

What matters in the milk markets?



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What metrics should I be measuring to move my dairy business forward faster?

a market-driven perspective

Sept. 5, 2024

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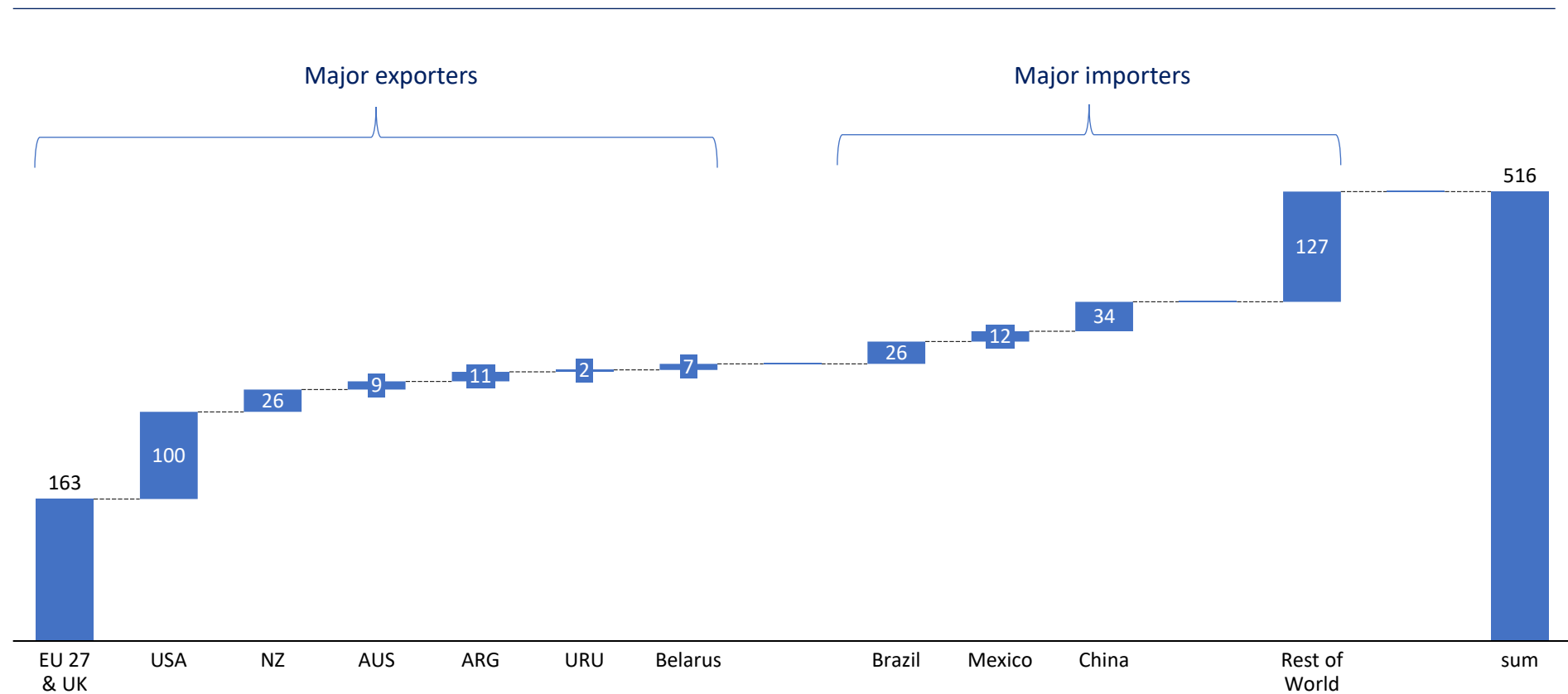
- **Global supply of raw milk (excluding IN/PAK)**
- Domestic demand developments in net dairy exporting countries/regions
- Demand in net dairy importing countries
- Implications for dairy market and prices globally
- Zooming in on the UK picture
- Threats and opportunities for UK dairy farming towards 2030
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Raw milk supply into processing ~ 520 bn kg/y (for World ex IN/PAK)



Simplified world raw milk supply 2020 (excluding India, Pakistan)

in billion kg ECM/year

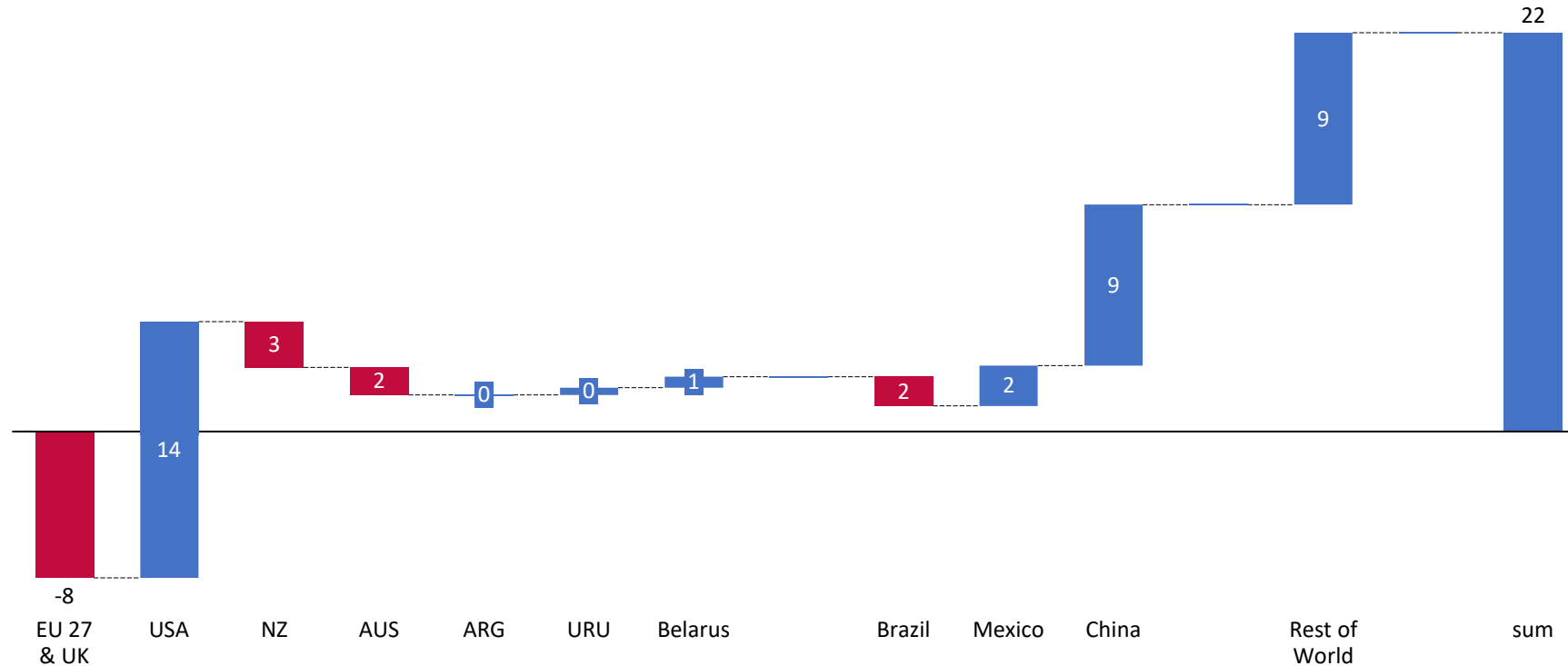


Raw milk supply into processing ~ 540 bn kg/y in 2030 (for world ex IN/PAK) Net growth exclusively expected in US and current net dairy importing countries.



Simplified world raw milk supply change from 2020 to 2030 (excluding India, Pakistan)

in billion kg ECM/year



Agenda



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Based on the 2018-2021 trend data, the growth of raw milk use for domestic cheese and drinking milk equals **0 bn kg/y**



When using the 2018-2021 trend of demand development for cheese and drinking milk in the domestic markets of the main net dairy exporting countries/region, the conclusion is simple. The net exporters need 0.0 bn kg/ y extra to serve the growth of their domestic market of cheese and drinking milk combined.

Demand by country / region	Cheese	Drinking milk	Sum
LME (all figures in bn kg/y)	Raw milk valorization in cheese for the domestic market	Raw milk valorization in drinking milk for the domestic market	
Based on data for 2018-2021	Delta volume from 2018 to 2021	Delta volume from 2018 to 2021	Delta volume from 2018 to 2021
UK	0	-0.6	-0.6
EU-27	0	-2.0	-2.0
US	4.0	-1.6	2.4
Sum	4.0	-4.2	-0.2
<u>Annual</u> extra raw milk required	1.0	~ -1.0	0.0

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The dairy “world market” consists of two blocks: “Net Exporters” and “Net Importers”. In 2021, domestic consumption in “Net Exporters” was 240 bn kg.



