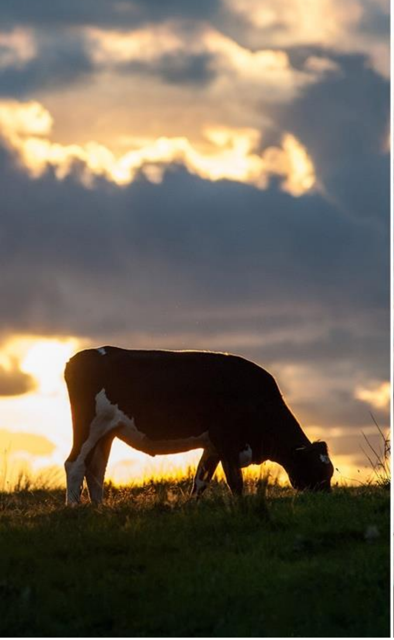
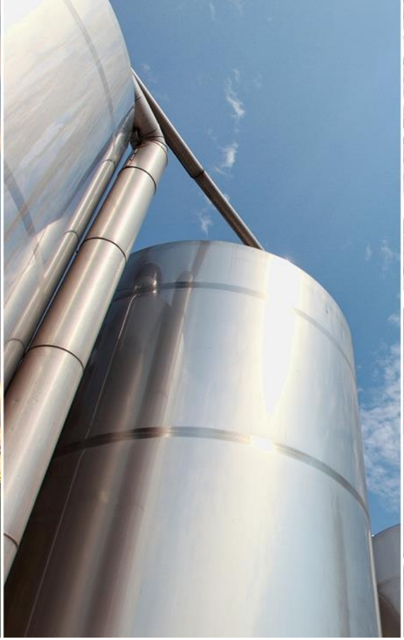

Are We There Yet?

Global Dairy Quarterly Q2 2022

RaboResearch Food & Agribusiness ***June 2022***

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Summary

- ***Rabobank's response to "Are we there yet?," referring to peak milk powder prices, is yes.*** It appears that global milk powder prices peaked during 1H 2022. While milk production is in the middle of a significant slowdown, set to last at least four consecutive quarters (from Q3 2021 to Q2 2022), weakening demand expectations are creating the scenario for some moderate price declines in dairy commodities during the second half of 2022.

- ***Chinese oversupply is driving dairy imports lower.*** Strong domestic milk supply growth in Q1 2022 of 8% YOY and high carry-over stocks from last year's strong imports are colliding with weaker demand due to Covid-related lockdowns. This is creating the perfect condition for reduced Chinese dairy imports (albeit only 4% in LME terms from January to April 2022).

- ***Milk production is expected to recover modestly in coming quarters.*** Record-high feed costs and weather-related issues have directly impacted margins for dairy farmers across the Big-7 dairy-producing regions for some time now. Global herds have contracted or are facing barriers to grow, making it harder for milk output to rebound after the current slump. If weakening commodity prices translate into lower farmgate prices in coming quarters, that could result in a less impressive recovery.

- ***Inflationary pressures to trigger lower demand in rich and poor countries,*** as consumers are being hit by a global inflation wave not seen since the 1970s. While developed country consumers are usually more resilient to higher prices, this time around the impact on energy and fuel prices are severe and are resulting in changing consumer behavior. US dairy domestic disappearance for March was down by 1.3% YOY on a total solids basis. Some countries, like the UK, are already implementing measures to protect low-income families with one-off payments and energy bill discounts due to diminished purchasing power.

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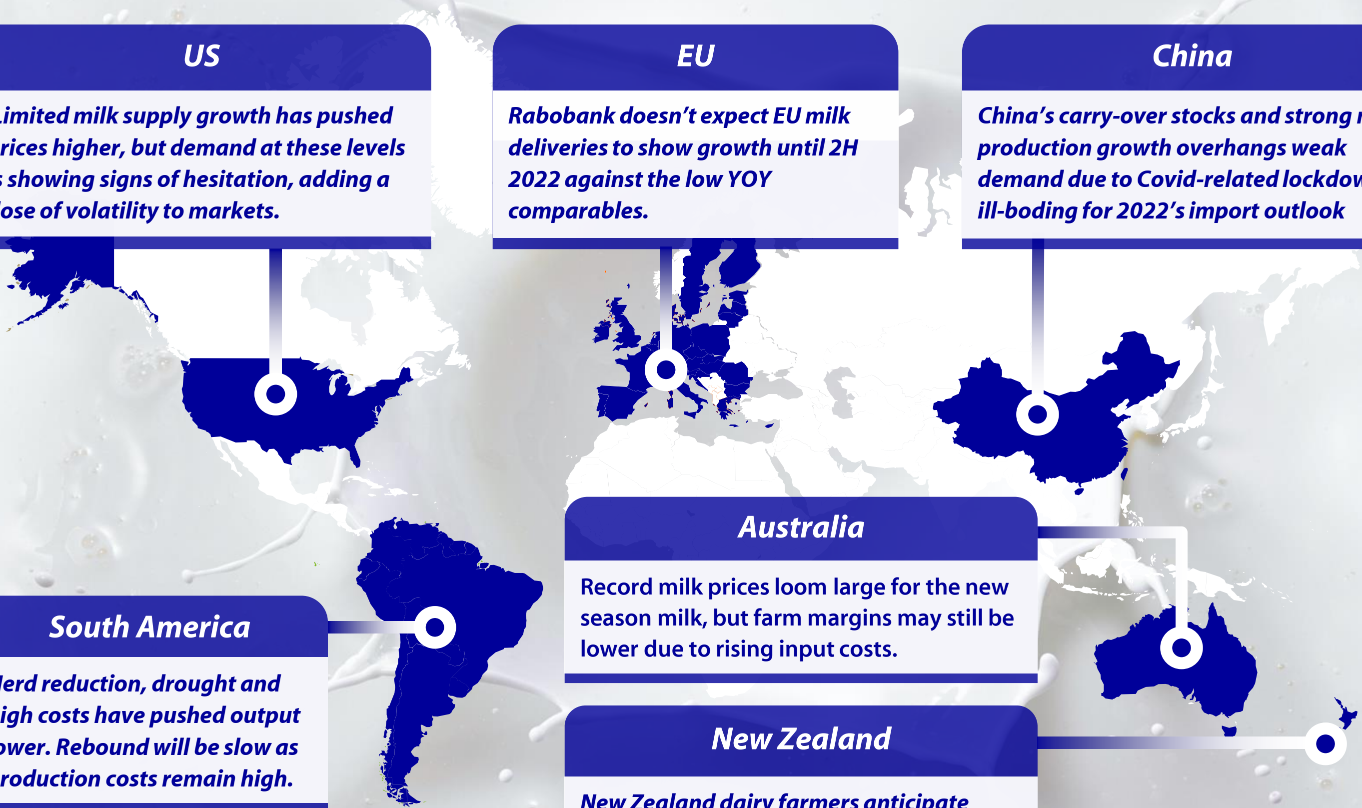
Regional Dairy Markets



US

Limited milk supply growth has pushed prices higher, but demand at these levels is showing signs of hesitation, adding a dose of volatility to markets.

EU

Rabobank doesn't expect EU milk deliveries to show growth until 2H 2022 against the low YOY comparables.

China

China's carry-over stocks and strong milk production growth overhangs weak demand due to Covid-related lockdowns, ill-boding for 2022's import outlook

South America

Herd reduction, drought and high costs have pushed output lower. Rebound will be slow as production costs remain high.

Australia

Record milk prices loom large for the new season milk, but farm margins may still be lower due to rising input costs.

New Zealand

New Zealand dairy farmers anticipate another season of profitability, but higher input costs will weigh on margins.

Global Summary

For the first time since 2016, milk production in the Big-7 dairy export regions contracted year-on-year for three consecutive quarters. And, Rabobank forecasts that the Big-7 regions are on track to contract for a fourth consecutive quarter in Q2 2022, something that hasn't happened since 2012-2013. Milk output is expected to decline by 1.1% YOY in Q2 2022 after declining by 1.9% in Q1 2022. Positive year-on-year growth – versus a low comparable – is anticipated in 2H 2022, resulting in an estimated -0.5% loss for 2022. Preliminary forecasts for 2023, suggest a below trend gain of 0.5%.

