Fastmarkets
RISI

Old corrugated containers (OCC)

A new era dawns

Market Insights

December, 2020

Foreword

Matt Graves
Senior Vice President
Fastmarkets Forest Products

Matt Graves leads the Fastmarkets RISI, Fastmarkets FOEX and Random Lengths price reporting businesses, including market reporting and price assessments. Matt has worked for over 20 years at Fastmarkets RISI with a focus on the global pulp and paper industry.

For the first time in human history, there is an active futures contract for recovered paper. As a self-avowed commodity-geek, I'm fascinated by this new development.

To understand it, we need to answer some key questions:

- How volatile is OCC compared to other global commodities?
- What exactly is this new futures contract and how will it work?
- What do the waste management companies, producers, and traders think about it?
- Will recovered paper behave like other 'scrap' commodities which have embraced futures markets or is it inherently different?

I believe the answers lie in looking at the fundamentals of volatility, risk and reward in the recovered paper supply chain. In this paper we will attempt to do just that through a series of contributions and interviews with key players.

Matt Graves
Senior Vice President
Fastmarkets

Table of contents

Executive summary

Recovered paper prices are highly volatile

The volatility in recovered paper prices can rival those of many other, more liquid commodities. It can at times be more volatile than pulp, cotton, copper or Brent crude.

COVID-19 has had a massive impact on supplies

The volatility in 2020 has been unprecedented. The COVID-19 pandemic slashed collection rates, virtually wiped supplies of grades collected in schools and offices and disrupted international trade flows. OCC prices have ridden a roller-coaster ride, and one that it seems, like the pandemic, is not over yet.

China is set to ban all imports

China, a key buyer of recovered paper from Europe and the US, is due to ban imports in 2021. This will undoubtedly trigger further price volatility and changes in trade flows.

The need to hedge has never been greater

In this environment, it is becoming more important that market participants manage their risk. One solution for this is to use futures contracts to lock in prices. NOREXECO, The Pulp and Paper Exchange, launched the world's first recovered paper futures in October 2020. So how might market participants use futures to bring predictability to their balance sheets?

OCC volatility - off the charts

Sharon Levrez
Price Assessment Manager
Fastmarkets Forest Products

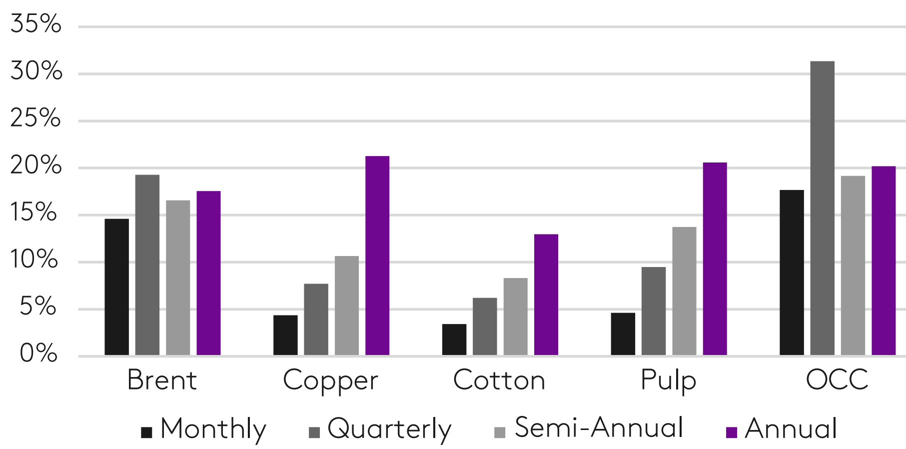
Sharon joined Fastmarkets RISI in 2017. She works closely with Fastmarkets' Forest Products' SVP of Indices Matt Graves to improve the reliability of our price assessments and develop new ways of assessing prices.

To contact Sharon or a member of our price reporting team, email pricing.risi@fastmarkets.com

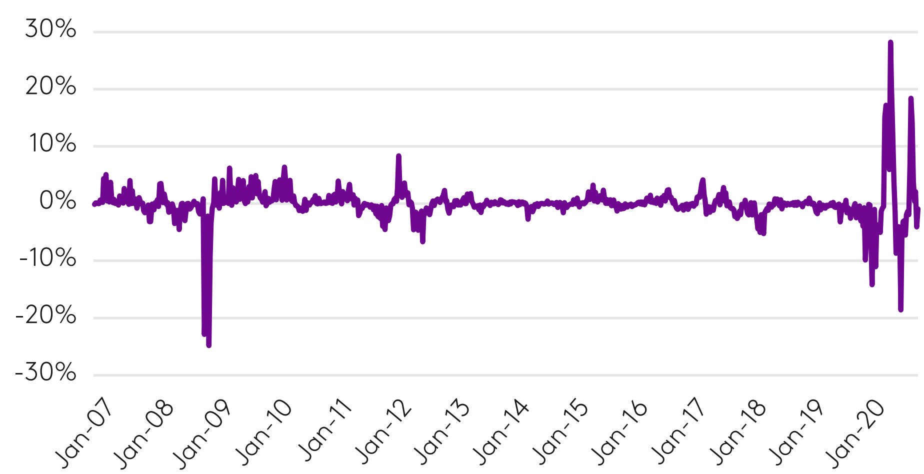
Recycled paper, and old corrugated containers (OCC) in particular, has always been a volatile commodity. Over the past few years, the market has seen boosts in demand from rising recycled containerboard production, followed by a sharp fall in export opportunities and then supply-side disruptions. All this has naturally led to major swings in pricing.

A comparison of OCC volatility versus other more liquid, mature commodity markets over the last five years, shows OCC is the leader of the pack. Monthly, quarterly, bi-annual and annual volatility outstrips that of Brent crude, copper and cotton. Quarterly volatility stands at a whopping 31.36%.

