

#InvestChileInsights



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FOREIGN INVESTMENT PROMOTION AGENCY

# Foreign investment in Chile 2021

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## Executive Summary

Information published by international entities such as the United Nations Conference on Trade and Development (UNCTAD) and the OECD confirm that, in 2021, global Foreign Direct Investment (FDI) made a major recovery that brought it above pre-pandemic levels. Unfortunately, this was not the case in the Latin American and Caribbean region, which did not achieve pre-pandemic inflows in 2021, according to UNCTAD, registering investment 15% below its 2019 level.

Direct investment abroad, meanwhile, picked up well in 2021, standing at 119% higher than in 2020 and 52% greater than in 2019.

FDI income continued to drop, although multinational companies achieved much higher income levels than in previous years. Equity inflows recovered significantly in 2021.

However, even though 2021 figures seemed to call for optimism, the outlook for 2022 deteriorated due to both interest rate hikes and the international impact of Russia's invasion of the Ukraine.

For its part, global greenfield investment did recover somewhat in 2021, but in many sectors it still appears weak, making further drops likely in the near future.

What is happening in Latin America? Despite the rise in FDI in countries of the region in 2021, some still have not returned to pre-pandemic levels.

According to the figures reviewed, investment inflows in Chile in 2021 were 66% higher than in 2020, with a cumulative net FDI flow of US\$15.25 billion. The recovery also implies an increase over pre-pandemic levels, 12% higher than in 2019. The high level of FDI in Chile in 2021 from equity participation is noteworthy, as it is the highest figure in the historic series.

Another point worth mentioning at the local level is the number of projects managed by the Foreign Investment Promotion Agency, InvestChile, which was 25% higher than in 2020. The Energy Sector spearheaded the institution's portfolio in 2021, followed by Global Services and Technology. China led the list, followed by the USA. This is consistent with capex that reflects greenfield projects and with the growth in projects implemented by FDI-resourced companies inventoried by the Corporación de Bienes de Capital (Capital Goods Corporation, CGC) in its latest report, for the fourth quarter of 2021. According to the report, Mining and Energy are the leading sectors. Noteworthy investments in the Energy sector include Non-Conventional Renewable Energies (NCREs) and announcements about green hydrogen projects.

Lastly, we have included in this document information on the Global Services and Technology sector, which has been a focal point for investors advised by InvestChile and has transformed Chile into a digital hub in the region.

# Foreign investment in Chile 2021

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## Global Outlook

The information provided by the Organization for Economic Cooperation and Development (OECD) on FDI flows takes into account average inflows and outflows, a methodology based on the fact that, in theory, inflow and outflow amounts should be symmetrical, and so both currents should be considered for measuring overall values.

Because UNCTAD's uses a different method of analysis for inflows and outflows, annual global variations differ among the institutions mentioned.

Still, the final figures published by both international entities confirm a major rebound in Foreign Direct Investment (FDI) in 2021. The OECD's "FDI in Figures," published in April 2022, reports that the flow of global FDI grew by 88% in 2021, reaching higher than pre-pandemic levels. Indeed, the US\$1.82 trillion reported is 37% higher than in 2019, when global flows reached US\$1.32 trillion. Figures corrected in July 2022 indicate that there was an increase of 91% between 2020 and 2021, and 30% between 2019 and 2021<sup>1</sup>.

For its part, UNCTAD shows that global inflows grew by 64% between 2020 and 2021, with a net growth of 6.9% over 2019, the pre-pandemic year.<sup>2</sup>

Although there are differences in their FDI accounting methodologies, both the OECD and UNCTAD report that inflows have recovered in regard to pre-pandemic levels, and are well above 2020 figures.

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<sup>1</sup> FDI-in-Figures-July-2022, OECD

<sup>2</sup> World Investment Report (WIR) 2022 Annex Table 1

For Latin America and the Caribbean, however, the UNCTAD report indicates that the region has not yet rebounded to pre-pandemic levels, reporting 2021 flows 15% lower than in 2019. Still, the FDI flow registered for 2021 was 56% higher than in 2020, which does reflect a significant recovery.

FDI inflows among OECD countries increased by 89% between 2020 and 2021, which was still slightly lower (-3%) than in 2019. In 2021, the USA was the leading FDI host economy, followed by the Peoples' Republic of China and the Hong Kong S.A.R.

Direct investment abroad was also more dynamic in 2021, up 119% over 2020 and 52% higher than in 2019. These UNCTAD data coincide with OECD figures, which reflect a 144% rise over 2020 and of 50% compared to 2019. The USA was also the leading foreign investor, followed by Germany, Japan and China, in fourth place (UNCTAD).

FDI income, however, fell steadily to 4.9% over the past two years, down from 6% in 2019 and 9.2% before the crisis (2005-2007)<sup>3</sup>. A sampling of OECD countries indicates that FDI achieved a profitability rate of 4% in 2021, up from 3% in 2020, but below the average of 6% in the pre-crisis period. However, in terms of amounts, earnings registered among OECD countries in 2021 are the highest in the historic series<sup>4</sup>. According to the OECD's April 2022 report, very little of these earnings was distributed to parent companies, leaving high levels of reinvested earnings, which stimulated the recovery of flows<sup>5</sup>.

In any case, according to the 2022 World Investment Report (WIR) published by UNCTAD, the profitability of large multinational corporations was much higher in 2021 at 8.2%, double that of 2020<sup>6</sup>.

Like reinvested earnings, equity flows also recovered, growing by 25%, even slightly above their pre-pandemic level. In contrast, inter-company debt, or related debt, among OECD countries remained negative for the second consecutive year.

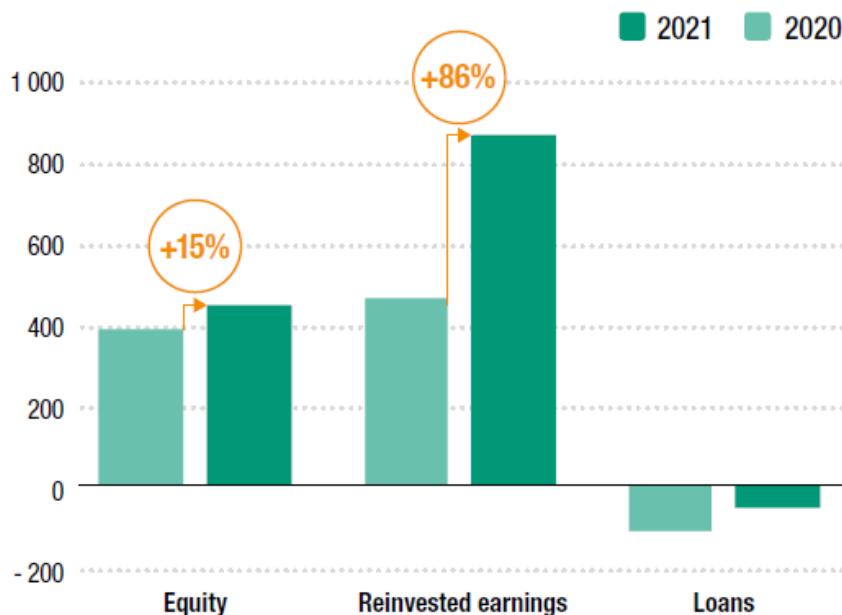
<sup>3</sup> WIR 2022 p. 39.