Net exporters

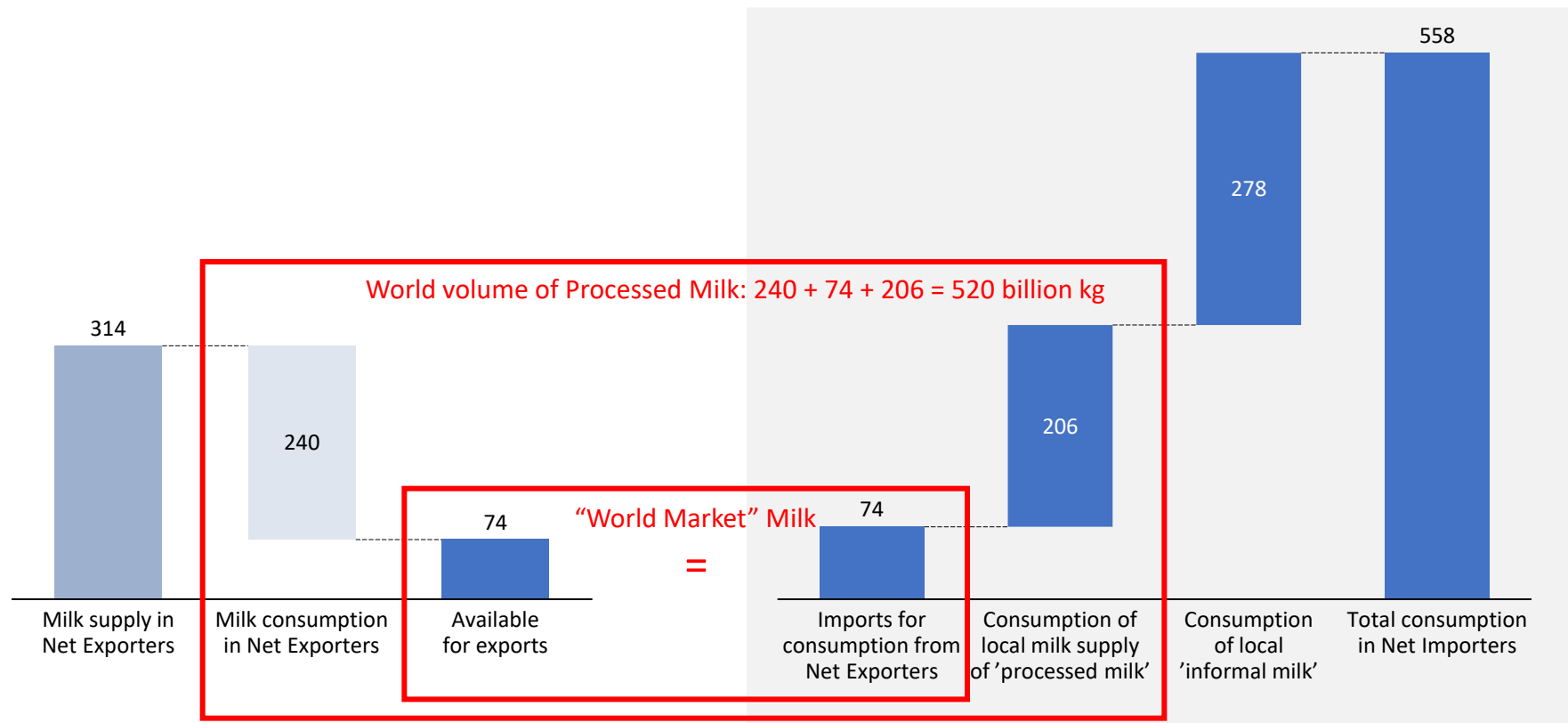
Raw milk supply for processing in factories and domestic demand in main ‘dairy exporting countries/regions’*

billion kg ECM, data for 2021

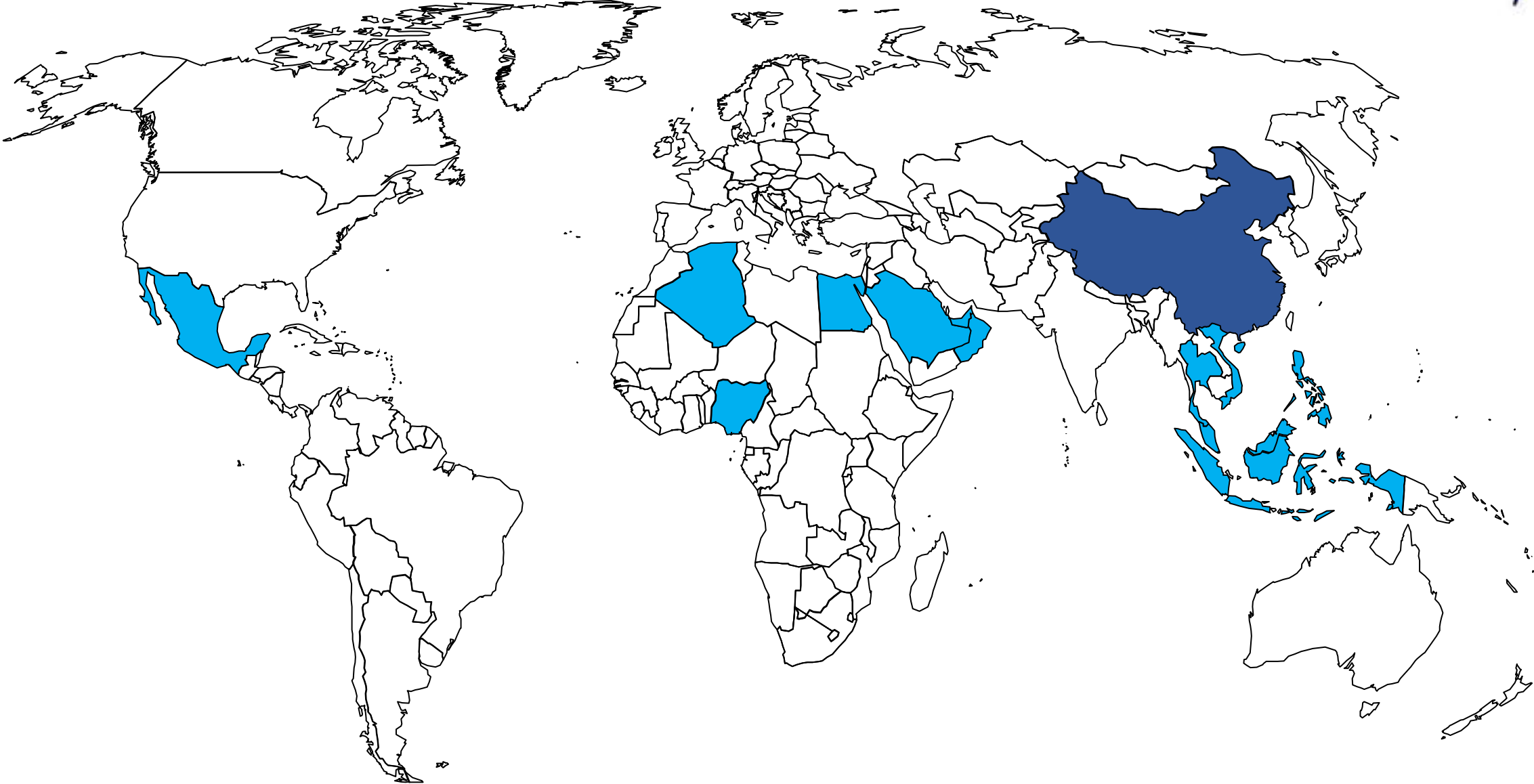
Net importers

Raw milk supply for processing in factories and domestic demand in main ‘dairy importing countries/regions’*