Higher farmgate milk prices across most regions have not guaranteed production growth. Milk producers around the globe are facing higher corn and soybean prices and weather disruptions in certain regions, notably Oceania and South America. Overall inflation pressures in energy fuel and wages are also impacting profitability across the Big-7. Despite higher milk prices, milk production growth and the feed costs scenario remain challenging.

Feed costs to remain elevated in 2022/23. Our most recent Agri Commodities markets monthly (*ACMR Monthly May 2022*) shows that price forecasts for CBOT corn have seen a slight decrease from the previous report but are still close to record-high levels. Corn is expected to peak in Q2 2022 and remain above USc/bu 700 into at least Q2 2023. Meanwhile, the outlook for soybeans prices also remains challenging for dairy farmers, with our forecasts suggesting prices above USc/bu 1500 for CBOT soy for the next 12 months.

Supply shortfall meeting demand weakness. Across most regions, consumers are feeling the impact of inflation in their purchasing power in a significant manner. In the US and the EU, inflation at a 40-year high, is a shock to the consumer and impacts lower income families disproportionately. In emerging markets, inflation is not new, but the severity of the current rise in prices, especially for commodity-importing countries has been amplified by the effects of the war in Ukraine and a very strong dollar. Still, high oil prices could support dairy import demand for some oil export countries as we've seen in previous commodity cycles.

Oversupply in China key is key to the global dairy demand outlook. Strong domestic milk production coupled with weaker consumer demand, due to Covid-related measures, at a time of high inventories, is resulting in lower imports. Overall imports LME (liquid milk equivalent, excluding whey) are already 4% lower for the first four months of the year with some categories down sharply (whey -40%). Looking forward, China's non-whey import demand is expected to decrease by 34% YOY in 2022.

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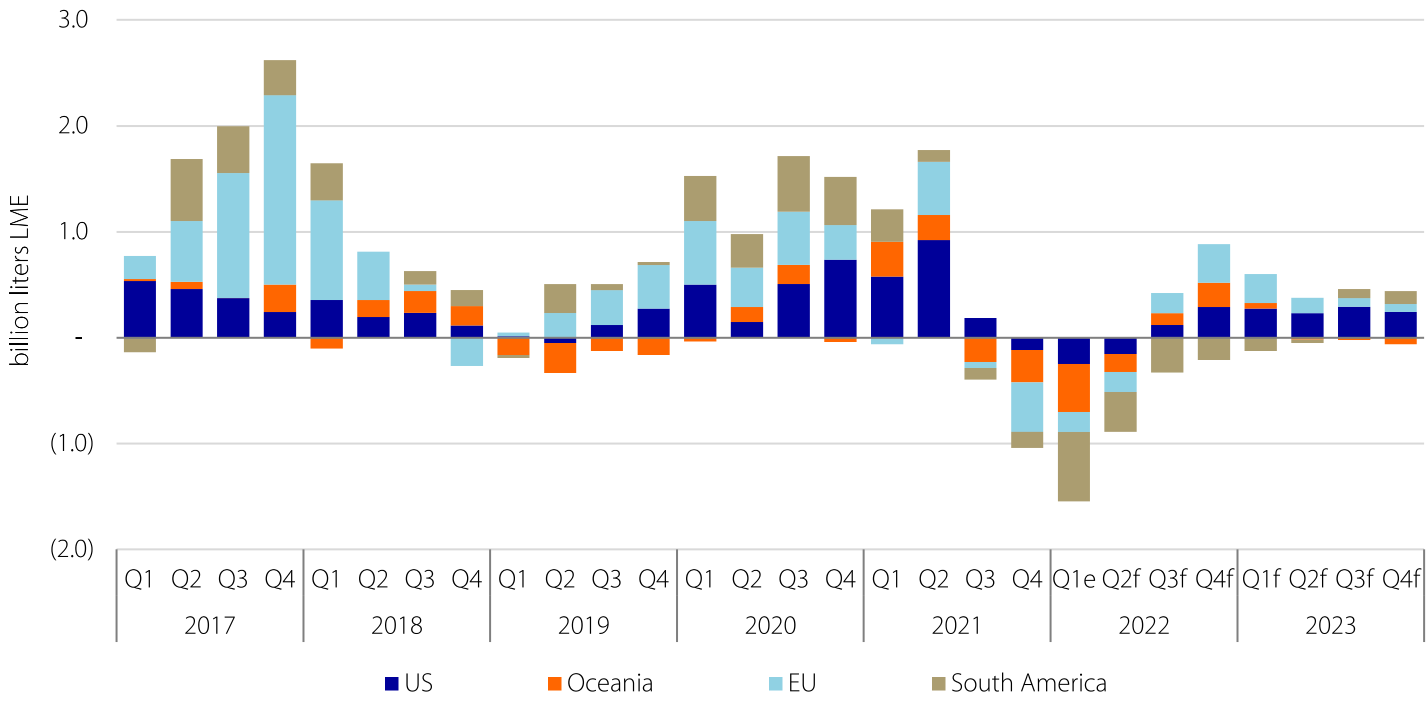
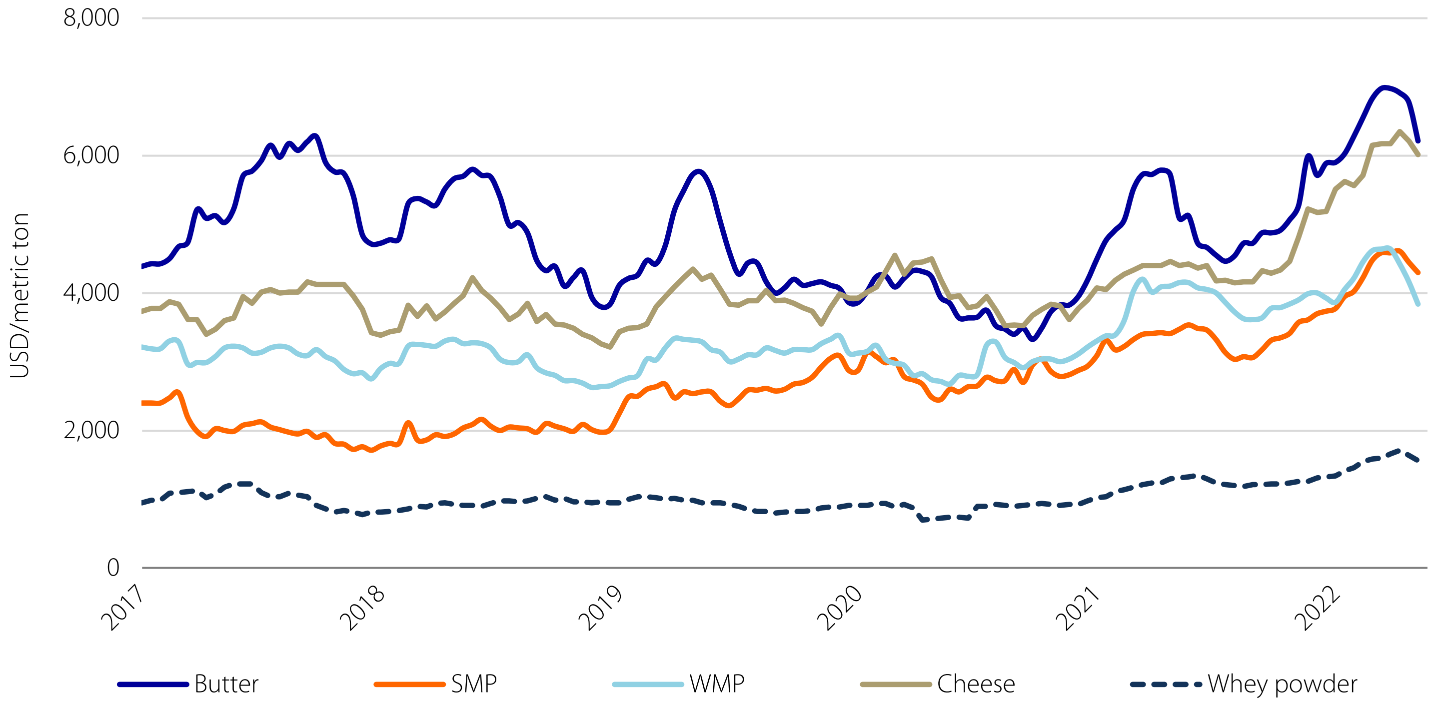
Figure 1: Milk Production Growth, Big-7 Exporters (Actual and Rabobank Forecast), 2017-2023f*



** Note: Big-7 includes the EU, US, NZ, Australia, Brazil, Argentina, and Uruguay.*
Source: Big-7 government industry agencies, Rabobank 2022

Figure 2: Dairy Commodity Prices, FOB Oceania, 2017-2022*



*Note: Whey is FOB in western Europe.

