

MANAGING PRICE RISK

An Introduction to Cocoa Futures Markets



**WORLD
COCOA
CONFERENCE 2016**



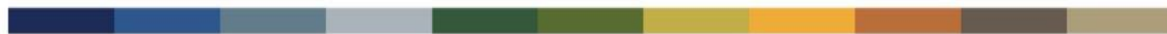
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PROGRAM

- Introduction to INTL FCSTONE
- The Commodities Market
- Hedging Theory
- Empowerment!
- Instruments
- Currencies

INTL · FCStone®



Agriculture



Precious Metals



Energies



Industrial Metals



Fuel Charges



Dairy and Cheese



Cotton / Textiles



Forest Products



Renewable Energies



Freight



Stocks and ADR



Livestock



Renewable Fuels



Foreign Exchange





USA

New York (HQ)	Miami
Bloomington	Minneapolis
Bowling Green	Nashville
Chicago	Omaha
Des Moines	Orlando
Denver	St. Louis
Indianapolis	Spirit Lake
Kansas City	Denver
Lawrence	

International

Asunción	London	Sydney
Beijing	Maringá	Winnipeg
Buenos Aires	Porto Alegre	Bogota
Campinas	Recife	Mexico D.F..
Ciudad del Este	São Paulo	
Dubai	Shanghai	
Dublin	Singapore	
Goiania		

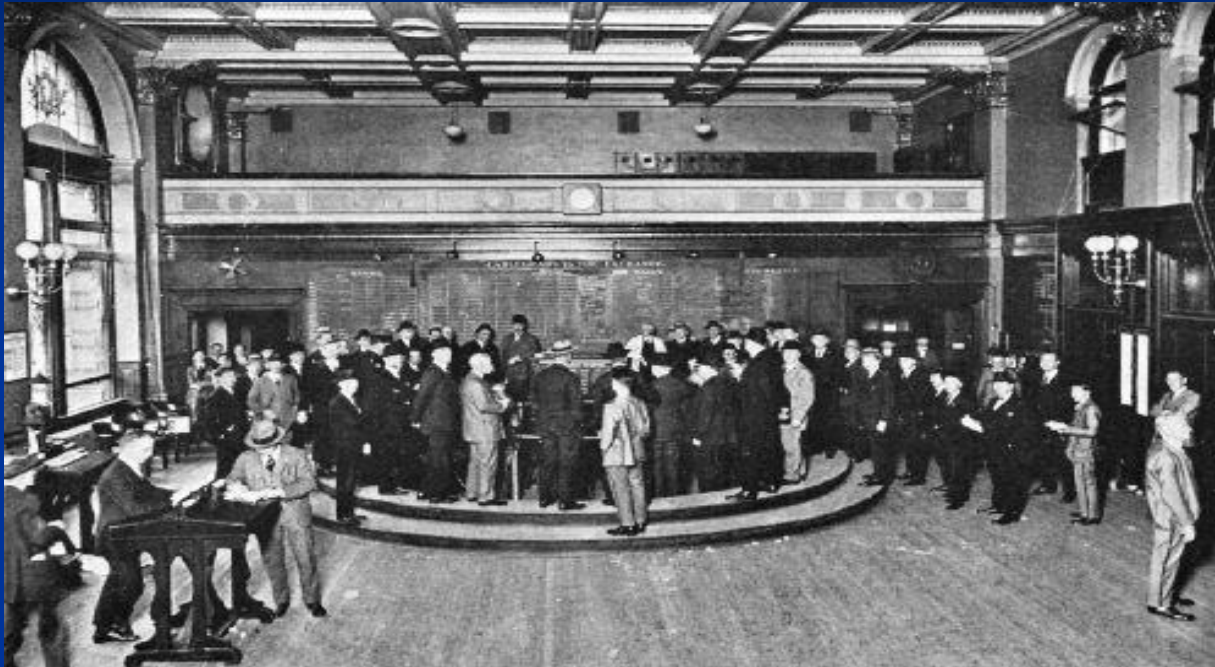
The Stock Market



The Stock Market



NY Cocoa Futures Exchange 1940's



VIDEOS





RISK

WHY DO WE HEDGE? (PROTECT)

HEDGING

“THE TRANSFER OF RISK”



Volatility

VOLATILITY

DEFINITION

Volatility refers to the amount

RISK or **UNCERTAINTY**

Over the changes in the values of a Product

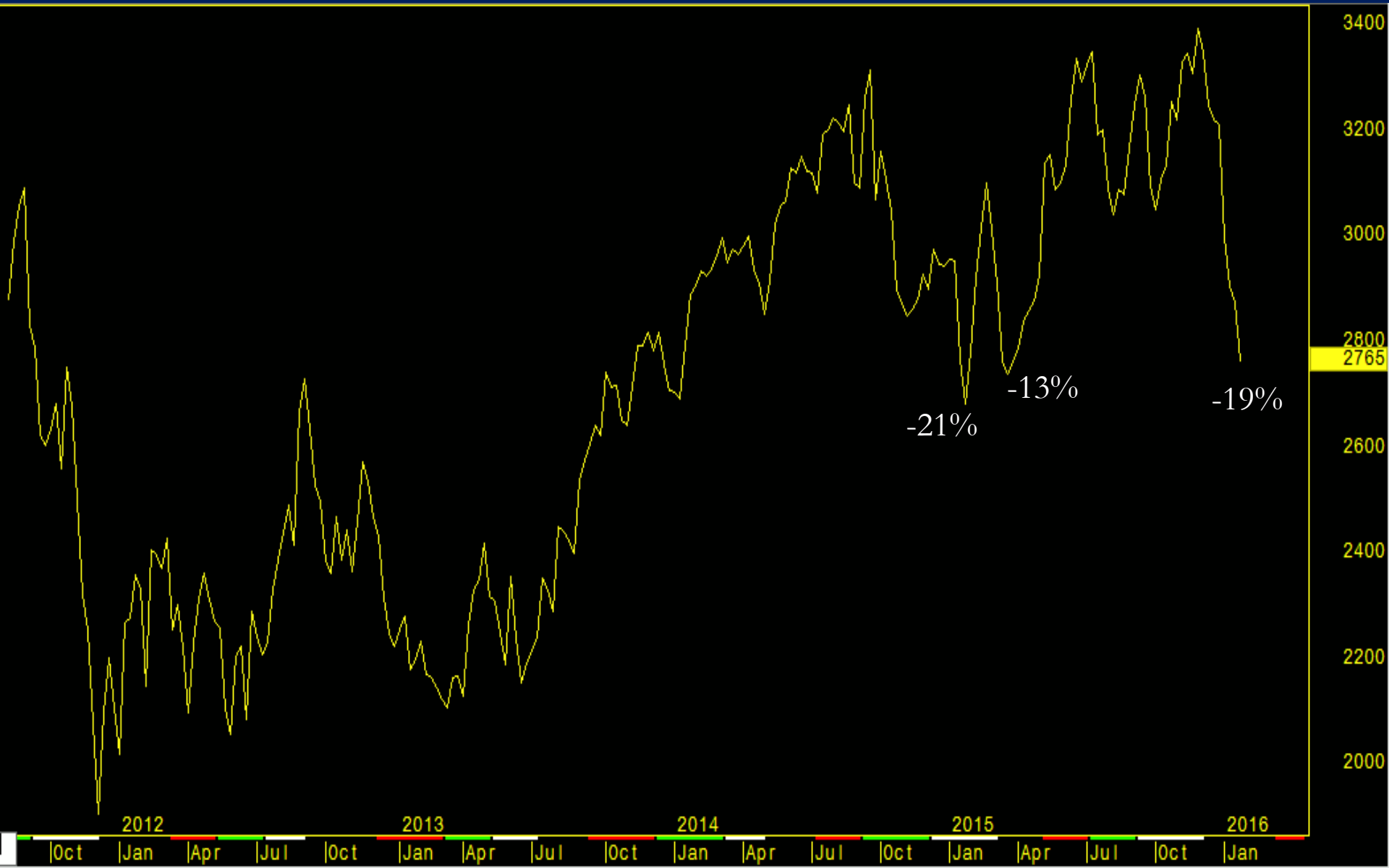
VOLATILITY

MY DEFINITION

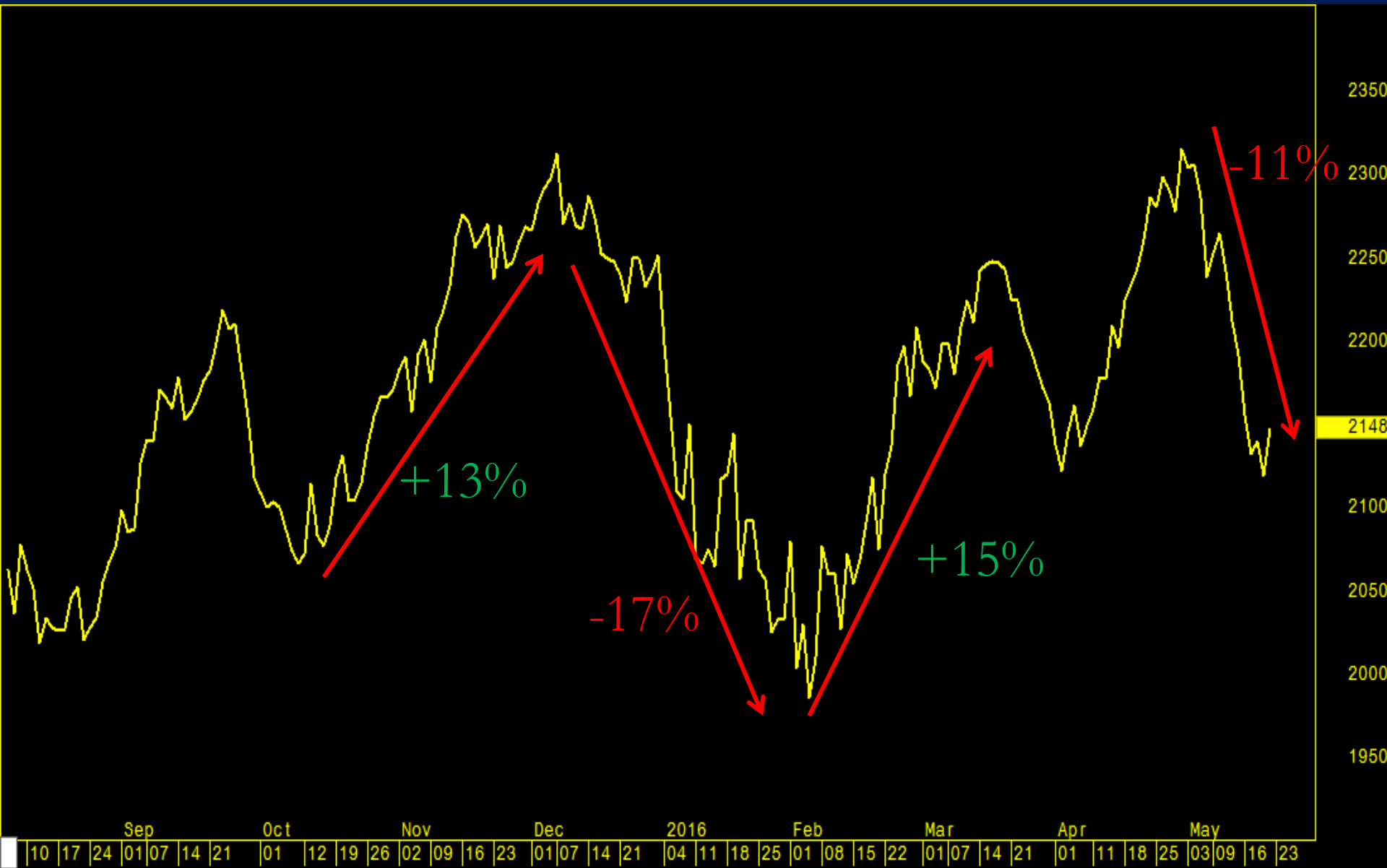
“HEADACHES”