5 Year volatility for selected commodities



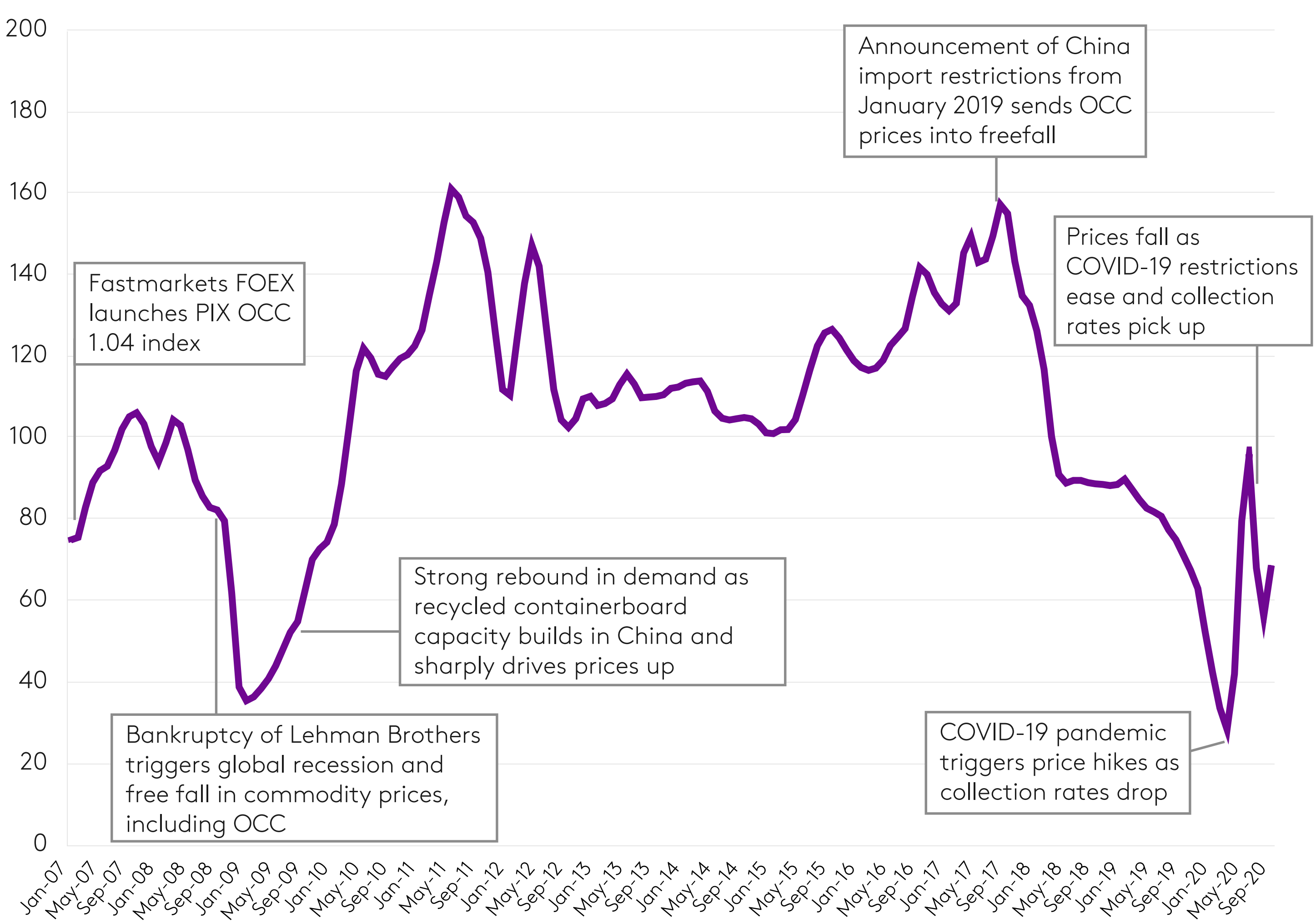
Price changes (OCC)



The volatility in 2020 has been off the charts as has been the case with many other commodities. Who can forget US crude oil prices going negative for the first time in history back in May, after demand for oil almost dried up. Prices of industrial metals such as copper and zinc also slumped, only to recover following the temporary shutdown of some mining activities. OCC still trumps the lot, though. Monthly OCC volatility from January to October 2020 stands at 37.45%, compared with 31.43% for Brent and just 6.52% for copper, according to Fastmarkets data.

Although prices appear to have stabilized in recent months, there remains much uncertainty in the market. Further demand and supply-side disruptions loom. Now more than ever, buyers and sellers of OCC need to look at managing their exposure to price swings. ■

PIX History Chart



European recycled paper market takes rollercoaster ride

Daniela Wortmann
Deputy Editor, PPI Europe
Fastmarkets RISI

Daniela has over ten years' experience covering the Spanish market and international news. She is a native German speaker and is fluent in Spanish and Portuguese.

The European paper for recycling (PfR) market has seen unprecedented price volatility in 2020.

"This is the craziest market ever," is how one market insider summarized developments. "I haven't seen anything like this in my 20 years in the industry."

Rising uncertainty over China's upcoming import ban, ever-increasing restrictions and quality requirements in several other traditional export hubs and, the effects of the coronavirus pandemic put the market in limbo and caused extreme and unprecedented price volatility. Bulk grades like sorted mixed paper and board, supermarket paper and board and old corrugated containers (OCC) were particularly affected.

OCC went into the year looking quite weak. In fact, it had been on a downward spiral since late summer 2018, a reaction to China's announcement of import restrictions for several grades. High inventories on both sides of the market, ample supply and the still heavily restricted export possibilities caused price drops for almost all grades, a trend that continued through into February 2020.

Then came COVID...

The spread of the coronavirus across Europe started to take its toll on the PfR market towards the end of Q1 2020. While escalating inventories at both paper mills and in the waste management sector had been one of the most important topics in previous months, the situation suddenly changed drastically. As more and more countries locked down and reduced public life to a minimum, the waste management sector faced restricted access to paper waste. In several countries, household collections were reduced or entirely stopped and many municipal recycling centers closed their doors.

At the same time, most paper mills, and those producing packaging paper in particular, continued to operate, and strict border controls and general logistics difficulties due to a lack of drivers caused the inter-European PfR flows to sputter. Consequently, OCC became a rare commodity with the ensuing effect on prices.

By early May, however, as restrictions eased, prices started to fall. They did not stabilize until August, when comparatively low collection volumes coupled with rather limited demand from paper mills and some export opportunities helped get supply and demand into some, albeit shaky, balance.

Certain uncertainty

If 2020 has taught the recycling sector anything it is that anything can happen. With China's import ban due to kick in during or sometime in 2021, the future remains uncertain. The rollercoaster ride may not be over yet. ■

Changes in global trade patterns

Hannah Zhao
Senior Economist
Fastmarkets RISI

Hannah joined Fastmarkets RISI in January 2009 as an economist on recovered paper. She is the coauthor of Fastmarkets RISI's special studies, Outlook for Global Recovered Paper Markets and The China Recovered Paper Market: A Comprehensive Analysis and Outlook, as well as the World Recovered Paper Monitor, the World Pulp & Recovered Paper 5-Year Forecast and the World Pulp & Recovered Paper 15-Year Forecast. Hannah holds a Master's degree in Resource Economics from University of Rhode Island.

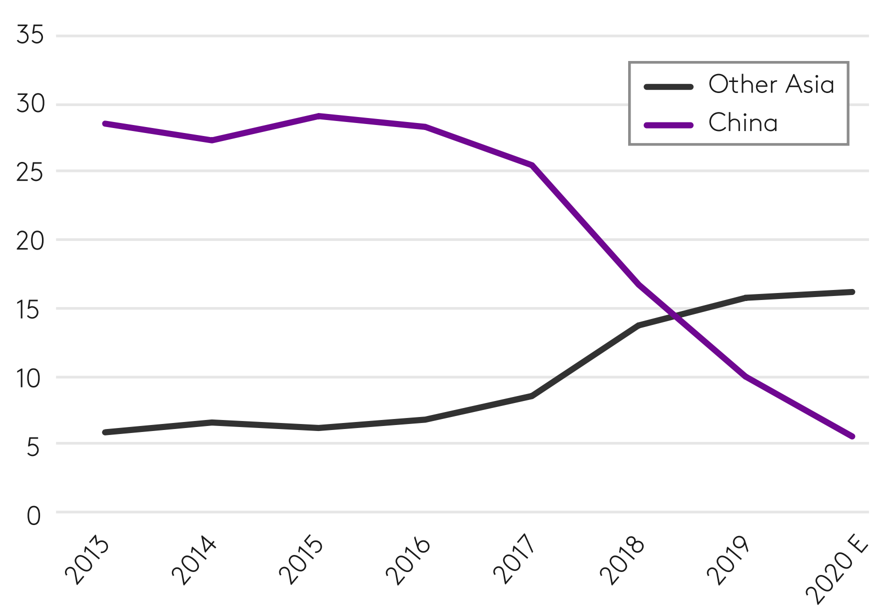
Global RCP markets have always been volatile and the past few years have witnessed even more volatility due, at least in part, to the substantial changes in global RCP trade flows. Since China announced its plan to curb the imports of recovered paper in 2017, Chinese RCP imports have fallen dramatically from 28.5 million tonnes in 2016 to 10.4 million tonnes in 2019, while its OCC purchase plummeted from 16.7 million tonnes to 8.0 million tonnes during the same period.