Source: USDA, Rabobank 2022

What to Watch

Structural issues could limit rebound in milk production growth. The current slowdown in global milk output is directly related to higher costs of production and weather events. In the past, production has recovered and surpassed previous peaks. However, there are structural issues that will limit a significant rebound in production this time around from some key exporters. Dairy herds in New Zealand and Europe have limited scope for growth and are more likely to contract under current and proposed regulations and environmental pressures. In South America, competition from grains and oilseeds for land and capital continues to intensify, limiting dairy expansions.

Unresolved Russia-Ukraine conflict is adding to cost-side pressures. The war in Ukraine continues to put pressure on grain and oilseed prices, as the vast exports of corn and sunflower seeds from Ukraine are not entering the global market. Also, limited Russian and Belarussian exports of fertilizers and other grains are also contributing to higher feed costs, upping production costs.

Easing of Covid-related lockdowns in China set to boost consumer sentiment. Rabobank estimates that cities and towns that account for an estimated 35% of China's GDP were impacted by lockdowns in April and May. However, the number and intensity of lockdowns is easing as of late May, which is positive for the sentiment in the commodities market. It should take time and massive government stimulus packages to re-boost the economic growth and lift consumer optimism.

China-New Zealand trade potentially at risk. China's displeasure with New Zealand due to its recent joint statement with the US that is critical of China, raises uncertainties over the trade relationship between the two countries. Around 30%-40% of New Zealand's dairy exports sail to China, its largest trading partner. China also relies heavily on New Zealand's dairy imports, with nearly 90% of China's WMP (600,000 to 740,000 metric tons), 80% of butter and fats (70,000 to 100,000 metric tons), 40% of SMP (140,000 to 145,000 metric tons) and 60% of cheese (65,000 to 95,000 metric tons) coming from New Zealand. In a worst-case scenario, with the political dispute leading to New Zealand, even temporarily losing part or all its Chinese market access would be a huge blow to the global dairy markets, and all parties would lose. A situation that, hopefully, can be prevented.

What to Watch

Oil at USD 120 a barrel is hard for consumers but is boosting exporter revenues. Oil prices surged following the Russian invasion of Ukraine and have been resilient to slowing economic forecasts on both sides of the Atlantic. For now, sustained high oil prices mean record-high gasoline and diesel prices in the EU, the US and many other regions. This is adding to inflationary pressures and limiting the purchasing power of many consumers. On the other hand, oil exporters are set to benefit from strong current account surpluses. This could bolster dairy import demand in some parts of the Middle East, Africa and South America.

US herd growth and production also face limiting factors. In recent years, the US has grown its milk production and processing capacity in ways that others in the Big-7 have not been able to replicate. However, there are signs that this will be more challenging in the future, with fewer replacement heifers and cooperative and propriety company-based programs limiting production output due to restricted processing capacity.

New wave of government aid? Inflation is very unpopular with voters, prompting governments to respond to record-high price increases. The UK is one of the first to implement measures to relieve the effects of high energy bills on consumers. This will take place in May.

Industry profitability is under pressure. Milk processors are facing higher farmgate prices in addition to rising fuel, energy, and wage costs. However, weakening consumer purchase power is making it difficult to pass on prices. In some regions, like the EU, some retailers continue to resist additional price hikes for some low-margin products.

Dollar index is at strongest level since 2003. The DXY dollar index hit 103 in May, the highest level in 20 years. Further EUR weakness is expected in coming quarters as the Fed continues to raise interest rates. This is amplifying high commodity prices in many regions and is a factor to watch for exporting and importing countries in the global dairy market.

La Niña conditions are likely to ease into late summer before increasing again by late fall of 2022. According to NOAA's latest update (05/12/22), the La Niña conditions in the Pacific are likely to ease somewhat during the northern hemisphere's late summer (58% chance) before intensifying again by late fall (61% chance). This could mean normal rain patterns in South America in Q3 before a return to drier conditions later in Q4.

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EU

As anticipated, EU-27 and UK milk deliveries were down 0.6% YOY (or 176,000 metric tons) in Q1 2022. Most of this decline is due to continued lower milk deliveries in Germany (-1.9% or 149,000 metric tons), France (-1.2% or 74,000 metric tons), the UK (-2.0% or 76,000 metric tons) and the Netherlands (-2.3% or 78,000 metric tons). Combined, these 'Big-4' countries account for about 53% of the region's milk deliveries. Italy (+1.1%) and Poland (+3.3%) showed another quarter of decent growth. In contrast, Ireland, down 0.8% YOY in Q1, is showing signs of more muted growth, driven by a weak start of the pasture season. April output posted a 4.1% YOY decline.

With the EU now in its seasonal peak, Rabobank anticipates Q2 milk deliveries to be down by about 0.6% YOY. Initial data shows more modest – but still significant – losses in the 'Big-4' for April and May, with dry conditions across the region tempering the potential for growth.

EU-27 average farmgate milk prices reached an impressive EUR 44.51/100kg in April (+6.5% from January). Prices will strengthen in the months ahead, as announced (base) payout prices for May and June approach the EUR 55/100kg by several large dairy companies.

The rate at which dairy companies are able to increase payouts to their farms – and reap the benefit from the high dairy commodity prices – varies on their product and market mix. A relatively large exposure to the longer-term retail contracts – especially for cheese and liquid milk – generally causes a lag in passing on price changes to farmgate milk prices. The already (often) low margins on private label liquid milk contracts also caused friction in the negotiations with retailers.

At the farmgate, increased milk prices have generally offset rising input costs, pushing cash margins to levels not seen by most dairy farmers in recent years. However, we don't expect that the current margins will strongly incentivize dairy farmers to push milk production, as the marginal costs remain high. A longer period of sustained strong 'cash' margins will likely improve producer sentiment.

As such, we don't expect EU milk deliveries to increase until 2H 2022 against the low YOY comparables in Q3 (+0.5%) and Q4 (+1 %). Overall, this will accumulate to flatline growth YOY in 2022 and near standstill in EU+UK annual milk delivery growth for the period 2020-2022.

Looking ahead to 2023, Rabobank forecasts a modest growth of 0.5% in 1H 2023 against weak YOY comparables, and a marginal growth of 0.2% YOY during the second half of the year.

EU

The Ukraine conflict triggered a second spike of inflation, lifting EU dairy commodity prices by double digits. Between mid-February and mid-May, SMP prices rose by 10.7%, or EUR 384/metric ton, to EUR 3,983/metric ton, while EU WMP prices lifted by 14.9%, or EUR 668/metric ton, to EUR 5,145/metric ton. Butter prices jumped by 15.9%, or EUR 944/metric ton, to EUR 6,884/metric ton. Gouda prices increased by 10.6%, or EUR 436/metric ton, to EUR 4,556/metric ton.

Looking ahead to 2H 2022, we anticipate further elevated EU dairy commodity prices despite increased market uncertainties and the flattening of global and EU (spot) dairy prices in the first half of May.

