Company Note Overseas
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ChargePoint Holdings, Inc. (CHPT)

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International Stock Market Weekly

Energy-Alternative: Other

ChargePoint Holdings, Inc. (CHPT)

Since 2015, global EV sales have risen at a CAGR of 47%, in 2019, 320,000 EVs were sold in the US, which amount to a CAGR of roughly 30% since 2015. As of end-2020 there were 1.3mn EVs on the road in the US and the number is rapidly rising and the global EV market expected to grow at a 31% CAGR from 2020-30. To date, OEMs have committed USD300bn to EV engineering, production and support to meet the fast-growing demand. In short, there is a massive TAM for EVs, and the electrification of mobility is taking place at record rates, presenting a tremendous addressable market for ChargePoint. EVs are projected to be 9.9% of new vehicles sold in 2025 and 29.2% 2030 in the US and Europe (vs. 2.6% in 2019).

Electrification has become the runaway winner in alternative transportation to petroleum and is poised to enjoy massive secular tailwinds over the next decade. Moreover, as ChargePoint is an infrastructure play, it does not matter which automotive manufacturer wins the so-called EV war. The stock is has undergone a correction due in large part to the delayed US Infrastructure bill, but since that issue has been sorted out should resume its northward march as it a decade-long runway of growth ahead of it.

The electrification of the automotive industry has begun in earnest. Many automotive companies besides Tesla (TSLA) are just starting to sell EVs, and as such we are now in a multi-year adoption phase for EVs which will sustain for decades. This is an opportunity for long-term investors ChargePoint to capitalize on this inevitable trend as the company is key to enabling the consumer adoption of EVs, and the present market landscape lacks the charging infrastructure penetration required to make EVs viable at scale.

Stock pick for the second week of November

ChargePoint Holdings, Inc. (CHPT)

About ChargePoint Holdings, Inc. (CHPT)

ChargePoint develops and sells networked EV charging system infrastructure and cloud-based services. The company enables consumers to locate, reserve, authenticate, and transact EV charging sessions The company provides an open platform that integrates with its system hardware and other manufacturers, connecting systems over an intelligent network that provides real-time information about charging sessions as part of its networked charging systems, subscriptions and other offerings. Its network provides web-based portals for charging system owners, drivers, fleet managers, and utilities. ChargePoint also sells cloud services, networked charging systems, and Assure. Assure includes monitoring, warranty, advice, and reporting. The company's ChargePoint-as-a-Service (CPaaS) combines customer's owned and operated systems with ChargePoint cloud services, Assure, and other benefits.

The company has a large network covering the most populated areas in the US and operates in 16 European markets. ChargePoint is by far the leading charge station company, rivaled only by Tesla's Supercharger network.

Rationale

The cumulative EV charging infrastructure investment in the US and Europe is projected to be ~USD60bn by 2030 and ~USD192bn by 2040.

Since 2015, global EV sales have risen at a CAGR of 47%, in 2019, 320,000 EVs were sold in the US, which amount to a CAGR of roughly 30% since 2015. As of end-2020 there were 1.3mn EVs on the road in the US and the number is rapidly rising and the global EV market expected to grow at a 31% CAGR from 2020-30. To date, OEMs have committed USD300bn to EV engineering, production and support to meet the fast-growing demand. In short, there is a massive TAM for EVs, and the electrification of mobility is taking place at record rates, presenting a tremendous addressable market for ChargePoint. EVs are projected to be 9.9% of new vehicles sold in 2025 and 29.2% 2030 in the US and Europe (vs. 2.6% in 2019). According to the Bloomberg NEF Electric Vehicle Outlook 2020, the cumulative EV charging infrastructure investment in the US and Europe is projected to be ~USD60bn by 2030 and ~USD192bn by 2040.

Electrification has become the runaway winner in alternative transportation to petroleum and is poised to enjoy massive secular tailwinds over the next decade. Moreover, as ChargePoint is an infrastructure play, it does not matter which automotive manufacturer wins the so-called EV war. The stock is has undergone a correction due in large part to the delayed US Infrastructure bill, but since that issue has been sorted out should resume its northward march as it a decade-long runway of growth ahead of it.

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for EVs which will sustain for decades. This is an opportunity for long-term investors ChargePoint to capitalize on this inevitable trend as the company is key to enabling the consumer adoption of EVs, and the present market landscape lacks the charging infrastructure penetration required to make EVs viable at scale.

While there are several competitors in the charging infrastructure space, we see ChargePoint leading the pack among EV infrastructure play thanks to its already considerable lead, winning portfolio, and business model. The company's revenues are directly proportional to EV penetration, monetization not tied to energy utilization. It offers a complete, vertically integrated, software-defined, and worldwide product portfolio of networked solutions for commercial, fleet, and residential customers coupled with turnkey support services. The company's platform enables companies to be part of the democratization of charging. The company has a diversified revenue stream of HW plus high-margin, recurring SW subscription, and services.

Winning formula of HW tied to growing EV penetration, recurring SaaS model with a 100% attach to HW, and a recurring services model

ChargePoint has built very strong competitive moats, and for more than a decade, it has been fueled by capital raised from established investors powering a successful R&D and go-to-market engine. The company's winning formula of HW tied to growing EV penetration, recurring SaaS model with a 100% attach to HW, and a recurring services model including a comprehensive warranty. The company has a strong network created by deep ecosystem integrations, and an open network with broad reach. Its expanding customer base of 5,000 commercial businesses includes 76% of the 2018 Fortune 50 list of companies and it has proven account expansion reflecting ongoing SW and warranty subscriptions as well as increased HW purchases as EV penetration across verticals expands. Scaling only requires minimal capex as customers own the charging systems, and so ChargePoint is able to focus its resources on customer acquisition, product development, and public policy to drive innovation, competition and customer choice in the market. And its recurring revenue streams from SW and services offer great financial visibility.

ChargePoint fuels all types of vehicles across use cases in depots, parking lots, and residential settings. In short, ChargePoint represents the basket for investing in automotive and mobility brands that are making the switch to electric. ChargePoint not only charges everything but is finding ways to integrate into everything. As of today, ChargePoint is integrated in-vehicle via native infotainment systems and in Apple (AAPL) CarPlay and Android Auto. ChargePoint is integrated with fleet fueling cards, payment systems, mobile wallets, and with utility programs. At home, ChargePoint is integrated with at-home assistants such as the Amazon (AMZN) Alexa and more.

The EV market is undergoing a period of explosive growth as governments around the world are pushing the transition from ICE vehicles to EVs. Major automakers such as GM (GM), Ford (F), Hyundai Motor (HYMLF), Toyota Motor (TM), Nio (NYSE:NIO), and Tesla (TSLA) are racing ahead to meet the fast-growing demand. However, the lock that is preventing the acceptance by the masses of EVs is what will make them viable and what will catalyze buying by the masses - the supporting infrastructure to power

them. ChargePoint is the key that unlocks this massive potential. ChargePoint operates the largest network of independently owned EV charging stations in the world.

Open-walled networks open massive opportunities

There is a direct correlation between EV penetration and ChargePoint's business growth, and this is because the company serves the entire EV market, which encompasses all carmakers with EVs, fleets, and more.

Even though Tesla is the current leader in EVs, its closed-wall market strategy, which includes its Supercharger network, has created an opportunity for ChargePoint. Tesla's closed wall and ChargePoint's open wall approaches are somewhat analogous to the approaches taken by Apple vs. Microsoft or Android. ChargePoint has a deep and broad customer base that enabling it to rapidly expand its footprint. It sells to large businesses, installs charge stations on-premise for consumers to conveniently charge while working, shopping, etc. And so, there is a direct correlation between EV penetration and ChargePoint's business growth, and this is because the company serves the entire EV market, which encompasses all carmakers with EVs, fleets, and more. In short, it is perfectly positioned to capture the lion's share of the EV market's growth.

Subscription economy electrifies

We remind investors that this is an emerging market and that like Tesla, Amazon or the countless other companies of the same ilk that have vanished in the dustbins of history, offers massive potential but not without the risk that such potential gains entail. Having said that, long term, we are very bullish on ChargePoint as a safe long-term investment. With the growing number of EVs on the road, the demand for charging stations will increase at an incredible rate. And as non-Tesla EVs roll out in increasing numbers, the demand for charging solutions will surge. What we also find very appealing is the company's subscription-based model from which software and services should account for around half of revenues within the next six years. ChargePoint has a monopoly, has an attractive business model, and is relatively undervalued. Investors would do well to accumulate positions in ChargePoint to benefit from the growing EV revolution.

Market outlook

EV adoption rates differ widely by location. In Europe, EVs are rapidly gaining market share. In the US, buyers have been somewhat reluctant to transition from ICE vehicles, due to range and price issues. Nevertheless, as governments spend billions of dollars on infrastructure and customer incentives and automakers spend billions developing them, the steady growth in EV sales all but a foregone conclusion.

According to the IEA Global EV Outlook EV registrations rose 41 percent in 2020, despite the pandemic-related downturn, which resulted in a 6% decline in global car sales. Roughly three million EVs were sold globally, and Europe overtook China as the world's biggest EV market. In 1Q21, global EV sales rose by roughly 140% vs. to 1Q20, driven by sales in China and in Europe. