

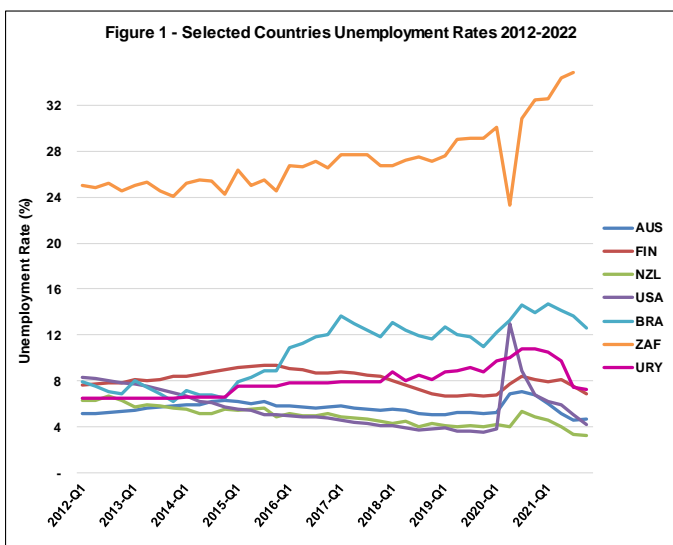
Timberland Market Update

Global Consulting Alliance

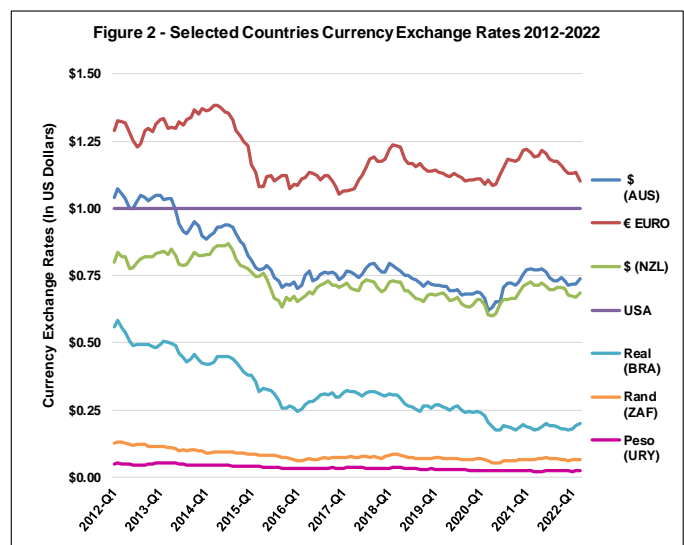
Quarterly Edition March 2022

ECONOMIC DASHBOARD

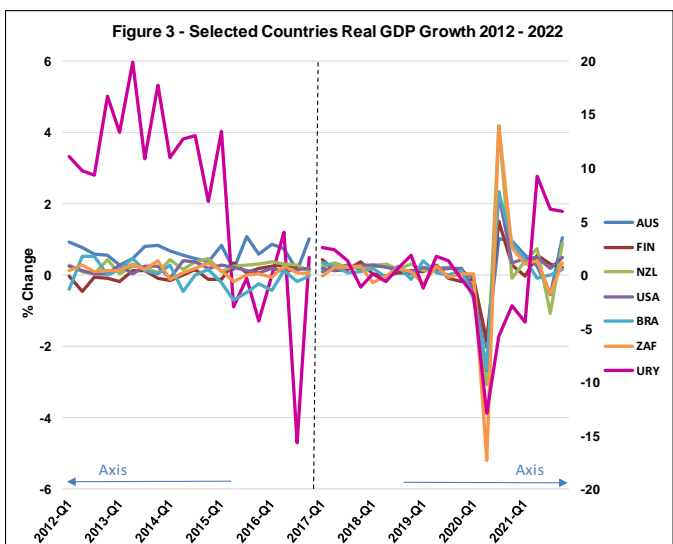
Figures 1 to 4 illustrate four key macroeconomic indicators as observed over the past decade, on a quarterly basis. These can be useful particularly to monitor the effects of the COVID-19 pandemic. Figure 4 rates are nominal.



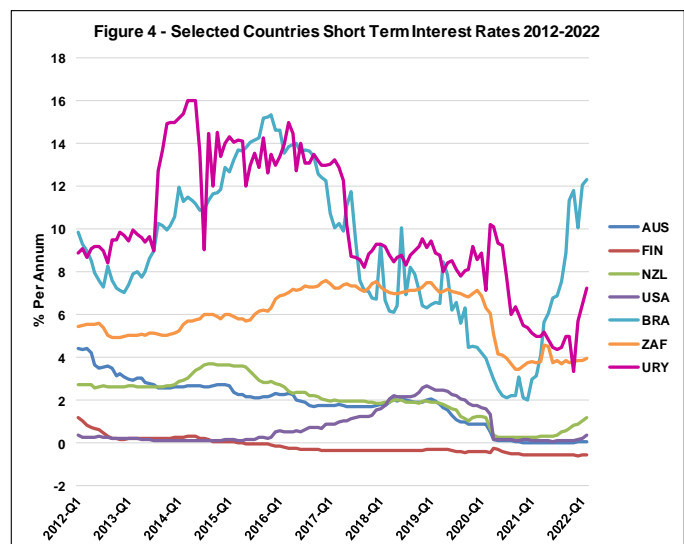
Sources: OEDC, Brazilian Institute of Geography and Statistics, macrotrends.net (World Bank), Statistics South Africa



