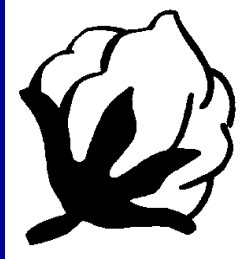


Cotton Pricing and World Textile Demand



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Economist



International Cotton Advisory Committee

2015 Research Associates Program
Washington DC
Jun 2015

Overview

- Cotton Market fundamentals
- World Textile Demand
- Cotton Prices



ICAC's Statistics on Cotton Supply & Use

Users



- Member governments
- Private sector
- Academia
- International Organizations
- General Public

Data collected for each country:

- Beginning stocks
- Imports
- Exports
- Production (area, yield)
- Consumption
- Ending stocks

It is important to reconcile stock and use estimates in a national cotton balance sheet, to help decision making in the public and private sectors



MARKET FUNDAMENTALS

World Supply =
Beginning Stocks + Production

World Demand =
Mill Use + Ending Stocks

World Supply = World Demand



Example 1
World 2013/14 season
Mill Tons

Beginning Stocks = 18

Production = 26

Supply = ? 44

Mill Use = 24

Ending Stocks = 20

Demand = ? 44

Supply = Demand

higher/lower production
=
higher/lower Ending Stocks



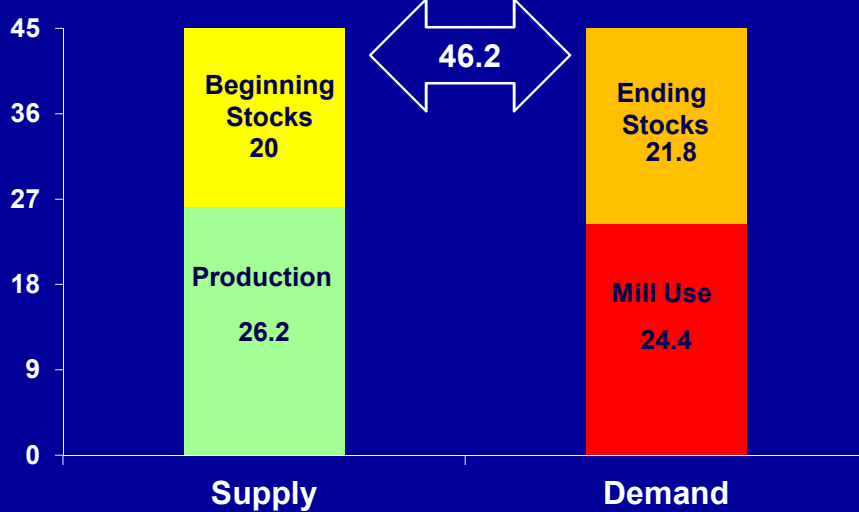
Supply = Demand

higher/lower mill use
=
lower/higher Ending Stocks



World Cotton Fundamentals 2014/15

Million tons



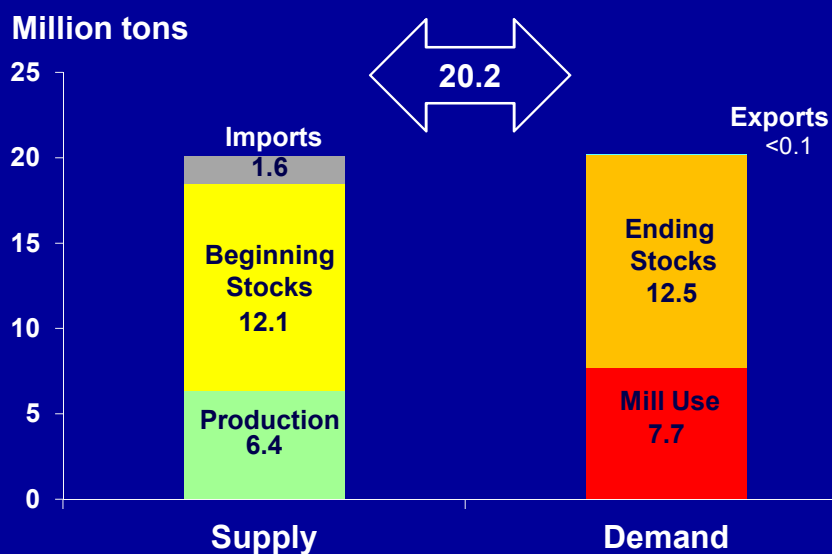
Country Supply =
Beginning Stocks + Production +
Imports

