1. Stationarity: (Table-4)

- a. All the series are not stationary.
- b. Almost all series have stationary first difference and 12th difference.
- c. Milk, Apples, Bananas, Lemons, Potatoes and Lettuce are refused to have a unit root.

2. Trend: (Table-2 and 3)

I used parametric and nonparametric tests on testing whether there is a trend. Both agree that *Peanut Butter* may not have a trend.

3. Structural Break:

Test Procedure:

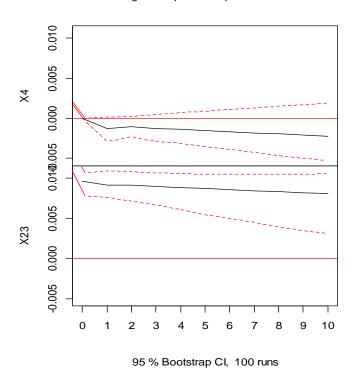
- (1) Test structural break over the whole period using OLS-CUSUM, MOSUM, supF, expF tests
- (2)If rejected, find a structural break by BIC/RSS. And test the structural break on divided intervals.
- (3) Repeat until all the interval has no structural break.

Results:

Name	Beef	chicken	milk	apple	electricity
beef	NA	67	No Breaks	No Breaks	191
chicken	155	NA	110,163,204	92,183	No Breaks
milk	No Breaks	No Breaks	NA	No Breaks	No Breaks
apple	130	225	No Breaks	NA	No Breaks
electricty	No Breaks	67	No Breaks	31 ,58	NA

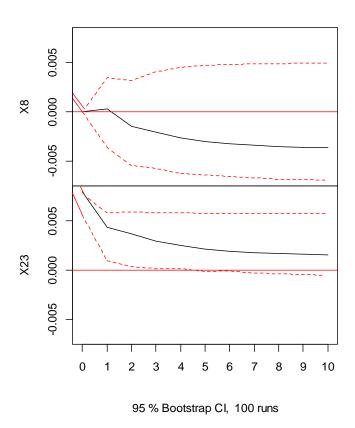
- 4. Cointegration Test with allowance of structural breaks:
 - Only *Electricity and Apple* are cointegrated in the interval [31,57] and [59, 259].
- 5. Irf from electricity to food vectors.
- (1) Electricity==>Beef



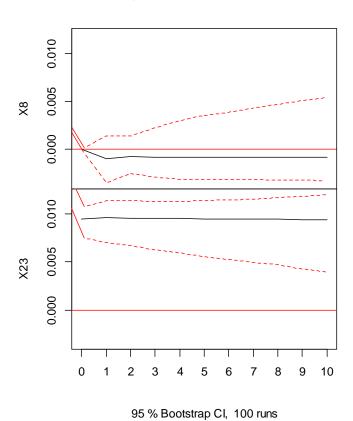


(2)Electricity==>Chicken

Orthogonal Impulse Response from X23

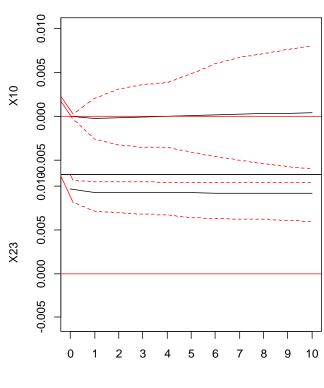


Orthogonal Impulse Response from X23



(3)Electricity==>Milk

Orthogonal Impulse Response from X23



95 % Bootstrap CI, 100 runs

(4)Electricity==>Apple

