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Infrastructure Debt

Newsletter Q1 2022

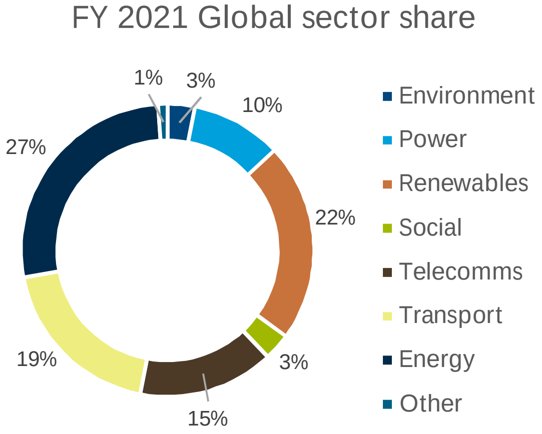
Infrastructure Q1 2022 Overview

> Total global deal value for FY 2021 amounted to USD 923.7bn with a deal count of 2,745. Although, COVID-19 has been a dominating economic factor for the second consecutive year and there have been other head-winds to a broader economic recovery such as labor shortages and supply-chain disruptions, 2021 has been a strong year for infrastructure investments with deal count up 2% and total value up 27%.

> Renewables and Energy sectors continued to account for the majority of all conducted deals throughout 2021 (49%), as sustainability and the reduction of carbon emission in energy production continues to be an important factor.

> The Transport sector has recorded a large influx in investments. In 2021, the total deal value of the sector recovered to pre-COVID levels and increased by 48% YoY, allowing the sector to reach a market share of 19%.

> Leverage for the full year 2021 stands at 56% with USD 521.2bn of the total deal value being financed by debt (YoY: -1.0%, Market based lending: 8.9%, Loans: 47.5%).



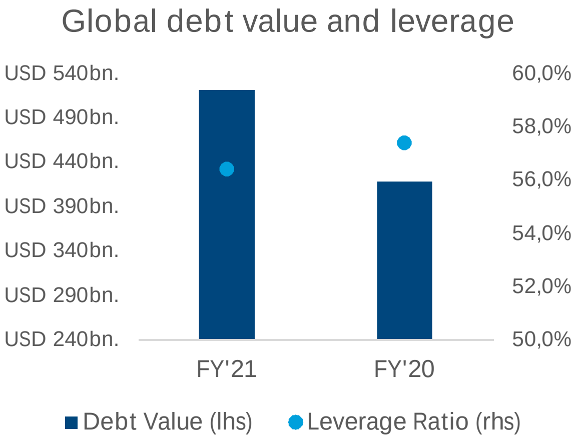


Figure 1: Sector Share and Global Debt Value[1]

[1] Source of data: Inframation February 2022: https://www.inframationnews.com/league-table-reports/detail/9884646/detail.thtml?parent=9675126

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Infrastructure Debt – Activity in detail

According to Inframation, global infrastructure and energy market investments have reached a new all-time high in 2021, as deal value increased by 27% to USD 923.7bn. The number of transactions grew by 2% from 2,745 in 2020 to 2,798 in 2021. Sector wise, the growth was led by the Energy and Renewables, accounting for 49% of the market share by value. This is followed by the Transport sector (19% market share) and Telecommunications (15% market share). In terms of value growth, the Transport sector has led the way with an increase of +48% YoY, reaching a value of USD 173bn.
Debt market activity has been very strong in 2021 with total debt value reaching USD 521bn for the full year (YoY: +5%). Although, bank financing continued to be the dominant form of debt throughout 2021 (84% of total debt), on a relative basis it is slightly down by -2% compared to FY 2020. Consequently, activity in capital markets has gained more traction in 2021, increasing from 14% of total debt in 2020 to 16% in 2021. The absolute value of capital market financing increased by 41% to USD 82bn.

For the full year 2021, **the European market** for infrastructure financing featured 1,173 deals with a total value of USD 350.5bn. Compared to FY 2020 this constitutes an increase of 10% and 42% in deal count and total deal value, respectively. Throughout 2021, the majority of financing came from classic lending, amounting to USD 182.1bn (53% of total deal value, +46% YoY). Financing sourced from debt capital markets remained relatively insignificant in 2021, amounting to USD 24.7bn for the full year (7% of total deal value, -0.3% YoY). Overall, the average leverage ratio for infrastructure projects in Europe stood at 59% for the year.

