Goldman Sachs Commodities
Sugar Hedging Structures

Presentation to Thai Sugar Millers Corp

22nd March 2011

A presentation by Goldman Sachs International

and J. Aron & Company (Singapore) Pte.

(Company Number: 198902119H)

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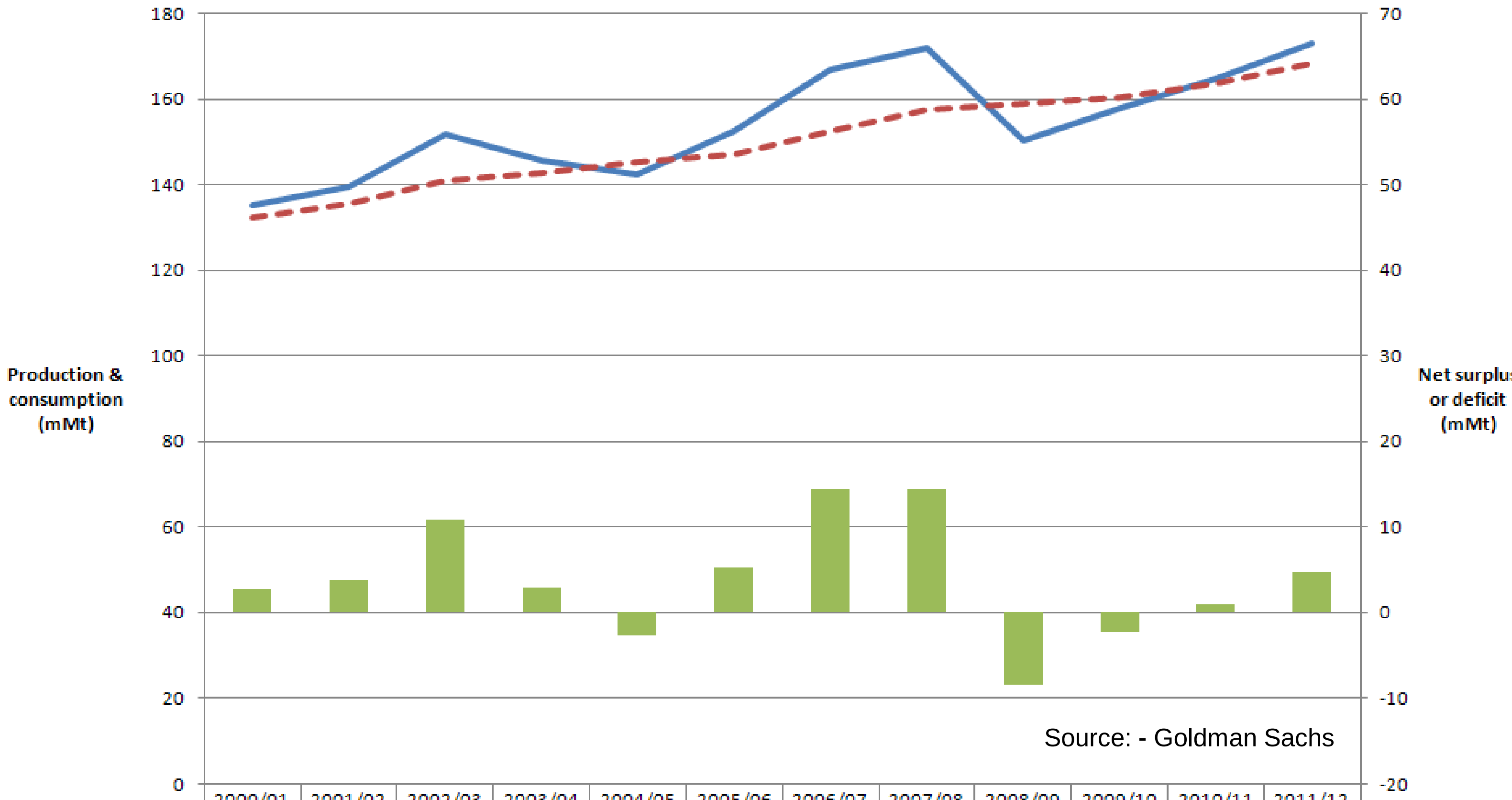
Agenda

1. Sugar Market update / forecast
2. Brief derivative history and basic OTC
3. Benefit of OTC over ETD
4. Raw sugar structures, examples
5. New product - White premium structure
6. Role in the physical market
7. Q&A

