

European and international dairy market situation and how to deal with the price volatility

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Market analysis

- Weekly/monthly dairy market analysis Europe, US, World
- Cost analysis of the dairy supply chain
- Process cost analysis of dairy industry



Market information

- Calculation of forecast indicators
- Calculation of European dairy market indices
- Calculation of milk futures prices
- Weekly evaluation of dairy spot markets

Consulting for dairy companies

- Consultancy for dairy and food industry
- Expertise for milk and dairy contracts
- Consulting/expertise
- Optimization product portfolio

Seminars on dairy markets

- Qualification program board of directors / board of management
- In-house seminars and trainings on dairy risk management



ife research project example: Economic analysis of EU dairy sector development beyond 2015



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University of Applied Sciences Kiel, Faculty Agriculture, Osterrönfeld
in Cooperation with
ife Food Research Institute Kiel

Research Paper

**Economic Analysis of EU Dairy Sector Development
beyond 2015:
Trade, Exports and World Market Integration**

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Kiel / Rendsburg, September 2013

Study: Economic analysis of EU dairy sector development beyond 2015

- This study is a contract work for the EDA (European Dairy Association) and is finished in September 2013.
- Presentation of the results: 26.09.2013 at the EDA Conference in Cologne and copies presented at the EU Conference on milk markets in Brussels in Sept. 2014.
- The study analyses the impact of the world milk market on European milk markets and prices in terms of changes in production, consumption, trade, price developments, and trends from 1990 to 2025 on the world market, on the EU market and in selected countries/regions.

ife milk indices: helpful for forecast and set up of reference values in milk contracts

