

Pairs Trading - Relative Value

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Outline

- 1 Introduction
- 2 Pairs Trading
- 3 Relative Value

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- Pairs trading can remove market risk and leave exposure to specific risk
- Depends upon being able to short securities
 - Professional ability to borrow securities
 - Use futures or contract-for-difference

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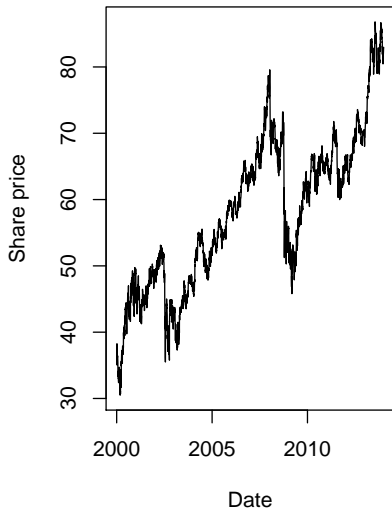
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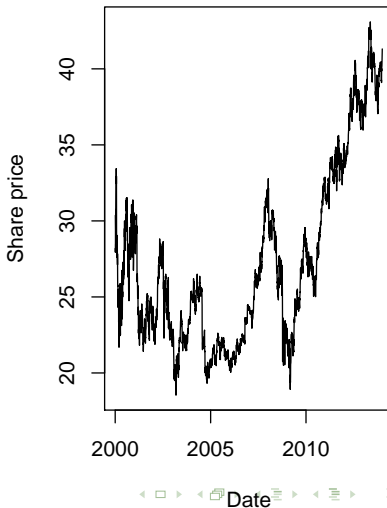
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Pairs

Pepsi

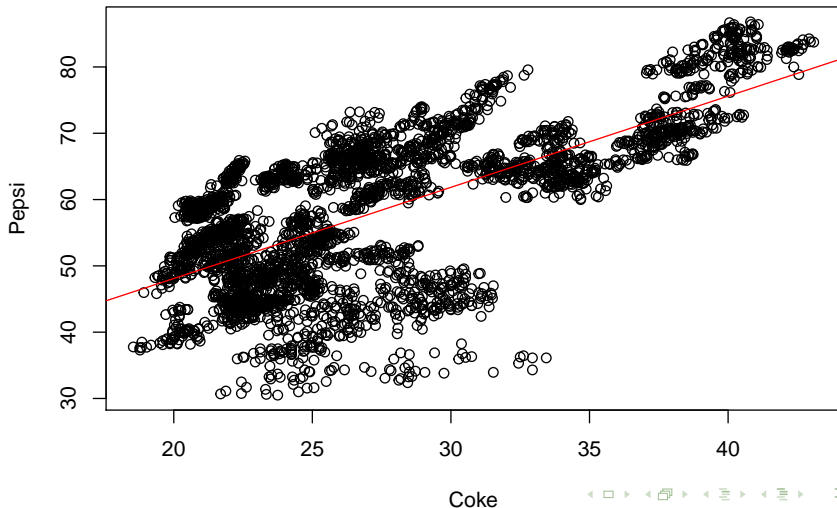


Coke

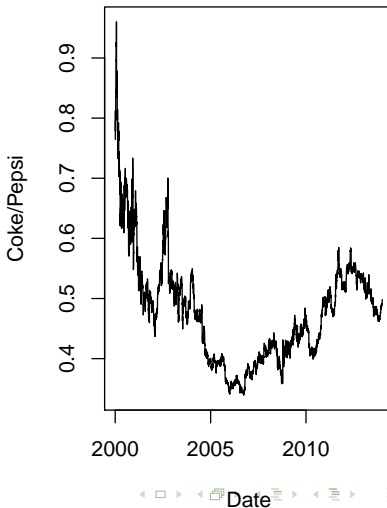
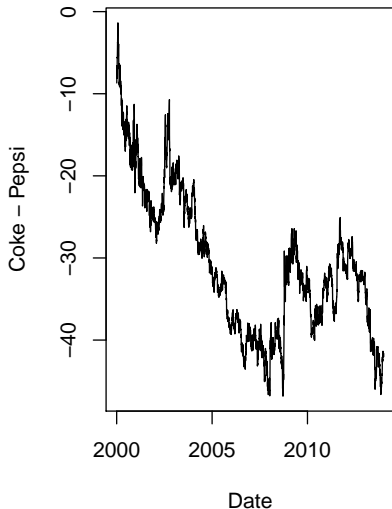


Coke vs Pepsi

Plot of Coke and Pepsi



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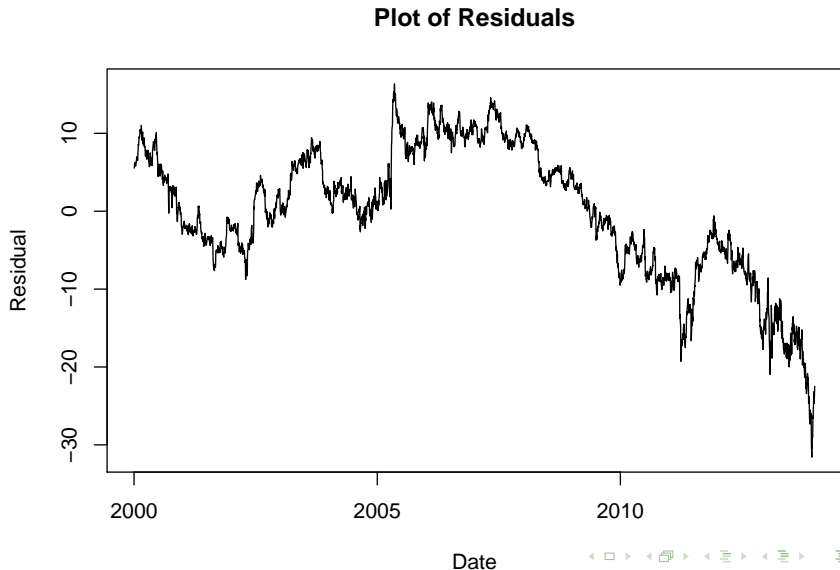
- Can use the Engle-Granger method and check that the residuals from the regression are *stationary*
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- *An Error-Correction Model can be used to assess the speed of the return to the set relationship*

Regression: Coke and Pepsi

	Estimate	Std. Error	t value	$\Pr(> t)$
(Intercept)	20.58	0.68	30.16	0.00
Coke	1.37	0.02	56.18	0.00

The regression of Pepsi on Coke is only valid if the two are cointegrated. Residuals must be checked.

Residuals



Dickey-Fuller

	Test	1pct	5pct
τ	-2.52	-3.96	-3.41
ϕ_2	2.80	6.09	4.68
ϕ_3	4.18	8.27	5.34

Dickey-Fuller tests show that the null of a unit root cannot be rejected (τ). Coke and Pepsi are not cointegrated.

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- Yield curve, duration and changes in short-term interest rates