Spotlight: First Tin - Getting ready to benefit from technological megatrends

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- First Tin is a tin mine developing company with a portfolio of two near-term high-margin projects located in low-risk jurisdictions (Germany and Australia) that together could annually produce ca. 6,000 tons of tin.
- Tin, an essential element in today's quality of life, could become a seminal piece of the green transition with its application potentially expanding from electric vehicles, solar panels and automation to hydrogen generation, water purification and lithium-ion batteries.
- The expected widening of the gap between tin supply and demand beyond 2025 should significantly improve the long-term outlook for tin prices.
- First Tin's assets represent the 5th largest undeveloped tin reserves globally (excl. RU, KZ, DRC). Based on First Tin's development plans, tin production might begin in 2025.
- First Tin has a supportive shareholder base and is led by an experienced and dedicated management team with significant personal investments in the company. Directors' shareholding in the company has increased to 9.5% from 8% at IPO.
- First Tin received an ESG rating from Digbee in May 2022, which concluded that it is a qualified candidate for European Raw Material Alliance (ERMA) funding and support.
- First Tin is well funded to reach the investment-ready stage for both projects.



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Recent developments

- The Taronga/Australia drilling update has confirmed the previous hypotheses of the project, keeping First Tin on track to complete the Feasibility Study and the Environmental Impact Study by the end of 2023.
- The Tellerhäuser/Germany drilling update has shown positive results from the 2nd round of two deep drillholes. Due to the slow operational performance of the drilling contractor, First Tin decided to terminate the current contract. According to First Tin, identifying and hiring a new contractor could delay the drilling program by around six months and push the completion of the Definitive Feasibility Study into 2024.
- The Saxonian Mining Authority confirmed on March 27 the Tellerhäuser asset's eligibility to move straight to the construction and operational permitting, which is reducing the overall permitting timeframe by up to 12-18 months.

Company data

Price as of 31.03.2023 (GBp)	6.85	Index	STOXX EURO 600
Year low/high (GBp)	6.85/30.95	Primary Exchange	London Stock Exchange
Shares outstanding eoy (mn)	265.5	ISIN code	GB00BNR45554
Market capitalisation	18.2	Secondary listing	Frankfurt Stock Exchange
Free float	46%	Bloomberg	1SN LN, 1SN GF
Free float (GBP mn)	8.3	Reuters	1SN.L, 1SN.F
Avg. daily turnover (12M, # shares)	370,800	Website	www.firsttin.com

Source: Bloomberg, Reuters, RBI/Raiffeisen Research

Oleg GALBUR

Analyst Editor

+43 1 71707-5610

oleg.galbur@rbinternational.com

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Company profile

First Tin is a listed tin mine developing company, which owns 100% of two projects with assets in the development stage located in Germany (Tellerhäuser project) and Australia (Taronga project).

First Tin was incorporated in 2012 as Treliver Minerals Ltd in the UK, which subsequently was changed to Anglo Saxony Mining Ltd (in February 2017) and to First Tin Ltd (in August 2021).

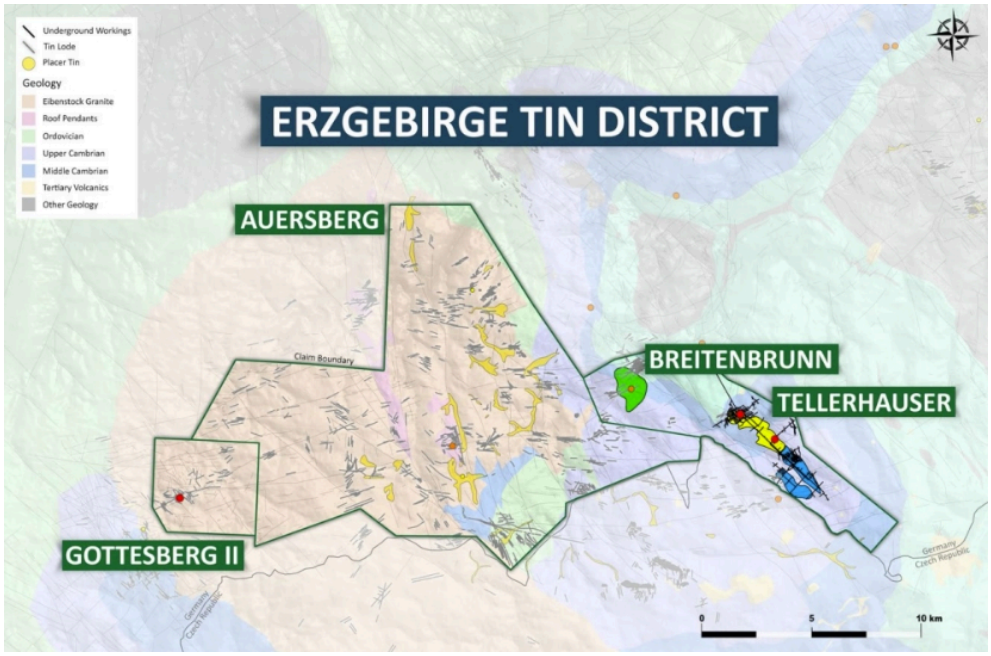
First Tin came to own Saxore Bergbau GmbH (Saxore), its German subsidiary, in December 2013. Saxore holds a valid mining licence (valid until 2070) in Saxony (Germany) for the extraction of mineral resources from the Rittersgrün field, which contains the Tellerhäuser tin project. In addition to the mining licence, First Tin also holds two exploration licences in Germany (Gottesberg and Auersberg), which sit directly contiguous with its Rittersgrün mining licence.

In November 2021, First Tin acquired the Taronga project via its fully owned subsidiary Taronga Mines Pty Ltd in Australia. As a result of this acquisition, Taronga Mines owns a mining lease and four exploration licences in the Taronga area located in New South Wales, Australia.

First Tin floated its shares on the London Stock Exchange on 8 April 2022 and listed shortly thereafter on the Frankfurt and Stuttgart stock exchanges.

Tellerhäuser assets

First Tin owns three tin assets in Saxony/Eastern Germany (Hämmerlein-Dreiberg, Gottesberg and Auersberg), which is considered the mining hub of Germany, having more than 800 years of history in mining silver, lead, zinc, tin, uranium and other by-product metals.



Mineral Resources

The indicated and inferred mineral resources for the Hämmerlein and Dreiberg tin deposits were estimated at 53,000 tons. The estimates were derived using a cut-off of

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0.5% tin (Sn) to determine material which has a reasonable prospect of eventual economic extraction and were classified and reported in accordance with the JORC code (2012 edition) as of September 2021. Estimates for zinc (Zn), iron trioxide equivalent (Fe_2O_3) and indium (In) have also been made, although it must be cautioned that confidence in the estimation of these elements is lower than for tin.

Hämmerlein-Dreiberg resource at 0.5% Sn cut-off under JORC 2012

	Tons mn	Sn%	Sn (tons)	Zn (tons)	Fe_2O_3 (tons)
Indicated	2.0	1.0	19,000	18,000	400,000
Inferred	3.3	1.0	34,000	37,000	650,000
Total	**5.3**	**1.0**	**53,000**	**55,000**	**1,050,000**

Source: First Tin

The Mineral Resource Estimate (MRE) for Gottesberg was updated in December 2012 to comply with the updated resource guidelines issued by JORC 2012. The Gottesberg MRE stands at 33,000 tons and was determined based on a total of 67 diamond drill holes completed from both surface and underground locations and also sampling of 124 underground headings. Although the resource was determined at multiple cut-off grades, a cut-off of 0.35% tin would be deemed to meet the Reasonable Prospects of Eventual Economic Extraction based on assumptions for suitable mining and processing cost, recoveries and grades for this deposit.