IFE Milk value Europe

- Products: smp / butter NL, F, FRG
- Cash market
- futures market

IFE Milk Value Germany

- Products: smp / butter FRG
- „Kieler Rohstoffwert“

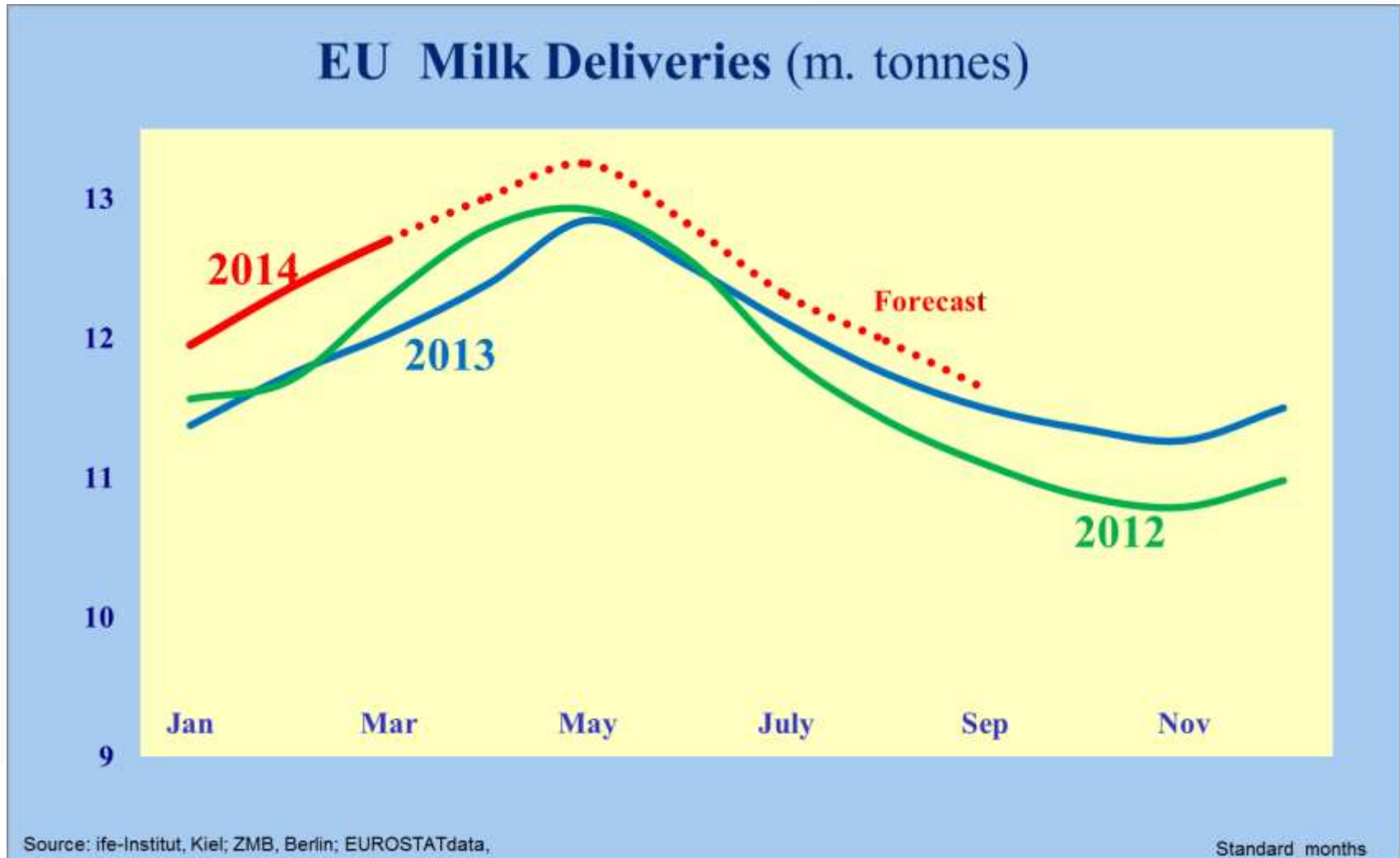
IFE spot milk value

- Products: Skim milk concentrate / cream FRG

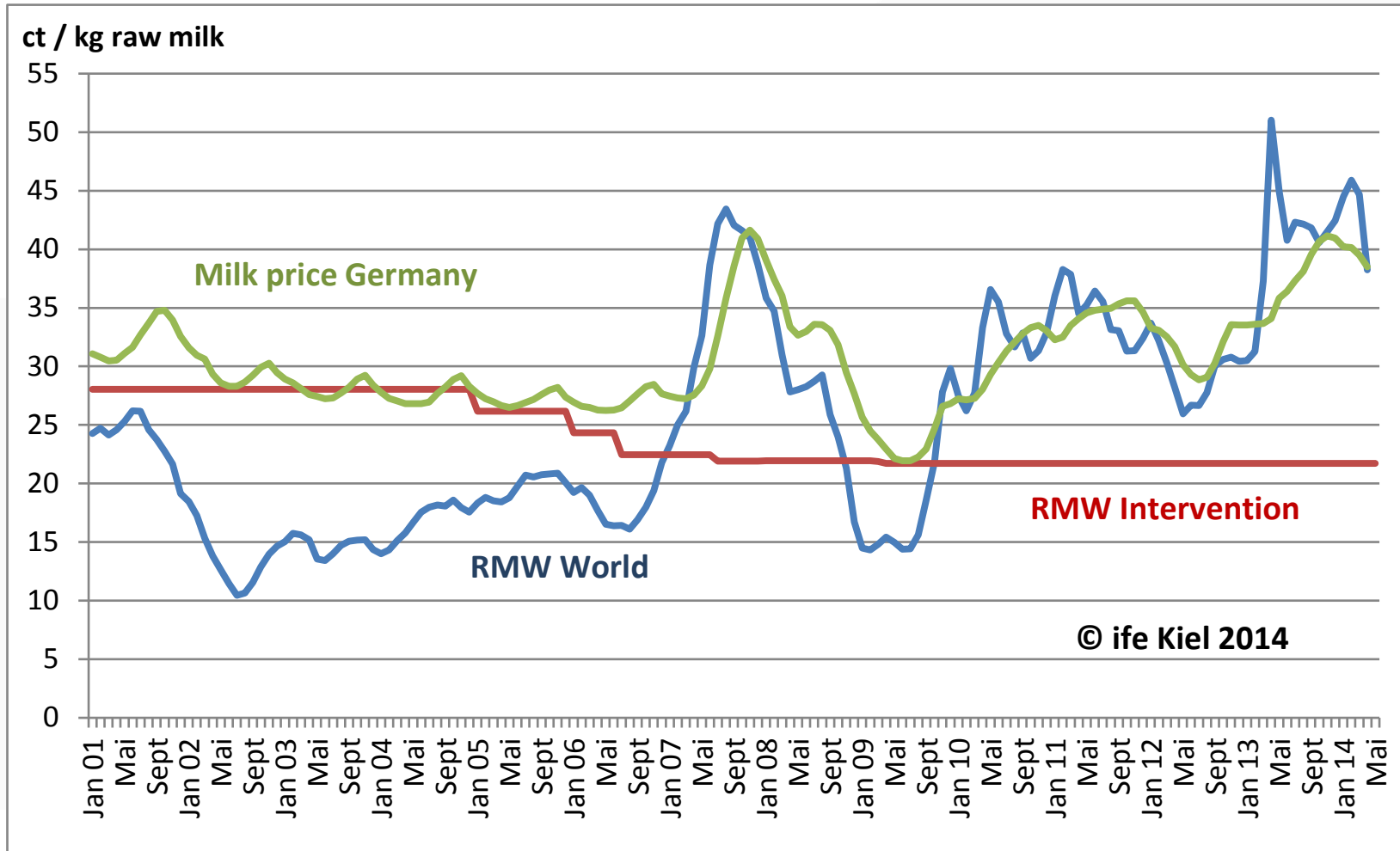
IFE Overall milk value Germany

- Products: smp, butter, smc, cream, cheese, wheypowder, fresh milk, UHT milk, bmp

EU milk deliveries: An increase of 4 million t (+3%) in 2014 seems to be realistic!

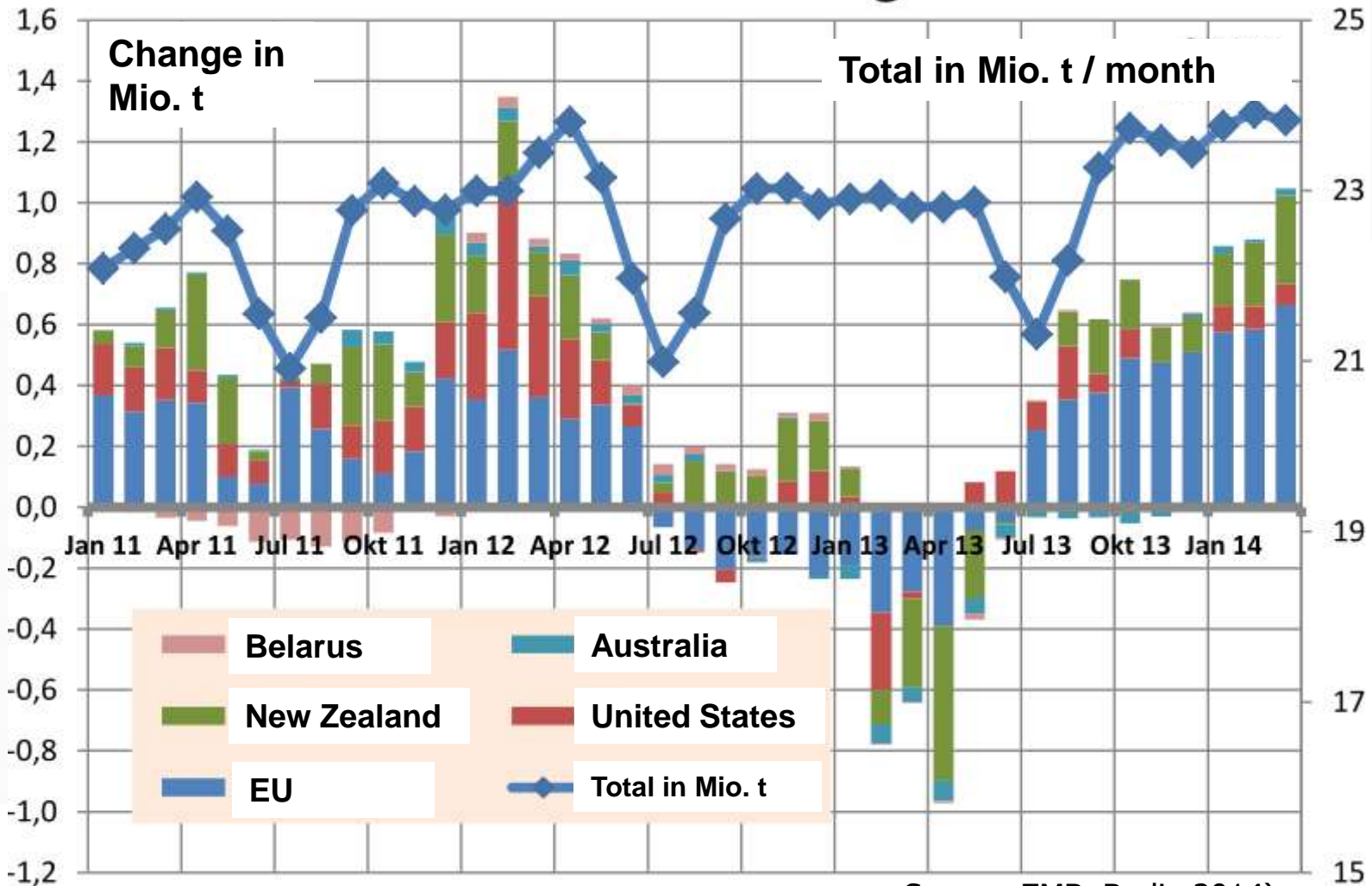


Actual EU minimum milk price level determined by raw milk value at world level (RMW World)



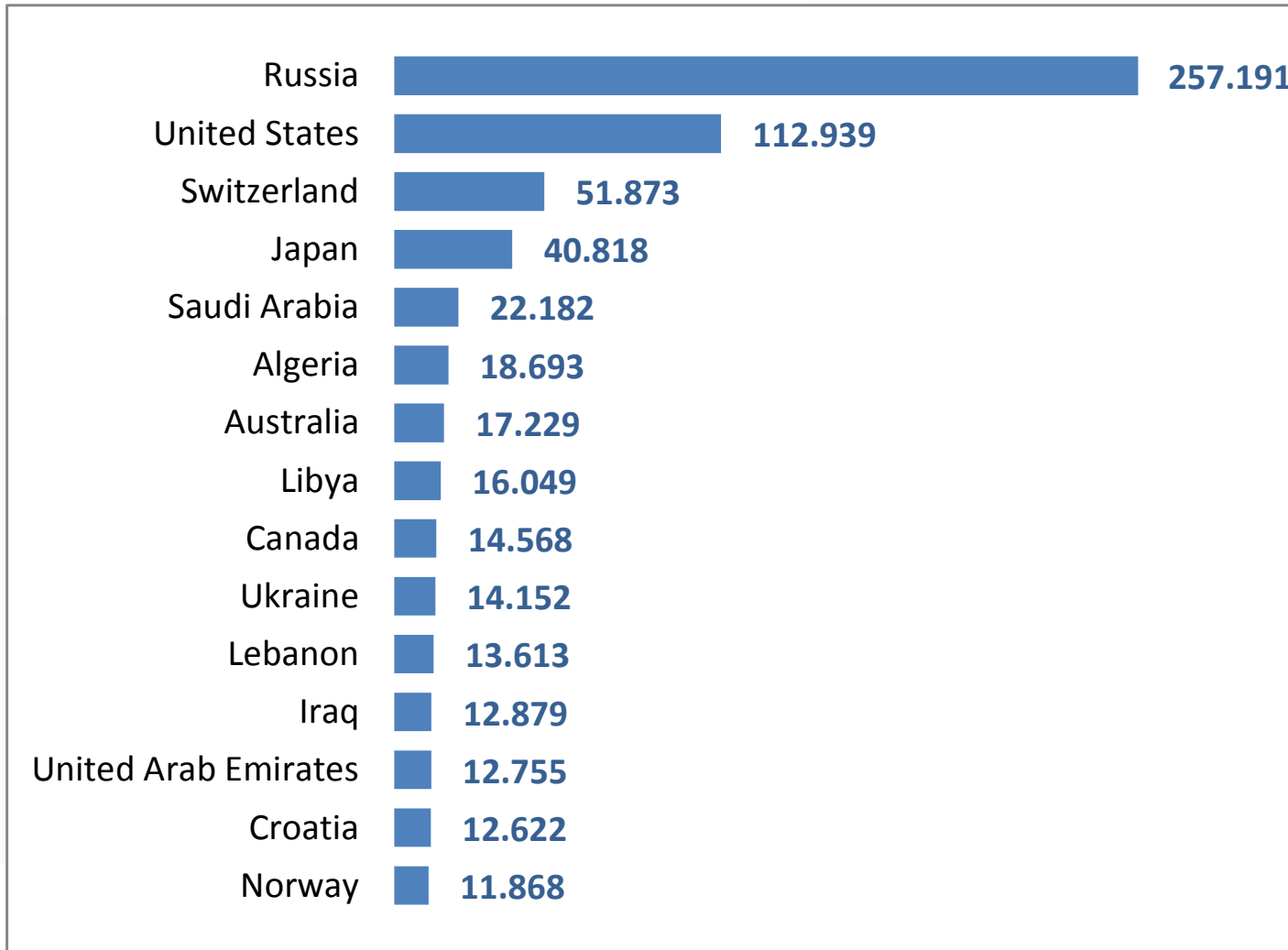
Source: ife Institute Kiel, own calculations based on BLE, USDA, AMI, ZMB.