COCOA-NY

2012 - 2016

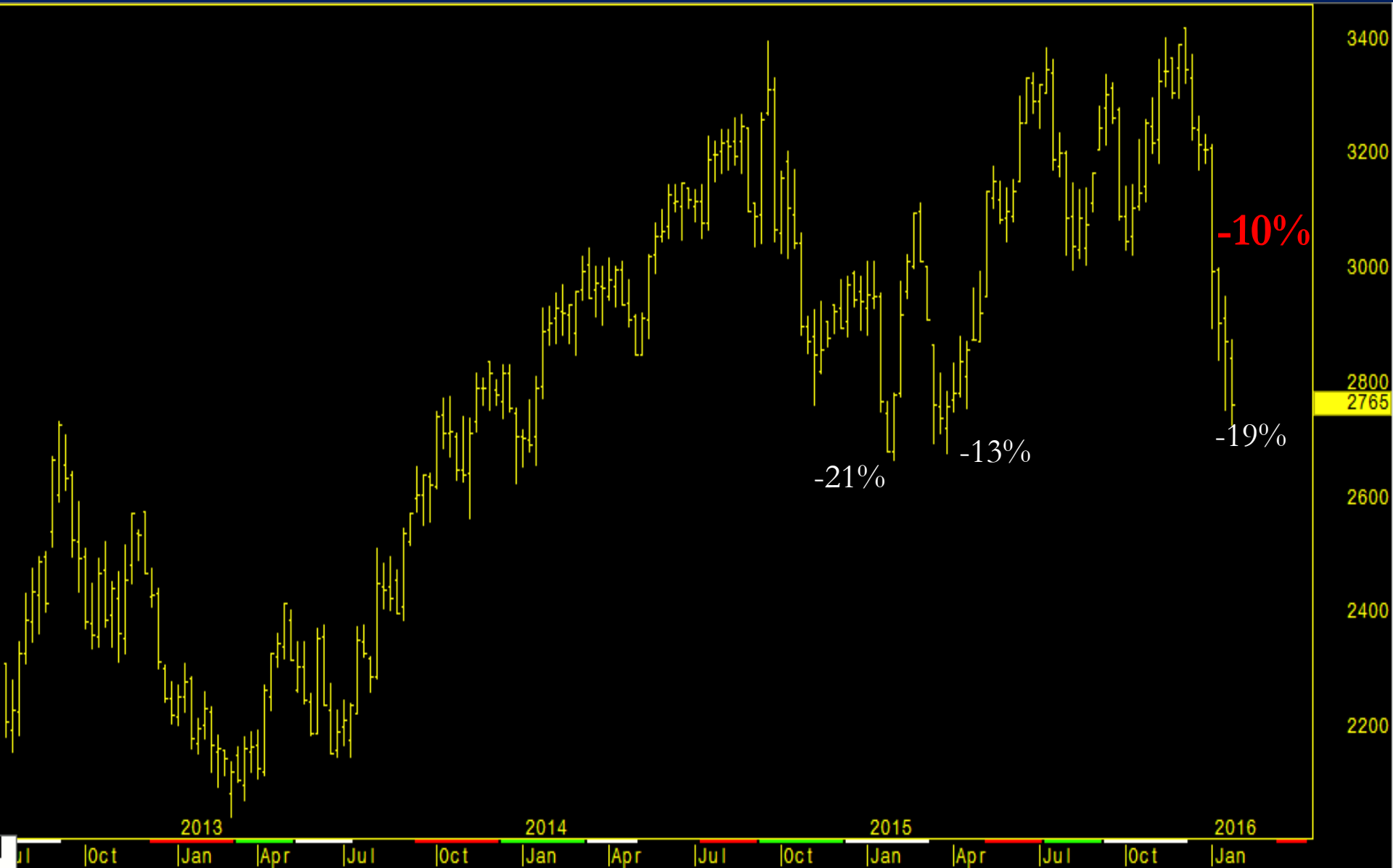


LONDON COCOA



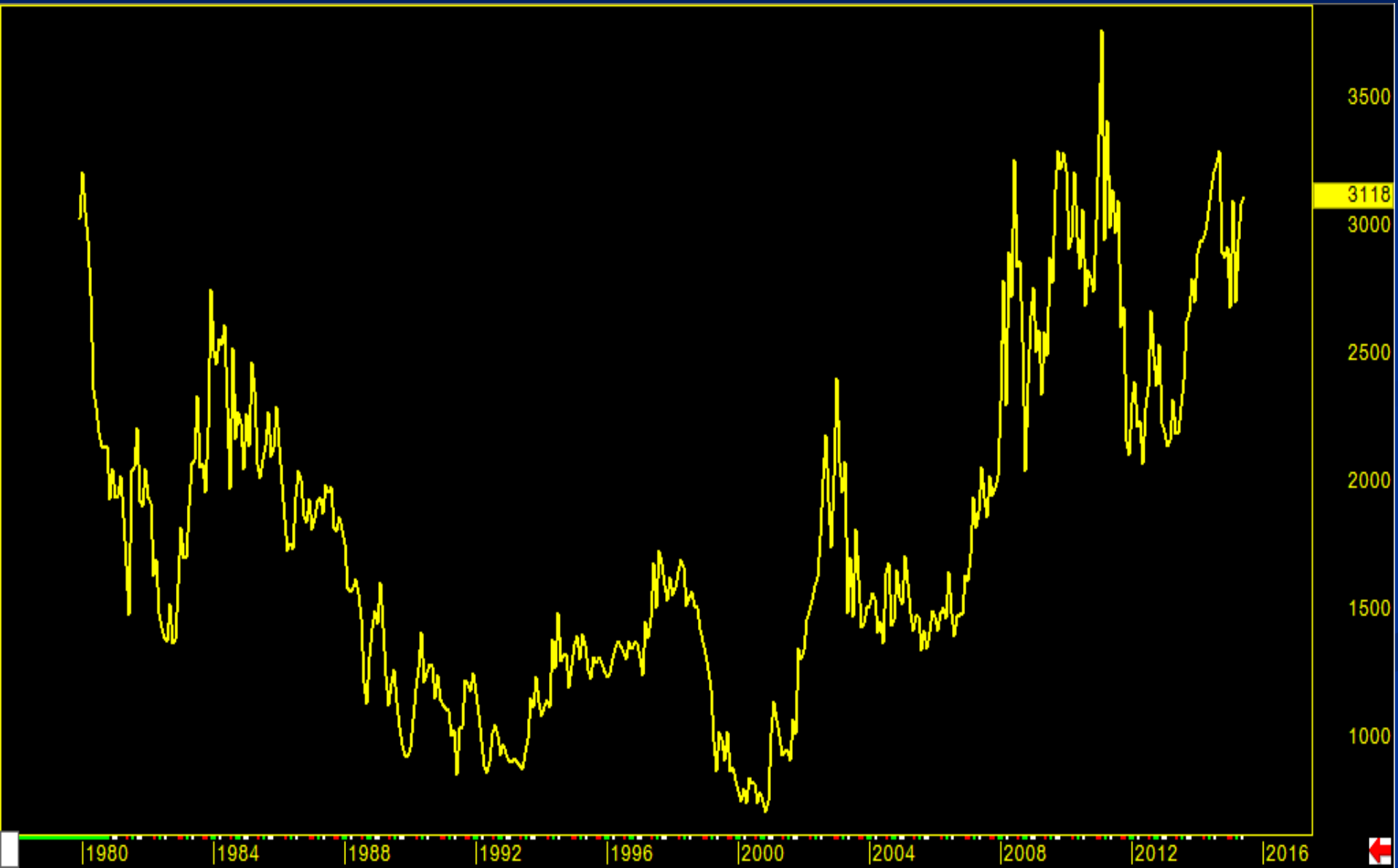
COCOA-NY

2012 - 2016



COCOA-NY

1980 - 2015



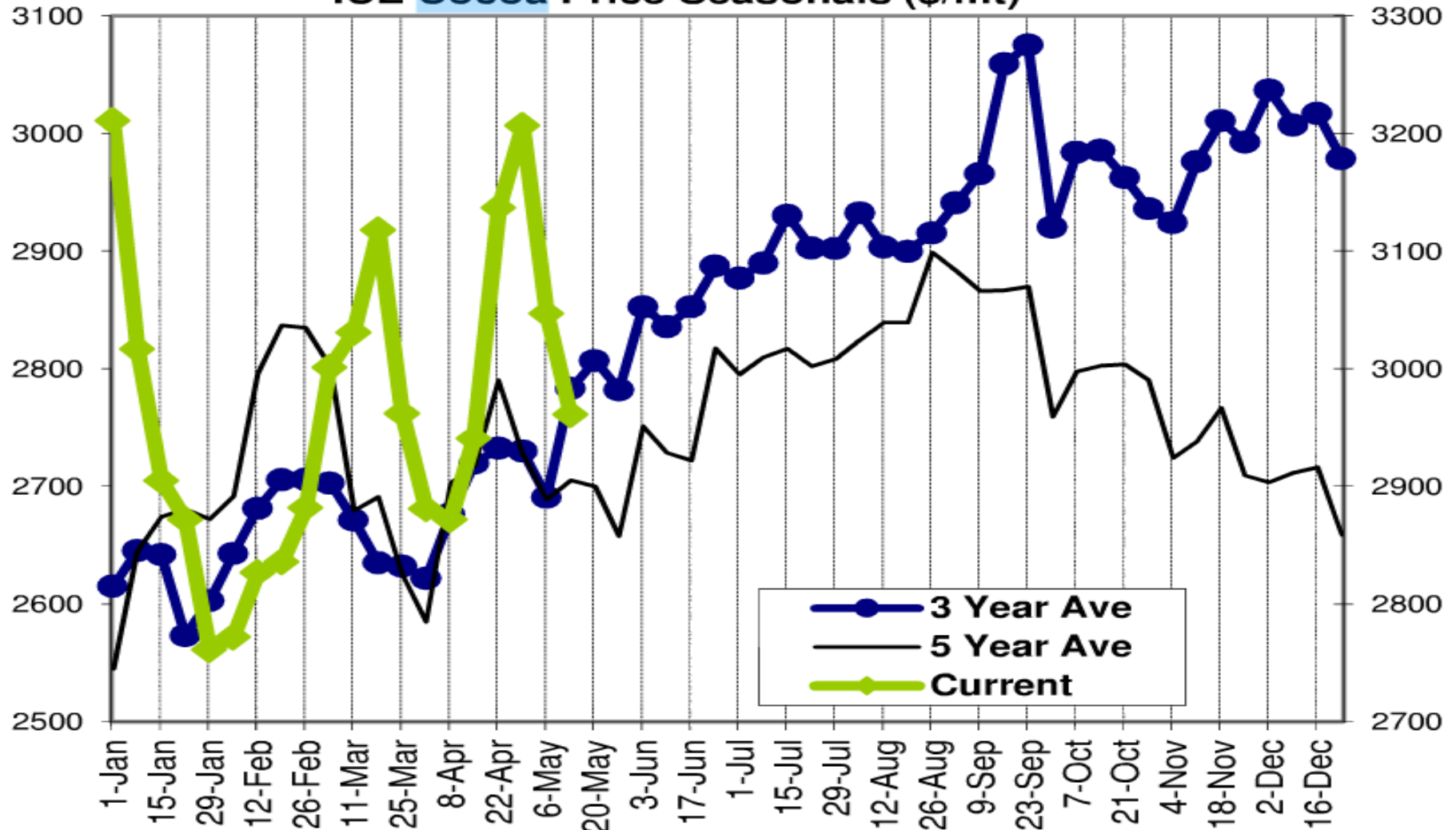
WHY IS IT VOLATILE?

- 1) WEATHER
- 3) SUPPLY and DEMAND Concerns
- 2) MACRO ECONOMICS/ POLITICAL

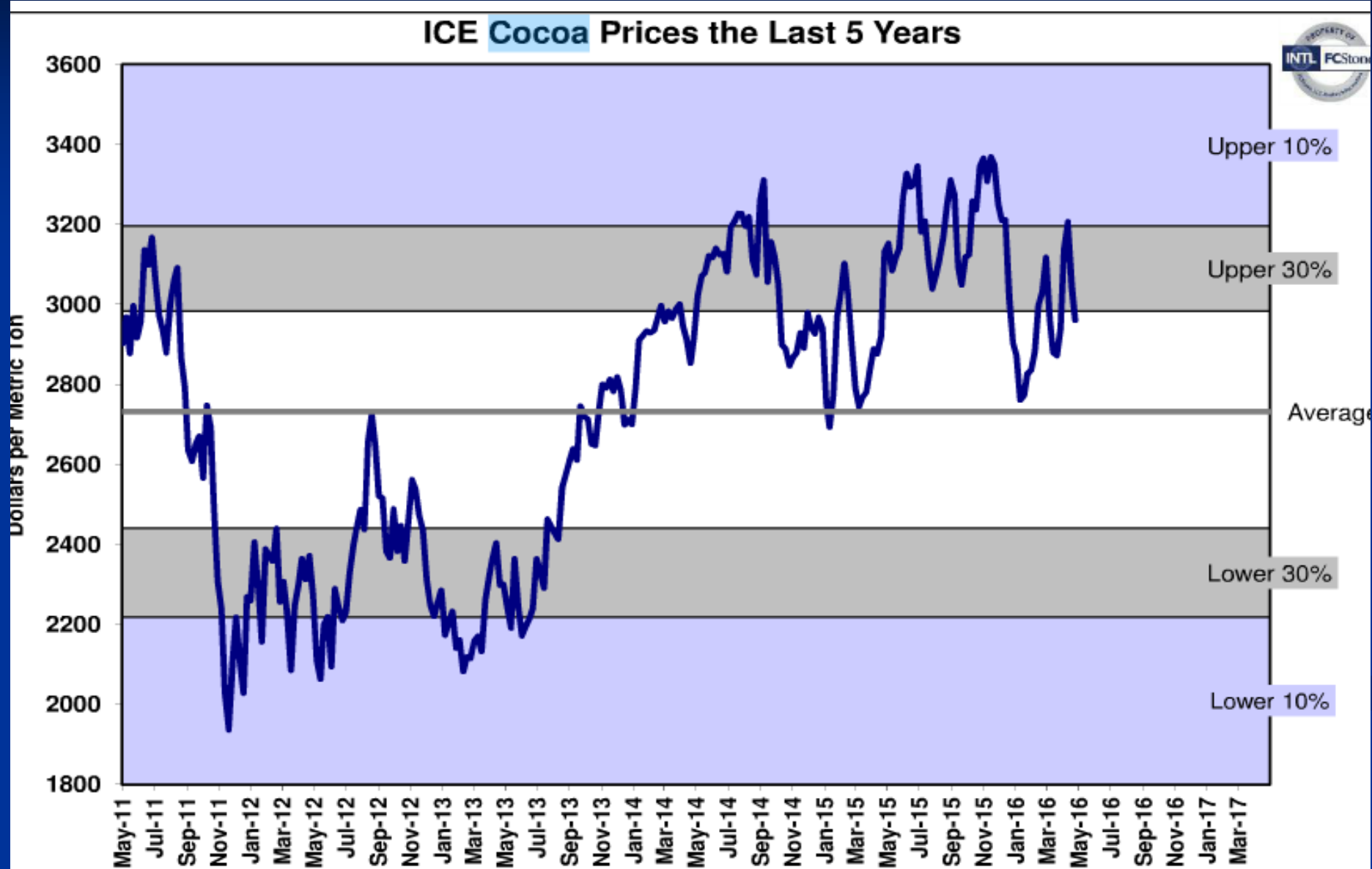
UNCERTAINTY

COCOA SEASONALS

ICE Cocoa Price Seasonals (\$/mt)