Country Demand =
Mill Use + Ending Stocks +
Exports

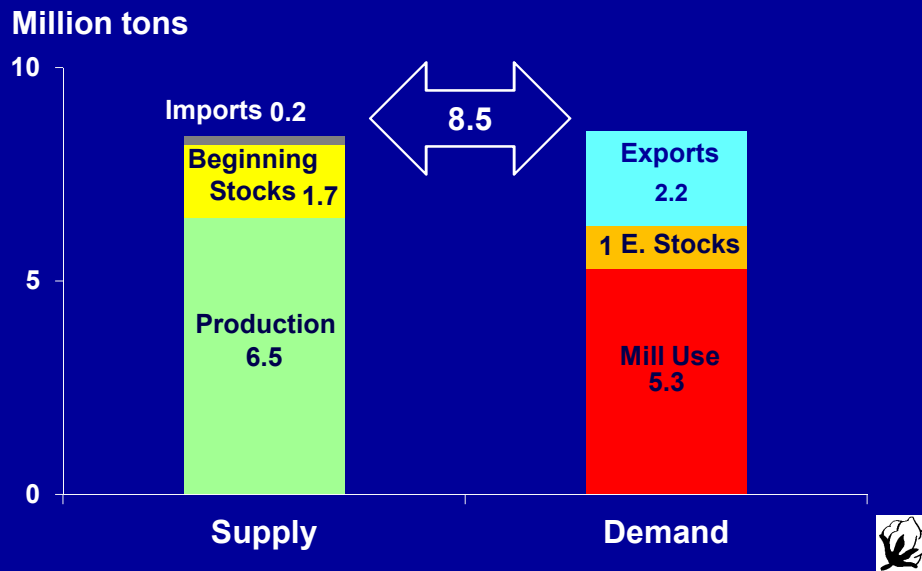
Country Supply = Country Demand



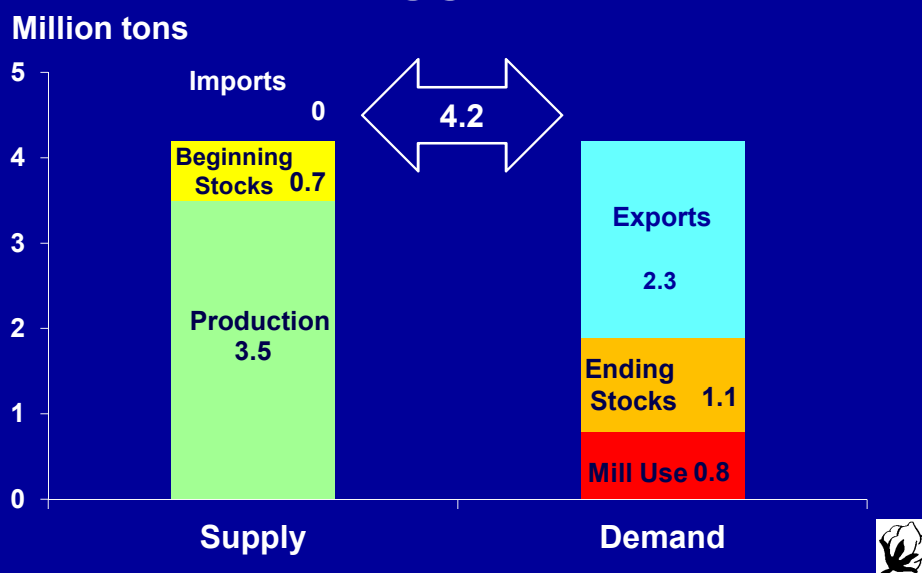
Cotton Fundamentals 2014/15 China



Cotton Fundamentals 2014/15 India



Cotton Fundamentals 2014/15 USA



Important Concepts

- **World Ending Stocks =**
Beginning Stocks + Production – Mill Use
- **World Stocks to Use Ratio =**
Ending Stocks / Mill Use