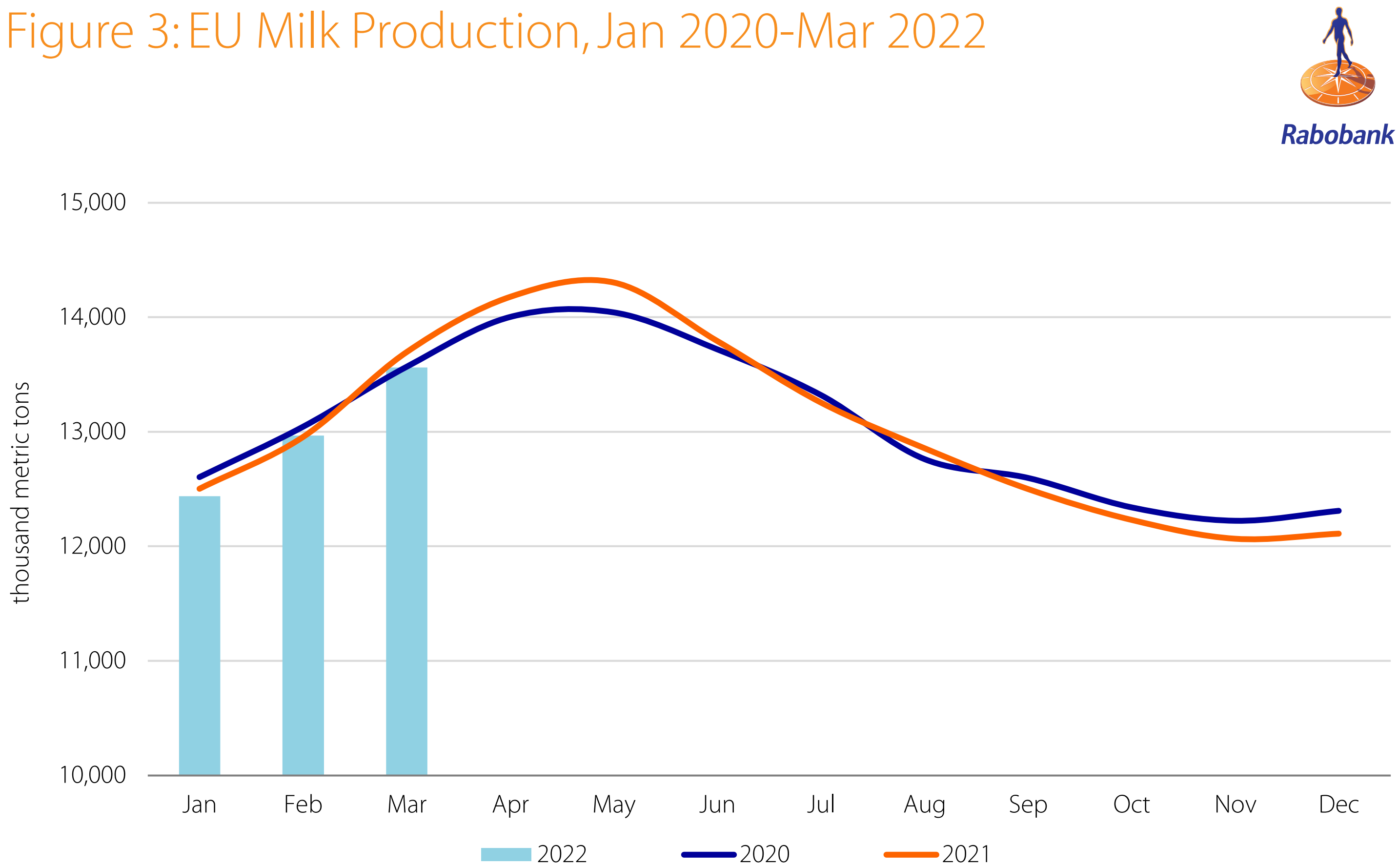
On the back of negotiations for new retail contracts, we see the potential for a strong increase in EU Gouda prices in 2H 2022, closer to EUR 5,000/metric ton, as the higher market prices will likely be reflected in the new contractual agreements. Spot Gouda (foil) cheese prices are near this level or higher for some time.

If a window of lower prices emerges, we expect increased demand from buyers needing to cover their positions towards the end of the year and the start of 2023, will support prices at elevated levels for the foreseeable future.

The greatest uncertainty to our forecast is the price inflation impact on dairy product demand. Data through April, indicates that retail sales volumes returned to pre-Covid levels. The recent cost inflation due to the war in Ukraine is not fully visible (yet) in consumer prices. At the same time, foodservice sales continue to benefit from pent-up demand and accumulated consumer savings from the past two years. Historically, EU dairy consumption (volumes) are considered to be relatively price inelastic, but the onset of more price inflation increases the risk of consumers trading down to cheaper alternatives, for now mainly in the retail channels.

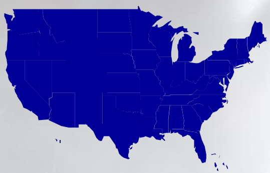
Supply-side constraints contributed to lower EU dairy exports across the board in Q1. Cheese exports fell by 2.3% YOY, or 5,600 metric tons, while liquid milk exports declined by 16.7%. SMP exports were lower by 21.4%, or 43,800 metric tons, while WMP volumes dropped by 18.8%, or 66,150 metric tons. Butter exports declined by 4.3%, or 2,400 metric tons. Looking ahead, we expect lower year-on-year export volumes until Q3 2022 due to the combination of a tight domestic market, regional price differences, and high shipping costs.

Figure 3: EU Milk Production, Jan 2020-Mar 2022



Source: ZMB, Rabobank 2022

US



The US milk cow herd hit bottom in January 2022, after posting monthly declines since June 2021. The national herd rebounded by 13,000 head in February, followed by a 22,000-head gain in March before losing steam. The herd was steady in April at 9,402m head, which was a 98,000-head YOY deficit that resulted in 1% YOY lower production. We expect Q2 milk production growth to remain negative as well. Year-on-year milk production will likely turn positive again by August, but growth is forecast to remain below trend at 0.9% YOY in 2H 2022 and 1.1% YOY across 2023.

Mixed weather has muted the spring flush in the US. Cool temperatures from the Great Lakes to the Pacific Northwest may have delayed the flush, while heat and drought across the southwest have negatively impacted cow comfort.

Rabobank forecasts higher feed costs for the foreseeable future. Farms that grow most of their feed will fare better than those that rely more heavily on purchased feed. Expiring feed contracts and hedges will exacerbate this divide, forcing buyers to lock in at higher current prices. Producers will be keeping a keen eye on costs but should be cautious not to make cost-cutting changes to feed rations at the expense of negatively impacting the production of high-value milk components.

Butter inventories remain below the levels of the past two years. Cream supplies are being pulled into ice cream, leaving less available to be churned for butter, so inventory build will likely decelerate through the next couple of months as those inventories are tapped to meet current demand. Butter production has been in line with the levels of the past couple of years and should take a seasonal turn lower into the summer months.

Recent months have seen higher cheese output, and with school milk programs slowing class I milk purchases over the summer, some of that additional milk may find its way into cheese vats. And more cheese vats are on the way, with ground being broken in South Dakota recently for an expansion of a Valley Queen Cheese plant and work expected to begin in the next couple of months in Kansas and Texas for Hilmar Cheese and Leprino Foods. These plants will not be operational until late 2024 to early 2025.

Skim milk powder and nonfat dry milk production were down through the first quarter, driven by tight milk supplies and lingering staffing issues. Production should pick up once again as milk availability improves, but high energy prices will raise the cost of operating dryers this summer.

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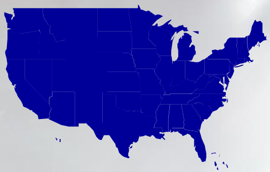
US



Supply constraints have pushed dairy commodity prices higher, but demand is beginning to push back. This demand response will trigger heightened volatility as markets search for equilibrium. With prices as elevated as they are, any signs of weakness will lead some buyers to back off and wait to see how far prices might fall. But as other buyers begin opportunistically 'buying the dip,' fear of missing out kicks in, causing prices to rebound.

Higher prices are hitting consumers. The at-home dairy consumer price index has lagged other food categories, but that gap is closing. In March, US domestic disappearance of total milk solids turned negative by 1.35% YOY. Cheese has fared well, with retail prices up a meager 2.1% YOY, and sales volumes up 4.5% during April. Meanwhile, fluid milk retail prices are up a dramatic 17.6% YOY, and sales volumes are down 1.2%. Plant-based milks have proven more price elastic, with a less dramatic 9.9% YOY price increase resulting in a 3.6% decline in volume sales.

Foodservice sales are reportedly slowing somewhat, likely in response to the broader inflationary pressure on household budgets. The last several months of consumer activity were defined by a hopeful return to normalcy. The months ahead will likely be more defined by economic strains providing a reality check.

A USD 40bn aid package for Ukraine will include USD 5bn toward addressing food shortages. It remains unclear exactly how the funds will be used, but it will likely be price-supportive to dairy. There have also been government interventions regarding the infant formula shortage in the US. While the situation has grabbed headlines, it is unlikely to have a meaningful impact on the broader dairy markets and should resolve in the near term.

Exports have been mixed but have fallen only 1% YOY in product volume through Q1. Cheese exports have been strong, up 13% YOY in Q1, thanks to gains in Mexico and Japan. Total Q1 US exports to China decreased by 9% YOY, driven by lower whey exports. While we anticipated a slowdown in demand from China, the current lockdown situation has added some uncertainty to the magnitude.

