



**FOEX**

**FOEX Indexes Ltd.**

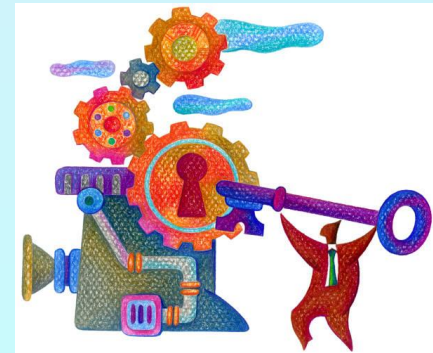
**UTIPULP – Nice, France  
September 21, 2012**

**Timo Teräs  
Managing Director**

# PIX Indexes – Facts, Challenges and Opportunities

## Agenda

- FOEX Indexes Ltd
- Indexes/ index system
- Challenges
- Opportunities



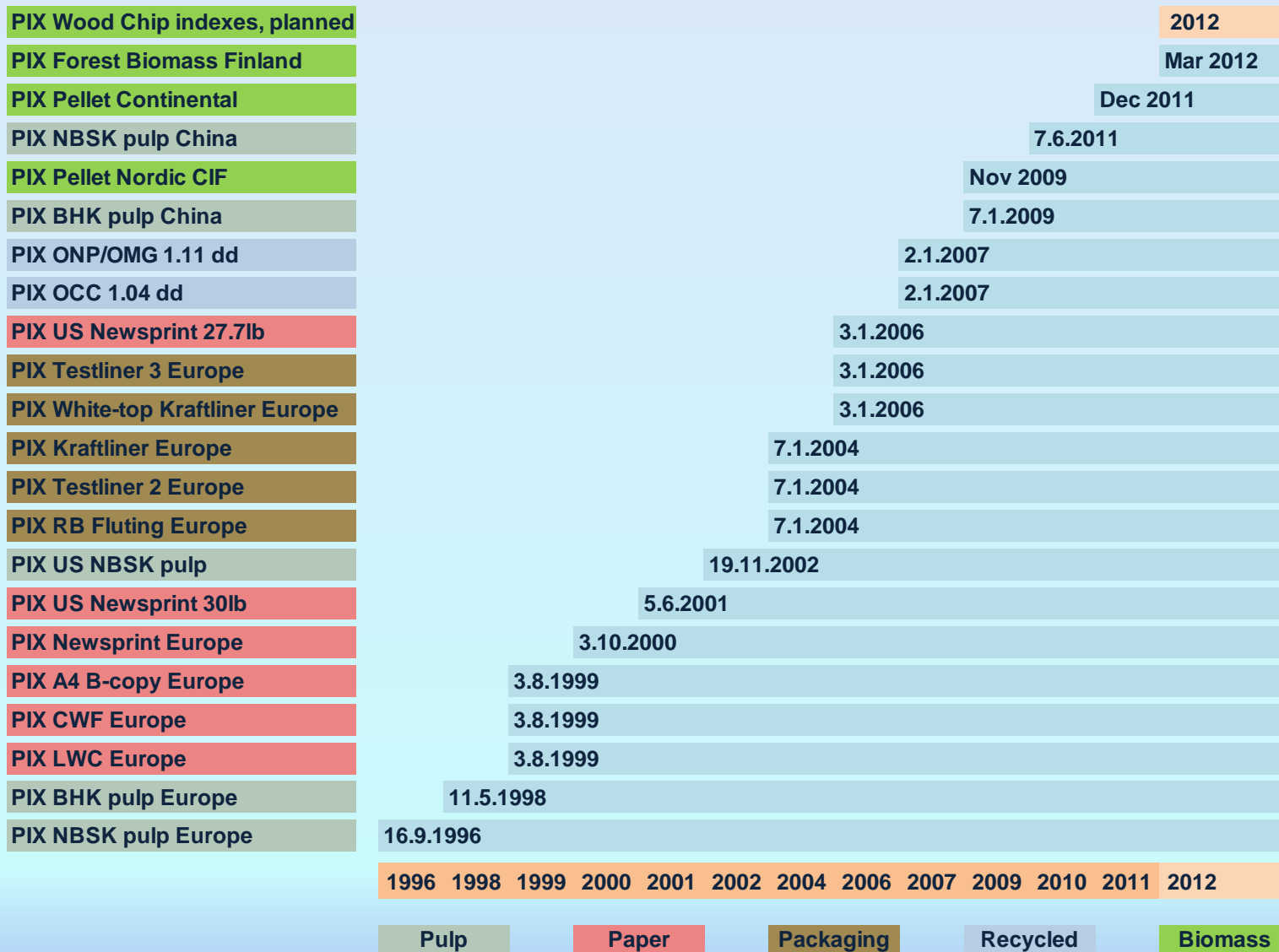


# FOEX Indexes Ltd

- **Private, independent company, located in Helsinki, Finland**
- **Owned by private individuals and investment companies**
- **1986 – Originally Finnish Options Exchange, then public company  
main products: exchange rate and interest rate futures and options**
- **1996-98 - First indexes launched: PIX trade-marked, pulp futures and options traded**
- **1999 - FOEX ceases to be an Exchange and is privatized. Name changed to FOEX Indexes Ltd. Indices become the core business**
- **Compiles and distributes audited pulp, paper and bioenergy price indexes**
- **Owns the trade marks rights to the PIX indexes as well as copy-rights**



## FOEX Indexes Ltd – Current and planned PIX Indexes





# PIX market areas





# PIX Price Indexes - Key Principles

- **FOEX is totally independent: no ownership links to any forest product companies**
- **FOEX is not allowed to do price forecasting**
- **Buyers and sellers evenly represented as price donors**
- **Participation to the index formation process must be voluntary and free of charge**
- **Participants must be allowed to remain anonymous (FOEX never mentions names of those who participate or those who do not)**