<sup>4</sup> FDI-in-Figures-July-2022 OECD T8.FDI income inward (USD)

<sup>5</sup> FDI-in-Figures-April-2022 OECD Recent trends in FDI income of OECD countries

<sup>6</sup> WIR 2022 p.6

**Figure I.3. Global FDI inflows, by components, 2020 and 2021** (Billions of dollars and per cent)



This is backed up by UNCTAD’s WIR report, which reports an increase in equity of 15% and an 86% increase in reinvested earnings.

In regard to the FDI outlook, in April 2022 the OCED affirmed, “While new investment activity was generally strong in 2021, the prospects for 2022 remain uncertain with the war Russia is waging in Ukraine. Greenfield investment in emerging and developing economies remains weak.” However, a sampling of Latin American countries in the first half of 2022 points to an overall increase in FDI inflows, which contrasts with OECD projections.

According to the WIR 2022, the war in the Ukraine will have widespread consequences on international investment, economic development and progress towards the Sustainable Development Goals (SDGs) in all countries. An added consideration is that this conflict is occurring at a time when the global economy is fragile and is just beginning to recover from the effects of the pandemic. Outlooks indicate that at the global level, FDI will be affected by the humanitarian and security crises, by the macroeconomic shocks provoked by the conflict, by rising energy and food prices and by increased investor uncertainty in 2022 and following<sup>7</sup>.

<sup>7</sup> WIR 2022 p. 3

Furthermore, the rise in interest rates expected in the USA, Europe and other economies experiencing significant rises in inflation could decelerate merger and acquisition markets at year-end and slow the growth of international project financing. Apprehension in financial markets and signs of an imminent recession could further hasten the drop in FDI.

However, the FDI component most closely correlated with financial markets remains strong. Cross-border mergers and acquisitions and international infrastructure project financing could provide a floor for global FDI in 2022. As for greenfield investment in the industry, it recovered only partially in 2021 and continues to remain weak in many sectors and so is likely to fall again in the future<sup>8</sup>.

Table 1.2 below shows figures for greenfield investments and mergers and acquisitions as reported in the 2022 WIR Report.

**Table 1.2. Announced FDI greenfield projects, cross-border M&As and international project finance deals, by economic grouping, 2020–2021**

Group of economies	Type of FDI	Value (Billions of dollars)		Growth rate (%)	Number		Growth rate (%)
		2020	2021		2020	2021	
Developed economies	Cross-border M&As	389	615	58	5 333	7 838	47
	Greenfield projects	316	401	27	8 993	9 790	9
	International project finance	264	656	149	742	1 262	70
Developing economies	Cross-border M&As	86	113	31	868	1 008	16
	Greenfield projects	259	259	-	4 255	4 920	16
	International project finance	220	532	142	520	853	64

Source: UNCTAD, cross-border M&A database (<https://unctad.org/fdistatistics>) for M&As, information from the Financial Times Ltd, fDi Markets ([www.fdimarkets.com](http://www.fdimarkets.com)) for announced greenfield FDI projects and Refinitiv SA for international project finance deals.

In general, UNCTAD forecasts that the momentum for growth seen in 2021 cannot be maintained and that global FDI flows will likely continue on a downward trajectory or, at best, flatten out. This projection considers the different downward pressures and potential stabilization factors.

### FDI in Latin America in 2021

<sup>8</sup> WIR 2022 p. 4

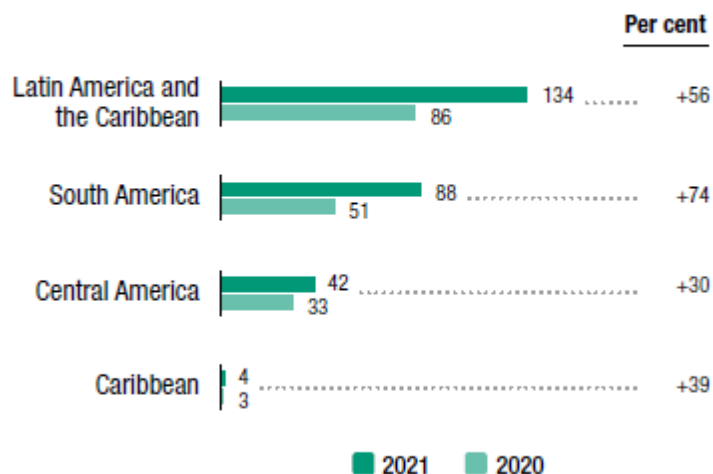
According to UNCTAD data, FDI flows in Latin American and Caribbean countries increased significantly in 2021, by 57%, although they remained lower than pre-pandemic levels. In fact, according to statistics published by the entity, the FDI of US\$130 billion is lower than it has been since 2007.

UNCTAD’s WIR report indicates that, “In 2021, FDI in Latin America and the Caribbean rose by 56 per cent to \$134 billion, sustained by strong inflows in traditional target industries such as automotive manufacturing, financial and insurance services, and electricity provision, and pushed up by record high investments in information and communication services across the region.

Most economies saw inflows rebound, with only a few experiencing further declines caused by the pandemic-induced economic crisis, in some cases combined with political instability. Flows rose in all three subregions in Latin America and the Caribbean (excluding financial centers).”<sup>9</sup>

Figures for each subregion are presented below:

**Figure I.11.** FDI inflows in Latin America and the Caribbean, by subregion, (Billions of dollars)



Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

<sup>9</sup> WIR 2022 p. 15



As of the date this report went to press, central banks and statistical institutes of Latin American countries had reported information on FDI up to the second quarter of 2022. Data from a sampling of Latin American countries indicates that FDI flows in 2022 are 47% higher than in 2021, comparing the January-June period in each year, and this year's figure to date amounts to 88% of the total FDI received in all of 2021. **(Table 1)**

Based on the above, we can predict that 2022 will wrap up with positive FDI flow figures for the region. Even Brazil, which has the highest FDI inflow in the region, has almost equaled its entire 2021 flow in just six months of 2022. The economies of Argentina, Colombia and Uruguay also bear mention, as they have already exceeded their total 2021 flows. It should be noted that these are preliminary figures, and corrections in the following quarters are not uncommon.

However, despite the increased FDI seen in countries of the region, some have still not achieved pre-pandemic levels. Brazil is a case in point; given the magnitude of investment in the country each year, this has a significant impact on regional amounts. Final figures for the country indicate that, despite the 23% rise in investment, the total FDI received in 2021 was 33% lower than pre-pandemic levels (2019). A significant sampling of countries reveals that FDI in the region is still 18% below pre-pandemic levels, despite its 34% increase over the previous year. **(Table 2)**

UNCTAD figures in the above-mentioned WIR report show Latin America and the Caribbean at 15% below pre-pandemic levels and 56% above 2020.

A similar scenario can be seen in greenfield projects, which grew in 2021 in comparison to 2020, but still did not reach pre-pandemic levels. A sampling of Latin American countries-- excluding the Caribbean-- indicates that the number of greenfield projects rose by 13% over 2020, but was still 30% lower than in 2019. The situation is the same with regard to capital expenditure pledged (capex), which in 2021 was 28% higher than the previous year, but still 30% below its pre-pandemic level<sup>10</sup> **(Table 3)**.

At the time this report went to press, the same sampling of Latin American countries had not rebounded back to pre-pandemic levels. Indeed, figures to date show that they have only reached approximately 70% of their 2021 level, in terms of both capex and the number of projects.

This is the exact opposite of what can be observed in mergers and acquisitions (M&A) in Latin America. According to the Transactional Track Record (TTR), prepared in collaboration with Datasite and AON, the region recorded 3,633 M&As, including both announced and closed (Graph 3), with a combined value of US\$167.78 billion (Graph

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<sup>10</sup> fDi Markets greenfield projects.

