



Meat the Standards: Effective Risk Management for Meat Producers

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KYOS Commodity Risk Solutions**

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KYOS



Short overview
KYOS



KYOS in a nutshell.....

- **Background**

- Activities started in 2001, Strong focus on risk management
- Core competence: combine quantitative background with practical solutions

- **Activities**

- Modelling: Apply quantitative financial techniques to commodity markets
- Software: Analytical, but practical, approach to understandable risk reporting
- Training: Combine theory with real life examples





ERP, TMS compared to KYOS



- Physical Logistics
- Inventory
- Invoicing/Payments
- Positions, Cashflows
- MtM FX and IR
- Hedge Accounting
- MtM valuations for all commodity derivatives
- 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





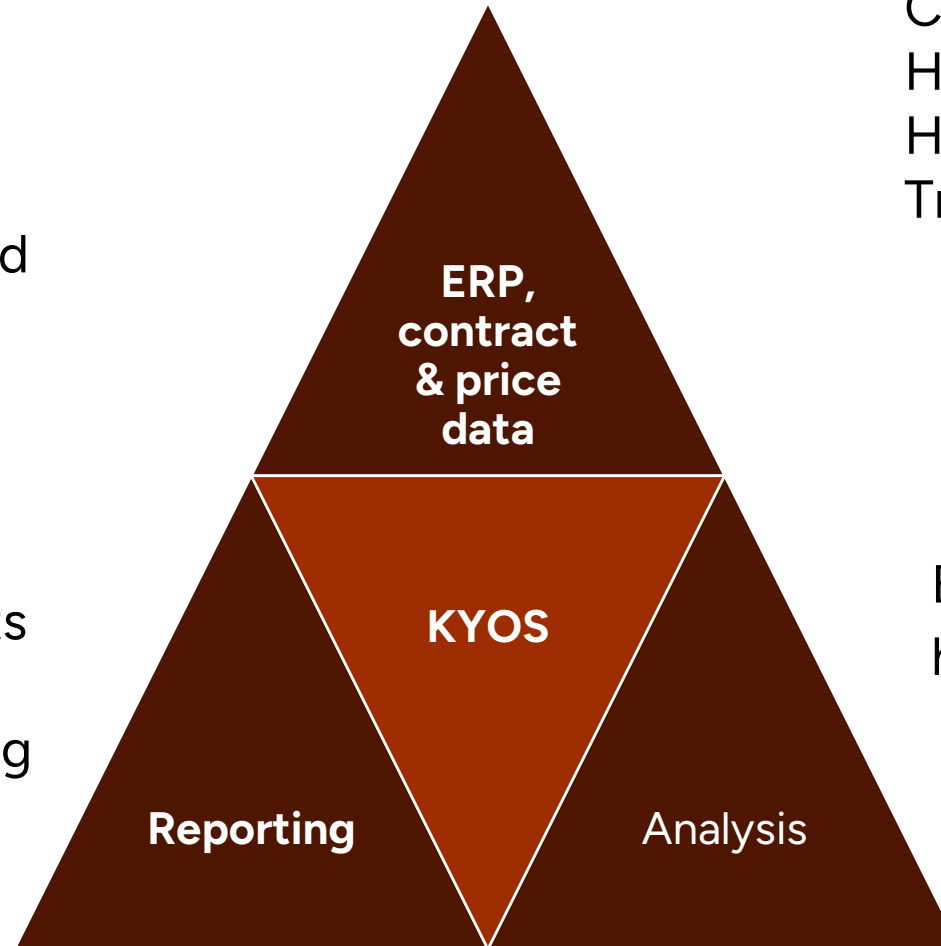
Where do we add value to the chain?