COCOA PRICE PERCENTILE RANGES LAST 5 YEARS



The Commodities Boom

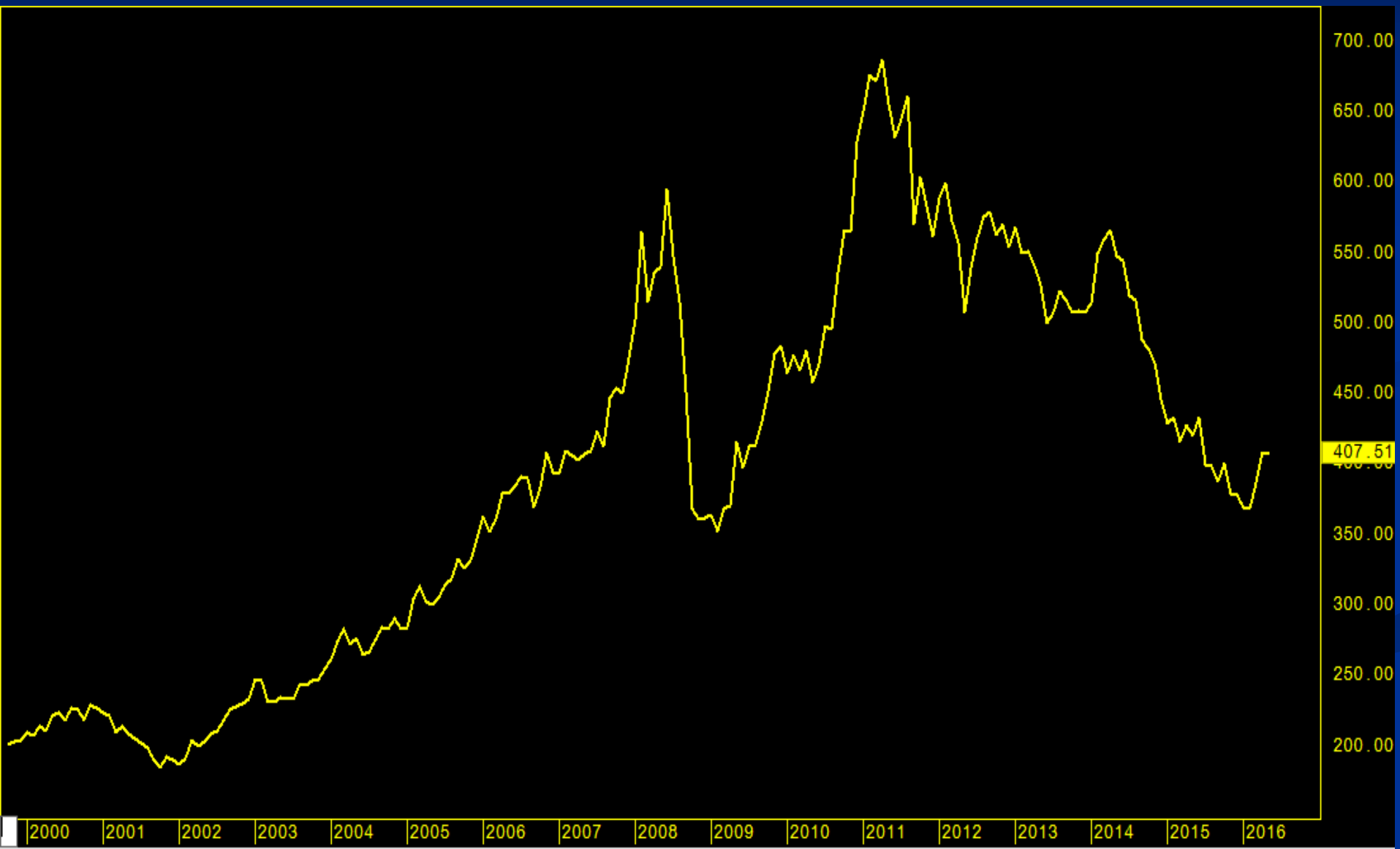
The New Investment Vehicle



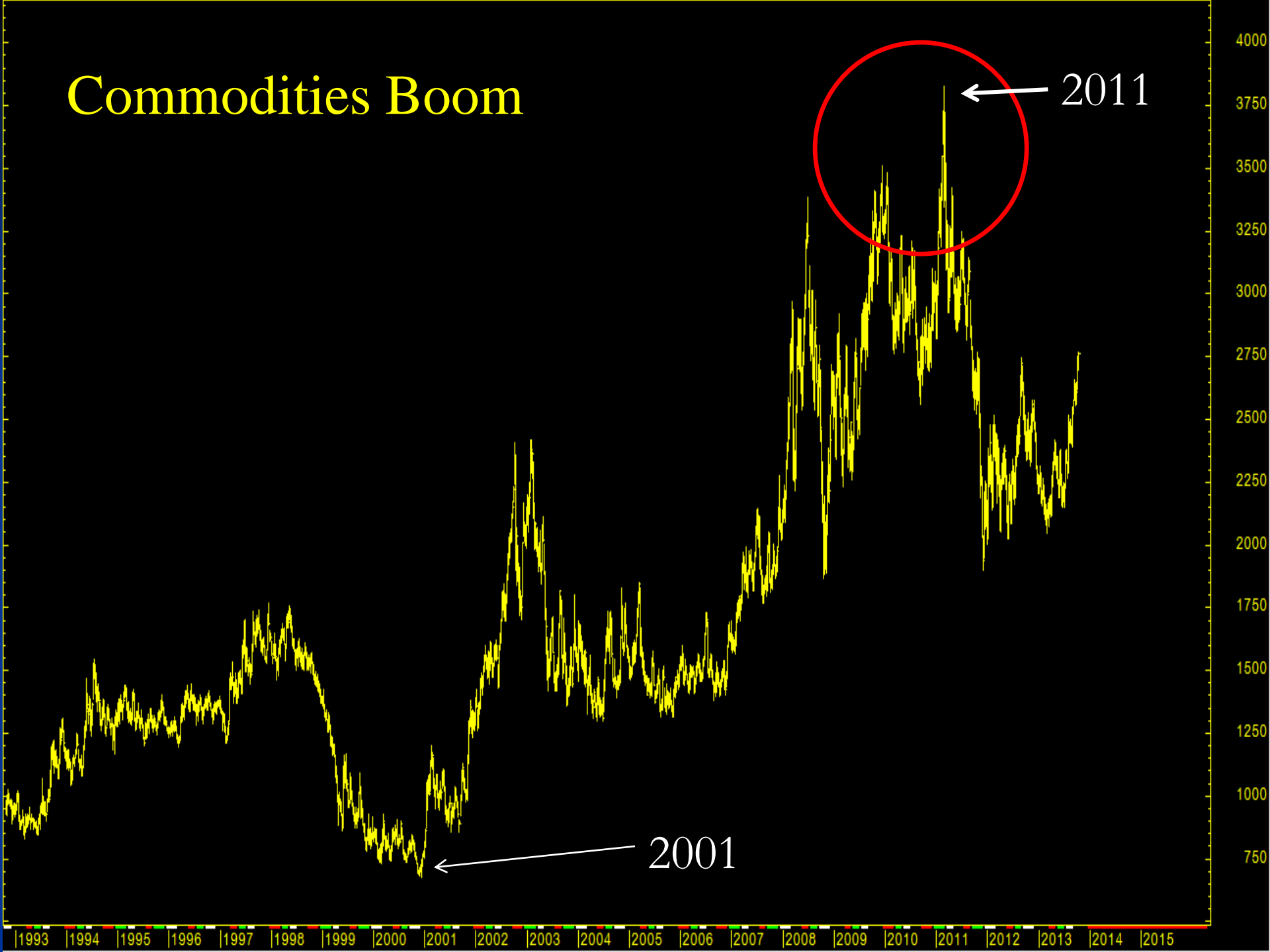
US DOLLAR



Commodities Index



Commodities Boom



PRICES

- Milk
- Fuels
- Meats
- Breads
- Cereals
- Orange Juice
- Cotton

- Equipment
- Coffee
- Edible Oils
- Mantequilla
- Metals
- Fruits
- **COCOA!**

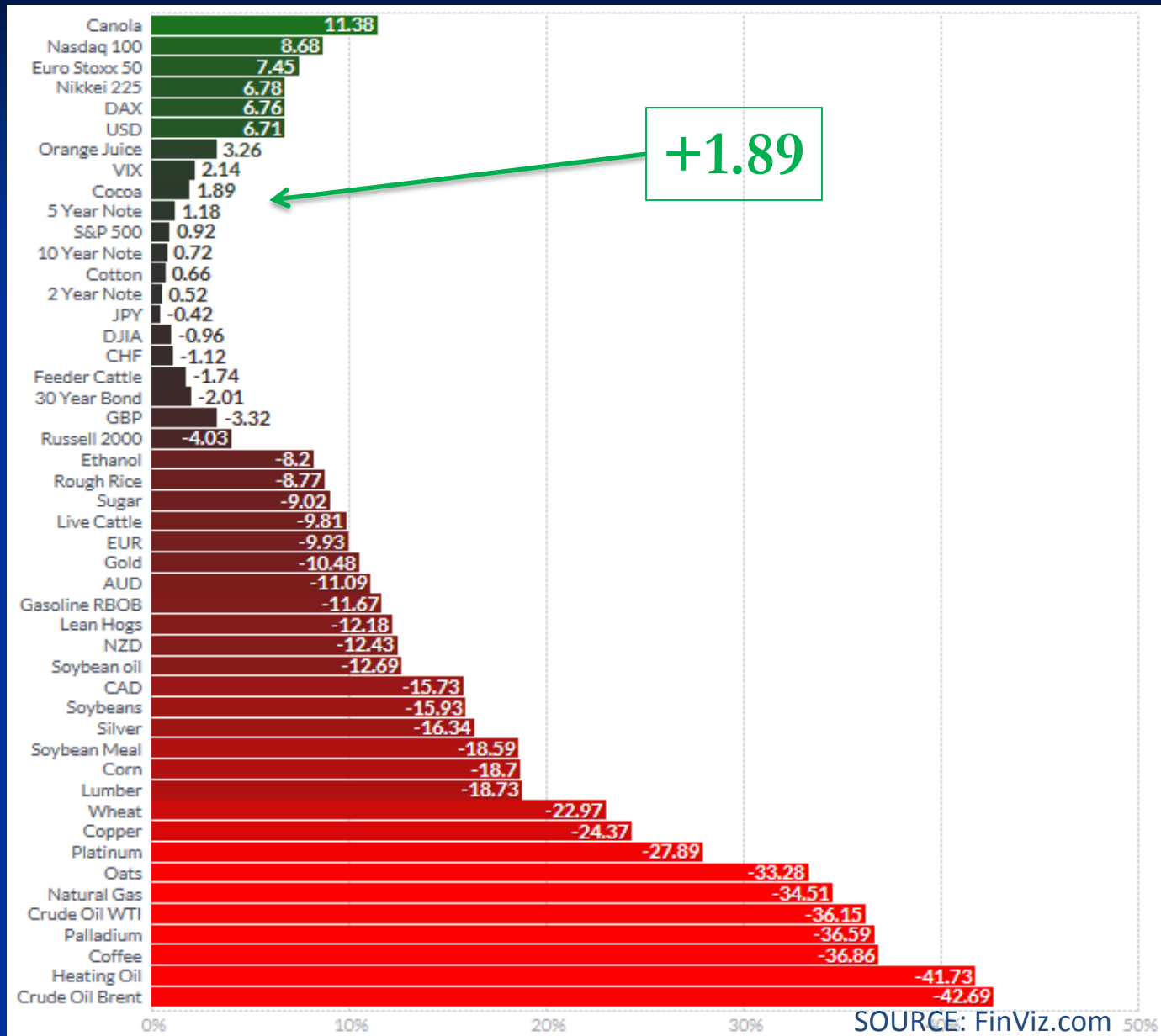
Commodities Super Cycle

12-14 years of a Bull Market

18-20 years of Dormancy

- 1970 - 1982 Commodities boom
- 1982 - 2001 Dormancy period
- 2001 - 2014 Commodities boom
- 2014 - ? Start of Dormancy period?

Commodities in 2015



COMMODITY EXCHANGES

PRICING MECHANISMS

STOCK MARKET

A Share of a Company

COMMODITIES MARKET

A Futures Contract

The Futures Contract

The Central Pricing Mechanism for most of the world's Raw Materials

- A legally binding agreement, to buy or sell a commodity sometime in the future.

Commodity Futures Markets Exchanges

■ Dōjima	1730	RICE
■ Chicago	1848	CBOT
■ Frankfurt	1867	Various
■ New York	1872	Cotton
■ London	1877	Various
■ New York	1882	Coffee
■ New York	1925	Cocoa
■ New York	1914	Sugar

Economic Function of the Futures Markets

- Price determination of the basic raw materials in the world markets.
- Used as risk transfer vehicle for the underlying Commodity

A HEDGE

- Used as an Investment Alternative.

COCOA EXCHANGES

- New York \$ USD ICE US
- London £ UK ICE EUROPE
- Chicago € EU CME

The New York Cocoa Futures Contract (ICE US)

- 10 M/T Cocoa

- Price Quotes

 - US\$ / MT

- Delivery:

 - March, May, July,
Sept., Dec.

- Market Hours

 - 4:15AM – 1:30PM (New York)

Futures & Options

El London Cocoa Futures Contract (ICE Europe)

- 10 M/T de Cacao

- Price Quotes

- £ / M/T

- Delivery:

- March, May, July,
Sept., Dec.

- Market Hours

9:30AM - 4:50PM (LONDON)

Futures & Options

The Euro Cocoa Contract (Chicago Mercantile Exchange)

- 10 M/T Cocoa
- Price Quote
- € / TM
- Delivery:
 - March, May, July, Sept., Dec.
- Market Hours
9:00AM - 4:50PM (LONDON)

Futures & Options

Market Participants

Hedgers

Speculators

“Investors”

HEDGERS

- Producers
- Middlemen
- Exporters
- Importers
- Physical Brokers
- Industry
- Final Users

SPECULATORS

‘Investors’

■ Small Speculators

- Self guided traders, personal accounts

■ HFT high Frequency /Systems / Algorithmic Traders

■ Large Speculators

- Managed Money “Guided Accounts”
- Hedge Funds “Traditional”
- High net worth individuals
- Index Funds for Commodity Investors

INSTRUMENTS

INSTRUMENTS

- 1) Futures Contract
- 2) Options Contract (Insurance Policy)
- 3) Structured Products
- 4) Currency Forwards

Accessing the Markets

Opening of an Account

- Commission House
- Specialized Broker
- Account opening documentation
- Initial Deposit

Margins

- Good Faith Deposit
- Risk Barometer
- Margins
 - Initial
 - Variation

Accessing the Markets

Two Account Types

- 1) Futures and Options Account
- 2) Structured Products Account

“Over-the-Counter (“OTC”) Products or “Swaps” are only available to individuals or firms who qualify under CFTC rules as an Eligible Contract Participant (“ECP”) and who have been accepted as customers of IFM.”