4). These figures translate into a 41% increase in the number of operations and a 112% rise over the amount mobilized in 2020<sup>11</sup>.

Brazil, Mexico and Chile had the most outstanding M&A figures in 2021 among countries in the region (Graph 5). It is worth noting that this statistic does not only account for M&As by foreign companies in host economies, but also includes domestic operations and local company operations abroad. Because of that, Brazil shows a much larger number of operations than the remaining countries--2,560 transactions compared to Mexico's 394 and Chile's 349.

The TTR report highlights investor interest in the venture capital sector. In 2021, 179 private equity operations were registered with a combined value of US\$13.08 billion, while the venture capital segment recorded 1,070 transactions with an aggregate value of US\$20.2 billion<sup>12</sup>. According to a report by CB Insights, that US\$ 20 billion was the result of 952 agreements signed in the region. Especially noteworthy in this sector are Brazilian companies and Internet-related industries such as software, services, and e-commerce, which received the largest investments in Latin America.

However, according to TTR's monthly M&A report for August 2022, the Latin American market has shown a drop in transactions and capital mobilized compared to the same period in 2021. Effectively, the first eight months of 2022 have yielded a total of 2,184 movements amounting to US\$69.78 billion, which is an 8% drop in the number of operations and a 34% lower investment amount than the same period in 2021.

M&A leads the transactions registered and aggregate amount, with 1,152 operations (53% of the total) valued at US\$43.67 billion (63%). The remaining operations are divided among the venture capital segment, which as of August 2022 had registered a total of 699 operations with an aggregate value of US\$6.66 billion; private equity, with 114 operations worth US\$6.63 billion; and lastly, asset acquisition, which to the end of August had registered 220 operations valued at US\$12.84 billion.

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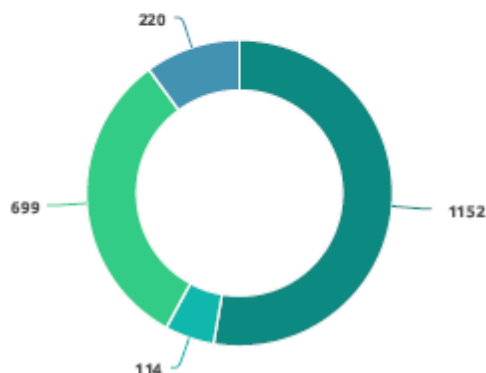
<sup>11</sup> TTR Report, February 2021 and November 2021

<sup>12</sup> Diario Financiero 7-2-2022

YEAR TO DATE

Total aggregate value (USDm):	69,780	▼ -34.10%
Number of transactions:	2184	▼ -8.00%
Completed:	1,745 (80%)	
Disclosed value:	961 (44%)	

Number of Transactions by Type



The ranking of countries analyzed, according to their volume of operations since January 2022, is as follows: Brazil leads the region with the largest number of operations recorded, followed by Mexico and then Chile. Colombia ranks fourth, Argentina fifth, and Peru is in last place. In terms of capital mobilized, Brazil is first in the ranking, followed by Mexico, then Chile, Colombia, and lastly Argentina, in fifth place.<sup>13</sup>

### Chile and foreign investment

According to the figures reviewed, in 2021 Chile recorded 66% more annual investment inflow than in 2020, with a cumulative net FDI flow of US\$15.25 billion. This rebound also reflects an increase over pre-pandemic levels amounting to 12% above 2019 inflows **(Graph 6)**.

Equity participation was the most important FDI component in 2021, accounting for US\$12.64 billion (83% of the total), followed by reinvested earnings, at US\$1.54 billion, and finally debt instruments, at US\$1.11 billion. All components recorded increases **(Graph 7)**.

<sup>13</sup> Monthly Report August 2022 TTR

The figure for equity participation is not only the highest in the past five years, but also the highest on record for the 2003-2021 historic series. This means that new resources entered the economy, along with all the positive effects that FDI generates. **(Graph 8)**

The breakdown of investment in Chile by country, based on figures from the nation's Central Bank, indicates that Canada is the leading investor and has been since 2018. The USA is second, followed by the Netherlands in third<sup>14</sup>. The list below shows the 20 countries with the most FDI stock in Chile. **(Table 4)**

In terms of FDI stock, Mining is the leading host economy sector, followed by Financial Services, with Electricity, Gas and Water taking third place. **(Table 5)**

Net FDI flows over the past five years are also broken down by economic sector. **(Table 6)**

As the previous section showed, the M&A sector made a significant leap forward in Latin America in 2021. This scenario is also reflected in Chile, which ranked second in the region in this regard, with its total of US\$12.89 billion in FDI beating out Mexico in both number of operations and aggregate value<sup>15</sup>. Nevertheless, in the first eight months of 2022 M&A operations in Chile have fallen considerably, to US\$3.45 billion, pulling the country down to fourth in Latin America, after Brazil, Mexico and Colombia.

The Venture Capital sector in Chile deserves special mention. According to Magic accelerator, venture capital invested in the country in 2021 amounted to US\$2.9 billion, far beyond the US\$160 million invested in 2020<sup>16</sup>. In the first eight months of 2022, venture capital deals have fallen significantly to just US\$616 million.<sup>17</sup>

In this context, Chile's promotion and attraction of foreign investment becomes even more important, as different studies show how increased foreign investment is directly correlated to growth. In the post-pandemic scenario, it will be crucial to observe how countries and their investment-promotion agencies react, by creating strategies and policies to position themselves as attractive investment destinations and take advantage of the benefits and new opportunities for development that investment offers in the present very competitive and demanding scenario.

## Foreign Investment Projects

<sup>14</sup> "The entry of funds through third countries — such as the Netherlands and Luxembourg, both of which are markets frequently used by transnational corporations — makes it difficult to identify the origin of that capital." ECLAC, "Foreign Direct Investment in Latin America and the Caribbean 2020," page 41.

<sup>15</sup> Annual Report 2021 Latin America TTR

<sup>16</sup> Chile Forbes 25-1-2022 Inversión en venture capital rompe récords en Latam y en Chile

<sup>17</sup> Annual Report August 2022 TTR

InvestChile focuses its efforts on attracting new investment projects that positively impact the nation's economy through job creation and by boosting sectors that require FDI for their development. In 2021, the agency finished the year with a record US\$27.78 billion in its project portfolio. This is the highest figure since the agency was founded five years ago, and is 25.1% higher than 2020.

The projects managed by the agency, which are at different stages of development, recorded the highest number of associated jobs over the past five years, generating 20,886 potential positions, a 38% increase over 2020.

In terms of sectors, Energy once again led the portfolio, with 53 projects valued at US\$12.6 billion, followed by the Global Services and Technology sectors, with US\$5.57 billion, and Mining and its suppliers, with US\$4.86 billion.

China leads the list of countries that figure most prominently in the project portfolio, with projects worth US\$7.73 billion, followed by the USA at US\$5.49 billion, and Canada, with US\$2.63 billion. Another noteworthy development is the increase in Brazilian-financed investment projects, which reached US\$1.56 billion last year, 187% higher than the year before, making Brazil the leading Latin American country in the InvestChile portfolio. **(Table 8).**

In the first half of 2022, InvestChile's project portfolio has slowed to just 3.3% growth over 2021 (when the portfolio grew by 28% compared to the first half of 2020). However, in the first half of 2022, the number of InvestChile projects rose by a significant 22% over the same period in 2021, as did the number of jobs committed, which rose by 49%.