According to the latest Chinese trade data, Chinese RCP and OCC imports plunged by another 48% year-over-year in the first eight months of this year. At the end of June, the Chinese Ministry of Ecology and Environment (MEE) officially announced that no permits for RCP imports will be issued in 2021 and confirmed that China will ban all RCP imports, including OCC, by the end of 2020.

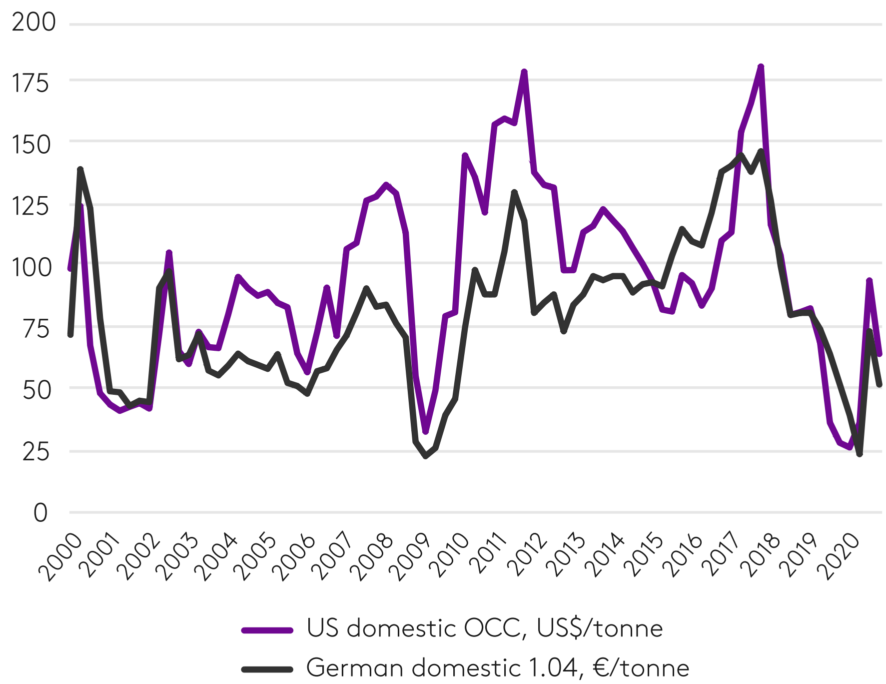
Most, if not all, of the major RCP exporting countries and regions have seen a significant decline in exports over the past several years. Western European net exports of RCP fell from 8.3 million tonnes in 2016 to 5.0 million tonnes in 2019, while US net exports slid from 18.9 million tonnes to 16.0 million tonnes during the same period. Net shipments from the largest exporter in Asia-Pacific, Japan, sank as well, dropping from 4.1 million tonnes in 2016 to 3.1 million tonnes in 2019, despite the significant increase in its exports to other Asian countries.

The Australian government even announced a plan to ban RCP exports by mid-2022. OCC exports declined less dramatically during the same

Chinese and Other Asian recovered paper imports
Million tonnes

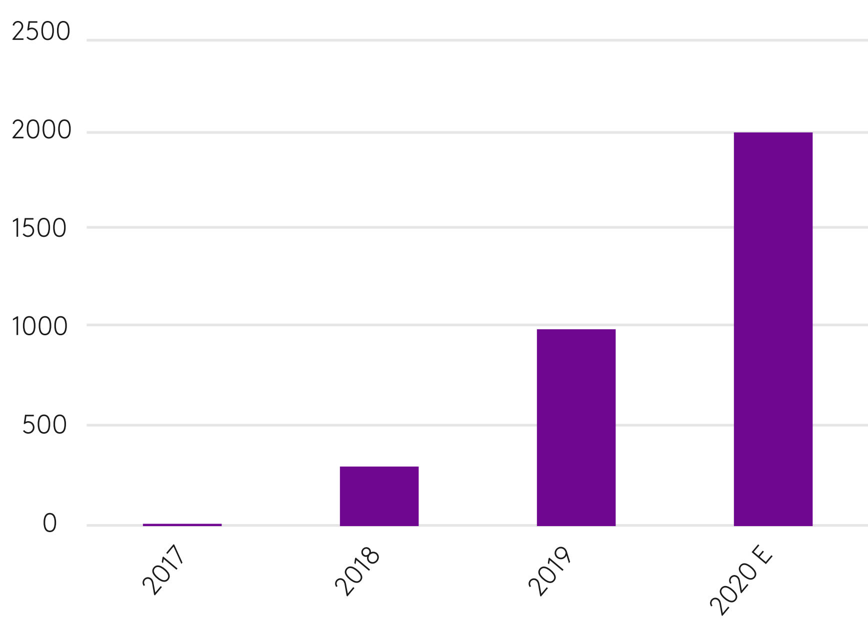


OCC prices in different regions



Source: Fastmarkets RISI.

Chinese recycled pulp imports
Thousand tonnes



period thanks to the healthy demand and relatively good quality. But the turmoil in OCC trade still dragged OCC prices down sharply worldwide. Domestic OCC prices fell to their two-decade lows at the end of 2019 in Europe and North America.

Chinese paper producers have been looking for different solutions to alleviate the recycled fiber shortage issue caused by the sharp fall in its RCP imports. Recycled pulp, made mainly from OCC, has been one of the most important alternative ways for Chinese paper producers to obtain the OCC fiber. Chinese recycled pulp imports surged from virtually nothing in 2017 to about 1 million tonnes in 2019 and continued growing significantly this year.

Most of the recycled pulp has been manufactured in the US, using US OCC, and in Southeast Asia, using OCC imported from the major OCC exporting regions or collected domestically. So far, about 7 million tonnes of recycled pulp projects have been announced in the US and Southeast Asia. We estimate Chinese recycled pulp imports will reach about 2 million tonnes in 2020 and climb further to nearly 5 million tonnes over the next few years.

Recycled pulp has and will become an important alternative channel for OCC to flow into China. However, there are no well-established rules on Chinese recycled pulp imports yet, despite the fast-growing imports. This may present some uncertainty and risks to recycled pulp investments and trade in the near term.