Source: Federal Reserve, Uruguay Statistics National Institute



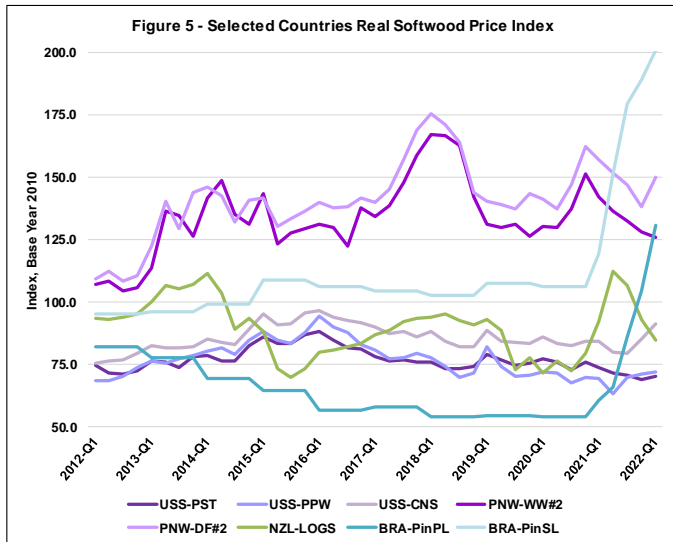
Source: OEDC, Chamber of Commerce and Services of Uruguay



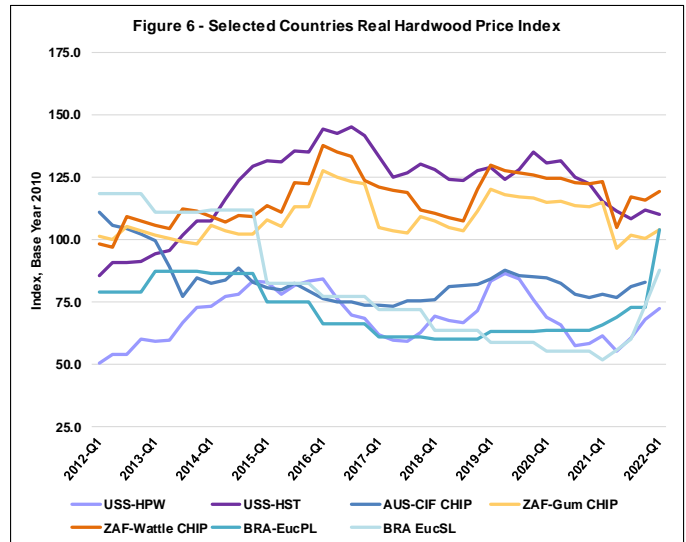
Source: OEDC, FRED - St. Louis Fed, Banco Central Del Uruguay, CEIC Data

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Figures 5 and 6 show indexed real pricing for select softwood and hardwoods – with Q1 2010 the base quarter-year.



Source: Timber-Mart South, RISI Log Lines, AgriHQ; USS = US South, PNW = US Pacific Northwest



Source: Timber-Mart South, RISI Log Lines, NCT; USS = US South

Legend:

USS-PST = US South Pine Sawtimber, USS-PPW = US South Pine Pulpwood, USS-CNS = US South Chip n' Saw, PNW-WW#2 = US Pacific Northwest Whitewood #2 Saw Avg. Columbia River, PNW-DF#2 = US Pacific Northwest #2 Saw Avg. Columbia River, NZL-LOGS = New Zealand Softwood Logs Composite, BRA-PinPL = Brazil Pine Pulplogs, BRA-PinSL = Brazil Pine Sawlogs.

USS-HPW = US South Hardwood Pulpwood, USS-HST = US South Hardwood Sawtimber, AUS-CIF CHIP = Australia Hardwood CIF Chip, ZAF-Gum CHIP = South Africa Gum CHIP, ZAF-Wattle CHIP = South Africa Wattle Chip, BRA-EucPL = Brazil Eucalyptus Pulplogs, BRA-EucSL = Brazil Eucalyptus Sawlogs.

ECONOMIC HIGHLIGHTS

Global

- With the outbreak of the Russia/Ukraine war, the world economy has entered a new era of slower growth and incremental inflation with the isolation of Russia and Belarus from the West. These developments risk a European led global recession in the short term and possibly stagflation over the medium term.
- The World Bank Group in March 2022 indicated that global goods trade showed some modest improvement in February, but sanctions, logistics disruptions and airspace bans associated with the Russia/Ukraine war are now exacerbating persistent supply bottlenecks and elevating commodity prices through global value chains.
- Energy prices have recorded unprecedented increases since the outbreak of the Russia/Ukraine war while financing conditions have tightened amid a surge in market volatility.
- US GDP – Forecasters have been steadily revising forecasts of real GDP growth to account for expected impacts of the COVID-19 pandemic, the associated fiscal and monetary policy responses, as well as increased levels of inflation. The third estimate for Q4 2021 GDP growth from the Bureau of Economic Analysis showed that the US economy grew at an annual rate of 6.9% over the preceding quarter. GDP growth was due to inventory building, particularly in new motor vehicles, exports, consumer spending, and business investment.