### InvestChile Project Portfolio

As of June 30 each year

Value  
(Millions  
of US\$)

3.3%  
(% var.)



23,976 24,761



Number of  
Projects

22%  
(% var.)



372 453



Number of  
jobs

49%  
(% var.)



11,803 17,578



### Investment by sector



Energy

9,164

10,835

18%



Global Services  
and Technology

4,024

5,655

41%



Mining and  
its Suppliers

6,973

3,885

-44%



Infrastructure

1,645

1,671

2%



Food Industry

1,209

1,227

1%



Miscellaneous

814

1,205

48%

Another indicator that offers a picture of new foreign investment initiatives underway in the country is fDi Market's estimates of greenfield projects. According to those estimates, capital invested in 2021 reached US\$5.12 billion, divided among 73 projects. These figures place Chile in third place in the region in terms of the projects' capex. In 2022, however, the same source ranks Chile fifth in the region, as it had achieved just 28% of the capex estimated for 2021 when this report went to press. **(Table 3).**

In regard to investment projects, based on the Capital Goods Corporation's latest inventory for the fourth quarter of 2021, foreign capital participation plays a leading role. Overall, 1,214 public and/or private projects were included in the 2021-2025 five-year period, worth an estimated US\$71.74 billion. Of that total, 267 initiatives (22% of the total) correspond to FDI-related companies, representing US\$29.29 billion in investment (41% of the total value). The Mining and Energy sectors have the greatest impact, with additional major contributions from Public Works and Technology **(Table 9).**

Notwithstanding the above, a drop in the value and number of projects can be observed between the last survey in 2021 and the survey conducted in the second quarter of 2022 (these cover two different time periods, however, and therefore a rebound could be expected in the following two quarters of 2022). Up to the second quarter of 2022, FDI-related projects had increased by 76% in value and 89% in number over the survey figures reported for the fourth quarter of 2021. **(Table 10)**

## Mining

Given the importance of mining in Chile, the observed recovery in mining investment over the last few years--except for 2020, the first year of the pandemic--is especially relevant. According to Central Bank of Chile figures, this recovery was especially evident in 2018 and 2019 **(Table 11)** Then came the effects of the pandemic, which were first felt in 2020 and provoked a steep drop, of the same percentage (21%), but in the opposite direction to the growth seen previously.

The vigorousness of mining investment, which boosted figures in the sector by 17.6% in December 2021, indicates that mining investment can be expected to grow significantly. In fact, the Monetary Policy Report issued by this entity in December 2021 highlights that, *"investment continues to recover in the third quarter (2021), with significant dynamism in all lines. The machinery and equipment component maintained elevated growth, especially in regard to industrial machinery and cargo vehicles. In construction and other works, the reactivation of building projects and engineering works related to mining has been key."*<sup>18</sup>

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<sup>18</sup> IPOM diciembre 2021 page 4



According to information from the Consejo Minero (Mining Council), there are projects currently in progress in the sector worth US\$23.31 billion, with startup slated between 2021 and 2025. Among these, 37% correspond to companies with foreign capital (**Table 12**). These initiatives are expected to begin operating between 2022 and 2028 and represent an aggregate investment of US\$32.33 billion, close to 80% of it from FDI companies. (**Table 13**)

## Energy

Based on information collected from InvestChile's project portfolio and the Capital Goods Corporation (CGC) inventory, among other sources, it is clear that the Energy sector will continue to perform well in Chile in the coming years, primarily because of investments in Non-Conventional Renewable Energies (NCREs).

In fact, the latest Climatescope report by BloombergNEF rated Chile the most attractive country for renewable energy investment in the Americas and second among emerging economies worldwide, after India.

Among the investments in Energy compiled by the CBC, the participation of companies with foreign capital is especially noteworthy. Indeed, according to information provided by InvestChile, 62% of investment projected for the sector over the 2021-2025 five-year period is from foreign companies, which account for estimated investments of US\$6.92 billion across the country, with Antofagasta as a focal point.

This Energy sector's importance is even more apparent when one analyzes the list of NCRE generation projects: projects generating 100MW and higher are owned by companies with foreign capital and are slated for connection in 2021 and 2022. This sampling of power generation projects is valued at US\$8.11 billion (**Table 14**).

Importantly, according to the CBC inventory, as of the second quarter of 2022, 65% of the estimated investment in the Energy sector corresponds to companies with foreign capital.

It is also worth highlighting that investment in the Energy sector is especially focused on developing Green Hydrogen as a non-polluting energy source. Indeed, Chile aspires to become one of the most competitive global producers of green hydrogen, and is promoting its use and applications in key sectors such as industry, energy and transportation.

The Asociación Chilena de Hidrógeno (Chilean Hydrogen Association) is active in the sector and, according to its website, already has more than 120 members (professionals and companies). The association's strategic areas of action include promoting this alternative energy from a fair transition perspective, with special care for Chilean territories and in collaboration with local communities and the authorities.



Projects focused on this new fuel that are being implemented through both Chilean and international investment include:

1. Haru Oni – HIF EMEA, a joint venture between Enel Green Power and Siemens Energy, along with Enap, Sinopec, ExxonMobile, Global Thermostat and Porsche. This project seeks to create synthetic fuels (e-fuels) for export and already has obtained unanimous approval of its environmental impact statement; Magallanes Region.
2. HYEX, a green ammonia project developed by Engie and Enaex in Antofagasta Region to supply this essential input to the mining explosives manufacturing sector. HyEx is aiming to replace current imports of “gray” ammonia with green ammonia produced locally in Chile using renewable energy.
3. HOASIS, by TCI Gecomp, was established to produce green hydrogen for a variety of uses in Antofagasta region; the company is planning to build the globe’s largest photovoltaic plant in a location with the highest solar radiation on the planet; it has an installed capacity of 3 GW, associated with a 2.1 GW electrolyzer facility capable of producing 102,000 tons of hydrogen per year to serve different clients in the region. HOASIS could supply 100% of the hydrogen required by the Antofagasta mining industry for its decarbonization process, which for high tonnage CAEX mining trucks alone amounts to 50,000 tons of H2 annually.
4. HYDRA, developed by CSIRO, Engie and Mining3, is a project that seeks to validate GH2 generation and use in mining e-vehicles. The Hydra consortium of companies, which includes Engie, Mining3, Antofagasta Minerals, Mitsui & Co (USA), Inc, Thiess, Ballard Power System, Hexagon Purus, Reborn Electric Motors and Liebherr Mining, has already introduced a prototype that aims to replace the traditional diesel motor with a fuel-cell driven system that operates on green hydrogen and batteries.

### Global Services and Technology

As mentioned above, a review of the InvestChile project portfolio shows that the Global Services and Technology sector is a strong focal point for attracting investment.

Chile has become a digital hub in Latin America in recent years, with leading multinationals such as Microsoft, Google, Huawei, Amazon Web Services and Oracle choosing the country to host their regional data centers and clouds. Coupled with connectivity and talent availability, the installation of technological infrastructure is an enabling condition for exporting global services or knowledge-based services.

Global services include all services produced in-country for use abroad and are internationally recognized according to the following categories:

BPO, business process outsourcing;  
ITO, information technology outsourcing;  
KPO, knowledge process outsourcing; and  
IPO, intellectual property outsourcing.