billion kg ECM, data for 2021



Focus set on 12 major dairy (net) importers plus China

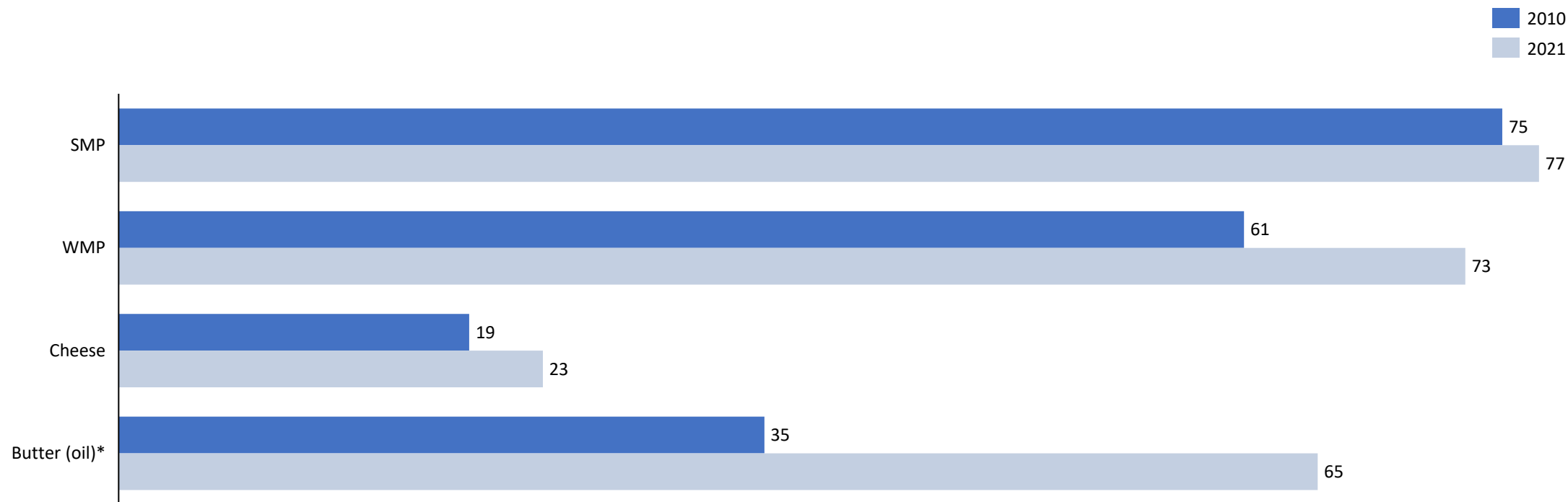


The Top-13 import about half of the ,world market‘ dairy volume in LME; lower in cheese, higher in powders. Up for all products in 2010-2021



Ratio of imports by “Top 13” of total world market imports by dairy commodity for 2010 and 2021

in %



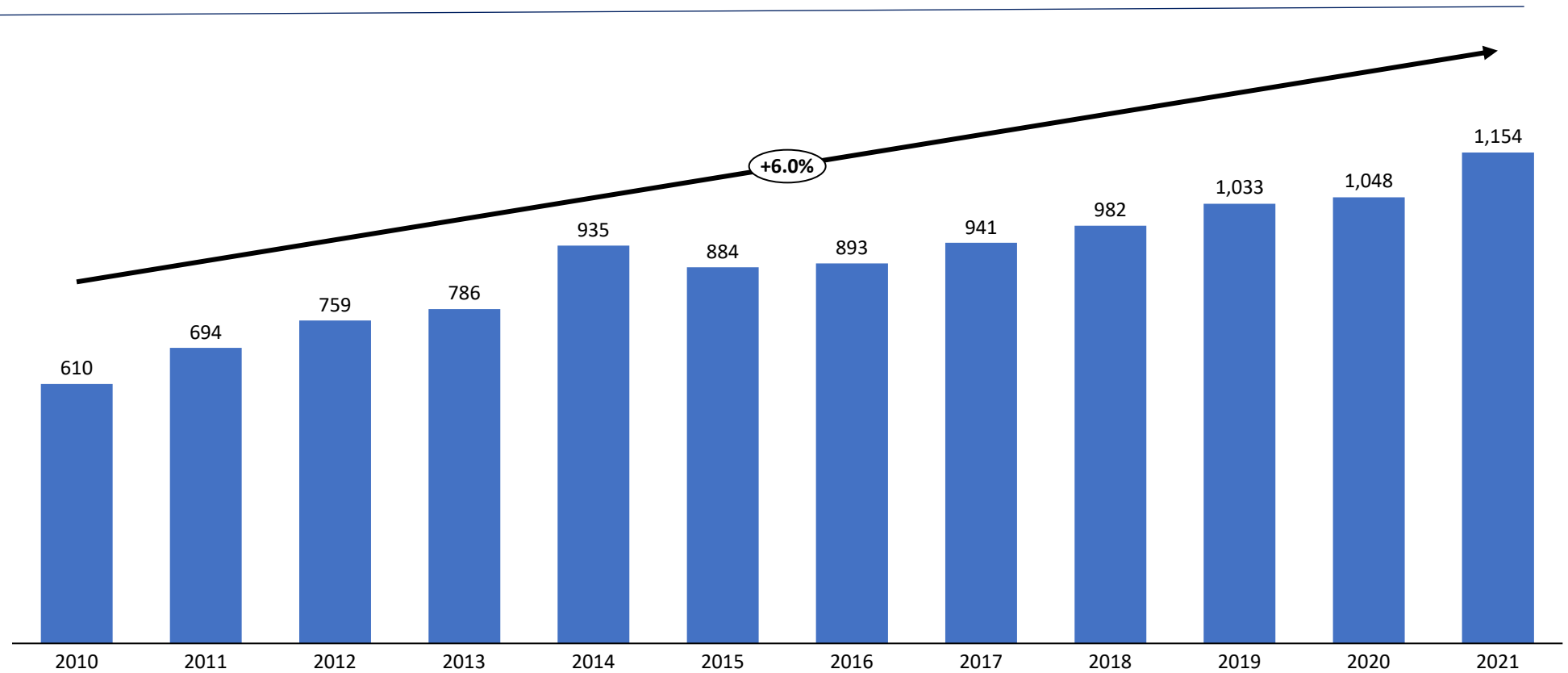
*Butter and Butter Oil have been added up and are expressed in butter equivalents.

The Top-13 have increased the protein component in SMP, WMP and Cheese imports in 2010-2021 with a volume CAGR of 6%



Dairy importing countries' consumption growth of **dairy protein** from 2010 to 2021

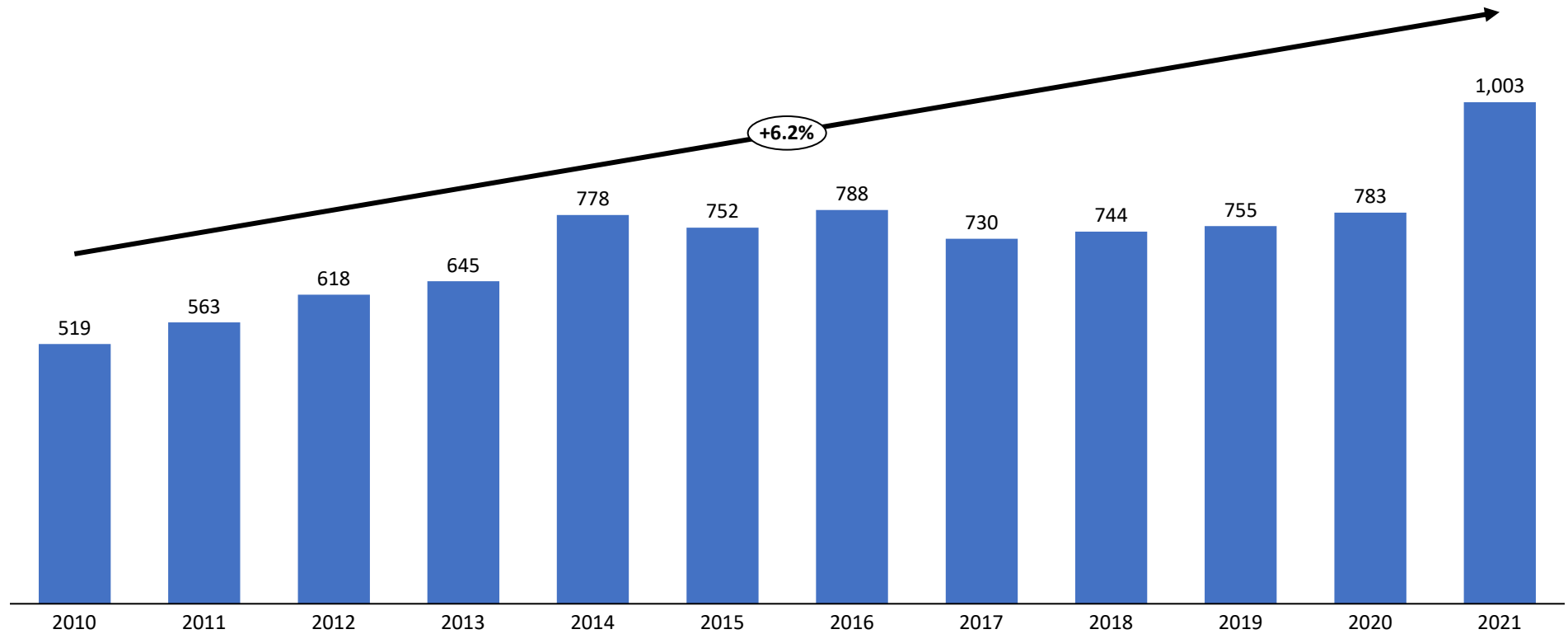
in kt



The Top-13 have in 2010-2021 increased their fat component imports with a volume CAGR of 6.2%.