Physical flows
Financial hedges
Price analytics
✓ SFTP, API
✓ SaaS based

CPO/CFO
Head of Trading
Head of Risk
Treasury

Cashflow forecasts
Insight in risks
Coverage reporting

Enable you to look forward as ...
hindsight is a wonderful thing





Market Overview



Markets relevant to meat are “volatile”

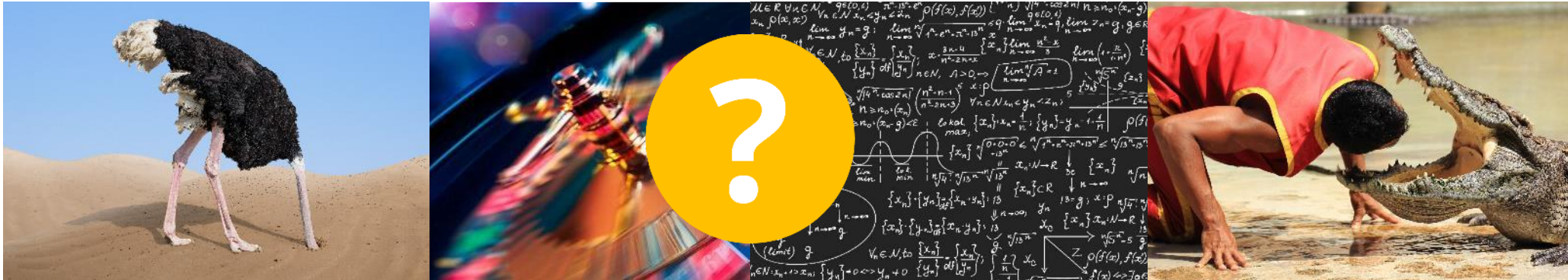
Corn & Soybean meal (Feedstocks) versus Lean Hogs (“Products”)





Price risks for buyers/sellers translated into “cash”

- Price risks can be calculated (estimated) of products bought and/or sold
- Certainty is the “big” question





From commodities like corn to a product like pork

To convert pork meat to corn equivalent:

Key numbers

0.72 is the meat to live weight conversion

4.2 is the feed conversion ratio

0.78 is the percentage of corn in the feed



For example, for 1 kilogram of pork:

$1/0.27 = 1.389$ -kilogram live weight

$1.389 * 4.2 = 5.8338$ kilogram of total feed

$5.8338 * 0.78 = 4.55$ kilogram of corn used

0.72 is the meat to live weight conversion

4.2 is the feed conversion ratio

0.78 is the percentage of corn in the feed

Lean Hogs are a futures contract traded on the Chicago Mercantile Exchange (CME) that can be used to speculate or hedge the price of pork. Lean hogs refer to **pigs that have reached 250 pounds**, which is the minimum weight to slaughter. This can happen as quickly as 6-months.





Risk Management



Estimating potential cash-flows

Date	Legal entity	Counterparty	Period	Commodity	B/S	Volume	FX	Price type	
2025-02-01	Food producer A	Bunge	Jan'26 - Dec'26	Corn No 2	Buy	60,000,000 Bushel	USD cent	phys future	Edit ▾
2021-06-01	Food producer A	Sysco	Jan'26 - Dec'26	Lean Hogs	Sell	-600,000,000 Lbs	USD cent	phys future	Edit ▾
2021-05-07	ForFarmers	Tyson Foods	Jan'26 - Dec'26	Soybean Meal	Buy	174,000 Short Tonne	USD	phys future	Edit ▾



Finding a “starting point”

- Buying corn & soybean meal
- Selling pork (pork products)