In recent years, new technologies and business models have enabled an increasing number of service providers to offer their products internationally through digital media, giving rise to the emergence in Chile of a group of information and communications technology (ICT) service providers that are supporting the ongoing digitalization of our economy. These companies contribute to both the digital transformation of traditional Chilean exports and the expansion of ICT service exports<sup>19</sup>.

The country has been able to position itself as a digital hub in Latin America largely because of its connectivity, and this asset has been strengthened by an industry milestone that was announced in December 2021: the launch of Latin America's first 5G network.

On May 20, 2021, the Chilean Telecommunications Undersecretary's Office (Subtel) publicly announced that, beginning in 2022, 366 localities in the country would be connected to a 5G network. This year, regulator Subtel reported that Entel has installed 212,888 5G-capable lines as of the end of March; WOM has installed 115,330 lines; and Movistar reported having more than 300,000 5G clients.<sup>20</sup>

Chile has also consistently ranked highest in Latin America in digital competitiveness. The most recent study prepared by the International Institute for Management Development (IMD) in Lausanne, Switzerland, ranked Chile 39th,<sup>21</sup> higher than countries such as Brazil and Mexico.

Another milestone in this sector occurred in 2021, when the installation of two undersea fiber optic cables was completed. The first, called "Mistral" or the "South Pacific Submarine Cable," extends from the coast of Guatemala to Arica and Valparaíso, while the second is the "Prat" cable, which links Arica to Puerto Montt. Together these cables safeguard the country's connectivity by minimizing the risk of disconnection caused by natural disasters. The two are joined by another that Google installed in 2019, called "Curie," which stretches 10,000 kilometers and is one of the country's most important digital superhighways, connecting Latin America with California through Valparaíso.

<sup>19</sup> Manual de Exportación de Servicios y aprovechamiento de tratados de libre comercio 2021

<sup>20</sup> Banamericas Agosto 2022

<sup>21</sup> IMD World Digital Competitiveness Ranking 2021

In recent years, Chile has also caught the eye of top cloud service providers around the globe, leading to the ongoing multiplication of new investment announcements. These announcements by technology giants have boosted the data center industry across the country<sup>22</sup>.

According to 2022 market figures, the Cloud sector in Chile is expected to grow by 31% annually, which is higher than the region's overall 25% growth rate.

Notably, in 2016 and following, and with InvestChile's support, companies such as Google, Microsoft, AWS, Oracle, Odata, Ascenty and Huawei have installed considerable technological infrastructure in the country. Recently, US-based AWS announced the construction of two data centers at a cost of more than US\$400 million in the country; and Oracle opened its Region Cloud, which will serve clients not only in Chile but in Argentina, Peru, Uruguay, Paraguay and Bolivia as well. In December 2020, Microsoft unveiled its largest investment in Chile over the past 28 years, with potential earnings of US\$11.3 billion over the coming four years. And the projects keep growing: InvestChile is currently supporting 29 technological infrastructure initiatives representing a potential investment of US\$ 5.26 billion.

The installation of digital infrastructure in Chile is not an isolated occurrence. In 2016, there were just 13 technology sector projects in the InvestChile portfolio, valued at US\$508 million, whereas today, the agency is handling 152 projects in the sector at different stages of development, with an aggregate investment value of US\$6.56 billion. This represents a 1,069% increase in the number of initiatives and a 1,192% rise in their value in this industry.

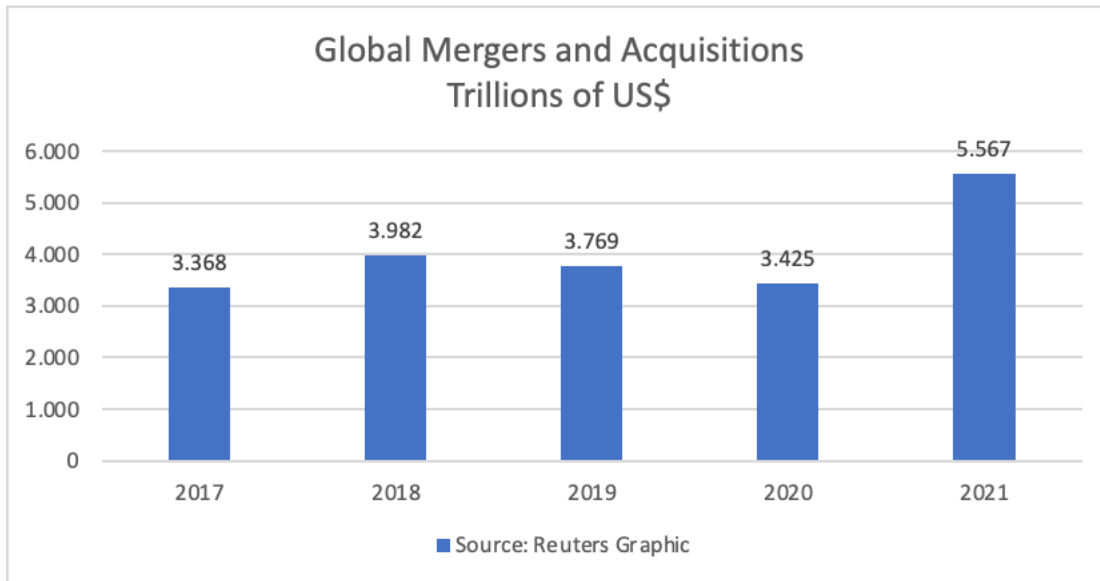
The agency is also working on setting up more software development centers like those that are currently operated in the country by companies such as Synopsys, Evernote, Equifax, Citi and others that have chosen Chile to provide support to their regional or global operations.

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<sup>22</sup> Nabiak September 2021

## Annex: Graphs and Tables

Graph 1: Mergers and acquisitions around the world



Graph 2: M&A deals around the world

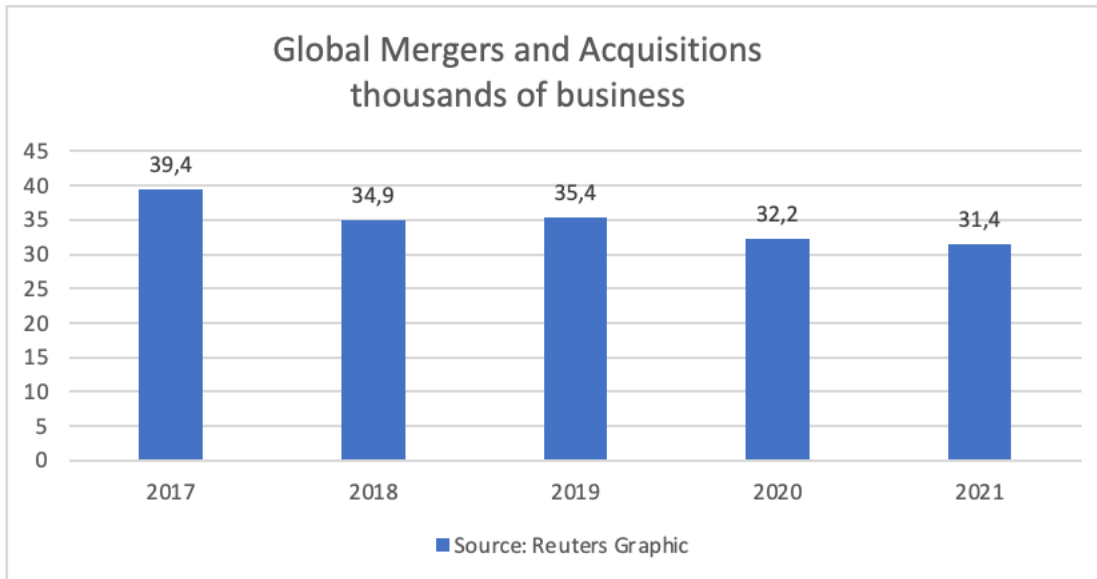


Table 1: Sample FDI flows for Latin American countries, January-June 2022-2021 (billions of US\$)