Dairy importing countries' consumption growth of **total dairy fat (embedded in WMP and Cheese and in butter (oil))** from 2010 to 2021

in kt

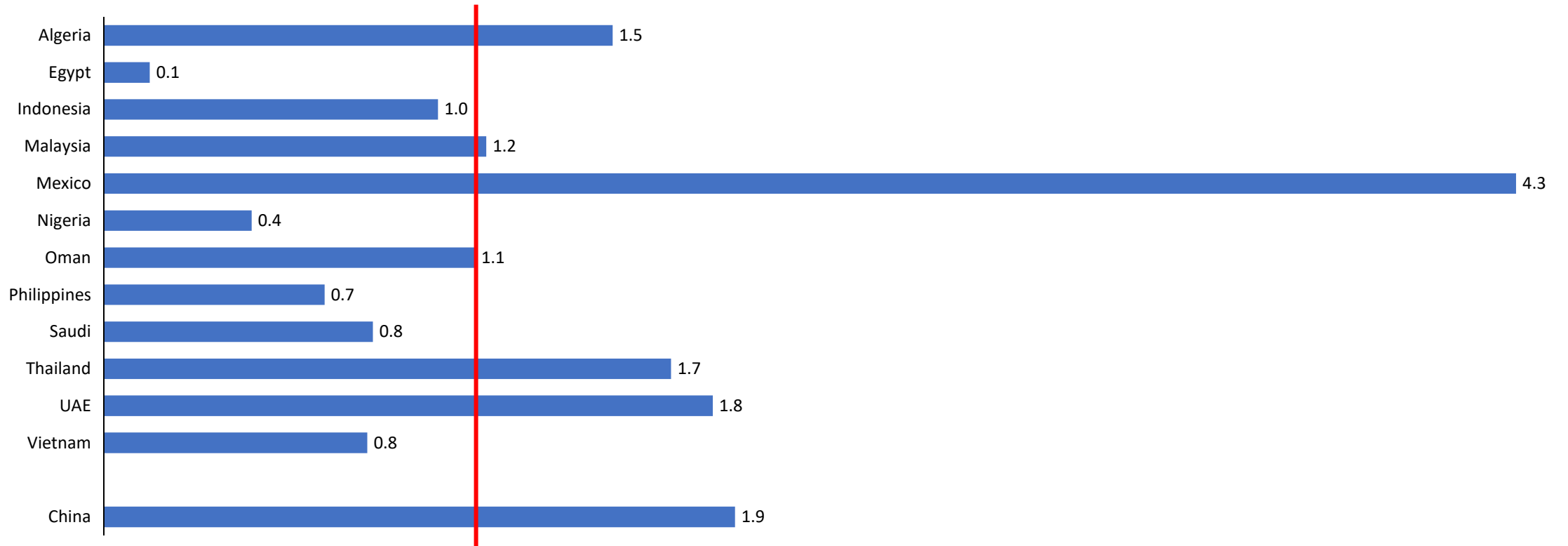


Top-13 value growth rate of dairy imports from 2010-2021 as multiple of the GDP growth rate of Top-13. Weighted average equals 1.1.



Import value growth CAGR by country over GDP growth CAGR by country period 2010 to 2021

(-)



Key messages from the analysis of demand in net importing countries: demand growth in value continues with strong momentum



Demand value growth in Top-13 in 'actual US\$' for 2023 – 2027 expected: ~ 7-8% CAGR (!)

Demand historic volume growth (LME) in Top-13 for 2010 – 2021: ~ 6% CAGR

Top-13 import volume growth 2010 – 2021 in billion kg LME: ~ 16 bn kg so ~ 1.5 bn kg/y

N.b. Top-13 represents only just over 50% of total ,world market'

How much volume growth for Top-13 imports will be feasible from 2024-2030, will depend on **supply**.

World Market **Supply** and **Demand** together will in 2024-2030 determine **global and local milk prices**

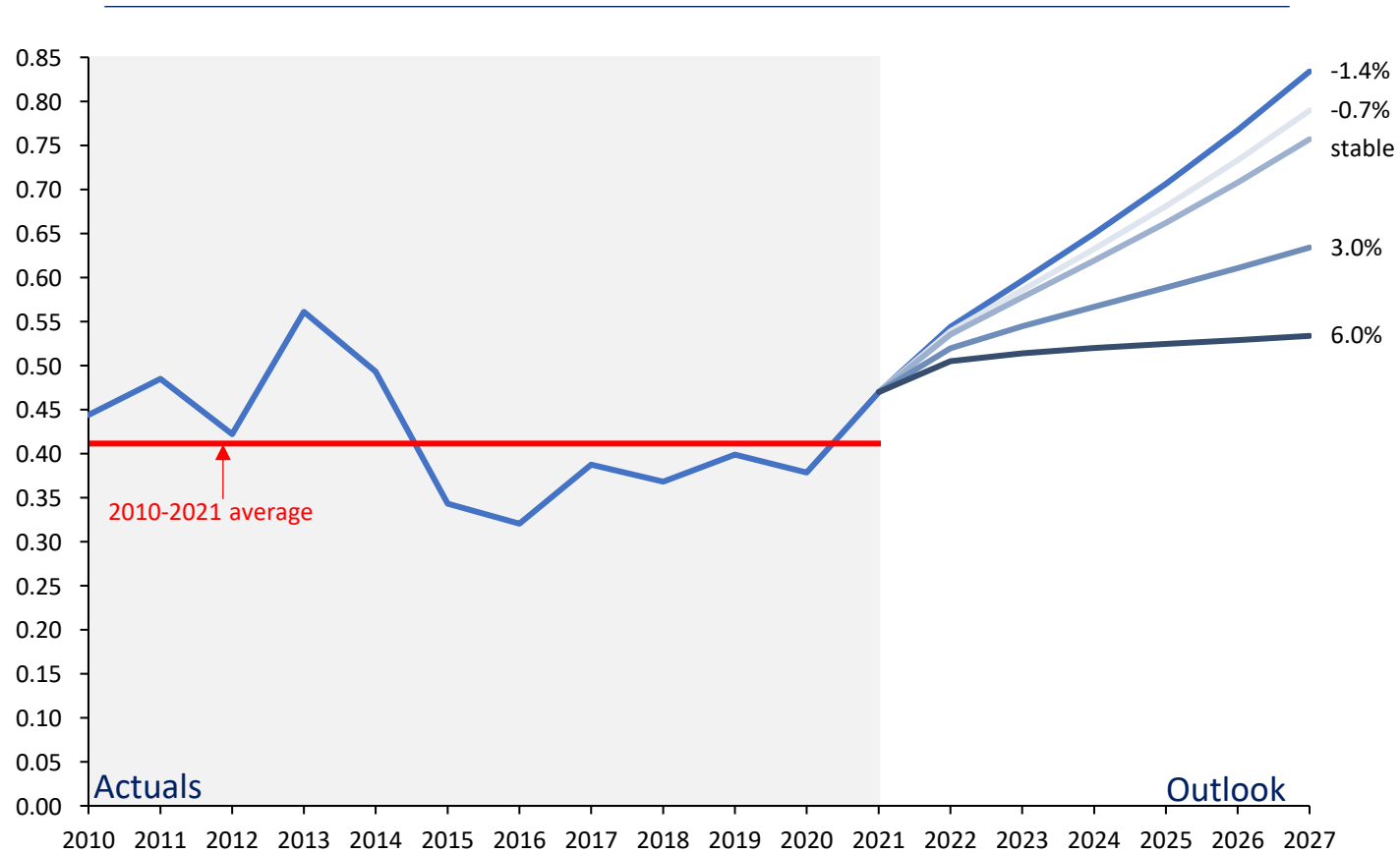
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Top-13 import unit value in *real US\$* when assuming the IMF inflation estimate for 2022-2027 for the US\$. All depends on P times Q

Dairy Import Value per kg LME for China and the "Other 12" countries together

In actual US\$ / kg LME for 2010 – 2027. Actuals up to 2021, "potential" for 2022-2027



The less they buy in volume, the more they can afford to pay per unit of volume bought

Outlook for world dairy towards 2030: scarcity and prolonged high prices look possible. Battle for milk will be global.