Gottesberg resource at 0.35% Sn cut-off under JORC 2012

	Tons mn	Sn%	Sn (tons)	Tons mn	Cu%	Cu (tons)
Indicated	2.0	0.48	9,000	-	-	-
Inferred	4.8	0.48	24,000	6.8	0.12	8,000
Total	**6.8**	**0.48**	**33,000**	**6.8**	**0.12**	**8,000**

Source: First Tin

The Auersberg project is still in the target generation phase and there has been no resource statement compiled for this project.

Mining

To achieve low operating costs and to maximise ore extraction, mining operations at Tellerhäuser would consist of a variety of mining methods, including Long Hole Open Stoping (LHOS), Room and Pillar, as well as Cut and Fill mining techniques. The upper Hämmerlein resources consist of thick zones of mineralisation which are ideally suited to LHOS. The flat lying, narrower sections would be mined using Room and Pillar mining techniques. Only where poor ground conditions prevail would Cut and Fill mining be implemented. Mining machinery would consist of a battery powered mobile fleet (trucks & loaders) with electric hydraulic drilling equipment.

The deeper Dreiberg deposit at Tellerhäuser would be mined predominately using Room and Pillar techniques. Given the significant distance (~ 2 km) to get to the Dreiberg mineralisation, further studies are required to determine the most cost-efficient access method.

No detailed mine planning has been undertaken yet for the Gottesberg resource. Historically, the mine workings were accessed via vertical shafts. No mine plans have been developed for the Auersberg project.

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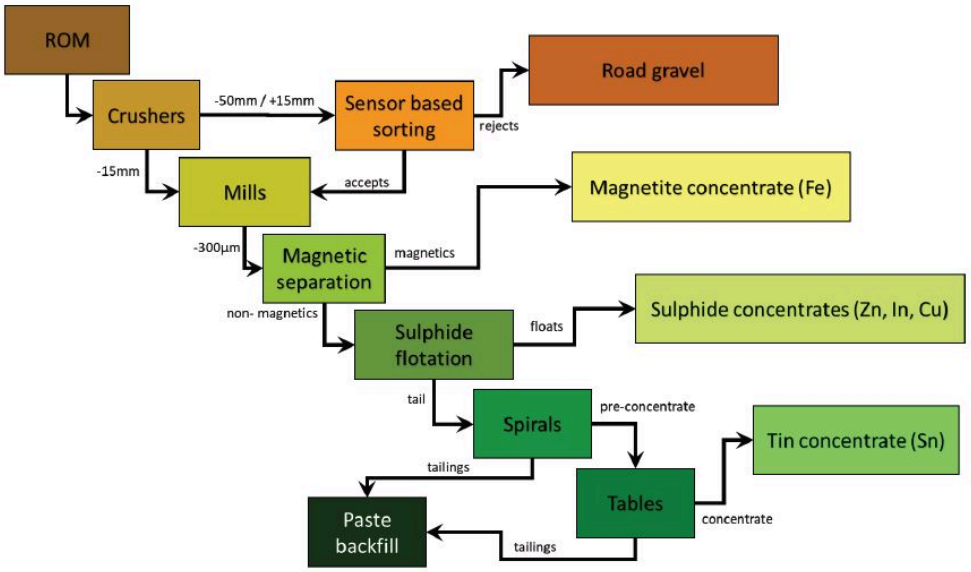
Mineral processing

Extensive sampling and testwork including pilot plant testwork on bulk samples has been undertaken for Tellerhäuser over periods since the early 1970s.

The flowsheet developed for Tellerhäuser comprises crushing, sorting, grinding, magnetic separation, sulphide flotation, gravity concentration and flotation of the cassiterites. X-ray transmission (XRT) sorting would be done in a single stage with both coarse and fine XRT sorters. Magnetic separation would be done with twin rougher WHIMS, with regrinding of the WHIMS tails and WHIMS at lower gauss. Regrind tails would be treated by sulphide flotation to produce a bulk Zn-Cu-In concentrate. Sulphide flotation tails would be treated by coarse gravity separation, followed by fine cassiterite flotation and fine gravity concentration to produce a final tin concentrate. Coarse gravity tails would be reground, treated by LIMS and recirculated to the gravity circuit feed.

Final concentrates would be tanked and pumped to surface for filtering and dumping to containers for delivery. Final tailings would be thickened and mixed prior to pumping to fill stopes for disposal. Overall recoveries of 75% Sn to a 50% Sn concentrate, 60% Zn to a 45% Zn concentrate containing 400 g/t In at 80% recovery, and 15% recovery of Fe_2O_3 to a 60% Fe concentrate are assessed for the flowsheet.

Conceptual Tellerhäuser process flow sheet



Source: First Tin

Waste management

The mining studies that have been undertaken for the Tellerhäuser project detail that the bulk of the waste rock and tailings produced from mining and processing activities would be predominately backfilled into the substantial underground voids that already exist. Waste material from the mine development would be transported and direct tipped into the historical tunnels that were constructed during exploration and mining activities. In addition, by installing the process plant within the mine, thickened tailings could be pumped into voids, or a system of co-disposal would be utilised. Co-disposal allows for greater utilisation of void space and offers greater stability and safety.

The current plan is to utilize up to 40% of the mined volume as product. The mineralized portions are to be converted into metal concentrates. A second larger volume fraction from the non-mineralized rock volume discarded early in the processing by the use of sensor-based ore sorting is to be marketed as construction material. The remaining

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processing waste will be backfilled into the mined voids and stabilize the pit, thus allowing for the loosening mining operation. This is the most sustainable mining method as it allows exploitation of up to 100% of the mineralized zone.

Infrastructure

All three project areas are well situated in relation to access and services. Road, rail and air transport are within relatively short distances to project sites. Direct access is possible to each location via a network of sealed all-weather roads. The German rail network and a rail goods yard are located approximately 11km from the Tellerhäuser project site.

All services required for mining operations are available locally, including power and water supply. Both Tellerhäuser and Gottesberg have water supplies from existing underground storage that can be utilised once treated. As each project area is located close to community centres, it is envisaged that the majority of the workforce would be recruited from the local towns. Senior professional occupations would need to be recruited from outside the area, however there is adequate accommodation available locally.

Planning for the Tellerhäuser project has incorporated designs for minimal surface infrastructure. Over the life of mine operations, the bulk of waste rock and plant waste is to be stockpiled underground into existing voids. Existing voids or new voids would be created for the construction of the processing plant. The cost of this is mitigated by the elimination of long haulage routes to transfer ore to the plant if located on surface and then returning waste underground. In addition, locating infrastructure underground minimises the potential for protracted permitting approvals. Infrastructure planning for the Gottesberg and Auersberg projects is not currently developed.

Project status update

According to the recently published drilling update, First Tin has received positive results from the 2nd round of two deep drillholes undertaken as part of the drill program into the deep Dreiberg mineralisation. This program is designed to add indicated resources to the Tellerhäuser project by confirming the continuity of mineralisation identified in the 1970s and 1980s.

Due to the slow operational performance of the drilling contractor, First Tin has decided to terminate the current contract and look for a new contractor to take over the Dreiberg drilling program. According to First Tin, identifying and contracting a new driller could delay the drilling program by around six months, which would push the completion of the Definitive Feasibility Study into 2024 (from end-2023, according to the original schedule).

