Supply and demand developments in a global perspective

Whey

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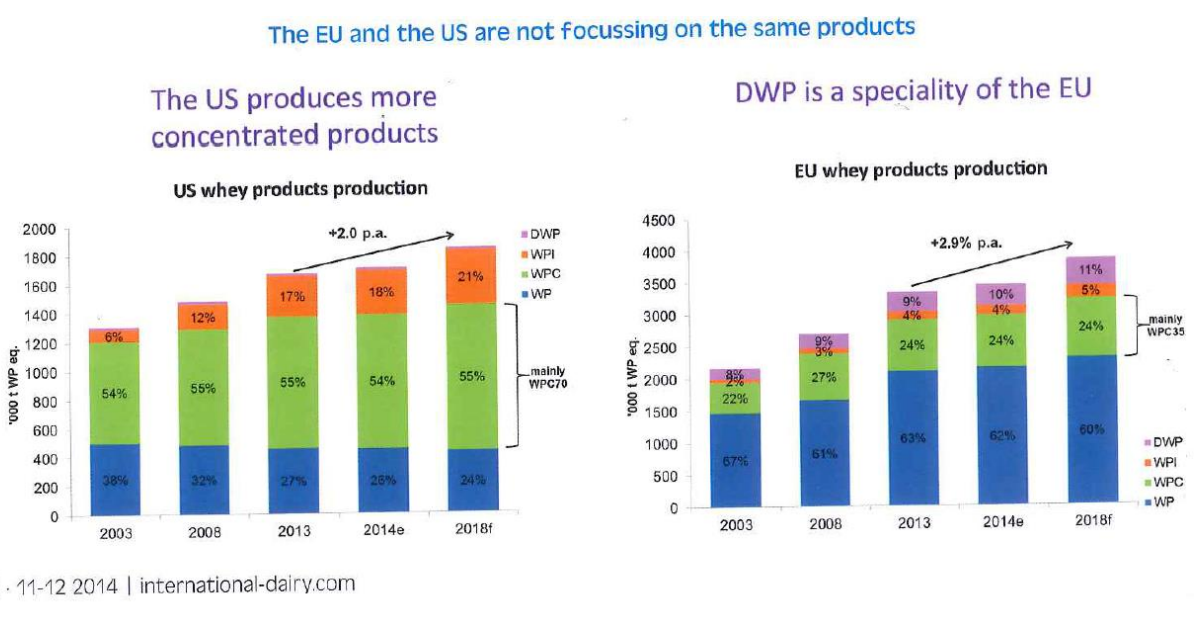
The EU and the US are the main suppliers of whey products, but each with their own specificities which is of course in line with the global cheese production breakdown. In 2013, the EU manufactured 9.209 m tons of cheese, equivalent to 48% of total world production. Second were the US with 5.035 m tons, or 27% of global cheese manufacturing. Brazil ranked at the third position with 966,000 tons or 5% of total cheese making, followed by Turkey with 574,000 tons or 3%. Total cheese production was 18.8 m tons in 2013.

Production

Global production of whey products will possibly reach 5.6 m tons (standard WP_{eq}) of which the EU will have a share of 62%. The US will come to a share of 30%, followed by New Zealand and Australia with 3% each and Argentina with a 2% share. To this total, whey powder will contribute 48% or 2.7 m tons, WPC represents 36% or 2 m tons WP_{eq}, WPI production will be around 5.1 m tons WP_{eq} (9%) in 2014 and that of demineralized whey powder will reach 3.7 m tons (7%) this year.

Gira expects a global cheese production increase of 1.99 m tons between 2013 and 2018 to almost 21 m tons. The EU accounts for around 40% of this growth, and the US' share of the increase will be 23%. But there will be significant difference in the development of whey products manufacturing in the EU and the US. In the US, WPI produc-



tion will keep on growing to 21% of total 2018 tonnage which will be about 1.8 m tons WP_{eq}. WPC will stay at a share of 55% of total production as will normal whey powder (24%). CAGR of whey products manufacturing will be 2% in the US until 2018.

The domain of the EU is demineralized whey powder. This specialty will reach a share of 11% in a total whey products production of 3.8 m tons WP_{eq} in 2018. 60% of the output of the EU will still be standard whey powder meaning a slight reduction in the overall portfolio. 24% will be the share of WPC, mainly WPC35 and WPI production will grow to a 5% share. The CAGR of whey products output of the EU will be around 2.9% until 2018.