Change in milk production of important countries (Δ Mio. t per month) and in total Mio. t per month



Source: ZMB, Berlin 2014)

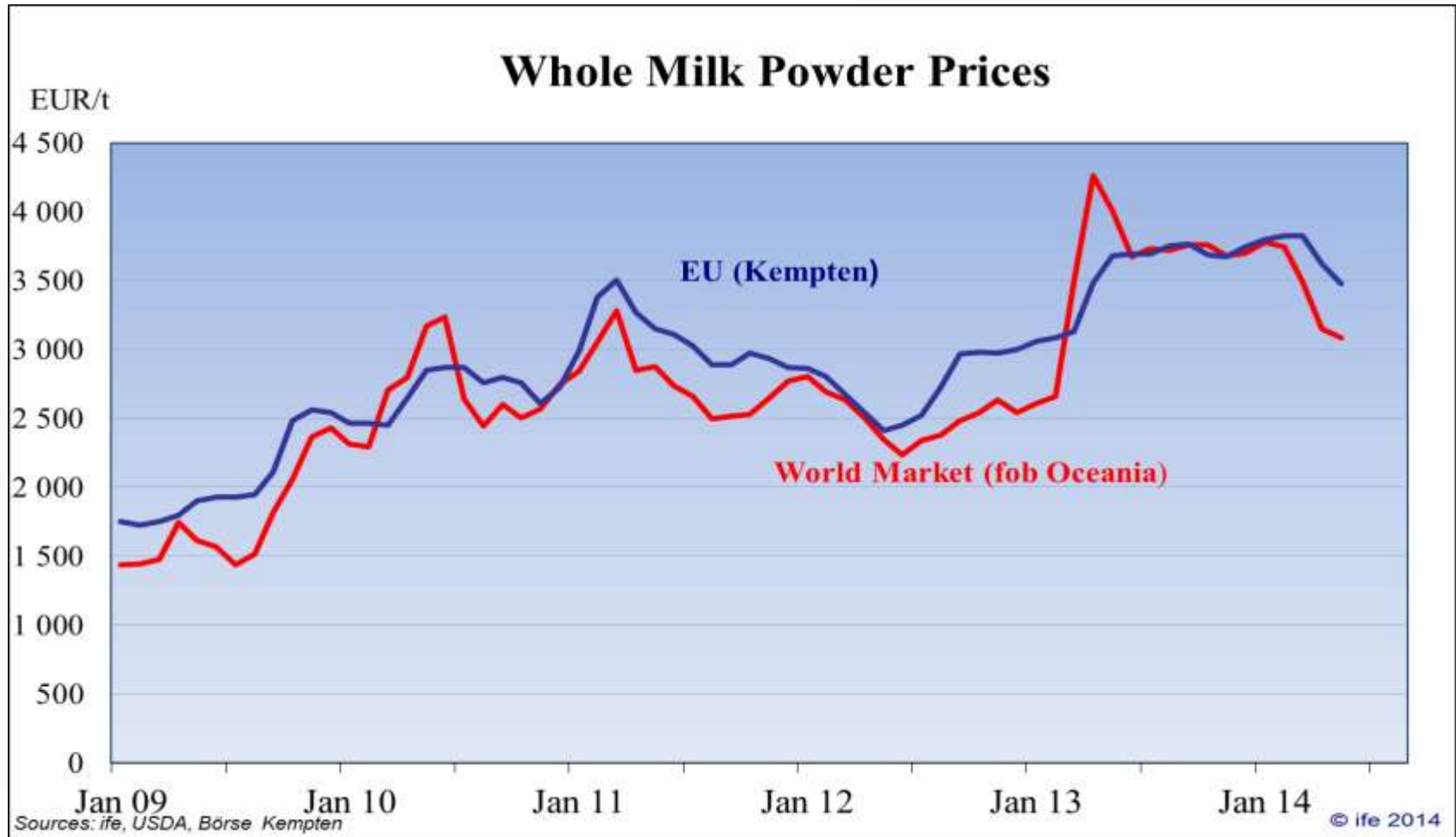
EU Exports of Cheese (2013, tons): High impact of Russian cheese imports on EU milk markets



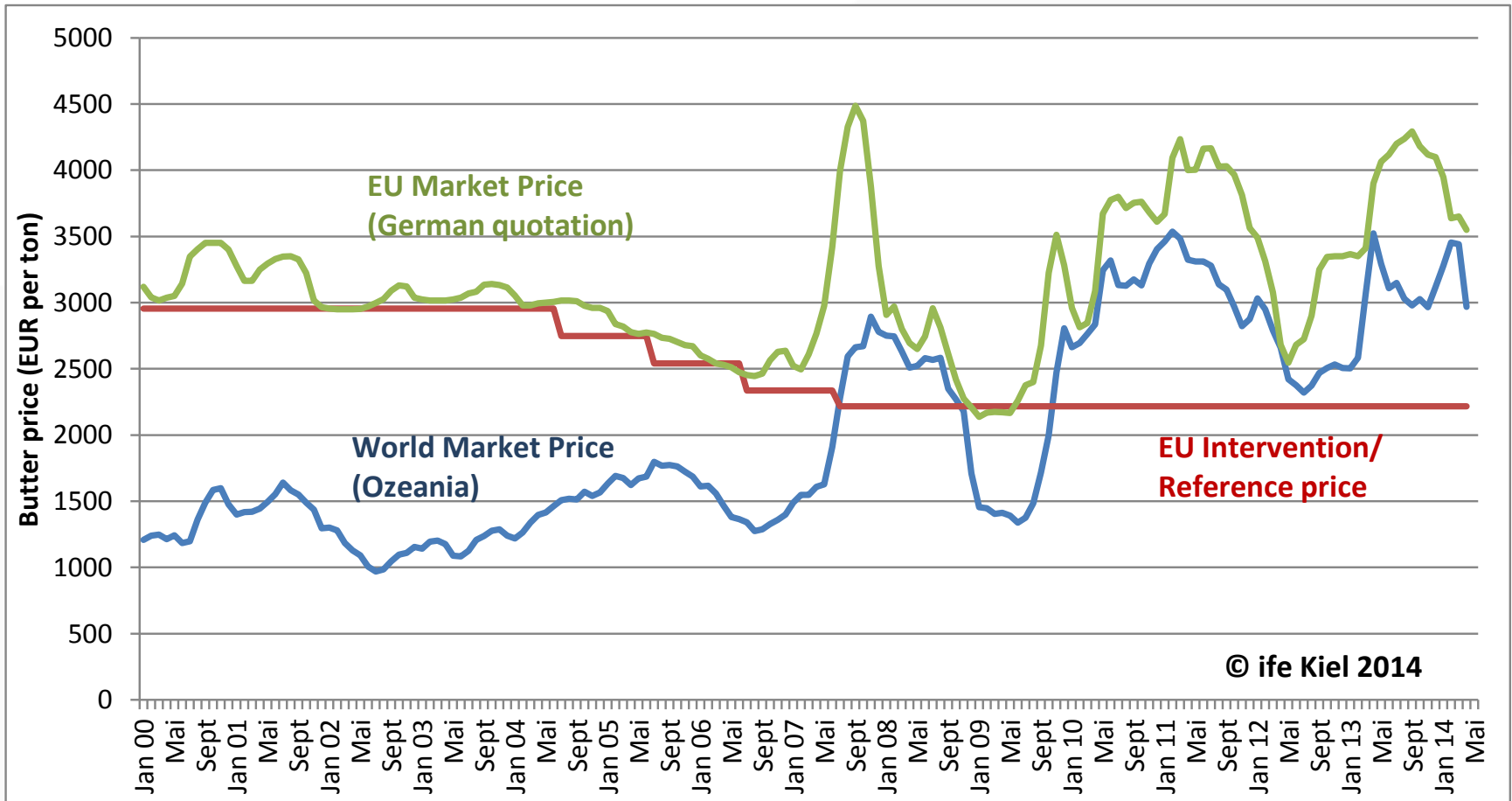
Restricted cheese exports and build up of storage: Impact on world and EU cheese prices