The sharp decline in Chinese imports has encouraged the major RCP exporting regions, such as North America and Europe, to utilize more RCP domestically through their expanding paper and board production base, especially for paper packaging grades. It has also lead to a growth in recycled pulp production capacity.

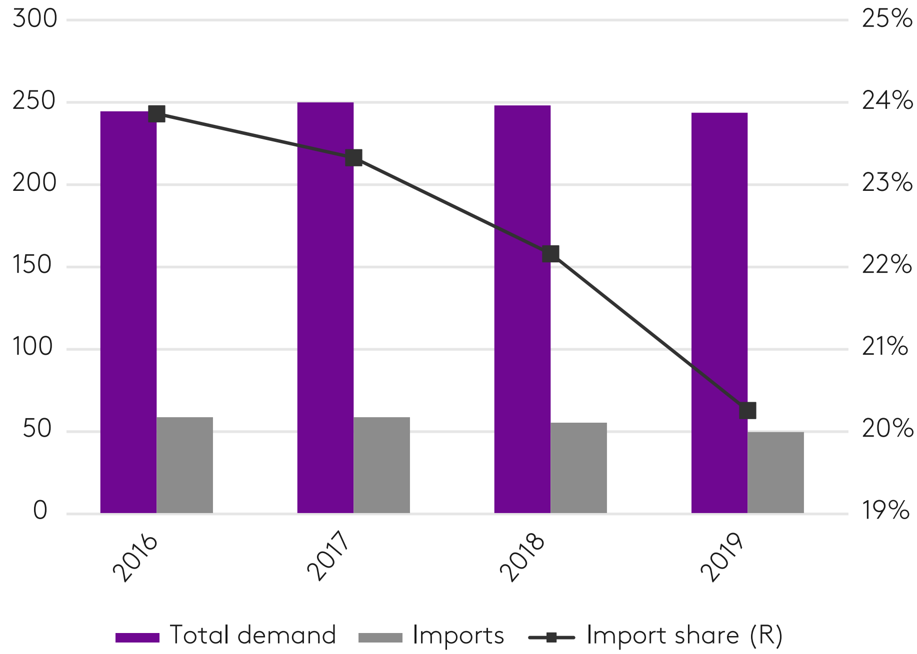
Meanwhile, most of the major RCP exporting countries and regions have been looking for new destinations for their RCP. Other Asia outside of China and Japan (Other Asia) has been the superstar, with India, Indonesia, Vietnam, Thailand, Taiwan and Malaysia all recording substantial increases in RCP imports over the past few years. In total, Other Asian RCP imports skyrocketed from 7.2 million tonnes in 2016 to 14.1 million tonnes in 2018 and increased further to 16.1 million tonnes in 2019.

The RCP shipped to this region supplies its expanding paper and board production base and new recycled pulp lines. As China has reduced its paper and board output to cope with its fiber shortage problem and searched for new sources of recycled fiber, Other Asia has stepped up and become one of the major suppliers for containerboard and recycled pulp to China. Despite the COVID-19 pandemic slowing Other Asian RCP demand and causing logistics issues in the first half of this year, a few countries and regions in this region still posted considerable increases in RCP imports so far this year.

Overall, Other Asian RCP imports are expected to grow continuously in the near- and medium-term because of this region's rapidly accelerating RCP demand and limited growth in domestic collection. But this region is not risk-free. A few countries, such as Indonesia, India and South Korea, have announced various regulations to tighten their controls on RCP imports. For instance, Indonesian RCP imports from the US and UK plunged by 74% and 50%, respectively, year-over-year in the first 7 months of this year.

Turkey and several Eastern European countries also purchased much more RCP in 2016-2019, thanks to their growing RCP demand from new paper and board capacity. But the Turkish Ministry of Environment and Urban

Global RCP trade and demand
Million tonnes



Planning recently announced plans to introduce legislation to encourage usage of domestically collected RCP and therefore limit its imports.

The global RCP trade volume shrank from about 58.5 million tonnes in 2016 to 49.4 million tonnes in 2019, and the share of trade in world total RCP demand dropped from 24% to 20% during this time. As more regions and countries may start to restrict RCP imports or exports, global RCP trade is projected to contract further in the near term. But international trade will remain an important player to balance the demand and supply of recycled fiber across the world through the form of RCP and recycled pulp.

The global paper and paper recycling industries have already spent about three years trying to adjust to the changes caused by the changes in RCP trade policies implemented by different countries, but there are still many questions about the new world trade patterns. With China's ban on RCP imports, officially kicking in at the end of the year, and the ongoing changes in RCP trade regulations proposed by other countries, we believe the next few years will remain challenging for the global RCP markets. Uncertainties and risks from the COVID-19 pandemic, global economy and RCP and recycled pulp trade regulations will continue to cast a shadow over the market. ■

A new tool to hedge risk –

Frederik Husebye
Director of Sales and Marketing
NOREXECO

Frederik Husebye holds the position as Director Sales and Marketing with NOREXECO The Pulp & Paper Exchange. He has worked in NOREXECO for the last 6 years, and since 2018 specifically with the launch of a futures contract for recycled paper market.

He has also experience from energy portfolio management, risk management and trading of commodities, and has held leading positions at Nordea Bank, the aluminum producer Norsk Hydro, and the International Maritime Exchange (IMAREX) which successfully launched a futures contract for the shipping industry which enabled them to hedge freight rates.

Frederik holds a BBA from Boston University and studied philosophy at the University of Oslo.

Interview with NOREXECO's Frederik Husebye

On October 6, 2020, Norwegian pulp and paper exchange NOREXECO launched the world's first futures contracts for recovered paper. The contracts are cash-settled against Fastmarkets FOEX' PIX OCC 1.04 dd index, a leading industry benchmark for supermarket grade old corrugated containers. They will offer industry players a chance to hedge their exposure to extremely volatile OCC prices for the first time. They will also bring some transparency to the forward curve, which up to now has been lacking in the market.

While the contract focuses on the pan-European price for supermarket grade OCC, it can be used to manage risk in locations that are more specific, as well as for slightly different grades of OCC. The price correlation between Europe's national markets and the PIX OCC 1.04 index is usually very strong. An analysis based on Fastmarkets RISI national price assessments and the PIX OCC 1.04 index put the r value at over 0.9, even with differences in quality and delivery terms.

As with any futures market, there may be differences between the hedger's cash position and the futures contract, something that is known in the industry as basis risk. But this risk does not prevent companies with a different cash position from using the contract to

Contract specs:

Product name:	Recycled Paper OCC 1.04 Europe
Underlying product:	Monthly average price of Fastmarkets FOEX' PIX OCC 1.04 dd
Contracts listed:	Current + 5 months, 6 quarters and 2 calendar years
Lot size:	1 lot = 100 tonnes
Min tradable volume:	100 tonnes per month
Currency/unit:	Euro per tonne
Final Settlement:	Cash settlement. Final settlement is based on the monthly average of the weekly PIX OCC 1.04 dd indices.
Trading days:	Norwegian trading calendar
Trading hours:	13:00 to 17:00 CET
Last trading day:	Last Index Day of the month, or the previous business day if this is a Norwegian holiday.
Clearing:	European Commodity Clearing AG (ECC)

hedge. Indeed, a degree of basis risk is generally accepted by hedgers in their attempt to reduce price risk.