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- US Unemployment – The Bureau of Labor Statistics reported that unemployment averaged 3.6% in March 2022, close to the pre-pandemic rate of 3.5%. The number of unemployed persons decreased by 318 000 to 6.0 million, as compared to 5.7 million in February 2020 and the workforce participation rate came in 1.2% lower than in February 2020, before the pandemic began. One recent industry analysis estimated that unemployment will average 3.9% in 2022, 3.8% in 2023 and 3.7% in 2024.
- Brazil – According to the Central Bank’s FOCUS bulletin, since early January, the prospects for year-end marginally improved for the Brazilian GDP, moving from 0.25% to 0.50%, and the exchange rate, from 5.6 to 5.3 USD/BRL. However, expectations are for inflation to worsen, increasing from 5% to 7%, and for the base interest rate to increase from 11% to 13%.

REGIONAL MARKET UPDATES

Asia Pacific

Australia

- Consensus Economics’ March 2022 edition upgraded expectations for Australia’s economy, now expected to grow by 4.1% in 2022, moderating to 3.1% in 2023. The unemployment rate is 4.1% and is expected to drop below 4% by 2023. The upgrade follows on a stronger-than-expected Q4 rebound, driven by household consumption. However, inflation is now at 5.1% year-over-year in Q1 2022 presents a source of downside risk with market expectations for the Reserve Bank of Australia (RBA) to start raising the national cash rate during the second half of CY 2022, currently at a record low of 0.1%.
- In the March quarter, Australian softwood timber prices are expected to exceed AUD 750/m³, up 30% compared to Q1 2021. Although housing approvals have decreased, the number of dwellings under construction remains very high with the expectation for prices to remain elevated well into 2023.
- The spot price for Australian Carbon Credit Units (ACCUs) dropped by ~37% in March, from a daily high of AUD 57.15 in late January, following the Federal Government’s announcement to allow project owners to exit their ‘fixed delivery’ carbon abatement contracts under the Emissions Reduction Fund.
- Improved trading conditions for Australian hardwood woodchip exports as Chinese BHKP market pulp prices continued to recover from the recent lows of ~USD 550/ADt to ~USD 650/ADt in March 2022. This follows significant planned and unplanned manufacturing capacity downtimes and closures globally combined with ongoing logistical challenges. The upward price momentum is expected to continue into Q2 2022 before easing back during the H2 2022 as new capacities come online.
- Chinese trade restrictions on Australia continue affecting the export of roundwood but not woodchip. There is no expectation for improved diplomatic relations any time soon. Australian softwood log exporters have developed new opportunities in India, but export log volumes will remain restricted to a limited number of log grades. Overall, log supply remains tight due to softwood plantation losses in the 2019/20 Black Summer bushfires and high timber demand sparked by pandemic economic stimulus measures.

New Zealand

- Adopting a more aggressive approach to containing inflation, the New Zealand Reserve Bank lifted the official cash rate by 50 bps to 1.50% on 13 April following a 25 bps increase on 23 February 2022. Ten-year bond yields have responded to the expectation of an increase and now sit at over 3.5%. Although the March quarter inflation rate is not yet out for all groups, market expectations are for a 7.4% annual rate, and will likely be the highest for ~40 years. Food price inflation for the year ending March was a historically high 8%. There is also pent-up pressure for general retail prices which is expected to result in an approximate 7% step up overall in prevailing prices in the near future. After initially denying the existence of a cost-of-living crisis, the government has moved to temporarily reduce fuel taxes and halve public transport fares, while also increasing pensions and benefits. Consensus Economics, in their March forecast, have reduced expected GDP growth for

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New Zealand to 3% in 2022 from 3.4%, due to the extent of the Omicron outbreak. The 2023 forecast has dipped only marginally to 2.9% although expectations of a hard landing are growing.