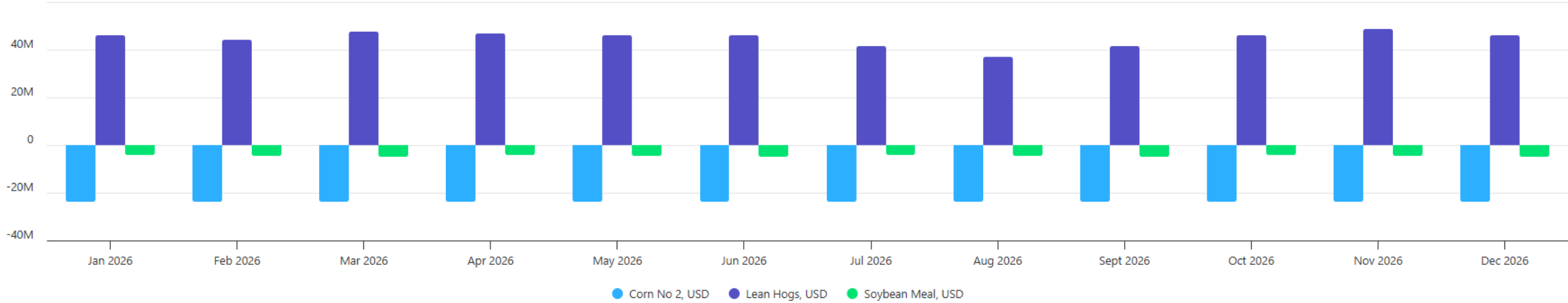
Starting point: today's values



Positions Exposure FX exposure **Cash flow** Average price Cash flow + costs Average price + costs Mark to market Greeks

Hide graph ^

Cash flow



KYOS CTRM

			2026											
Commodity	Currency	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Corn No 2	USD	-284,280,000	-23,690,000	-23,690,000	-23,690,000	-23,690,000	-23,690,000	-23,690,000	-23,690,000	-23,690,000	-23,690,000	-23,690,000	-23,690,000	-23,690,000
Lean Hogs	USD	536,532,500	45,899,375	44,116,875	47,681,875	46,790,625	45,899,375	45,899,375	41,443,125	36,986,875	41,443,125	45,899,375	48,573,125	45,899,375
Soybean Meal	USD	-54,118,350	-4,198,838	-4,509,863	-4,820,888	-4,198,838	-4,509,863	-4,820,888	-4,198,838	-4,509,863	-4,820,888	-4,198,838	-4,509,863	-4,820,888
Total	USD	198,134,150	18,010,538	15,917,013	19,170,988	18,901,788	17,699,513	17,388,488	13,554,288	8,787,013	12,932,238	18,010,538	20,373,263	17,388,488

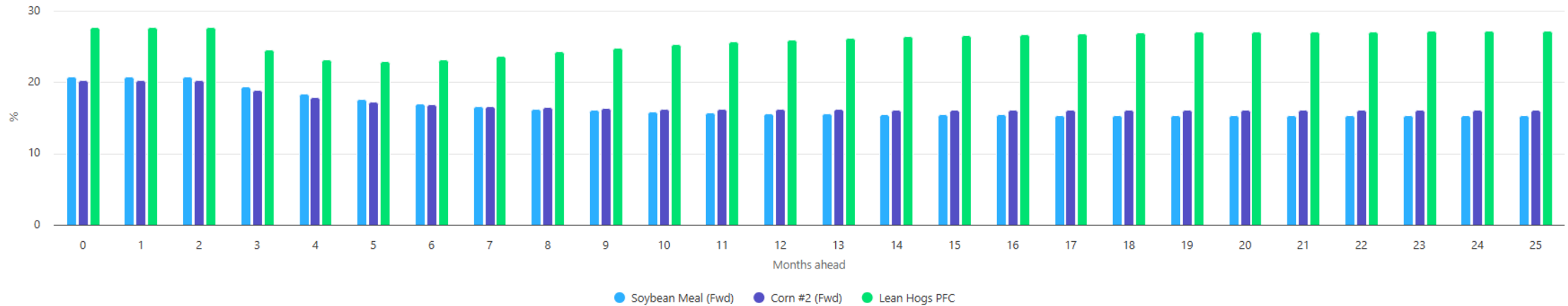


Calculating volatilities & correlations



VaR Backtest **Volatility** Exposures Forward Curve

Volatility Term Structure



KYOS CTRM

Volatility (%)