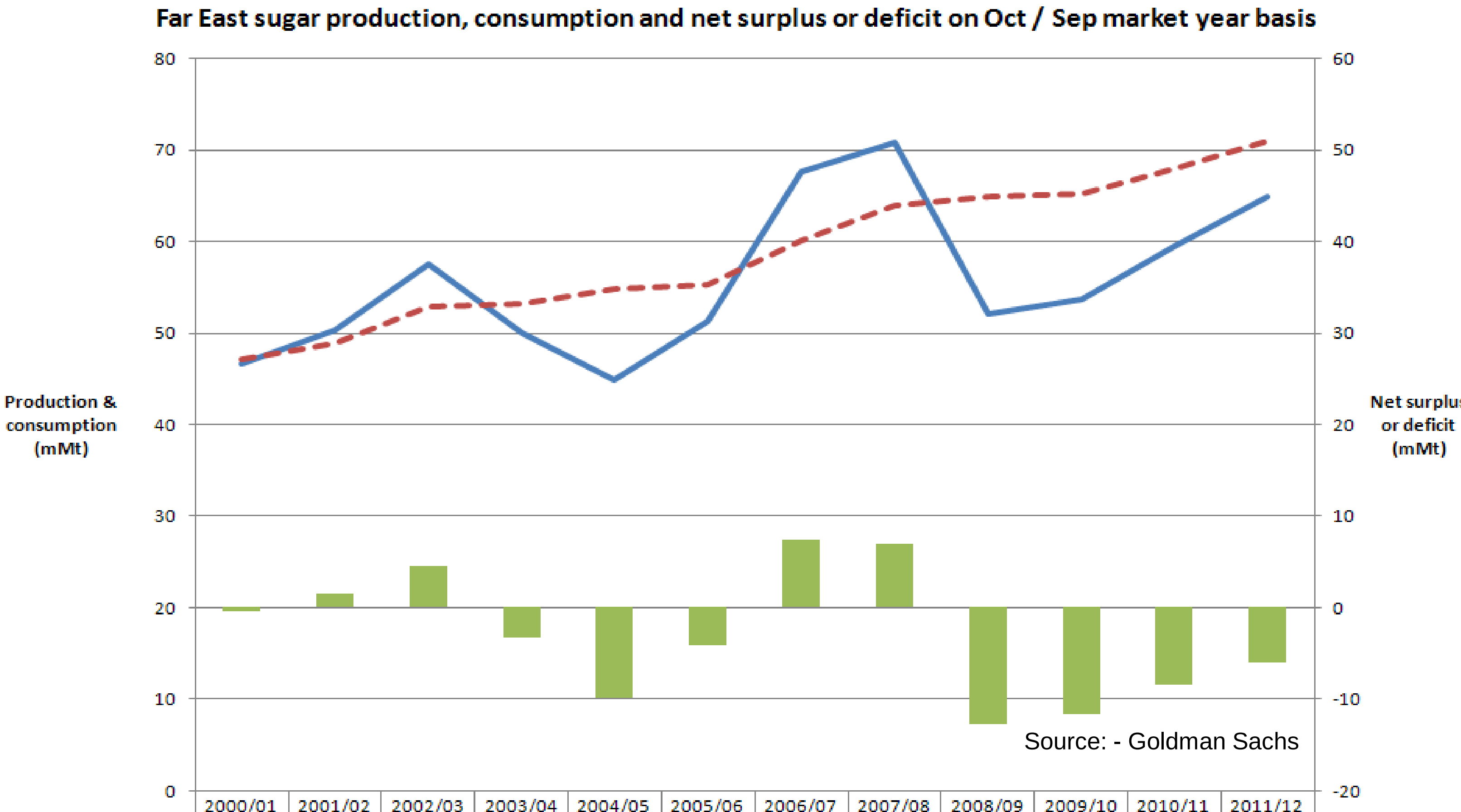
World sugar market

World sugar production, consumption and net surplus or deficit on Oct / Sep market year basis



	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Net	2.7	3.8	10.9	2.9	-2.6	5.3	14.4	14.5	-8.5	-2.4	0.9	4.7
Production	135.1	139.4	151.7	145.5	142.5	152.4	167.0	171.9	150.5	157.9	164.7	173.0
Consumption	132.3	135.6	140.9	142.6	145.2	147.0	152.6	157.4	159.0	160.3	163.8	168.3

Far East sugar market



	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Net	-0.4	1.5	4.6	-3.3	-9.9	-4.1	7.4	7.0	-12.7	-11.7	-8.5	-6.0
Production	46.7	50.4	57.5	49.9	44.9	51.2	67.5	70.9	52.1	53.6	59.5	64.9
Consumption	47.1	48.9	52.9	53.3	54.8	55.3	60.1	63.9	64.8	65.3	68.0	71.0