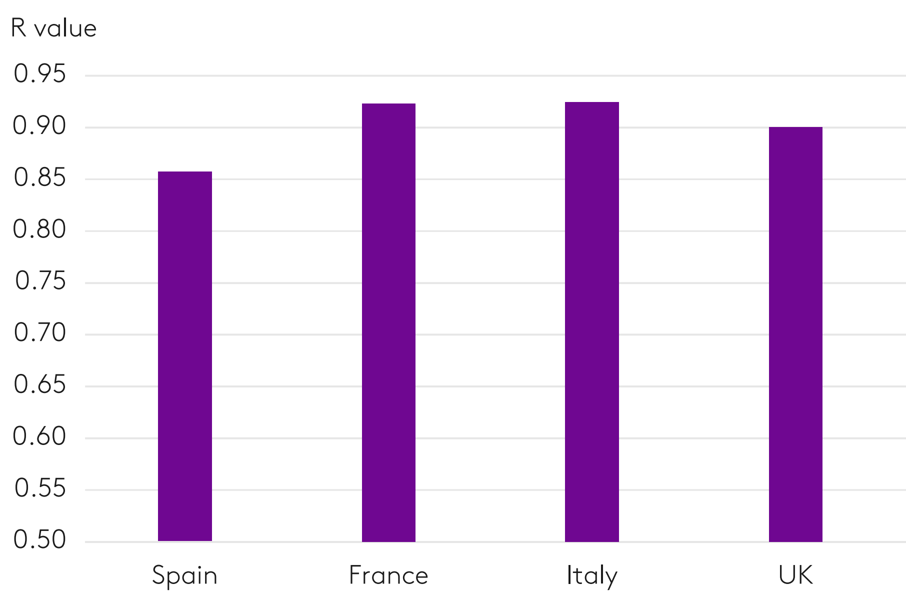
Fastmarkets spoke to NOREXECO Director of Sales and Marketing Frederik Husebye to find out more about the new OCC contracts and how they might be used.

Can you tell us a bit more about the new recovered paper contracts?
The contract is a financially settled contract, thus there is no physical delivery involved. As it is an exchange traded product there is no counterpart risk, and you are trading anonymously in the market. The listing will help market participants along the value chain to manage risk and uncertainty. It will enable them to transact to get predictable prices, thus being better equipped to take on new opportunities, act quickly and decisively, grow their business, and ultimately help control costs and secure revenue.

How far out will the RCP PIX 1.04 forward curve go and which products will you list specifically?
The duration or length of all NOREXECO products are up to 36 months. Each product line is made up of a string of financially settled futures contracts listed as 6 months, 6 quarters and two calendar years.

What prompted NOREXECO to expand beyond pulp contracts into recovered paper?
Demand from the industry, market size and price volatility are key elements. The recovered paper market is more than three times larger than the pulp market. OCC is by far the largest grade, estimated to be

Correlation between PIX OCC 1.04 and national prices



Source: Fastmarkets RISI and FOEX.

around 128 million tonnes. The recycled paper market is also haunted by fierce price volatility on par with oil and other energy products. Therefore, we hope that launching a futures contract for recycled paper will be well received in this industry as well.

What kind of companies do you expect to be active in trading the new OCC contracts?

Our expectations are that the most active companies trading the new recycled contracts will be what commonly is called the agile organizations. Companies that not only have identified and quantified their RCP price risk, but equally important, have the ability to implement change in risk management strategy, processes and people towards value-creating and value-protecting opportunities. Such adaptability may create a competitive advantage, particularly in times of high price volatility. Luckily, we find such companies among waste management firms, paper mills and traders.

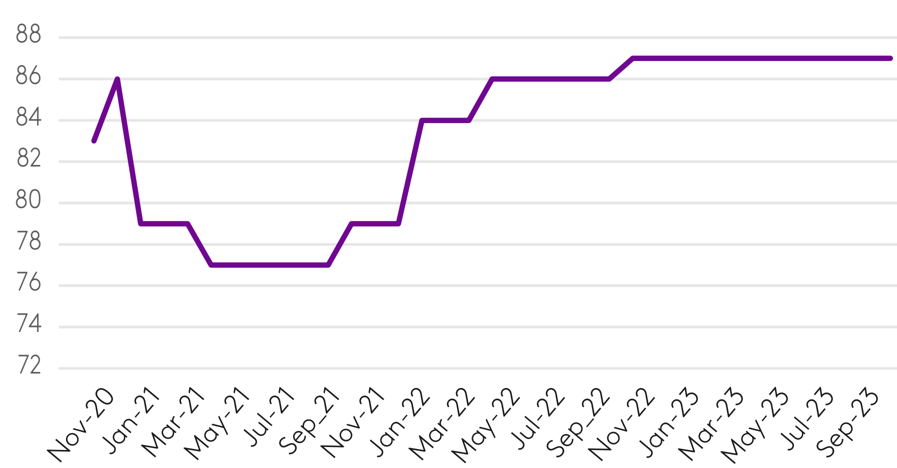
Why does NOREXECO choose to list cash-settled futures rather than physically settled futures?

We wanted to avoid issues associated with quality, physical delivery and warehousing. Our products and the settlement mechanism are structured in a way that they can be used to hedge the price risk in physical commercial agreements. By cash settling the recycled contract against the monthly average of PIX, it provides a unique hedging opportunity for the industry itself.

Why did NOREXECO choose PIX OCC 1.04 as the underlying benchmark for the contract?

In order to offer suitable hedging products for the industry, it is imperative that the futures contract settle against a trusted high-quality index. Therefore, when we decided to launch the recycled paper contract we compared the different indices available in terms of methodology – if it reports an absolute number or only a net

Norexeco PIX OCC 1.04 forward curve as of November 20



change, how well it correlated to other relevant indices and whether it is IOSCO-approved. As the goal was to build a futures contract that would function as a hedging vehicle not only in one region or country, but for companies located in many different European countries, the best solution was to find a pan-European index. Last, but not least, the index we chose had to be well known, used in commercial contracts, and trusted by the paper industry across Europe.

What kind of transaction volumes do you expect to see in the first year of trade? Do you expect the level to surpass volumes in your pulp contracts?

That is obviously a very difficult question to answer so early after launch. We think that the very high price risk associated with recycled paper will be a key driver for volume growth going forward and that the volume in this new recycled paper contract clearly will exceed the pulp contract volume by the end of 2021.

Are there any other markets NOREXECO is currently looking at? Other contacts you might be launching soon?

In addition to currently listed contracts, we are planning to launch two new China contracts during the first quarter of 2021. They will be for NBSK CIF China and BHKP PIX China.

Do you have any suggestions for market players looking to trade in the OCC futures market?

