



ANNUAL REPORT 2022

Contents

GDT EVENTS YEAR IN REVIEW	01
CEO'S REPORT	02
OVERSIGHT BOARD CHAIRMAN'S REPORT	03
GDT EVENTS OVERSIGHT BOARD	04
– MEMBER REPRESENTATIVES	05
MAJOR DEVELOPMENTS THIS YEAR	08
GDT EVENTS STATISTICS	12

GDT 2022 Year in Review



Traded on GDT Events



Traded on GDT Platforms



SGX-NZX Dairy Futures and Options
contracts settled to GDT Events prices



Average number of participating
bidders per quarter on GDT Events



Average number of winning
bidders per quarter on GDT Events



Bidders from 66 countries

CEO's Report



*Eric Hansen
CEO
Global Dairy Trade*

We started the year strongly by celebrating our 300th Trading Event at TE300 on 18 January, a huge milestone reflecting Global Dairy Trade's position as a cornerstone of international trade in dairy products.

GDT also provides a foundation for the development and growth of price risk management products through the use of GDT prices as settlement prices, as occurs in the SGX-NZX Dairy Derivatives Market.

Change in GDT ownership

In February, Fonterra announced its intention to enter a strategic partnership with the European Energy Exchange (EEX) and New Zealand's Exchange (NZX) to become shareholders in GDT.

Since 30 June, we have operated under a new ownership structure with EEX, Fonterra and NZX each holding equal one-third (33.33%) shareholdings in GDT.

The three partners share a strong common interest in credible price discovery and a shared vision to significantly grow the volume of physical and financial dairy trading.

The inclusion of EEX and NZX as shareholders with strong interests in dairy and established reputations as regulated exchanges further enhances our credentials as an independent, neutral, and transparent price discovery platform.

Establishing an enduring linkage through ownership also fits well with the role that our credible, market-based reference prices play in supporting the financial dairy derivative markets.

Launch of GDT Pulse

In August, we launched our latest initiative, GDT Pulse, designed to take the pulse of the market more frequently than can be provided by the large-scale GDT Event auctions.

GDT Pulse currently offers much shorter auctions on a single product in a single contract period, benefiting buyers and sellers by providing additional opportunity to trade and discover price between the twice-monthly GDT Events auctions.

A pilot version of GDT Pulse with sufficient features to meet customer needs will be operated for 6 – 12 months, with further development to be informed by customer feedback.

Further enhancements to GDT Events

During the year we released new features to further enhance user experience on the refreshed GDT Events platform that was launched last year.

Customers that wish to involve multiple employees in their bidding decision can now have multiple users, and bidders can now move seamlessly between devices such as laptop to mobile phone as the auction progresses.

Europe office

In November we established a subsidiary company and office in Europe to better serve the needs of our European customers and introduce GDT to new customers.

Two Europe-based roles have been

established, with GDT's CTO taking on additional responsibility as Managing Director GDT Europe, and Billy Quinn being appointed as Senior VP Global Sales to lead our sales function globally.

Looking ahead

GDT's vision is to be the world's pre-eminent price discovery platform for core dairy products and an active supporter of efficient dairy derivative trading.

To continue delivering on this vision, we are pursuing a three-year strategic plan focused on liquidity, global supply, and increased agility & efficiency in developing and operating our services.

The recent launch of GDT Pulse supports our goal of enhancing liquidity in the physical and financial dairy markets by providing price discovery on a more frequent basis.

For our global supply goal, we are seeking new sellers from all global milk pools to provide our bidders with more choice and enable GDT to publish credible reference prices for more products and across more regions. Our new European office represents the start of this new strategy.

Since the change in GDT's ownership on 30 June, our work to deliver the strategy has been guided by a new Board of Directors (as shown below), while the GDT trading rules and platform is overseen by the GDT Events Oversight Board as an independent, external body.

Eric Hansen
CEO, Global Dairy Trade

Board of Directors

Global Dairy Trade's Board of Directors is responsible for the business and commercial affairs of GDT as a company and is made up of seven directors, comprising two directors appointed by each shareholder and one independent chair of the board appointed by unanimous approval of the three shareholders.



CHAIR: Charlie Hyland

STONEX FINANCIAL EUROPE S.A.

Charlie joined StoneX in 2008 and has played an integral role in the development of StoneX's Commodity Risk Management Business in Europe, the Middle East and Asia/Oceania over that time. StoneX was one of the first companies to offer Financial Hedging and Risk Management Services to the Dairy Industry in EMEA and Charlie has led the team which has been responsible for the development of the StoneX suite of Dairy Risk Management Services, including: Market Intelligence, Advisory and Execution services.

Prior to joining StoneX Charlie started his career in treasury Risk Management with ABN Amro Bank.



Dr Tobias Paulun

CHIEF STRATEGY OFFICER
EUROPEAN ENERGY EXCHANGE AG

Dr Tobias Paulun has been a member of the EEX Management Board since 1st January 2015.

As Chief Strategy Officer of EEX, Tobias Paulun coordinates the strategic direction of EEX Group. The main focus of his work is the analysis of the political and regulatory environment of the energy markets and energy trading as well as the development of new products and services.

Starting in August 2009, he worked for EEX and ECC in the areas of Product Development and Strategy.

Previously, he worked at the Institute of Electrical Systems and Energy Economics (IAEW) of the RWTH Aachen in projects concerning the long-term development of the European electricity market and optimisation of grid expansion planning for electricity and gas networks.



Wolfgang von Rintelen

GENERAL COUNSEL & MANAGEMENT
BOARD OF THE EXCHANGE
EUROPEAN ENERGY EXCHANGE AG

A qualified lawyer, Wolfgang has dedicated almost his whole career to commodity exchanges. Having joined the German based European Energy Exchange (EEX) in 2004 he took responsibility for the legal department. Additionally, he held the roles of Chief Compliance Officer and Head of Market Surveillance for many years and is now a member of the Management Board of the Exchange. Prior to EEX, Wolfgang was employed by a German agricultural commodities exchange for almost 7 years and worked some years as an attorney.



Chris Rowe

ACTING CFO
FONTERRA

Chris entered the dairy industry as a graduate and has had the opportunity to take on a wide variety of finance roles in the operations and corporate areas of the Co-operative before spending seven years in Fonterra's Australian business in Ingredient, Consumer and Corporate finance roles.

Chris returned to NZ in 2011 and had a variety of Commercial Director roles focused on the ingredients and operations side of Fonterra. In 2018 he took up the opportunity to take on the Director's role in Group Finance.



Bruce Turner

KAITOHUTOHU |
STRATEGY & OPTIMISATION
FONTERRA

Bruce Turner is Kaitohutuhu for the Strategy and Optimisation Team at Fonterra. Bruce was the Founder and Director of the CPM team which has since evolved into the Strategy and Optimisation team which holds 6 sub teams who centrally manage Fonterra's physical and financial portfolios, ensuring Fonterra optimises its ingredients portfolio across markets/channels and manages market price exposures with a focus on using exchange-traded and OTC derivative contracts. Before joining NZMP, Bruce spent 32 years in the energy sector working in Oceania, Asia, Europe and North America, primarily in electricity and gas, with a focus on energy trading and portfolio management.



Kathryn Jaggard

CONSULTANT
NZX LIMITED

Kathryn worked for NZX from 2008–2018, in the role of Head of Derivatives. Prior to this she was in London for 10 years where she held several senior business development roles at LIFFE (The London International Financial Futures and Options Exchange). She also worked in Singapore where she helped drive derivatives growth from this region.

Kathryn has developed an intimate knowledge of the global derivatives markets, a multitude of new products, and assisted in driving liquidity to these products.



Graham Law

CHIEF FINANCIAL & CORPORATE OFFICER
NZX LIMITED

Graham joined NZX in November 2017. He has considerable experience working across the financial and professional service sectors in New Zealand and the United Kingdom. Graham previously worked as Head of Finance at ACC, and prior to this was Managing Director and Chief Financial Officer at AMP Capital Limited. Graham brings expertise in strategic leadership, corporate governance, and risk and financial management.



Oversight Board Chairman's Report



*Bill Shields
Chair GDT Events
Oversight Board*

The GDT Events Oversight Board is an independent oversight body established to ensure that the GDT Events trading platform is operated and developed in accordance with the Guiding Principles and to represent the interests of all parties trading on the GDT Events platform.

The GDT Events Oversight Board monitors Global Dairy Trade's compliance with its Governance Principles, approves any proposed rule changes, and contributes to the development of Global Dairy Trade's overall business strategy.

The beginning of 2022 saw the Oversight Board start a new three-year term with a mix of new and returning members. New members and their representatives are as follows:

- a) In the Bidder Group, Zhongshan Right On Trading Co. Ltd, represented by Jessica Lee Hiu Sun and Majan Food Industries LLC, represented by Rushikesh Ved, were appointed on the basis of their trading volumes and regional representation

- b) DairyAmerica Inc. was elected by the Oversight Board as a Seller Group member, represented by Patricia Smith and
- c) In the Finance and Markets Group, Singapore Exchange Limited (SGX) was appointed as the largest financial markets operator utilising GDT prices for settlement, represented by Nick Morris of NZX as part of the NZX-SGX Dairy Derivatives Partnership, while Jarden Securities Limited was subsequently elected by the Oversight Board, with Mike McIntyre named as their representative from the November meeting.

The Oversight Board held three meetings during 2022. The first meeting was held on 24 February to discuss the proposed new ownership structure for GDT that had recently been announced by Fonterra, NZX and EEX.