Class IV milk prices are forecast to maintain a premium above class III through 2023. Dairy commodity prices should soften from their peaks around Q2 2022 but will remain high compared to recent years. Whey will fare somewhat worse than other products based on weaker China demand. Rabobank forecasts average 2022 milk prices of USD 23.23 for class III and USD 24.66 for class IV.

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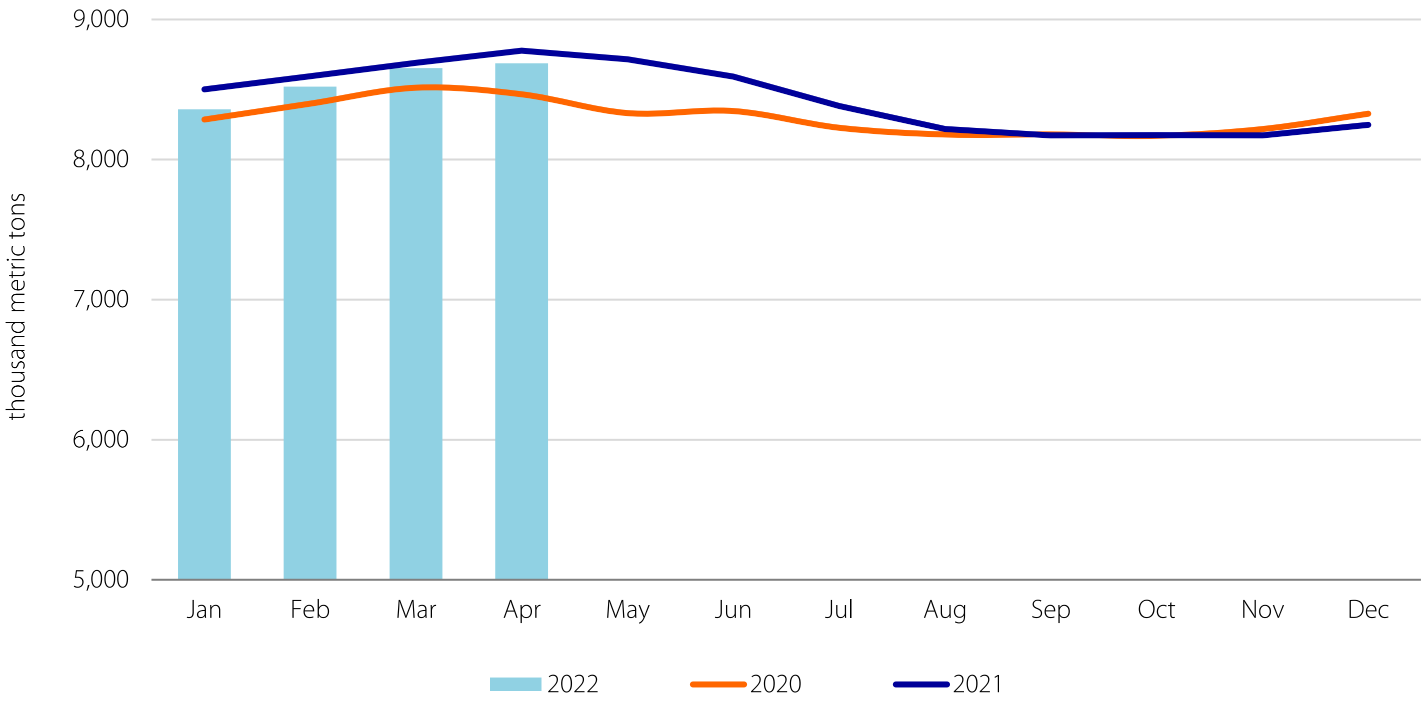
Figure 4: US Milk Production, Jan 2020-Apr 2022



Source: USDA, Rabobank 2022

New Zealand

New Zealand dairy farmers, like many farmers around the globe, are juggling inflationary input cost pressures. We anticipate key input costs for dairy farming – fuel, fertilizer, feed, and labor – to remain elevated throughout 2022 and into 2023. Farm profitability remains likely for most dairy farmers, but with a jump in their cost base for 2022/23, profit margins will be smaller than the season ending May 31, 2022.

The Rabobank Federated Farmers Farming Salaries 2022 Remuneration Summary Report shows an increase in hourly rates and salary packages for on-farm roles. This reflects the tight labor market, exacerbated by the Covid-19 border restrictions and further impacted by visa thresholds for international workers.

Finance costs are on the rise, with the Reserve Bank of New Zealand lifting the Official Cash Rate to 2% – the highest since 2016. Going forward, budgets will reflect a period of higher interest costs for dairy businesses. However, the industry is in good shape. A period of healthy profitability has allowed NZ dairy farm operators to reduce debt. Total debt returned to around 2014-2015 levels (absolute), while debt per kgMS* has dropped to around the same level as the five-year average across 2011-2015.

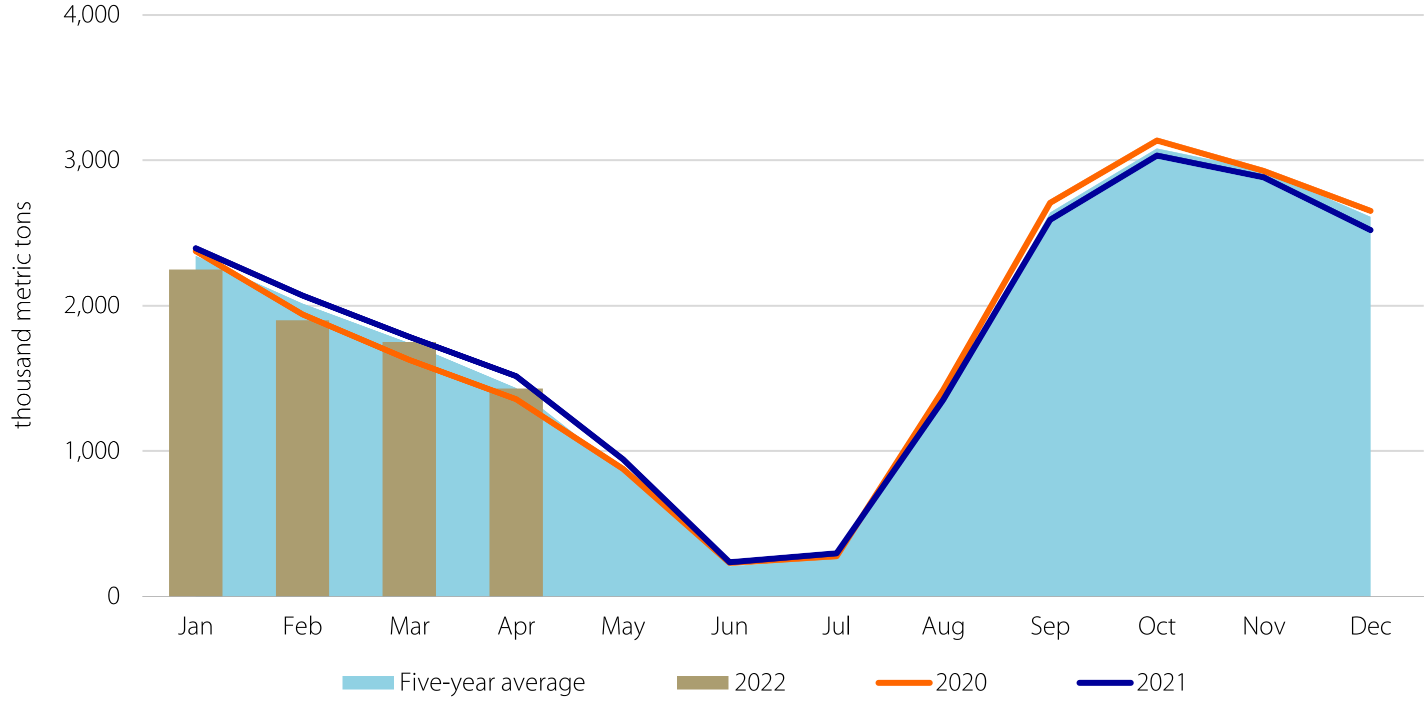
**Note: Based on 2021/22 milk production estimates*

He Waka Eke Noa (the primary sector climate action partnership) made its proposed recommendation to the government in late May on a preferred pricing mechanism for agriculture sector emissions, following the submission period in early 2022. The government will assess the recommendation and announce its final decision by year-end 2022. If the government is not satisfied with the proposed mechanism or progress, it retains the right to enter the agriculture sector into the Emissions Trading Scheme in 2025 (the 'backstop').