- According to Quotable Value, for the first time in over 10 years New Zealand house prices plateaued in March and in some regions dipped slightly. With the government's recent controls on property investors, raised deposit requirements, tightening bank credit, and rising interest rates finally beginning to have an effect. It remains to be seen whether this will flow through to new housing starts and hence lumber demand. The situation remains somewhat artificial as the housing shortage remains.
- With the opening of New Zealand's borders to Australia on 13 April, market commentators are expressing concerns about an impending flood of skilled people leaving for greener pastures and the traditional OE. Speculation is that this could be between 50 000 and 100 000. Should this occur, it would exacerbate the extreme existing skill/labor shortage impacting many industries. The government has been circumspect in only allowing a trickle of seasonal/permanent labor to enter the country, impacting agriculture, horticulture, health, and education sectors in particular.
- Despite a substantial decline in lumber demand in China driven by the credit/debt issues facing many construction sector developers and Omicron lockdowns, softwood log prices continue to increase. The main driver is developing constraints on log supply. Current CFR log prices have now reached USD 177/JAS m³ for A grade logs. Offtake from China ports has fallen to an average of 65 000 m³/day in March compared to over 90 000 m³/day in the same period last year. Wharf stocks remain stable.
- China softwood log supply reductions have been most notable for European exports and distant suppliers such as Uruguay. New Zealand supply for January and February 2022 remains 19% below 2021 levels due to inconsistent prices and high shipping rates (over USD 65/JAS m³ in March 2022); adverse currency movements (strengthening NZD against the USD); and pandemic effects on log production in New Zealand.
- The impacts of the Russia/Ukraine war have yet to be fully felt, as Western countries begin to block the exports of Russian and Belarusian timber. Ukraine, previously a significant supplier of softwood lumber has also been heavily impacted. Although China is not placing restrictions on Russian supply, there will be follow on effects. Western shipping lines are refusing to cart Russian goods for example. Russia still has land connections to China in the Far East and additional volume could flow through this route disrupting current Asia-Pacific supply sources.
- At the March primary carbon market auction of New Zealand Units (NZUs) the clearing price was at the government cap of NZD 70/NZU. Three further auctions will be held over 2022. Prior to the most recent auction, secondary market prices hit a peak of NZD 86/NZU before subsequently falling back to the low 70s. The current secondary market price is NZD 76/unit. Negative reaction against international investors acquiring land for permanent forest carbon farming is increasing with a petition being raised against the practice on the East Coast. The government has also announced plans to prohibit permanent carbon forests using exotic species and has called for submissions by April 22.

China

- Consensus Economics' March 2022 outlook for China's GDP growth remains unchanged at 5.0%, increasing to 5.2% in 2023. Headwinds such as China's troubled real estate construction sector and a significant new wave of COVID-19 infections may result in growth undershooting the official target. China's COVID-Zero policy continue to require abrupt lockdowns and border closures affecting economic activity in key centers such as Shanghai.
- Some of Russia's and China's own policies have been impacting exports to China:
 - Russia imposed 10% export duties (no less than EUR 13/m³) on green softwood lumber (exceeding 22% moisture content) as of July 1, 2021 – primarily impacting China.
 - Russia then imposed export duties (EUR 220/m³) on green softwood lumber in excess of 10 cm in thickness and width as of January 1, 2022. These export duties target so-called "square logs" that were being exported to China.

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- Russia's previous announcement of total softwood log export ban to all countries started on January 1, 2022.
- China banned Australia log exports to China since late 2020.
- China suspended log and lumber imports from Lithuania starting on February 26, 2022.
- China has targeted pine logs and lumber imports from seven countries (including the US and Canada) with new custom clearance regulations starting on February 1, 2022.
- With the Russia/Ukraine war, lumber exports to China will be in disarray for the rest of 2022. In 2021, Russia was the largest supplier to China with more than a 66% market share; Ukraine held the third position (5%) and was starting to rival Canada for second spot; and Belarus was ranked eighth (2.6%). Collectively, these three countries accounted for 13 million m³ and 74% of lumber exports to China in 2021.
- It is expected that with Baltic Sea ports inaccessible to Russian exports, more exports will be directed to China and most likely at discounted prices. This will likely cause other countries to redirect exports away from China to other higher priced markets.
- With no log exports from Russia, Australia, and Lithuania and reduced exports expected from Europe, China may be tight for logs in 2022. This could be a huge advantage for New Zealand, as it is the only large log supplier remaining.

Europe

- Demand for pulp in Europe is strong and prices have remained high. The big question marks related to the pulp market are to what extent the Ukraine conflicts and coronavirus pandemic will impact on Chinese industry and pulp demand. Prior to the Ukraine conflict, the exports of pulp from Russia have been on a level of 2 million tonnes. Exports to China have accounted for over half of the total. The volume of BSKP exported to China has been almost 1.2 million m³. It is unclear whether Russian industry will be able to increase their market shares in China at present market conditions.
- Imports of sawn timber from Russia and Belarus to Europe has also ended as a result of the war. Last year, some 7.7 million m³ of sawn timber was imported to the EU from Russia and Belarus, more than a third of all non-EU imports. Consequently, the demand for Nordic sawn timber will remain strong at least during the spring and summer this year. Towards the end of the year, Russian sawn timber will become increasingly competitive in the Chinese and North African markets.
- Since March 2022, following the events in Ukraine, additional disruptions in the wood supply chain are starting to be experienced in Europe.
- The sanctions applied by the EU and the UK on logs and wood product imports from Russia and now also Belarus have significantly restricted if not completely halted imports. The UK Government applied a 35% additional import tariff on Russian wood products starting the 25th of March. Additionally, many European wood organization such as European Sawmilling Organisation (EOS), European Confederation of the Woodworking Industry (CEI Bois) and the Timber Development UK (TDUK) also advised their members to cease trade with Russia and Belarus.
- The wood imports from Russia to the Nordics has practically ended. The total roundwood imports to Finland have for several years been in the range of 7-8 million m³/year, including woodchips. The import has been dominated by birch pulpwood and sawmill woodchips which are not subject to duties or any other restrictions. The wood imports from Russia to Sweden has been much smaller. The loss of some 4.5 million m³/a of birch pulpwood imported to Finland cannot be fully compensated by intensified domestic sourcing. Imports of hardwood pulp will increase. The shortage of woodchips will probably increase the price of energy wood and may result in an extension of the transition period for phasing out peat in energy production. Birch pulp production lines will presumably shift to softwood pulp production.
- On the 8th of April, the Official Journal of the European Union (OJEU) reported that the EU will also ban Chemi-Thermomechanical Pulp (CTMP), kraft paper and timber imports from Russia starting 9 April.