Volatility on 2025-04-22

Forward curve	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Soybean Meal (Fwd)	20.76%	20.76%	20.76%	19.36%	18.31%	17.56%	16.99%	16.58%	16.26%	16.02%	15.85%	15.72%	15.61%	15.53%	15.47%	15.42%	15.38%	15.35%	15.33%	15.32%	15.30%	15.29%	15.28%	15.28%	15.27%	15.27%
Corn #2 (Fwd)	20.23%	20.23%	20.23%	18.80%	17.84%	17.23%	16.83%	16.58%	16.41%	16.31%	16.24%	16.19%	16.16%	16.14%	16.12%	16.11%	16.10%	16.10%	16.09%	16.09%	16.09%	16.09%	16.09%	16.09%	16.08%	16.08%
Lean Hogs PFC	27.68%	27.68%	27.68%	24.52%	23.12%	22.85%	23.13%	23.65%	24.22%	24.76%	25.22%	25.60%	25.93%	26.20%	26.42%	26.59%	26.72%	26.83%	26.91%	26.98%	27.03%	27.07%	27.10%	27.12%	27.14%	27.16%



Adding value to the chain – risk management

Sales & Procurement : What can happen during a 2 weeks holiday in.....e.g..... Italy



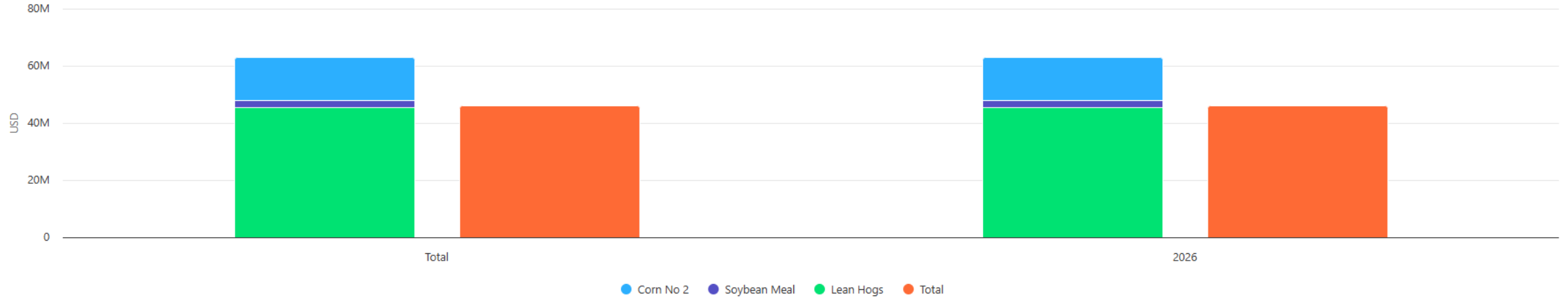
CFO: What can happen the next 2 or 3 years





Short-term risks – trading companies – 1 to 10 days

VaR per commodity



KYOS CTRM

		VaR 2025-04-22 (USD)		VaR 2025-04-21 (USD)		Change in VaR (USD)	
		Total	Jan '26 - Dec '26	Total	Jan '26 - Dec '26	Total	Jan '26 - Dec '26
VaR total		46,108,417	46,108,417	44,110,144	44,110,144	1,998,272	1,998,272
VaR per asset type	Contracts	46,108,417	46,108,417	44,110,144	44,110,144	↑ 1,998,272	↑ 1,998,272
VaR per book	Hedging Physical	46,108,417	46,108,417	44,110,144	44,110,144	↑ 1,998,272	↑ 1,998,272
VaR per commodity	Corn No 2	14,887,704	14,887,704	15,060,648	15,060,648	↓ -172,943	↓ -172,943
	Soybean Meal	2,642,339	2,642,339	2,700,017	2,700,017	↓ -57,678	↓ -57,678
	Lean Hogs	45,325,227	45,325,227	45,818,490	45,818,490	↓ -493,263	↓ -493,263



VAR for industrial customers or trading companies?