First Tin was able to identify a considerable amount of additional historical drilling data for the Tellerhäuser project. The data come from previously unseen old uranium exploration drillholes as well as from three different archives in Freiberg. All this data is currently being added to the main database and should result in amore robust resource model.

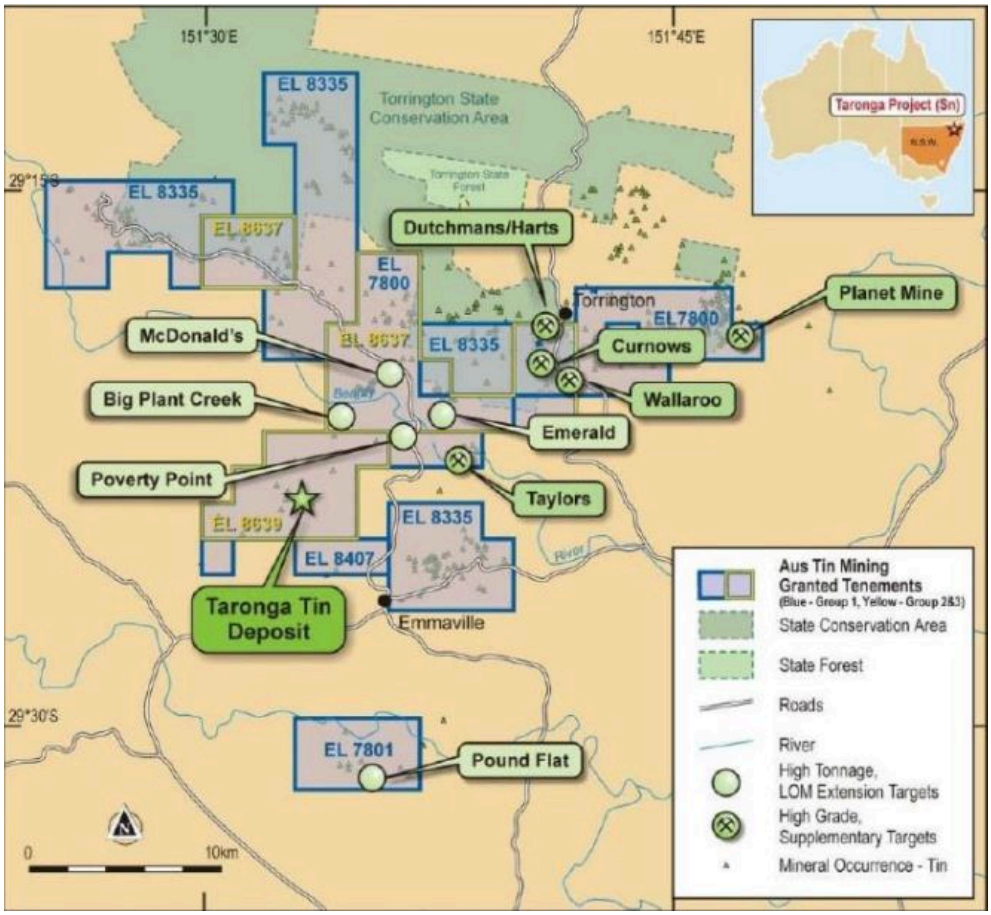
On March 27, the Saxonian Mining Authority confirmed the asset's eligibility to move straight to the construction and operational permitting process, which reduces the overall permitting timeframe by a period of up to 12-18 months. This decision was made due to the minimal environmental footprint that the project is anticipated to have throughout the construction and production phases.

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Taronga assets

In Australia First Tin fully owns the Taronga project, which is located within New South Wales. Taronga mines own a mining lease covering an area of 77 ha and four exploration licences covering a total area of 340 square kilometres. Mining, exploration and prospecting in the Taronga tin project area dates back over a century.

Taronga assets location



**First Tin exploration licences in blue, **Aus Tin Mining acquired by First Tin in 2021*
Source: First Tin

Mineral Resources

The mineral resource for the Taronga tin deposit was made by estimating grades for tin (Sn), copper (Cu) and silver (Ag). The classification of the resource included mineral resources in the indicated and inferred categories.

Taronga resource at 0.1% Sn cut-off under JORC 2012

	Tons mn	Sn%	Sn (tons)	Cu (tons)	Ag (koz)
Indicated	26.9	0.15	45,200	-	-
Inferred	9.4	0.19	12,000	26,400	4,400
Total	**36.3**	**0.16**	**57,200**	**26,400**	**4,400**

Source: First Tin

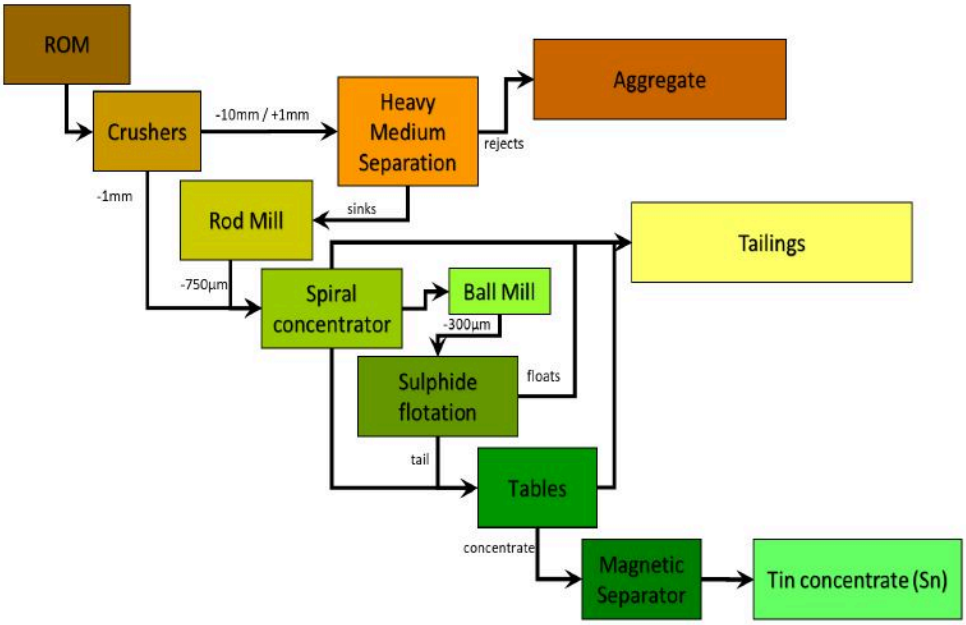
Mining and Processing

For Taronga mines, First Tin is considering open-pit mining in both northern and southern zones. The processing flow includes three stages of crushing. First Tin is considering using a high pressure grinding roll, which is a new technology designed to remove waste

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rock before crushing and sorting and thus lowering processing costs and improving head grades.

Simplified tin processing flow sheet for Taronga



Source: First Tin

Project status update

According to the recently published drilling update, the Taronga project is shaping up well with no red flags being identified by the work completed so far. The completed drilling campaign has confirmed the previous findings with respect to existing resources. First Tin will undertake in-fill drilling with the aim of creating new indicated resources so that they can be included in the Feasibility Study.

The CEO Buenger said that most data collection (on drilling and assaying, mineral processing testworks) is planned to be completed by the end of June. This should allow First Tin to decide on the size and style of operations for Taronga mines, so that the Feasibility Study can progress from that point forward with a single option. Despite facing significant cost inflation on most workstreams, First Tin stayed on track and is fully financed to complete the Feasibility Study and the Environmental Impact Study by the end of 2023.