EU milk powder production has been extended: milk powder tend to be in line with world prices

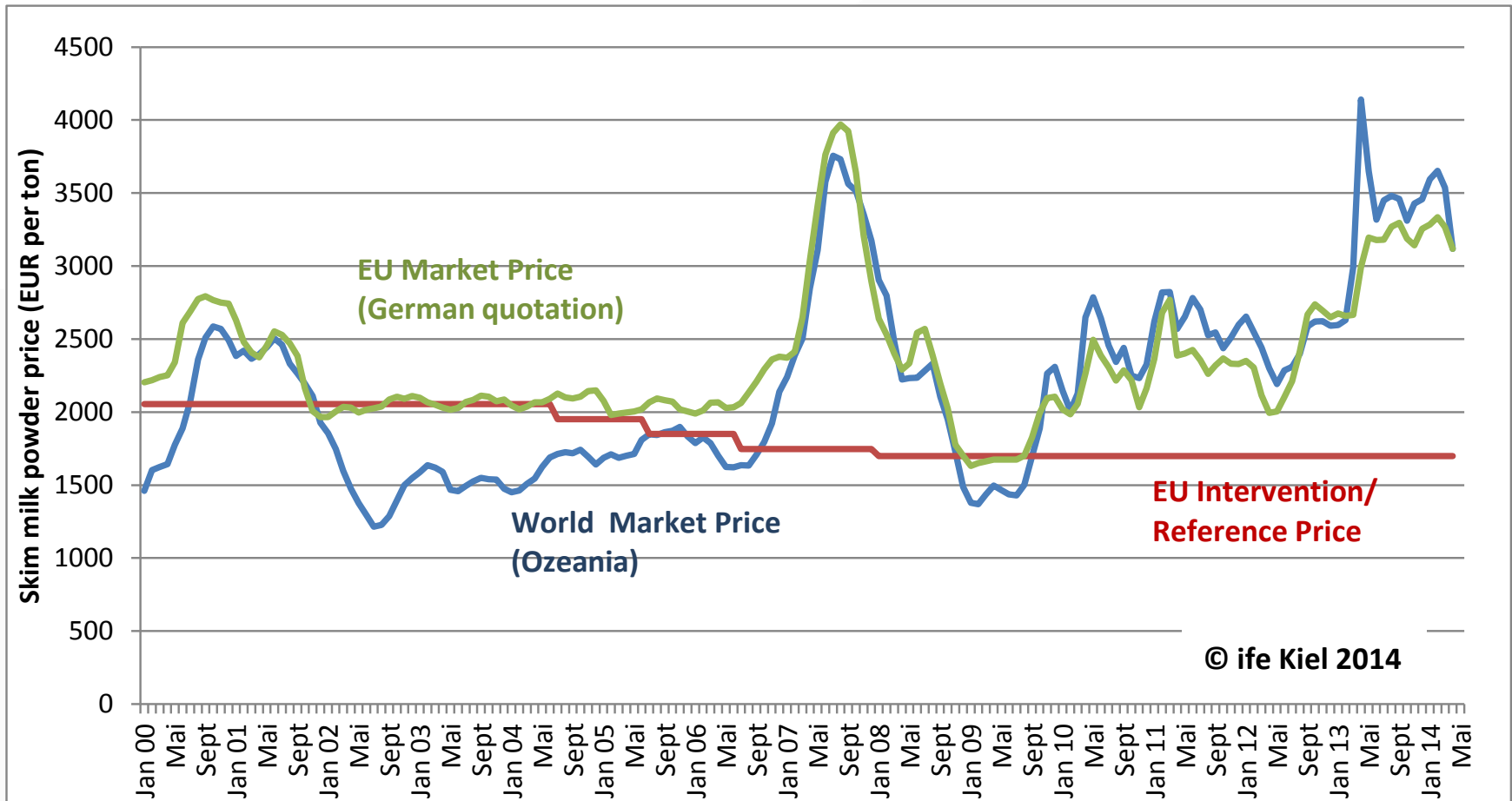


Convergency and trend to lower prices: World and EU butter prices



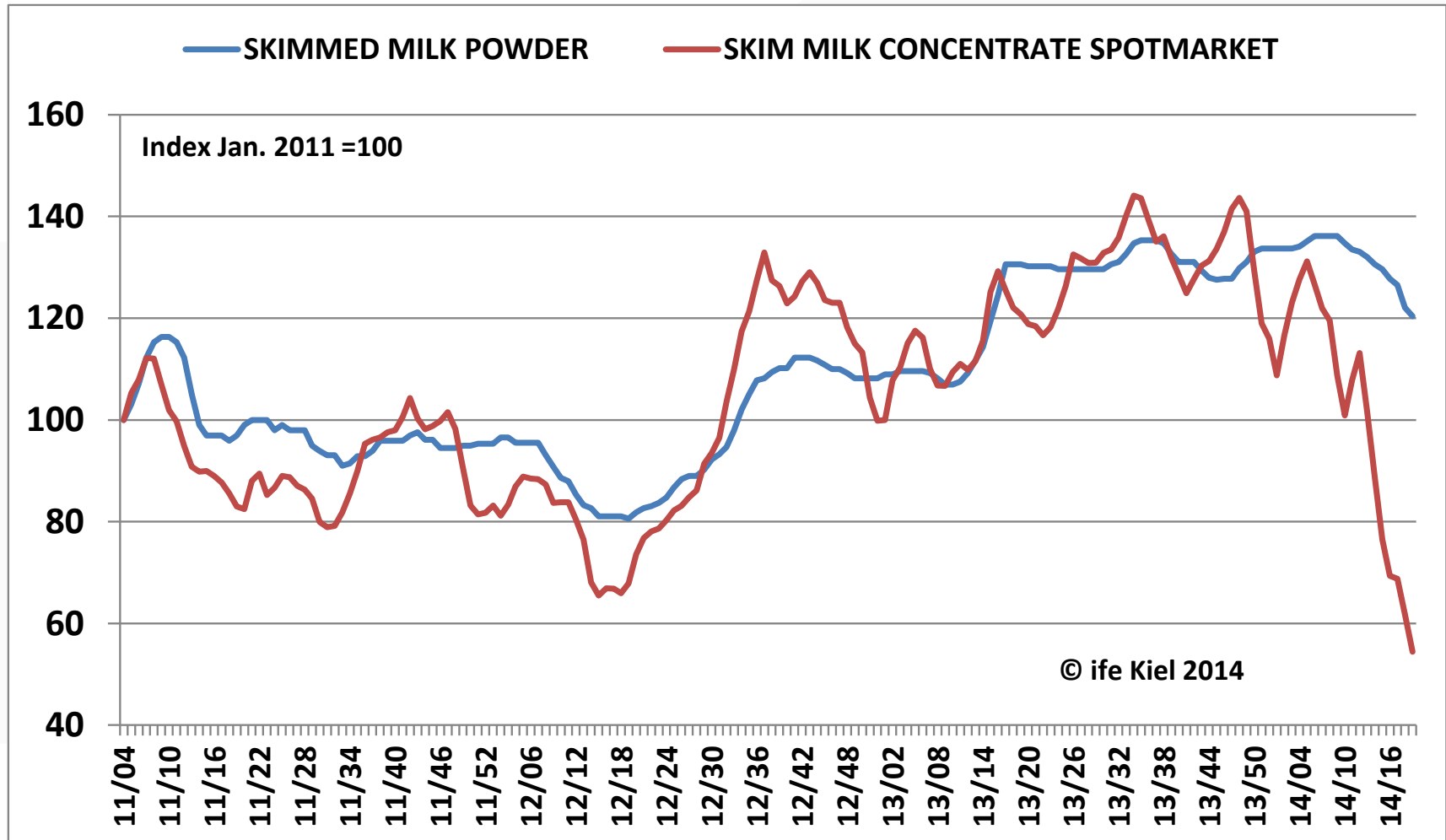
Source: ife Institute Kiel, own calculations based on BLE, USDA, AMI, ZMB.