Quantify the OCC price risk and its sensitivity to EBITDA similar to what has been done on energy and currencies. Communicate your findings to relevant stakeholders internally, including the Board of Directors to ensure common understanding. Assess if your findings are in line with your company's risk appetite and ability to bear that risk. Provide the board approved hedge mandate to the CFO or treasury function, describing how much of the OCC price risk and how far forward i.e 12, 24 or 36 months hedging can be done. Last but not least, ensure adequate internal competence, reporting and control functions. ■

Learn more about the new Recycled Paper OCC Future contract

For the first time ever there is a tool to hedge recovered.
See contract details >

Introducing the Fastmarkets FOEX Team

Tytti Inkinen is Director of Fastmarkets FOEX and manages the Packaging and Recovered Paper Indices. She joined the company in 2003 and has a career of over 20 years in the forest industries. Tytti holds a Master's Degree in Agriculture and Forestry (Forest Products Marketing) from the University of Helsinki.

Lars Halén is Director, Pulp Indices at Fastmarkets FOEX, managing the PIX Pulp price indices. He has been with FOEX since 1999, adding up to a career of more than 35 years so far in the pulp and paper industry. Lars graduated with a Master's Degree in Marketing from the Swedish School of Economics in Helsinki.

Tuomo Neuvonen is Senior Manager at Fastmarkets FOEX and manages the bioenergy and wood product indices. He started at the company in 2012 after working with forest research and data analysis in both private and public sectors. Tuomo holds a Master of Science Degree in Agriculture and Forestry (Forest Resource Science and Technology) from the University of Helsinki where he is currently completely professional specialization studies in bioeconomy.

Eva Nyman is Manager of Fastmarkets FOEX's Paper Indices. She joined the company in 2017 and has a career of about 10 years in the forest industries. Eva holds a Bachelor's Degree in Journalism and Communication from the University of Helsinki where she is currently pursing a Master's Degree in Area and Cultural Studies with a focus on East Asia.

Managing price volatility – Waste management view

Lauma Kazuša
Head of Financial and Market Reporting
Suez Trading Europe

Lauma joined SUEZ Trading Europe in 2018 and heads market analysis activities for all trading streams – alternative fuels, wood, paper, plastics and non-ferrous metals.

She has been working within resource and energy sectors for nearly 15 years, with previous professional experiences in due diligence work, market assessments and competitive analysis.

The European supply and demand of paper for recycling has been unbalanced for some time. Driven by both the green policies and regulations, European waste management infrastructure has become good at capturing paper in collection streams. Yet the local demand from paper mills still has not caught up with the available supply. The surplus volumes were exported for many years, with the trade peaking in 2017 driven by China's demand. Nevertheless, the regulatory changes on the far-away Asian shores reshaped the global trade from 2018 onwards. The European markets have experienced abundant supply, yet with national differences in demand.

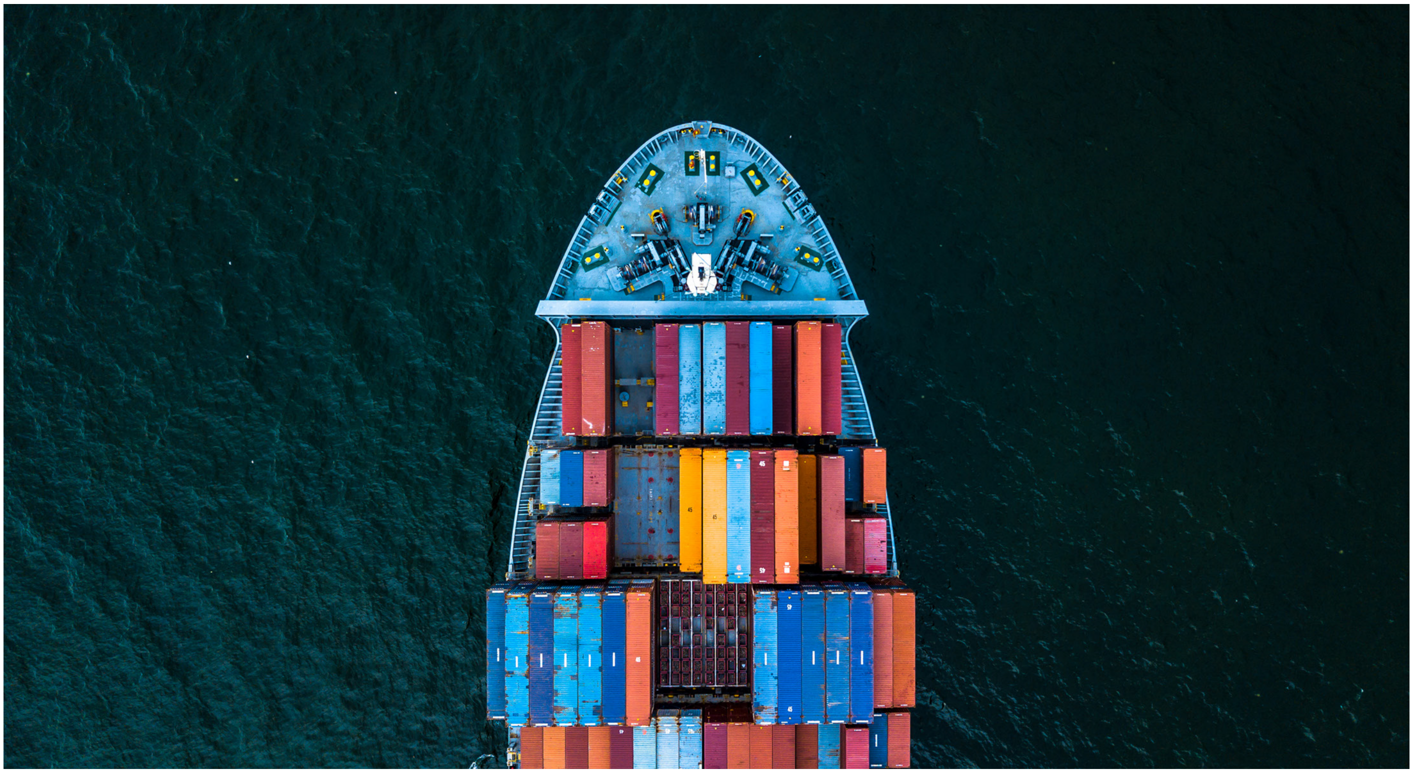
With the underlying supply and demand shifting, the pricing has been equally unpredictable in recent years as the market is trying to find a new equilibrium. Aside from the changes in regulatory frameworks, the prices have been affected by the demand for paper products, e.g., growth in e-commerce and the usual industry drivers – manufacturing activity, consumer spending, etc.

> *"...be it either the supplier or the consumer side, price hedging could provide some predictability and visibility."*

Such a price rollercoaster creates uncertainty, which is a risk with the potential to create damage. Further, price swings can create tension between the sellers and buyers. From an organizational perspective, be it either the supplier or the consumer side, price hedging could provide some predictability and visibility. It can serve as an additional risk mitigation tool in supporting cash flow stability through reduced exposure to market fluctuations.

Today, demand from paper mills mainly sets the monthly prices. Some supply contracts are linked to selected indices that track the spot market. There is a whole range of paper indices available across Europe that represent the local or main export markets, as is the case in the United Kingdom. By their nature, indices are retrospective with a delay in reporting and reflecting the market situation during the previous month. Affected by the global demand, market prices can move suddenly and sharply, impacting both the seller and buyer's revenues and profitability. The price of finished paper goods also affects the margins of paper mills.