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Projects' economic analysis

Taronga project

The previous owner of the Taronga project, Aus Tin, has commissioned a Mineral Resource Estimate, which was made by Mining One in compliance with JORC 12 guidelines.

In 2014, Aus Tin reported the completion of a Pre-Feasibility Study (PFS) based on mining and processing the mineralisation from the Taronga Tin Deposit. Based on the PFS findings and assuming a discount rate of 8%, a USD/AUD exchange rate of 0.90 and a tin price of USD 25,000 per ton, Aus Tin estimated a net present value (NPV) of USD 46 mn for the Taronga project in 2014. The project's NPV was updated in 2021 by taking into account the cost inflation and a new USD/AUD exchange rate of 0.73. Assuming a tin price of USD 25,000 per ton and a total development capex of USD 76 mn, the updated NPV for the Taronga project comes at USD 90 mn, which implies an internal rate of return of 38%. The tin price sensitivity shows that all other things being equal, Taronga project's NPV is positive for tin prices above USD 20,000 per ton.

Taronga project's NPV and IRR

Tin price, USD/ton	Pre-tax NPV, USD mn	IRR	Capex, USD mn
20,000	12	13%	76
25,000	90	38%	76
30,000	169	59%	76
40,000	326	100%	76

Assuming 0.73 USD/AUD (currently 0.67), 8% discount rate

Source: First Tin

Tellerhäuser project

According to the IPO prospectus, total capital costs for the Tellerhäuser project were estimated at USD 147 mn, including an initial capex of USD 49 mn for the Hämmerlein processing plant, mining fleet and mining infrastructure required to reach name plate capacity. Assuming a total annual throughput of 500 ktons, First Tin has estimated the operating cost of the Tellerhäuser project at USD 67.5 per ton.

Estimate of Tellerhäuser capital cost

Capital Item	Cost, USD mn
Hämmerlein processing plant	27
Mining fleet	14
Mining infrastructure	8
Subtotal	***49***
Linear development (LoM)	76
Dreiberg plant (Y3)	22
Subtotal	***98***
TOTAL	**147**

Source: First Tin

The economic analysis of the Tellerhäuser project takes into account the output of by-products such as zinc, indium and magnetite.

Tellerhäuser economic parameters

Metal	Unit	Price	Mill recovery	Receivable
Tin (Sn)	USD/ton	26,000	75%	87%
Zinc (Zn)	USD/ton	2,750	60%	79%
Indium (In)	USD/oz	6.05	85%	80%
Iron (Fe)	USD/ton	163	15%	100%

Source: First Tin

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Based on the above economic parameters and assuming an annual output of 500 ktons, First Tin has calculated an NPV of USD 173 mn and an IRR of 43% (assuming a discount rate of 8%). Even when assuming a tin price of USD 20,000 per ton, the project's NPV comes in at USD 82 mn (IRR of 26%), which suggests that the project is financially robust. There has been no economic analysis yet undertaken for the Gottesberg and Auersberg resources.

Tellerhäuser project's NPV and IRR

Tin price, USD/ton	Pre-tax NPV, USD mn	IRR	Capex, USD mn
20,000	82	26%	49
25,000	173	43%	49
30,000	264	58%	49
40,000	445	87%	49

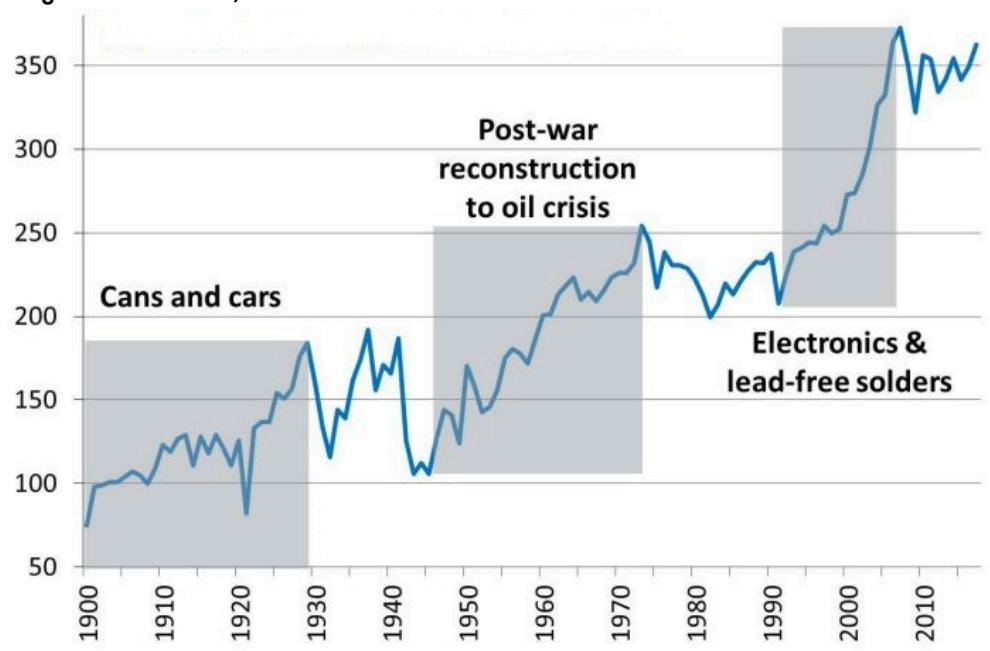
Source: First Tin

Tin market environment and outlook

Tin, a chemical element with the symbol Sn (Stannum in Latin), is a soft, pliable, silvery-white metal that is light and easy to melt. Tin is an essential element of our everyday life and is used in a diverse range of products. The most important applications of tin includes electronics, transport and packaging.

Global economic and technological developments have had a strong impact on tin demand over time. Thus, from the 1990s to the mid-2000s, total tin consumption increased from ~200 ktons per annum to 370 ktons (CAGR of 3.7%) mainly driven by rapid economic growth in emerging economies (including China) as well as transition to high tin-content lead-free solder alloys.

Long-term tin demand, in ktons



Source: Tin for the Future, ITA

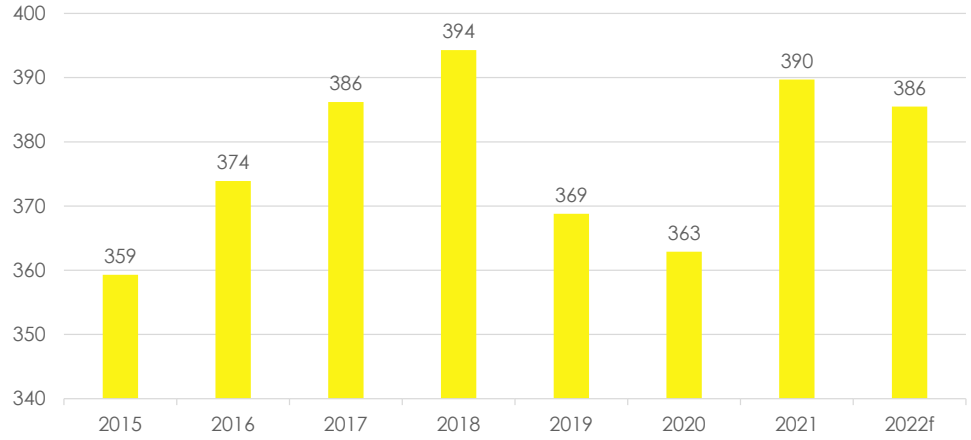
Tin demand

According to the International Tin Association (ITA), global demand for refined tin reached 390 ktons in 2021. Total recycled and secondary refined tin use stood at ca. 126 ktons (a recycling input rate of 28%), which resulted in a total tin use of 436 ktons in 2021. The ITA market survey run at the end of last year concluded that the demand for refined tin had decreased to 385 ktons in 2022 (-1% yoy), being negatively impacted by macroeconomic

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headwinds related to the Covid-19 related restrictions (including in China) and the war in Ukraine.