Convergency and trend to lower prices: World and EU skimmed milk powder prices

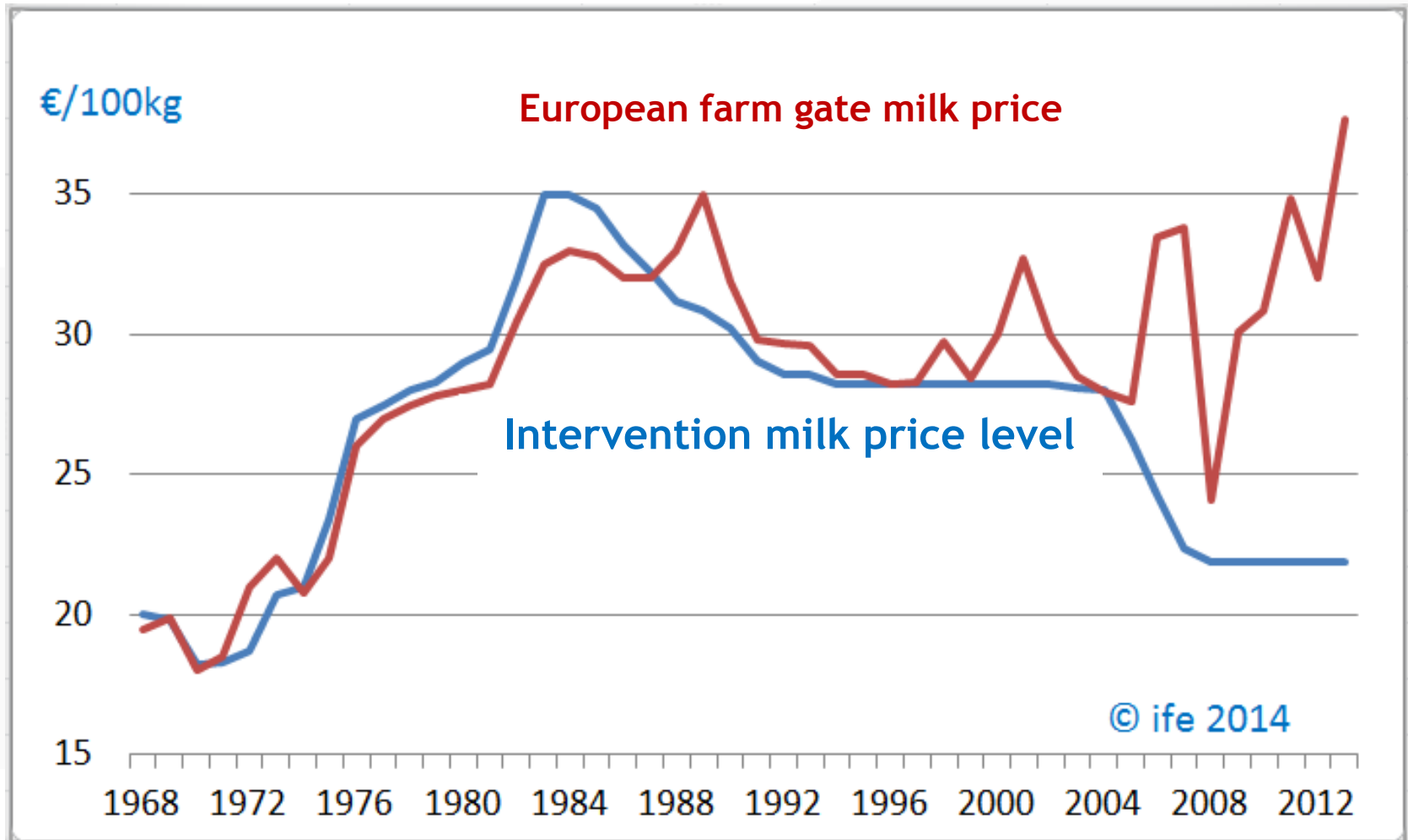


Source: ife Institute Kiel, own calculations based on BLE, USDA, AMI, ZMB.

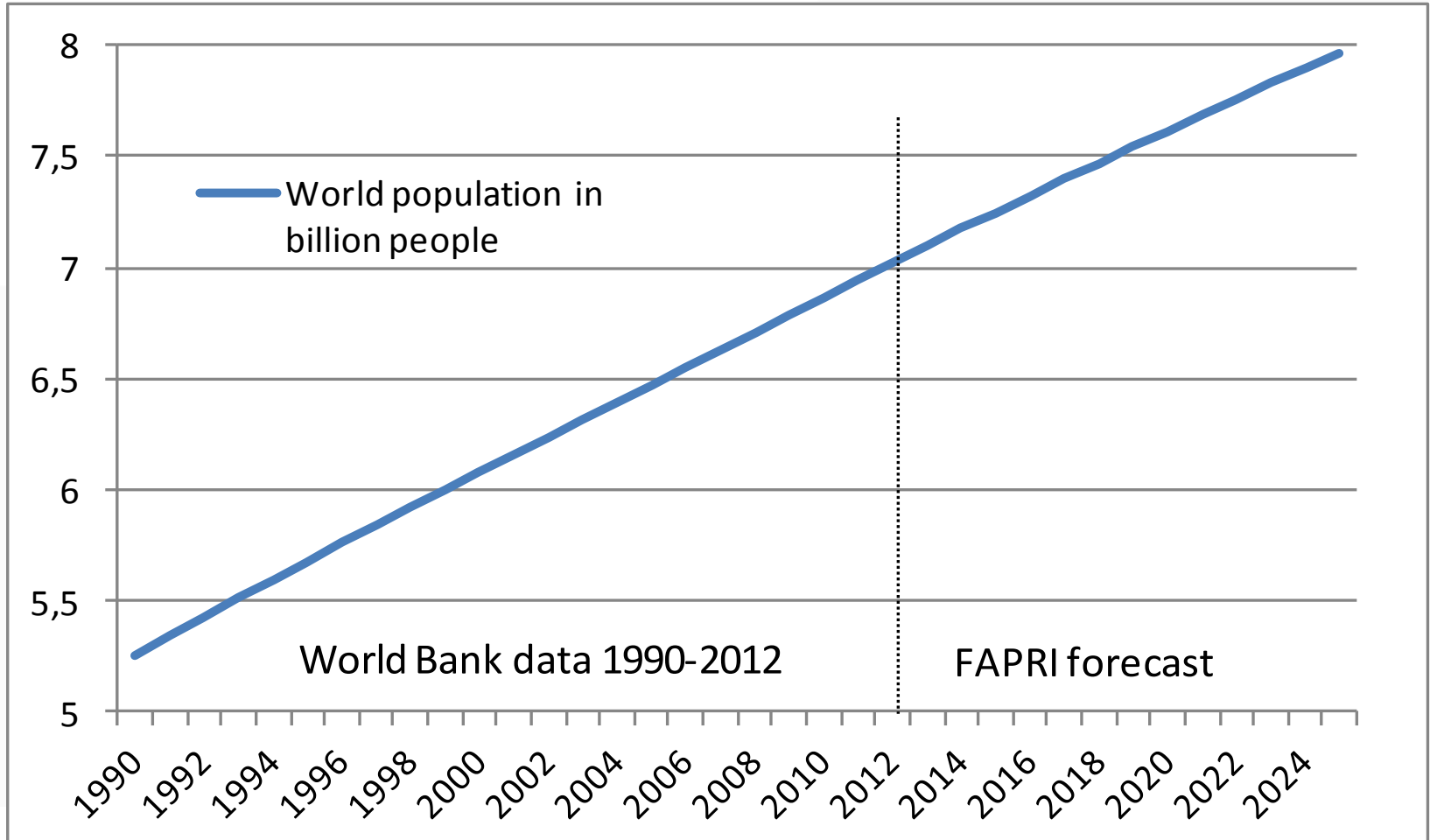
High spread in skimmed milk prices in 2014: market adjustments are expected



New era in European milk prices since 2006: world market based high milk price volatility!