Consumption

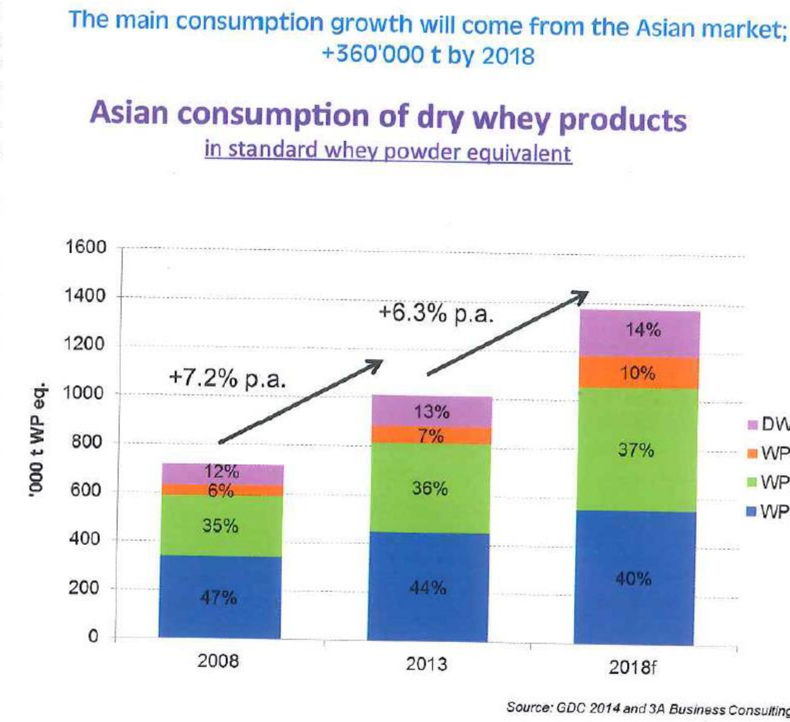
Out of the 5.6m tons of whey products that are likely to be made in 2014 on a global scale, 47% will be consumed in the EU, 21% in the US, 13% in China, another 7% in the rest of Asia, 3% in the MENA area and 8% in Latin America. Global consumption is set to grow at a CAGR of 2.8% until 2018 reaching

Asia

The main driver of consumption growth will naturally be Asia. The growth rate will, however, go down from 7.2% CAGR until 2013 to 6.3% until 2018. WPI will show the biggest single category growth from around 7% in total Asian consumption in 2013 to 10% in 2018. Consumption of demineralized whey powder will also increase from 13% to 14%. But as overall consumption in Asia is forecast to grow by some 360,000 tons to 1.4 m tons, there will be growth in all product categories. Key segments of the future are infant food formula in Asia.

Russia

For the EU dairy industry the Russian embargo could well be "a last straw", coming at the same time as a major cyclical crash in world commodity prices. With the Russian embargo, the EU might lose 257,000 tons of cheese export corresponding to approx. 2.7% of its overall cheese production but 33% of the EU's total cheese exports. Also, 21,000 tons of SMP and 25,000 of whey powders, both representing 5% of total EU exports could get lost.



Assuming that all this cheese milk was converted into milk powders, the implications are the following:

1. SMP prices will be affected negatively (in an already declining market), given the additional volume which would be produced
2. Around 150,000 tons of standard whey powder could be lost in a year, i.e. 5% of total current EU production.

Analysis and outlook

The EU and US together supply more than 90% of global whey consumption. They have different strategies in terms of type of whey products and utilizations:

1. There is still large production of basic powder dedicated to feed in Europe
2. As far as value-added whey products are concerned, the US is focused on WPI for nutritional/clinical uses and the EU is No. 1 for demineralized powder, mainly used for infant formula.

Global demand for whey will continue to increase strongly in the coming years:

1. Infant formula is the key end-user segment
2. The growth is mainly due to Asian countries' demand (with a major contribution from China), in terms of both volume and % growth

Gira expects that world cheese production growth should allow future global demand for whey to be satisfied. In the EU alone, more than €2.3bn of investment has either just been made or is to be commissioned in the near future. A large part of this concerns drying capacity to process whey or even directly for the manufacture of infant formula.