World consumption of refined tin, in ktons



Source: ITA

China remains the largest consumer of refined tin, having increased its market share to 47% in 2021 from 45% in 2015. Other large regional consumers of refined tin include Asia (17% excl. China), Europe (13%) and the USA (11%).

Tin applications

Although tin is used in a diverse range of products, its main application is in solder, chemicals, tinplate, batteries and copper alloys.

Tin is the main component of **solder**. Tin use in solders has represented the largest use sector for many years and remains at close to 50% of refined tin demand (48% in 2022). Most demand comes from electronics, followed by industrial traditional solders (i.e. plumbing, wiring and similar applications) and solar ribbon. The latter, solar ribbons for joining solar cells, is emerging as a new large user of industrial solder with an estimated share of 10% of solder production. The increase of demand for lead-free solders (96% Sn) was another important driver, growing to 86% of electronics solders in 2021, up from 80% in 2020. The trend towards higher-purity and lower-lead solders is expected to continue. Tin demand for solders increased at a CAGR of 1% between 2015 and 2021 before declining by an estimated 3.7% yoy in 2022.

Tin chemicals are the second largest tin use, representing 17% of total refined tin consumption in 2022. There is a large variety of tin chemical uses, which is divided between more traditional inorganic applications (i.e. ceramics, pigments, electroplating) and organic tin products (i.e. PVC stabilisers, polymer catalysts and glass coating). While, in general, the demand for traditional uses is in decline, tin chemicals were growing at a 2015-2022 CAGR of 2.2% (4.9% yoy in 2022) with growth being driven by polymer products used in the construction and transport sectors.

Tinplate packaging uses tin as an electroplated coating on steel for anticorrosion and food preservation and accounted for 12% of total refined tin demand in 2022. Once the most important tin use, the global market for tin in tinplate has been in a slow but steady decline over the last decade, losing market share to alternatives such as aluminium, plastics and paper. The trend was temporarily reversed in 2020, since lockdowns and home-office working arrangements led to higher demand for canned food products.

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Lead-acid batteries represent the fourth largest use of tin (8% market share in 2022). Although lead-acid technology remains the most cost-effective and safe way to store electrical power, it is facing an increasing competition from lithium-ion and other alternative battery technologies. Tin demand for lead-acid batteries increased at a 2015-22 CAGR of 3.2% (7.6% in 2022) with the 2022 increase coming mainly on the back of a strong growth of e-bike use in China.

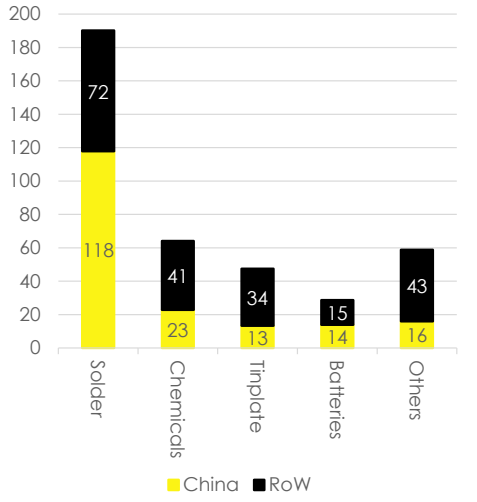
Other markets, including copper alloys, represent a minor but important proportion of tin use (ca. 15% in 2022). These markets are expected to remain stable as applications rely on the technical properties of their specific alloys with tin-copper products used in electrical connections likely to benefit from growth in electric vehicle (EVs) and renewable energy markets.

Tin applications by usage, 2022



Source: ITA

Refined tin use by application in 2021, in ktons



Source: ITA

Tin market trends and drivers

The growth of tin use in its main applications, solder and tinplate, has flattened since 2018. Miniaturisation of electronics (i.e. shrinking solder joint size) and the slowing down of economic growth in China have resulted in a lower intensity of use. On the other hand, tin demand for chemicals and batteries was growing steadily, helping the global consumption of tin to recover to pre-Covid-19 levels in 2021.

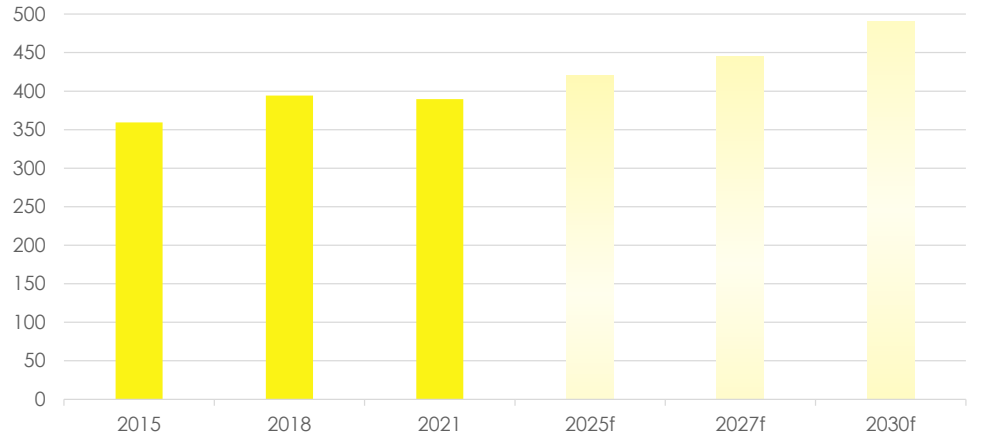
Looking forward, the medium- and long-term prospects for tin demand are good. Market intelligence sources forecast a 2022-30 CAGR of between 2.7% and 3.2% with stronger growth being expected for the second half of this decade. This could bring global consumption of refined tin to 480-500 ktons by 2030. While the exact scale and timing of tin demand growth remain uncertain and hard to predict, most of the industry expects the demand growth to be supported by the following drivers:

- **Solder** demand should be supported by (1) fading electronics miniaturisation, which should increase the correlation of tin demand and electronics growth, (2) switching to 5G wireless communications, which is seen as a back-bone for a higher penetration of the Internet of Things or IoT (i.e. physical objects with sensors, processing ability, software and other technologies that connect and exchange data with other devices and systems over the Internet), (3) climate change-related regulations, which strongly drive the demand for EVs and renewable sources of energy (i.e. solar panels).

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- **Tin chemicals** demand is expected to be driven by organic tin products as well as by new applications, especially related to both climate change and electronic materials. A significant volume of R&D is dedicated to evaluating new battery materials for lithium-ion and other energy storage markets, as well as energy generation and catalytic chemistries in solar cells, energy harvesting, carbon capture and hydrogen generation.
- **Tinplate** demand should be mainly driven by an expected increase of per capital consumption in emerging markets, but also by the shift in consumers' sentiment from single-use plastic towards more recyclable materials. With sustainability being a key driver in the packaging market, tinplate might become more competitive due to its recyclability.
- **Batteries** have been an important driver for tin demand and should continue playing a crucial role due to a higher penetration of e-mobility.