CUSTOMER



SIMPLE
FUTURES
ACCOUNT



STRUCTURED
PRODUCTS
ACCOUNT

1) Futures Account

- No minimum financial requirement
- Quick account opening
- Futures and Options only
- Standardized contracts only

2) Structured Products Account

- Minimum financial requirement
 - \$1M Equity
 - \$10M Total Assets

PRODUCTS:

- | | |
|---------------------|-----------------------------|
| -Futures | -Exotic Options |
| -Options | -Currency Forward Options |
| -Fractions | -Conditional Stops |
| -Futures Structures | -Commodity Pricing in Euros |
| -Currency Forwards | -Programmed Buying/Selling |
| -Variable Options | -Currency Structures |

Regulatory Agencies

- N.F.A. National Futures Association
- C.F.T.C.- The Commodity Futures Trading Commission
- United States Congress

HEDGING

“The Transfer of Risk”

Softs						
Name	Month	Symbol	Last	Change	High	Low
Coffee	May 13	KCK3	135.45	+1.00	136.00	134.50
Coffee	Jul 13	KCN3	136.85	+0.75	137.55	136.10
Coffee	Sep 13	KCU3	139.30	+0.65	139.85	138.65
Cocoa	May 13	CCK3	2274	+31	2285	2232
Cocoa	Jul 13	CCN3	2292	+25	2302	2257
Cocoa	Sep 13	CCU3	2301	+24	2310	2267
Sugar #11	May 13	SBK3	17.92	+0.13	17.97	17.74
Sugar #11	Jul 13	SBN3	17.74	+0.19	17.79	17.54
Sugar #11	Oct 13	SBV3	18.09	+0.16	18.14	17.90
Orange Juice	May 13	OJK3	147.55	-1.55	148.95	146.20
Orange Juice	Jul 13	OJN3	146.75	-1.55	147.90	145.50
Orange Juice	Sep 13	OJU3	144.65	+4.30	144.65	142.50
Cotton #2	May 13	CTK3	84.12	-0.21	85.00	84.02
Cotton #2	Jul 13	CTN3	85.81	-0.31	86.61	85.64
Cotton #2	Oct 13	CTV3	84.95	-0.33	84.95	84.95

Financials						
Name	Month	Symbol	Last	Change	High	Low
10-Year T-Note	Jun 13	ZNM3	132-53	-014	133-17	132-51
10-Year T-Note	Sep 13	ZNU3	132-23	+0-06	132-23	132-23
T-Bond	Jun 13	ZBM3	147-13	-017	148-14	147-11
T-Bond	Sep 13	ZBU3	146-20	-016	147-16	146-19
U.S. Dollar Index	Jun 13	DXM3	82.140	-0.367	82.620	82.065
U.S. Dollar Index	Sep 13	DXU3	82.235	-0.447	82.775	82.235
Euro FX	Jun 13	E6M3	1.31470	+0.01020	1.31540	1.30310
Euro FX	Sep 13	E6U3	1.31600	+0.01060	1.31600	1.30590
BMF US Dollar	May 13	XDK3	1989.500	-0.849	1995.500	1987.500
BMF US Dollar	Jun 13	XDM3	1999.500	-0.717	1999.500	1999.500
Mexican Peso	May 13	M6K3	0.081475	-0.000900	0.082375	0.081475
Mexican Peso	Jun 13	M6M3	0.081875	+0.000625	0.081900	0.080975

Currencies					
Symbol	Last	Change	High	Low	Time
^EURUSD	1.31405	+0.01064	1.31472	1.30281	07:32:09
^GBPUSD	1.53171	+0.00343	1.53281	1.52720	07:32:09
^AUDJPY	101.727	+1.957	101.792	99.590	07:32:09
^EURCAD	1.34134	+0.00493	1.34320	1.33407	07:32:09
^USDCHF	0.92569	-0.00534	0.93262	0.92498	07:32:09
^USDJPY	98.013	+1.246	98.059	95.872	07:32:09
^USDMXN	12.1496	-0.1298	12.2820	12.1466	07:32:09
^EURCHF	1.21644	+0.00258	1.21650	1.21371	07:32:09
^EURGBP	0.85785	+0.00511	0.85806	0.85221	07:32:09

Grains						
Name	Month	Symbol	Last	Change	High	Low
Corn	May 13	ZCK3	648-4	+1-6	648-4	641-0
Corn	Jul 13	ZCN3	628-6	+0-6	628-6	621-6
Corn	Sep 13	ZCU3	557-2	+0-4	558-2	552-0
Soybeans	May 13	ZSK3	1407-6	+12-6	1409-6	1389-0
Soybeans	Jul 13	ZSN3	1366-0	+10-0	1368-0	1350-4
Soybeans	Aug 13	ZSQ3	1321-2	+7-0	1322-4	1310-2
Soybean Meal	May 13	ZMK3	397.5	+4.2	398.4	392.0
Soybean Meal	Jul 13	ZMN3	393.1	+3.6	394.2	388.0
Soybean Meal	Aug 13	ZMQ3	377.4	+1.3	379.0	375.1
Soybean Oil	May 13	ZLK3	48.66	+0.48	48.71	48.00
Soybean Oil	Jul 13	ZLN3	48.86	+0.50	48.89	48.18
Soybean Oil	Aug 13	ZLQ3	48.87	+0.50	48.87	48.20
Wheat	May 13	ZWK3	695-0	+1-2	698-0	689-6
Wheat	Jul 13	ZWN3	699-6	+0-4	703-2	695-0
Wheat	Sep 13	ZWU3	705-6	-00	709-0	701-0

Energies						
Name	Month	Symbol	Last	Change	High	Low
Crude Oil Brent	Jun 13	CBM3	99.91	-0.72	100.37	98.00
Crude Oil Brent	Jul 13	CBN3	99.92	-0.62	100.36	97.95
Gasoline RBOB	May 13	RBK3	2.7581	+0.0005	2.7620	2.7036
Gasoline RBOB	Jun 13	RBM3	2.7596	-0.0011	2.7629	2.7069
Heating Oil	May 13	HOK3	2.8052	-0.0240	2.8151	2.7712
Heating Oil	Jun 13	HOM3	2.8014	-0.0208	2.8117	2.7690

Indices						
Name	Month	Symbol	Last	Change	High	Low
DJIA	Jun 13	DJM3	14512	-0	14733	14512
S&P 500 Index	Jun 13	SPM3	1559.10	+15.60	1559.50	1543.80
BMF Bovespa Ind	Apr 13	XIJ3	53690	+679	53830	53540
DAX Index	Jun 13	DYM3	7724.5	+4.0	7729.0	7647.0
DJ-UBS Industria	Jun 13	LZM3	136.25p	unch	0.00	0.00
Euro Stoxx 50	Jun 13	FXM3	2569.0	+5.0	2571.0	2541.0

Metals						
Name	Month	Symbol	Last	Change	High	Low
Gold	Apr 13	GCJ3	1391.0	+30.4	1401.0	1323.0
Gold	May 13	GCK3	1392.5	+31.9	1402.9	1322.1
Gold	Jun 13	GCM3	1392.9	+31.8	1404.2	1321.5
Palladium	Apr 13	PAJ3	675.00	+9.15	675.00	675.00
Palladium	May 13	PAK3	668.50	+2.10	668.50	668.50
Palladium	Jun 13	PAM3	679.50	+12.50	685.60	647.50
Platinum	Apr 13	PLJ3	1434.3	+10.1	1441.3	1411.6
Platinum	May 13	PLK3	1424.4p	unch	0.0	0.0
Platinum	Jun 13	PLM3	1461.9	+37.3	1461.9	1433.7
Silver	Apr 13	SIJ3	23.355p	unch	0.000	0.000
Silver	May 13	SIK3	23.730	+0.369	23.975	22.000
Silver	Jun 13	SIM3	23.760	+0.385	23.975	22.085

Hedging your price risk...

...is shifting it to someone who wants it



Economic Relationship

Processor
(Buys Physical Cocoa)

Producer/ Exporter
(Sells Physical Cocoa)

Short Physical
(has to buy Cocoa)

Long Physical
(has Cocoa to sell)

BUYS Cocoa Futures

SELLS Cocoa Futures

....More stability in the cash flows of your operations!

Scenario 1: Market Drops

Processor
(Buys Physical Cocoa)

Processor is losing money in Futures position BUT making money in physical purchases

Producer/ Exporter
(Sells Physical Cocoa)

Producer is selling cocoa cheaper in the physical market BUT making money in their futures position



Scenario 2: Market Rallies

Processor (Buys Physical Cocoa)

Processor is losing money by purchasing physical Cocoa at a higher price BUT making money in their futures position

Producer/ Exporter (Sells Physical Cocoa)

Producer is making money in physical Cocoa BUT losing money in his futures position



Basic Elements of Hedging

- No ownership Change
- Added flexibility in changing market conditions
- Futures markets maintain a positive correlation with the physical

LONG HEDGE

- May 24 Price Sept Cocoa futures = £ 2.150

Processor (buyer) foresees need for 100 M/t July & August
Hopes to pay £ 2.150

HEDGE

Buy 20 July futures @ £ 2.150

- August 1st Price Sept. Futures = £ 3.000

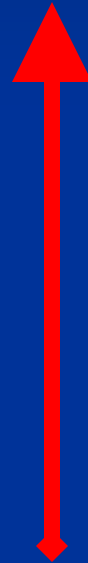
Increase cost of £170.000,00

Hedge supplemented the £170.000,00

Futures Account

Market at £3.000

£170.000,00



BOUGHT 20 Contracts at 2.150

Futures Account

SHORT HEDGE

Producer

- May 24 Price Dec. Cocoa futures = US\$ 2.950

Cocoa Producer needs to secure 100 M/t of production

HEDGE

Sell 10 December futures @ \$2.950

- October 30th Price December Futures = \$2.100
- Income loss of \$180,000.00

Hedge supplemented the \$180,000.00

Futures Account

Futures Account

SOLD 10 Sales at \$2.950



Market at \$2.100

Commodity Options “Insurance Policies”



INTL · FCStone®

“INSURANCE PRODUCTS” OPTIONS

- Convey the Right to **BUY** or **SELL** for
- A Specific Futures and Commodity Product
- For a pre-determined time frame
- For a pre-determined price

“AN INSURANCE POLICY”

OPTIONS

“INSURANCE PRODUCTS”

TWO TYPES

CALLS = The Right to Buy

Price Rise Insurance

&

PUTS = The Right to Sell

Price Drop Insurance

PURCHASING

Price Rise Insurance

“CALLS”

CALLS = Acquires right to buy

- Acquires the right,
- but not the obligation
- to purchase a specific futures contract
- at a specified price
- within a specified time

BUYER SCENARIO

Price Rise Insurance

- Supply & Demand Concerns
- Possible weather concerns in Ivory Coast
- With only 2 months fixed
- Concerned with further drought fears
- Would like to protect without actually buying more Cocoa

Purchasing Price Rise Insurance

“Call Options”



Cocoa Producer

- Cocoa unsold
- Protect against falling prices with **PUT** Options

“Price Drop insurance”

“Price Drop Insurance”

PUT OPTIONS



OPTIONALITY

“Being Creative”

“Variable Sales”

“Variable Purchases”

“Covered Purchases”

“Variable Sales”

“Variable Sales” Concept

- Market in a downward trend
- Producer does not sell in hopes of higher prices
- Producer looking for a strategy that can provide a minimum floor on prices in case of further price drops
- but with an Upside potential in case of a Rally in market prices

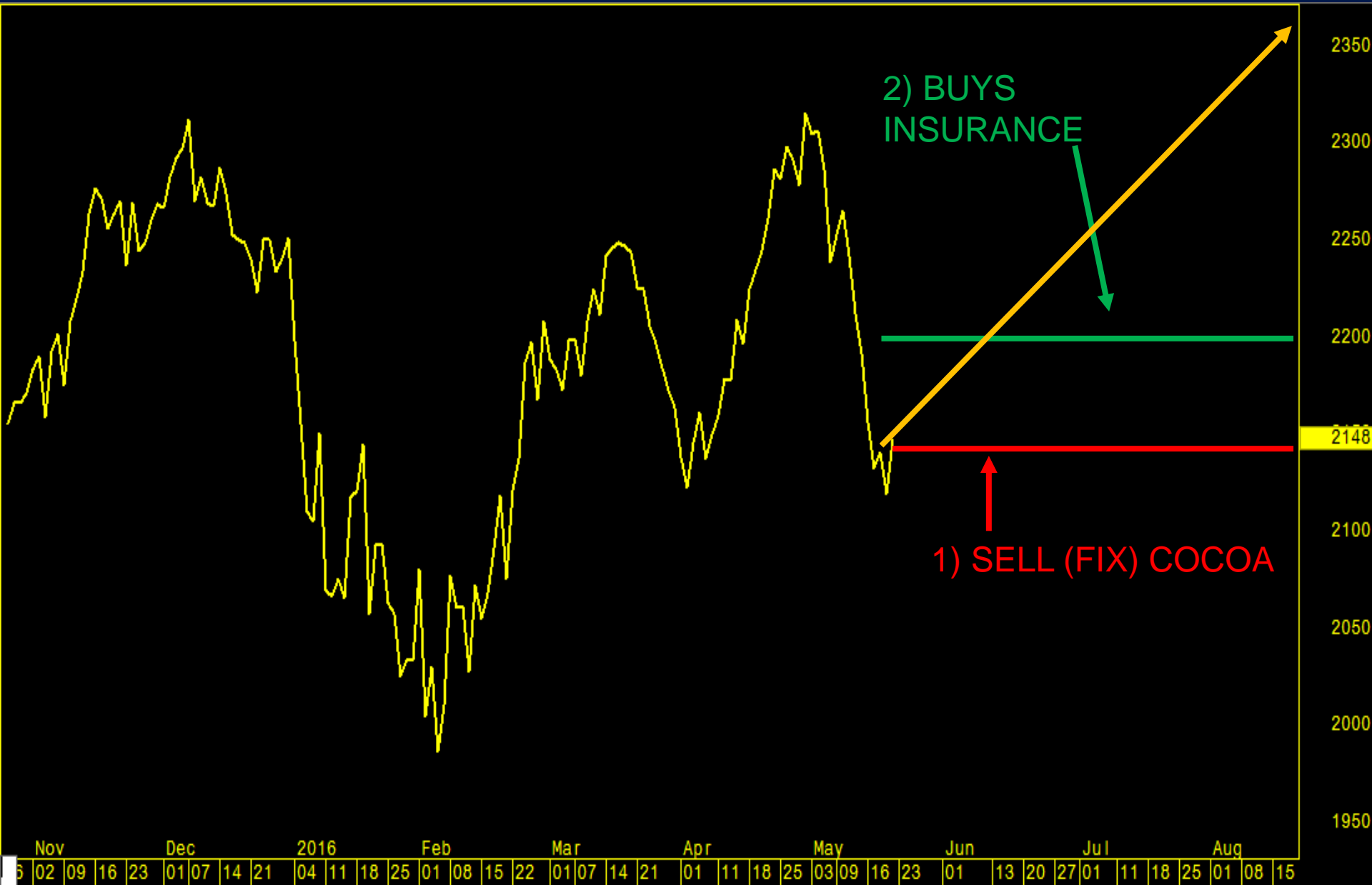
PRODUCER SCENARIO

Price Rise Insurance

- Sell Cocoa (FIX-The-Price)
- Buy Price Rise Insurance in case of a drought in order to increase the effective selling price.