The Oversight Board's second meeting was held on 10 May 2022 to review GDT's annual risk report and consider proposed rule changes. The Oversight Board noted that all GDT services, whether managed directly by GDT or through service providers, continued to operate without disruption or significant stress in the face of the Covid-19 pandemic.

Following public consultation, the GDT Events Oversight Board

approved proposed rule changes to the GDT Trading Event Rules to incorporate GDT's new service, GDT Pulse. Members discussed how the new rules were designed to allow for some operational flexibility during the early phases of the GDT Pulse pilot, and recognised that some rules may need updating once the pilot has been deemed successful.

At the final Oversight Board meeting of the year held on 8 November 2022, the board noted GDT's intention to develop and execute a series of three-year strategic plans to further the development of GDT in line with its Guiding Principles. The need to review and update GDT Governance Principles prior to completion of GDT's first three-year strategic plan was also discussed, including whether it would be appropriate for GDT to become a registered entity under the IOSCO framework.


Members discussed the performance of GDT Pulse since its launch in August 2022 and the ways in which more frequent price discovery could facilitate the development of liquidity in the derivatives market. Also discussed was the prospect of additional buyer and seller interest from the momentum created by additional auctions and price data points, the possibility of negative impacts on basis risk, potential disruptions to financial trading activity and the role of other initiatives such as education and training about

dairy derivative markets. The potential impact if financial derivatives settlement prices were eventually amended to include GDT Pulse prices was also raised.

Members endorsed GDT's proposal to replace the existing Confidentiality Deed with new Confidentiality Protocols that align better with the new ownership structure. These protocols continue to ensure that GDT's activities and the information it holds are clearly separate from the business activities any affiliated seller carries on as a producer of dairy products.

My sincere thanks go to the members of the Board for their contributions this year. I value their advice and their commitment to both the Board and our purpose, which ultimately seeks to maintain confidence in price discovery via the GDT Events trading platform. I would like to acknowledge Gilbert Chow, Vince Curtin, and Sri Jayen Mehta for their valuable input to the Board before it was reconstituted this year.

Bill Shields stepped down from his role as Chairman of the GDT Events Oversight Board from 1 January 2023.



Bill Shields
Chair, GDT Events
Oversight Board

GDT Events Oversight Board Member Representatives in 2022



Bill Shields

CHAIR

Bill Shields was appointed inaugural chair in March 2016. He has extensive financial markets and governance experience and brings a deep understanding of commodity markets from his involvement in electricity trading platforms. He is a former director of M-co International and the Energy Market Company, which operated regulated electricity and gas markets in New Zealand, Singapore and Australia. Mr Shields also has extensive experience internationally

in banking and finance and government policy advice. His career responsibilities have included economic and financial research in Australia and overseas, the provision of analytical and strategic advice on Australian and international financial market developments, the conduct of monetary policy, as well as the oversight of regulated energy markets. Mr Shields is a former director on the Capital Markets Board of the Queensland Treasury Corporation. He served on their Funding & Markets Committee and as chair of the Accounts & Audit Committee. Mr Shields was Chief Economist and an Executive Director of Macquarie Bank Limited until 2001, and previously held positions with the Reserve Bank of Australia, the International Monetary Fund and the Australian Treasury. He was a Visiting Professor at the Macquarie Graduate

School of Management of Macquarie University until 2009 and has taught at the Australian Catholic University in Australia.

Bill Shields stepped down from his role as Chairman of the GDT Events Oversight Board from 1 January 2023.

BIDDER GROUP MEMBERS



Rushikesh Ved

MAJAN FOOD INDUSTRIES LLC

Rushikesh joined the family business Majan Food Industries LLC as a partner in 2020 to manage operations, sourcing and business development.

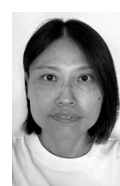
Rushi has a background in electrical engineering as an Industrial and Operations Engineer. Majan Food Industries LLC has provided milk powder repacking and food manufacturing across the Middle East and African Region for over 35 years.



Kimberly Fisk

NESTRADE S.A

Kimberly Fisk is the Global Head of Procurement for Commodities in Nestle, where she is responsible for a global team managing commodity procurement. Her previous experience started in the NZ Dairy Industry before moving to the UK and working in supply chain and procurement roles in FMCG companies. She joined Nestle in 2009 where she has focused on global sourcing strategies and risk management across commodities based in UK, Singapore and Switzerland.



Jessica Lee Hiu Sun

ZHONGSHAN RIGHT ON TRADING CO. LTD

Jessica Lee is the Director of Operations at Zhongshan Right On Trading Co. Ltd, where she is responsible for managing the import, warehousing and distribution of dairy ingredients. She has 20 years of experience in operations planning and supply chain management across a wide range of FMCG and commodity industries in both Hong Kong SAR and Mainland China. She joined Right On in 2010 and has helped to develop various supply chain solutions for customers and grow the company to become one of the largest dairy ingredients distributors in China.



SELLER GROUP MEMBERS



Thomas Carstensen
ARLA

Thomas is the Senior Vice President of Global Trade & Planning at Arla Foods a.m.b.a, where he has had overall responsibility for their global B2B activities, milk planning and sourcing of dairy raw materials since 2010. Thomas joined Arla Foods a.m.b.a in 1983 and has held several management positions, including the Business Unit Director for Arla Foods Ingredients and a four-year position in the Middle East.



Patricia (Patti) Smith
DAIRYAMERICA, INC., U.S.A

Patti is the President and Chief Executive Officer of DairyAmerica, Inc. She joined DairyAmerica in 2020 with the focus of driving value, revitalizing vision, and modernizing the organization. She has a wealth of experience having held a number of leadership capacities over the past 30 years in the dairy processing and food ingredient industry.

Patti is involved in several industry organizations at both the board and officer level.



Bruce Turner
FONTERRA

Bruce Turner is Kaitohutohu for the Strategy and Optimisation Team at Fonterra. Bruce was the Founder and Director of the CPM team which has since evolved into the Strategy and Optimisation team which holds 6 sub teams who centrally manage Fonterra's physical and financial portfolios, ensuring Fonterra optimises its ingredients portfolio across markets/channels and manages market price exposures with a focus on using exchange-traded and OTC derivative contracts. Before joining NZMP, Bruce spent 32 years in the energy sector working in Oceania, Asia, Europe and North America, primarily in electricity and gas, with a focus on energy trading and portfolio management.



FINANCE & MARKET GROUP MEMBERS



Mike McIntyre
JARDEN SECURITIES LIMITED

Mike McIntyre is the head of derivatives at Jarden, New Zealand's largest investment bank, where he provides specialist advice regarding the derivative and commodity markets, with a particular focus on dairy derivatives. He advises wholesale farming clients, processors, multinationals, and commodity trading houses in relation to trading, hedging, and developing comprehensive risk management solutions. Mike has worked in financial markets for the past 25 years, including the past 11 spent across various roles in dairy risk management.



Nick Morris
SINGAPORE EXCHANGE LIMITED (SGX)

Nick leads the Strategic Delivery business unit at NZX which includes the SGX-NZX Global Dairy Derivatives partnership, Equity Derivatives, and Energy and Carbon markets. Nick has over ten years of experience in financial markets, having worked at the Bank of New Zealand in various FX related roles and at Medley Global Advisers prior to joining NZX.



Liam Fenton
STONEX FINANCIAL INC.

Liam is the Global Head of StoneX Dairy and Food's Group. Liam established his independent floor broking and trading business operating profitably for 12 years. Liam opened FCStone's first office outside of the Americas in Dublin, subsuming his successful business into today's StoneX office. The StoneX office became profitable within three years of operation and continues to trade successfully while developing price risk management tools for the dairy industry in Europe.



Major Developments this year

GDT Events Auction Website enhancements

After completing a refresh of the GDT Events Auction Website last year, we continue to engage with bidders to gain further insights on enhancements we can make for continuous improvement. We released two such enhancements in May of this year:

Team Member Icon:

- This feature allows companies to have multiple users log into the same Trading Event simultaneously.
- The first user with an 'Auction Bidder' role to log in is the sole 'active' bidder and can place bids. Any other users will be 'inactive' bidders and cannot bid, however they can view the Trading Event.
- The active bidder can hand over bidding to any inactive bidder during the Trading Event, and an inactive bidder can request to become the active bidder.

Multiple devices:

- Given our customers operate their businesses in a highly agile manner including on mobile, we felt it was essential to prioritise access to our GDT Events Auction Website across multiple devices. Bidders can move between devices such as laptops and mobile phones as the auction progresses.

Launch of GDT Pulse – providing price discovery on a more frequent basis

Global Dairy Trade's vision is to be the world's pre-eminent price discovery platform for core dairy products and an active supporter of efficient dairy derivative trading.

We have been working on an exciting new development consistent with this vision that aims to enhance liquidity in GDT for the benefit of both buyers and sellers by providing price discovery on a more frequent basis, called GDT Pulse.

A pilot version of GDT Pulse has been developed and launched, offering sufficient features to meet customer needs. The first GDT Pulse auction (PA001) occurred at 1200 UTC on 9 August 2022.

GDT Pulse operates on alternate weeks between GDT Trading Events, for an initial trial period of six to twelve months. The auctions offer one product specification to participating bidders: Fonterra Whole Milk Powder Regular, Contract Period 2, ensuring a short total auction duration as a convenient option for bidders.