World Ending Stocks 2014/15 = 21.8

World Stocks to Use Ratio 2014/15 = 21.8 / 24.4
= 0.89

Important Concepts

- **Country Ending Stocks =**
Beg. Stocks + Prod. + Imports – Exports – Mill Use
- **Country Stocks to Mill Use Ratio =**
Ending Stocks / Mill Use
- **Country Stocks to Use Ratio =**
Ending Stocks / (Mill Use + Exports)

INDIA:

Ending Stocks 2014/15 = 1.7

Stocks to Mill Use Ratio 14/15 = 1.7 / 5.3 = 0.33

Stocks to Use Ratio 14/15 = 1.7 / (5.3 + 2.0) = 0.23

Last methodological issue: SMU

- If Stocks-to-mill use ratio = $\frac{\text{Ending Stocks}}{\text{Mill Use}}$

↑ SMU : ↑ Ending stocks
 ↓ Mill Use

↓ SMU : ↓ Ending stocks
 ↑ Mill Use



WORLD TEXTILE DEMAND

- WTD is a report of world end-use consumption of textile fibers, mill use, production and trade of cotton yarn and fabric and production of chemical yarn for over 100 countries.
- The report is divided in 4 Chapters
 1. World Economic Outlook
 2. Demand for end-use products
 3. Mill consumption of cotton
 4. Yarn and Fabric Market

WORLD TEXTILE DEMAND



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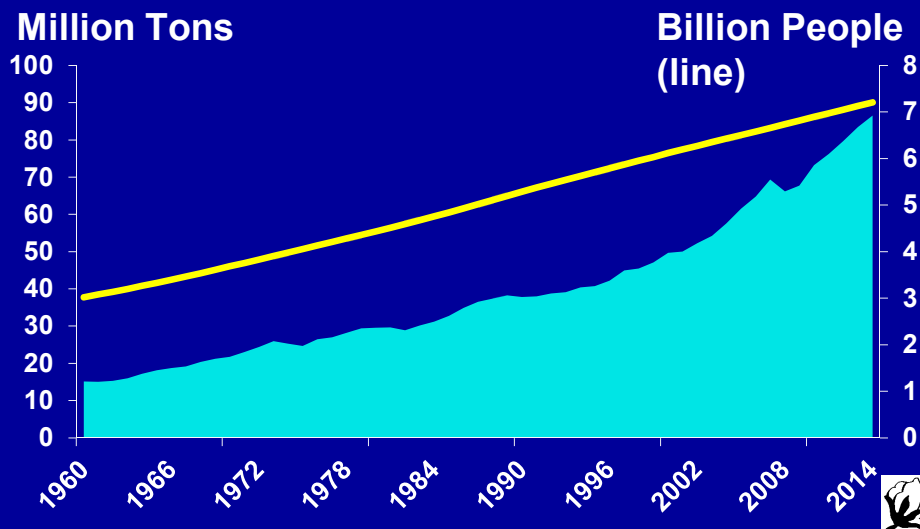
Chapter 97 THE TEXTILE SECTOR IN THE COUNTRIES OF THE PACIFIC

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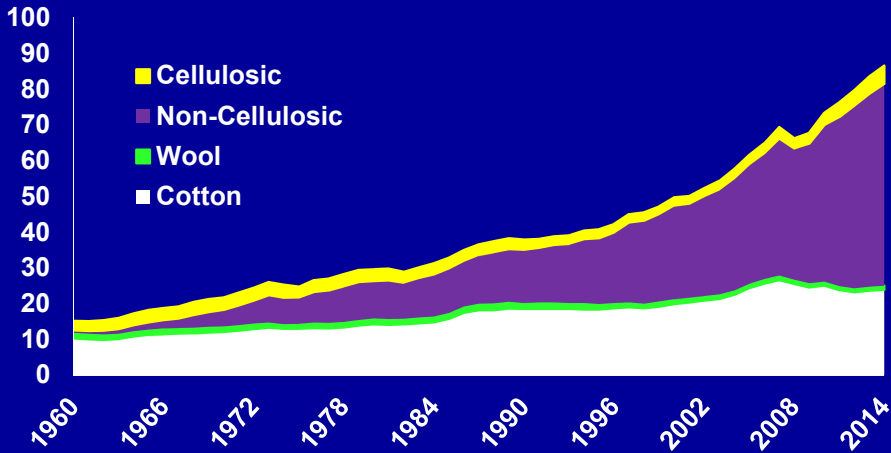
Chapter 100 THE TEXTILE SECTOR IN THE COUNTRIES OF THE CARIBBEAN