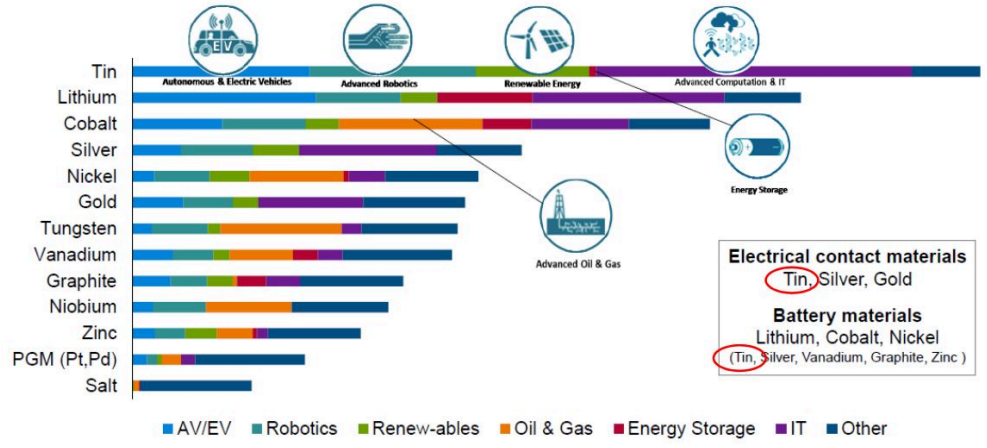
Forecast of global demand for refined tin, ktons



Source: ITA, IMARC, RBI/Raiffeisen Research

The Massachusetts Institute of Technology (MIT) study commissioned by Rio Tinto has identified tin as the metal which gains most from "new technology". The MIT has concluded that tin can benefit from all four megatrends of electric vehicles, renewable energy, advanced robotics and advanced computation & IT.

Metals to benefit most from new technology



Source: MIT study commissioned by Rio Tinto

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Technology opportunities and threats

	Opportunities	Threats
Solders	+ lead-free electronics + industrial lead-free solders + solar ribbon + robotics and IoT	- miniatuarisation - low-temperature solders - competititite technologies
Tinplate	+ sustainability	- tin-free steel
Tin chemicals	+ lead-free PVC + water treatment + electronics	- tin-free polymers
Tin energy uses	+ lithium-ion & next generation batteries + photovoltaics + hydrogen	

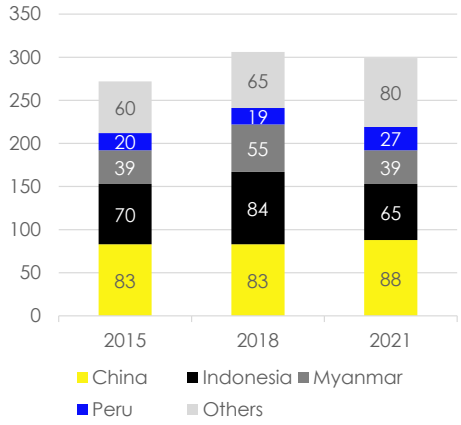
Source: RBI/Raiffeisen Research

Tin supply

World tin production has been relatively stable in the last few years with the annual refined tin output hovering between 330-370 ktons and mine production staying between 270-310 ktons. The difference between refined tin and mine production was filled by secondary refined tin production.

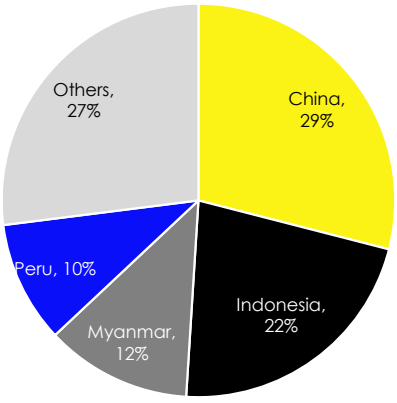
China and Indonesia remain the largest players in global tin mining, although their joint market share fell from 56% in 2015 to 51% in 2021. Tin mine production has been declining faster in Indonesia than in China due to regulatory changes which have tightened exports of crude tin as the government aims at developing the country's tin processing capabilities.

World mine production of tin, ktons



Source: USGS

Mine tin production by country, 2021



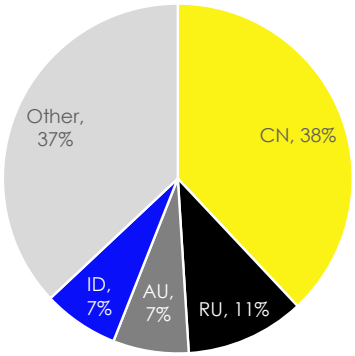
Source: USGS

Tin resources and reserves

According to ITA, the world's reported tin resources at the end of 2019 totalled ca. 15.4 mn tons, including 5.5 mn tons of reserves. The top countries in terms of proportion of global resources are China, Russia, Australia and Indonesia. China also holds most of the global tin reserves, followed by Russia and Indonesia.

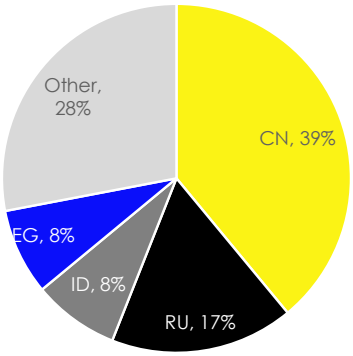
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Global tin resource by country, 2019



Source: ITA

Global tin reserves by country, 2019



Source: ITA

Based on ITA and USGS estimates, existing tin reserves at the end of 2019 would cover between 15 and 18 years of global annual production (based on the 2019 production of 306 ktons).

Estimations of global tin resources and reserves



Source: ITA report "Global Resources & Reserves"

Recycling is expected to continue to play an important role in the future tin supply, however, due to limited investments into tin recycling technologies, future growth potential of tin recycling is hindered by the low efficiency of tin extraction from end-of-life electronics.

Tin mining outlook

As we reckon above, the medium- and long-term outlook for tin demand continues to improve with the future growth of tin consumption hardly to be covered by recycling. Consequently, tin mining is to continue to cover the largest part of feedstock for tin smelters. For this to happen, the tin market will need to bring new mines online and/or improve the production profile of existing mines.

A large part of the tin projects being currently developed were first discovered during the mining boom of the 1970s and early 1980s and were reassessed at the beginning of the 2010s after a strong increase of the tin price. Still, the current pipeline of tin projects

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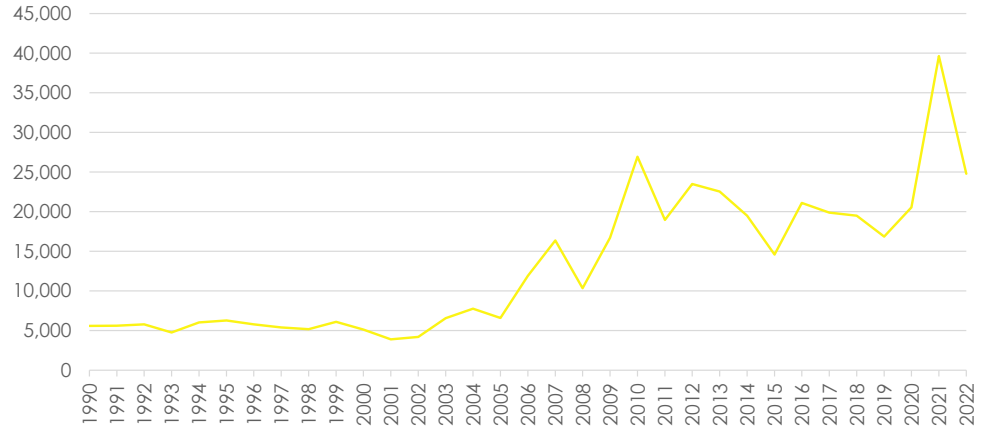
remain thin. According to ITA, just fourteen projects (including the two projects of First Tin) are targeting start-up by 2025. At the same time, production from existing mines is expected to stay flat in the best-case scenario. Many of the producing mines are facing a natural decline of output and tend to replace the depleted material with lower-quality ore.