History of commodity derivatives

- **Exchange futures** have developed over 150 years
- Developed as vehicles for hedging and risk management, so that people can avoid exposure if that is not their choice. "Regret all or nothing"
- Being "conservative", and a firms approach to hedging
- Exchange margin calls – Initial and daily variation
- Liquidity – Ok in short dates but not so in longer dates – *see next slide for options illustration*

- **OTC Agri market** has been around for less than 10 years.
- In response to participants looking for:
  - Liquidity – both relative to futures and from a cash flow (credit) perspective
  - Price enhancement and longer dates
  - More practical tailored terms and conditions (admin and credit)
  - Suits 'lumpy' producer cash flows
- Mainly used by Brazilian and Australian sugar industry

Issues specific to Thailand

- USD transfers issue
  - Bank of Thailand restricts transfers. Transfers may be needed to service margin / collateral requirements.

- Possible solutions: -

  1. Seek approval from Bank of Thailand

  2. EFS or AA settle into a merchants account or physical

  3. Local bank support

- Quota B and the profit sharing system
  - *Cost of cane unknown initially*
  - *Timing of provisional cane price and final cane price needs to be monitored*
  - *800k tonnes, 50% miller and 50% farmer (TCSC)*
  - *Price and Thai premium have to match or better TCSC*

Price components

- ICE futures + Premium / (USD/THB) = Local Price received
- (Commodity / Currency = Result)
- March ’12 24.00 + *0.50 (Prem for Thai)* = 24.50 US cents / THB = Local income

- 2 KEY Points
  - 1. Financial market hedge, <u>can be achieved well prior</u> (years) to physical premium and logistics (Although Quota B is a limitation). *Separate pricing and supply/physical*
  - 2. <u>Premium can be maximized</u> separately to the financial market components (Futures and Currency)

- Today’s focus is on maximizing the financial market (futures) component of your price: -
  - The sugar price (NY#11)
  - The Whites Raws Premium (LIFFE – NY#11)

OTC for Thai Sugar Producer

TCSC sets cane prices as the Quota B is priced, leaving mills with sugar price exposure

- Thai millers' cost in the Quota B are fixed
- If sugar prices + premium move below the Quota B – Millers could potentially have negative margins
- The millers' risk is that sugar prices move down below the Quota B level
- Implementing strategies that allow the miller to enhance the price received in the market could potentially assist in generating positive margins

OTC strategies with Banks as Counterparties typically separate the Price Risk from the Physical Underlying.

- Enhanced Credit worthiness of Bank

Advantages of structures that accrue daily: -

- Volume can be sold above current market, conditional on future market movement
- Clients become disciplined on pricing a quantity of sugar each day
- Clients know exactly what quantity of sugar is priced, at what level each day
- Unpriced sugar quantity is known and can be hedged either by simple OTC swaps or via the futures market
- The following structures can be altered, or tailored to meet clients' needs as appropriate

Producer Collar Accumulator with Daily Double Up

Basis: March 12 @ 24.00

Expiry: 15 Feb 2012

Business days: 233

Number of lots per day : N

1. Every day that March 12 settles at or below 24.00 client accumulates ‘N’ lots of March 12 shorts at 24.00.
2. Every day that March 12 settles above 24.00 but below 26.55 client accumulates ‘N’ lots of March 12 shorts at settlement.
3. Every day that March 12 settles at or above 26.55 client accumulates **‘2 * N’** lots of March 12 shorts at 26.55.

Risks

Benefits

- Client receives prices equal to or greater than current market.
- Client accumulates daily, even between the upper and lower levels.

Risks

- If the daily close price settles above 26.55 (the fixed price), client accumulates double daily notional (N)
- If prices keep closing above the fixed price for the tenor of the entire trade, client will price double the quantity at 26.55, which will be lower than the prevailing market price
- Should price keep rising mark-to-market losses are theoretically unlimited
- Value of the structure will change with volatility, price of the underlying, time to expiry, interest rates and other factors; this can effect early closeout valuation.
- If this structure is not EFS’ed at expiry the client is obliged to cash settle this transaction with Goldman Sachs or partner bank

Producer Accumulator with Daily Knock Out and Double Up at Expiry

Basis: March 12 @ 24.00

Expiry: 15 Feb 2012

Business days: 233

Number of lots per day : N

1. Every day that March 12 settles above 19.00 client accumulates ‘N’ lots of March 12 shorts at 27.50.
2. Every day that March 12 settles at or below 19.00 client accumulates ‘Zero’ lots of March 12 shorts.
3. In addition **at Expiry** (15 Feb 2012) if March 12 settles at or above 27.50 client accumulates **a further ‘233 * N’ lots** of March 12 shorts at 27.50.