World Consumption of Textile Fibers and Population

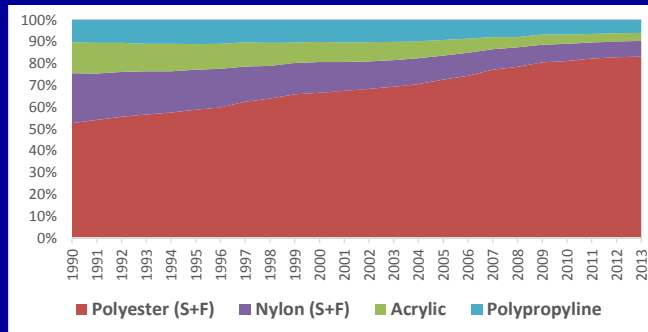


World Consumption of Textile Fibers

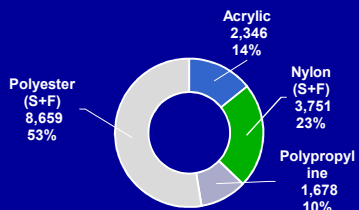
Million Tons



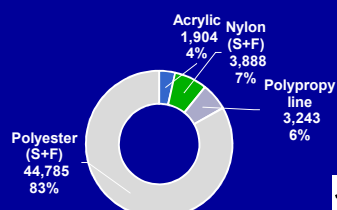