European landmark deals during the final quarter of 2021 have particularly featured the Energy and Telecommunications sectors. With a value of USD 24.8bn the Arctic LNG-2 Project in Russia has been the largest European infrastructure transaction by far, accounting for 1% of global deal value within the Energy sector. This was followed by a USD 9.8bn financing for the development of the Amur Gas Chemical Complex by Gazprom. Within the Telecoms sector the USD 6.5bn refinancing of Deutsche Glasfaser and the USD 6.1bn sale of KKR and Altice owned Hivory Telecoms Towers to Cellnex stood out in the fourth quarter of 2021.

Given these landmark deals it is not surprising that the Energy and Telecoms sectors have been the largest in terms of market share with 25% (YoY: +12%) and 23% (YoY: +2%) of total value, respectively. This was followed by the Renewables sector with a market share of 21% (YoY: -12%) and Transport with a share of 16% (YoY: -3%) of total value.

In the **North-American market**, the deal count stood at 759 for the full year 2021, amounting to a total value of USD 287.4bn (YoY: +24%). The deals have been financed with USD 130.7bn in debt, equating to an average leverage ratio of 45% demonstrating strong interest in infrastructure as an asset class by debt investors. The majority of debt financing was provided via loans (84% of total debt, +2% YoY), while capital market activity has been somewhat slower, accounting for 16% of total debt (YoY: -2%) However, North-America remains the market with the highest DCM activity.

The largest infrastructure transaction in the region has been the USD 33.6bn sale of US railway company Kansas City Southern (KSI) by Global Infrastructure Partners and Blackstone Infrastructure Partners. The transaction closed in Q4 2021 and put the transport sector back on the map, accounting for 19% of global transport transaction value. Other notable deals in the last quarter of 2021 have been the USD 7.2bn acquisition of Enable Midstream Partners by Energy Transfer Partners (Energy sector) and the USD 5.3bn sale of Covanta Holdings to EQT Infrastructure (Renewables sector).

The KSI transaction boosted the Transport sector tremendously in terms of market share. In 2021, the sector accounted for 22% of total market value in North-America (YoY: +14%). However, the Energy sector remains the largest with a share of 28% (YoY: -1%), followed by the Renewables sector with a market share of 24% of total value (YoY: -5%).

For the full year 2021, the deal count in the **Australasian market** stood at 379 with a total value of USD 133.9bn (YoY: +13%). On average, the transactions have been financed with a leverage ratio of 51%, while 91% of the debt used was provided via loans. Capital markets activity slightly picked up compared to the previous year, accounting for 8% of total debt (YoY: +3%).

Notable transactions in Q4 have been the USD 8.4bn financing of the North East Link Motorway in Victoria, Australia, which will be the state's largest project and the USD 4.8bn sale of 33% stake in CGN Wind Company by China General Nuclear Group to a consortium of 11 investors.

Sector wise, Renewables continue to be the dominant force in mainland Asia with a market share of 42% in FY 2021 (YoY: +10%). This was followed by the Transport sector with a share of 21% (YoY: -1%) and Energy with a market share of 18% (YoY: +6%). In Australia and New Zealand, on the other hand, investments have been distributed more evenly among the different sectors. With a market share of 24% (YoY: -6%) the Transport sector has been the largest by value. This was followed by the Telecoms sector which saw several large transactions throughout the year, leading to a near tripling of market share from 6% in 2020 to 17% in 2021. With a market share of 15%, Social Infrastructure remains the third largest sector (YoY: +3%). The Energy sector, however, while being the second largest sector in 2020 with a share of 28%, in 2021 it more than halved to only 12% of total market value.

"Spotlight": Grid Scale Battery Storage Systems

Battery Energy Storage Systems (BESSs) are an integral part of the adaption and expansion of low emission and renewable electricity systems by providing the necessary stability and reliability to power networks by balancing supply and demand. BESSs provide access to multiple revenue streams by monetizing their speed of response, their ability to arbitrage volatile short-term prices and their ability to provide capacity when the grid needs it most.

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Overall, revenue streams can be placed into three different categories: ancillary services, energy trading, and capacity market services.

Ancillary Services: Services provided to the national grid such as dynamic containment, firm frequency response, or reserve. The most common service is the provision of a stable grid frequency between 49.5Hz and 50.5Hz where control reserves are being deployed in an event that causes imbalances between energy generation and consumption. Frequency Containment Reserve (FCR) or "Primary Reserve" is the first response to such an event and intended to stop the frequency drift. The automatic Frequency Response Reserve (aFRR) or "Secondary Reserve" is the subsequent response to the FCR in an event of grid frequency imbalances and is intended to resolve the frequency drift.