- Dairy market globally will remain cyclical. There is always noise on the signal trend.
- The trend line, however, is decidedly up. Do not let the growth of plant-based etc. distract you.
- Key driver no. 1 is **strengthening demand**:

strong economic growth in the major dairy importing countries
- Key driver no. 2 is **constrained global supply**:
 - Environmental constraints in major dairy exporters (NZ, EU)
 - Farmer demography in major dairy exporters
 - Slow dairy development in current major importers (e.g., water scarcity in ME, droughts...)
China is now the exception, but that could well be temporary.



Outlook in layman's terms for world dairy market for towards 2030: scarcity and prolonged high prices as the battle for milk will be global



Implications for global dairy farming:

- **Cyclical**ity and **volatility** of dairy markets will remain
- Global **scarcity of cow's milk** will become the 'new normal'
- Dairy commodity and milk prices increase (trendline) **faster than inflation**
- Dairy will become **unaffordable** to ever more consumers globally

Agenda

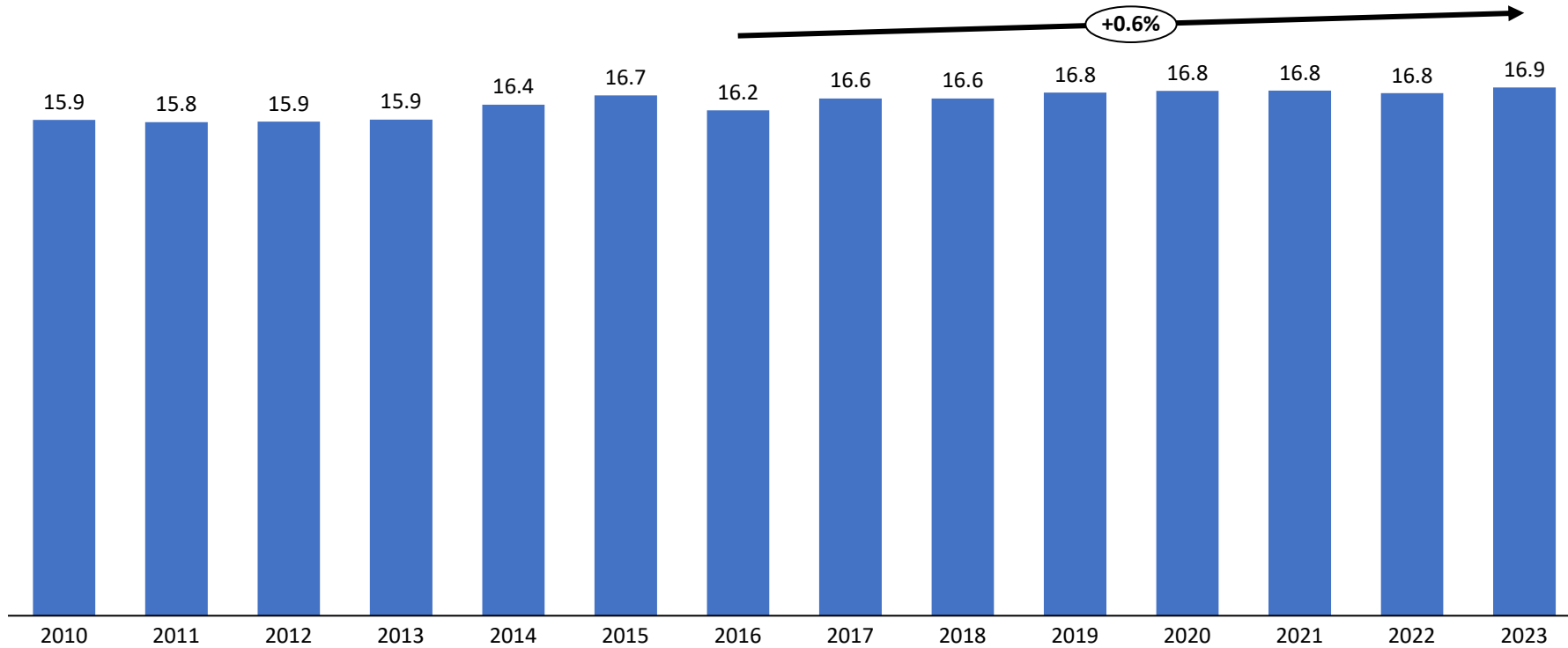
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UK dairy demand in LME: modest growth momentum

UK dairy demand expressed in Liquid Milk Equivalent



bn kg

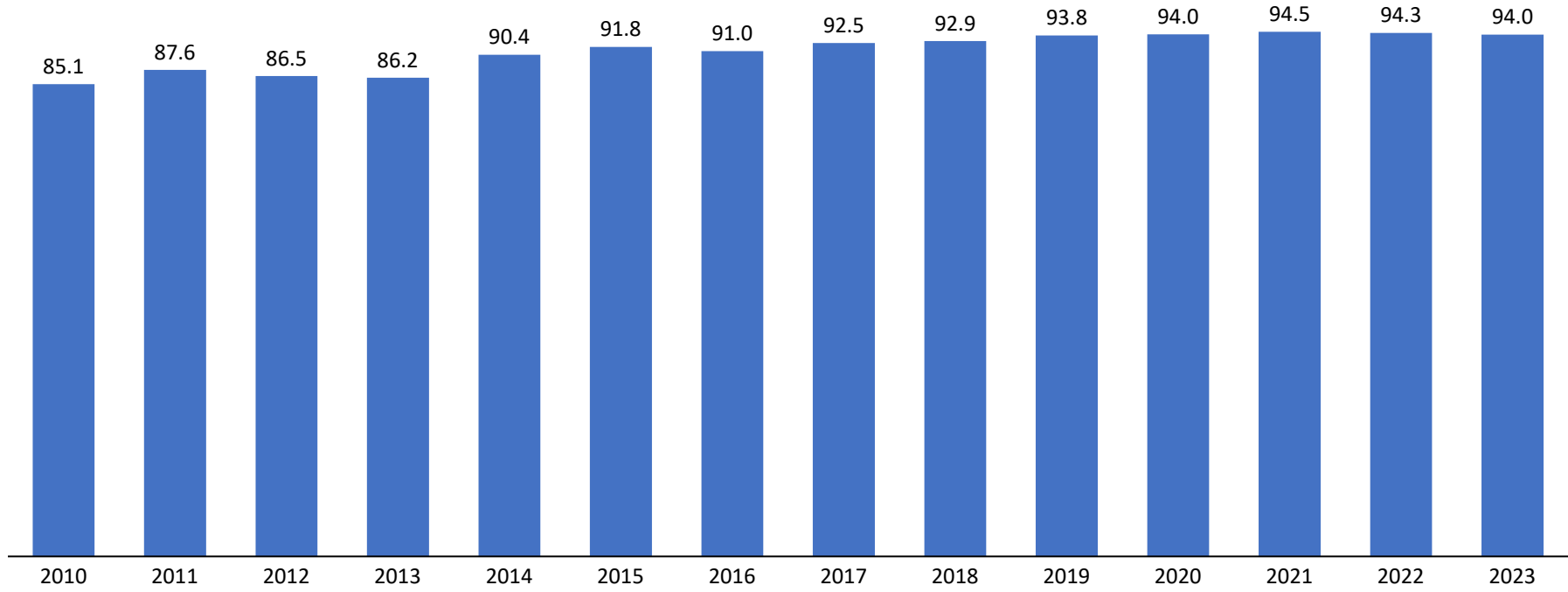


UK self-sufficiency since 2019 is flat at ~ 94%.
Net deficiency equals ~ 1 billion kg/y