Synthetic Fibers: Market Share %



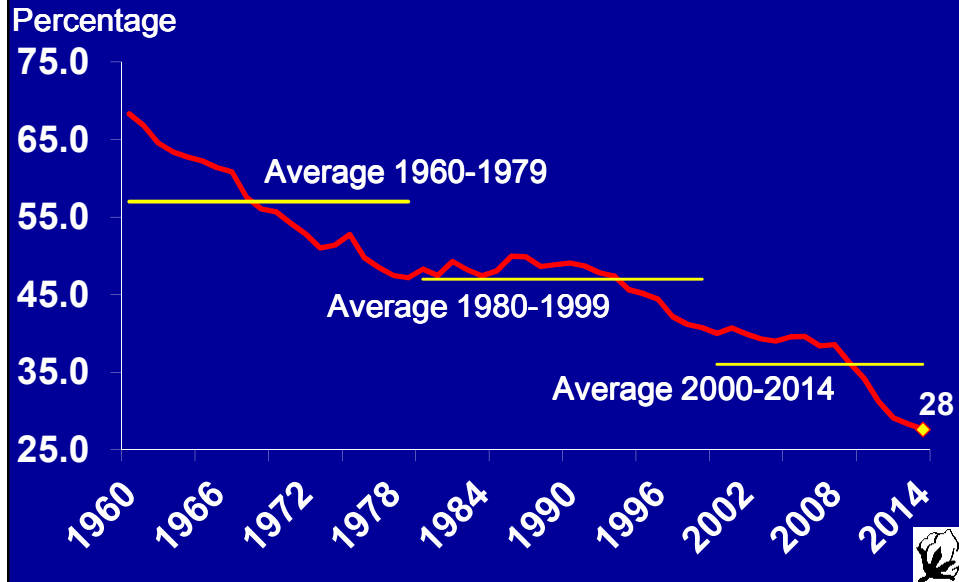
Market share in 1990



Market share in 2013

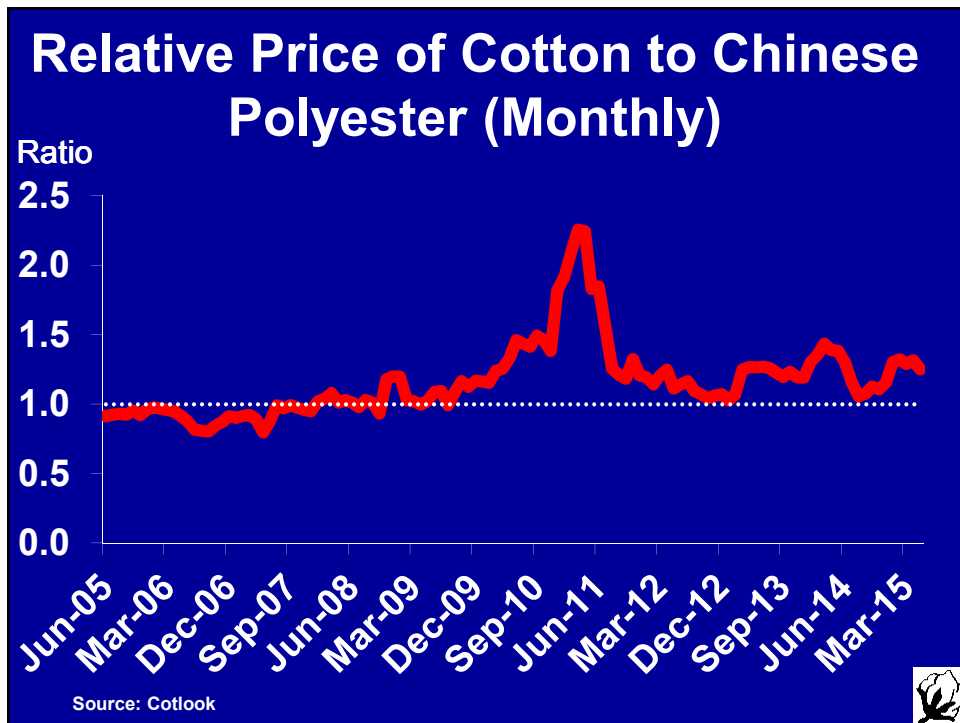
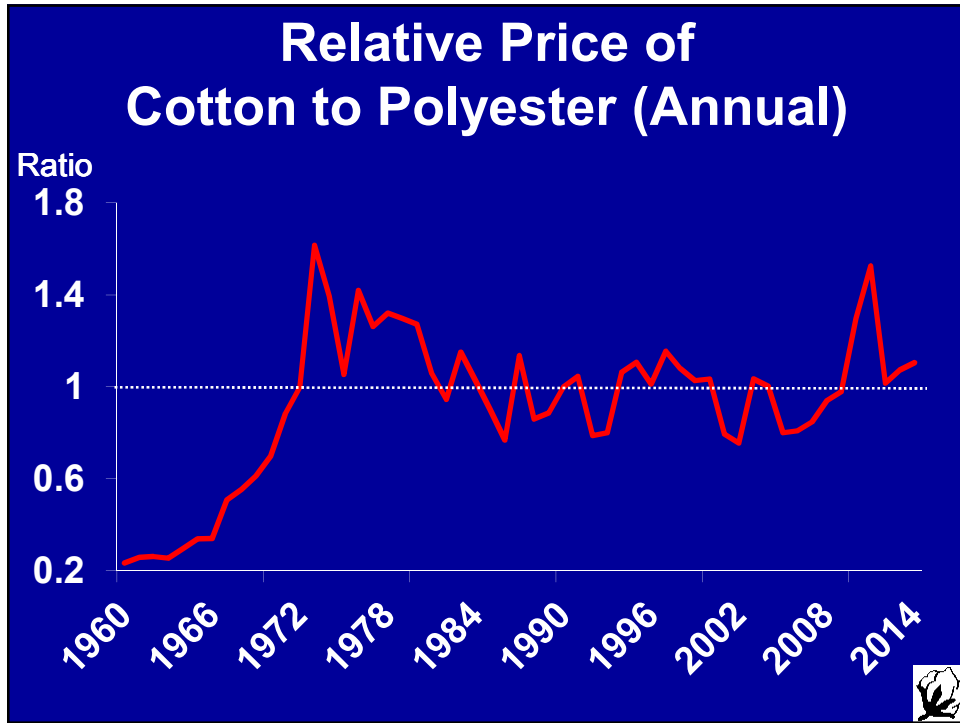