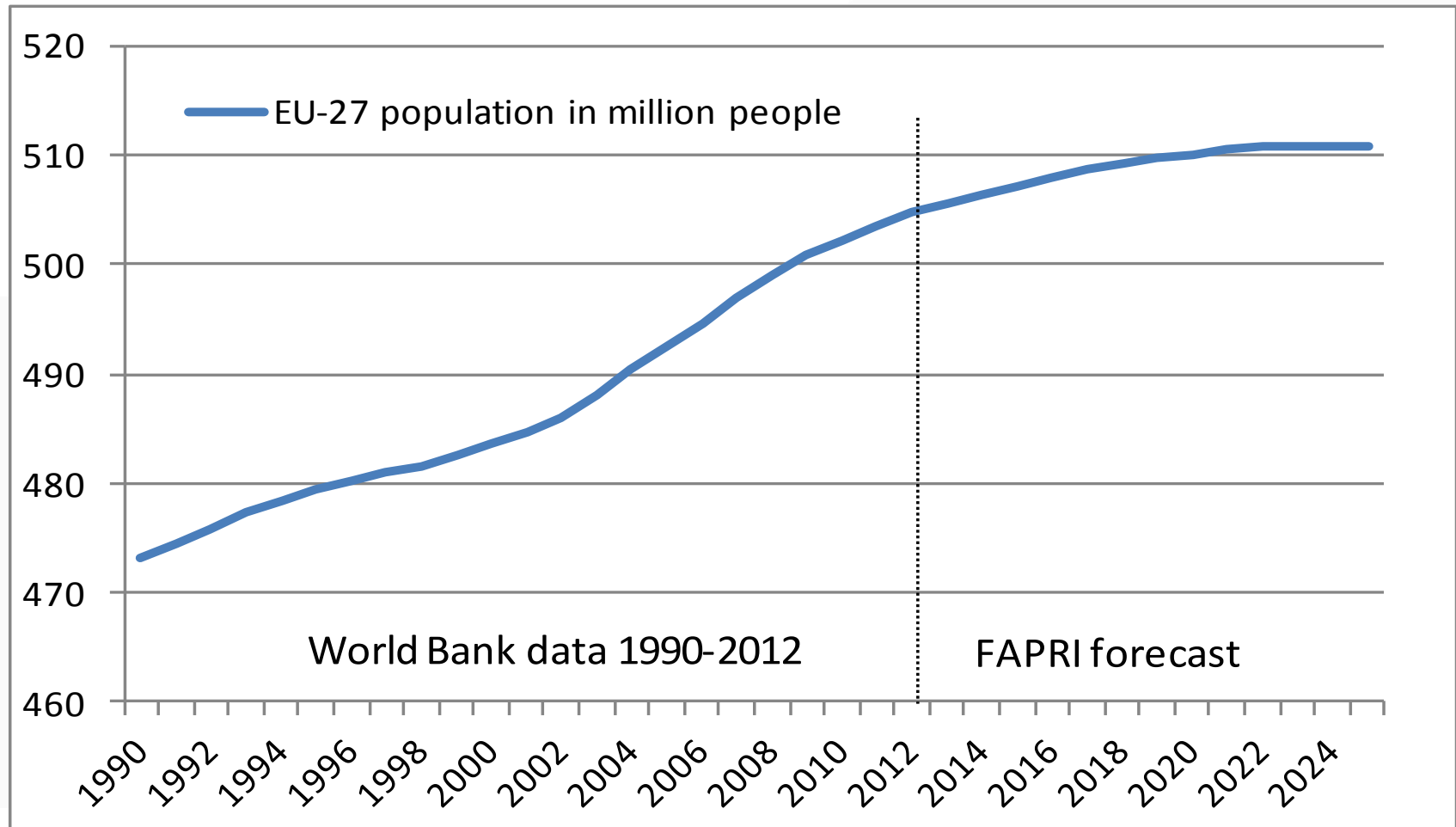


World population development and forecast until 2025: Growing milk demand



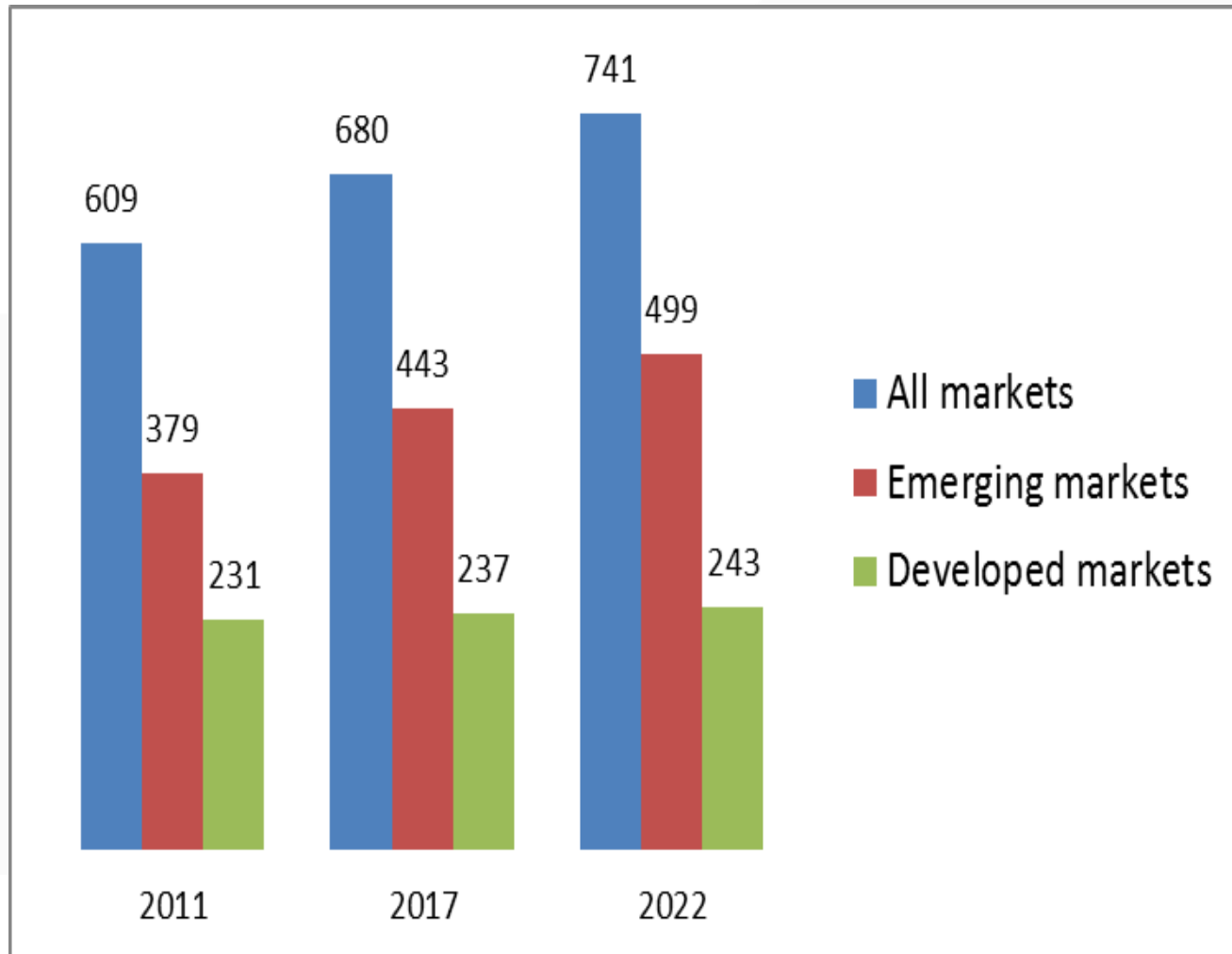
Source: *World Bank, FAPRI, 2013.*

EU population development from 1990 until 2025: stagnation or lower milk demand

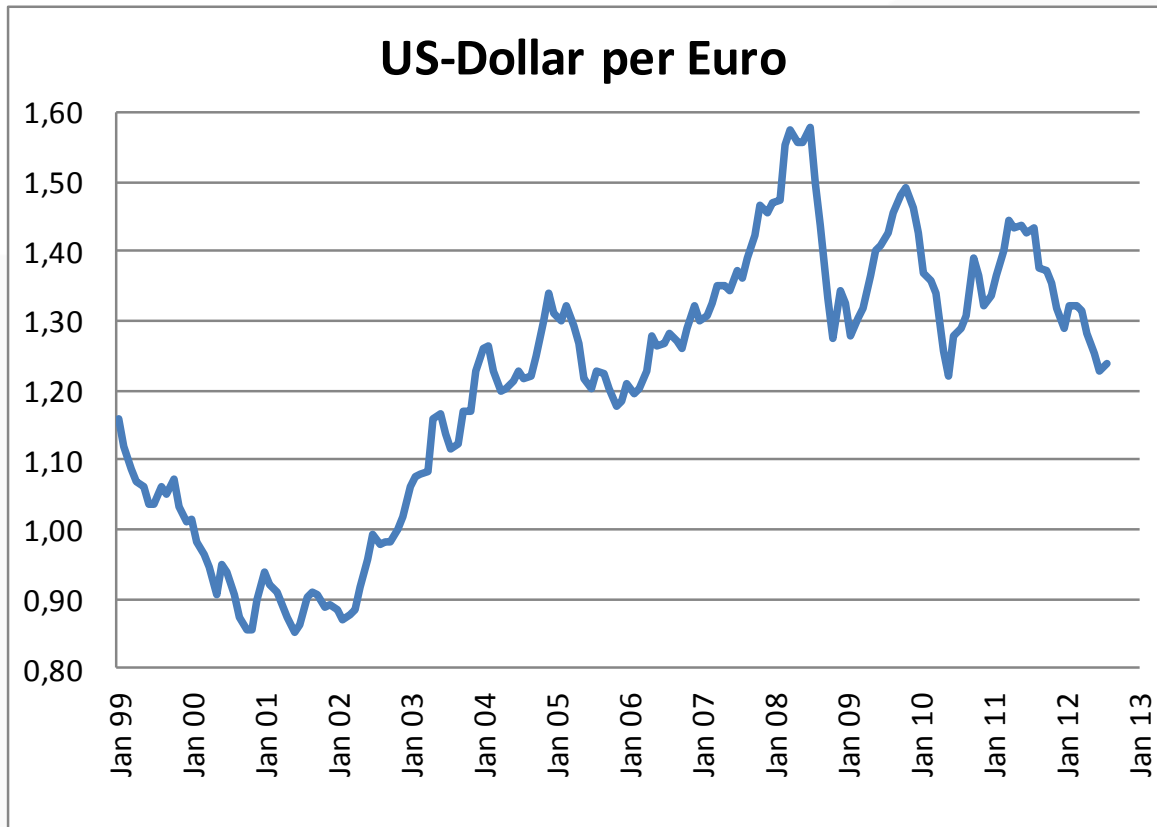


Source: *World Bank, FAPRI, 2013.*

ife Study 2013: Demand for all dairy products in milk equivalent terms until 2022 in m.t.



USD : EUR currency effects: Revaluation of the Euro decreases milk prices in the EU!



Source: ife, ECB

Devaluation of the EUR increases European milk prices: Example:
Jan. 2010: 1,45 USD/€
June 2010 1,20 USD/€
= -25 USD Cent
= +7 Cent/kg milk in EU.

The revaluation of the EUR decreases European milk prices. Example:
June 2010