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- After the EU and the US announced its sanctions against Russia, Russia announced its own measures towards “states engaging in hostile acts against Russia”. This includes an export ban on several types of timber and timber products. The ban is currently in force until the end of the year.
- Many forest products companies have taken steps to withdraw from Russia. For example, Stora Enso announced that it would stop all production at its three packaging plants and two sawmills in Russia. Ikea has decided to pause all industrial production in Russia and suspend all import and export operations. Recently Smurfit Kappa Group plc also decided to exit the Russian market.
- Such sanctions and events in the supply chain are now shifting part of the market in Europe and globally. Before the war, Russia and Ukraine were supplying timber and other wood products to many countries, including Finland, the Baltic states, Poland, Germany, the Middle East, and the US.
- The German Institute for Economic Research (Ifo) reported a new supply shortage in building materials and an increase in price (EUWID reported an increase of 19% in March for timber construction products against December 2021). According to Ifo surveys, 80% of the interviewed manufacturing companies in March complained about delivery bottlenecks (67.3% for the manufacture of paper and 62.7% for the manufacture of wood products).

Russia

- A total log export ban became effective on January 1, 2022, so this was already expected. However, log exports from Europe could be reduced to meet anticipated sawmill demand.
- Russia’s invasion of Ukraine will cause some major dislocations in the lumber trade and flows this year.
- Russia bans exports to “unfriendly” countries in Europe, United States, Canada, Australia, Japan, South Korea, etc.
- EOS member countries in Europe ban all wood imports from Russia and Belarus as “conflict timber”. Other countries like the US are drafting regulations for similar bans.
- FSC and PEFC reported suspension of their activity in Russia and Belarus. Meaning that forest and wood products from both countries cannot be traded under the FSC or PEFC certified schemes. PEFC went further by stating that wood from these countries shall be viewed as “conflict timber”.
- The European trade ban in Russia, Belarus, and Ukraine represents up to 10% of Europe’s sawn softwood timber consumption, or about 8.5 million m³. How this deficit gets made up will likely involve a number of adjustments in reduced European offshore imports to keep more production in Europe. This will likely involve less exports from Europe to China (filled up with cheaper Russian sawn wood) as well as the US and Australia.
- The biggest question is: how much can Russia harvest forests to provide sawlogs to sawmills and pulpwood for pulp mills? And since lumber produced in Western Russia can no longer be shipped via the Baltic Sea to European ports, is there enough rail capacity to transport lumber across Russia to Far East ports or onward to China ports and is this even practical and economical?
- Oak from Ukraine makes up a considerable hardwood volume for European consumption and this will not likely be accessible while the war is on.
- Birch plywood from Russia, Belarus and Ukraine represents 70% of global production, where 3 million m³ is exported – mainly to Europe – and the US is the largest single country market (400 000 m³).
- Russia has proposed nationalizing foreign-owned factories that shut down operations in the country. This means that foreign companies are at risk of losing some of their investments.

North America

- US housing starts rose to 1.793 million units (SAAR) in March, up marginally from 1.788 million units in February and from 1.679 million units in January and up 3.9% from 1.725 million units year-over-year. Starts totaled 1.6 million units in 2021, which was an increase of 16.0% over the 2020 total of 1.38 million units. The preliminary NAHB Builder Confidence Index slipped two points to 79 in March and to 77 points in April based on lower projected single-family sales in the next six months. Total housing starts in 2022 are projected to total 1.664 million units. Starts are predicted to rise to 1.78 million units to a cyclical peak in 2025.