Market Share of Cotton in World Textile Fibers Consumption



Drivers of Cotton Consumption:

- 1) Relative prices vs. other fibers
- 2) Population
- 3) Income per capita



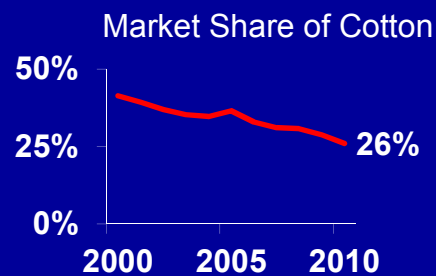
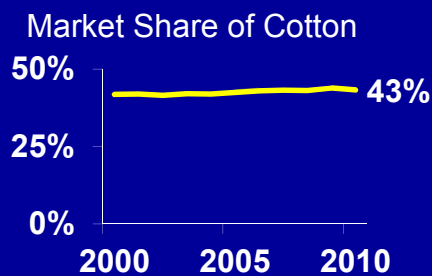
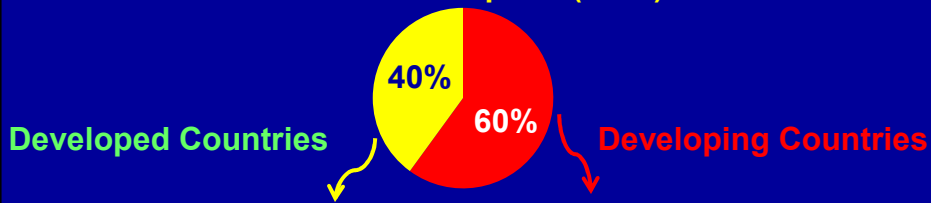
Cotton Consumption

↑ population, ↑ cotton consumption

↑ income, cotton consumption per capita ↑↓

Developed and Developing Countries

Share of World Apparel
Fiber Consumption (2010)



Cotton Consumption

Low income countries:

↑ income, ↓ market share of cotton

High income countries:

↑ income, market share of cotton stable at around 40%

Outlook:

↑ cotton consumption
↓ market share of cotton

ICAC Price Model



ICAC Price Model

$$\ln(A_t/A_{t-1})=a*\ln(X_t/X_{t-1})+b*\ln(X_{t-1}/X_{t-2})+m_t*c*\ln(Y_{t-1}/Y_{t-2})+(1-m_t)*d*\ln(Z_t/Z_{t-1})+e*D07+f*D09+g*D10$$

- Average value of the cotlook A index
- Stock to use ratio for World Less China (X_t)
- Stock to use ratio for China (Y_{t-1})
- China's net imports (Z_t)

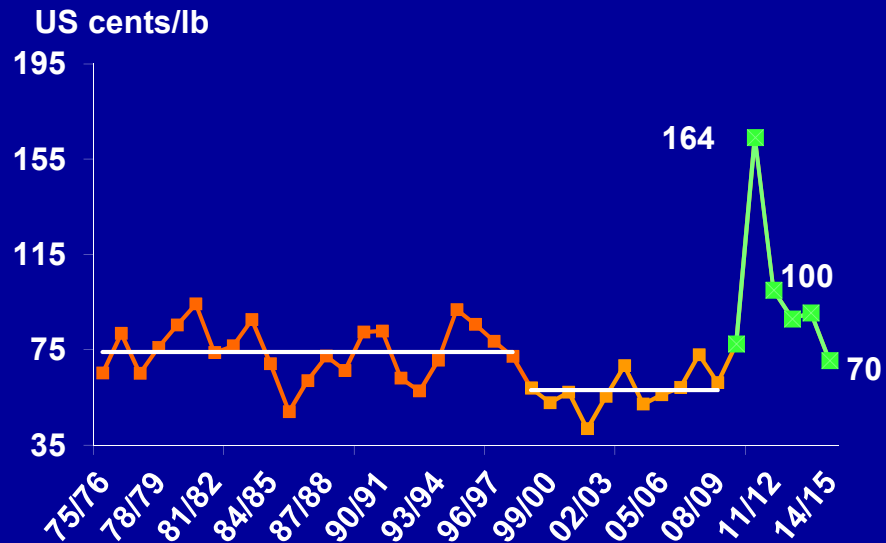


World Statistics and Price Forecasting

- ICAC
- Cotton Outlook Ltd.
- United Nation's Food and Agriculture Organization/Organization of Economic and Cooperative Development
- U.S. Department of Agriculture
- Food and Agricultural Policy Research Institute