“Variable Sales”

PRODUCER SCENARIO



PRODUCER ACCOUNT

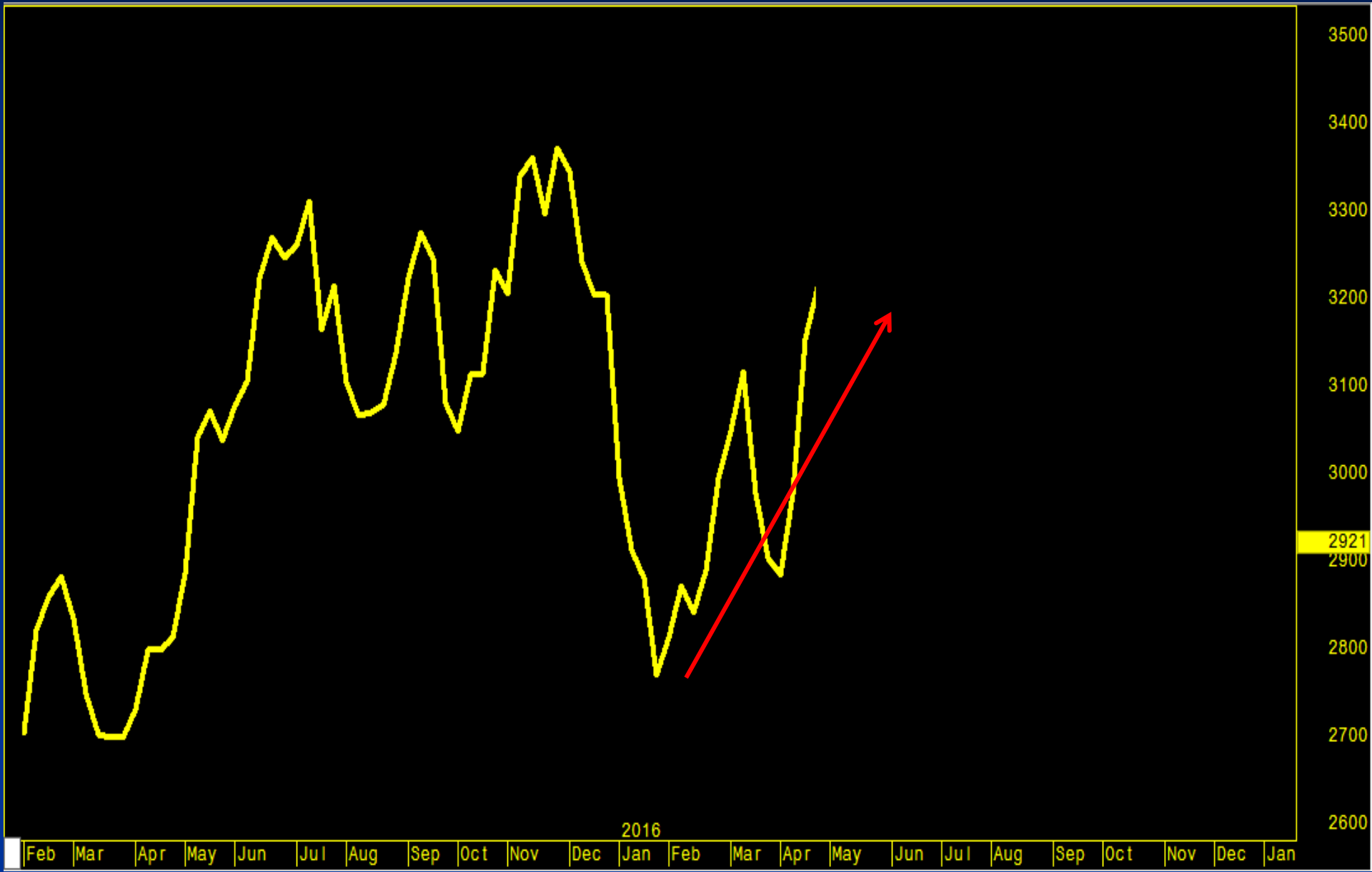
- Sells Cocoa 2.150 Fixed Price
 - INS. Cost 50 100_Day Price Ins. at 2.200
 - Selling Price 2.100 Variable Price
- Price Move to → 3.000
- Option Generates + 800
- Final Effective Selling Price 2.900
- 

“Example does not include commission and fees”

“Variable Purchases”

“Covered Purchases”

NEW YORK COCOA



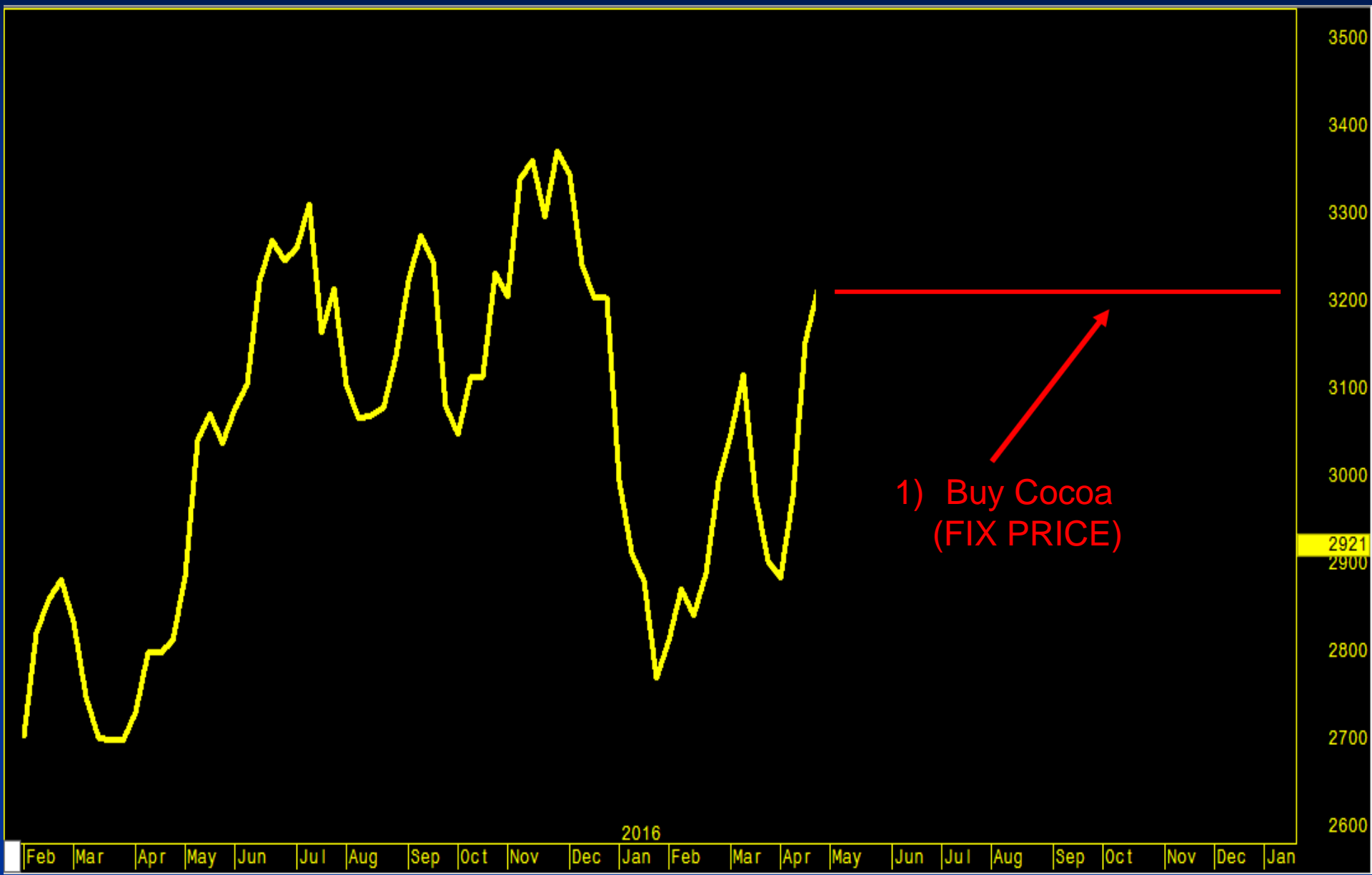
Variable Purchases Concept

- Bullish Market
- Processor does not buy in hopes of lower prices
- Customer looking for a strategy that can provide a lock on prices in case of a market rally
- but with downside potential in case of a drop in market prices

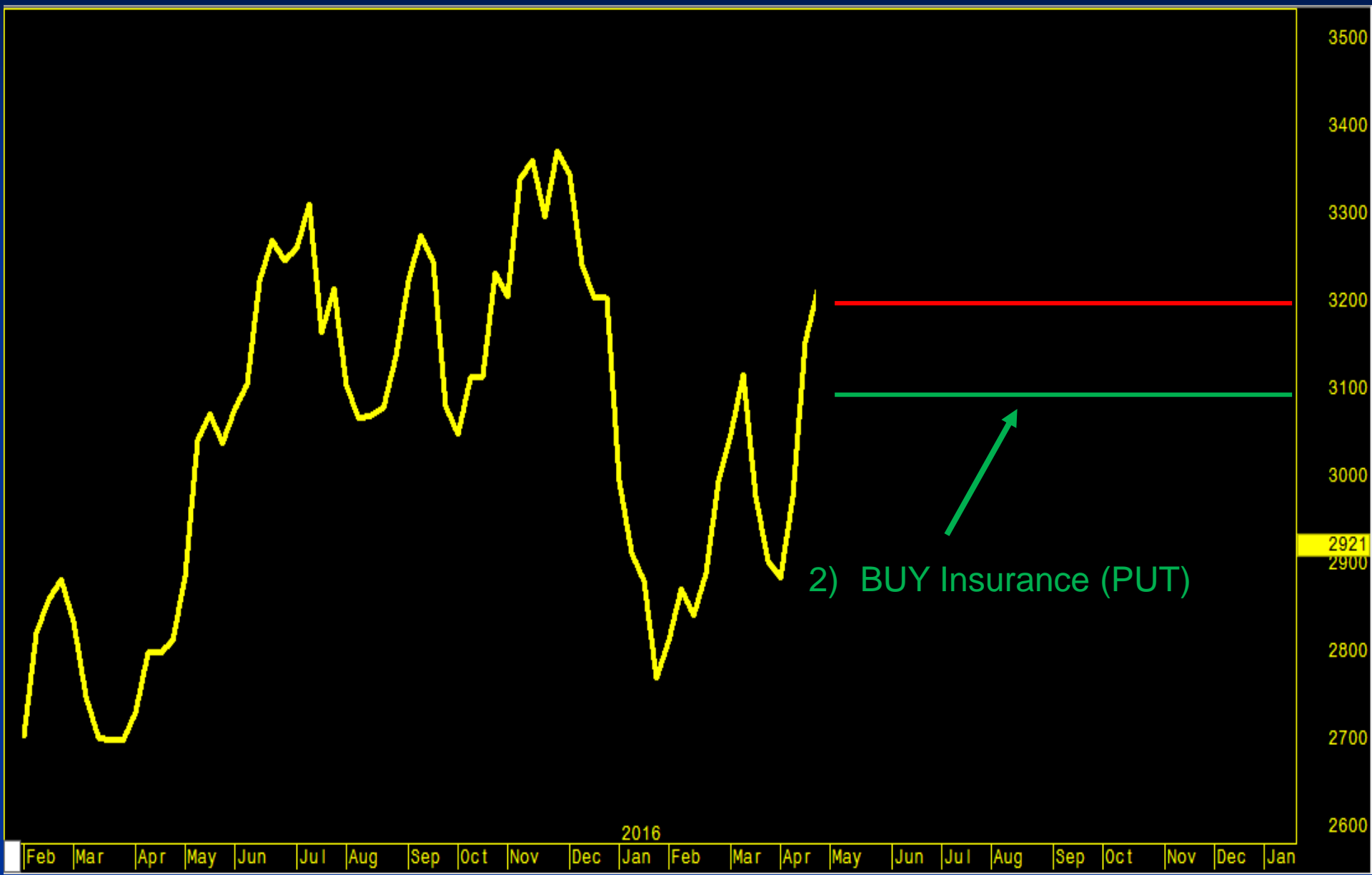
STRATEGY

- FIX COCOA PRICES (BUY)
- Buy Price Drop Insurance (PUTS) in case of a drop in prices in order to reduce cost of inventory