Risks

Benefits

- Client receives initially a significantly better price than current market level.
- Should prices fall below a KO level, no lots are sold for that day but structure remains

Risks

- If the daily close price settles above the fixed price on expiry, client is obliged to sell 2x quantity at the fixed price. This means client must leave the double up volume unhedged until outcome of double up is known
- If price closes above the fixed price at expiry, client will price double the quantity at the fixed price, which will be lower than the prevailing market price on expiry
- Should price keep rising mark-to-market losses are theoretically unlimited
- Value of the structure will change with volatility, price of the underlying, time to expiry, interest rates and other factors; this can effect early closeout valuation.
- If this structure is not EFS'ed at expiry the client is obliged to cash settle this transaction with Goldman Sachs or partner bank
- The client does not accumulate if the market settles below the knock out level i.e. you are unhedged if the market stays below the knock out level continuously

Producer Accumulator with Single Knock Out and Double Up at Expiry

Basis: March 12 @ 24.00

Expiry: 15 Feb 2012

Business days: 233

Number of lots per day : N

1. Client accumulates ‘N’ lots of March 12 shorts at 27.90 providing that March 12 does **not settle at or below 18.40**, in the event that March 12 does settle at or below 18.40 then **all accumulation stops and the trade ceases to exist.** Client however keeps all lots accumulated up to that time.
2. In addition **at Expiry** (15 Feb 2012) if March 12 has not settled at or below 18.40 for the duration of the trade and then settles at or above 27.90 (on expiry) then client will accumulate a further ‘233*N’ lots of March 12 shorts at 27.90.

Risks

Benefits

- Client initially receives a significantly better price than current market price
- Keep accumulated lots up until KO

Risks

- Should prices fall below a KO level, the whole structure ceases to exist i.e. you will be unhedged, apart from the accumulated lots up to point of KO
- If the daily close price settles above the fixed price on expiry, client is obliged to sell 2x quantity at the fixed price. Client needs to keep this volume unhedged
- Should price keep rising mark-to-market losses are theoretically unlimited
- Value of the structure will change with volatility, price of the underlying, time to expiry, interest rates and other factors; this can effect early closeout valuation.
- If this structure is not EFS'ed at expiry the client is obliged to cash settle this transaction with Goldman Sachs or partner bank

New Product: -
Leveraged White Premium Collar Accumulator

Underlying : March 12 White sugar premium basis USD 98.00

Expiry : 1 Feb 2012

Lower level : 98.00

Upper level : 118

Treble Up Level : 118

Lots per day : 2

Treble up lots: 442

Business days : 221

1. Every day March12 white premium settles at or below USD 98 client accumulates 2 lots short March 12 white sugar / long March 12 raw sugar at USD 98
2. Every day March12 white premium settles above USD 98 but below USD 118 client accumulates 2 lots short March 12 white sugar / long march 12 raw sugar at Settlement price
3. Every day March12 white premium settles at or above USD 118 client accumulates 2 lots short March 12 white sugar / long March 12 raw sugar at USD 118

In addition At Expiry if March 12 White premium settles at or above USD 118 then client accumulates a further 442 lots short March 12 white sugar / long march 12 raw sugar at USD 118

Why is Goldman Sachs in physical commodities?

- Existing clients increasingly want price risk management in physically settled contracts
  - » Simplified accounting
  - » Board level familiarity
  - » Performance/credit concerns around fixed-price contracts with physical suppliers
  - » Derivative policy limitations, either for regulatory or governance reasons
- Credit considerations in certain jurisdictions, and with certain counterparts
- Lack of reliable price references for certain products and locations
- Increasing emerging market commodity focus
- Physical market participants are interested and provide liquidity
- Lenders support it with their corporate clients
- Goldman is new to physical sugar, does <u>not</u> want to be a trade house, but recognizes physical transactions as a way to access price risk opportunities i.e. non-derivative vehicle to manage price
- Commodity Finance Products

Summary – Thank you

Process is underway: –

- Product – Tools are available, direct or via local bank
- Examples – demonstrates value
- Education – Today and more available

Next Steps: -

- One-on-one discussions
- Credit & Documentation (role for local partner bank)
- Detailed risk and sensitivity analysis – disclosure and discussion
- Strategy development and implementation (place order)
- Close-out hedge & deliver physical sugar for a profitable price

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