Based on the current projects' pipeline, the medium-term tin mine production is projected to grow by just 1%, which implies an estimated global tin-in-concentrate production of ca. 320 ktons in 2025.

Tin price outlook

Similarly to other metals, tin prices are driven by global macroeconomic growth with China playing a key role in the development of refining tin consumption. The correlation between China's GDP and global consumption of refined tin stood at 0.95 between 2000-2010, decreasing to 0.7 in the following decade. The price of tin has broadly mirrored the expansion of the Chinese economy, which is expected to remain one of the most important drivers for the tin market going forward.

Tin price (annual average), in USD/ton



Source: Bloomberg

After shortly touching an all-time high level of USD 50,000/ton in March 2022, the price of tin collapsed to USD 17,700/ton at the end of October. The invasion of Ukraine and increased macroeconomic uncertainties led to a strong correction of all metal prices with tin not being an exception. Since last November, the price of tin has recovered, trading currently slightly below USD 25,000/ton.

Daily tin price, in USD/ton

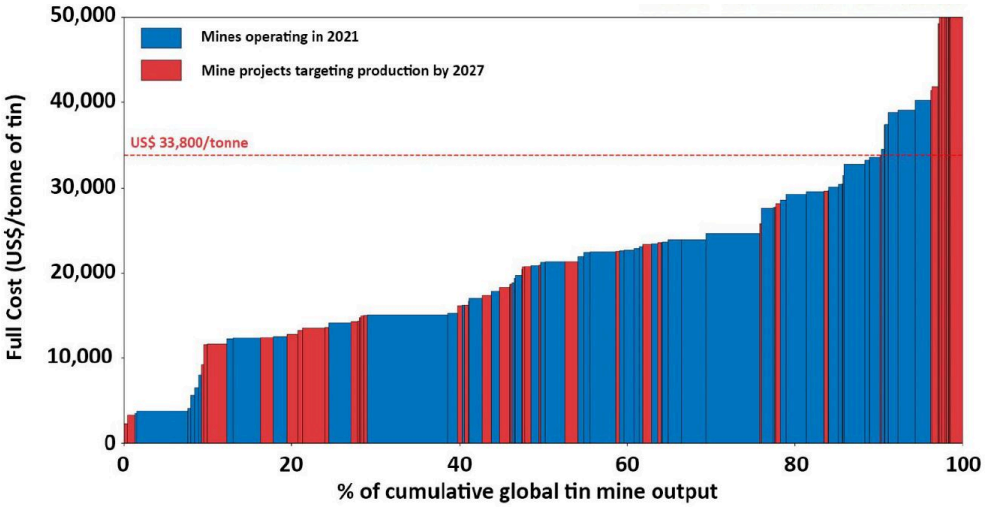


Source: Bloomberg

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The global tin market should remain well-balanced in the medium term. Therefore, we expect the price of tin to stay within the USD 20k and USD 25k per ton range until 2025. This would match current Bloomberg consensus estimates of USD 24.6k and USD 24.1k per ton for 2023e and 2024e, respectively. The tin price outlook should improve beyond 2025 with the gap between supply and demand expected to widen mainly due to a thin project pipeline in contrast to a potential acceleration of demand growth. With a limited number of new projects expected to come on stream in the longer run, a significantly stronger price environment would be needed to enable mature mines to improve their production profiles. According to Alphamin Resources citing ITA, the equilibrium price for the global tin market would be around USD 34k per ton based on ITA's full cost projections to 2027.

Tin equilibrium price based on 2027-full costs, in USD/ton



Source: Alphamin Resource/ITA

Corporate governance

First Tin (Bloomberg ticker: 1SN LN) has a dual listing on the London Stock Exchange (LSE) and the Frankfurt Stock Exchange (FSX). Its shares were floated via an initial public offering (IPO) on LSE on 8 April 2022. First Tin raised GBP 20 mn by issuing 66.67 mn new ordinary shares at GBp 30 per share, thus increasing the total number of ordinary shares to 265.5 mn. According to the IPO Prospectus, the IPO proceeds were intended for funding the exploration and development of its mines in Australia (GBP 9.7 mn) and Germany (GBP 4.6 mn), as well as for covering general corporate expenses (GBP 4.7 mn).

First Tin share price on LSE, in GBp



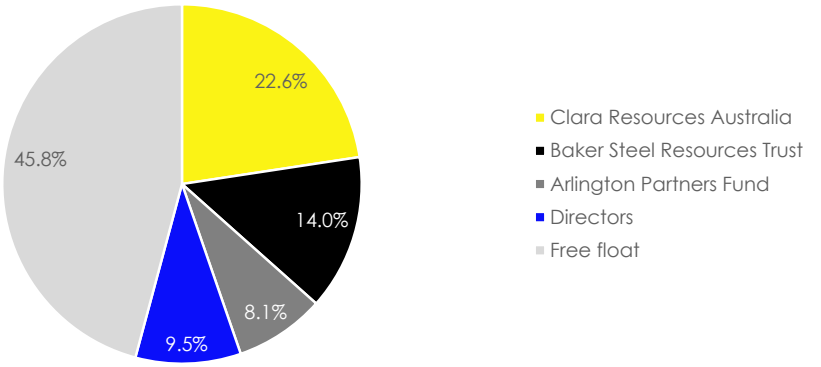
Source: Bloomberg

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Shareholders

First Tin has a supportive shareholder base. The three largest shareholders together with company directors jointly hold 54.2% of the shares. All IPO-related lock-ups expire on April 7, 2023. However, since the IPO, company's directors have increased their ownership from 8% to 9.5%.

First Tin shareholder structure



Source: First Tin

Management and Board

First Tin is managed by a team of experienced and dedicated professionals, who jointly own almost 10% of the company's shares.

The **CEO**, Thomas Buenger, has more than 25 years of experience in the base metal and semiconductor industry. Mr. Buenger is a former board member, chief operating officer and chief technical officer of Arubis AG (Germany), which is a world leading copper and multi-metal producer.

The **Non-Executive Chairman**, Charles Cannon-Brookes, has over 20 years of regulatory and investment experience. Mr. Cannon-Brookes is a Director of Arlington Group Asset Management, which is First Tin's third largest shareholder (8.1%). First Tin has four **non-executive directors** with extensive experience in mining industry.

First Tin's **Technical Director** at Taronga/Australia (Tony Truelove) has over 35 years of experience in exploration and mining geology worldwide with a proven "mine-finder" record (e.g. 100 ktons of tin, 15 Moz of gold). The **Managing Director** of Tellerhäuser/Germany (Thomas Kleinsorge) has 35 years of experience in industrial minerals operations with a proven record in successfully realising mining projects.

Sustainability

First Tin supports a decarbonised future and is committed to best-in-class environmental responsibility. Also, it is committed to being a zero-carbon emissions company as agreed by the nations participating in the Paris Agreement of 2015.