Prices discovered through the GDT Pulse auctions are complementary to the price discovery provided by GDT Events.

Further development of GDT Pulse is being informed by bidder feedback. In October, bidders were asked whether they would like the round duration to be reduced from two minutes per round to one minute per round, to further reduce the auction duration.

to 10-20 minutes. Following an overwhelming response in support, bidding rounds were reduced to one minute from PA010 on 29 November 2022.

Further insights from this survey showed that two thirds of bidders were satisfied or very satisfied with GDT Pulse so far, with an average of 33 participating bidders per Pulse Auction.

During the pilot period, GDT will assess the merit of GDT Pulse and the future potential for more frequent price discovery from Global Dairy Trade.

If the pilot is deemed successful, it is envisaged that GDT will assess options for increasing the scale and scope of the service to enhance liquidity and offer more choice to our customers.

GDT Services

GDT Events

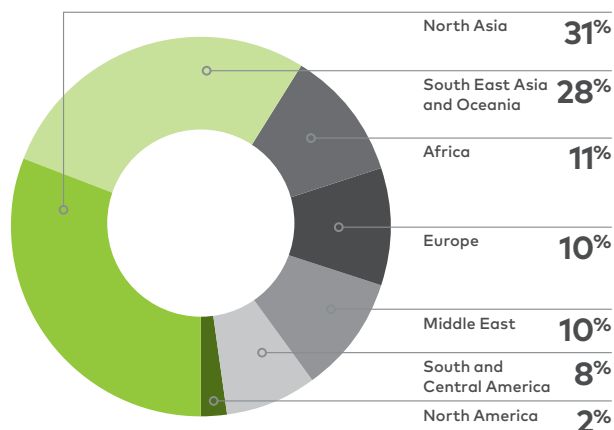
The primary function of GDT Events is to provide credible, market-based reference prices for globally traded dairy products.

In 2022, GDT Events traded 635,541 MT of product from six sellers, representing three major supply regions, Europe, Oceania and US.

Seven (7) product groups were sold to 264 bidders this year. GDT Events achieved an average of 159 participating bidders per Trading Event with a 95% clearance rate.

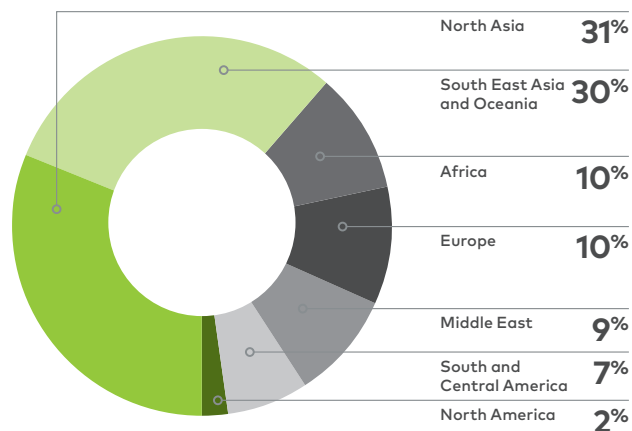
Breakdown of GDT Events Bidders

Participating Bidders* by Region 2022 (278 Total)



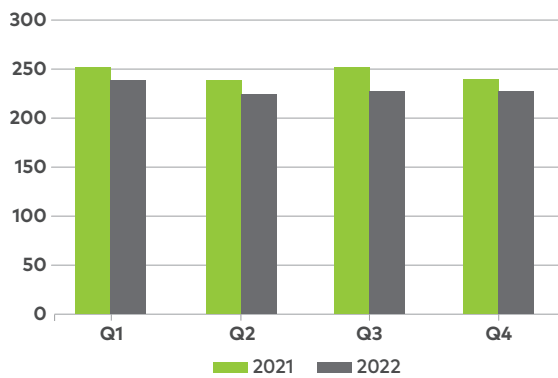
* Total number of unique bidders that participated at least once during 2022.

Winning Bidders* by Region 2022 (264 Total)

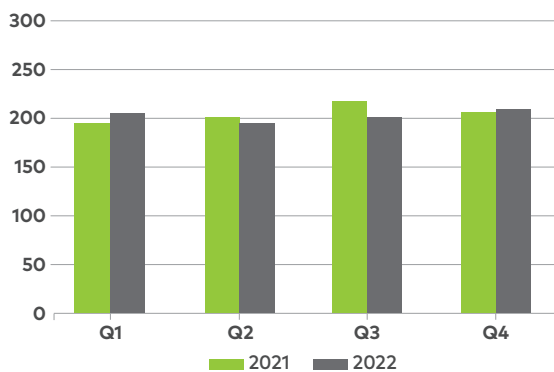


* Total number of unique bidders that purchased at least once during 2022.

Participating Bidders Per Quarter 2022 vs 2021



Winning Bidders Per Quarter 2022 vs 2021



Annual Weighted Average Prices (USD/MT)

Product Group	2022	2021	2020
AMF	6,195	5,934	4,159
BMP	3,852	3,363	2,471
Butter	5,676	5,067	3,758
Cheddar	5,309	4,478	3,878
Lactose	1,473	1,224	1,093
SMP	3,695	3,337	2,745
WMP	3,880	3,850	2,986

Note: This table shows the annual weighted average price data from 2020 to 2022. It includes product group prices across all product specifications and sellers for short-term contract periods (CP1 and CP2), weighted by traded quantity.

GDT Insight

GDT Insight is our data subscription service with three tailored offerings

The Market Pack, Analyst Pack and Trader Pack each provide valuable data not available publicly, and analysis targeted to a range of subscribers.

Please visit <https://www.globaldairytrade.info/en/gdt-insight/> for more information on GDT Insight.

GDT Events Statistics

**The following pages
present statistics for
GDT Events to
31 December 2022.**

Further information is
available through GDT Insight
www.globaldairytrade.info/en/gdt-insight/

For any queries please contact
help@globaldairytrade.info

GDT Price Index

The average GDT Price Index increased by 4% in 2022 on top of a large increase in 2021, reaching a high of 1,593 in March.

This chart includes GDT Price Index data from January 2019 to December 2022.

The GDT Price Index uses a weighted-average of the percentage changes in prices. GDT Price Indices are used to avoid the bias of a simple weighted average price, and to give a more accurate reflection of the price movements between Trading Events.

Further information on the GDT Price Index is available at www.globaldairytrade.info/en/gdt-events/how-gdt-events-work/reference-material/

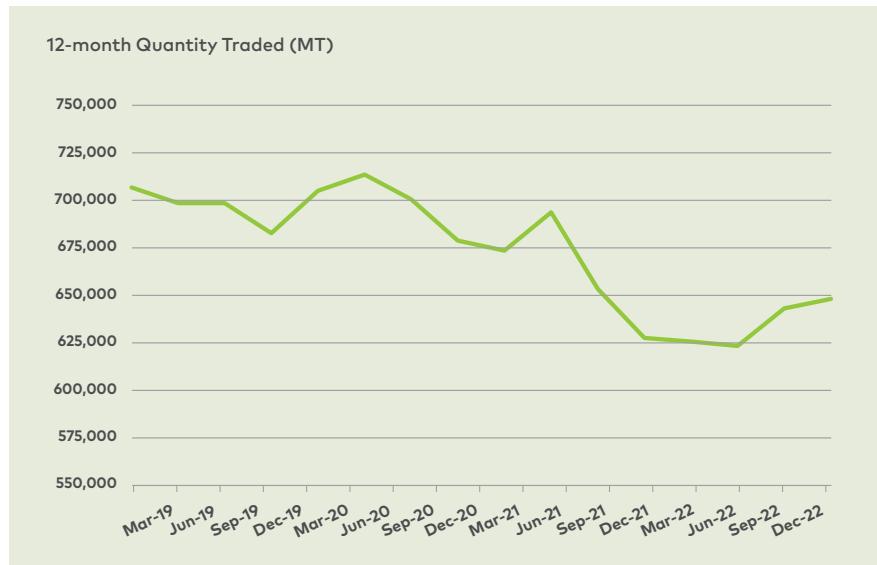


Date	GDT Price Index	Date	GDT Price Index
Jan-21	1,065	Jan-22	1,336
Jan-21	1,116	Jan-22	1,397
Feb-21	1,136	Feb-22	1,455
Feb-21	1,170	Feb-22	1,516
Mar-21	1,346	Mar-22	1,593
Mar-21	1,295	Mar-22	1,579
Apr-21	1,299	Apr-22	1,564
Apr-21	1,298	Apr-22	1,507
May-21	1,290	May-22	1,379
May-21	1,287	May-22	1,340
Jun-21	1,276	Jun-22	1,359
Jun-21	1,259	Jun-22	1,342
Jul-21	1,214	Jul-22	1,287
Jul-21	1,179	Jul-22	1,223
Aug-21	1,167	Aug-22	1,163
Aug-21	1,170	Aug-22	1,129
Sep-21	1,217	Sep-22	1,185
Sep-21	1,229	Sep-22	1,208
Oct-21	1,229	Oct-22	1,166
Oct-21	1,256	Oct-22	1,112
Nov-21	1,310	Nov-22	1,069
Nov-21	1,335	Nov-22	1,095
Dec-21	1,354	Dec-22	1,101
Dec-21	1,333	Dec-22	1,060

12-month Quantity Traded

12-month quantity traded increased by 3.3% to 647,296 MT in 2022.

This chart includes quantity traded (MT) on GDT Events and GDT Pulse from March 2019 to December 2022.