- Mind your step: as it does not report the maximum potential loss
- The extremes (>95%) may occur
- Markets are known to have non-normal distributions.
- Include variance, covariance, and standard deviation as the complexity might increase exponentially for your specific portfolio.

Growth in financial derivatives creating a combined book (physical/financial)

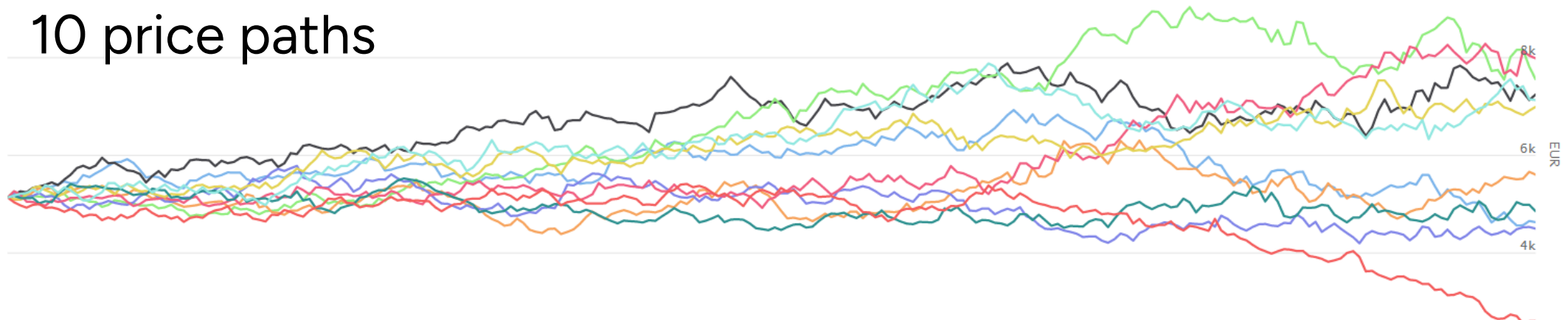
1. Swaps/futures
2. Basic Call and Put options
3. Combinations of sometimes more complex products, like accumulators



