

Webinar

Advanced risk management - softs

Mon 14 February 2022



Agenda

15.00: Welcome – Craig Haymaker, HedgeStar

15.10: **The role of data**
Ben van der Laan, DycoTrade



15.20 **Advanced risk metrics**
Richard Cornielje, KYOS



15.30 **Translating data and risk analytics
into earnings performance**
Craig Haymaker, HedgeStar



15.40 Questions & Answers



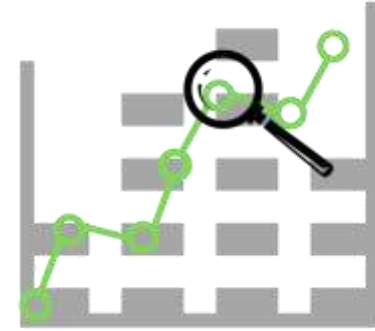


Introduction

Why advanced risk management?

Tone at the top

- Expectations around risk management have changed
- Board members and senior leaders are striking a different tone
- Flexible frameworks and process to actively manage risk are necessary



Strategy and Risk

Senior Leaders



Senior Leaders – Responsibility

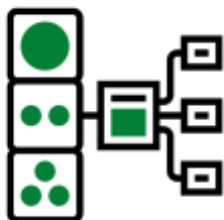
Board of Directors

- Establishes the risk appetite of the enterprise
- Approves the risk management policy

Senior Management

- Establish the risk management policy
- Set strategic goals and approve hedge strategy
- Assign responsibilities for hedge execution

Rank & File



Rank & File – Responsibility

Treasury / Procurement / Trading

- Manage metals price risk exposure
- Adhere to risk management policy
- Execute hedge strategy

Accounting / Financial Reporting

- Enforce compliance to hedge policy
- Account for hedging program

Strategy and Risk

Where to begin?

- **Articulate what 'risk' means to the enterprise**
 - Timing, quantity/amount and geography
- **Define risk management objective(s)**
 - Reduce price risk variability
 - Mitigate price risk above or below certain levels
- **Identify hedging strategy(ies)**
 - Inventory balances, raw material purchases, sales, etc.
- **Select hedging tools**
 - Futures, options, swaps, accumulators, etc.



Strategy and Risk

Where to begin? (continued)

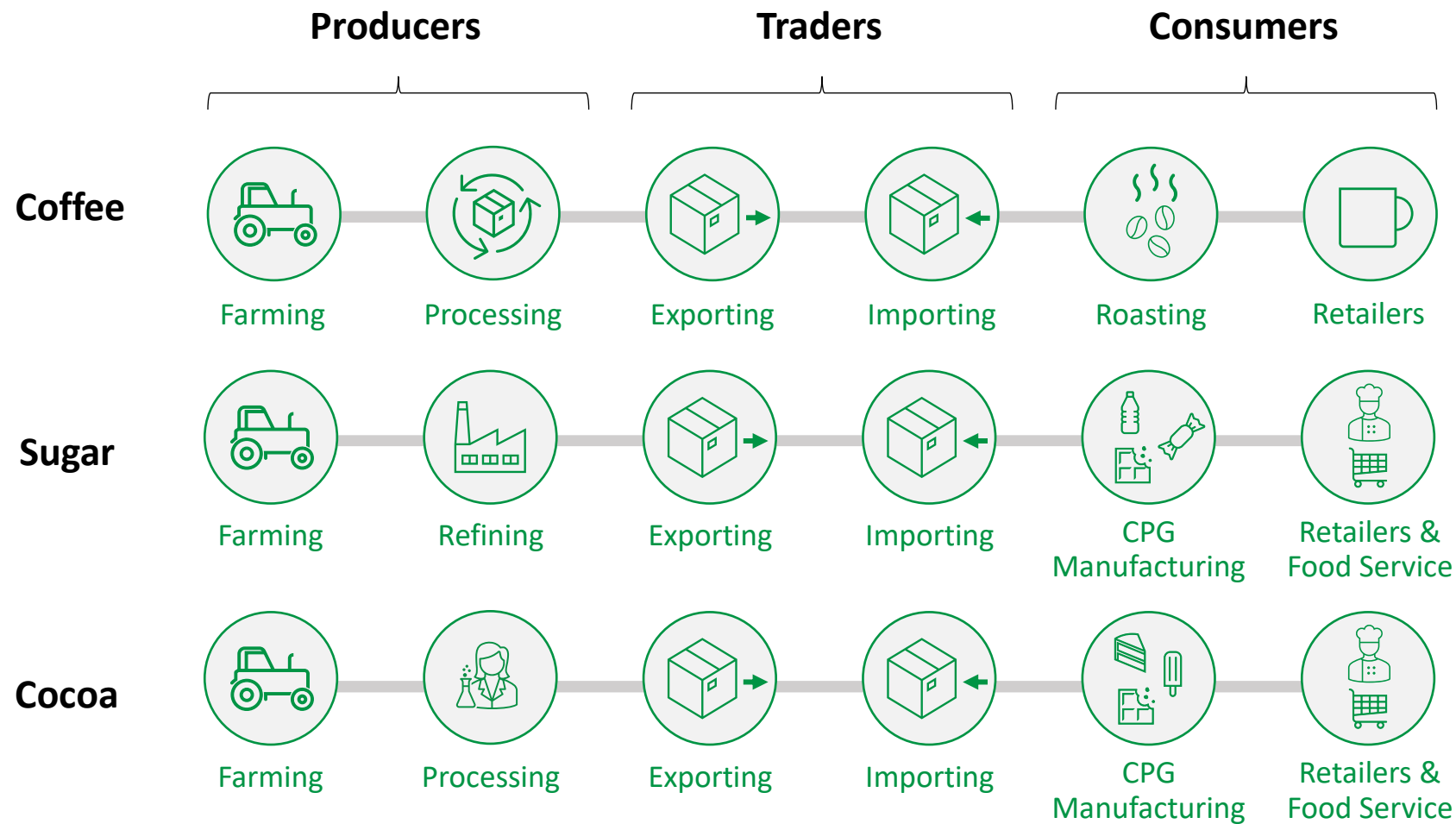
- **Create policy and assign responsibility**
 - Governance
 - Risk limits and sub-limits
 - Lines of reporting and approval
 - Clearly delineate roles across the enterprise
- **Execute strategy and policy**
 - Reporting on hedge performance
 - Risk scorecards
- **Streamline process and accounting**
 - Documentation
 - Earnings optimization (hedge accounting)



Soft Commodities



Supply Chain



Coffee Source: Specialty Coffee Association. SCA Coffee Systems Map. <https://sca.coffee/coffee-systems-map>

Sugar Source: Sugar Association <https://www.sugar.org/sugar/refining-processing> & Ceres. <https://engagethechain.org/sugarcane>.

Cocoa Source: International Cocoa Organization <https://www.icco.org/> & Ceres. <https://engagethechain.org/cocoa>



Risk Orientation

- Pursuit of strategic objectives give rise to risk
- Participants desire to maximize their own utility

○ **Producers**



○ **Consumers**



○ **Traders**



IN FOCUS: Traders

- To appease their customers, traders may offer flexible pricing and contracting. Customers can choose if they wish to...
 - Let prices float then sell or purchase at spot, or
 - Lock-in the futures prices when they please.
- Traders must be comfortable buying and selling derivatives to hedge their position to satisfy customer demand



IN FOCUS: Traders (continued)

The paradigm is simple when buyers and sellers wish to trade...

At the same time



For the same product



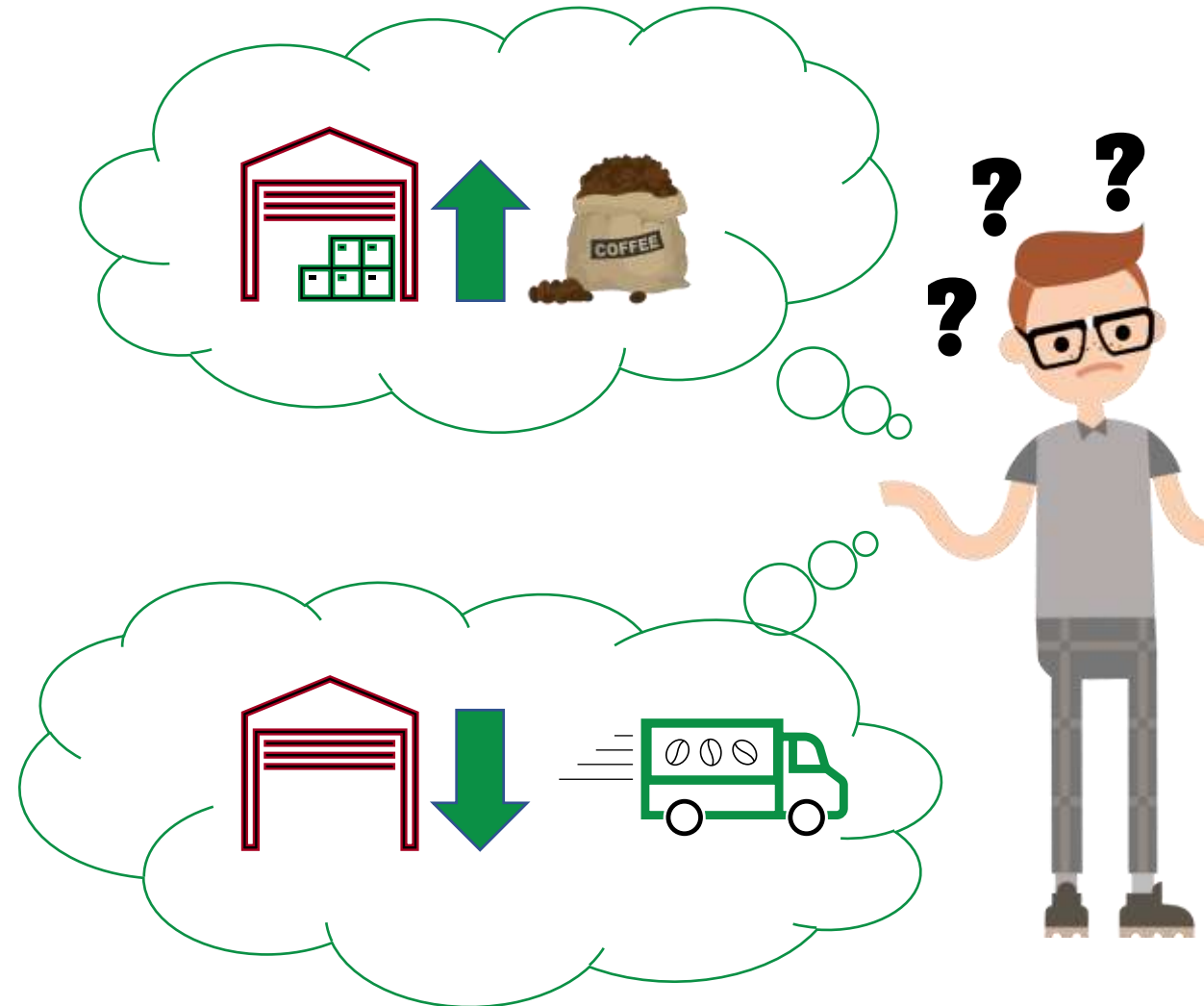
For the same delivery period



...but this is often not the case.

IN FOCUS: Traders (continued)

Traders may need to purchase more product in advance and hold more in inventory, or hold less and purchase more at spot prices all while trying to determine how much to hedge.



IN FOCUS: Traders (continued)

- To do this effectively, traders need...



Data on inventory turnover and how their customers may respond to different price environments



A view on where coffee prices may go and potential impact to net risk position



Accounting and cash flow considerations that reflect their operational and hedging strategy



The role of data - DycoTrade

A day in the life of a Trader

DycoTrade Commodity Trade and Risk Management

- Microsoft ISV
- Multicommodity solution
- Embedded in Microsoft Dynamics 365 ERP
- Cloud solution on Microsoft Azure



Agenda

1

**DycoTrade
Look & Feel**

2

**Position
management**

3

**Embedded
PowerBI**

4

**Contract
creation**

5

**Interface to
KYOS advanced
risk management**

DycoTrade look & feel

Finance and Operations

Search for a page

TREX

?

NH

DycoTrade 365

Demo environment

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February 2022

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19

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21

22

23

24

25

26

27

28

Work items assigned to me

Work items will be displayed here after they are assigned to you.

Position management

Delayed order lines

101

Orders on hold

0

DycoTrade Risk management

EUR FX Contracts

56

GBP FX contracts

17

DycoTrade Trading

Open Purchase contracts

76

Open Sales contracts

79

DycoTrade Logistics

Inbound Logistic files

47

Outbound / B2B Logistic files

43

DycoTrade Finance

Customer invoices due today

0

Vendors past due

25

Reuters market prices

Using multiple screens

The image displays two side-by-side screenshots of the Dycotrade Risk management system interface.

Left Screenshot: Dycotrade Risk management

The interface shows a sidebar with navigation options: Options, Data Lists, Unhedged PO lines, **Forex exposure**, and KYC in progress. The main area displays a table of sales orders with the following columns: Sales order, Delivery name, Currency, Item number, and Net amount.

Sales order	Delivery name	Currency	Item number	Net amount
SC0009	Palmer Inc	GBP	Milk Powder	17,631.00
SC0009	Palmer Inc	GBP	Milk Powder	3,918.00
SC0011	Palmer Inc	GBP	Coffee Beans	112,000.00
IC-wowhSC-000006	Kronos	EUR	Coffee Beans	3,827.12
SC0021	Avatrade Brokers	CAD	Coffee Beans	144,000.00
SC0022	Muller Ltd	EUR	Ethanol	132.09
SC0022	Muller Ltd	EUR	Ethanol	0.00
SC0022	Muller Ltd	EUR	Ethanol	0.00
SC0022	Muller Ltd	EUR	Ethanol	0.00
SC0022	Muller Ltd	EUR	Ethanol	0.00
SC0022	Muller Ltd	EUR	Ethanol	0.00
SC0051	Stone	GBP	Rapemeal	160,000.00
SC0052	Stone	GBP	Rapemeal	4,436.10
SC0052	Stone	GBP	Rapemeal	77,500.00
SC0052	Stone	GBP	Rapemeal	23,250.00
SC0053	Stone	GBP	Rapemeal	36,250.00
SC0054	NWF Agriculture	GBP	Rapemeal	4,640.00

A "See more" link is visible at the bottom of the table.