Date	12-month Quantity Traded (MT)	Date	12-month Quantity Traded (MT)
Mar-19	706,199	Mar-21	672,824
Jun-19	697,850	Jun-21	692,965
Sep-19	697,930	Sep-21	652,687
Dec-19	682,078	Dec-21	626,747
Mar-20	704,412	Mar-22	624,886
Jun-20	712,904	Jun-22	622,568
Sep-20	699,937	Sep-22	642,331
Dec-20	678,076	Dec-22	647,296

Clearance Rate

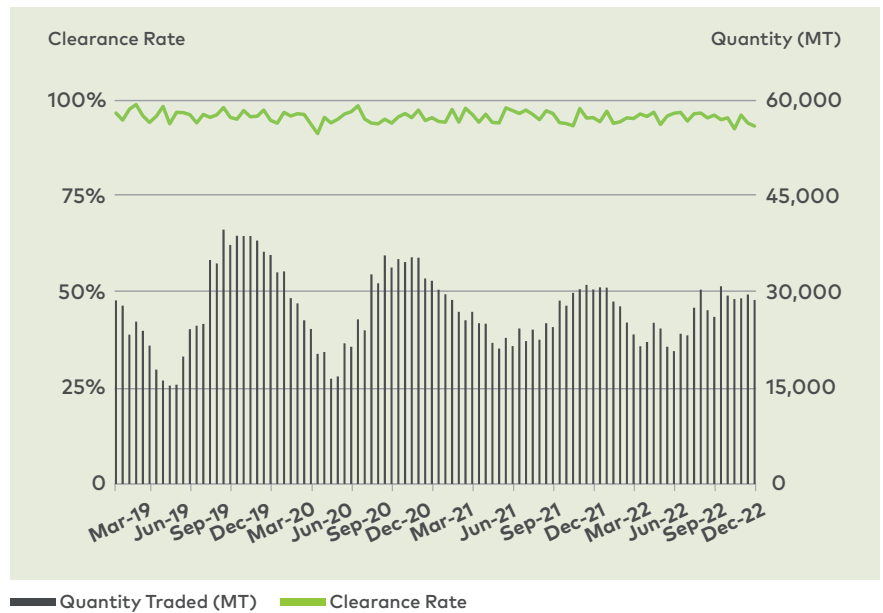
Over 2022, GDT Trading Events average clearance rate was 95%.

This chart includes clearance rate data from January 2019 to December 2022.

The clearance rate is robust during peaks and troughs in traded quantity.

The clearance rate is quantity traded divided by maximum supply offered. The calculation excludes sellers who traded less than 1,000 MT on GDT Events during 2022.

Maximum supply has been adjusted for the Cream Group to avoid double counting the available quantity.



Date	Quantity Traded (MT)*	Clearance Rate*	Date	Quantity Traded (MT)	Clearance Rate
Jan-21	30,313	94%	Jan-22	30,685	94%
Jan-21	29,606	94%	Jan-22	30,644	97%
Feb-21	28,707	97%	Feb-22	28,463	94%
Feb-21	26,883	94%	Feb-22	27,726	94%
Mar-21	25,554	98%	Mar-22	25,208	95%
Mar-21	26,872	96%	Mar-22	23,348	95%
Apr-21	25,104	94%	Apr-22	21,511	96%
Apr-21	25,008	96%	Apr-22	22,179	96%
May-21	22,020	94%	May-22	25,163	97%
May-21	21,140	94%	May-22	24,285	93%
Jun-21	22,825	98%	Jun-22	21,411	96%
Jun-21	21,522	97%	Jun-22	20,760	96%
Jul-21	24,278	96%	Jul-22	23,461	97%
Jul-21	22,330	97%	Jul-22	23,219	94%
Aug-21	24,084	96%	Aug-22	27,500	96%
Aug-21	22,543	95%	Aug-22	30,326	96%
Sep-21	25,093	97%	Sep-22	27,127	95%
Sep-21	24,476	96%	Sep-22	26,106	96%
Oct-21	28,623	94%	Oct-22	30,852	95%
Oct-21	27,836	94%	Oct-22	29,402	95%
Nov-21	29,815	93%	Nov-22	28,867	92%
Nov-21	30,397	98%	Nov-22	28,980	96%
Dec-21	31,092	95%	Dec-22	29,570	94%
Dec-21	30,375	95%	Dec-22	28,724	93%

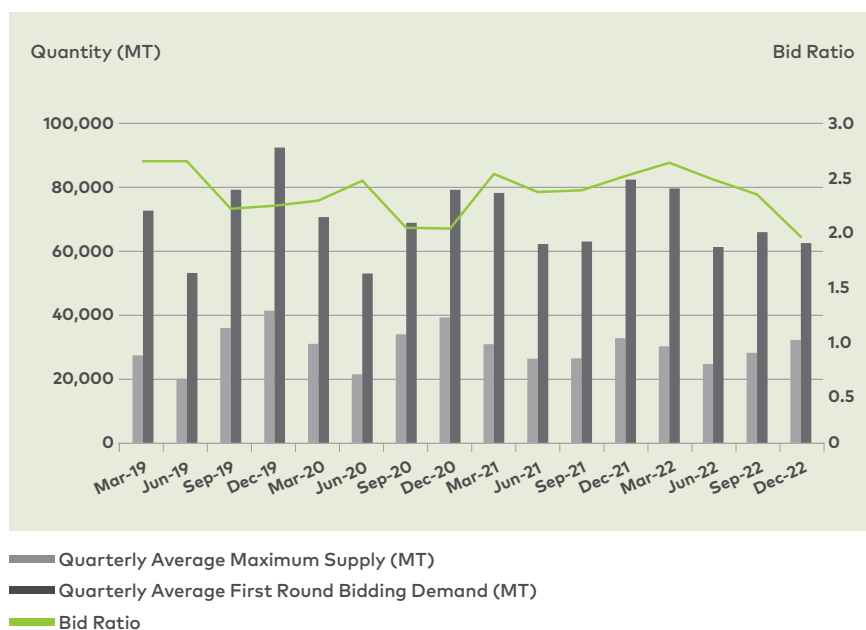
* Excludes GDT Pulse auctions.

Quarterly Average Supply and Demand

In the first two quarters of 2022 the bid ratio tracked higher than the 2021 average level of 2.5, before dropping significantly below average during the second half of the year. The bid ratio averaged 2.3 for the full year.

The bid ratio is calculated by dividing first round bidding demand by maximum supply.

Maximum supply has been adjusted for the Cream Group to avoid double counting the available quantity.



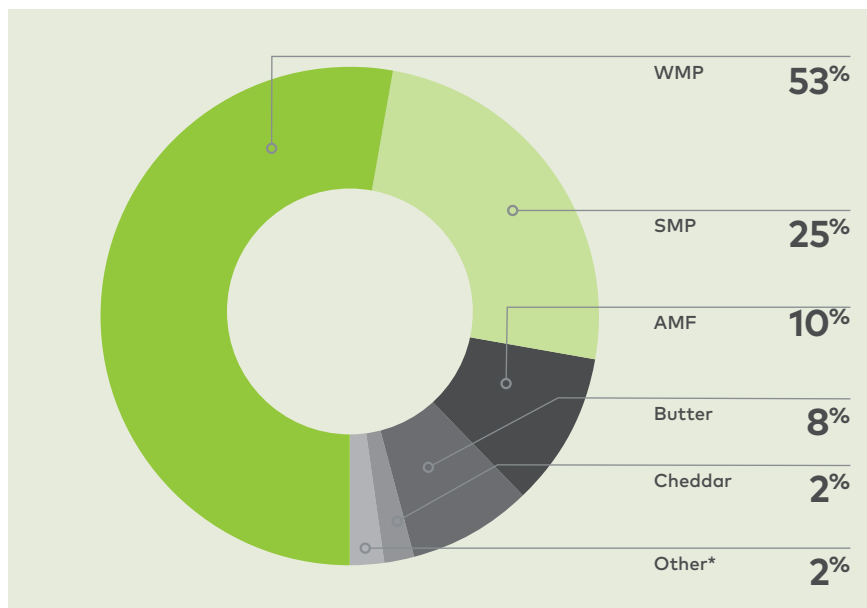
Date	Quarterly Average Maximum Supply (MT)	Quarterly Average First Round Bidding Demand (MT)	Bid Ratio*
Mar-19	27,484	72,941	2.7
Jun-19	20,095	53,340	2.7
Sep-19	36,028	79,473	2.2
Dec-19	41,499	92,733	2.2
Mar-20	31,082	70,930	2.3
Jun-20	21,517	53,170	2.5
Sep-20	34,111	69,124	2.0
Dec-20	39,378	79,519	2.0
Mar-21	30,965	78,486	2.5
Jun-21	26,431	62,462	2.4
Sep-21	26,553	63,209	2.4
Dec-21	32,883	82,677	2.5
Mar-22	30,278	79,930	2.6
Jun-22	24,774	61,491	2.5
Sep-22	28,267	66,186	2.3
Dec-22	32,332	62,731	1.9

* Excludes GDT Pulse auctions.

Quantity Traded by Product Group, 2022

The main milk powders, WMP and SMP, accounted for 78% of quantity traded.

AMF, Butter and Cheddar represented a further 20% of sales.