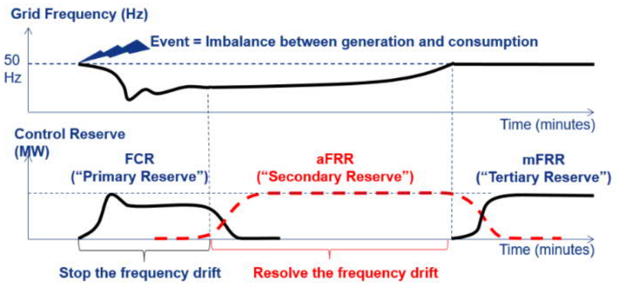

Figure 2: Frequency control reserve ensure the balance between generation and consumption

The current prices for FCR yield revenues of ca. EUR 70k/MW/year, while aFRR prices can result in revenues beyond EUR 100k/MW/year as they offer a combination of reservation (in EUR/MWh of availability) and activation payments (in EUR/MWh activated). So far, however, FCR remains the primary revenue source for energy storage systems as regulations in most continental European countries prohibit storage to participate in the secondary reserve market. This will change with the roll-out of project PICASSO, a European aFRR mutualisation project that will enable European countries to share their balancing energy, resulting in storage-compatible rules in most countries. The project will allow battery storage assets to penetrate the secondary reserve market, providing investors with alternative revenue streams as primary reserve services face price declines.[2]

Energy Trading: Energy trading involves charging the battery when electricity prices are low and discharging during more expensive peak hours. This can provide the BESS operator with revenues by taking advantage of price volatility throughout the day. An extension of energy trading is the reduction of renewable energy curtailment. With increasing share of variable renewable energy, the limited flexibility of generators and temporal mismatch between renewable energy supply and electricity demand (e.g. excess wind generation during night hours) could lead to generators curtailing their output. By charging batteries during hours of excess renewable generation and discharging during periods of high demand, BESSs can reduce renewable energy curtailment as well as maximize the value of energy the developer can sell to the market.[3] Revenues from trading activity can range from EUR 83k/MW/year to EUR 152k/MW/year.

Capacity Market Services: Distribution network operators (DSOs) receive electricity from higher network levels. In cases of peak demand, DSOs must pay charges to transmission network operators (TSOs) for withdrawing electricity from the higher grid level. If the electricity, however, is provided by decentralized generators, the resulting savings will be paid to the respective producers/providers as "Peak Shaving Revenues", which can be considered as a regulated revenue stream of around EUR 4k/MW/year.

Overall, battery energy storage systems can be seen as an attractive and up-and-coming asset class for infrastructure investors as they offer various sources of income with services that are stackable. This includes the wholesale energy market, through bilateral contracts, or directly by the utility provider through a cost-of-service mechanism.

The increasing injection of variable renewable energy into electricity grids will further accelerate the demand for storage systems that are able to contain supply and demand imbalances and offer peak capacity when renewable supply is insufficient.

Prime Capital is continuously investing in renewable energy assets and transformative technology across Europe, building up a distinctive track record in renewable energy production as well as supplementary infrastructure assets and technologies. With its established relationships, Prime Capital is well positioned to further contribute to the decarbonisation of the EU's electricity grids and enabling investments in this asset class on behalf of its investors.

2 https://www.energy-storage.news/inside-europes-newest-frequency-response-opportunity-for-energy-storage-afrr/

3 https://www.nrel.gov/docs/fy19osti/74426.pdf

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About Prime Capital's Private Debt Team

Our infrastructure debt team, which has been active in the infrastructure debt market for many years, has executed transactions of more than EUR 1.1bn. The Private Debt Team also invests in Commercial Real Estate, Transport Debt and Corporate Lending. We expect significant further asset growth in these areas, while providing satisfactory risk adjusted returns to our largely institutional investors. Prime Capital's Private Debt Team manages in excess of EUR 2bn across asset classes for institutional investors.

Further information about Prime Capital AG can be found at www.primecapital-ag.com

Prime Capital Infrastructure Debt Expertise

> Advice and support for infrastructure direct investments, portfolio strategy and sector allocation

> Managed accounts and funds with investment expertise in various jurisdictions and markets

> Unique "multi-channel sourcing" with access to transactions via direct lending, bank and advisor sourcing on the basis of longstanding relationships to market leading sponsors, equity funds and project finance banks

> Investments in Senior and Junior Debt

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