Nov. 2010 uro from 1,20 USD/€ begin June 2010 onto 1,40 USD/€ begin Nov. 2010., that means **+ 20 USD Cent**, produced an EU-pricing pressure of **- 6 Cent/kg milk**.

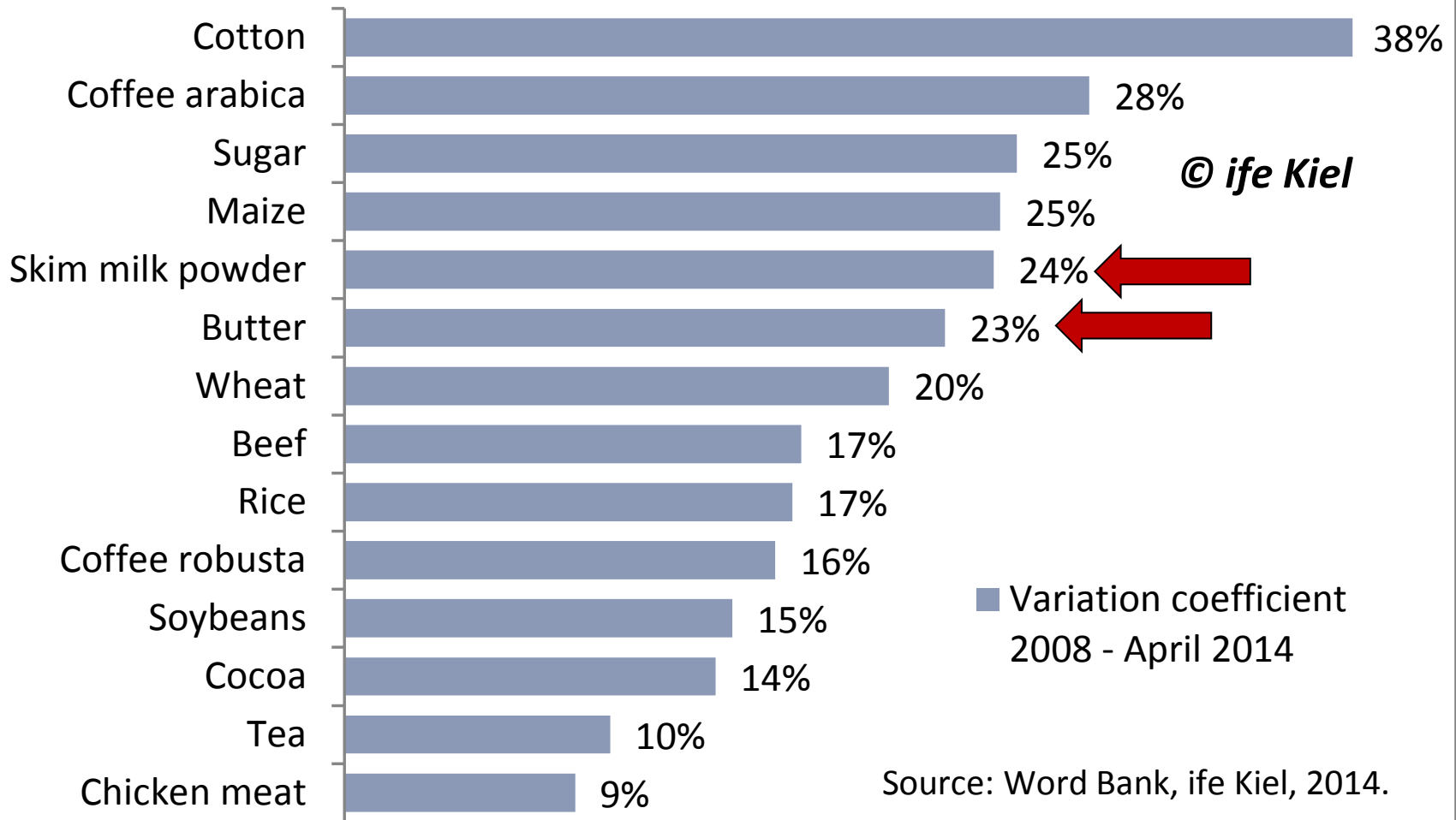
Proportion of EU milk production exported out of the EU will increase in the future!

- Significant trend that proportion of EU milk production exported will increase to 22.6 % in 2022.
- Significant increasing proportion of EU milk production exported out of the EU up to 15.4 % in 2022.
- EU milk markets have already benefited from the world market price trends: From Jan. 2006 until Aug. 2013 an increase of world milk value by 1.0 Cent per kg milk increased the EU milk value by 0.78 Cent per kg milk on average.
- There is a strong positive correlation of 0.81 to 0.90 between EU milk prices and world market prices (from 2006 to 2013) (Source: Thiele, Richarts, Burchardi, 2013).