Right Screenshot: Foreign exchange contracts

The interface shows a sidebar with navigation options: Edit, New, Delete, Contract, Options. The main area displays details for a specific contract: **FX0076 : B0002 - Avatrade Brokers**.

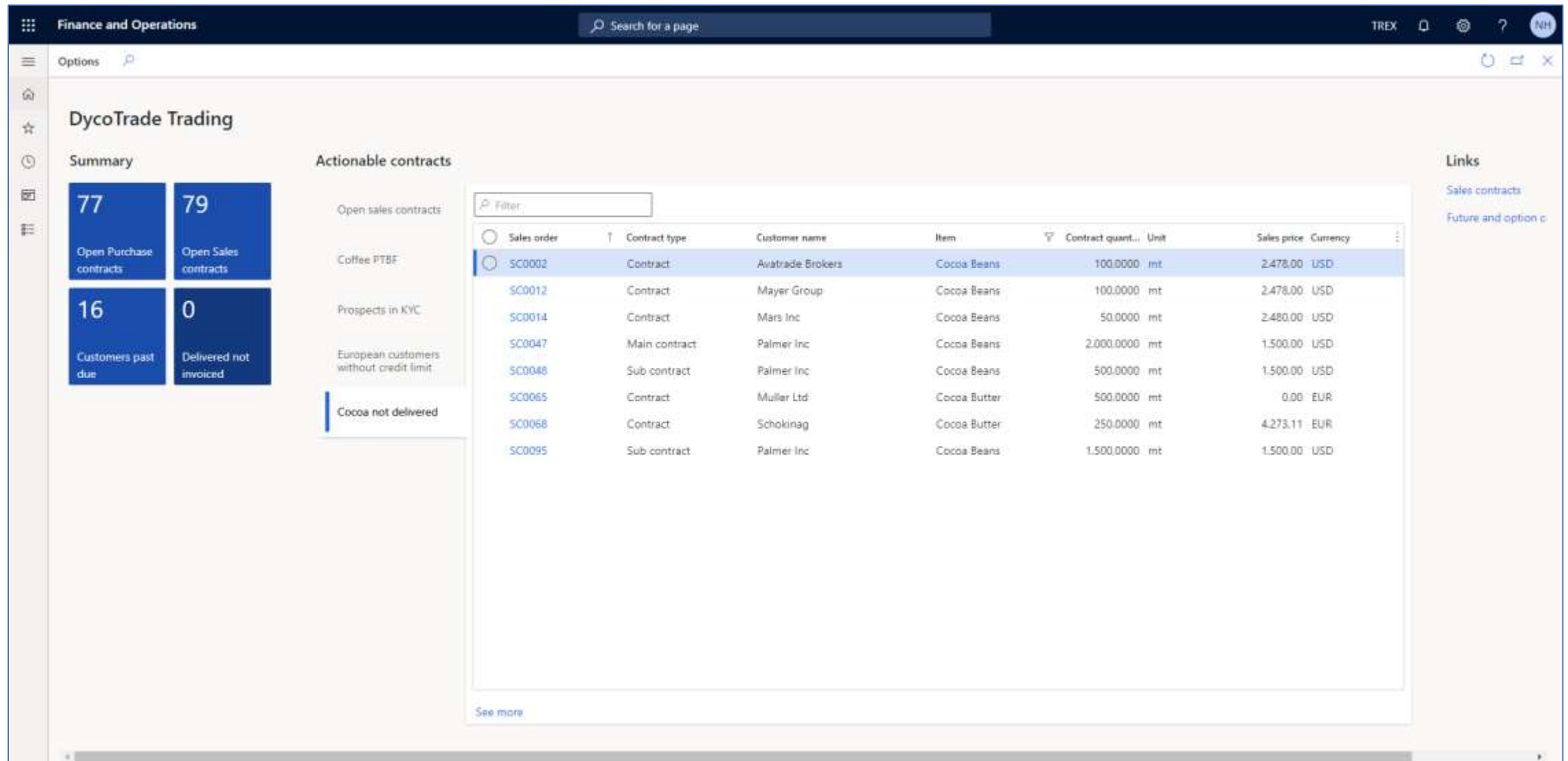
The contract details are organized into a table with columns: IDENTIFICATION, BROKER, ALLOCATION, DETAILS, and CURRE.

IDENTIFICATION	BROKER	ALLOCATION	DETAILS	CURRE
Contract number	Broker	Base allocated	Product	Buy/Sell
FX0076	B0002	58,000.00	GBP-EUR	Buy
Contract date	Broker name	Base position	Exchange	Market
3-2-2022	Avatrade Brokers	42,000.00	ECB	Market
Trader	Trade reference	Quote allocated	Prompt date	Buy/Sell
Nick Hoodemakers		60,000.00	25-2-2022	Buy/Sell
Contract status		Quote position	Trade registration	
Created		73,525.00	ETP	

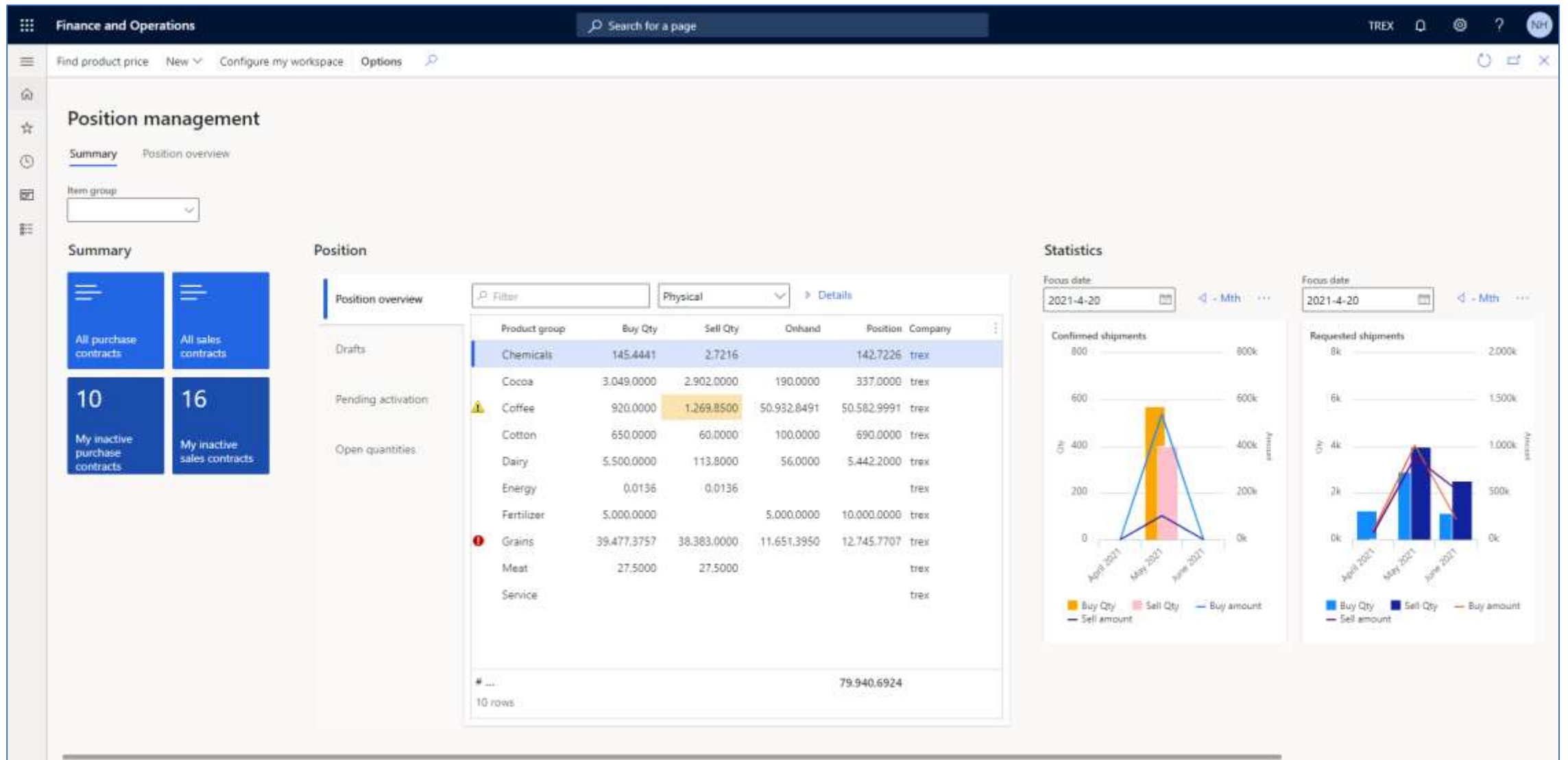
Below the contract details, there is a section for "Foreign exchange contract lines" with a "Remove" button. The table shows the following lines:

Hedging type	Direction	Number	Line	Counter party name	Product	Inv
Physical	Sales	SC0143	1.0	La Doria	Tin	
Physical	Purchase	PC0051	2.0	Hungary Customer	Rapemeal	
Physical	Purchase	PC0057	1.0	Cargill Plc	Rapemeal	
Physical	Purchase	PC0053	1.0	Chocomac	Cocoa Butter	

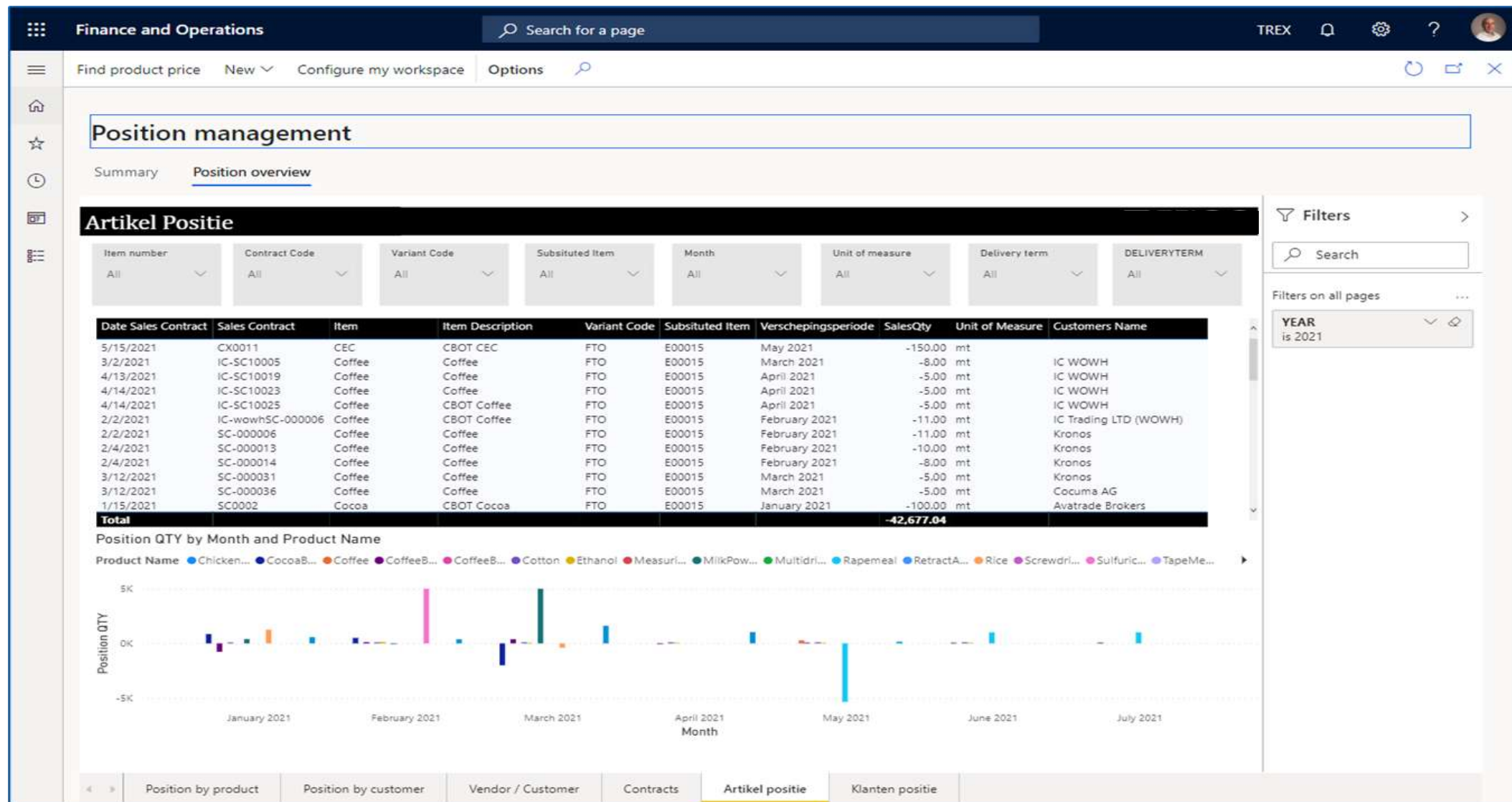
Trading dashboard



Trading dashboard



Trading dashboard



Embed 3rd party websites

The screenshot displays the Reuters Finance and Operations website. The top navigation bar includes the Reuters logo, a search bar, and various menu items like World, Business, Markets, Breakingviews, Technology, Investigations, Lifestyle, Pictures, Video, and Graphics. The main content area is divided into three sections: Commodities: Softs, Markets, and Currencies.