Product Group	Quantity Traded (% of Total)**
WMP	53%
SMP	25%
AMF	10%
Butter	8%
Cheddar	2%
Other*	2%

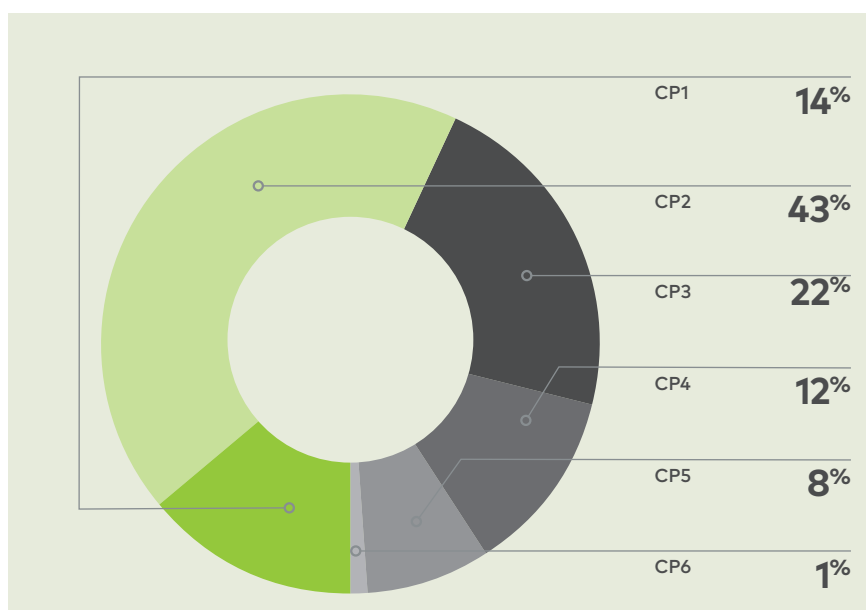
* Other includes BMP and Lactose.

** Includes GDT Events and GDT Pulse.

Quantity Traded by Contract Period, 2022

In line with previous years, the most active contract period was CP2, which is the contract period used as settlement for SGX-NZX Dairy Derivatives.

Both CP1 and CP2 experienced growth while activity decreased on the other CPs compared to 2021.



Contract Period*	Quantity Traded (% of Total)**
CP1	14%
CP2	43%
CP3	22%
CP4	12%
CP5	8%
CP6	1%

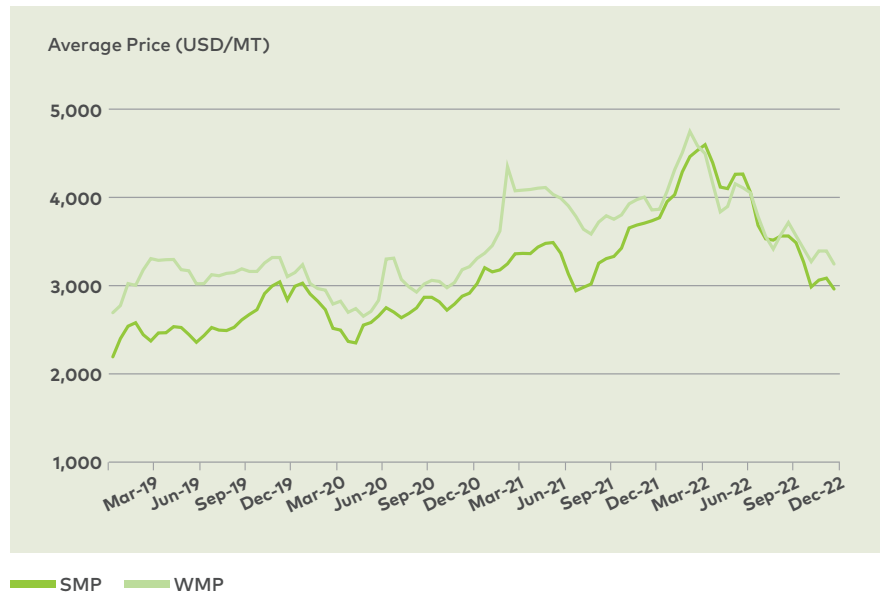
* Contract Period (CP), refers to the month when product is shipped.
Product traded in CP1 is shipped in the month after the Trading Event when it was purchased, CP2 is shipped two months after, etc.

** Includes GDT Events and GDT Pulse.

Average Price: SMP and WMP

The 12-month average prices for all dairy ingredients increased over 2022. SMP and WMP gained 11% and 1% respectively. The two products reached an 8-year high of 4,598 USD/MT and 4,747 USD/MT in April and March 2022 respectively.

This chart shows average price data from January 2019 to December 2022 for SMP and WMP prices across all product specifications and sellers for short-term contract periods (CP1 and CP2) on GDT Events, weighted by quantity traded.

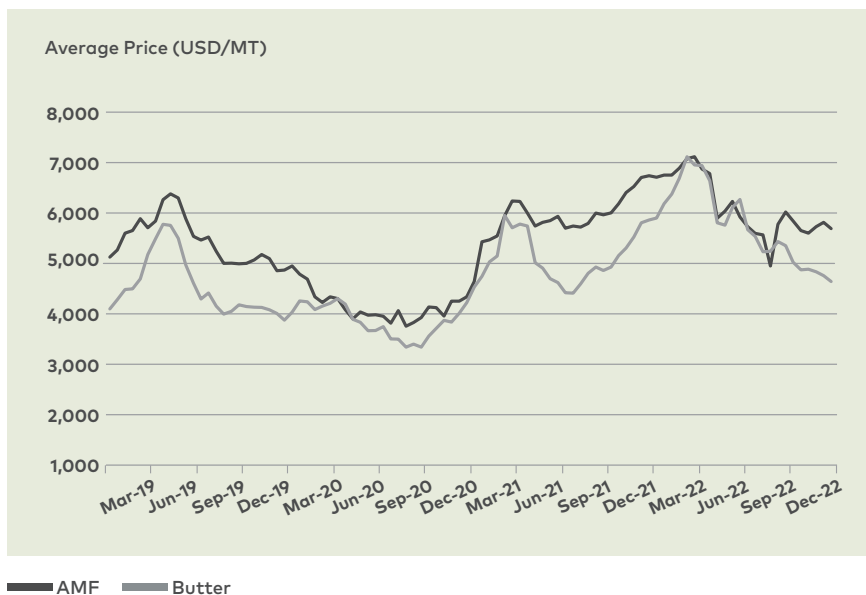


Date	SMP (USD/MT)	WMP (USD/MT)	Date	SMP (USD/MT)	WMP (USD/MT)
Jan-22	3,764	3,861	Jul-22	4,055	4,050
Jan-22	3,947	4,068	Jul-22	3,678	3,779
Feb-22	4,026	4,313	Aug-22	3,525	3,553
Feb-22	4,288	4,505	Aug-22	3,510	3,408
Mar-22	4,460	4,747	Sep-22	3,558	3,572
Mar-22	4,532	4,585	Sep-22	3,556	3,711
Apr-22	4,598	4,496	Oct-22	3,480	3,559
Apr-22	4,391	4,156	Oct-22	3,259	3,412
May-22	4,114	3,831	Nov-22	2,978	3,265
May-22	4,096	3,893	Nov-22	3,055	3,387
Jun-22	4,261	4,151	Dec-22	3,077	3,387
Jun-22	4,262	4,106	Dec-22	2,953	3,236

Average Price: AMF and Butter

In 2022, the 12-month average prices for AMF and Butter gained 4% and 12% respectively. In March 2022, AMF grew to a 4-year high of 7,115 USD/MT while Butter reached an all time high of 7,112 USD/MT.

This chart shows average price data from January 2019 to December 2022 for AMF, Butter, prices across all product specifications and sellers for short-term contract periods (CP1 and CP2), weighted by quantity traded.

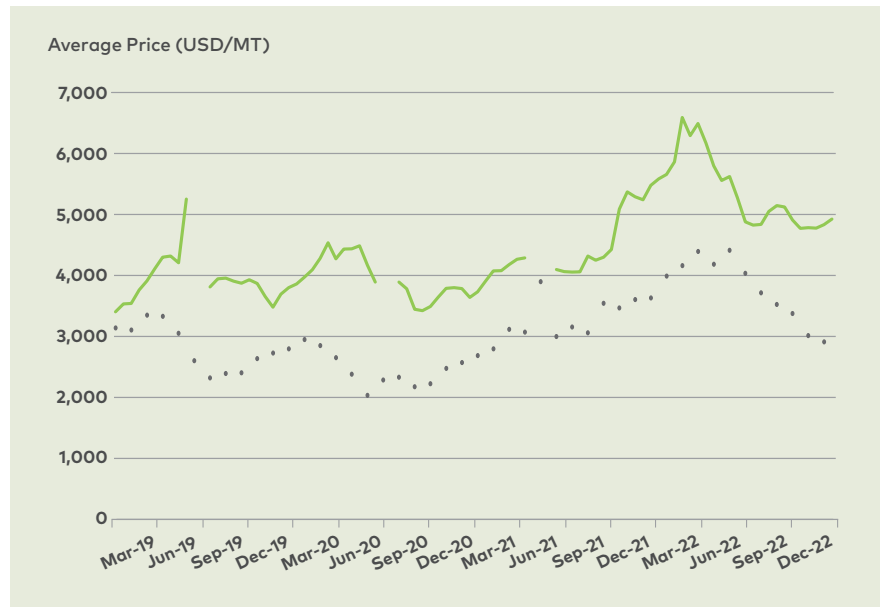


Date	AMF (USD/MT)	Butter (USD/MT)	Date	AMF (USD/MT)	Butter (USD/MT)
Jan-22	6,707	5,895	Jul-22	5,722	5,663
Jan-22	6,749	6,178	Jul-22	5,588	5,529
Feb-22	6,748	6,369	Aug-22	5,559	5,223
Feb-22	6,885	6,684	Aug-22	4,939	5,231
Mar-22	7,075	7,112	Sep-22	5,770	5,426
Mar-22	7,115	6,950	Sep-22	6,016	5,345
Apr-22	6,869	6,936	Oct-22	5,835	5,014
Apr-22	6,777	6,635	Oct-22	5,643	4,862
May-22	5,891	5,797	Nov-22	5,592	4,876
May-22	6,029	5,750	Nov-22	5,722	4,823
Jun-22	6,226	6,102	Dec-22	5,808	4,747
Jun-22	5,913	6,265	Dec-22	5,682	4,630

Average Price: BMP and Cheddar

In 2022, the 12-month average prices for BMP and Cheddar increased 15% and 19% respectively compared to the previous year. Cheddar reached an all time high of \$6,590 USD/MT in March 2022, the highest price since launched on GDT in 2011.