Milk price volatility will increase in the future

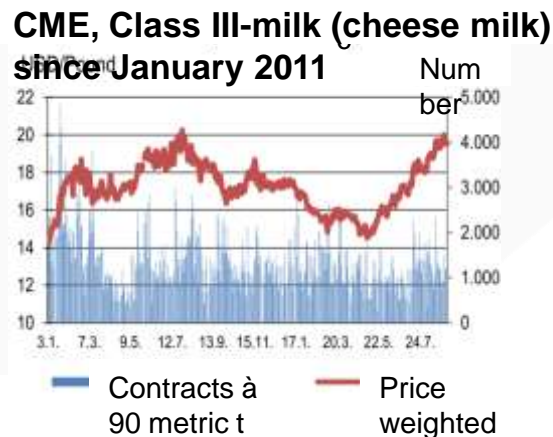
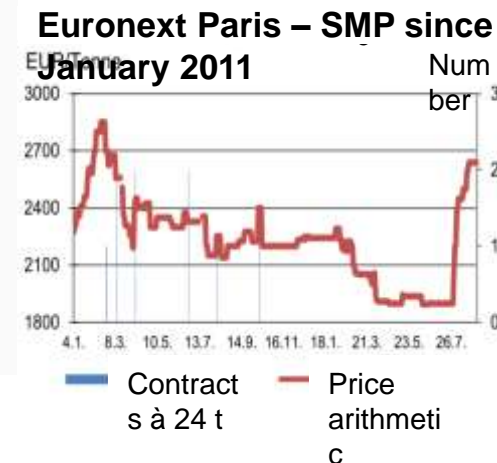
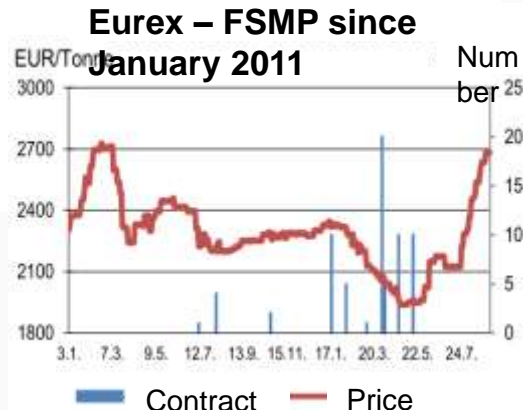
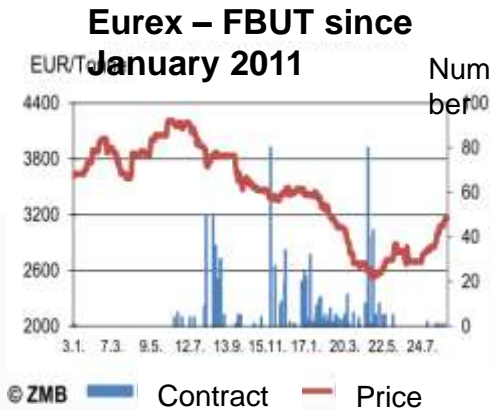
- EU will increase the market share on global dairy markets
=> connection to global markets increase
- New price risks for EU dairy markets due to international climate and weather risks
- New price risks for EU dairy markets due to currency risks
- New risk distribution in the EU dairy chain: EU dairy farmers try to reduce their risk taking position

Price risk of smp/butter > wheat, coffee, cocoa



Dairy Risk Management in order to prepare for post 2015 quota environment

Dairy futures markets in Europe and the United States



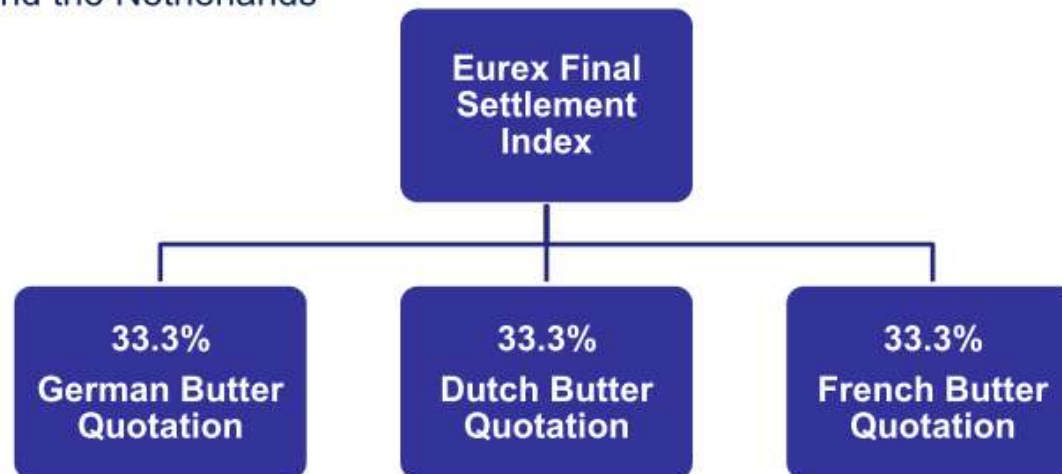
IFE Institute Kiel seminars and coaching for dairy risk management and dairy futures markets:

- e.g. how to hedge milk price market risks
- e.g. how to hedge cheese price market risks

Milk price hedging is possible: e.g. using Eurex European Butter Futures

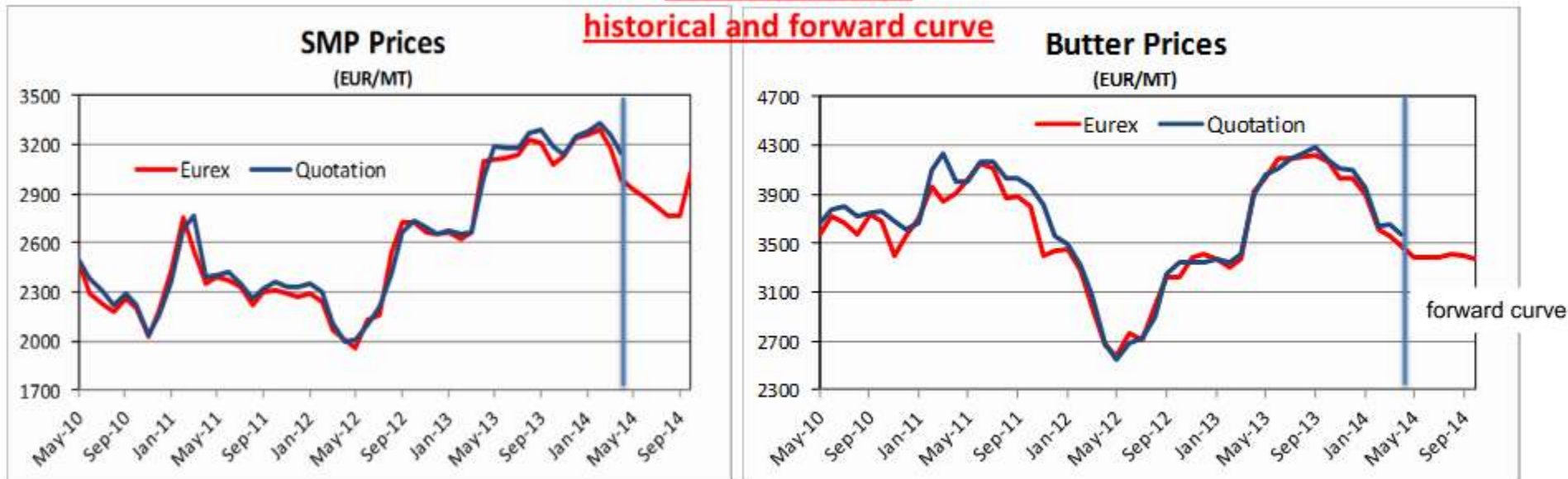
Eurex European Butter Futures

- Contract Size: 5 Metric Tonnes
- Contract Months: Near six months and quarterly thereafter, Jan / Apr / Jul / Oct Quarterly for 18 months
- Trading Unit: Euro per Metric Tonne
- Settlement: Settled as the weighted average of the settlement weeks (**final Wednesday per listed month**) published prices from three primary consumptive, productive and international trade regions for Butter in the EU, namely: Germany, France and the Netherlands



How does the physical quotation in NL, F, FRG relate to a financial hedge instrument?

Monthly average historical and forward curve



Source: Mondelez International, Dairy Risk Management Seminar, Amsterdam, May 2014.

Results

- International and EU milk production is coming back to former production growth after years of reduced growth.
- Adjustments lead to better supply-demand balances and allow to build up stocks and reduces volatility.
- Dairy commodity prices will be back to path of moderate price development.
- Dairy prices will move below the level of the second half year in 2013 but still above a level of 35 Cent per litre.
- EU-Butter prices will be closer to the international level
- EU will increase their shares in the international markets.

Results

- Higher EU export shares will increase volatility of milk prices due to exchange risks, political risks, economic risks.
- Hence, there is a strong need for dairy risk management strategies in European milk supply chain.
- In general dairy companies in Europe hedge the milk price risk through to the farmer.
- Growing dairy farms facing more liquidity restrictions and are interested in lowering the market price risk!
- A market oriented risk management strategy is hedging milk prices via dairy futures markets.

Thank you for your attention!

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