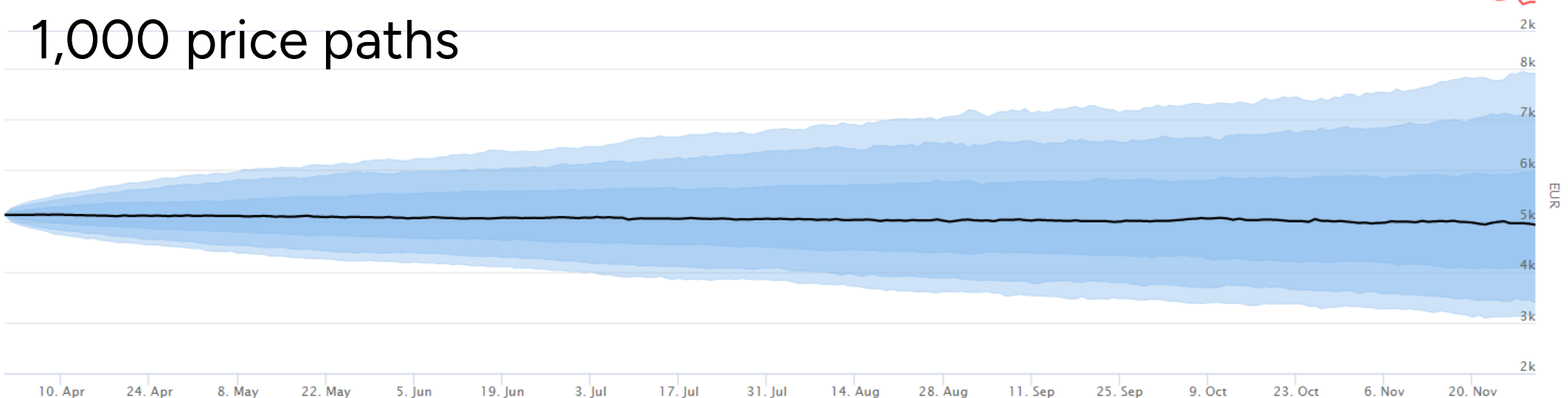


Use all information to create Monte Carlo simulations

10 price paths



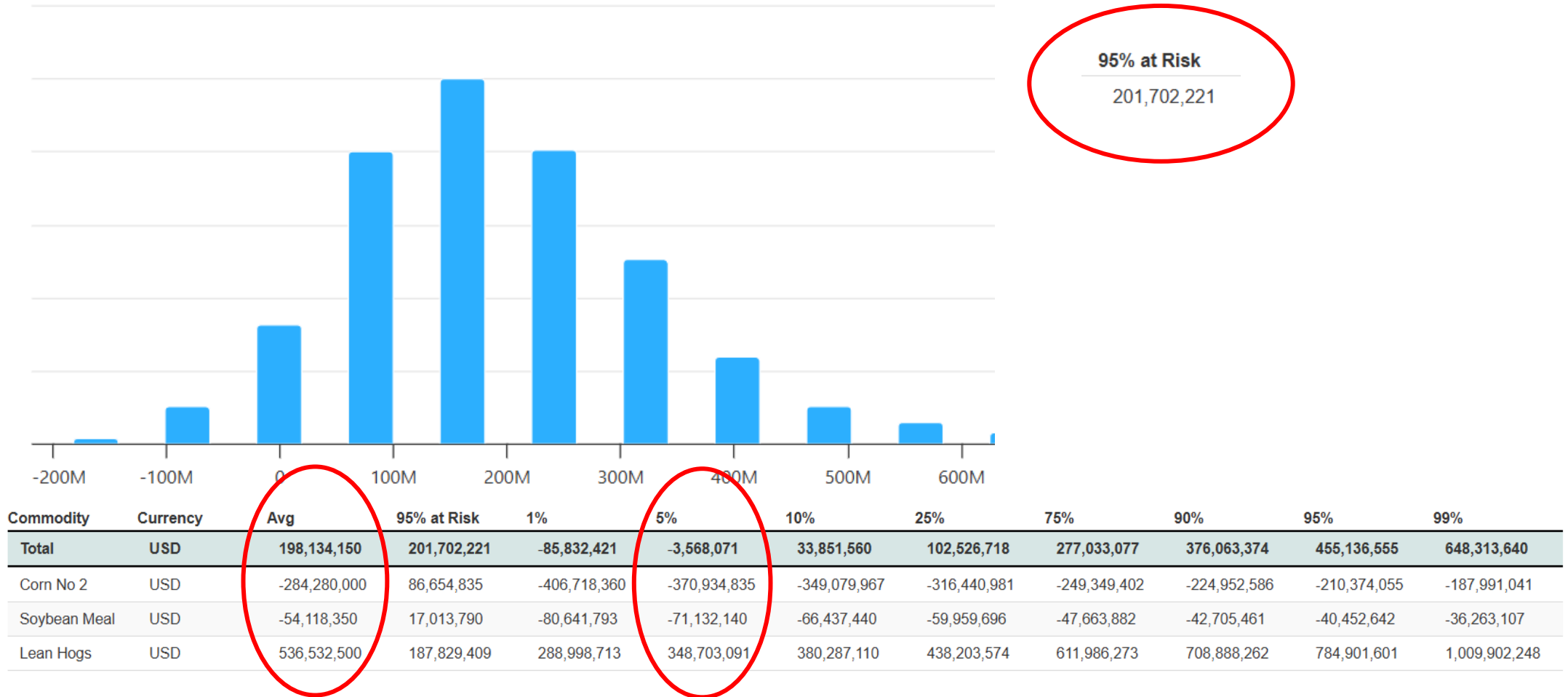
1,000 price paths





Long-term risk for buyers as well as producers

Cashflow





Hedging tools in turbulent times

Growth in financial derivatives creating a combined book (physical/financial)