Country	2022	2021	Variation 2022-2021	2021 Total	2022/2021 total	Period Compared
Brazil	44.908	26.823	67%	46.441	-3%	Jan-Jun
Mexico	27.512	22.093	25%	31.517	-13%	Jan-Jun
Chile	11.517	12.414	-7%	15.252	-24%	Jan-Jun
Colombia	9.846	4.355	126%	9.727	1%	Jan-Jun
Argentina	8.476	4.552	86%	6.782	25%	Jan-Jun
Uruguay	4.772	3112	53%	2.564	86%	Jan-Jun
Costa Rica *	995	859	16%	3563	-72%	Jan-Jun
Panama *	823	-37,5	N.A.	1.350	-39%	Jan-Jun
Peru **	0	0	N.A.	6223		
<b>Total</b>	<b>108.849</b>	<b>74.171</b>	<b>47%</b>	<b>123.419</b>	<b>88%</b>	

\*Different comparison period for Costa Rica and Panama  
 \*\* No information available for 2022

Table 2: Change in FDI flows for Latin American countries, 2021-2019 (billions of US\$)

Country	2021	2020	Variation 2021-2020	2019	Variation 2021-2019
Brazil	46.441	37.786	23%	69.174	-33%
Mexico	31.517	28.133	12%	34.374	-8%
Chile	15.252	9.205	66%	13.579	12%
Colombia	9.727	7.458	30%	13.989	-30%
Argentina	6.782	4.723	44%	6.663	2%
Peru	6.223	1382	350%	7.731	-20%
Costa Rica	3.563	2103	69%	2719	31%
Uruguay	2.587	410	531%	1.409	84%
<b>Total</b>	<b>122.092</b>	<b>91.200</b>	<b>34%</b>	<b>149.638</b>	<b>-18%</b>

Table 3: Greenfield projects in Latin American countries, 2021-2019 (billions of US\$ and # projects)

Year	2022 (August)		2021		2020		2019		Total 2019 - 2022	
	Capex	Projects	Capex	Projects	Capex	Projects	Capex	Projects	Capex	Projects
Brazil	13.528	154	23.083	174	17.207	218	33.248	355	87.067	901
Mexico	18.159	276	19.109	340	13.384	278	25.006	494	75.657	1.388
Chile	1.452	44	5.119	73	5.383	76	7.727	123	19.681	316
Argentina	2.004	41	3.703	94	3.871	59	4.288	85	13.866	279
Colombia	1.183	81	4.260	126	2.444	98	5.356	182	13.244	487
Peru	727	22	2.126	43	1.675	35	12.288	70	16.817	170
Panama	3.718	9	153	11	1.292	22	1.611	27	6.774	69
Uruguay	862	14	1.117	18	128,1	15	3.873	16	5.979	63
Costa Rica	293	33	1.806	139	1.735	97	1.218	105	5.052	374
Ecuador	233	9	659	10	604,4	14	520	11	2.016	44
<b>Total</b>	<b>42.159</b>	<b>683</b>	<b>61.136</b>	<b>1.028</b>	<b>47.724</b>	<b>912</b>	<b>95.134</b>	<b>1.468</b>	<b>246.154</b>	<b>4.091</b>