With higher input costs, New Zealand's milk production needle for the 2022/23 season will be dictated by the weather. Long-term forecasts suggest a warmer start to the new season is likely. Rabobank anticipates NZ milk collections to increase by 2% for the 2022/23 season due to low comparables and improved weather over the season's peak.

Rabobank forecasts a milk price for the 2021/22 season of NZD 9.00/kgMS, which is in line with Fonterra's midpoint of their opening range of NZD 8.25 to NZD 9.75/kgMS. Modest milk production both within New Zealand and in other exporting regions supports another profitable milk price forecast. Still, China's lockdowns and import demand will ultimately dictate NZ dairy farmer fortunes.

Figure 5: New Zealand Milk Production, Jan 2020-Apr 2022



Source: DCANZ, Rabobank 2022

Australia

Australian milk production continues to trail last season with widespread declines across all regions. As of April 2022, national milk production was down 3.4% at 7.3bn liters. The new season begins on July 1. Rabobank still expects milk production to return to marginal growth in 2022/23, albeit off a low comparable base.

As the 2021/22 season draws to a close, there has been a raft of milk price increases. Fonterra Australia increased its weighted average price for Southern Australia to AUD 7.40/kgMS. Stronger export returns continue to flow through to the farmgate milk prices, providing support to all regional milk prices.

There are keen eyes on new season (2022/23) milk price signals leading up to the July 1 kick-off. Rabobank's modeled farmgate milk price forecast for Southern Australia in 2022/23 stands at AUD 8.40/kgMS. This is broadly in range with already announced official price offers, which range between AUD 8.25/kgMS and AUD 8.90/kgMS.

As a result, Australian dairy farmers are enjoying record milk price signals for 2022/23, and the early timing of announcements will provide confidence and cashflow support early in the season. This is important as dairy farmers face cost headwinds on a number of fronts. The cost of homegrown feed and supplementary feed will be more expensive, among other inflationary pressures. Against this backdrop, labor availability remains a handbrake on expansion. There is a likelihood that farm margins will be lower in the new season not higher, despite a circa 15% lift in milk prices to record levels.

There are bright spots on the horizon. Seasonal conditions remain supportive for spring pasture growth, and water market conditions are good for irrigation farmers. Non-milk incomes remain elevated, supported by a very firm beef market.

Australia's consumer market is on a good footing. However, food inflation and broader costs of living pressures are more apparent. There is inflation across the dairy aisle with more to potentially come but it is unlikely to materially impact dairy consumption volume trends.

Australian trade trends remain mixed. Season-to-date exports (July 2021-March 2022) are up on a volume basis by 24%. This is driven by a strong rebound in liquid milk and skim milk powder (SMP) exports. Australian exporters will be looking for market conditions to improve across Southeast Asia as economies open up, but will be challenged by high dairy commodity prices. There will also be a close eye on China's trade performance given the lockdowns and the role that liquid milk exports to China are playing in Australia's trade growth.

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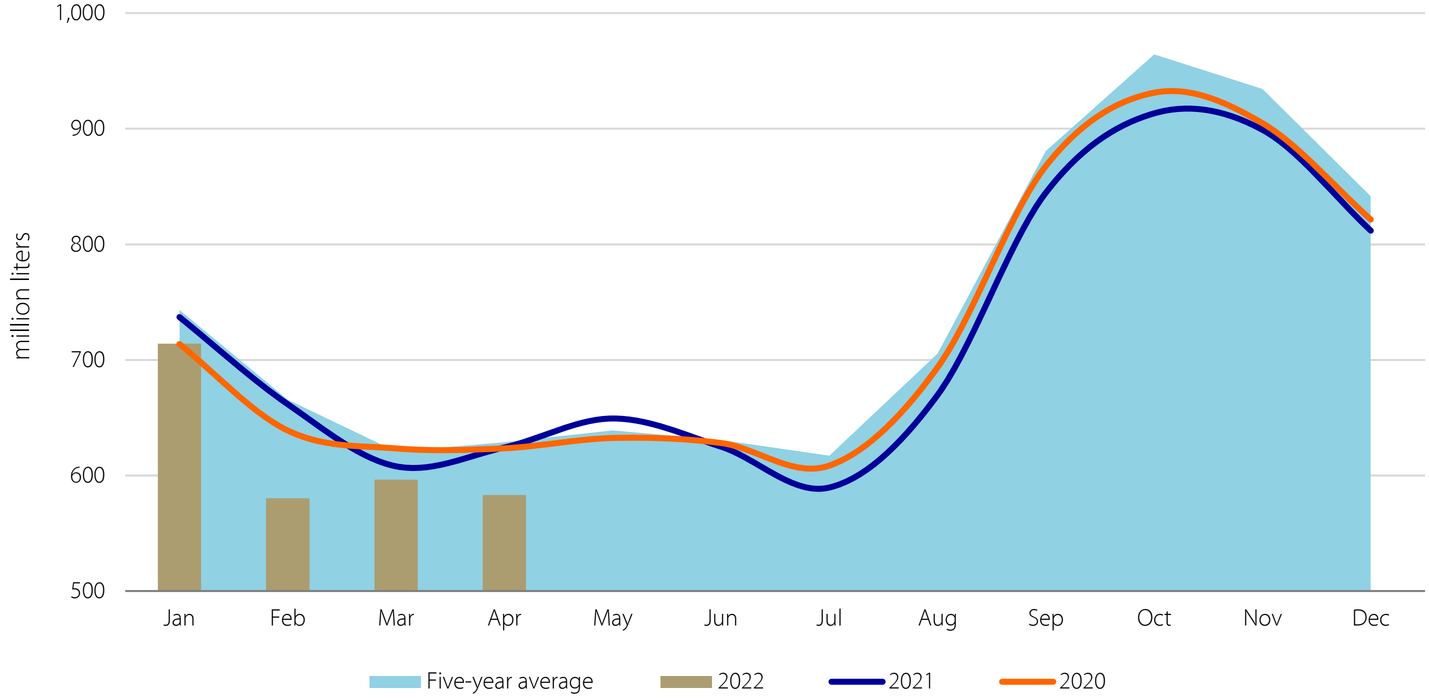
Figure 6: Australia Milk Production, Jan 2020-Apr 2022



Source: Dairy Australia, Rabobank 2022

Brazil

Record decline in Q1 2022 production. Ongoing climate disruptions further impacted milk production in key regions of Brazil during Q1. Grain prices remained elevated, and there is limited relief in sight. While farmgate milk prices recently moved higher, farmers' margins continued to be under pressure during the first months of the year. As a result, preliminary data from the IBGE (Brazilian Statistics Institute) indicate a 10% drop in milk output for Q1 2022 compared to Q1 2021.

Herd reduction helps explain the decline. Milk production has faced significant obstacles since the start of the pandemic. Sustained high grain costs and two consecutive years of irregular rains have taken their toll on dairy farming. But beef prices have also been at record levels in recent quarters, incentivizing dairy farmers to reduce their herds or to exit the sector altogether. While Brazil's official tally of the dairy herd is published with a significant lag, anecdotal evidence suggests that a 10% reduction in the dairy herd over the past 18 months is likely.

Farmgate milk prices gained on low supply. The sharp decline in milk output caused farmgate milk prices to increase significantly in recent weeks. Processors have had to pay higher farmgate milk prices, even in an environment of weak consumer demand. April prices registered a nominal record at BRL 2.43/liter average and are expected to move higher in May. Prices could peak by July as milk output from the South flush season increases.

Consumer demand to improve marginally. CPI inflation surpassed 11% for the past twelve months in April, with food and beverages increasing almost 13% for the same period. Consumers have felt the impacts of high inflation in Brazil since early 2021, adjusting consumption patterns accordingly. Dairy retail sales dropped by around 6%, according to industry sources. However, demand is set to start stabilizing in coming months as unemployment declines and inflation starts to peak. There could be some demand recovery in Q3 2022. Economic projections have been revised recently to the upside and Brazil could post stronger-than-expected growth in 2H 2022. However, demand will continue to underperform until inflation recedes.

A stronger currency helps higher imports in 2H 2022. Exports should rebound in the second half of the year as domestic milk prices increased and the BRL recovers from the lows seen in Q4 2021. If farmgate milk prices remain high in Brazil, then some additional imports from Mercosur are expected.