- **Index values are never retroactively modified; index system audited by Ernst & Young and approved by competition authorities (DG IV)**



# PIX Pulp Indexes - Challenges

- **Retroactive decisions on pricing (Baisse/Hausse Clause / invoiced or targeted price )**
- **Pricing based on last month's market price**
- **Most representative prices (weighting by tons) vs. most suitable prices**
- **Varying share of spot vs. contract business; also: only new deals spot**
- **Changing size and varying use of price discounts (in China net vs. gross)**
- **Reporting prices of late deliveries (in absence of new sales); spread**
- **Announced new price vs. invoice to consignment stock vs. invoice to buyer**
- **Weighing or not**
- **Auditing price quotes at price provider's end**



**Indexes are only as correct and accurate as the price quotes received!!**



# PIX Pulp Indexes - Opportunities

## **Existing**

- **Use as direct reference value in normal physical trade (growing rapidly)**
- **Use as a primary or secondary reference in financial price risk management products (banks, exchanges)**
- **Group internal pricing**
- **Other internal use (market research, valuations)**
- **Authorities, press and other external needs**

## **Potential new**

- **Need for a net price index for pulp and possibilities to collect the data**
- **Clearing a swap through an Exchange replacing credit risk insurance or letter of credit**
- **Risk management products on the price gap between fibre and paper/board**