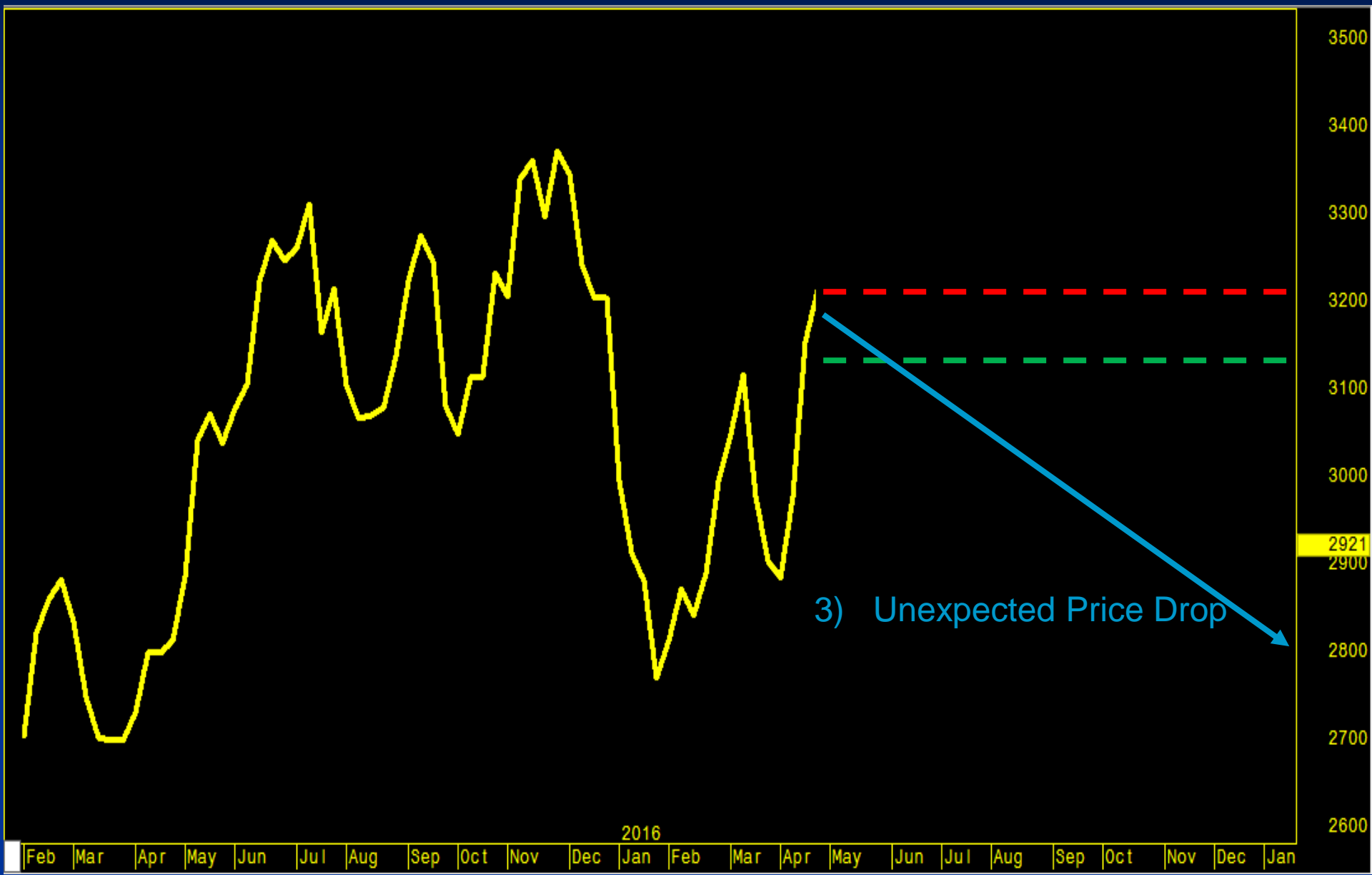
NEW YORK COCOA



NEW YORK COCOA



NEW YORK COCOA



FUTURES ACCOUNT

- Fix Cocoa \$3,200
 - Option Price 60 (75 DAYS PROTECTION @ \$3,100)
 - Variable Price \$3,260
- Price Drops to → \$2,800
- Option Generates \$300
 - Final Price \$2,960 (11%)
-

Price Risk Management

EMPOWERMENT

■ Sustainability

(We need PRM)

- Having a Price

- Managing the Price

“Knowledge is Power and Power is Knowledge”

Francis Bacon 1597



150	350	600	171
161	4713	2000	12 15.0
600	173 19	22 4	
600	4048	500	2500
850	250	100	2379
90	196		
30	150 1	8 16	286880

STRUCTURED PRODUCTS

Structured Products

- ❖ Custom tailored Buying and Selling programs
- ❖ Assist in the Short, Medium and Long term price management
- ❖ Helps reduce the uncertainty over market prices and «Guessing»
- ❖ Assist in budget planning and control
- ❖ Can provide an additional marketing tool
- ❖ Provides more attractive pricing

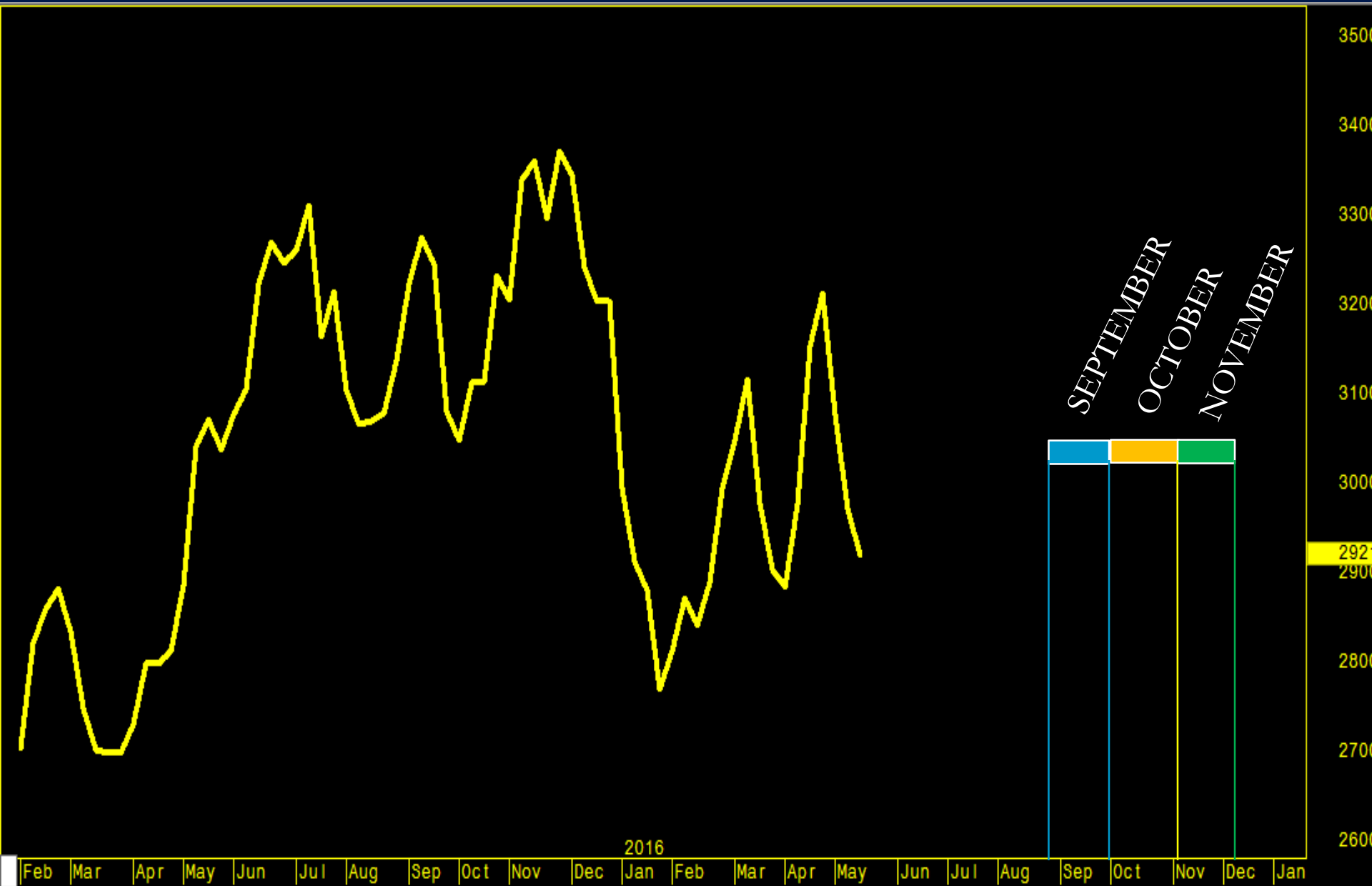
AVERAGES

“ASIAN SWAPS”

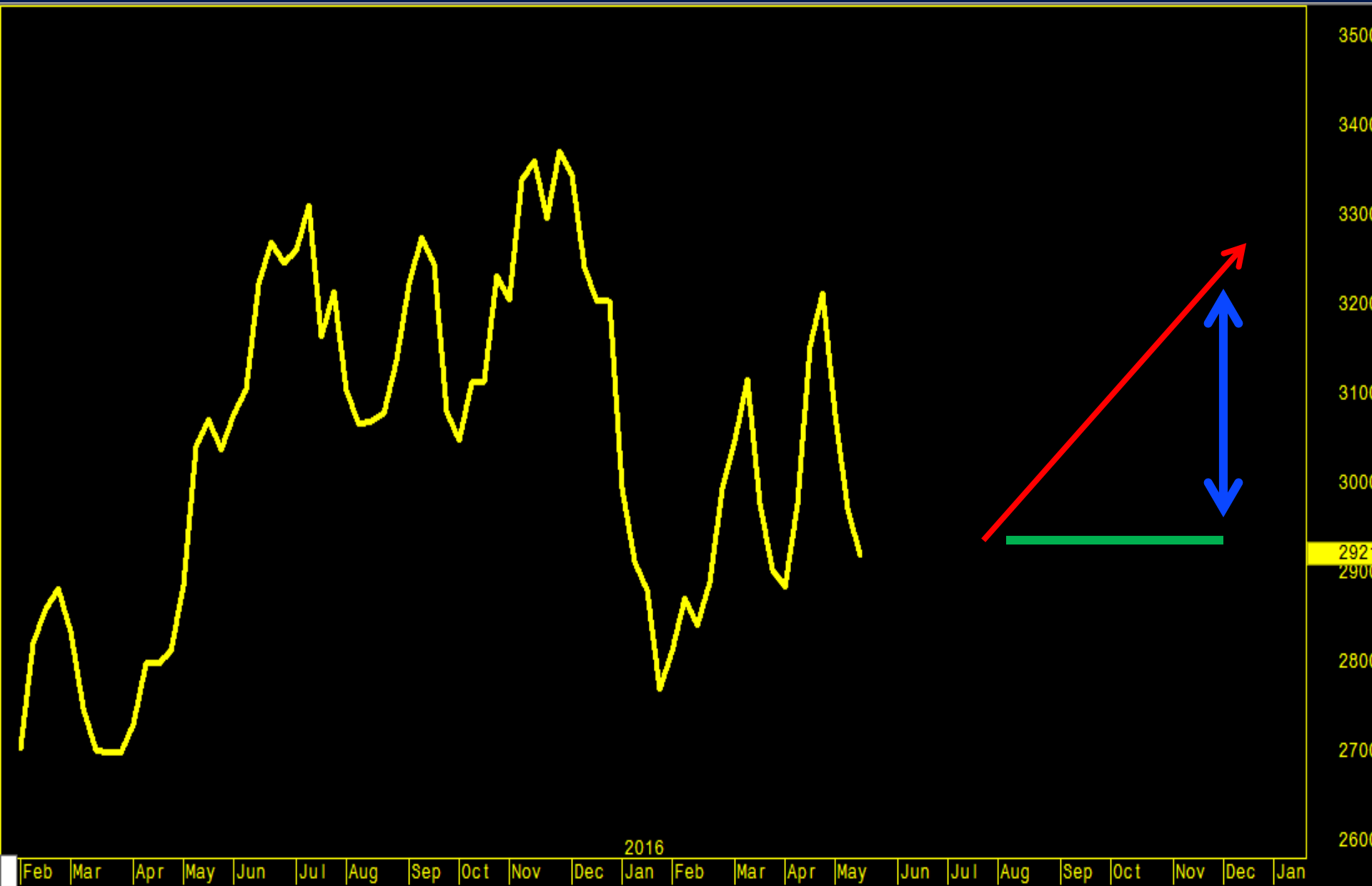
Cocoa Processor/Producer needs to secure pricing for the entire pricing period of September, October and November New York with today's pricing.

“ We need an average of the entire month ”

NEW YORK COCOA



NEW YORK COCOA

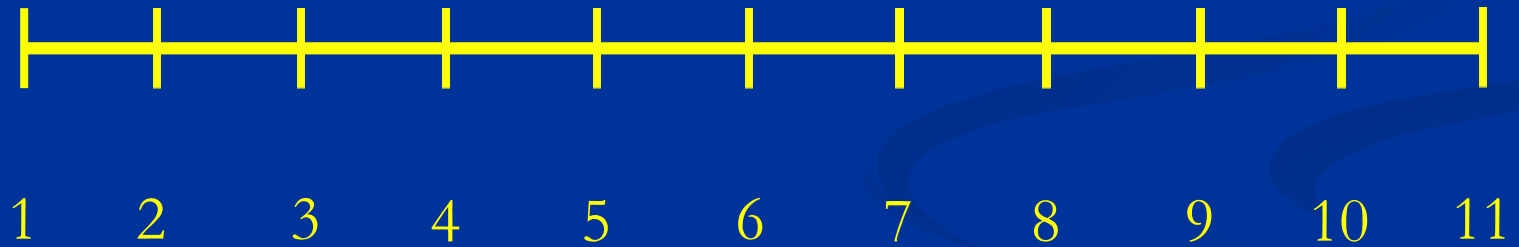


STRUCTURED PRODUCTS

“PROGRAMMED SALES”