COMMODITIES: SOFTS

SUGAR

Commodity	Exchange	Currency	Expire	Last Trade	Trade Time	Change	Open	Day's High	Day's Low
SUGAR NOS DEC6 Feb22	IEU	USD	02/11	507.70	02/08 19:00	+7.50	502.30	507.20	500.50

Data as of 08:47am EST (Delayed at least 20 minutes).

COFFEE

Commodity	Exchange	Currency	Expire	Last Trade	Trade Time	Change	Open	Day's High	Day's Low
COFFEE C CON1 Mar22	IUS	USD	03/21	254.75	02/09 08:34	5.8	248.3	254.9	247.9
ARABICA COFFEE C Feb13	TGE	JPY	02/08	17,000	02/03 19:00	-170	16,170	17,000	16,170
1 COFFEE MAR0	BMF	USD	12/31	298.55	02/07 22:00	+4.90	293.75	299.30	293.05

Data as of 08:47am EST (Delayed at least 20 minutes).

COCOA

Commodity	Exchange	Currency	Expire	Last Trade	Trade Time	Change	Open	Day's High	Day's Low
COCOA CON1 Mar22	IUS	USD	03/16	2,734.00	02/09 08:35	+65.00	2,667.00	2,737.00	2,663.00

Data as of 08:47am EST (Delayed at least 20 minutes).

MARKETS

STOCKS

Index	Value	Change
S&P 500	4,521.54	+0.00%
Dow Jones	35,462.78	+1.06%
FTSE 100	7,620.48	+0.71%
Nikkei 225	27,579.87	+1.08%

BONDS

Bond	Value	Change
US 10YR	+1.925	-0.031
DE 10YR	+0.228	-0.037
JP 10YR	+0.215	+0.010

CURRENCIES

Pair	Value	Change
USD / EUR	0.8744	-0.18%
USD / GBP	0.7368	+0.20%
USD / JPY	115.4800	-0.05%

Data delayed by at least 15 min.

Embed 3rd party websites

☰

Home

☆

Favorites

🕒

Recent

📁

Workspaces

☰

Modules

Finance and Operations

🔍 Search for a page

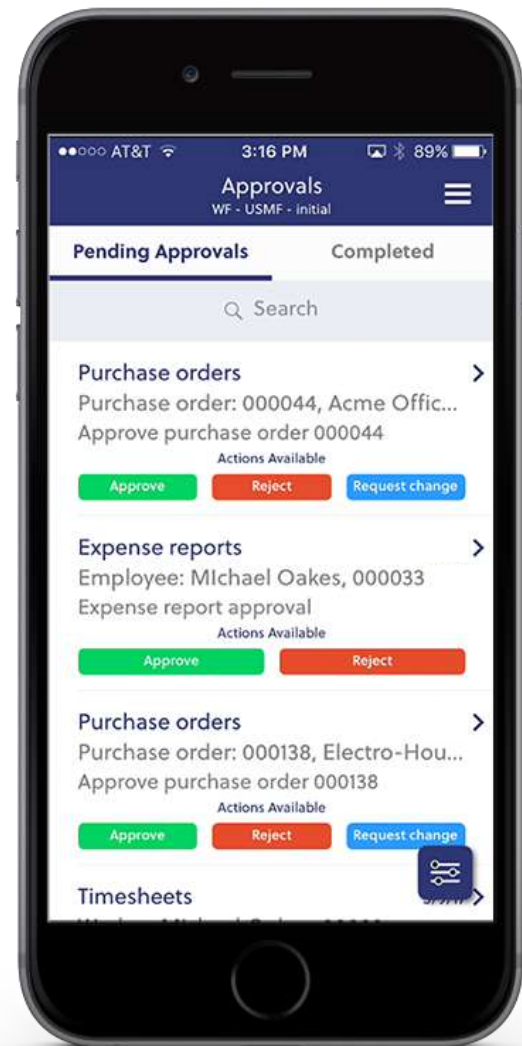


Contract: NG0023
Consignment: SW2101
Origin: PHL
Destination: LON
Departed: 12/9/21
Arrival: 15/9/21
Handler: Maersk

[Open in Tradelens](#)

Agenda

Finance and Operations									
Search for a page									
TREX									
NH									
Edit New Delete Purchase contract Purchase Manage Receive Invoice General Options									
Purchase contract									
Purchases > 100k									
Filter									
Purchase contract	Vendor name	Item	Contract quant...	Unit	Purchase price	Currency	Approval status		
PC0098	Coffee Roasting Company	Coffee Beans	75,0000	mt	437,50	USD	Confirmed		
PC0099	Testaaja Hanna	Oat	500,0000	mt	100,00	EUR	Confirmed		
PC0100	Testaaja Hanna	Oat	500,0000	mt	100,00	EUR	Approved		
PC0101	Testaaja Hanna	Oat	100,0000	mt	195,00	EUR	Confirmed		
PC0102	Pekantesti Pekka	Oat	200,0000	mt	197,00	EUR	Confirmed		
PC0104	Archer Daniels Midland (ADM)	Milk Powder	55,0000	mt	3.218,00	USD	Confirmed		
PC0106	McGuinness Feeds Ltd	Rapemeal	29,0000	mt	140,00	GBP	Confirmed		
PC0113	Cargill Inc.	Wheat	3.000,0000	mt	226,00	USD	Approved		
PC0114	CBC Guangzhou Trading Co Ltd	Wheat	3.000,0000	mt	226,00	USD	Confirmed		
PC0115	Agricorp	Palm Kernel Oil	1.000,0000	mt	100,00	USD	Confirmed		
PC0117	Boston Commodities Co.	AL	1.500,0000	mt	2.713,00	USD	Confirmed		
PC0135	Boston Co.	Wheat	500,0000	mt	208,50	USD	Draft		
PC0136	Boston Co.	Wheat	500,0000	mt	208,50	USD	Confirmed		
PC0137	Europe Metal Supply Inc.	Cu	200,0000	mt	804,08	EUR	Confirmed		



Position management

Finance and Operations

Search for a page

TREX

NH

Find product price

New

Configure my workspace

Options

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Summary

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All purchase contracts

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My inactive sales contracts

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Open quantities

Filter

Physical

4 Details

Product group	Buy Qty	Sell Qty	Onhand	Position
Chemicals	145,4441	2,7216		142,7226
❗ Cocoa	2,999,0000	5,152,0000	738,0000	-1,415,0000
⚠ Coffee	2,885,0130	2,508,7000	5,314,9585	5,691,2715
Cotton	3,557,7360	2,586,0000	803,6015	1,775,3375
Dairy	5,600,0000	113,8000	56,0000	5,542,2000
❗ Energy	0,0136	0,0590		-0,0454
Fertilizer	5,000,0000		5,000,0000	10,000,0000
Grains	18,674,1597	11,553,0000	10,118,7696	17,239,9293
Meat	27,5000	27,5000		
❗ Metal	3,910,0000	4,360,0220	545,0220	95,0000
Nuts	80,0000		20,0000	100,0000
Palm	2,450,0000	250,0000	25,0000	2,225,0000

To...
15 rows

Filter

Product number	Buy Qty	Sell Qty	Onhand	Position
❗ AL	1,560,0000	1,950,0000		-390,0000
❗ Cu	900,0000	1,100,0000		-200,0000
⚠ HMS	50,0000	75,0000	150,0000	125,0000
⚠ HRS	200,0000	395,0220	195,0220	
❗ Steel		140,0000		-140,0000
Tin	1,200,0000	700,0000	200,0000	700,0000