This chart shows average price data from January 2019 to December 2022 for BMP and Cheddar prices across all product specifications and sellers for short-term contract periods (CP1 and CP2), weighted by quantity traded. As Cheddar was only sold during CP3 and CP6 from April 2021 to June 2021, the average prices for Cheddar are not showing in the table and chart from April to June 2021.



— BMP — Cheddar

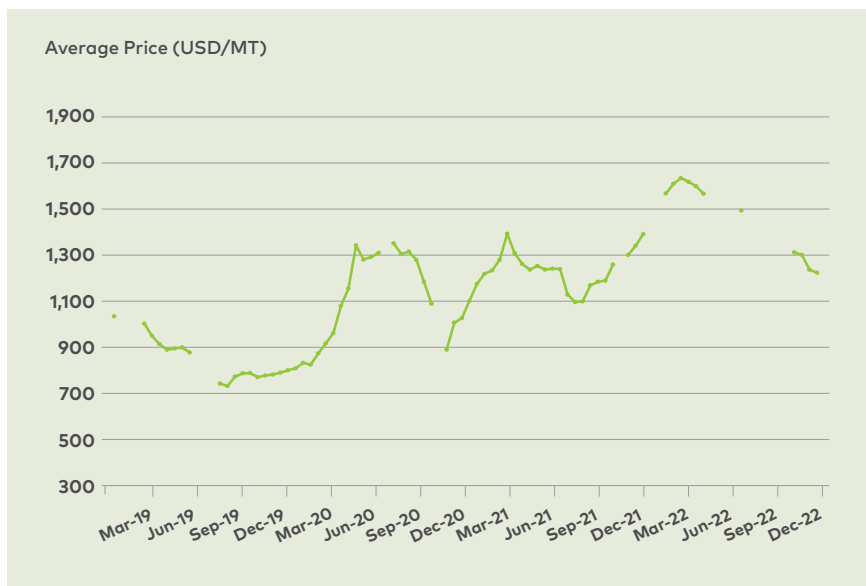
Date	BMP (USD/MT)	Cheddar (USD/MT)	Date	BMP (USD/MT)	Cheddar (USD/MT)
Jan-22	3,632	5,476	Jul-22	4,036	4,876
Jan-22	-	5,583	Jul-22	-	4,825
Feb-22	3,990	5,653	Aug-22	3,717	4,837
Feb-22	-	5,860	Aug-22	-	5,048
Mar-22	4,161	6,590	Sep-22	3,526	5,144
Mar-22	-	6,291	Sep-22	-	5,123
Apr-22	4,395	6,489	Oct-22	3,379	4,909
Apr-22	-	6,168	Oct-22	-	4,772
May-22	4,185	5,796	Nov-22	3,016	4,781
May-22	-	5,554	Nov-22	-	4,775
Jun-22	4,414	5,622	Dec-22	2,911	4,833
Jun-22	-	5,275	Dec-22	-	4,923

Note: "-" means that no price was published.

Average Price: Lactose

The 12-month average price of Lactose during 2022 was 20% higher than 2021, reaching an all time high of \$1,634 USD/MT in March 2022, the highest since the launch of European Lactose on GDT in 2015.

This chart shows average price data from January 2019 to December 2022 for lactose prices across all product specifications and sellers for short-term contract periods (CP1 and CP2), weighted by traded quantity.



Lactose

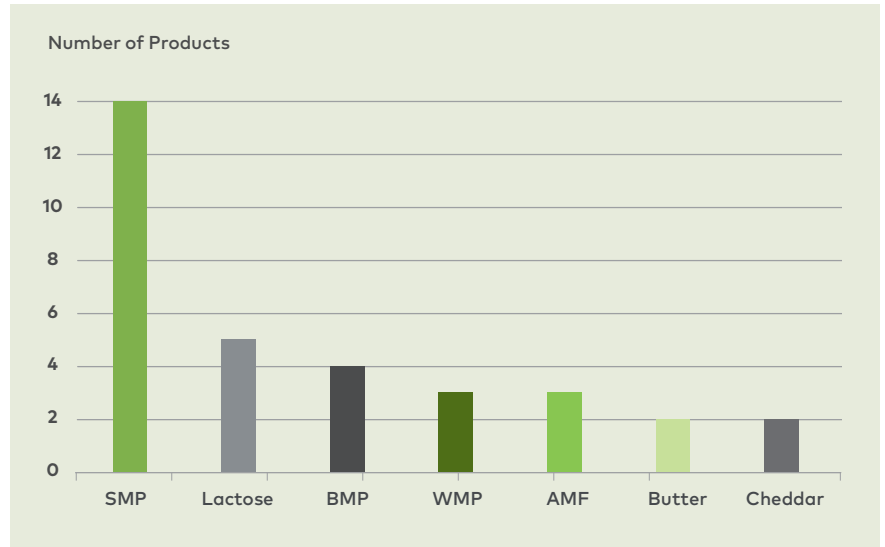
Date	Lactose (USD/MT)	Date	Lactose (USD/MT)	Date	Lactose (USD/MT)	Date	Lactose (USD/MT)
Jan-21	1,099	Jul-21	1,238	Jan-22	-	Jul-22	1,493
Jan-21	1,173	Jul-21	1,127	Jan-22	-	Jul-22	-
Feb-21	1,217	Aug-21	1,094	Feb-22	1,567	Aug-22	-
Feb-21	1,232	Aug-21	1,097	Feb-22	1,609	Aug-22	-
Mar-21	1,278	Sep-21	1,167	Mar-22	1,634	Sep-22	-
Mar-21	1,392	Sep-21	1,183	Mar-22	1,618	Sep-22	-
Apr-21	1,307	Oct-21	1,188	Apr-22	1,598	Oct-22	-
Apr-21	1,260	Oct-21	1,258	Apr-22	1,565	Oct-22	1,310
May-21	1,236	Nov-21	-	May-22	-	Nov-22	1,300
May-21	1,251	Nov-21	1,299	May-22	-	Nov-22	1,236
Jun-21	1,236	Dec-21	1,339	Jun-22	-	Dec-22	1,222
Jun-21	1,240	Dec-21	1,390	Jun-22	-	Dec-22	-

Note: "-" means that no price was published.

Products Offered, 2022

Products offered increased over 2022 by one SMP product. The largest offering is in the SMP group due to the larger number of supply regions.

This chart shows the number of products offered per product group.

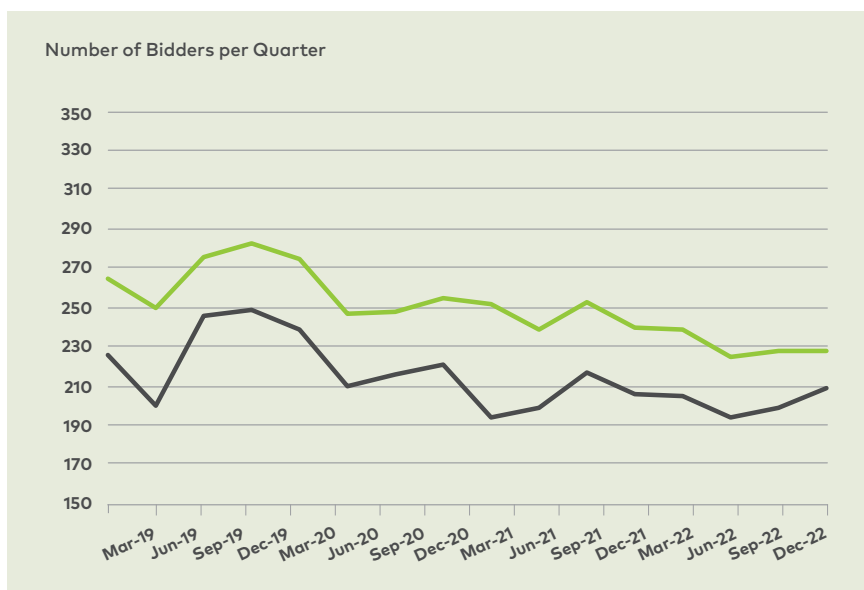


Product Group	Products	Number of Sellers
SMP	14	5
Lactose	5	2
BMP	4	2
WMP	3	1
AMF	3	1
Butter	2	1
Cheddar	2	1

Participating and Winning Bidders

Quarterly participating bidders averaged 230 during 2022, down 7% compared to the previous year. Quarterly winning bidders averaged 202 during 2022.