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- While US housing starts have moved steadily higher during the pandemic, what is troublesome is that mortgage rates are rising (near 5%), housing is becoming less affordable as home prices keep rising, and housing completions are lagging starts by a widening factor due to supply chain disruptions. All these factors point to a potential slowdown in lumber and panel consumption during the rest of 2022 and this could negatively impact housing starts.
- American pulpwood prices vary by region. Prices in the US South are expected to experience a modest correction in 2022, then return to recent price cycles that gradually increase to USD 10.10 per green ton by 2025 for softwood pulpwood stumpage and USD 10.00 per green ton for hardwood stumpage. Increased demand for OSB and wood pellets will promote rising prices, while higher availability of residuals from increased lumber production will apply downward pressure. In the Northeast, demand is projected to recover modestly, after capacity closures and shutdowns having impacted demand in 2020 and 2021, with prices reaching USD 24.30/cord for hardwood and USD 16.60/cord for softwood by 2025. In the North Central Region, prices are projected to continue to head lower in 2022 due to capacity loss also. However, by 2023 through 2025 it is anticipated that demand will improve with increased consumption from panel mills, and prices reaching USD 36.10/cord for hardwood and USD 32.50/cord for softwood.
- Pacific Northwest Douglas-fir log prices have increased sharply in 2022 thus far. Log supplies are tight since fire salvage operations concluded and high prices for solid wood products have driven logs to nearly USD 1000/MBF delivered, and hemlock logs to higher than USD 625/MBF. The short-term forecast is for delivered log prices to decrease as lumber prices normalize and seasonal patterns return, the summer being the low point, increasing through the remainder of the year. Douglas-fir 2022 averages are projected to be USD 842/MBF delivered and for hemlock, USD 579/MBF. The US West region is expected to continue the downward trend of exports of sawtimber logs to 0.72 BBF in 2022 due to their high-cost relative to other log supplying regions.
- US lumber production gained only 0.7% in 2021 to reach 37.15 BBF (61 million m³) despite some 1.3 BBF per year of new sawmill capacity that has been added in the last few years in the US South. Canada's lumber output was higher by 2.8% (14.46 BBF; 23.5 million m³); in total, North American lumber production increased by 1.5% despite all-time high lumber prices. US lumber consumption in 2021 increased by 1.5% to almost 51 BBF (82 million m³). Canadian lumber imports represented 13.1 BBF (21 million m³) of US consumption while European imports were 1.65 BBF (2.7 million m³).
- The Framing Lumber Composite Price (Framing Lumber, Southern Pine, OSB, Structural Panels, Studs, Western S-P-F) experienced the highest recorded three-month average of USD 1 119/MBF (~USD 700/m³, net) in the first quarter of 2022, despite steep drops in late March. Rising housing starts and a strong repair and remodeling sector were drivers of high demand. The Composite Price Index rose sharply from USD 1 038 in the week of December 29th to USD 1 334 the week of March 11th. Prices began sliding amid rising interest rates, high fuel costs and inflationary pressures in the broader economy. The index sat at USD 1 134 on March 31st and averaged USD 1 275 for March 2022.
- US Hardwood lumber utilization in 2021 total consumption increased 3.5% over 2020 to 7.589 BBF. Consumption outpaced supply by 308 MMBF, which was a significant improvement over 2020, when there was a supply shortfall of 1.15 BBF. In January 2022, production was slightly down at 7.0 BBF, which is due to labor and materials shortages brought on by the pandemic. Prices are currently elevated by demand, but adjusting for inflation, some real prices have gone lower.
- US Timberland transactions were slower, but values were up in Q1 2022 due to strong fundamentals and some interest in carbon and ESG backed by plenty of capital to invest. Only one major public sale (the Triptych package) is on the horizon once Project Sunrise and the Ceres package fully close, but private sales may be in progress. Sentiment about carbon-related timberland investing following the Bloomberg publication claiming that hundreds of millions of dollars in useless carbon credits were sold by timberland companies and carbon exchanges so far has been difficult to gauge as there hasn't been an intense reaction yet.
- The BC government's temporary deferral of 2.6 million hectares of old growth is starting to cause log shortages at some mills and this expected to increase during the year. The old-growth forests are about 7% of the timber harvesting land base in both the Coast and Interior regions. The government's initiative has also

reduced old-growth lumber production from coastal sawmills that is a key input in many value-added plants in the greater Vancouver area and in the Interior. The government has also given itself the power to change or end timber licenses, determine what compensation may be paid to forest companies (if any) and redistribute Crown logging rights to community and Indigenous land title holders. As a result, BC is becoming almost “uninvestable” as the industry has not been able to have any input into the government’s dramatic policy changes.

- The recent BC budget showed revenues from forestry are expected to decline by nearly CAD 1 billion per year over the next few years, during which the “allowable annual cut” will be reduced from 45 million m³ in 2021 to 38.5 million m³ by 2023 — a decline of 6.5 million m³. The actual log harvest will be below these permitted levels. At the peak of the mountain pine beetle salvage program, the BC log harvest on crown land reached 73.5 million m³ in 2005 and the harvest on private land was another 10 million m³.

South America

Brazil

Brazilian Wood Market – Near Future Challenges:

The primary forest clusters in Brazil are experiencing wood supply challenges that are expected to extend over the next few years. The main reasons are the last two-year export increase due to the COVID pandemic, significant industrial growth without the due increase in the forest base (structural supply deficits), and the decline in forest productivity because of adverse climate events and forestry investment reduction over the last decade.

Although at a high additional cost, the high-value industrial segments, like pulp and composite panels, are addressing their supply challenges through significant investment to plant and buy forests and the high bargaining power in the spot market provided by their extensive forest base.