1. Swaps/futures
2. Basic Call and Put options
3. Combinations of sometimes more complex products, like accumulators





KYOS PRM – Portfolio and risk management



To conclude, KYOS offers software solution for advanced risk management

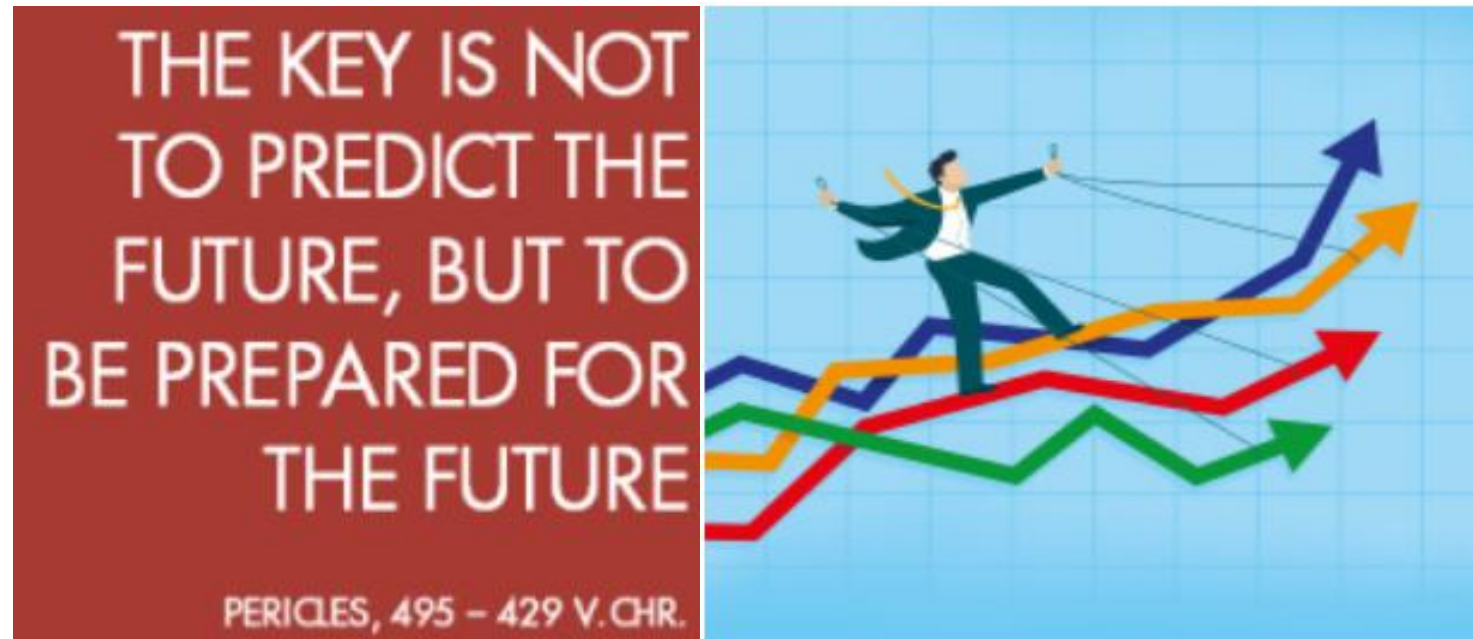
- Combine all flows, physical and financial
- Translate contracts, flows and inventory into exposures
- Cash-flow at risk (Cfar) as well as Value-at-risk (VaR)
- Monte Carlo Price simulations (stress testing “2.0”)
- Advanced option capturing, like accumulators

All delivered in a user-friendly, on-line SaaS based platform

Used by treasury, sales, procurement and finance



Let's talk and get you in control, where possible..





Questions



- Time for questions & answers!





More information



Looking forward supporting you with advice & tools!



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