Source: fDi Markets

Graph 3: Merger and Acquisition operations in Latin America, 2017-2021



Graph 4: Value of Mergers and Acquisitions in Latin America, 2017-2021

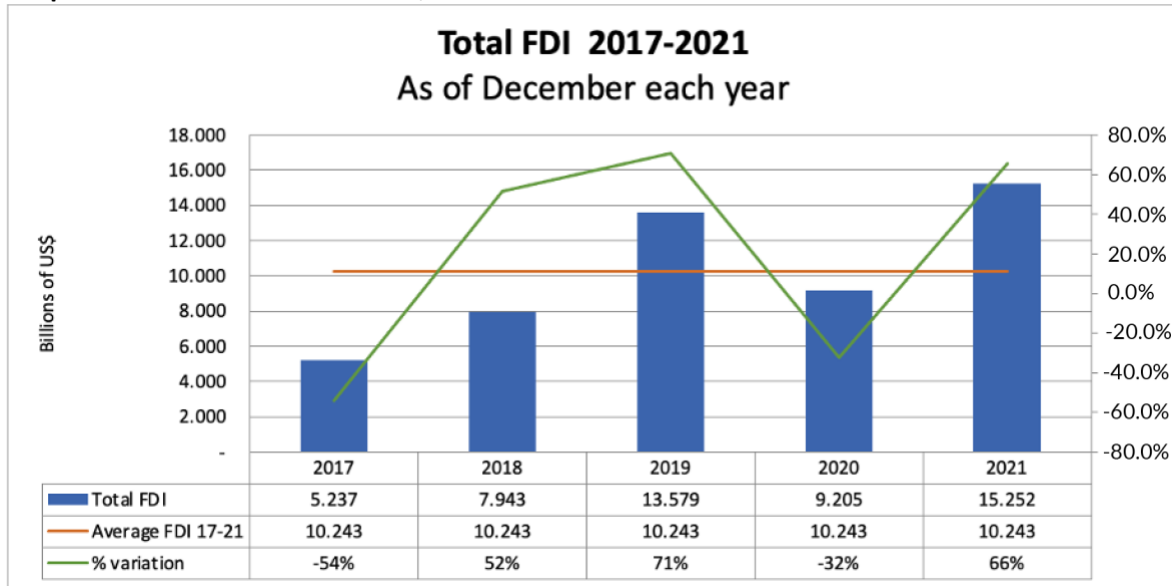


Graph 5: Merger and Acquisition operations in Latin America, by country



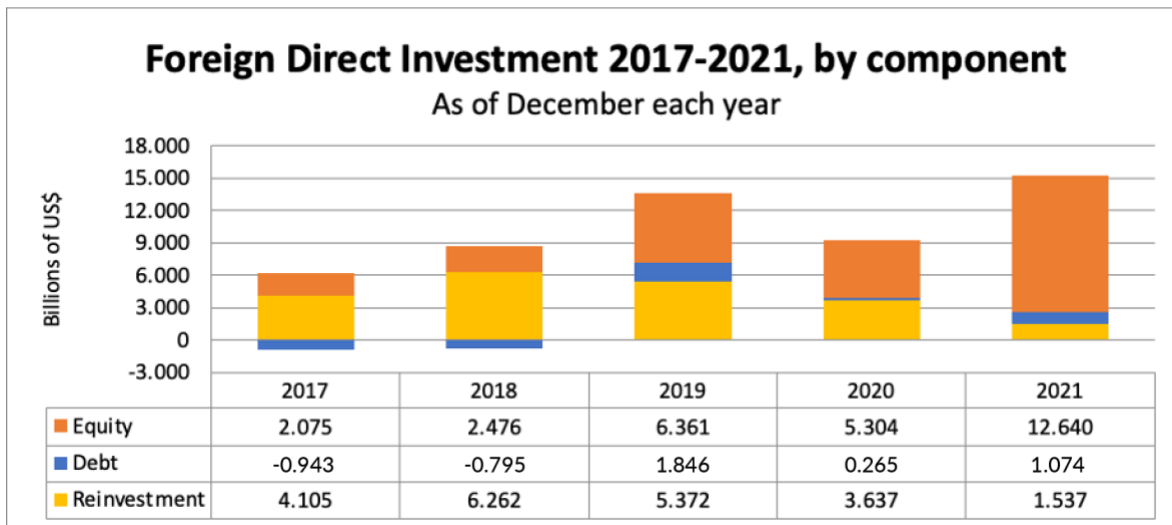


Graph 6: Annual FDI flows in Chile, 2017-2021



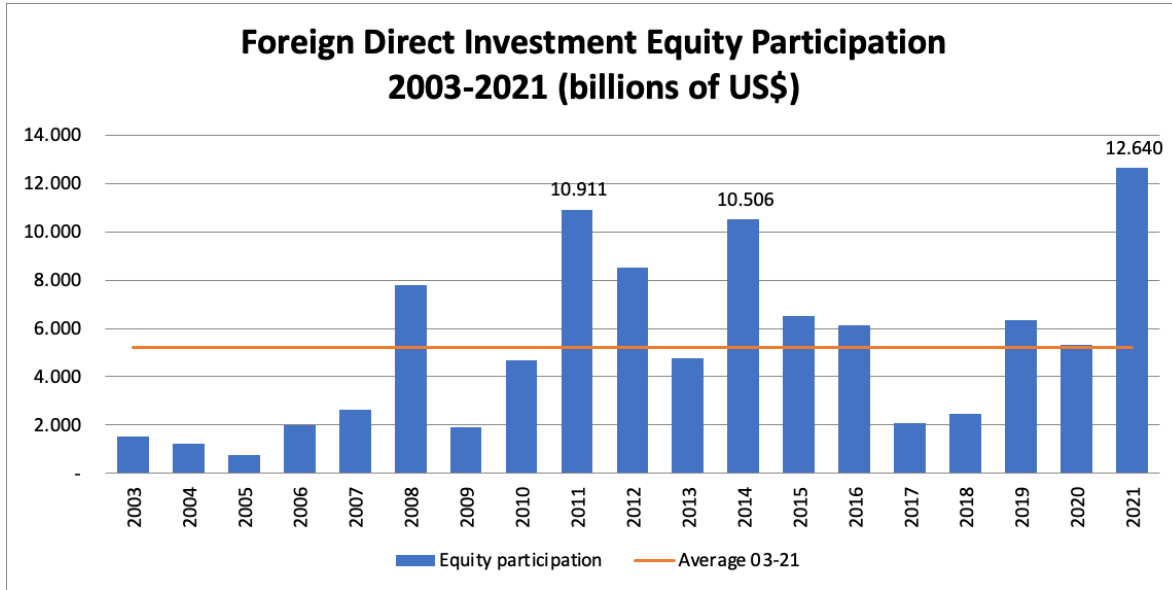
Source: Banco Central de Chile

Graph 7: Foreign Direct Investment 2017-2021, by component (billions of US\$)



Source: Banco Central de Chile

Graph 8: Foreign Direct Investment Equity Participation



**Table 4: Leading foreign investor countries in Chile (2020 and 2021 stock)**  
(billions of US\$)

Country	2020	2021
Canada	31.936	33.210
United States	29.839	27.416
The Netherlands	20.993	22.688
United Kingdom	16.754	17.591
Spain	21.514	16.986
Italy	15.091	14.005
Belgium	2.493	5.471
Australia	4.910	3.769
Brazil	3.353	3.344
Colombia	3.774	3.318
Japan	2.005	3.282
Bermuda	3.509	3.091
Switzerland	1.960	1.876
Mexico	1.857	1.680
France	1.572	1.616
Norway	1.194	1.255
British Virgin Islands	1.095	1.206
Luxembourg	1.198	1.181
Germany	1.066	1.019
Sweden	941	897
Rest of world	92.560	86.324
<b>Total FDI Stock (BILLIONS OF \$US)</b>	<b>259.614</b>	<b>251.224</b>

Table 5: FDI stock by economic sector, 2020-2021 (millions of US\$)

Sector	2020	2021
Agriculture and fisheries	3,331	3,534
Mining	62,201	67,415
Manufacturing industry	10,590	9,631
Electricity, gas and water	37,801	35,028
Construction	5,044	5,242
Commerce	12,735	12,620
Hotels and restaurants	62	60
Transportation and Storage	4,904	4,416
Communications	8,133	7,166
Financial Services	43,132	40,716
Real Estate and business services	151	121
Other services	1,862	2,037
Uncategorized	69,670	63,237
<b>Total (millions of US\$)</b>	<b>259,614</b>	<b>251,224</b>

Table 6: Foreign Direct Investment flows, by economic sector in destination

Sector	2017	2018	2019	2020	2021
Agriculture and fisheries	156	95	184	399	128
Mining	837	-1,666	1,482	2,037	4,469
Manufacturing industry	-276	-224	328	-298	197
Electricity, gas and water	378	1,527	3,988	4,082	9,612
Construction	565	105	153	1,199	730
Commerce	565	159	1,449	810	314
Hotels and restaurants	-5	12	7	1	7
Transportation and Storage	-574	-309	-203	138	-1,578
Communications	-1,034	422	1,236	-1,603	-687
Financial Services	717	6,736	2,108	1,084	1,102
Real Estate and business services	93	-46	16	10	-13
Other services	-70	215	-316	171	150
Uncategorized	3,884	915	3,147	1,175	821
<b>Total (millions of US\$)</b>	<b>5,237</b>	<b>7,943</b>	<b>13,579</b>	<b>9,205</b>	<b>15,252</b>

Source: Banco Central de Chile

Table 7: 2021 FDI portfolio managed by InvestChile

InvestChile Project Portfolio		
Industry	No. Projects	Value US\$ (millions)
Energy	53	12,603
Global Services	203	5,571
Mining and its Suppliers	28	4,856
Infrastructure	7	1,645
Miscellaneous	73	1,448
Food Industry	86	1,340
Financial	18	234
Tourism	17	79
<b>Total</b>	<b>495</b>	<b>27,776</b>

Source: InvestChile

Table 8: Foreign Direct Investment Portfolio managed by InvestChile in 2021, by country

InvestChile Project Portfolio		
Industry	No. Projects	Value US\$ (millions)
China	30	7,734
United States	110	5,487
Canada	18	2,627
Ireland	12	2,265
Brazil	28	1,565
Norway	11	1,435
Australia	12	1,207
South Africa	3	845
Japan	8	805
Spain	27	648
Germany	20	605
France	21	564
Rest of World	186	1,992
<b>Total</b>	<b>486</b>	<b>27,776</b>

Table 9: Capital Goods Corporation Project Inventory, 2021-2025 (to 4th quarter 2021)

Sector	Value (billions US\$)	No. of Projects	FDI Amount (billions US\$)	No. FDI projects	FDI as % of total value	No. of FDI projects as % of total
Energy	11.127	238	6.922	149	62%	63%
Forestry	714	1	-	-	N/A	N/A
Industry	2.075	71	308	18	15%	25%
Real Estate	7.452	249	96	5	1%	2%
Mining	22.416	85	16.301	54	73%	64%
Public Works	22.268	545	3.956	29	18%	5%
Ports	620	6	251	1	40%	17%
Technology	5.073	19	1.453	11	29%	58%
<b>Total</b>	<b>71.744</b>	<b>1.214</b>	<b>29.287</b>	<b>267</b>	<b>41%</b>	<b>22%</b>