This chart includes data from January 2019 to December 2022, indicating quarterly participating bidders and winning bidders. Participating bidders are unique bidders who placed a bid in round 1 of a Trading Event. Winning bidders are participating bidders who won product.



— Participating Bidders
— Winning Bidders

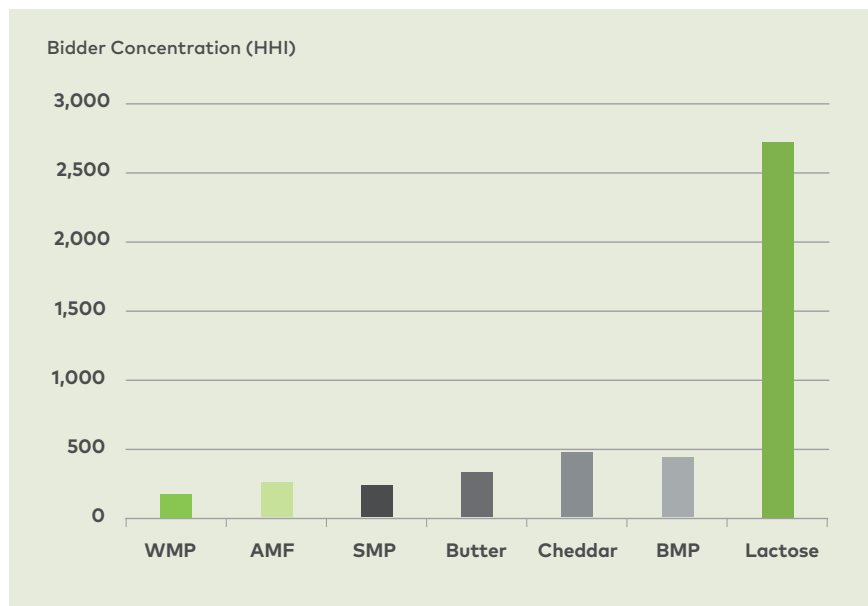
Date	Participating Bidders	Winning Bidders	Date	Participating Bidders	Winning Bidders
Mar-19	265	226	Mar-21	252	194
Jun-19	250	200	Jun-21	239	199
Sep-19	276	246	Sep-21	253	217
Dec-19	283	249	Dec-21	240	206
Mar-20	275	239	Mar-22	239	205
Jun-20	247	210	Jun-22	225	194
Sep-20	248	216	Sep-22	228	199
Dec-20	255	221	Dec-22	228	209

Bidder Concentration

Most product groups meet generally accepted thresholds for unconcentrated markets. The HHI value for Lactose has grown from moderate to highly concentrated bidding.

GDT calculates bidder concentration using the Herfindahl-Hirschman Index (HHI). The HHI is calculated as the sum of squares of each bidder's proportional annual purchase (x100), within each product group.

The Horizontal Merger Guidelines (2010) published by the US Department of Justice and US Federal Trade Commission indicated that an HHI below 1,500 is regarded as 'unconcentrated', whereas values between 1500 – 2500 are considered as indicating a 'moderately concentrated' market and above 2500 as 'highly concentrated'.



Product Group	Bidder Concentration (HHI)*
AMF	250
Butter	324
BMP	433
Cheddar	471
Lactose	2,724
SMP	230
WMP	171

Note: SMP has been excluded as it was not sold in the last 12 months.

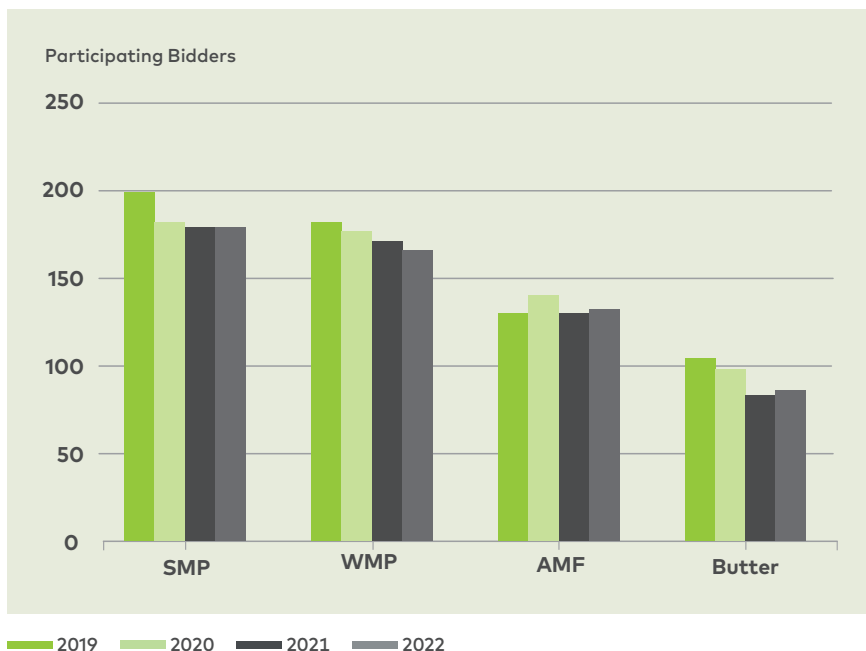
* Excludes GDT Pulse

Participating Bidders: SMP, WMP, AMF and Butter

SMP remains the most active product group for bidders, followed closely by WMP and AMF.

This chart shows the number of bidders who actively bid on each product group in at least one Trading Event over the calendar years 2019-2022.

Note: SWP has been excluded as no bid was submitted in the last 12 months.



	2019	2020	2021	2022
SMP	199	182	179	179
WMP	182	177	171	166
AMF	130	140	130	132
Butter	104	98	83	86

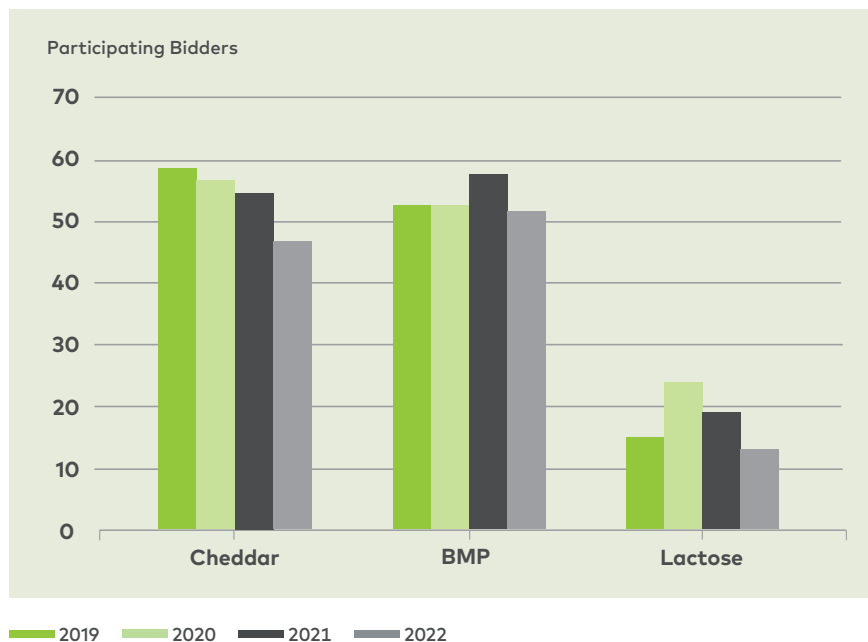
Note: SWP has been excluded as it was not sold in the last 12 months.

* Excludes GDT Pulse

Participating Bidders: Cheddar, BMP, and Lactose

Compared to 2021, participation in BMP, Cheddar and Lactose during 2022 declined.

This chart shows the number of bidders who actively bid on each product group in at least one Trading Event over the calendar years 2019 - 2022.



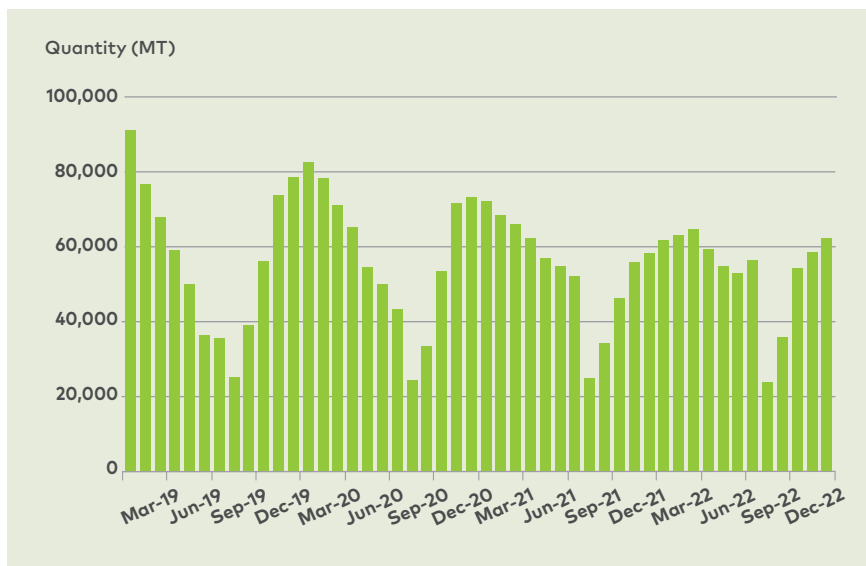
	2019	2020	2021	2022
Cheddar	59	57	55	47
BMP	53	53	58	52
Lactose	15	24	19	13

Note: SWP has been excluded as it was not sold in the last 12 months.