Season-Average Cotlook A Index



ICAC Price Model

Change in Cotlook A Index in the CURRENT season explained by changes in:

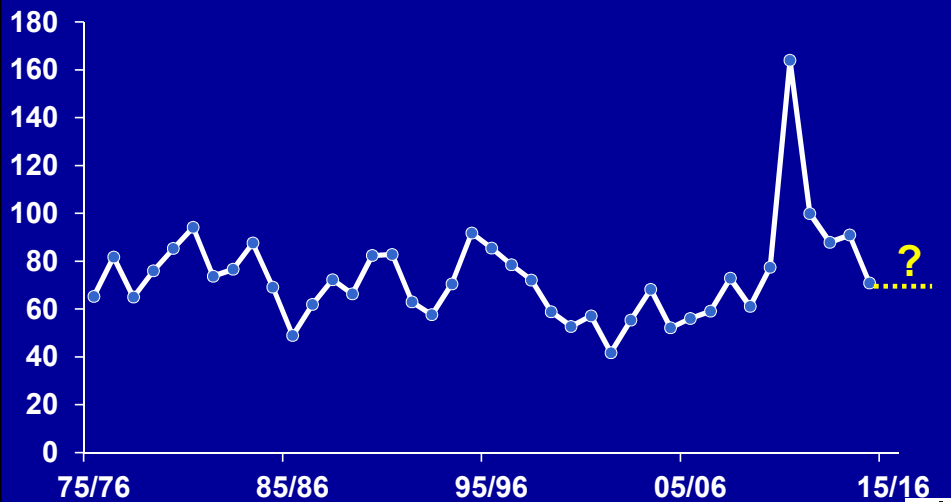
- SMU ratio in the World-less-China in the CURRENT and PREVIOUS seasons
- SMU ratio in China (M) in the PREVIOUS season

ICAC Price Model

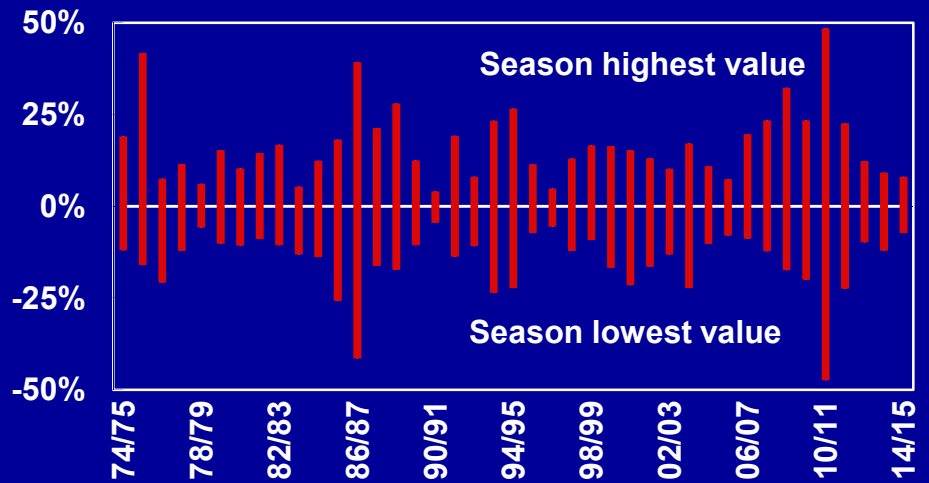
- Most important variable:
 - Stocks to mill use ratio in World-less-China
 - SMU World less China **UP**, Price **DOWN**
 - SMU World less China **DOWN**, Price **UP**

Cotlook A Index

Season-average (US cents/lb)



Price Volatility by Season: Cotlook A Index



2014/15: August 2014 – May 2015



Factors Affecting Volatility Not Captured by Statistics

- Limits on Exports
- Potential Purchases for State Reserves
- Defaults on Contracts