The export window closed for Brazil. With current international prices and exchange rates, Brazilian exports have lost competitiveness and are not expected to contribute to global trade flows in a significant manner during Q3 2022.

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Argentina

Milder weather boosted production after January's drought. After an extreme heatwave during January, temperatures moderated from February onwards, and drought conditions subsided. As a result, milk production ended Q1 2022 up YOY by 1.6%. Favorable weather in Q2 will also mean some additional growth in output compared to Q2 2021 of around 1%.

Worsening margins signal weaker 2H 2022. Rampant inflation and high global grain prices have continued eating away at farmers' margins in recent months. According to local sources, farmers' profitability is expected to fall into negative territory in April and May despite higher farmgate prices. This is particularly bad news for smaller farmers with lower scale and will likely result in reduced milk output in the coming months. Rabobank expects overall milk production to end 2022 flat compared to 2021, with a weaker second half of the year.

Exports flat in Q1 2022. Dairy exports have been stable thus far in 2022, with Q1 shipments nearly even with Q1 2021. Overall, dairy exports should account for around 25% of the overall milk supply. The risk of further export restrictions exists. Still, limited industrial capacity for milk powder and cheese production means that a maximum of 30% of supply could be destined for exports before hitting production constraints without further capital expenditure on new plants.

Inflation remains a huge problem. The inflationary spiral continues in Argentina, without much relief in sight. CPI inflation advanced by 6% in April alone and this continues to erode purchasing power. As a result, dairy consumption is now closer to 180 liters per capita, down from over 200 liters per capita 10 years ago. Argentines have had to adapt their diets to lower disposable incomes as more rely on government subsidies for food purchases.

Salary increases a problem for processors. Additional minimum wage increases of 17% have been announced for June. This will restore some of the purchasing power for workers, but it will also increase costs for the dairy industry. Processors with older plants and a higher headcount will see further margin erosion in their operations in coming months, which is a concern, given that domestic demand remains weak and passing on higher prices is difficult.

Smaller herd will make rebound harder. High beef prices at a time of low margins in dairy farming have contributed to a reduction in the number dairy farmers in Argentina, which could, for the first time, drop below 10,000 this year.

China

Average Chinese farmgate milk prices continue to weaken, falling by 2% over the past three months, to CNY 4.16/kg (USD 0.62/kg) in mid-May 2022, 5% off the peak in August and down 2% YOY. Meanwhile, Oceania WMP prices have declined by over 10% during the last three months. ***Rabobank's latest import parity analysis shows that the landed Oceania WMP price discount is now 10% off the average domestic milk price, vs. the historical average of 15% since 2013.***

National Statistics Bureau's total dairy production volume, a proxy for demand, was up by less than 1% YOY during Jan-Apr 2022, vs. 9% in 2021. Signs of demand deterioration emerged in March, then extended into April and May, as more regions went into prolonged lockdowns under the Covid-zero policy, including Shanghai and Beijing. This should have impacted Q2 performance very negatively given the logistics challenges for products to reach distributors and consumers.

The lockdowns are exacerbating an already softening macroeconomic outlook in several Chinese regions. Rabobank estimates that cities that have experienced full and partial lockdowns during April and May accounted for 35% of the country's GDP in 2021. The impact may be disproportionately larger as it ripples through to other regions not currently under lockdowns via supply chain links. This has sent the official urban unemployment rate to 6.1%, the highest level since March 2020, and has hurt retail sales and foodservice, which tumbled 11% and 23% YOY, respectively. The lockdown has started to ease slowly at the time of writing, and recovery is expected to be gradual. Meanwhile, an elevating Covid situation is prompting more lockdowns in Beijing and Tianjin.

China's milk production continues to grow strongly. The NBS reports that Q1 2022 milk production increased by over 8% YOY, driven by herd expansion during last two years and by yield improvements.

Chinese import volumes of dairy products (LME) declined by 4% YOY during Jan-Apr 2022 (excluding whey which tumbled by over 40% YOY). This, combined with strong production growth and very slow processing demand growth, means that the general oversupply situation has remained unchanged, if not deteriorated further.

Local market prices have followed the declines in GDT auction prices since mid-March, until recently. The cost of imported WMP has mainly remained on-par or slightly below the current GDT price levels. For Chinese traders to step back into the market requires confidence in further price increases based on the underlying expectation of a swift recovery in domestic demand as lockdowns are lifted, and/or the building of a higher food security reserve in the wake of renewed geopolitical conflicts.

China

Rabobank revises its milk production forecast for 1H 2022 to a conservative 5% YOY growth (previously 4%), considering the stronger-than-expected Q1 performance, with 2H 2022 output tapering off to 3% YOY (unchanged). ***Our forecast production growth remains to be on the conservative side.*** Feed costs have caught up at the farmgate, and, with weaker average milk prices, farming profitability has been squeezed significantly. ***It may take longer than forecast for supply to respond to weakening milk prices and higher feed costs,*** presenting a downside risk to China's forecasted imports.

Rabobank cuts consumption growth in LME (excluding whey) to 1.5% YOY for 1H 2022, accounting for the lockdown impact (previously 3%). For 2H 2022, we expect consumption growth of 4% YOY (LME, excluding whey) (previously 3%), reflecting some short-term demand rebound post-lockdowns. China's 1H 2022 dairy imports (LME excluding whey) are forecast at 19% lower YOY (previously 26%), reflecting stronger than expected year-to-date imports. Looking into 2H 2022, Rabobank expects the import at 54% lower YOY (previously 37%), without further rises in year-end stocks. ***This could potentially result in an estimated reduction of 260,000 metric tons and 135,000 metric tons, respectively, in WMP and SMP imports for 2022 vs. 2021.***

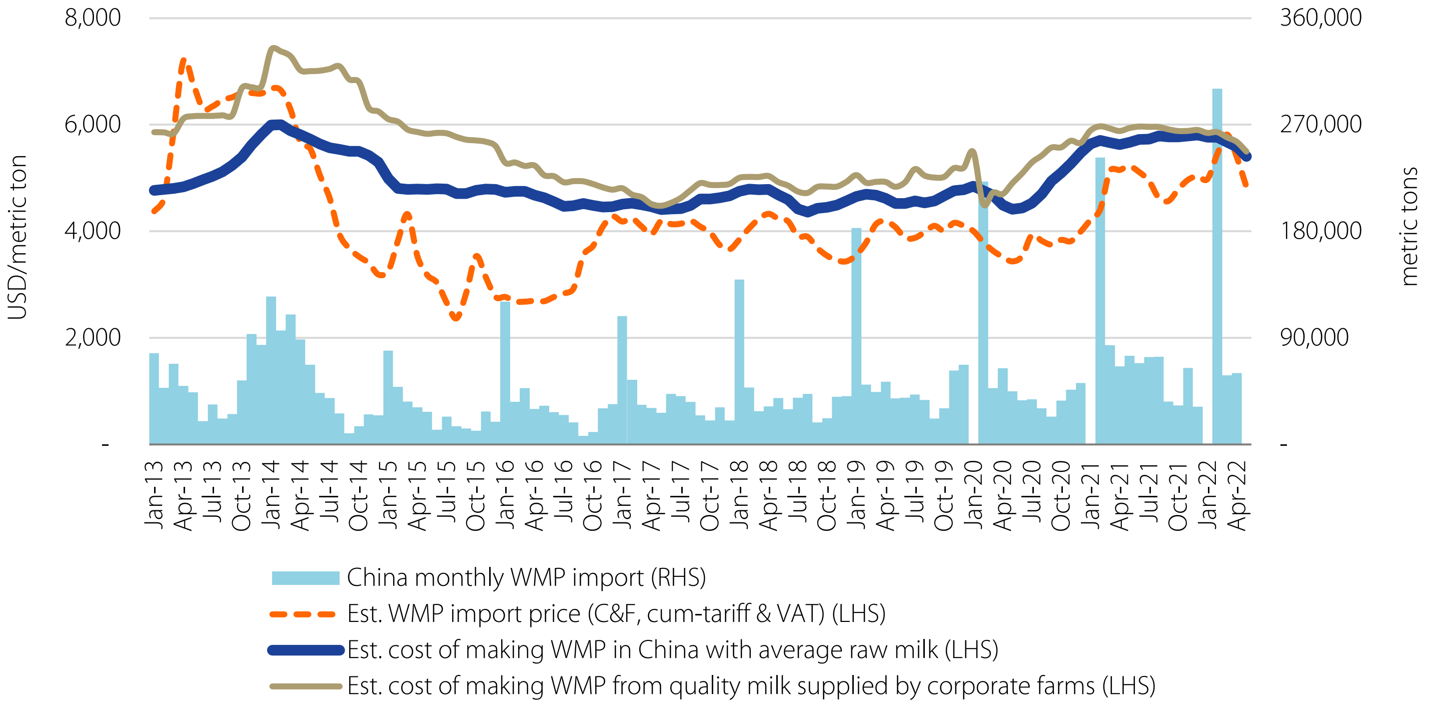
China's 1H 2022 whey imports are expected to fall by nearly 40%, from last year's record level, followed by a more muted decline of 25% YOY in 2H 2022. Milk production growth in 1H 2023 is expected to ease to 3% YOY. Consumption growth in 1H 2023 is forecast at 5% YOY against a weak 1H 2022. ***This should lead to a mild import growth of 4% YOY in 1H 2023, followed by a 17% growth YOY in 2H 2023 on low comps in 2H 2022.***