...
6 rows

Links

Sales

Backlog Sales

Purchase

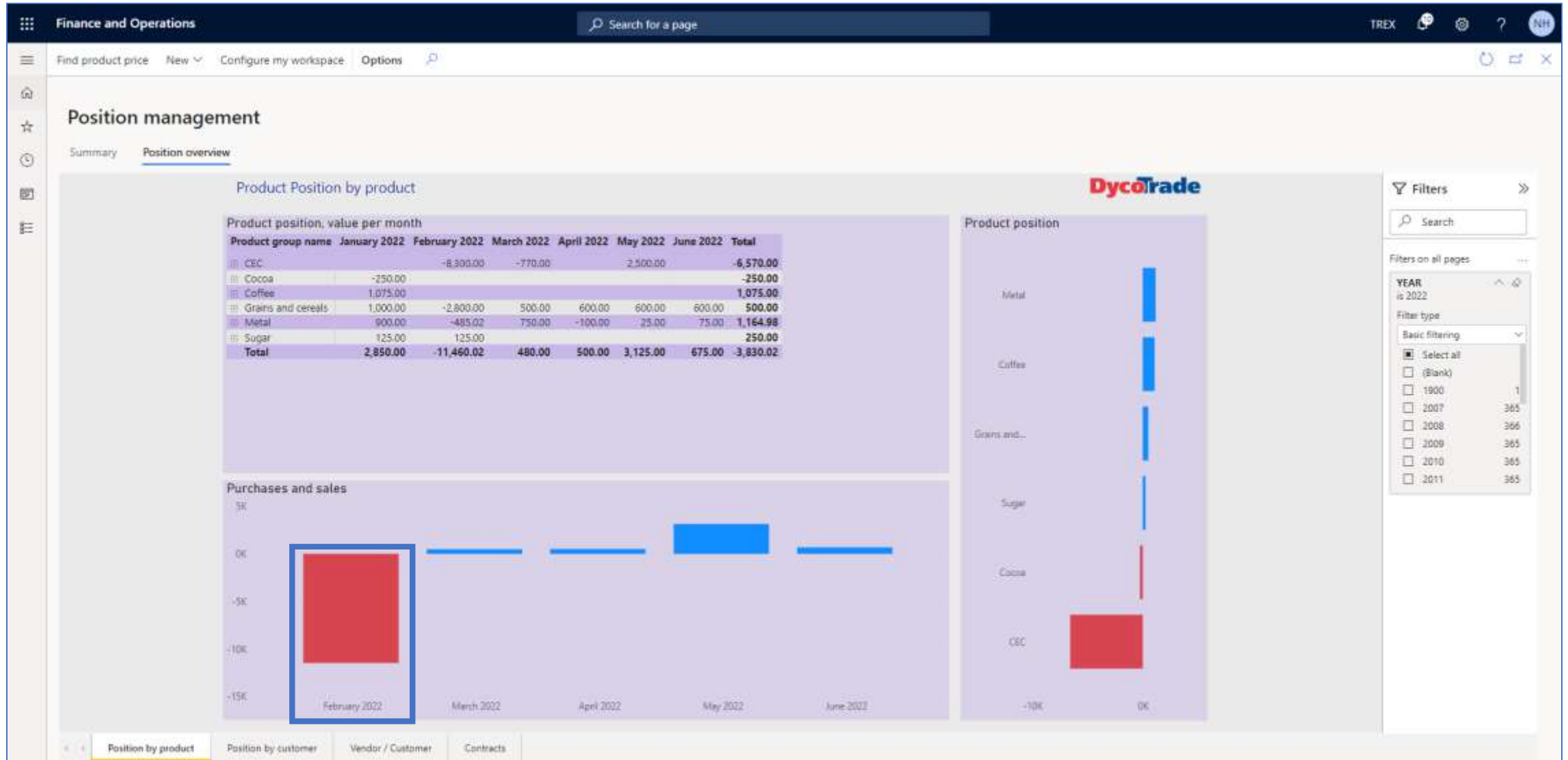
Backlog Purchase

Back to Back

Overview

Overview

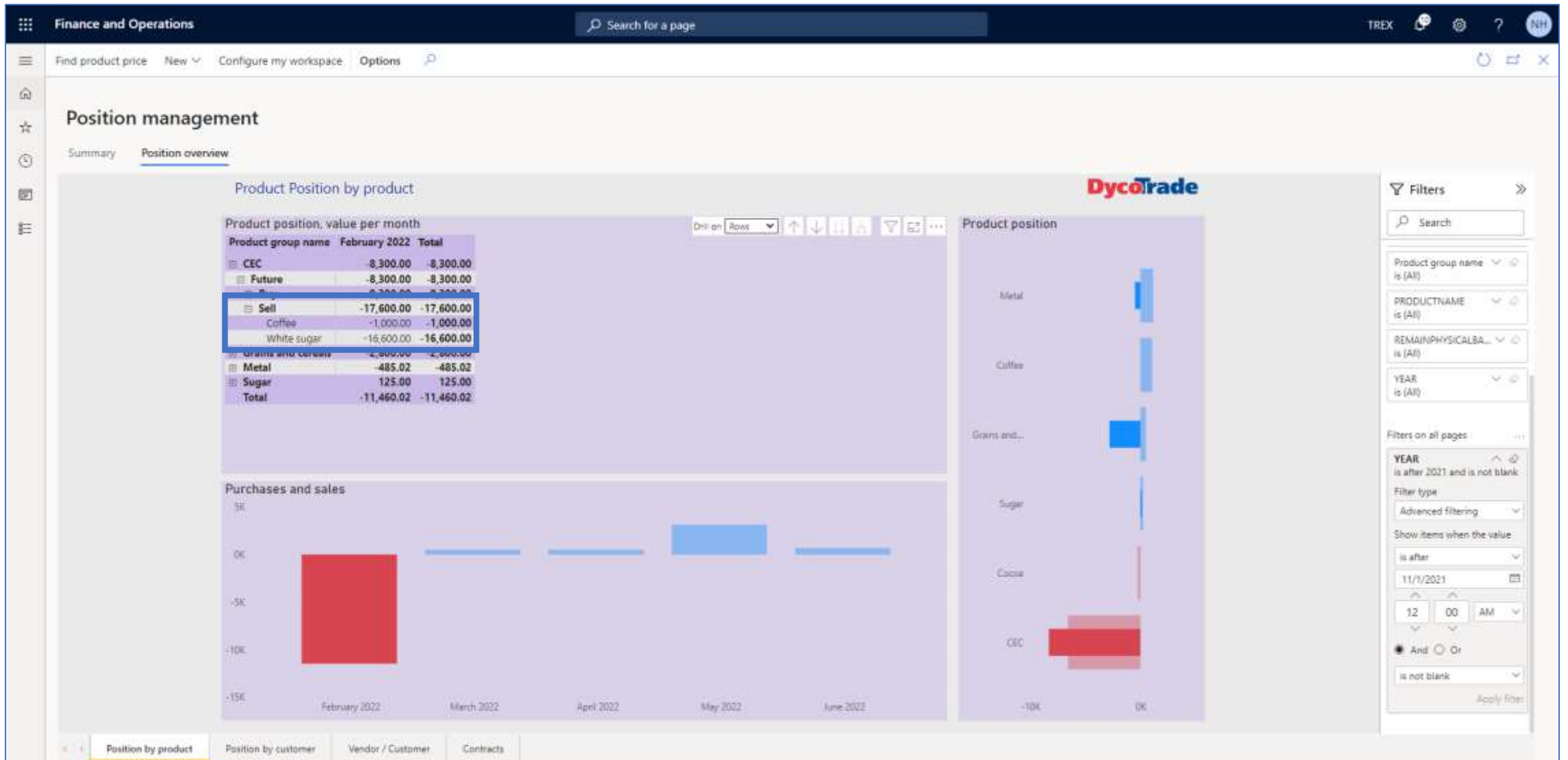
Embedded PowerBI



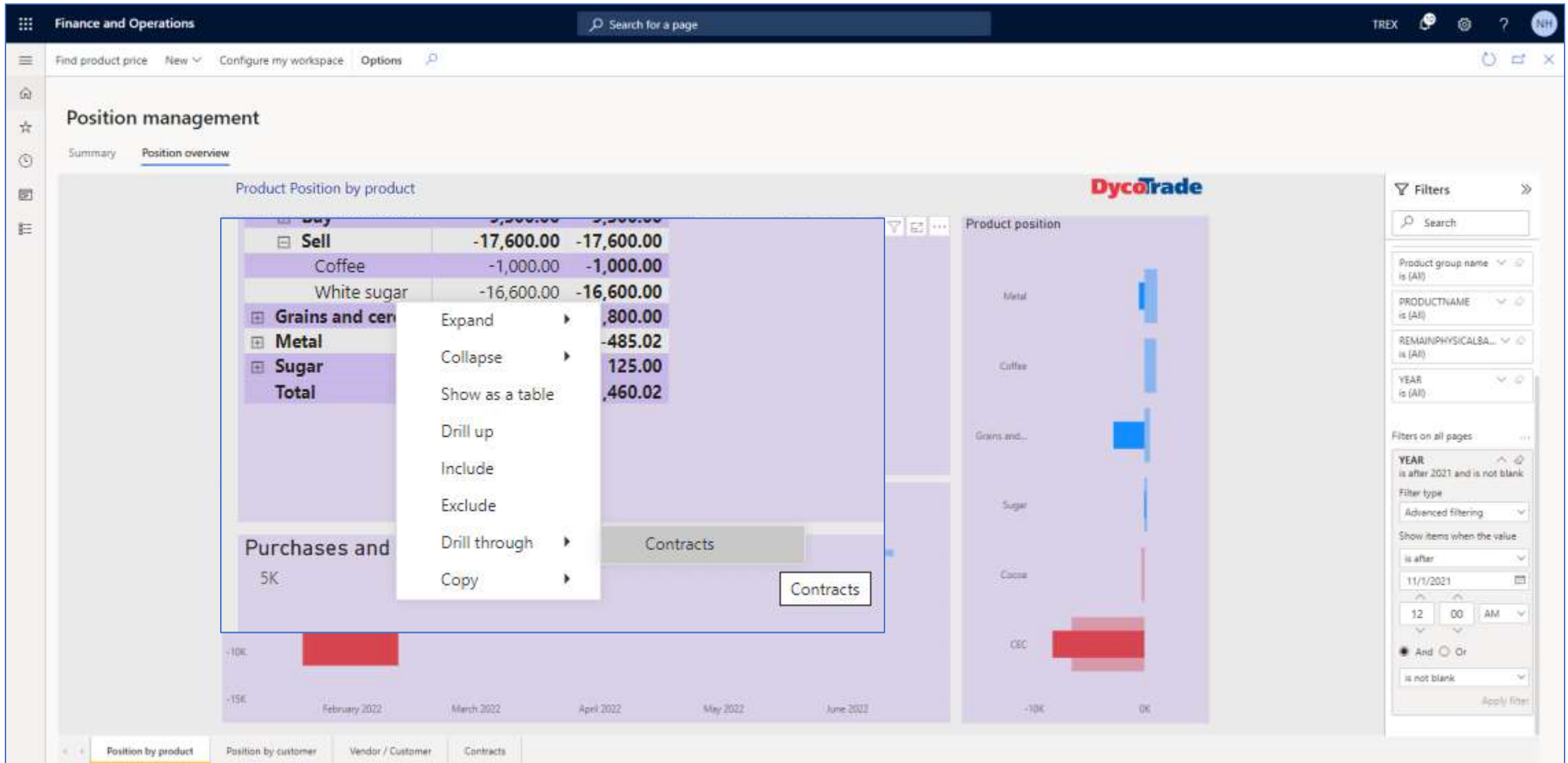
Position management



Position management



Position Management



Position management

Finance and Operations

Search for a page

TREX

Find product price New Configure my workspace Options

Position management

Summary Position overview

Contracts

DycoTrade

Contract line	Contract	Contract line	Position type	Product name	Product group name	Vendors name	Customers name	Positions subtype	Product code	Delivery date	Remaining physical base qty	Remaining physical value mst
CEC-000003	Future	White sugar	CEC		NBEI IC (TREX)	Sell	WS-LIFFE	2/11/2022 12:00:00 AM		-500.00		-179,653.68
CEC-000005	Future	White sugar	CEC		NBEI IC (TREX)	Sell	WS-LIFFE	2/11/2022 12:00:00 AM		-4,000.00		-1,437,229.44
CEC-000008	Future	White sugar	CEC		NBEI IC (TREX)	Sell	WS-LIFFE	2/11/2022 12:00:00 AM		-4,000.00		-1,437,229.44
CEC-000010	Future	White sugar	CEC		NBEI IC (TREX)	Sell	WS-LIFFE	2/11/2022 12:00:00 AM		-4,000.00		-1,437,229.44
CEC-000012	Future	White sugar	CEC		NBEI IC (TREX)	Sell	WS-LIFFE	2/11/2022 12:00:00 AM		-4,000.00		-1,437,229.44
CEC-000016	Future	White sugar	CEC		NBEI IC (TREX)	Sell	WS-LIFFE	2/28/2022 12:00:00 AM		-100.00		-35,930.74
Total											-16,600.00	-5,964,502.16

Filters

Search

PRODUCTNAME is White sugar

PRODUCTNAME is (All)

REMAINPHYSICALBASE... is (All)

REMAINPHYSICALVALL... is (All)