Shipment Profile

The seasonal pattern shows traditional peak shipment quantities from November to February. Over 2022 the shipment peak flattened over November to April, also adding unusually increased quantities in July.

This chart shows the seasonal profile of shipments for all products traded on GDT Events from 2019 to 2022.

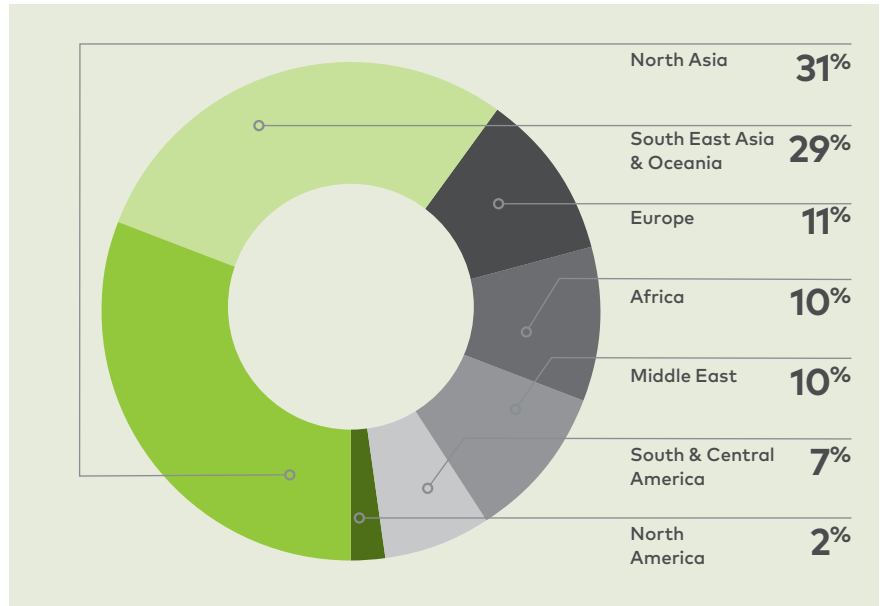


Month	Quantity Shipped During Month (MT)	Month	Quantity Shipped During Month (MT)
Jan-19	91,121	Jan-21	72,123
Feb-19	76,840	Feb-21	68,493
Mar-19	67,923	Mar-21	65,791
Apr-19	59,301	Apr-21	62,225
May-19	49,794	May-21	56,949
Jun-19	36,540	Jun-21	54,609
Jul-19	35,727	Jul-21	52,299
Aug-19	25,330	Aug-21	24,598
Sep-19	38,909	Sep-21	34,055
Oct-19	56,272	Oct-21	46,193
Nov-19	73,701	Nov-21	55,884
Dec-19	78,628	Dec-21	58,161
Jan-20	82,644	Jan-22	61,892
Feb-20	78,391	Feb-22	63,232
Mar-20	71,138	Mar-22	64,675
Apr-20	65,177	Apr-22	59,347
May-20	54,726	May-22	54,688
Jun-20	49,782	Jun-22	53,168
Jul-20	43,515	Jul-22	56,604
Aug-20	24,639	Aug-22	24,041
Sep-20	33,531	Sep-22	35,984
Oct-20	53,363	Oct-22	54,480
Nov-20	71,576	Nov-22	58,707
Dec-20	73,374	Dec-22	62,324

Participating Bidders by Region, 2022

Consistent with previous years, North Asia and South East Asia & Oceania were the most active regions, comprising 60% of total participating bidders in 2022.

Except for North America, the remaining regions are of similar size between 7.5 - 11% each.

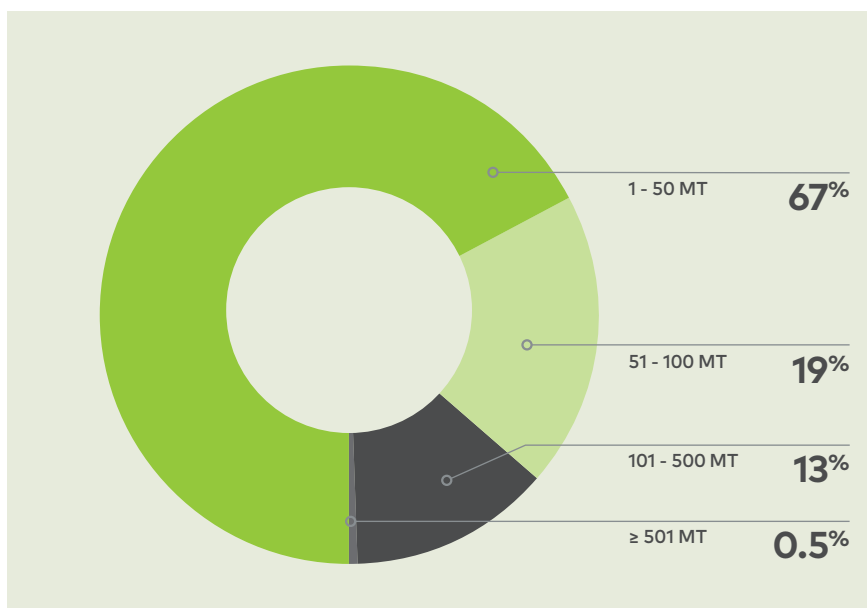


Region	Participating Bidders (% of Total)
North Asia	31%
South East Asia & Oceania	29%
Africa	10%
Europe	11%
Middle East	10%
South & Central America	7%
North America	2%

Distribution of Quantity Traded by Size, 2022

Two-thirds of purchases occurred in the 1-50 MT category, indicating a wide variety of purchases across product groups and contract periods.

This chart shows the number of purchases by parcel size as a share of the total number of purchases during 2022 on GDT Events.

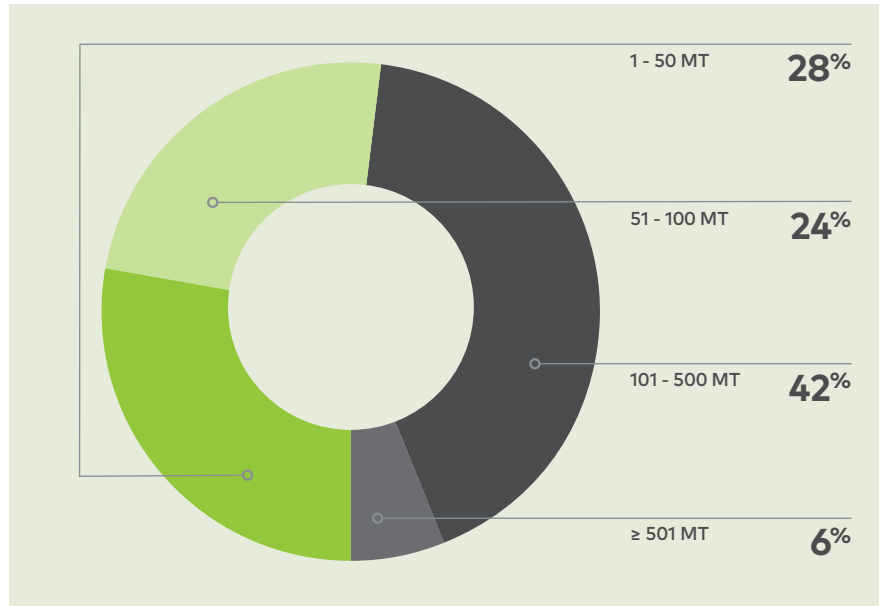


Parcel Size	Distribution of Quantity Traded
1 - 50 MT	67%
51 - 100 MT	19%
101 - 500 MT	13%
≥ 501 MT	0.5%

Distribution of Purchases Traded by Size, 2022

Over half of the total quantity traded occurred in parcel sizes of 100MT or less.

This chart shows the quantity traded by parcel size as a share of total quantity traded during 2022 on GDT Events.



Parcel Size	Distribution of Purchases
1 - 50 MT	28%
51 - 100 MT	24%
101 - 500 MT	42%
≥ 501 MT	6%

Disclaimer

The data contained in this document are provided subject to the Terms of Use ('Terms') published on www.globaldairytrade.info as applicable to information materials provided or published on that site. By accessing, viewing or downloading this data, you accept these Terms and agree to comply with them.

Use of this information: All information published in this publication may be reproduced provided the user acknowledges Global Dairy Trade as the source.

Abbreviations

AMF	Anhydrous Milk Fat
BMP	Butter Milk Powder
CP	Contract Period
GDT	Global Dairy Trade
MT	Metric Tonne
SMP	Skim Milk Powder
SWP	Sweet Whey Powder
WMP	Whole Milk Powder

Directory

Contact Us

Global Dairy Trade
PO Box 106561
Auckland 1143
New Zealand

Global Dairy Trade
Level 12, 23 Customs Street East
Auckland 1010
New Zealand

help@globaldairytrade.info

www.globaldairytrade.info

Global Dairy Trade Management Team

Eric Hansen – Chief Executive Officer

Yasmine Bendjafer – Chief Operating Officer

Justin Matijasevich – Chief Financial Officer

Shaun McCauley – Chief Technology Officer
& Managing Director GDT Europe

Jen O'Hara – Chief Customer Officer & Head of People