Table 10: Capital Goods Corporation Project Inventory, 2022-2026 (to 2nd quarter 2022)

Sector	Sector Value (billions US\$)	No. of Projects	FDI Amount (billions US\$)	No. FDI Projects	FDI as % of total value	No. of FDI projects as % of total
Energy	6.527	183	4.210	115	65%	63%
Forestry	134	1	-	-	N/A	N/A
Industry	1.447	62	388	23	27%	37%
Real Estate	5.543	211	59	3	1%	1%
Mining	15.126	70	10.304	43	68%	61%
Public Works	20.423	454	5.722	41	28%	9%
Ports	785	8	465	3	59%	38%
Technology	3.964	15	1.177	10	30%	67%
<b>Total</b>	<b>53.948</b>	<b>1.004</b>	<b>22.325</b>	<b>238</b>	<b>41%</b>	<b>24%</b>

Table 11: Gross Fixed Capital Formation (GFCF) by economic sector (in billions of Chilean pesos)

Economic Sector	2018	2019	2020
Mining	8.010	9.690	7.648
Housing and real estate services	7.183	7.308	5.876
Transportation, information and communications	6.205	6.030	5.160
Electricity, gas, water and waste management services	4.912	3.999	5.518
Manufacturing industry	3.830	4.491	4.830
Public administration	3.118	3.256	3.019
Personal services	2.435	2.534	2.290
Other	7.971	8.390	7.086
<b>Gross Fixed Capital Formation</b>	<b>43.664</b>	<b>45.697</b>	<b>41.427</b>

**GFCF 2020 = 48.711 trillion CLP**

Source: Banco Central de Chile, FBKF, volume at prices tied to the previous year, by economic activity, reference 2013 (billions of Chilean pesos).

Table 12: Annual investment in mining projects in progress

Startup date	Company	Product	Region	EIA Permit Status	Investment (billions US\$)
2021-2025	Codelco Chile	Copper	Various	ND	6.043
2021	Codelco Andina Division	Copper	Valparaíso	approved	1.580
2022	Minera Los Pelambres	Copper	Coquimbo	approved	1.700
2022	Codelco, Salvador Division	Copper	Atacama	approved	1.570
2022	Kinross Minera Chile Ltda.	Gold	Atacama	approved	225
2023	Gold Fields	Gold	Atacama	approved	1.021
2023	Doña Inés de Collahuasi	Copper	Tarapacá	approved	302
2023	Teck Quebrada Blanca	Copper	Tarapacá	approved	5.200
2023	Teck Carmen Andacollo	Copper	Coquimbo	Submitted	100
2024	Codelco, Teniente Division	Copper	O'Higgins	approved	5.573
<b>Total (billions of US\$)</b>					<b>23.314</b>

Source: Consejo Minero



Table 13: Annual investment in mining projects under evaluation

Startup date	Company	Product	Region	EIA Permit Status	Investment (billions of US\$)
2022	Zaldívar Cont. Operacional	Copper	Antofagasta	EIA submitted	190
2024	Lomas Bayas 2034	Copper	Antofagasta	No EIA	255
2024	Centinela Polo sur	Copper	Antofagasta	EIA submitted	300
2024	Anglo American Los Bronces I	Copper	Metropolitana	EIA submitted	3.000
2024	Sierra Gorda Exp. 230 Ktpd	Copper	Antofagasta	EIA approved	2.000
2025	Pelambres Futuro I	Copper	Coquimbo	EIA submitted	1.000
2025	Desarrollo Distrito Centinela	Copper	Antofagasta	EIA approved	4.350
2025	Nuevaunion Fase I	Copper	Atacama	Sin EIA	3.500
2025	Collahuasi mejora producción	Copper	Tarapacá	EIA submitted	3.200
2025	Continuidad Candelaria	Copper	Atacama	EIA submitted	600
2026	Pelambres Futuro II	Copper	Coquimbo	Sin EIA	500
2027	KinRoss Lobo-Marte	Gold	Atacama	No EIA	3.735
2028	El Abra	Copper	Antofagasta	No EIA	5.000
2028	Nuevaunion Fase II y III	Copper	Atacama	No EIA	3.700
<b>Total under evaluation (*)</b>					<b>32.325</b>
(*) Does not include Projects under evaluation valued less than US\$ 100 million.					

Source: Consejo Minero

Table 14 NCRE generation projects with FDI, with estimated connection date

(Projects over 100 MW)

Project	Type of Technology	Net MW	Region	FDI Company	Capex MMUS\$	Startup date
Parque Tchamma	Wind	155	Antofagasta	Mainstream	215	s/i
Cerro Tigre	Wind	185	Antofagasta	Mainstream	200	03-2022
Calama	Wind	150	Antofagasta	Engie Chile	159	11-2021
Llanos del Viento	Wind	156	Antofagasta	Mainstream	280	03-2022
Ckani	Wind	107	Antofagasta	Mainstream	120	02-2022
Ampl.Finis Terrae	Photovoltaic	126	Antofagasta	Enel	128	08-2021
Sol de Lila	Photovoltaic	152	Antofagasta	Enel	130	11-2021
Domeyko	Photovoltaic	186	Antofagasta	Ingenostrum	164	s/i
Tamaya	Photovoltaic	114	Antofagasta	Engie Chile	101	02-2022
Pampa Tigre	Photovoltaic	100	Antofagasta	AR Pampa	158	01-2022
Valle del Sol	Photovoltaic	150	Antofagasta	Enel	170	01-2022
Coya	Photovoltaic	180	Antofagasta	Solventus	179	07-2022
Elena	Photovoltaic	470	Antofagasta	Ibereólica	535	12-2022
Andes IIB	Photovoltaic	113	Antofagasta	Inversiones LK	80	01-2022
Cabo Leones III	Wind	110	Atacama	Ibereólica	125	12-2021
Río Escondido	Photovoltaic	145	Atacama	Mainstream	172	12-2022
Valle Escondido	Photovoltaic	105	Atacama	Mainstream	118	01-2022
Sol de Varas	Photovoltaic	101	Atacama	AustrianSolar	110	03-2022
Los Cóndores	Run-of-river hydro	150	Maule	Enel	1.152	12-2023
Los Olmos	Wind	100	Biobío	Inversiones LK	111	01-2022
Malleco – Fases	Wind	273	Araucanía	WPD Malleco	410	s/i
Puelche Sur	Wind	152	Los Lagos	Mainstream	245	02-2022
Las Lajas	Run-of-river hydro	267	Metropolitana	Inversiones LK	1.534	s/i
Alfalfal II	Run-of-river hydro	264	Metropolitana	Inversiones LK	1516	12-2021
Campos del Sol II	Photovoltaic	370	Atacama	Enel Green Power	149	05-2022
Parque Eólico Caman - Etapa	Wind	146	Los Ríos	AR Caman Spa	182	07-2022
Meseta de Los Andes	Photovoltaic	153	Valparaíso	Tercera Región Solar	165	09-2022
Las Salinas	Photovoltaic	364	Antofagasta	Enel Green Power Cl	253	09-2022
Parque Solar FV Tamarico	Photovoltaic	145	Atacama	Tamarico Solar Dos!	s/i	12-2023
<b>Total MMUS\$ (*)</b>					<b>8.861</b>	

(\*) Does not include projects under evaluation valued at less than US\$100 million.

Source: Comisión Nacional de Energía Installations declared under construction as of March 2021 and updated with the Anuario Estadístico Energía 2021.