The solid-wood-based industries are more vulnerable to the mid-term wood shortage risk because they depend significantly on the spot market. These industries will most likely find it difficult to maintain production and profitability at adequate levels in the next few years: wood prices increased between 50% and 120% in 2021, land prices between 20% and 30%, and forestry costs between 30% and 70% (leasing, forestry, harvesting, and transport). Prices and costs are continuing to increase.

If the above diagnoses and outlook are correct, intensive planting of new forests will be required to sustain these industries. If opportunities for growth and industrial innovation are considered, the urgency is even greater.

Questions such as who should plant and how much should be planted need to be considered. Starting with the latter, a preliminary analysis of the wood balance in the primary Brazilian forest clusters points to a structural deficit of around 500 thousand to 700 thousand hectares.

The former question is more complex. Two non-exclusive strategies are presented: integrated plantations (self-supply) and independent plantations (spot market).

Concerning the first strategy, the large companies have no other option than to self-supply in the short- and mid-term since reducing industrial production is not a realistic option. The expansion of their forest bases is ongoing through a proactive combined strategy of planting forests, purchasing timberland assets, partnerships with silvicultural investors, and long-term wood supply contracts. As a result, it can be observed that spot markets are decreasing while wood, land, and timberland prices are rising significantly, escalating from economic to strategic value. This situation makes the option of self-supply a non-option for small or non-vertically integrated industrial companies, both due to the high costs and long and steep learning curves.

The second strategy, making spot markets an important wood source, would be, in theory, a win-win solution for all players. However, most farmers and institutional investors are unlikely to engage due to risk perceptions. Specifically, investment in new plantings with log production 7 to 15 years into the future to supply customers with high bargaining power is a high-risk gamble with a low success probability.

Following on the above arguments it then raises the question if the spot market concept should be abandoned. To date, investments in greenfield projects linked to spot markets have shown substantial risk and low economic return in Brazil and other countries. Consequently, institutional investors have recently considered ventures with long-term contracts with pre-defined prices and returns. However, farmers remain skeptical of forestry due to negative experiences over the last twenty years. In regions with agricultural potential, farmers converted their plantations into “oxen” and “soybean” and only maintain forest plantations on marginal areas.

Despite the structural challenges in Brazil, a competitive and large spot market is arguably necessary for Brazil’s forestry sector to thrive. To achieve this will require a lot of focus, discipline, and time. In the first instance, the trust of farmers will need to be regained by treating them as investors, offering pre-agreed prices and profitable wood contracts, credit lines for long-term investments, proper tax regimes, and management support. In the case of eucalyptus clusters, diversified industrial market segments, like the pine cluster structure, will be necessary. In short, it is essential to transform an almost imperfect market into a competitive market

The cost of spot market wood will likely be higher than other options due to lower yields and higher harvesting and transport costs. However, we should remember that the most expensive wood is the one we do not have.

Forest-Based Industry Overview:

In general, the forest-based industries increased their exports on a year-to-year basis, keeping pressure on the wood market prices:

- Pine industries:
 - Lumber, plywood, and molding exports increased 4.8% in quantity, 53% in USD, and 46% in BRL.
 - Pulplog prices increased by 70%, and sawlog prices between 49% and 63% over the same quarter of 2021.
- Eucalyptus industries:
 - Pulp exports grew by 4.7% in quantity, 16.4% in USD, and 11% in BRL.
 - Green-pig iron exports (charcoal based) decreased 6.4% in quantity but increased 46.1% in USD and 40.2% in BRL.
 - Other minor product exports (logs, plywood, woodchips) grew 40.8% in volume, 45.3% in USD, and 39% in BRL.
 - Pulplog prices increased between 60% and 95% over the same quarter of 2021.
- Corrugated Cardboard sales decreased by 0.7% in the domestic market on a year-to-year basis.

Uruguay

- UPM’s second pulp mill project in the central region of Uruguay is proceeding according to plan, even though some delays in the construction of the railroad was experienced while labor disputes caused by the impact of inflation on workers’ salaries remains a recurring theme.
- Both UPM1 and the Montes del Plata (MdP) pulp mills operated at full capacity during 2021 and are doing so during Q1 2022. During Q1 2022, MdP “imported” 1.1 million m³ and UPM 1.2 million m³ of logs.
- The first seven woodchip vessels exported during Q1 2022, showed an increase in FOB price close to USD 10/BDMt compared with 2021, reaching FOB values between USD 155/BDMt and USD 158/BDMt. During 2022, Uruguay’s *Eucalyptus globulus* woodchips exports will increase compared with 2021, Portugal being the main destination.
- Pine logs exports started at good pace during Q1 2022, with a total exported volume of 0.55 million JAS m³, representing nine vessels, (53% to China and 47% to India). Average FOB price for Q1 2022 is around USD 73/JAS m³.
- Uruguay’s eucalypt sawlog exports also started at good pace during 2022, expecting to export higher volumes than 2021. Average FOB prices for Q1 2022 are around USD 135/m³ for logs +30 SED. Also, during 2022, holds on bulk vessels are going to be loaded with *Eucalyptus grandis* sawlogs (SED +20), and by doing this, exported volumes will continue to grow.