Filters on all pages

YEAR is after 2021 and is not blank

Filter type: Advanced filtering

Show items when the value is after 11/1/2021

12 00 AM

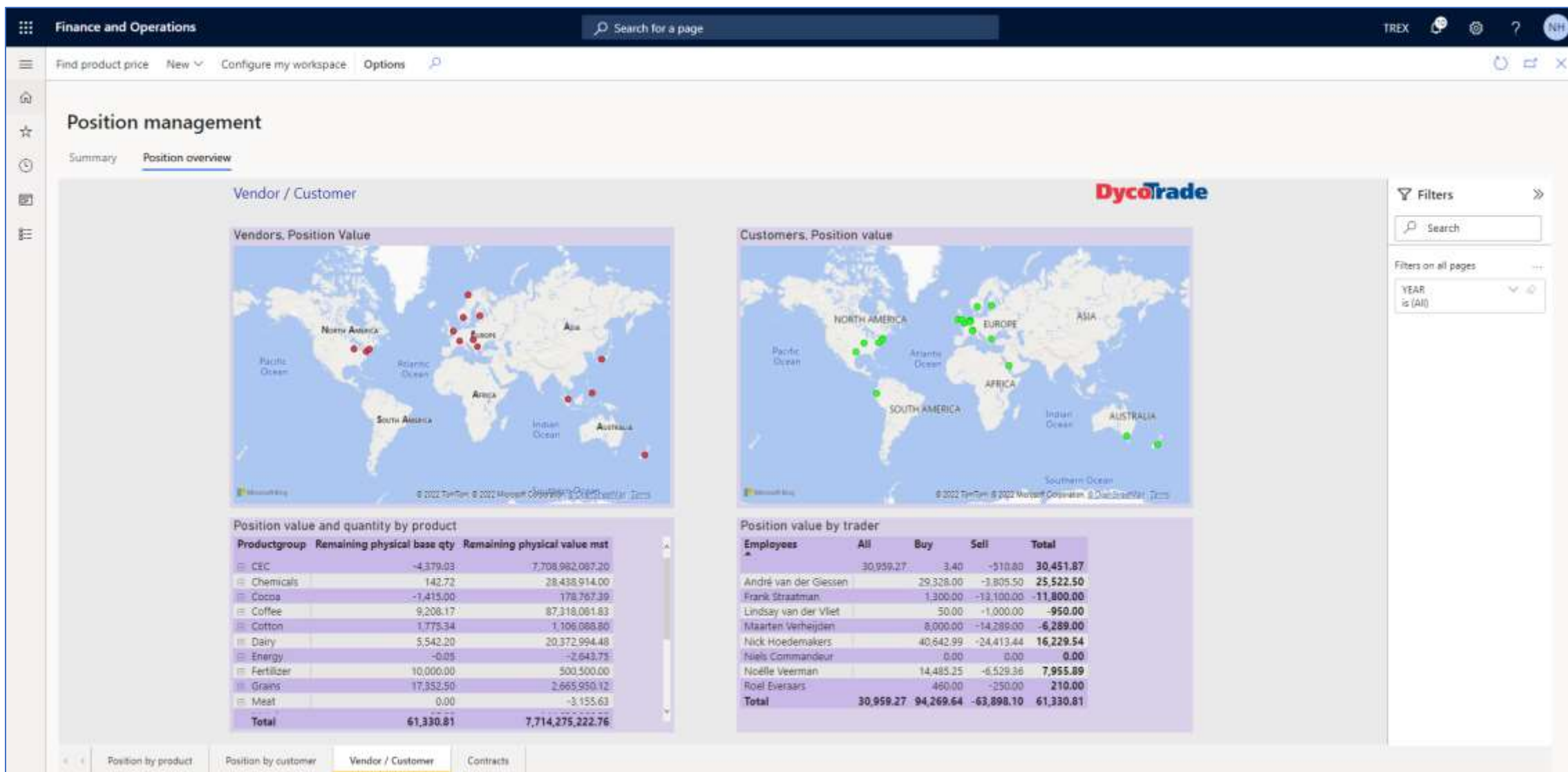
And Or

is not blank

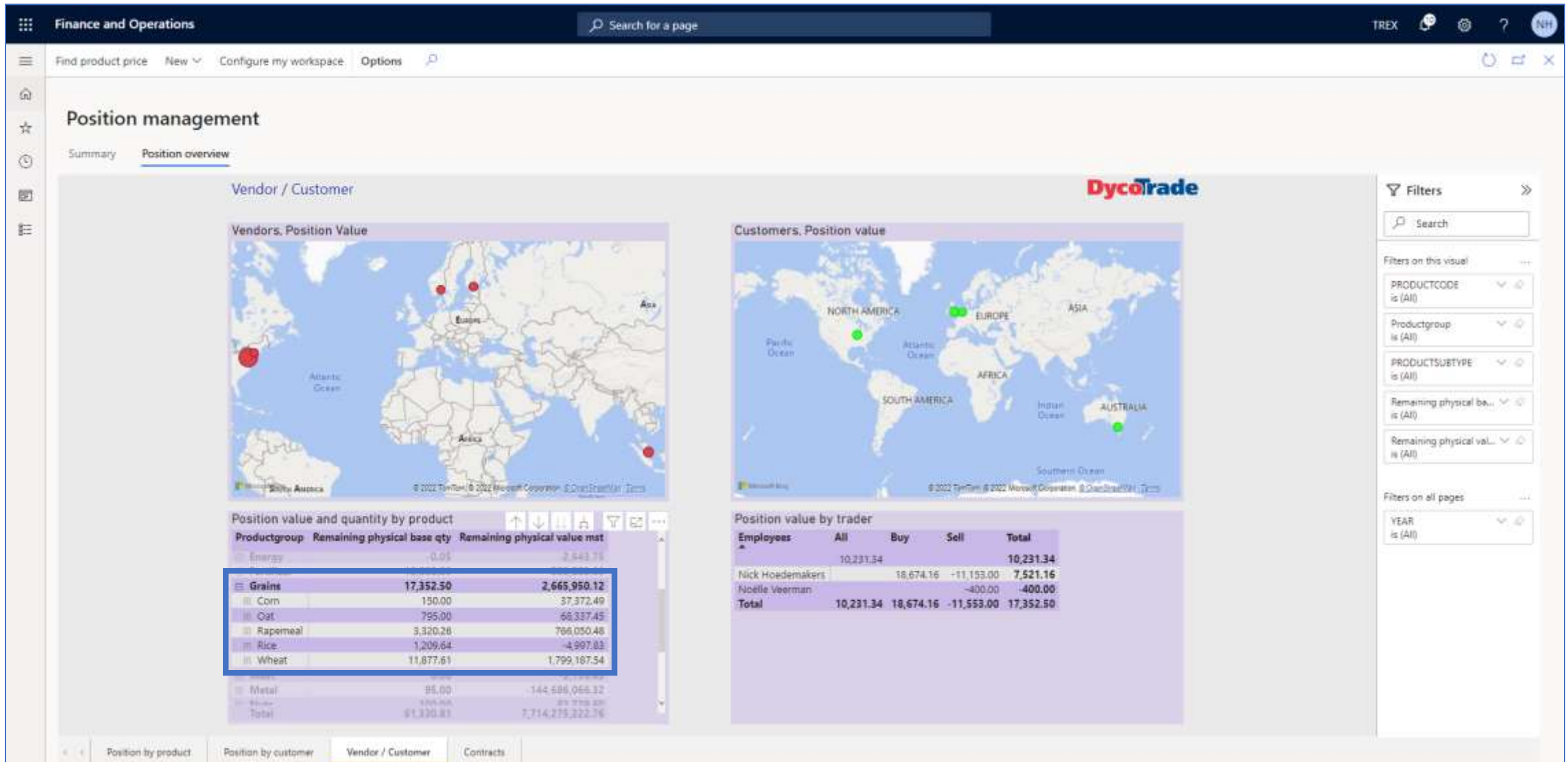
Apply filter

Position by product Position by customer Vendor / Customer Contracts

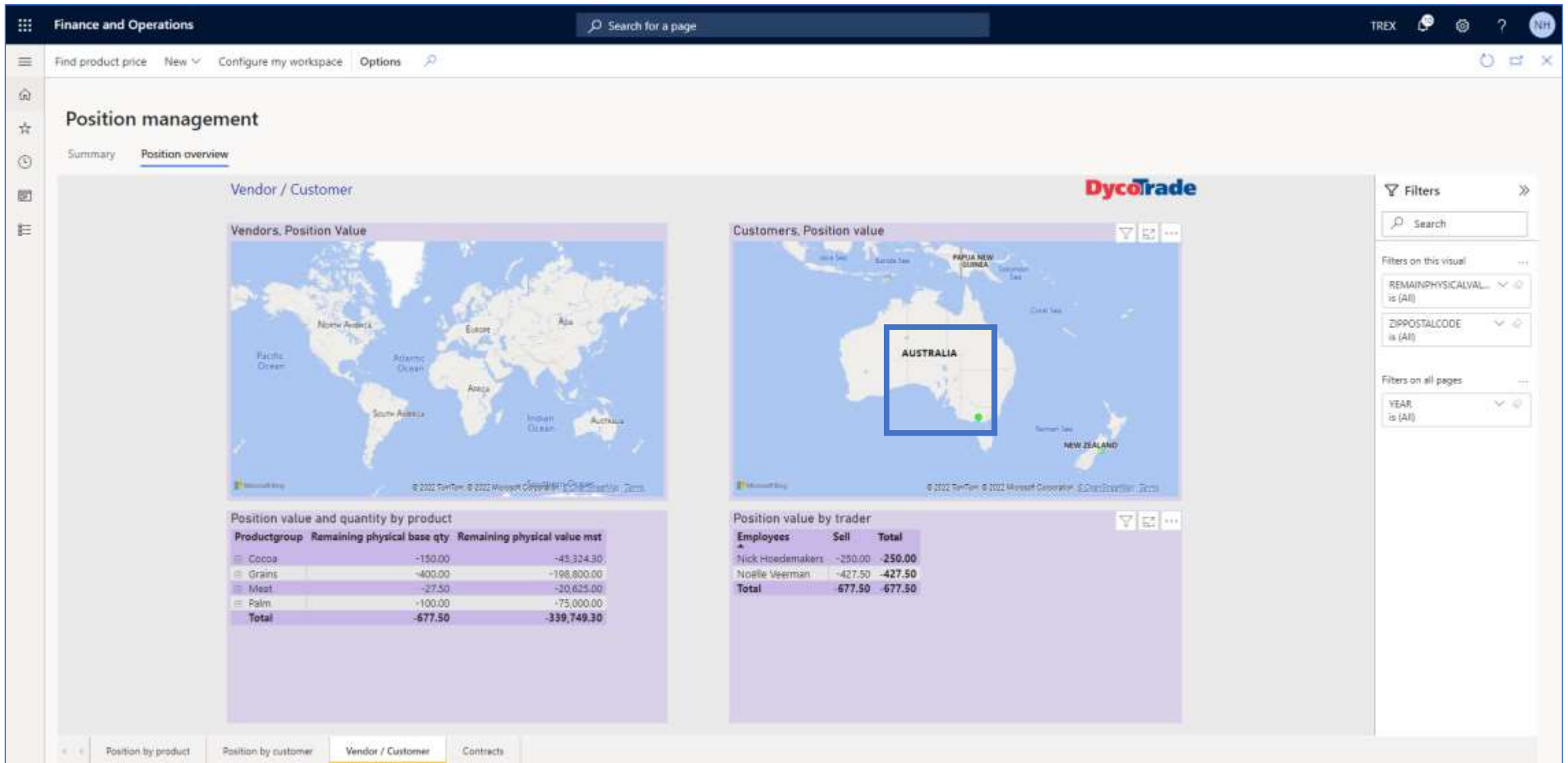
Position Management



Position management



Position Management



Position Management

Finance and Operations

Search for a page

TREX

NH

Find product price

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Summary

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My inactive purchase contracts

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My inactive sales contracts

Position

Position overview

Drafts

Pending activation

Open quantities

Filter

Physical

Details

Product group	Buy Qty	Sell Qty	Onhand	Position
Chemicals	145,4441	2,7216		142,7226
Cocoa	2,999,0000	5,152,0000	738,0000	-1,415,0000
Coffee	2,885,0130	2,508,7000	5,314,9585	5,691,2715
Cotton	3,557,7360	2,586,0000	803,6015	1,775,3375
Dairy	5,600,0000	113,8000	56,0000	5,542,2000
Energy	0,0136	0,0590		-0,0454
Fertilizer	5,000,0000		5,000,0000	10,000,0000
Grains	18,674,1597	11,553,0000	10,118,7696	17,239,9293
Meat	27,5000	27,5000		
Metal	3,910,0000	4,360,0220	545,0220	95,0000
Nuts	80,0000		20,0000	100,0000
Palm	2,450,0000	250,0000	25,0000	2,225,0000
Service	113,3981			113,3981

To...

15 of

Links

Sales

Backlog Sales contracts

Purchase

Backlog Purchase contracts

Back to Back

Overview matched contract lines

Overview unmatched contract lines

Contract creation

The screenshot displays the Dycotrade Finance and Operations interface. The top navigation bar includes a search bar and user profile. The left sidebar contains navigation icons and a 'Position' dropdown menu. The main content area shows a 'Position overview' table with columns for Product group, Buy Qty, Sell Qty, Onhand, and Position. A 'Links' panel on the right provides quick access to Sales and Purchase contract backlogs.

Position Overview Table:

Product group	Buy Qty	Sell Qty	Onhand	Position
Chemicals	145.4441	2.7216		142.7226
Cocoa	2.999.0000	5.152.0000	738.0000	-1.415.0000
Coffee	2.885.0130	2.508.7000	5.314.9585	5.691.2715
Cotton	3.557.7360	2.586.0000	803.6015	1.775.3375
Dairy	5.600.0000	113.8000	56.0000	5.542.2000
Energy	0.0136	0.0590		-0.0454
Fertilizer	5.000.0000		5.000.0000	10.000.0000
Grains	18.674.1597	11.553.0000	10.118.7696	17.239.9293
Meat	27.5000	27.5000		
Metal	3.910.0000	4.360.0220	545.0220	95.0000
Nuts	80.0000		20.0000	100.0000
Palm	2.450.0000	250.0000	25.0000	2.225.0000
Service	113.3981			113.3981

Links Panel:

- Sales**
 - [Backlog Sales contracts](#)
- Purchase**
 - [Backlog Purchase contracts](#)
- Back to Back**
 - [Overview matched contract lines](#)
 - [Overview unmatched contract lines](#)

Contract creation

Finance and Operations

Find product price New Configure my workspace Options

Position management

Summary Position overview

Item group

Summary

All purchase contracts

All sales contracts

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My inactive purchase contracts

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My inactive sales contracts

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Position overview

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Open quantities

Product group

Buy Qty

Sell Qty

Onhand

Chemicals

145.4441

2.7215

Cocoa

2.999.0000

5.152.0000

738.0000

Coffee

2.885.0130

2.506.7000

5.314.9585

Cotton

3.557.7360

2.586.0000

803.6015

Dairy

5.600.0000

113.8000

56.0000

Energy

0.0136

0.0590

Fertilizer

5.000.0000

5.000.0000

Grains

18.674.1597

11.553.0000

10.118.7696

Meat

27.5000

27.5000

Metal

3.910.0000

4.380.0220

545.0220

Nuts

80.0000

20.0000

Palm

2.450.0000

250.0000

25.0000

Service

113.3981

To...

15 ft

Create commodity exchange contracts

General

IDENTIFICATION

Contract number

CX0053

Contract date

9-2-2022

Trader

Ben van der Laan

BROKER

Broker

B0005

Broker name

XTB Broker

Trade reference

Trade

DETAILS

Buy/Sell

Buy

Product

Cocoa

Exchange

CBOT

Valuation type

Outright

SETTLEMENT DATE

Period

C1Z2

Prompt date

31-12-2022

Trade registration

ETP

QUANTITY

Lots

150

Quantity

1.500.0000

Lot unit

mt

Pricing

PRICE

Price

205.000

Price unit

AMOUNT

Amount

307.500.00

Currency

PREMIUM

Premium

MARKET INDICATION

Price in exchange currency

Exchange rate

OK

Cancel

Contract creation

Finance and Operations

Search for a page

TREX

Find product price New Configure my workspace Options

Position management

Summary Position overview

Item group

Summary

All purchase contracts

All sales contracts

50 My inactive purchase contracts

51 My inactive sales contracts

Position

Position overview

Drafts

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Open quantities

Filter Physical Details

Product group	Buy Qty	Sell Qty	Onhand	Position
Chemicals	145,4441	2,7216		142,7226
Cocoa	4,499,0000	5,152,0000	738,0000	85,0000
Coffee	2,885,0130	2,508,7000	5,314,9585	5,691,2715
Cotton	3,557,7360	2,586,0000	803,6015	1,775,3375
Dairy	5,600,0000	113,8000	56,0000	5,542,2000
Energy	0,0136	0,0590		-0,0454
Fertilizer	5,000,0000		5,000,0000	10,000,0000
Grains	18,674,1597	11,553,0000	10,118,7696	17,239,9293
Meat	27,5000	27,5000		
Metal	3,910,0000	4,360,0220	545,0220	95,0000
Nuts	80,0000		20,0000	100,0000
Palm	2,450,0000	250,0000	25,0000	2,225,0000
Service	113,3981			113,3981

To... 15 m

Links

Sales

Backlog Sales contracts

Purchase

Backlog Purchase contracts

Back to Back

Overview matched contract lines

Overview unmatched contract lines

Contract creation

Finance and Operations

Find product price New Configure my workspace Options

Search for a page

Please wait. We're processing your request.

Position management

Summary Position overview

Item group

Summary

All purchase contracts

All sales contracts

51 My inactive purchase contracts

52 My inactive sales contracts

Position

Position overview

Filter Physical

	Product group	Buy Qty	Sell Qty	Onhand
Drafts	Chemicals	145,4441	2,7215	
Pending activation	Cocoa	4,499,0000	5,152,0000	758,0000
	Coffee	2,885,0130	2,506,7000	5,314,9585
	Cotton	3,557,7360	2,586,0000	803,6015
	Dairy	5,600,0000	1,13,8000	56,0000
Open quantities	Energy	0,0136	0,0590	
	Fertilizer	5,000,0000		5,000,0000
	Grains	18,649,1597	11,353,0000	10,143,7898
	Meat	1,247,5000	427,5000	30,0000
	Metal	3,910,0000	4,380,0220	545,0220
	Nuts	80,0000		20,0000
	Palm	2,450,0000	250,0000	25,0000
	Service	113,9981		

To... 15 it

Create purchase contract

Route template: GHTEM - NLRTM

To date: 31-12-2023

Delivery date: 1-1-2023

From: GH - Tema

To: NL - Amsterdam Port

DELIVERY INFO

Mode of delivery: Vessel

Delivery terms: FOB

Item

CONTRACT ITEM

Multiple items: No

Item: Coffee Beans

STORAGE DIMENSIONS

Site:

Warehouse:

MARGIN

Overdelivery: 10,00

Underdelivery: 10,00

PRODUCT DIMENSIONS

Configuration: Bags

Size: GR 1

Color: Blend

Style:

CONTRACT QUANTITY

Purchase quantity: 30,000,000,0...