From the waste management perspective, there are two pricing points to manage:
1. the incoming volumes of material for sorting and processing; and
2. the sales of paper for recycling to paper mills.



Contractually various arrangements exist. At times, the pricing for incoming material can be a fixed price for the year ahead, which has its advantages for the local authorities or businesses generating waste. However, annual price-fixing is untypical for the outgoing material. Pricing for both incoming and outgoing material can be linked to the existing market indices. Similarly, pricing can be indexed in back-to-back contracts too.

Although the futures system can alleviate some anxieties around price outlook and potentially stabilize prices for better planning, it creates concerns about how it will address regional differences, load sizes, and quality within the grade variances. How well will the system anticipate the market shifts for the next quarter or even the year ahead?

Market liquidity and participation will be essential for future trades. Perhaps these will be integrated into the recycled paper markets and increase visibility. This approach to the market should not be seen as competing with the traditional ways of doing business but as a part of the trading portfolio in the context of risk management.

Managing price volatility - Producer view

Johannes Rosner
Head of Group Treasury, Prinzhorn

Johannes Rosner has been with Prinzhorn Group since August 2019 and currently named Head of Group Treasury. He has worked in finance and risk management for over 10 years. He also lectures at the University of Applied Sciences bfi in Vienna. Johannes has earned the certified Energy Risk Professional (ERP), Charted Financial Analyst (CFA) and Financial Risk Manager (FRM) charters.

Interview with Johannes Rosner of Prinzhorn

The Prinzhorn Group is a family owned business headquartered in Vienna which has been operating in the pulp and paper industry for more than 160 years. It has three main divisions – Recycling, Containerboard and Packaging. Its geographical coverage is mainly in Austria, Germany, Eastern Europe (CEE and SEE countries), Russia and Turkey.

Johannes Rosner, who has a background in energy markets within risk management, joined Prinzhorn group a year and a half ago as a risk manager and is now responsible for Group Treasury. Group Finance and the divisions within the group have been interested in and observing hedging opportunities for recycling paper and containerboard, including Norexeco's new OCC 1.04 contract.

According to Johannes, the new contract could help to stabilize profit margins by better controlling input cost for containerboard producers using recycled paper as input source."We are intending to research how elastic containerboard prices are to input prices from recycling paper raw material, but what we already expect is that there is little elasticity," he says. "Therefore we see these financial futures as a realistic instrument to better steer our exposure and have another instrument to manage our earnings situation. One scenario could be to set up a revolving hedging strategy, so that we might secure a certain amount of our input material for containerboard at a predefined level of cost."

Two things are necessary to ensure a successful hedging, he adds. First you need a product that fits your underlying business transactions as best as possible, and second you need a strategy for how much of your costs you want to hedge and at what point in time (budget, transaction related etc.).

Johannes said the PIX indices, which form the underlying basis for the Norexeco OCC contract, reflected purchasing prices quite well, although there has been some breakdown in the correlation with the impact of COVID-19 on the market. "We carried out some research in the Containerboard division to see how closely our average purchase price per tonne replicates the PIX [index] developments and we see that in the local markets it matches," he told Fastmarkets RISI. The match was very good in

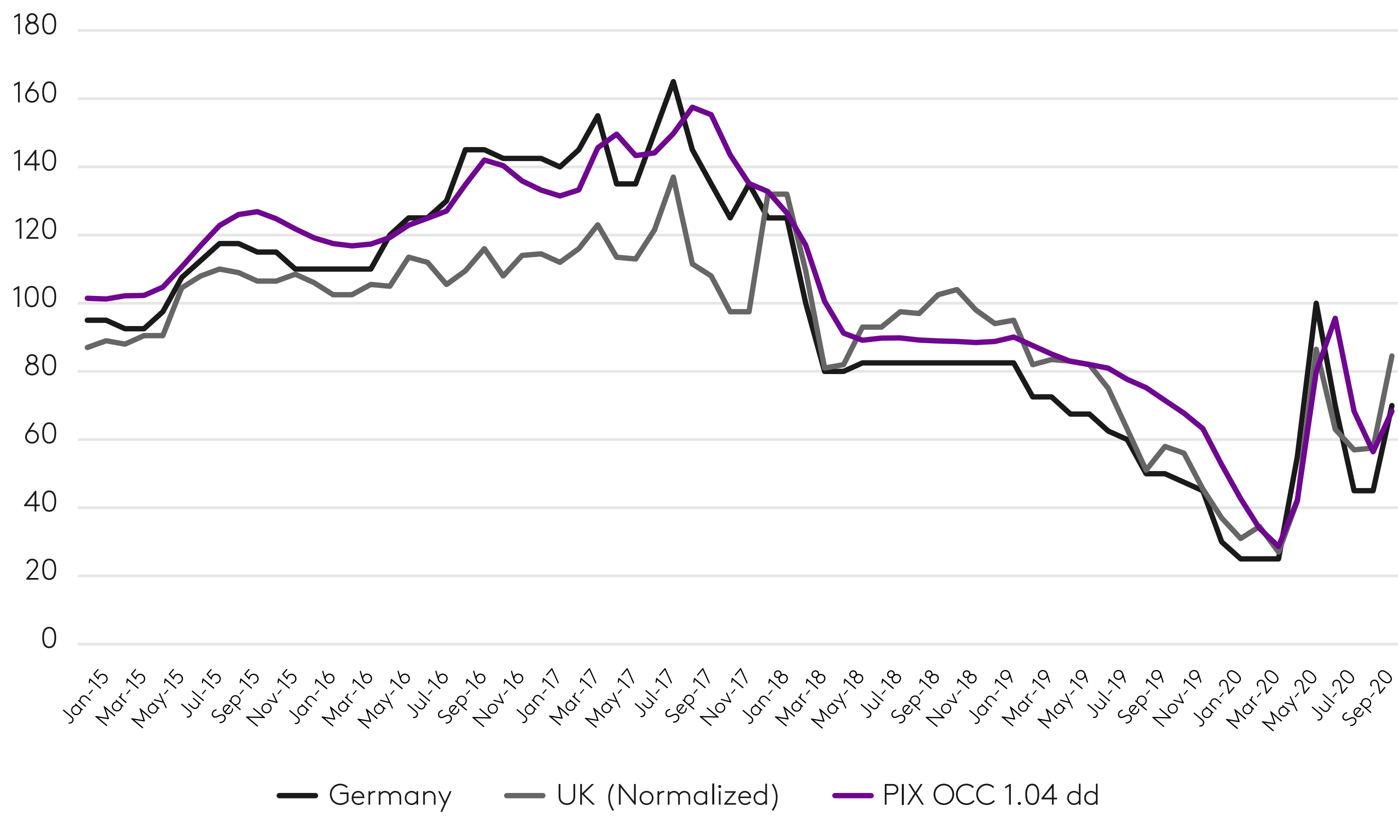
"We see these financial futures as a realistic instrument to better steer our exposure."

Austria, he said, but became less evident as you move east, away from the core area covered by the index.