UK dairy self-sufficiency, based on Liquid Milk Equivalent



%

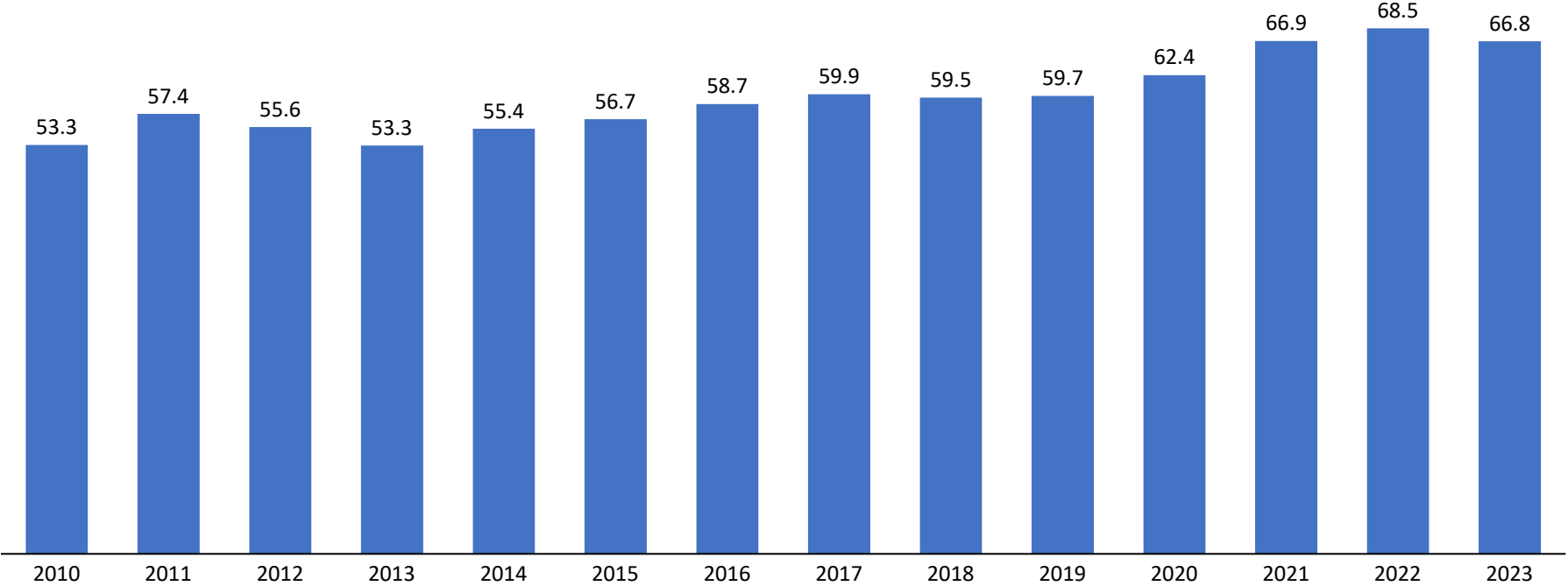


UK lacks self-sufficiency in cheese – especially and logically in foreign cheese-types



UK self-sufficiency in cheese

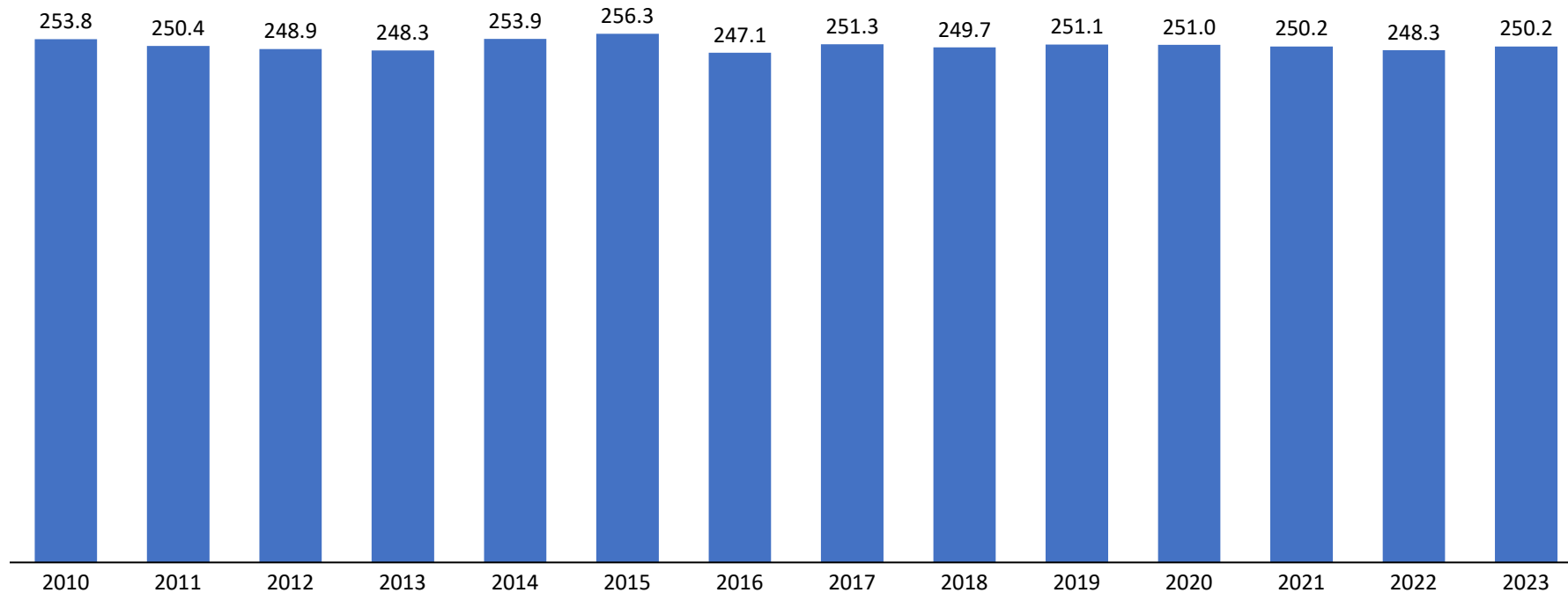
%



UK dairy consumption per capita is flat as a pancake

UK dairy consumption per capita, based on Liquid Milk Equivalent

kg per capita per year

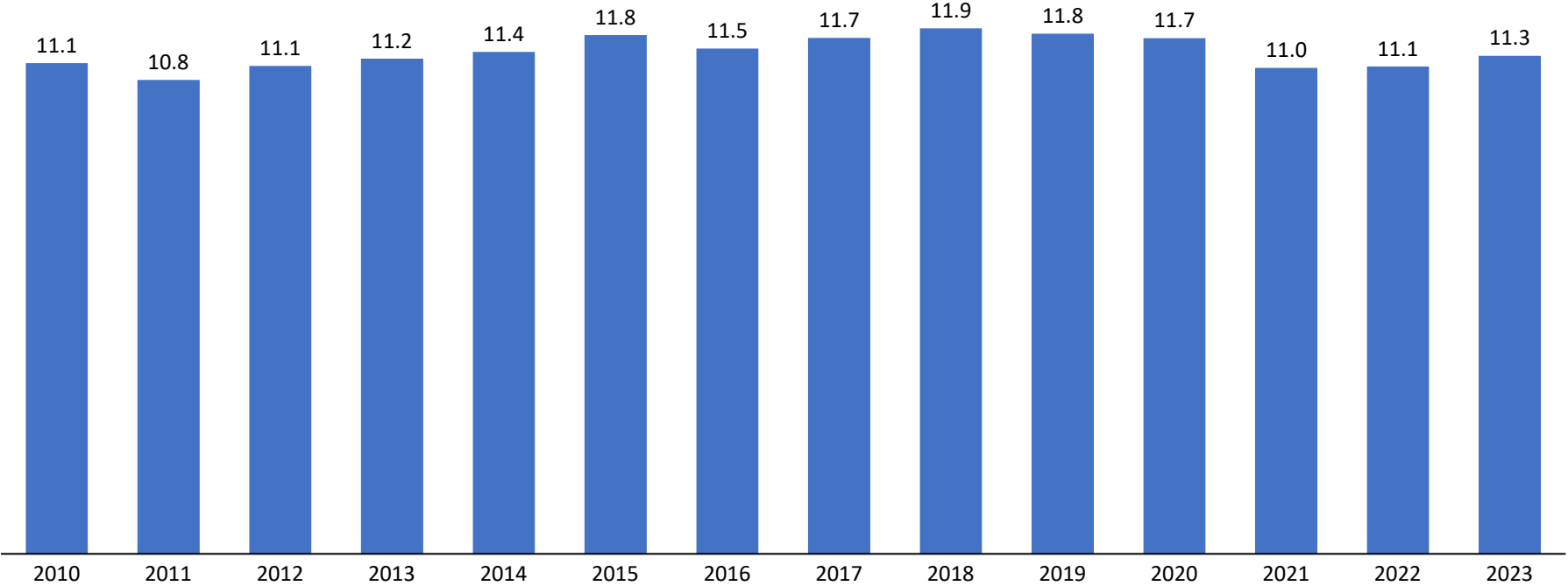


UK cheese consumption per capita is also flat (across all cheese types together)