Unit: lb

Create purchase line: Yes

OK Cancel

Contract creation

Finance and Operations

Search for a page

TREX

Save + New Delete Purchase contract Purchase Manage Receive Invoice General Options

Purchase contract: My view

PC0153 : V0009 - Viet Delta commodities

Lines Header Contract | Open order Approved

Purchase contract header

Purchase contract lines

Add line Add lines Remove Purchase contract line Financials Inventory Product and supply Update line Tax information Commodity

	L	T	Split	Line status	Matched	Item number	Configuration	Size	Quantity	Unit	Delivery date	From	To	Net amount	Amount MST
	1	0		Open order		Coffee Beans	Bags	GR 1	2,500,000.0000	lb	1-1-2023	GH - Tema	NL - Rotterdam Port		
	2	0		Open order		Coffee Beans	Bags	GR 1	2,500,000.0000	lb	1-2-2023	GH - Tema	NL - Rotterdam Port		
	3	0		Open order		Coffee Beans	Bags	GR 1	2,500,000.0000	lb	1-3-2023	GH - Tema	NL - Rotterdam Port		
	4	0		Open order		Coffee Beans	Bags	GR 1	2,500,000.0000	lb	1-4-2023	GH - Tema	NL - Rotterdam Port		
	5	0		Open order		Coffee Beans	Bags	GR 1	2,500,000.0000	lb	1-5-2023	GH - Tema	NL - Rotterdam Port		
	6	0		Open order		Coffee Beans	Bags	GR 1	2,500,000.0000	lb	1-6-2023	GH - Tema	NL - Rotterdam Port		

Line details

General Setup Address Product Product dimension remarks Delivery Price and discount Foreign trade Financial dimensions

ORDER LINE

Procurement category
Prepayment

Product name
Coffee Beans / Coffee Beans

Text
Coffee Beans Arabica

REFERENCE

External
SC872394827

Origin
Purchase

ARRIVAL JOURNAL

Journal

DELIVERY REFERENCE

Customer requisition

Customer reference

INTERCOMPANY

Origin (intercompany orders)

STATUS

Line status
Open order

Stopped
☒ No

Prevent partial delivery
☒ No

State

Weight condition
None

FINANCING

Financing bank

Bank sub-account

CALCULATION CLOSING

Calculation closing status
Open

Closing date

Closed by

Closed date time

Learn from today to predict the future

Seamless handover of data
from DycoTrade CTRM to Kyos Advance Risk Management





Advanced risk management - KYOS

From DycoTrade to KYOS



- Positions
- Logistics
- Inventory
- Invoicing
- Cashflows
- MtM for futures/swaps
- MtM for all derivatives (incl. option structures)
- Stress testing
 - prices
 - volatility
- Value-at-Risk (short term risks)
- Cashflow-at-Risk (long term risks)

"RISK COMES
FROM NOT
KNOWING
WHAT YOU'RE
DOING."

WARREN BUFFET

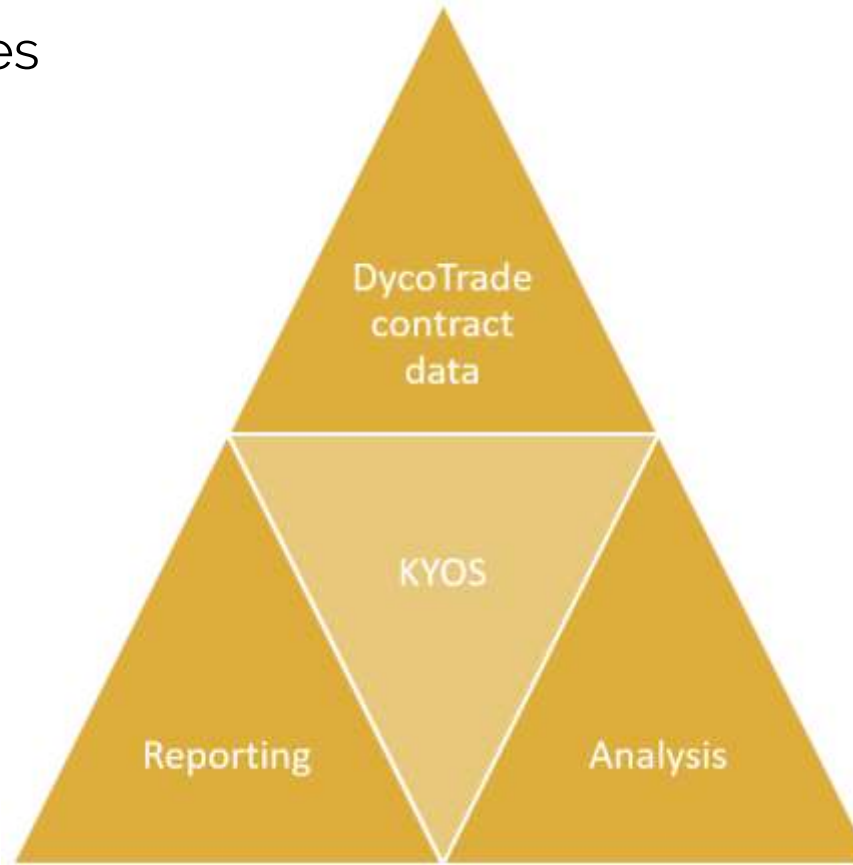


Where does KYOS add value to the chain?

Physical flows
Financial hedges
Price analytics



Cashflow
forecasts
Insight in risks
Hedge reports
Performance



CPO/CFO
Head of Trading
Head of Risk
Treasury

Enable you to look
forward as
hindsight is a
wonderfull thing

Visualization of contracts - KYOS analytical platform

Legal entity	Counterparty	Period	Commodity	B/S	Volume	FX	Price type
Beverage Producer	Neumann Kaffee Gruppe	Jan'23 - Dec'23	Coffee Arabica	Buy	20,000,000 Lbs	USD cent	phys fixed 226.00
Beverage Producer	Neumann Kaffee Gruppe	Jan'23 - Dec'23	Coffee Arabica	Buy	20,000,000 Lbs	USD cent	phys future
Sugar company	BNP Paribas	Mar'22 - Mar'22	Sugar #11	Sell	-22,046,200 Lbs	USD cent	fin future 18.25
Sugar company	Market	Jan'23 - Dec'23	Sugar #11	Sell	-661,386,000 Lbs	USD cent	phys indexed
Sugar company	Commerzbank	Oct'23 - Oct'23	Sugar #11	Sell	-165,346,500 Lbs	USD cent	fin future 16.25
Sugar company	Cargill Fin Services	Jul'23 - Jul'23	Sugar #11	Sell	-165,346,500 Lbs	USD cent	fin future 16.75
Sugar company	JP Morgan	May'23 - May'23	Sugar #11	Sell	-165,346,500 Lbs	USD cent	fin future 17.25
Sugar company	BNP Paribas	Mar'23 - Mar'23	Sugar #11	Sell	-165,346,500 Lbs	USD cent	fin future 18.25
Coffee Trading	Cargill Fin Services	Mar'22 - Mar'22	Coffee Arabica	Buy	1,000,000 Lbs	USD cent	fin option 210.00 C 365,000
Producer Food	Nord Zucker	Jan'22 - Dec'22	Sugar #11	Buy	25,904,285 Lbs	USD cent	phys fixed 19.10

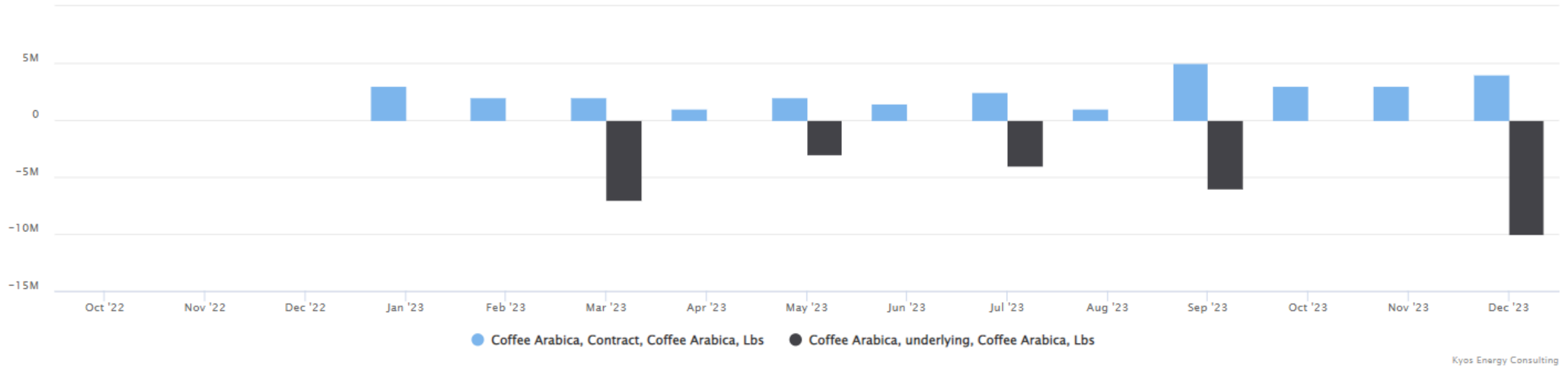


Base case

- Position of 30 million Lbs Arabica for 2023
 - Trader might think prices will go down
 - Procurement teams need to source (based upon expected sales)
 - Producers would like to secure income
- Unhedged position for 2023
 - Head of trading versus a CPO and/or CFO
 - Physical and/or financial hedging



Underlying exposures resulting from physical contracts

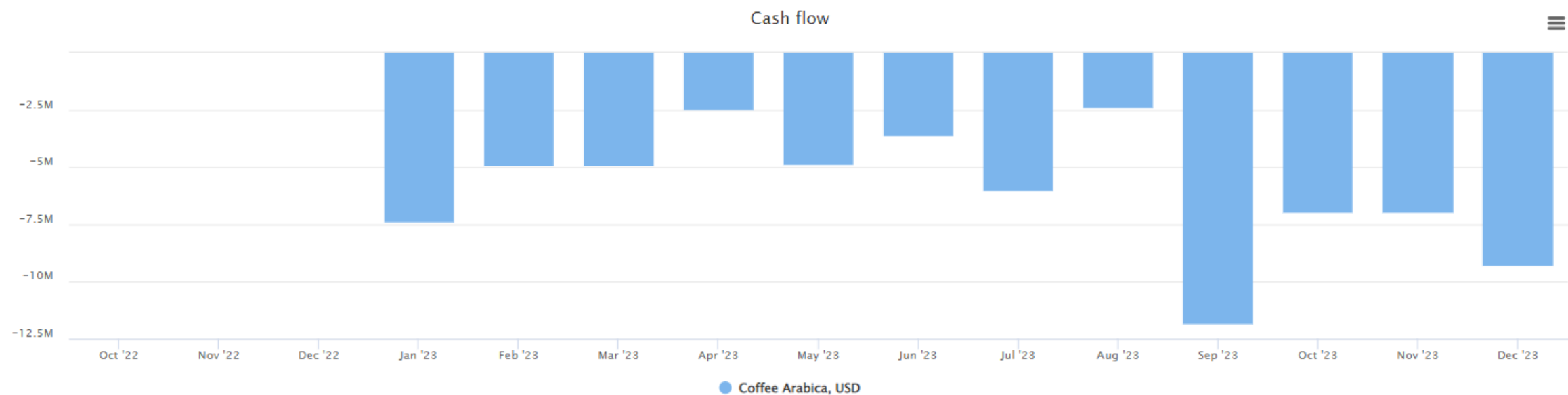


Contracts																			
					2022			2023											
Contract comm	Contract/Underlying	Underlying comm	Unit	Tot	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Coffee Arabica	Contract	Coffee Arabica	Lbs	30,000,000	0	0	0	3,000,000	2,000,000	2,000,000	1,000,000	2,000,000	1,500,000	2,500,000	1,000,000	5,000,000	3,000,000	3,000,000	4,000,000
	underlying	Coffee Arabica	Lbs	-30,000,000	0	0	0	0	0	-7,000,000	0	-3,000,000	0	-4,000,000	0	-6,000,000	0	0	-10,000,000



Physical contracts leading to a financial “underlying” exposure

The easy part: “current value”



Kyos Energy Consulting

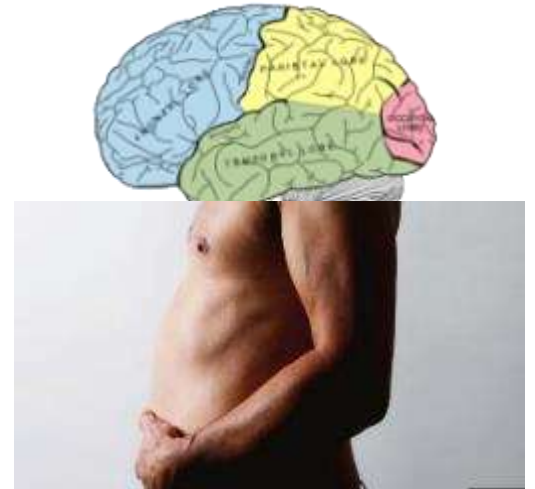
			2022			2023											
Commodity	Currency	Tot	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Coffee Arabica	USD	-71,536,000	0	0	0	-7,383,000	-4,922,000	-4,922,000	-2,434,000	-4,868,000	-3,600,000	-6,000,000	-2,364,500	-11,822,500	-6,966,000	-6,966,000	-9,288,000
Total	USD	-71,536,000	0	0	0	-7,383,000	-4,922,000	-4,922,000	-2,434,000	-4,868,000	-3,600,000	-6,000,000	-2,364,500	-11,822,500	-6,966,000	-6,966,000	-9,288,000



\$ 71.5 million - AVG price 2023 - \$cnts 238 Lbs

More complex: forecasted cashflows

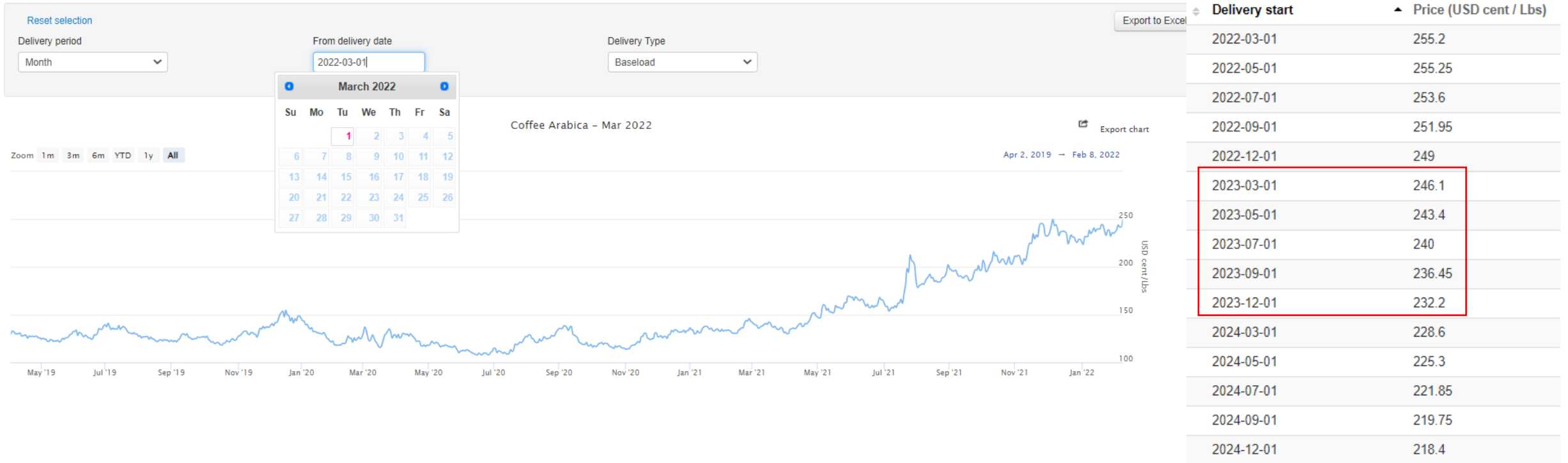
CFO expects or even demands a view (e.g. 2023)



Price movements of arabica, sugar, aluminium ?

