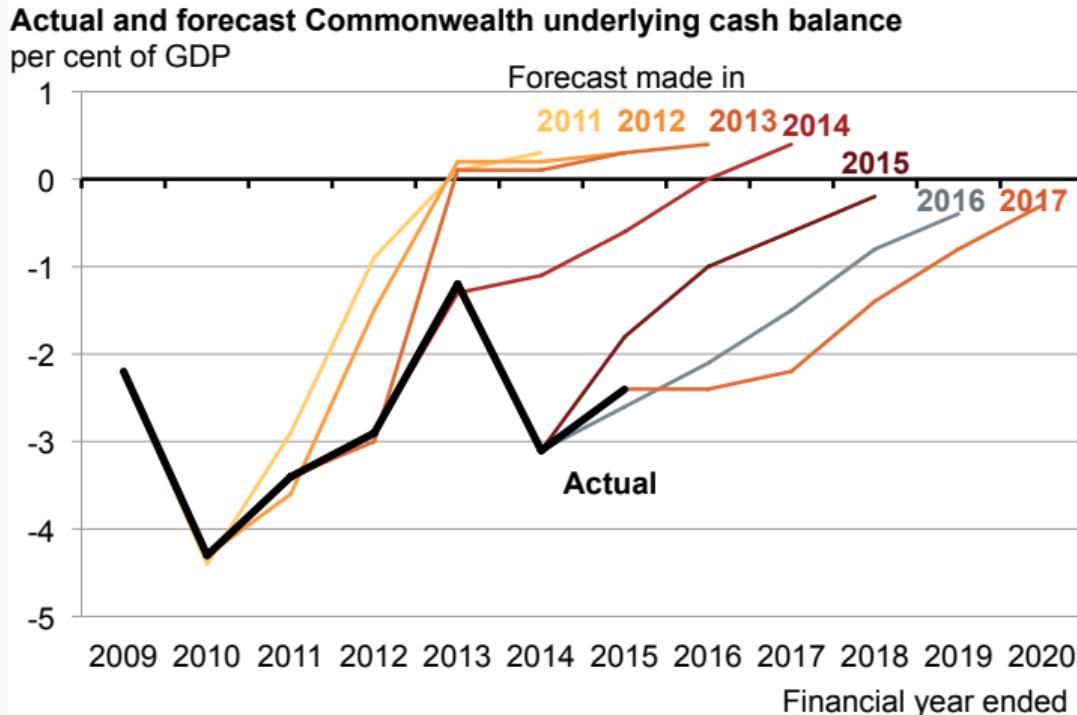
1. Getting started

1.1 What can we forecast?

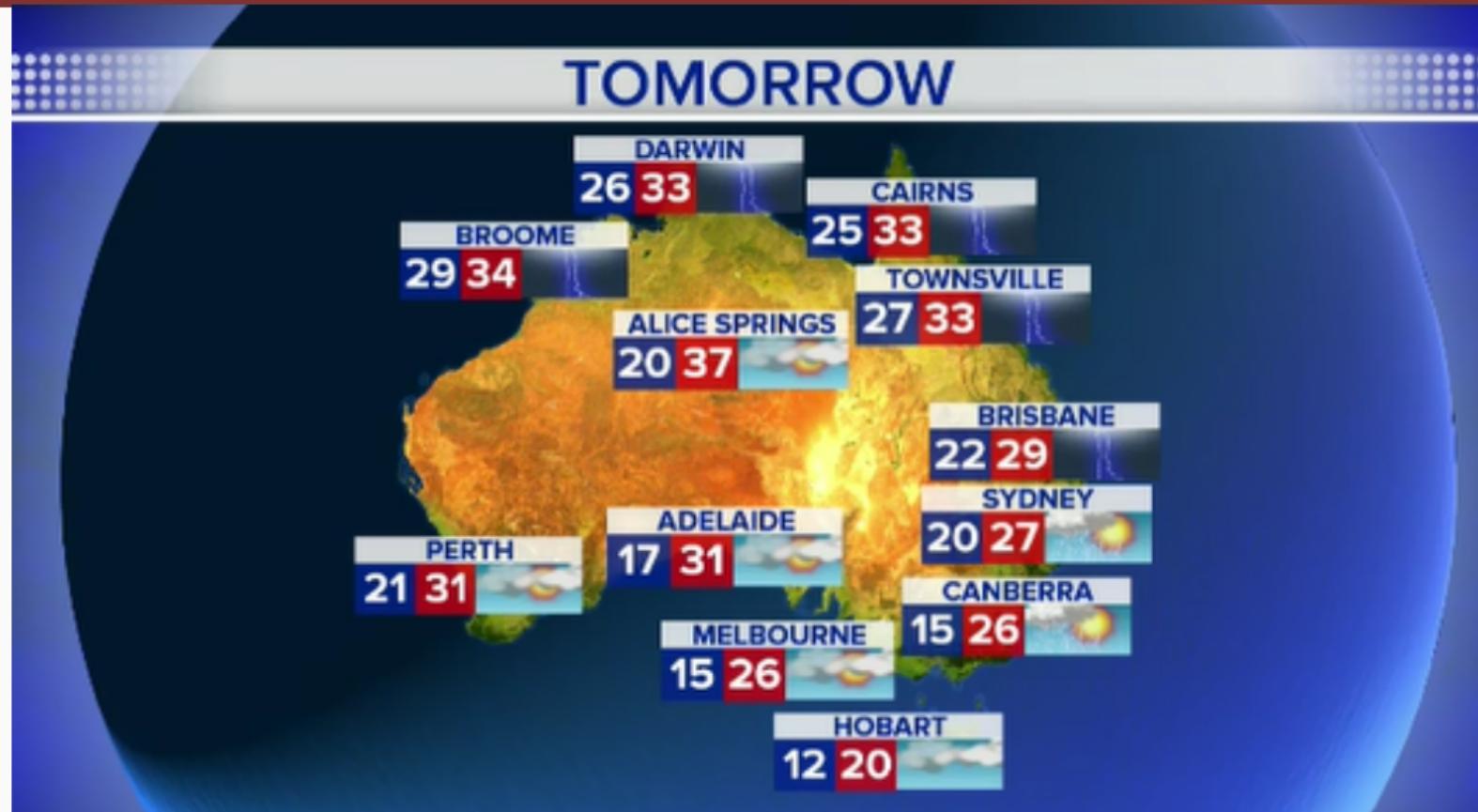
OTexts.org/fpp3/

Forecasts that aren't forecasts

Commonwealth plans to drift back to surplus **GRATTAN** Institute
show the triumph of experience over hope



What can we forecast?



What can we forecast?



What can we forecast?



What can we forecast?



What can we forecast?



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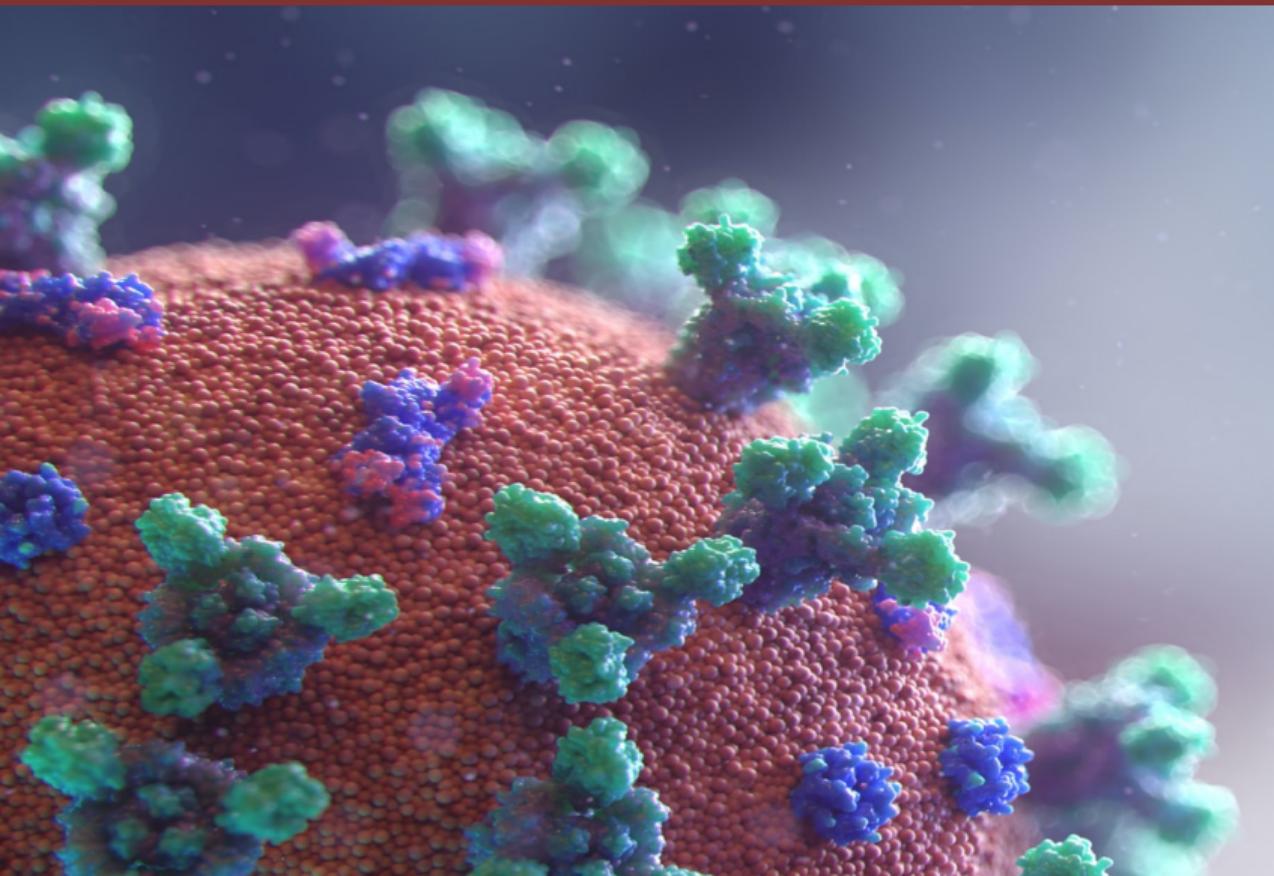
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What can we forecast?



Which is easiest to forecast?

- daily electricity demand in 3 days time
- time of sunrise this day next year
- Google stock price tomorrow
- Google stock price in 6 months time
- maximum temperature tomorrow
- exchange rate of \$US/AUS next week
- total sales of drugs in Australian pharmacies next month
- timing of next Halley's comet appearance

Which is easiest to forecast?

- 1 time of sunrise this day next year
- 2 timing of next Halley's comet appearance
- 3 maximum temperature tomorrow
- 4 daily electricity demand in 3 days time
- 5 total sales of drugs in Australian pharmacies next month
- 6 Google stock price tomorrow
- 7 exchange rate of \$US/AUS next week
- 8 Google stock price in 6 months time

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- how do we measure “easiest”?
 - what makes something easy/difficult to forecast?

Forecastability factors

Something is easier to forecast if:

- 1 we have a good understanding of the factors that contribute to it
- 2 there is lots of data available
- 3 the future is somewhat similar to the past
- 4 the forecasts cannot affect the thing we are trying to forecast