UK cheese consumption per capita

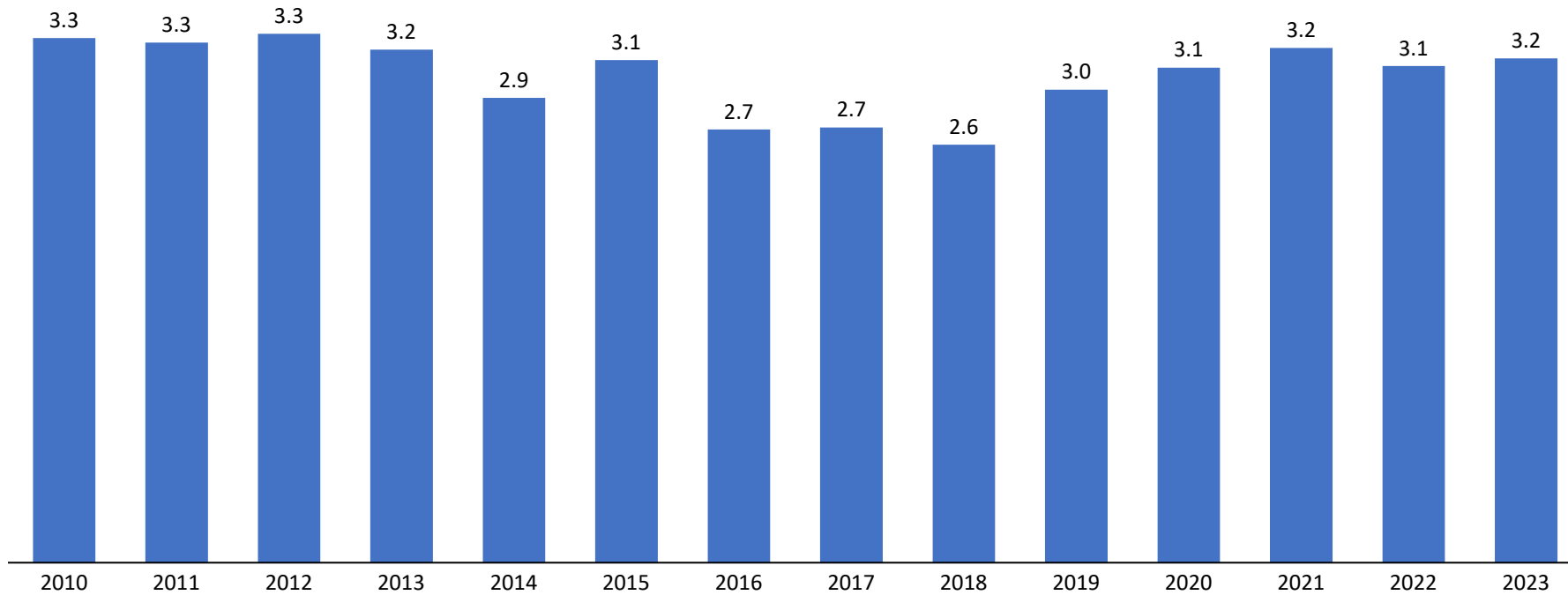
kg per capita per year



UK butter consumption per capita is also quite flat

UK butter consumption per capita

kg per capita per year

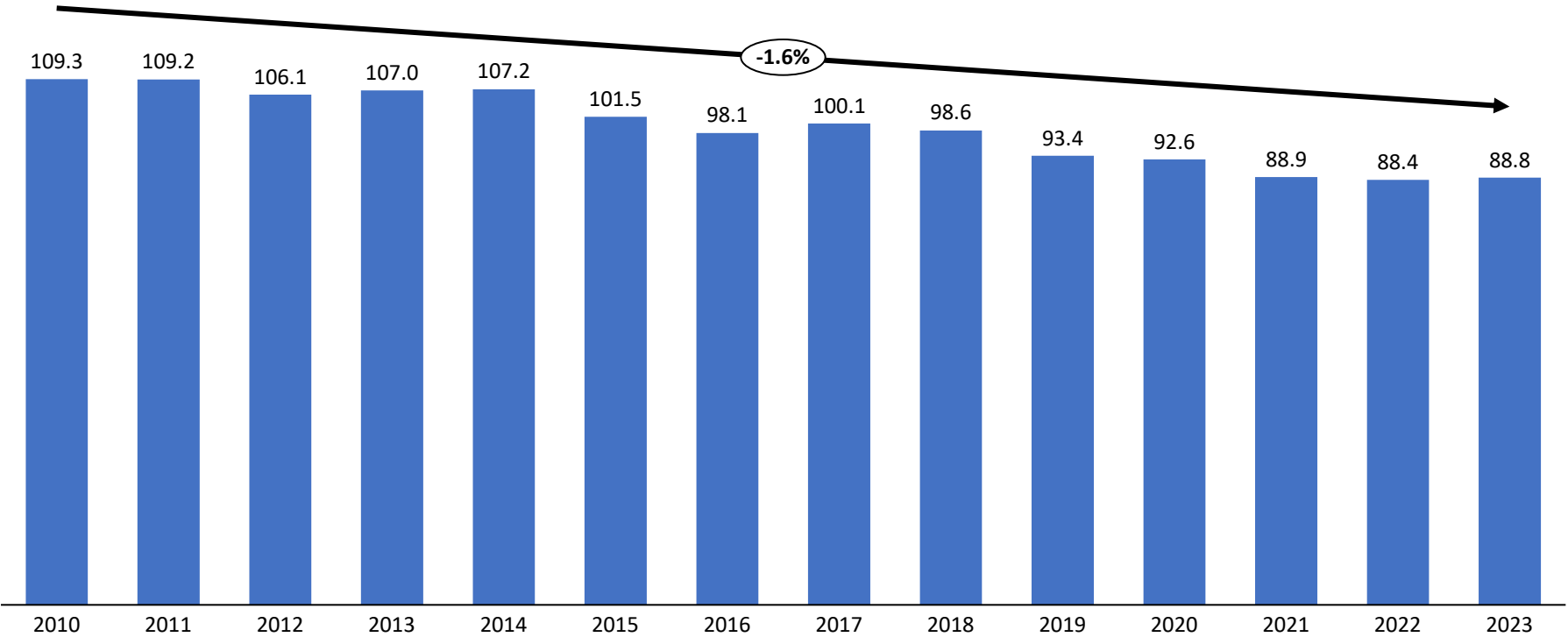


UK drinking milk consumption per capita is down, typically with 1.6% CAGR. Consumers are changing



UK drinking milk consumption per capita

kg per capita per year

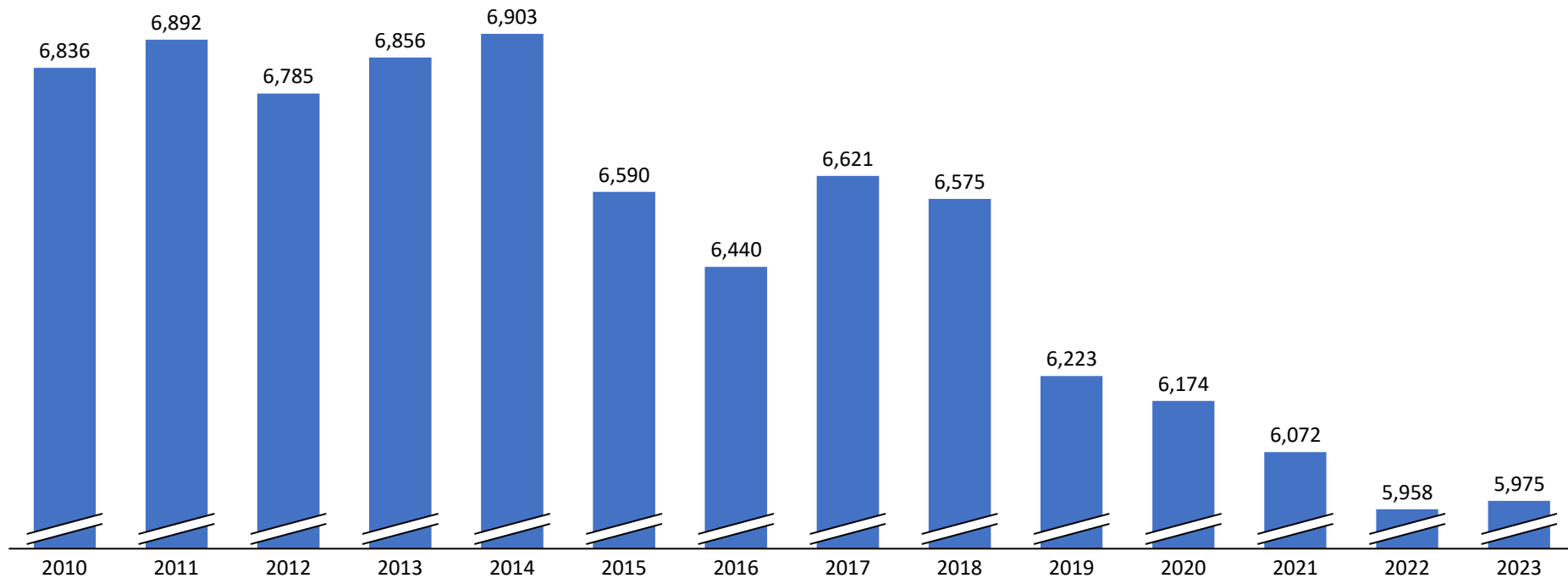


In 2010-2023 the production of drinking milk in the UK dropped with 0.85 bn kg/y or 12.6%. The drop in the UK makes up 26% of that of EU-27 & UK in total (UK population is 13% of the EU-27 & UK together)

Production of Drinking Milk (Eurostat code: 2100) for the UK
from 2010 to 2023



in kt



How do UK milk prices look when corrected for inflation*?
UK milk price levels today are just above all-time-low-levels of 2016. No wonder, milk pool growth is lacking.