The key to successful hedging strategy was predictability, he added. "[Companies] agree on budgets every year. Budgets can be more easily reached if set up for a certain percentage of input costs that are fixed because they are planned alongside the markets and we safeguard a certain price according to what the futures market is giving you."

The Norexeco OCC 1.04 contract may take some time to be fully adopted by the industry, as has been the case with other contracts. Pulp and paper companies tend to be quite conservative, and there is an acceptance within the Containerboard industry that certain input factors can be quite volatile even resulting in volatile bottom line figures. Those financial instruments mentioned may allow companies to manage their financial results better. ■

PIX OCC 1.04 shows a strong correlation with national OCC prices



Source: Fastmarkets RISI and FOEX.

Managing price volatility – Trader view

Darren Gurner
Senior Sales and Trading Executive, SEB

Darren Gurner is a Senior Sales and Trading Executive at SEB, where he specializes in global commodity markets, FX and interest rates for large corporations. After graduating Liverpool JM University in 1995 Darren started his career in the City of London with Sucden. He gained an in depth knowledge of a wide range of commodities, from metals and energy, to cotton and coffee. He is the longest, continuous serving derivatives expert in the pulp and paper market with a proven record and expertise of hedging and risk management. Darren has also worked for Enron, Tradition and Macquarie Bank covering pulp and paper.

The term 'Risk Management' can have a number of meanings within corporations but in this context and in the financial markets, we mean the use of financial instruments to manage the price risk or volatility of a commodity – OCC. Swapping unknown future prices with known prices in the future.

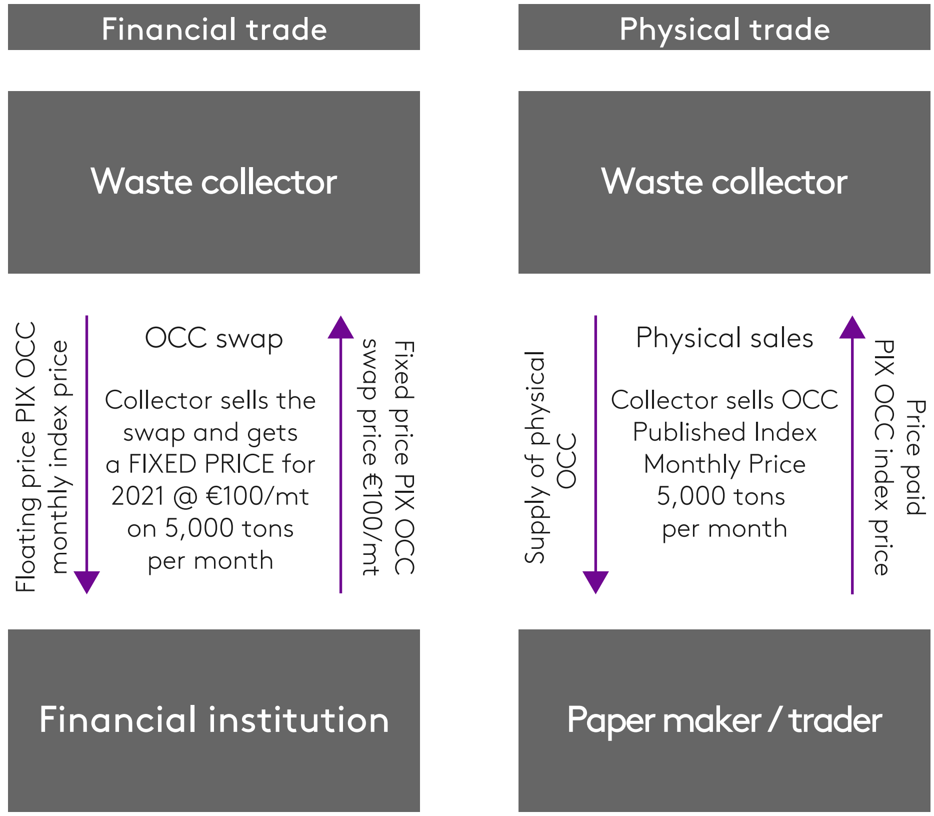
While the concept of using financial instruments may be new to the paper industry for OCC, it is well establish in the pulp market and is used globally for most commodities, from copper and aluminium, to oil and diesel, coffee and sugar as well as products such as plastics or lumber. Many reading this report will 'hedge' other business costs such as electricity, gas, diesel or shipping, by locking in long term fixed price contracts, either physically or financially.

These fixed prices allow companies to understand what their costs will be in the future and thus help plan ahead, bid on contracts or work out what they can charge for their finished products and ultimately how much profit they can make. As an example, an airline would not think of selling tickets next year, without knowing what the cost of Jet Fuel will be in a year or two years' time – it is their biggest commodity exposure and the greatest unknown. Another example could be a coffee chain using hedging to be able to keep the price of a cup of coffee in their stores stable – what happens if coffee prices go through the roof and they don't hedge? Will they swallow the additional cost or pass this on to the consumer? Will their competitors be in the same boat?

If we look at the OCC and packaging paper market, the same exposures exist as in the examples above. The difference is that all the markets mentioned above have functioning futures and over the counter (OTC) markets, and thus a forward price curve that shows the markets' expectation of where prices will be at a certain point in time - in the future. This does not mean that those prices will be correct when we get there, but it allows the industry, traders and speculators the ability to hedge or trade into the future. The new futures market on NOREXECO and the OTC swap market both use the same PIX OCC 1.04 index, and while there are differences between the two, the industry now has the tools for hedging OCC.

For the industry, this means that sellers of OCC can independently (these financial hedging tools are negotiated separately, but should stand alongside physical contract prices) sell forward / lock in a future price of OCC giving a clear picture and stable revenues for a set period. Where OCC is the main input raw material such as for a paper maker, the ability to lock in the future price of OCC for a period (say a calendar year, or for the duration of a specific contract) means that the input price is now known. This would allow for a better understanding of how

Financial hedge for waste collector



to price testliner for that period or compete for a new order.

These tools do not impact physical price negotiations, but it is important that the physical prices are used in the financial markets. Thus, the Fastmarkets FOEX PIX OCC 1.04 index should ideally be used in physical contracts, or there should be a strong correlation with other indices used in the physical market. This is so when the two separate and independent trades (physical and financial) are seen side by side, the net effect is that the hedging party ends with their fixed price. See the example above. ■

Key Take Aways

The degree of volatility and uncertainty in the OCC market leaves companies exposed to wide swings in prices. There is a new tool available to hedge OCC risk in Europe, but it remains to be seen whether companies will embrace hedging in this market. Going forward, we know:

- Volatility and uncertainty look set to remain for the foreseeable future.
- For the first time ever there is a tool to hedge recovered paper price risk.
- The PIX OCC price index is a robust benchmark that can be used to match physical purchases with financial hedging

The closest parallel we have seen is in scrap metals markets where futures contracts are slowly starting to be embraced by both industrial and financial players. We believe that the logic for hedging exposure to recovered paper prices is very similar to these markets and that it will eventually, if not slowly, become part of the toolkit for navigating this challenging market.

Fastmarkets RISI