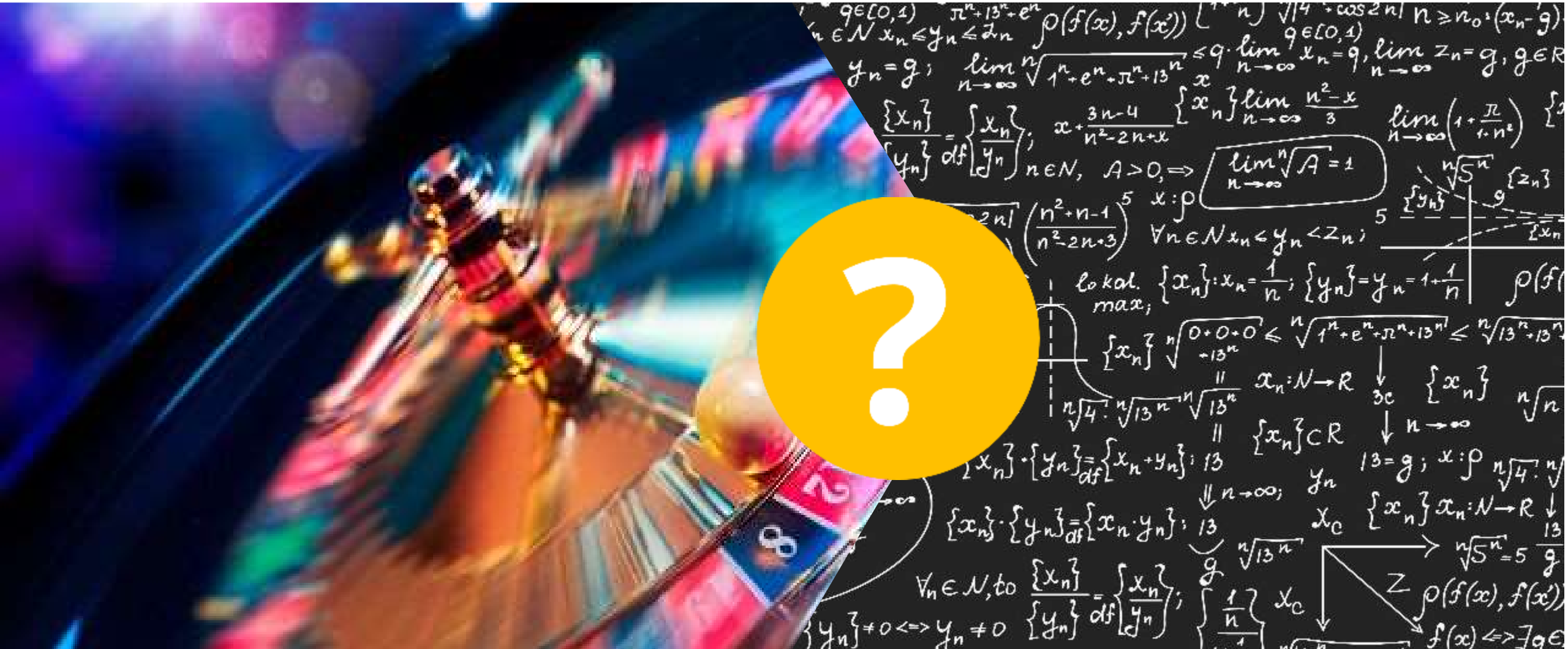
What can happen in 1 day or 10 days or even in 2023 ?

Starting point for analytics – “actual vs history”



2023 ?

Estimating or calculating risks

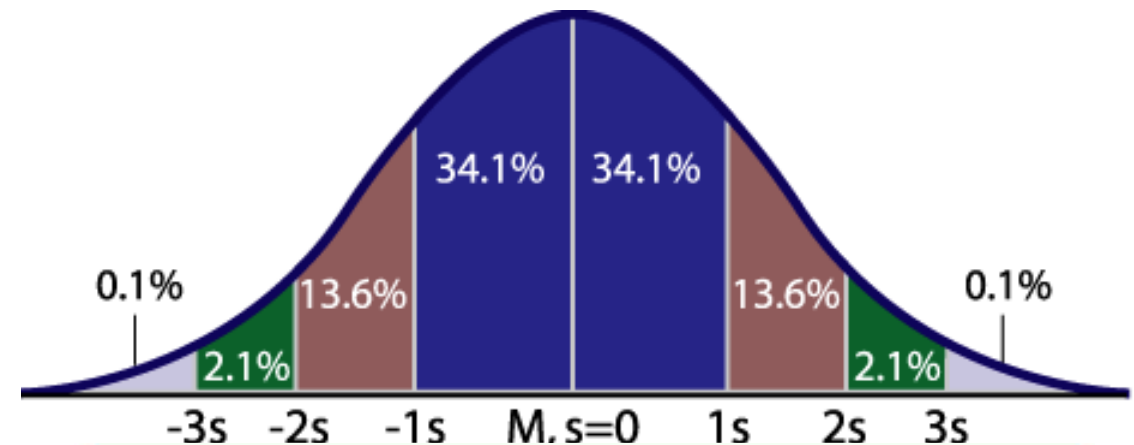


How to “look forward”

What can happen from today to tomorrow



95 % certainty



Risk method	Coffee future	Differential
Historical	✓	✗
Parametric Normal	✗	✗
Parametric non-normal	✓	✗
Monte Carlo Path	✓	✓

Monte Carlo (MC) Simulations



- Long horizons (e.g. budget for 2023)
- Tails – non “normal distribution”
- Exposure is complex
 - multiple commodities
 - differentials/spreads
- Volume uncertainty
- Dynamic trading strategies



MC Simulations for trading and/or procurement



Realized volatilities

Rolling correlations

Simulation results

Export volatilities to Excel

Back to results

KySim ID 171

Commodities: Coffee Arabica, Sugar #11, Cocoa NY, Coffee Robusta

History Length 6/12

Job id 245979

Job created at 2022-02-11 08:57:13

Valuation date 2022-02-08

Job created by KYOS | Richard Cornelje

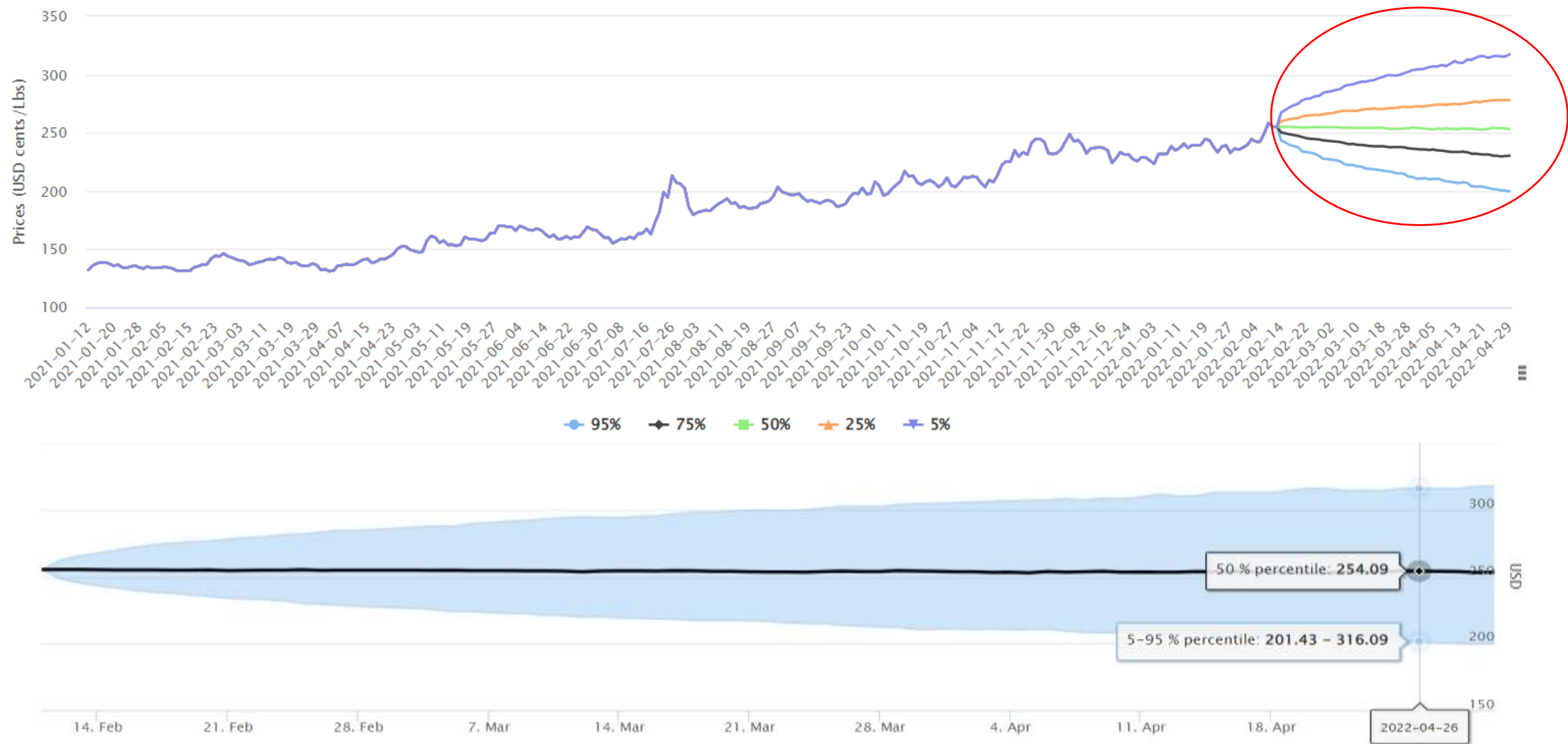


Realized correlations of the rolling contracts

Correlation M01

	Coffee Arabica
Coffee Arabica	1.00
Sugar #11	0.20
Cocoa NY	0.12
Coffee Robusta	0.62

Translate experience (“gut feeling”) into clear data



Short term risk calculation: Value-at-Risk

- How to use VaR in practice:

What can happen with MtM, costs/income in 1 single day with a 95% confidence level ?
or what can happen during your holiday of 10 days without internet, prices and news
when you have multiple commodities (sugar, cocoa, aluminium, natgas and coffee)

- Base case is "30 million Lbs" - current value of "\$ 71.5 million" - to be delivered during 2023

Practical usage of a theoretical model

		VaR 2022-02-10 (USD)		VaR 2022-02-09 (USD)		Change in VaR (USD)	
		Total	Jan '23 - Dec '23	Total	Jan '23 - Dec '23	Total	Jan '23 - Dec '23
VaR total		2,309,200	2,309,200	2,332,800	2,332,800	-23,600	-23,600
VaR per commodity							
	Coffee Arabica	2,309,200	2,309,200	2,332,800	2,332,800	↓ -23,600	↓ -23,600
VaR per book							
	Hedging Physical	792,960	792,960	801,930	801,930	↓ -8,970	↓ -8,970
	Hedging Financial	1,516,200	1,516,200	1,530,900	1,530,900	↓ -14,700	↓ -14,700
VaR per counterparty							
	JP Morgan	457,640	457,640	462,780	462,780	↓ -5,140	↓ -5,140
	Golden Bean Trade	235,840	235,840	238,720	238,720	↓ -2,880	↓ -2,880
	Cargill Fin Services	309,820	309,820	313,570	313,570	↓ -3,750	↓ -3,750
	Amius	748,750	748,750	754,550	754,550	↓ -5,800	↓ -5,800
	Keurig Green Mountain	557,120	557,120	563,210	563,210	↓ -6,090	↓ -6,090

- With 95% certainty the change (up or down) will be < \$ 2.3 million
- Portfolio value ranges between \$ 69.2 to \$ 73.8

Long term risks : Shareholders

- **Cashflow-at-Risk (CfaR):**
- CFO question two: What can happen with our cashflow during 2023 if we do not hedge this position ? How sure are we?
- In practise many clients hedge exposures
 - Fully and/or partially hedged
 - Physical and/or financial hedges
- CfaR should be part of your risk management procedures

Risks – but what is risk ?