TIME HORIZON

WEEKLY SALES ACCUMULATIONS



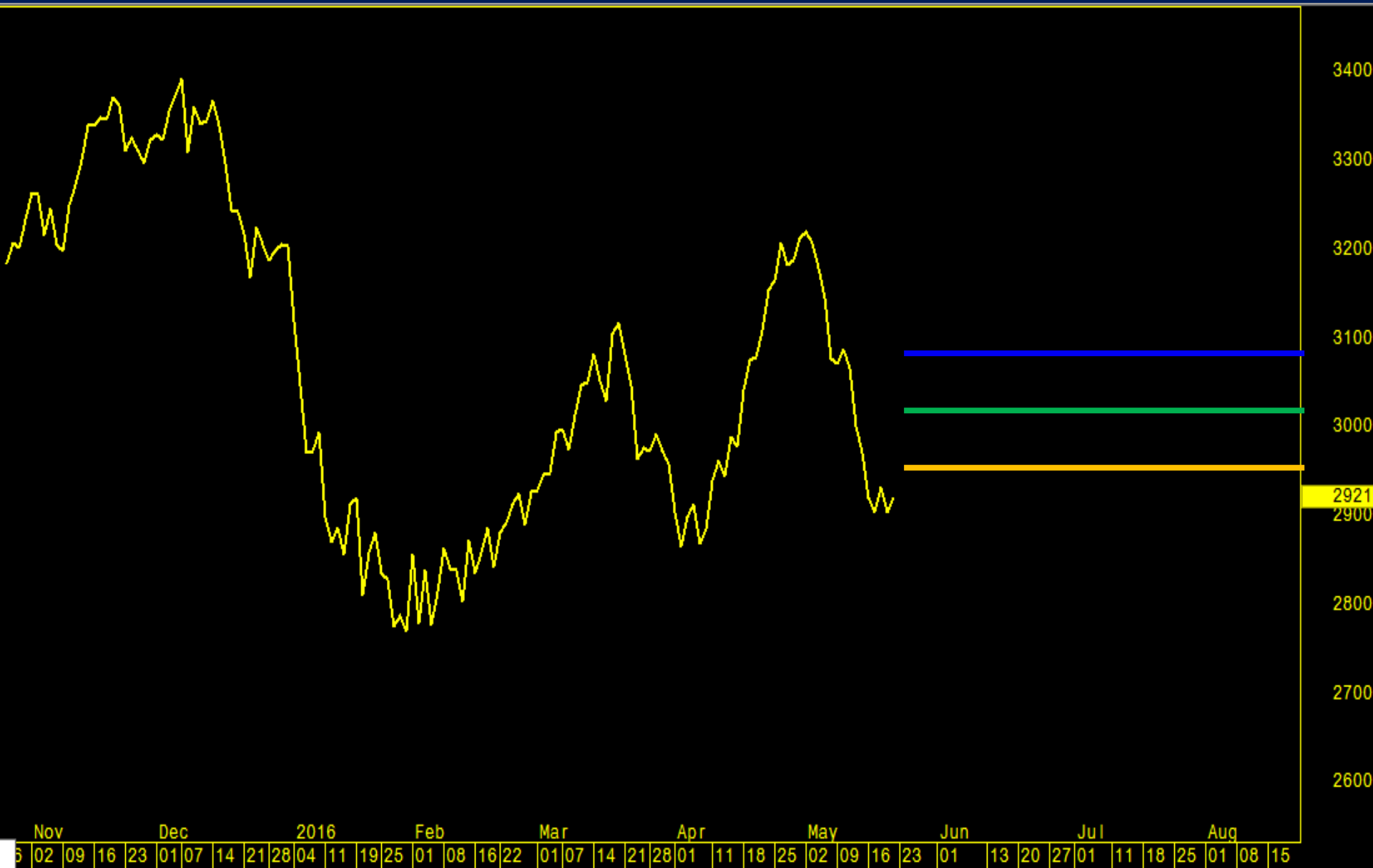
Ladder Program Sales

NEW YORK Cocoa @ 2.940

- START: May 27th, 2016
- ENDS: August 5th, 2016
- Period: 11 Weeks

- First Level: \$2.940
 - Second Level: \$3.000
 - Third Level: \$3.060
- 

LADDERED SALES



Programmed Sales

With Min Floor and Max Ceilings

London Cocoa @ 2.120

- START: May 25th, 2016
- END: Nov 30th, 2016
- PERIOD: 28 Weeks

- MIN PRICE: 2.120
- MAX PRICE: 2.240



WEEKLY STRIPS

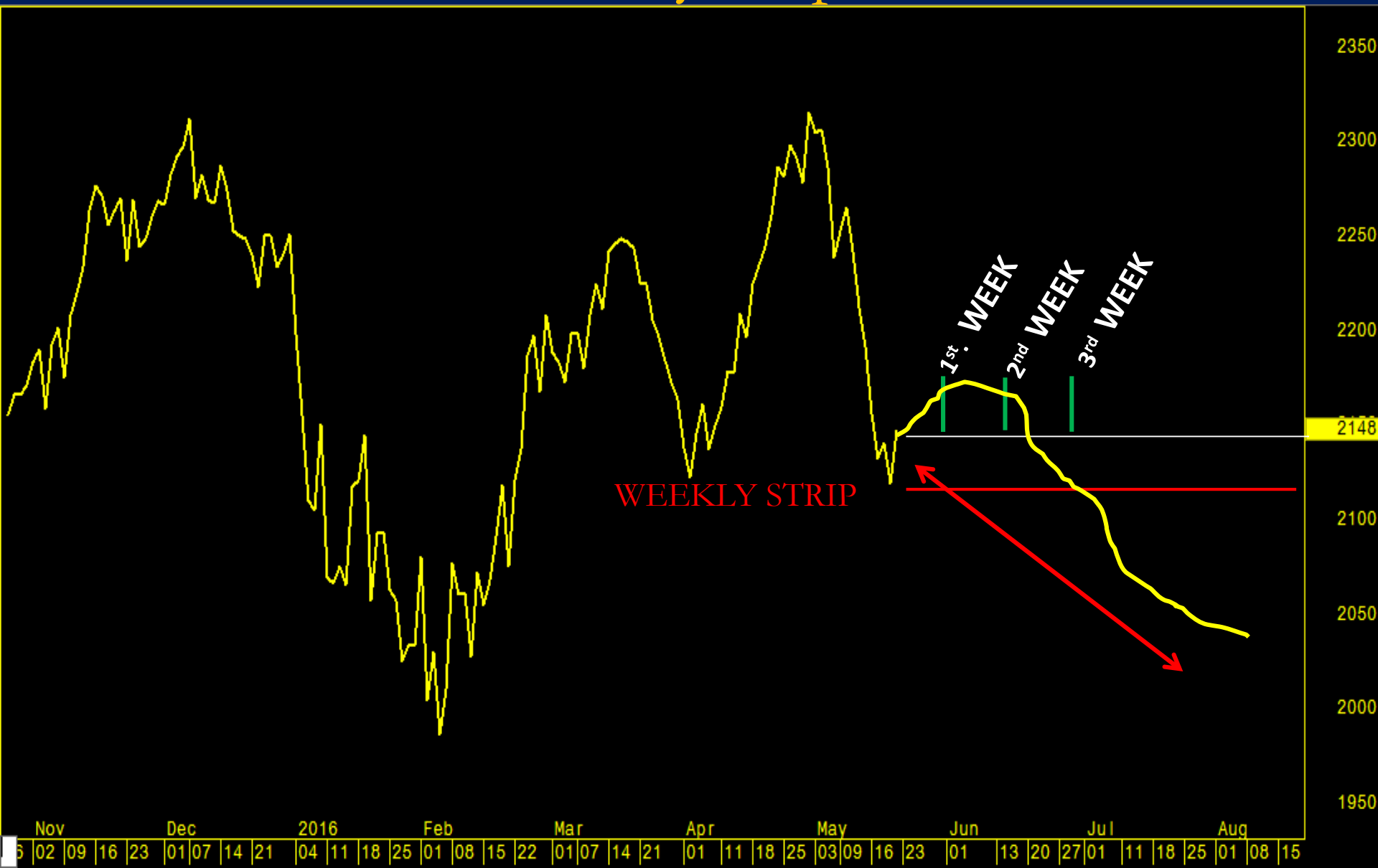
“Conditional Stops”

Minimum Weekly Price “Weekly Insurance”

- September London Cocoa: 2.140
- 15 Weeks
- Minimum Floor Price 2.100
- Cost 30 M/T

“Example does not include commission and fees”