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- Only one plywood company in Uruguay is still operational. As of Q1 2022, exported volume already reached 51.600 m³, with average prices around USD 470/m³.
- Carbon credits from Uruguay's forest projects are still in high demand, with prices higher than USD 11/CCBvccu (CCBvccu= Climate, Community & Biodiversity Verified Carbon Unit).

Argentina

- Pine log exports continued during Q1 2022, with a total exported volume 0.190 million JAS m³, representing eight vessels, (three to China and five to India).
- HS Timber Group, together with its Belgian joint-venture partner Forestcape, intends to build a new sawmill in Gobernador Virasoro, in the Argentinian province Corrientes. The investment will amount to approximately 100 million USD and the sawmill is expected to create 280 direct jobs. The total employment impact, including the upstream and downstream sectors, is estimated at over 700. The plant is designed to process small diameter pine logs (*Pinus taeda* and *Pinus elliottii*), which will be sourced exclusively in the region, from sustainably managed areas.

Africa

- The Russian invasion of Ukraine and associated sanctions on Russia could present an opportunity for several African countries with mineral and energy reserves, especially newly discovered gas reserves. Countries such as Tanzania, Mozambique, Senegal, and Nigeria could benefit from a shift away from Russian energy reserves while South Africa could benefit from an increasing demand for gold and palladium.
- The benefits that African countries might experience due to a geopolitical shift in mineral resource demand is, however, overshadowed by rising agricultural and domestic costs. Increased fuel prices are having a direct effect on the prices of household goods while more hardship is projected due to disruptions in wheat imports. In 2021, nearly 40% of the Ukraine's wheat exports were to African countries. The increases in oil prices and export bans on fertilizers from Russia and China are driving fertilizer prices to levels where African farmers cannot afford to apply the required levels of fertilization to their fields that will support good harvests.
- It is estimated that South African companies such as Naspers, Bell Equipment, Barloworld, and others have more than USD 5.3 billion invested in Russian operations. On the forestry front, Mondi's pulp and paper operations are affected by the war in Ukraine and Russian sanctions. Its Russian operations represented "12% of the Group's revenue by location of production in 2021" (www.mondigroup.com).
- In South Africa, pulp and woodchip producers faced log supply shortages due to disruptions in the freight rail service that link the Mpumalanga Highveld and KwaZulu-Natal North areas to the pulp and woodchip mills in Richards Bay. This service ground to a halt for more than a week in March due to a shortage of locomotives.
- The government of the Democratic Republic of the Congo indicated that it would review all logging permits after a scathing government audit highlighted widespread tax avoidance and illegal concession licenses in the forestry industry. Meanwhile in Zambia, the government will soon start again to issue concession licenses after licenses were suspended in 2017.
- The CDC Group, the UK's development finance institution has been formally renamed British International Investment (BII). BII has a portfolio value of USD 4.2 billion in Africa which include various investments in forestry companies. At least 30% of its total investments over the next five years will be in climate finance.
- In Gabon the African Conservation Development Group and Cora Group announced a joint sustainable forestry venture called African Equatorial Hardwoods that will manage 400 000 ha of timber concessions and see an investment of EUR 30.5 million in timber processing.
- Nearly 350 000 Mt of woodchips were exported through the ports of Richards Bay and Durban in South Africa between January and February 2022. Over the same period nearly 180 000 ADt of chemical wood pulp were exported through these ports.

GLOBAL CONSULTING ALLIANCE LOCATIONS

BM2C

Address: Av. Cândido de Abreu, 70 - Centro Cívico, Curitiba - PR, 80530-000, Brazil

Tel: +55 41 98893 7338 | +55 41 3319 5967

bm2c@bm2consulting.com | <http://bm2consulting.com/>

Hägglom & Partners Ltd

Address: Oy Aleksanterinkatu 21 A, 5. floor, 00100, Helsinki

Tel: +358 40 555 9567 | Rainer Hägglom, Chairman | rainer.haggblom@haggblompartners.com

Tel: +358 40 758 8881 | Werner von Troil, COO | werner.von.troil@haggblompartners.com

<http://haggblompartners.com/>

Helsinki | London | New York | São Paulo | Singapore

Margules Groome Consulting Pty Ltd

Address: Level 4, 90 William St, Scottish House, Melbourne VIC, 3000, Australia

Tel: +61 3 8199 7937

info@margulesgroome.com | www.margulesgroome.com

Australia | New Zealand | Netherlands | South Africa | China

Mason, Bruce & Girard, INC | Natural Resource Consultants

Address: 707 SW Washington Street, Suite 1300, Portland, Oregon, USA

Tel: + 1 503-224-3445

info@masonbruce.com | www.masonbruce.com

PIKE & CO Consultora Forestal

Address: Costa Rica 1566, 11500 Montevideo, Uruguay

Tel: + 598 2605 6234 | +598 2605 6235

info@pike.com.uy

Russ Taylor Global | Wood Business & Market Consulting

Address: Vancouver BC Canada

Tel: +1 604 897 5666

rustaylor@rustaylorglobal.com | www.rustaylorglobal.com