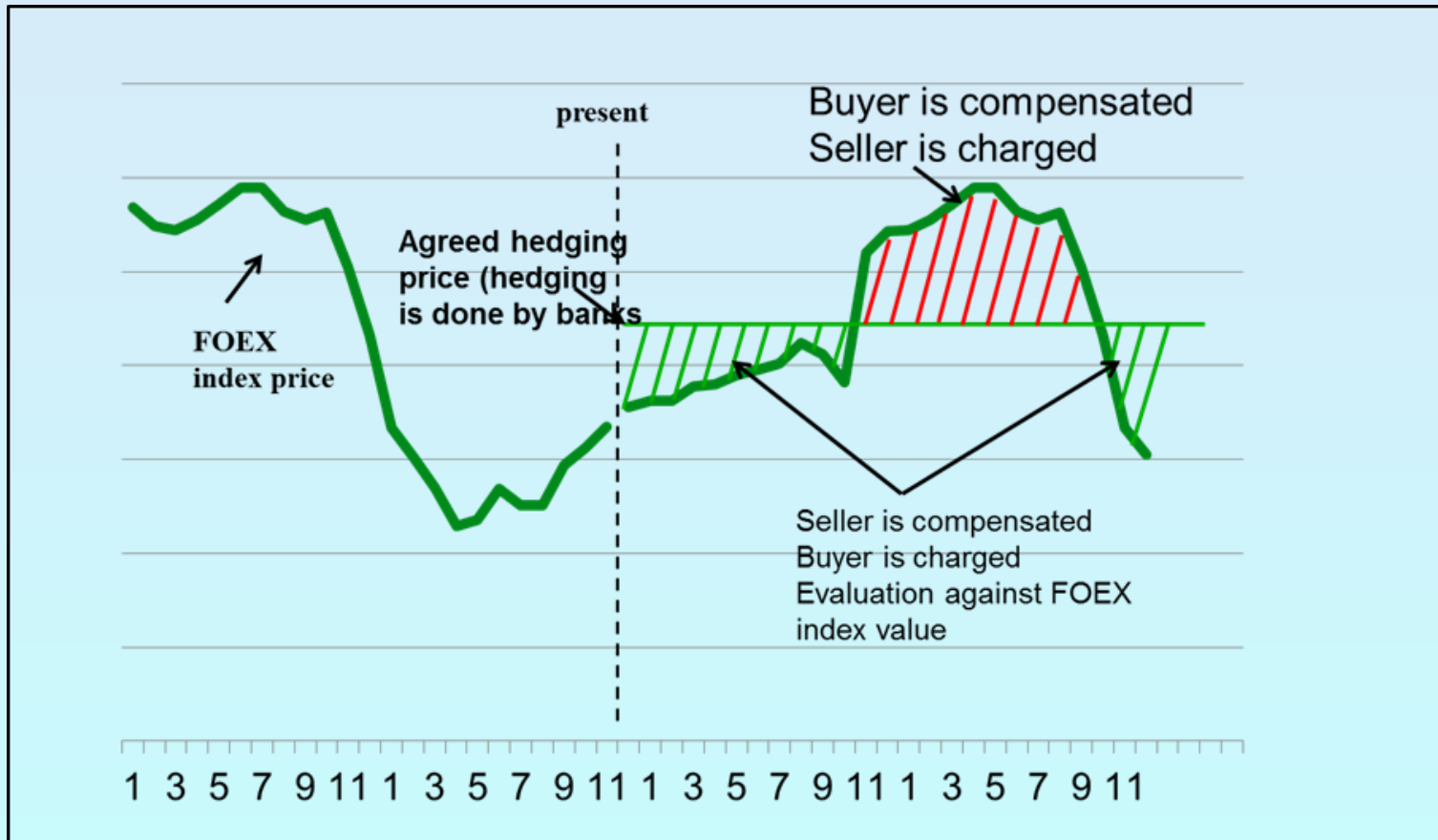


# PIX in Supply Contracts

- **Growing use as market reference price when linking physical supply contract prices to benchmarks**
- **License Agreements between FOEX and companies for the commercial use of PIX indexes**
- **Commission to FOEX based on the tonnage volumes in the supply contract**
- **Factors supporting the use of PIX as benchmark (PIX Survey, Oct 2006)**
  - o **simplifies negotiations**
  - o **cost and time saving**
  - o **no arguments about the market price level**
  - o **stability long term**
  - o **focus more on value added topics**



# PIX in price risk management





**FOEX**

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**[www.foex.fi](http://www.foex.fi)**

**Thank you!**



# Confidence interval

In general, the confidence interval is used to indicate the reliability of a mean value, or in our case, the reliability of a PIX index, that is, how confident you can be that the PIX index shows the mean value of all prices in the market, if they were all collected. The confidence interval expresses the minimum and maximum value within which the mean value (PIX index) lies at 95% confidence. In other words, the 95% confidence range expresses the degree of probability by which the mean is found between these limits.

The larger the sample size, the more sure you can be that the prices truly reflect all the prices in the market. Therefore, for a given confidence level, the larger your sample size is, the smaller will be your confidence interval. The confidence interval becomes wider in case it is calculated at a higher confidence, i.e. at 99%. The confidence interval calculations assume that we have a genuine random sample of the prices in the market.