September London Cocoa Weekly Strips



HEDGING FRACTIONS

FRACTIONAL HEDGING

BUYS

6 Tons

3 Tons

14 Tons

SALES

4 Tons

2 Tons

25 Tons

Standardized Contract = 10 M/T

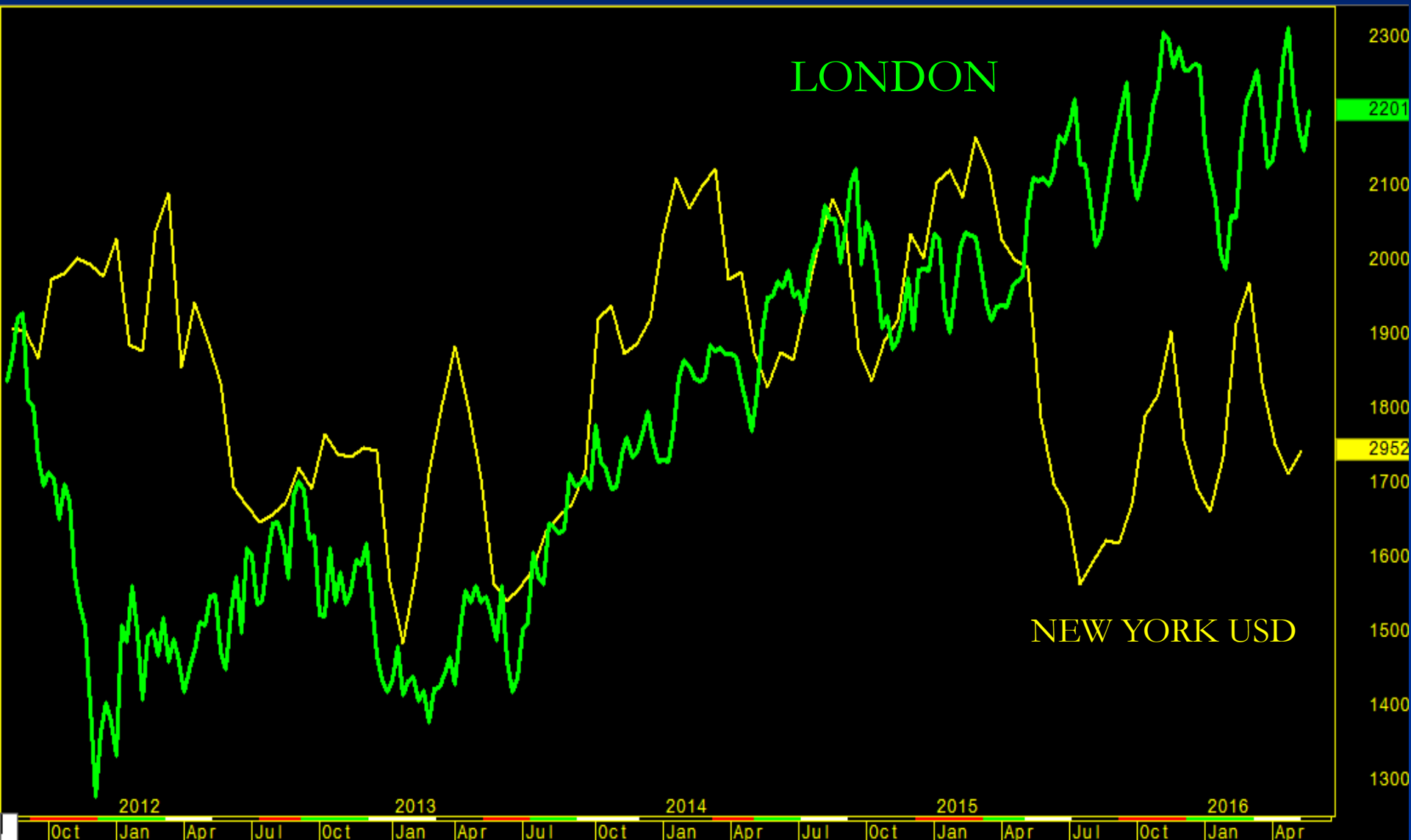
CURRENCIES



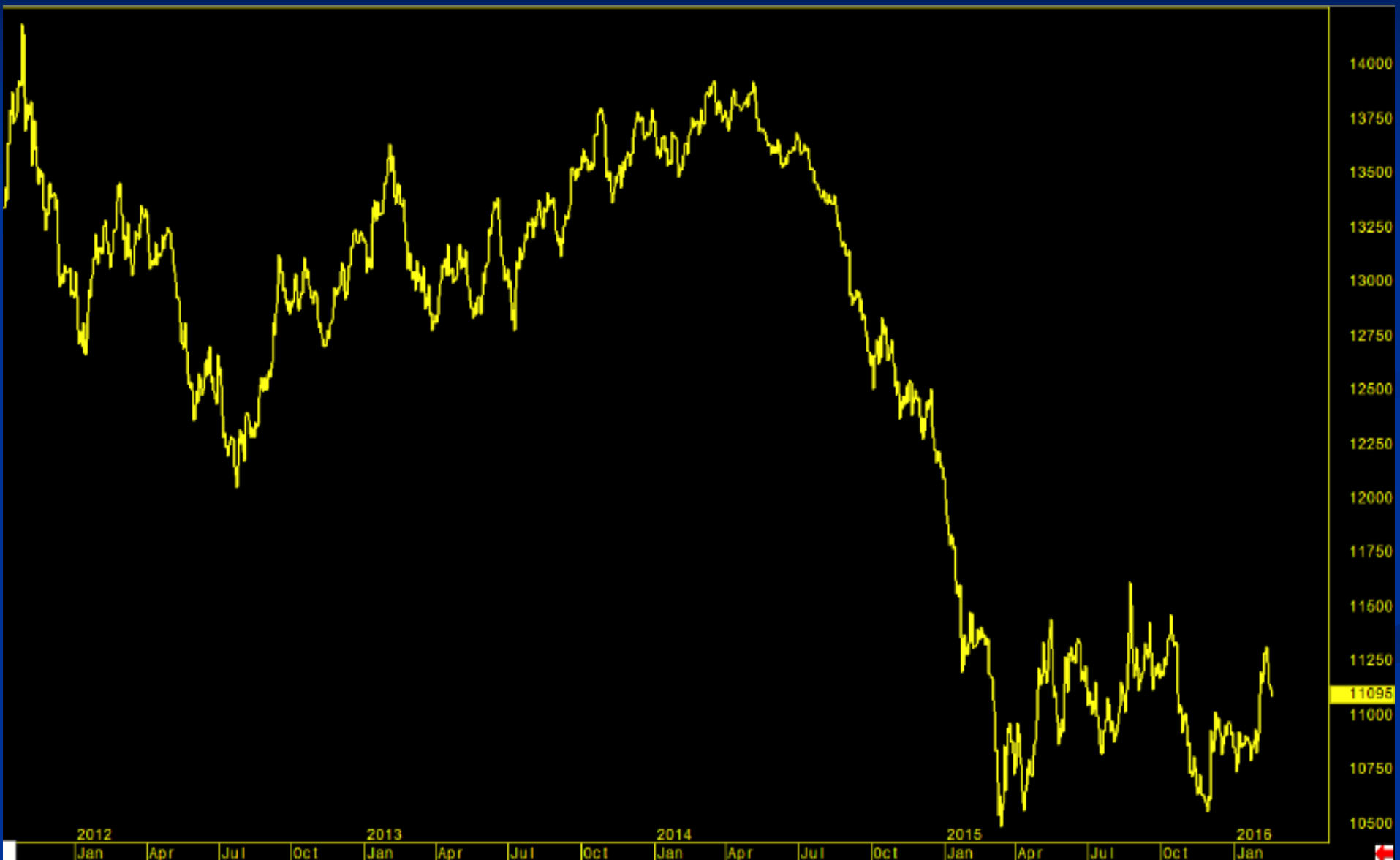
Highest Volatility of the past 30 years

COCOA IN LOCAL CURRENCIES

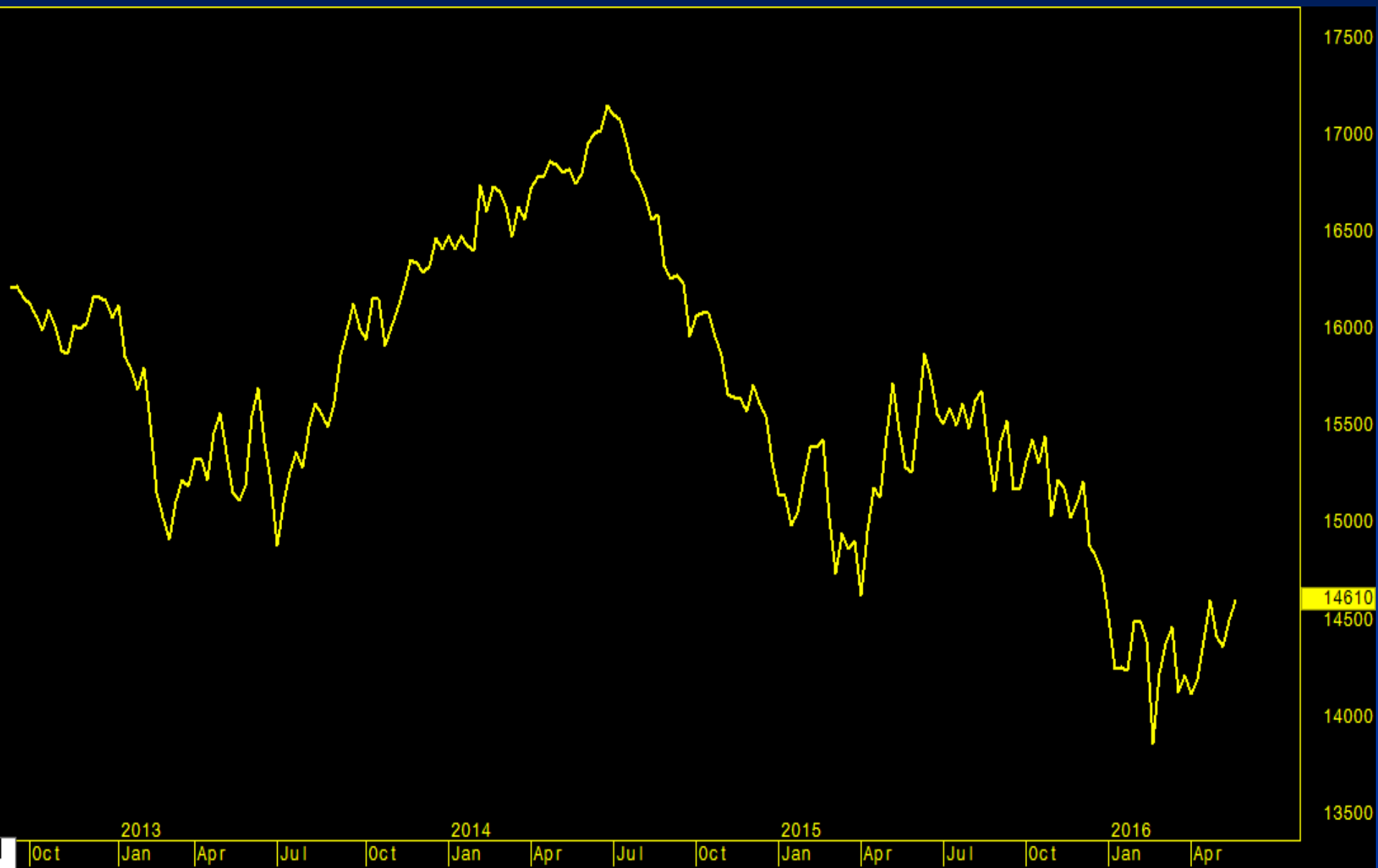
“Compos & Quantos”



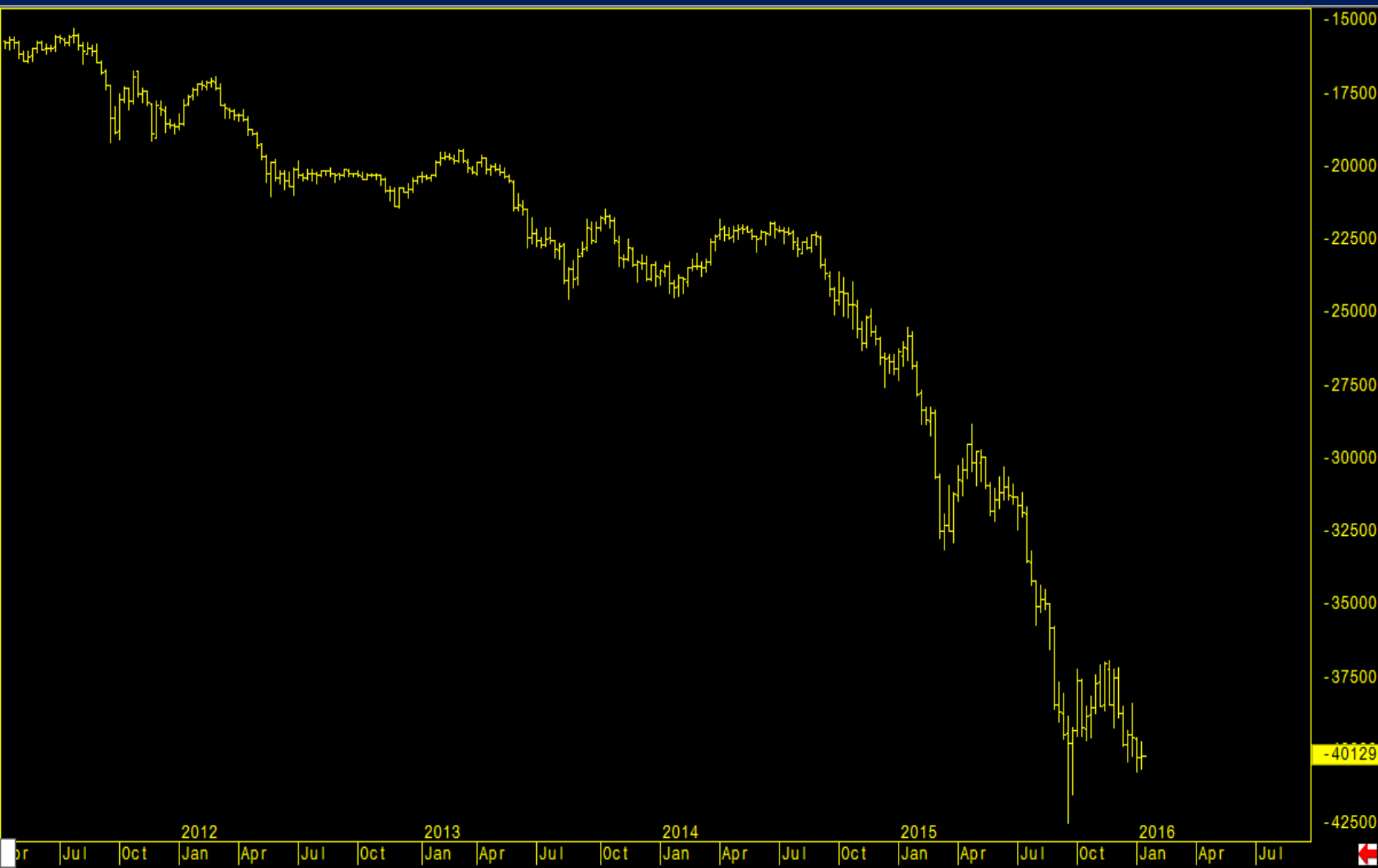
Euro



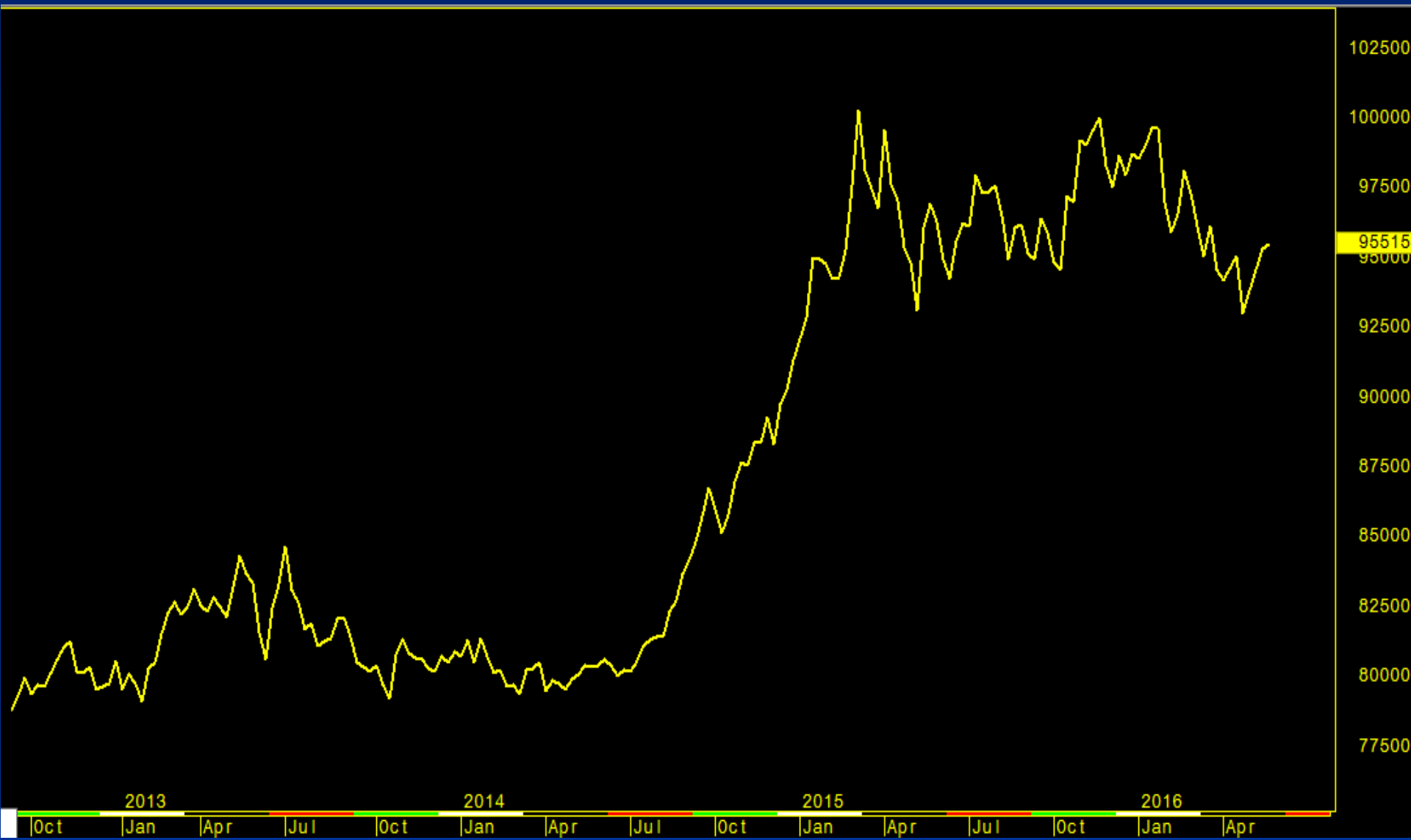
British Pound



Brazilian Real

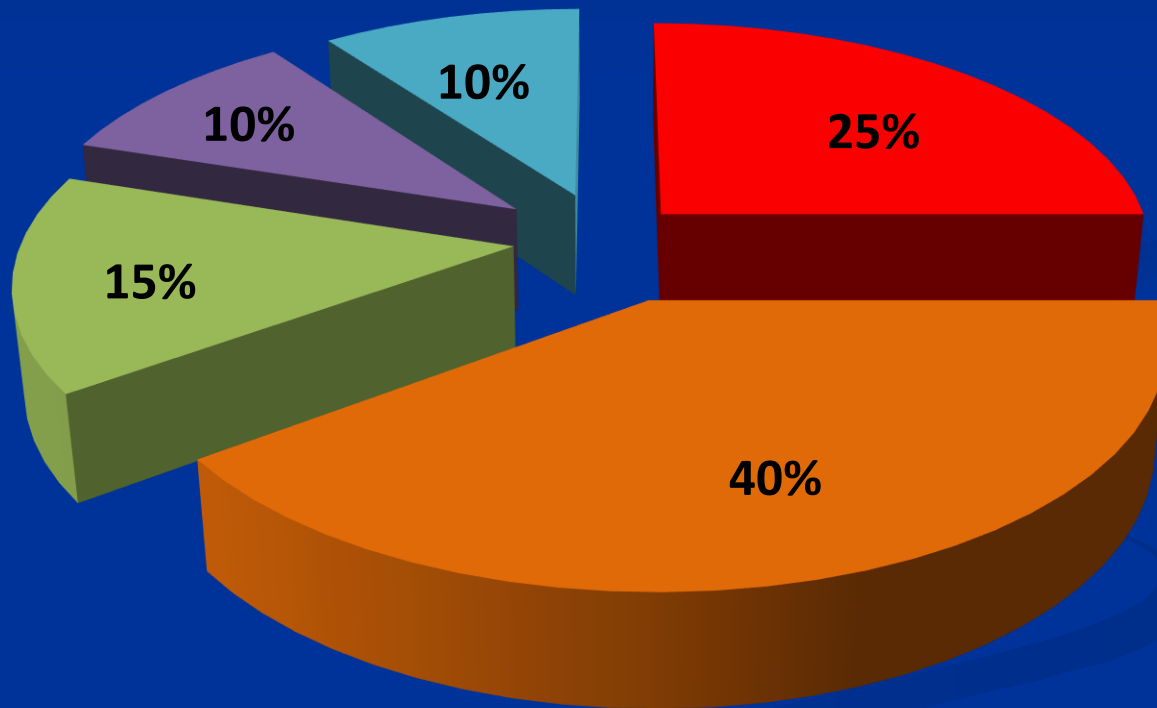


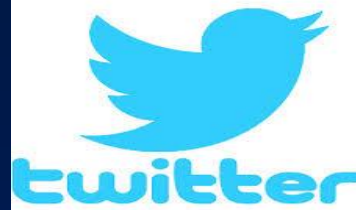
US DOLLAR



HEDGE BLEND WHEEL

■ FIXED PRICE ■ VARIABLE PRICE ■ STRUCTURED PRICE ■ SYNTHETIC ■ "WAIT"





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Hedging Solutions for the Cocoa Industry