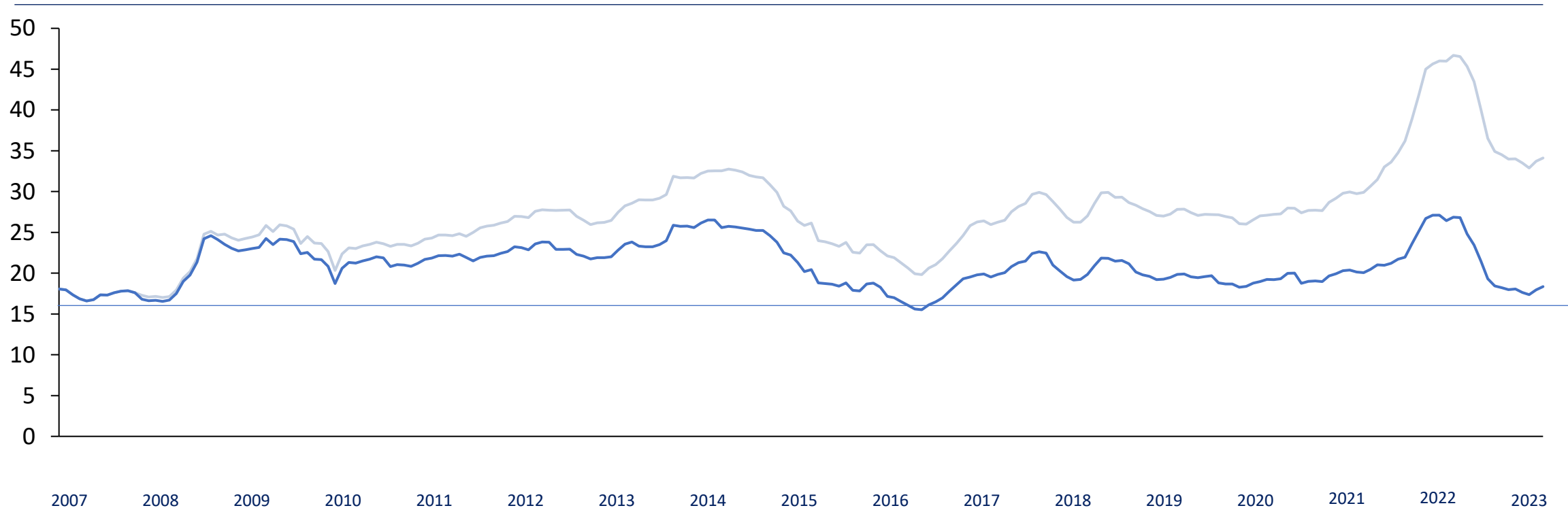


Weighted average UK milk prices; SCM-basis

— Actual
— Inflation-corrected



In £ / 100 kg



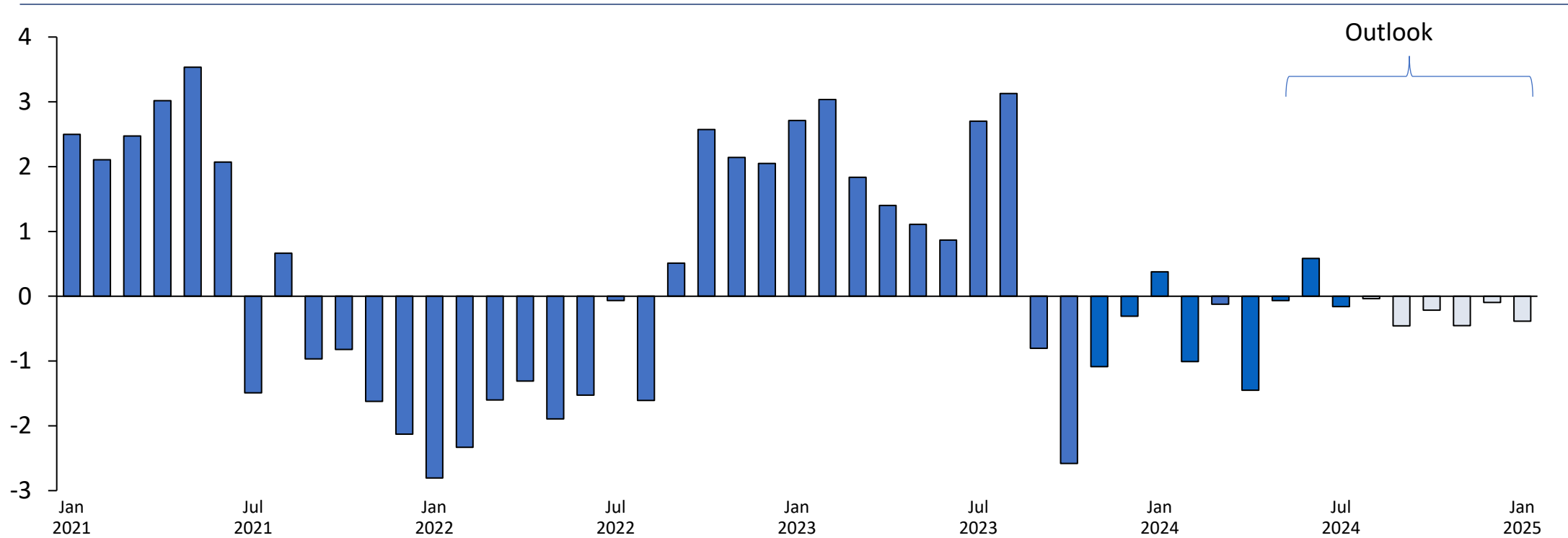
*inflation source: OECD.

UK raw milk supply growth outlook. Take-out: ongoing stagnation expected...as many farms have trouble to make ends meet



Raw milk pool growth outlook UK (volume) (SCM-basis)

Y-on-Y change on monthly basis (in %)



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Net favorable outlook for UK dairy farming...



Opportunities	Challenges
<p>Supply of raw milk globally ever more constrained</p> <p>Growth of global middle class consumer group</p> <p>Westernization of global diet (esp. youngsters: pizza, burger)</p> <p>→ Drivers for global scarcity of cow's milk</p> <p>→ Global dairy prices likely to structurally exceed inflation</p> <p>UK dairy chain looks better positioned than e.g., traditional dairy exporters (e.g., lower farming intensity & self-sufficiency)</p>	<p>UK is a relatively isolated dairy market, sensitive to local economic and regulatory woes. Dairy consumers become more demanding.</p> <p>No net growth in dairy consumption (LME) expected in UK, but access to world market looks to improve, so there is always a buyer</p> <p>Dairy remains a cyclical and volatile business</p> <p>Tightening requirements and regulations in carbon and beyond</p> <p>Investment intensity to meet (future) on-farm requirements to qualify for delivery is up</p> <p>Cost of capital likely structurally to be up compared to past years</p> <p>Monetizing sustainability requires willingness-to-pay/invest across the entire chain</p>

...but to thrive economically as dairy farmer there is increasingly little room left for sub-optimal choices



You have to choose horses for courses...

i.e. you must match your farm's choices with the supply chain you are in

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Your metrics: score your own farm (silently), scale 1-10. To what degree...



... does your farm fully 'match' in terms of business model with the product portfolio of the processor I deliver to and the end markets the processor is in?

... (when your processor is in commodities / possibly focused on exports) can your farm handle the intrinsic volatility of the *relatively* volatile pay-out you may have to expect?

...(when your processor delivers to UK retail), can your farm's balance sheet carry the investments required to minimally keep meeting the retailers' requirements (sustainability in the broadest sense)?

...can your farm grow to keep your unit cost of production at least as low as your various neighbors?



Thank you

Sept. 5, 2024

Erik Elgersma