The company applies stringent environmental controls and procedures to minimise and mitigate its impact on land, water, air quality, climate and biodiversity and complies with the requirements of all applicable legislation, regulations and rules. To minimise the

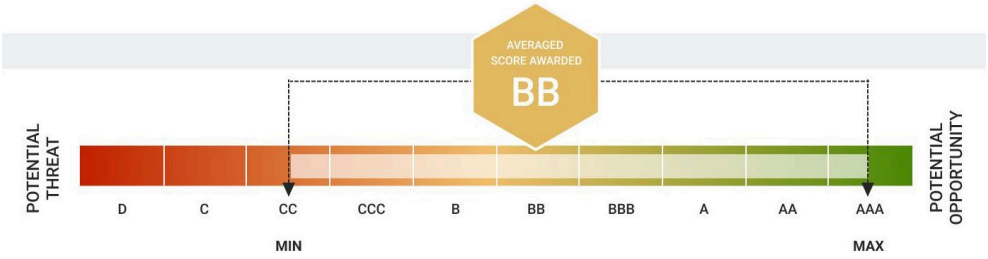
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environmental impact, First Tin has a set of compensation measures implemented at projects' early stages, which include:

- Surface and groundwater monitoring.
- Treatment of mine, process, grey, and black water.
- Exploitation of all usable mineral resources (accompanying minerals).
- Short transport routes.
- Minimisation of dust and noise emissions as well as the surface space requirement (processing takes place underground).
- Creation of compensatory areas in the course of forest conversion.
- After completion of the extraction of raw materials, the final operating plan is implemented.
- Dismantling of all plants (underground and above ground).
- Adjustment of the mine water management.
- Safekeeping of accesses to the mine building according to the planned reuse.
- Gradual remodelling and restoration of the waste dump, ideally complete dismantling of the dump.

First Tin received its inaugural ESG rating from Digbee, which is an independent assessment platform for ESG disclosure in the mining industry. First Tin was rated as a 'BB'. This score places First Tin within the top-5 rating bands, which give credit for present positives and opportunities.

First Tin corporate ESG score



Source: Digbee

First Tin has been also awarded individual scores for the two projects. The Tellerhäuser project has obtained a score of 'BBB', while the Taronga project has achieved a score of 'BB'.

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Tellerhäuser project ESG score



Source: Digbee

Taronga project ESG score



Source: Digbee

The Digbee assessment report has concluded that First Tin is a qualified candidate for European Raw Material Alliance (ERMA) funding and support. ERMA has identified tin from conflict-free sources as a critical raw material to support the EU's intention of becoming climate-neutral by 2050. The jurisdictions where both projects are situated (Australia and Germany) are well established mining jurisdictions with well-developed governance systems in place to ensure environmental, health and social aspects are adhered to. First Tin's planning incorporates a number of aspects that show ESG considerations with regards to mining activities, e.g. concurrent rehabilitation of mining workings on mining tenements, use of renewable energy, and use of waste rock as filling material for underground sites (Germany) or as dry stacking / aggregate (Australia).

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Financials

First Tin has sufficient cash to fund operating costs and all planned exploration work at the two sites before reaching investment-ready stage. At the end of June 2022, First Tin had nearly GBP 19 mn cash. Assuming operating costs and capital expenditure in H2 22 at a comparable level to H2 21 (~GBP 2.5 mn), First Tin could have approximately GBP 16 mn cash at the end of 2022e. Full year 2022 financial results are scheduled for release on April 12, 2022.

Consolidated Balance Sheet (GBP)	12/2020	12/2021	06/2022
Assets	**4,218,497**	**7,870,768**	**43,237,603**
Non-current assets			
Intangible assets	2,950,227	3,380,913	22,724,338
Investments deposits and LT receivables	-	1,543,670	-
Property, plant and equipment	10,930	28,851	1,289,882
Financial assets at fair value	915,750	-	-
	3,876,907	**4,953,434**	**24,014,220**
Current assets			
Trade and other receivables	95,850	413,620	376,225
Cash and cash equivalents	245,740	2,503,714	18,847,158
	341,590	**2,917,334**	**19,223,383**
Equities and Liabilities	**4,218,497**	**7,870,768**	**43,237,603**
Current liabilities			
Convertible loan notes	2,478,479	-	-
Trade and other payables	187,721	301,452	387,483
	2,666,200	**301,452**	**387,483**
Equity			
Called up share capital	70,177	138,868	265,535
Share premium account	10,264,409	17,931,296	18,391,046
Share to be issued	50,411	-	-
Merger relief reserve	-	-	17,940,000
Warrant reserve	-	95,372	269,138
Retained earnings	-8,861,429	-10,507,856	6,021,137
Translation reserve	28,729	-88,364	-36,736
Total equity	**1,552,297**	**7,569,316**	**42,850,120**

Source: First Tin

Consolidated Statement of Income (GBP)	12/2020	12/2021	06/2022
Administrative expenses	-589,002	-1,321,977	-945,035
IPO costs	-	-	-505,335
Share based payments (non-cash)	-	-	-707,100
Operating loss	**-589,002**	**-1,321,977**	**-2,157,470**
Other gains and losses	110,321	167,795	37,455
Financial items, net	-203,608	-58,495	10,612
Loss on ordinary activities before taxation	**-682,289**	**-1,212,677**	**-2,109,403**
Income tax expense	-	-	-
Loss after taxation	**-682,289**	**-1,212,677**	**-2,109,403**
Other comprehensive income:			
FX difference on translation of foreign operations	112,557	-117,093	51,628
Changes in the FV of equity instruments	749,250	-582,750	-
Total comprehensive (loss)/income	**179,518**	**-1,912,520**	**51,628**
Loss per share (GBp)	-1.02	-1.02	-1.07

Source: First Tin

Consolidated Statement of Cash Flows (GBP)	12/2020	12/2021	06/2022
Cash flow from operating activities	-525,964	-1,357,810	-1,232,719
Cash flow from investing	-186,779	-1,831,364	-1,023,091
Cash flow from financing	584,308	5,401,000	18,631,479
Total cash flow	**-128,435**	**2,211,826**	**16,375,669**
Cash and cash equivalents at the end of the period	**245,740**	**2,503,714**	**18,847,158**

Source: First Tin

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AARON ALBER
Austria ,
aaron.alber@rbinternational.com

BENEDIKT-LUKA ANTIC
Austria ,
benedikt-luka.antic@rbinternational.com

OLEG GALBUR
Austria ,
oleg.galbur@rbinternational.com

CHRISTIAN HINTERWALLNER
Austria ,
christian.hinterwallner@rbinternational.com

JAKUB KRAWCZYK
Austria ,
jakub.krawczyk@rbinternational.com

SEBASTIAN MATHE
Austria ,
sebastian.mathe@rbinternational.com

HELGE RECHBERGER
Austria ,
helge.rechberger@rbinternational.com

MARKUS REMIS
Austria ,
markus.remis@rbinternational.com

ANDREAS SCHILLER
Austria ,
andreas.schiller@rbinternational.com

TERESA SCHINWALD
Austria ,
teresa.schinwald@rbinternational.com

MANUEL SCHLEIFER
Austria ,
manuel.schleifer@rbinternational.com

JOVAN SIKIMIC
Austria ,
jovan.sikimic@rbinternational.com

ROK STIBRIC
Austria ,
rok.stibric@rbinternational.com

ANA LESAR
Croatia ,
ana.lesar@rba.hr

ANA TURUDIC
Croatia ,
ana.turudic@rba.hr

ADRIAN-COSMIN PATRUTI
Romania ,
adrian-cosmin.patruti@raiffeisen.ro

DANIELA POPOV
Romania ,
daniela.popov@raiffeisen.ro

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