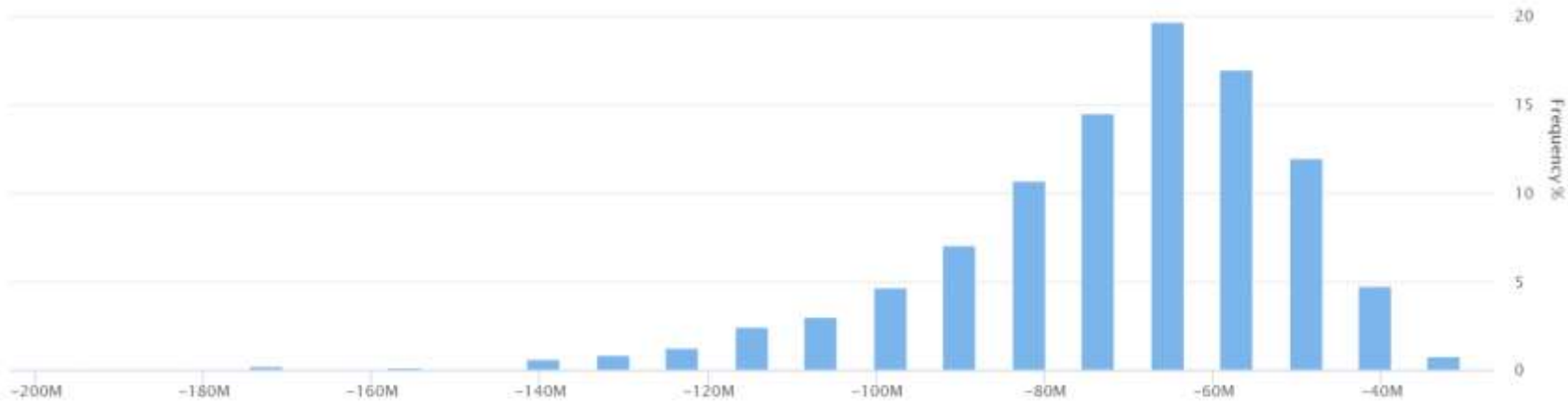


If you can't stand the heat, get out of the kitchen.
(Harry S. Truman)

Unhedged position feels like “bull riding”

Cash-flow at Risk Summary

Commodity	Currency	95% at Risk
Commodity	USD	41,381,360



Commodity	Currency	Avg	1%	5%	10%	90%	95%	99%
Total	USD	-71,536,000	-136,730,047	-112,917,360	-99,751,964	-48,522,530	-44,195,852	-37,227,386



Partially hedged position “control the bull”

Hedging instruments:

- Physical price agreements
- Swaps and futures
- Options including accumulators



Valuation of option structures like accumulators

<https://admandvantage.com/grain-contracts/price-accumulator/>

Price Accumulator™

Rather than settle for the current market price, you can often achieve strategic price targets by using this unique contracting mechanism to establish your futures reference price. If prices go higher, you may sell additional bushels and if prices go much lower, pricing activity may stop altogether or trigger a minimum guaranteed futures reference price.

ADM products and services vary by location.

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[Download Non-Guaranteed Limited Knock-Out PDF](#)

Automatic Contracts:

- ☐ 1x2 Contract
- ☐ Average Seasonal Price (ASP™)
- ☒ Price Accumulator™
- ☐ Price Daily™
- ☐ Price Max™
- ☐ Price Point™

[Contact Me Now](#)

Manage a portfolio of multiple OPCO's

	 Tactical management	 Strategic management	 Central hedging	 Active risk taking
What	Optimization	Long term exposer taking / Investments	Execute hedge transaction	Proprietary trading
Why	Favorable markets	Securing profit targets	Minimize risk	Profit making
How	Timing and scaling	Maintain hedge ratio	Based on hedging policy	Timing and scaling
Who	Physical trader	Senior management	Trade execution	Derivative Trader

- Up-to-date insight in risks and potential cashflows
- Consistency & transparency across commodities
- Uncertainty translated into EUR
- Supporting decisions

THE KEY IS NOT
TO PREDICT THE
FUTURE, BUT TO
BE PREPARED FOR
THE FUTURE

PERICLES, 495 – 429 V. CHR.

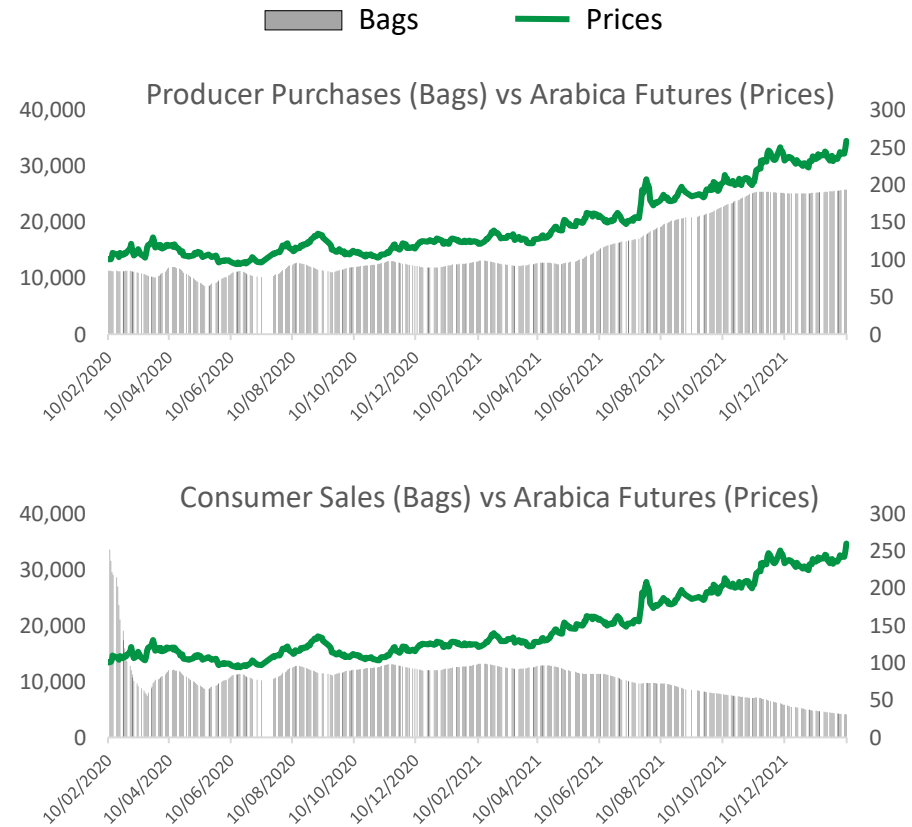


Translating data and risk analytics into earnings performance- HedgeStar

IN FOCUS: Traders (continued)

How have customers behaved historically in down-price and up-price environments?

- Anticipating customer response to price movements is critical to optimizing inventory turnover and margins accordingly.



IN FOCUS: Traders (continued)

Where are coffee prices going?

- Participants buying or selling commodities must have an orientation on market direction.
- Traders must assess all exposures to identify their current net position:



**Physical purchases -
fixed and floating**



Inventory



**Physical sales -
fixed and floating**

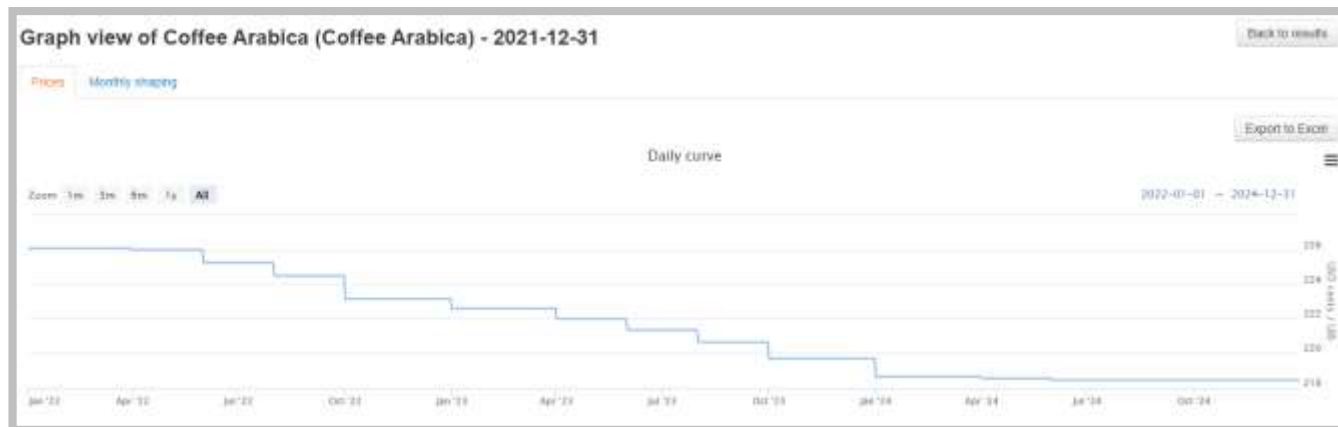
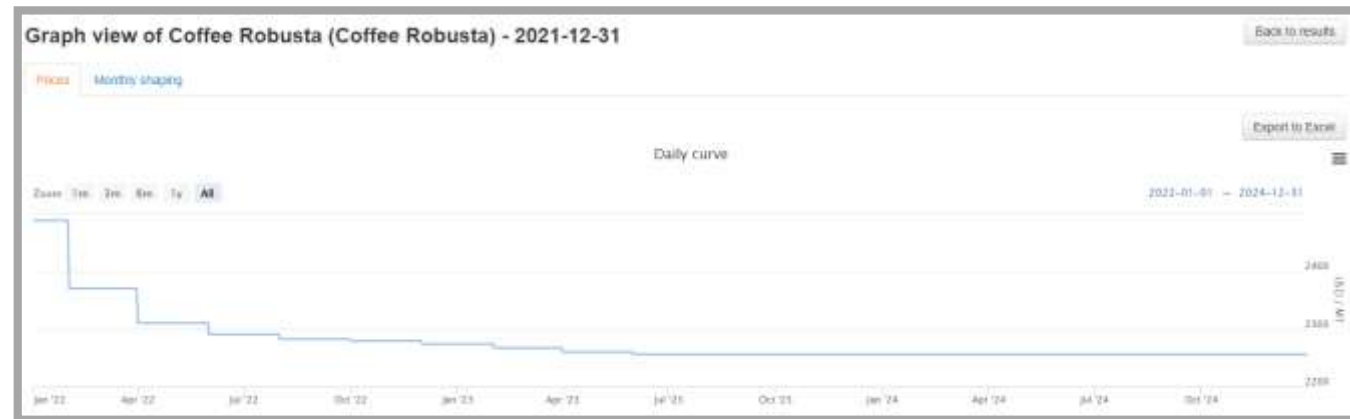


Hedging positions

IN FOCUS: Traders (continued)

Where are coffee prices going?

- Forward price curves and price simulations can help inform decision making around hedge ratios



IN FOCUS: Traders (continued)

What is the potential impact on my net risk position?

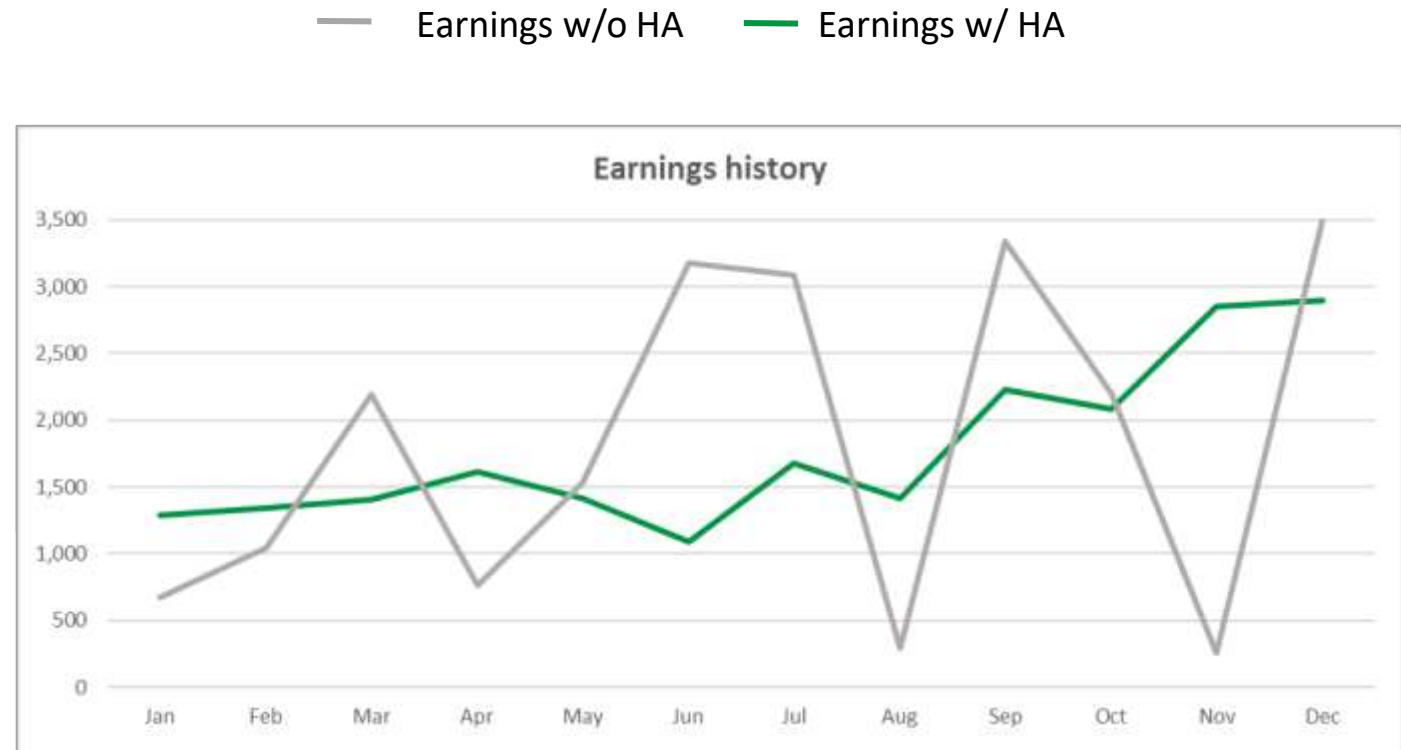
- Price simulations using monte carlo, Value-at-Risk and other stress testing methods can help.



IN FOCUS: Traders (continued)

How to account for operational and hedging strategy?

- Must reflect proper offset between cash outflows and inflows, expenses and income.
- Answer? Hedge accounting under ASC 815/IFRS 9





Questions and Answers

Contact Details

We look forward to supporting you with the right tools and advice!



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