Dairy companies should expect the Covid-related lockdowns to take tolls on sales growth in Q2 2022. On a slightly positive note, cost pressure from milk prices will be muted this year, but this has unfavorable implications for the dairy farming sector.

The Chinese dairy CPI remained muted at 0.6% YOY during Jan-Apr 2022. The weak consumer sentiment extending into the aftermath of strict lockdowns may limit the room for further premiumization, and processors will possibly pass on some of the savings from lowering milk cost back to consumers. Margin pressure will remain due to rising costs of other ingredients and logistics costs.

As long as China's dynamic Covid-zero policy remains and the government stimulus package reboots underlying economy, the uncertainties over a swift recovery will remain high and it is difficult to anticipate a drastic acceleration in dairy consumption growth in the next twelve months.

Figure 7: China WMP Import Parity, Jan 2013-May 2022



Source: China Customs, Eucolait, Chinese Ministry of Agriculture, Rabobank 2022

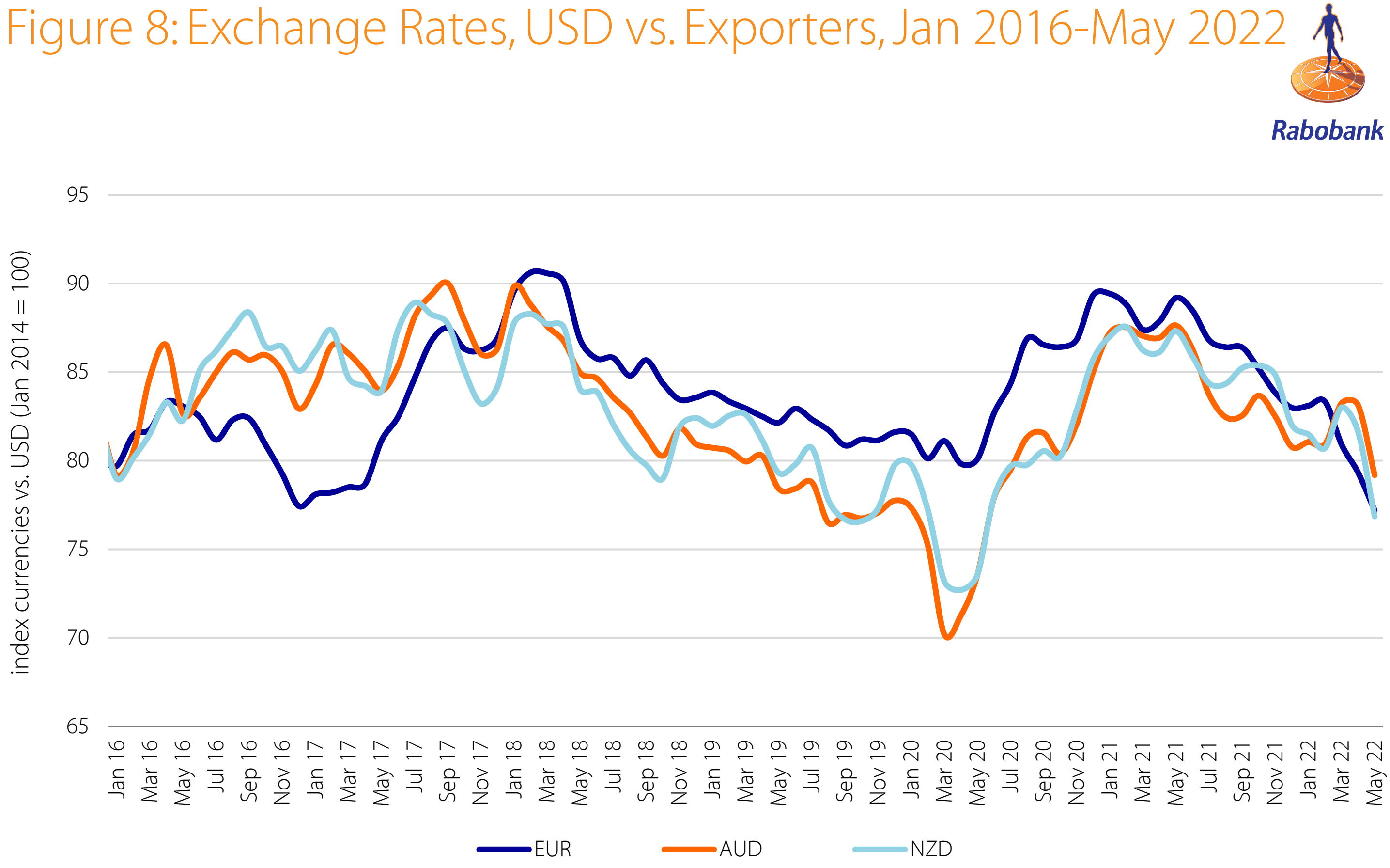
Table 1: Quarterly Dairy Commodity Prices (Historic and Forecast), 2021-2023f

Rabobank

		2021		2022				2023f			
		1H	2H	Q1e	Q2f	Q3f	Q4f	Q1f	Q2f	Q3f	Q4f
Butter											
Europe	EUR/metric ton	3,832	4,501	5,940	7,000	7,200	7,000	6,800	6,600	6,500	6,500
US	USD/metric ton	3,597	4,042	5,883	6,115	6,175	6,000	5,365	5,075	4,885	5,255
Oceania	USD/metric ton	5,137	4,900	6,425	6,000	5,700	5,600	5,500	5,400	5,300	5,300
Cheese											
Europe (Gouda)	EUR/metric ton	3,195	3,460	4,073	4,500	4,900	4,900	4,700	4,600	4,500	4,500
US (Cheddar)	USD/metric ton	3,681	3,706	4,306	5,180	5,200	5,025	4,800	4,650	4,630	4,630
Oceania (Cheddar)	USD/metric ton	4,312	4,398	5,790	5,750	5,600	5,400	5,350	5,300	5,200	5,200
Dry whey powder											
Europe	EUR/metric ton	927	1,007	1,266	1,350	1,300	1,250	1,225	1,225	1,225	1,225
US	USD/metric ton	1,259	1,274	1,678	1,475	1,225	1,100	1,050	1,100	1,100	1,110
Skim milk powder											
Europe	EUR/metric ton	2,440	2,778	3,594	4,050	4,000	3,900	3,800	3,700	3,600	3,600
US	USD/metric ton	2,588	3,008	3,801	3,990	3,900	3,850	3,825	3,750	3,625	3,500
Oceania	USD/metric ton	3,470	3,350	4,488	4,250	4,100	3,950	3,900	3,850	3,750	3,750
Whole milk powder											
Europe	EUR/metric ton	3,054	3,458	4,478	5,100	5,100	5,050	4,900	4,750	4,650	4,600
Oceania	USD/metric ton	3,873	3,850	4,300	4,000	4,050	3,900	3,850	3,800	3,700	3,700
South America	USD/metric ton	3,375	3,575	3,905	4,250	4,300	4,100	4,050	3,800	3,800	3,800

Source: USDA, forecasts by Rabobank 2022

Figure 8: Exchange Rates, USD vs. Exporters, Jan 2016-May 2022



Source: UDM Board of Governors of the Federal Reserve System, Rabobank 2022

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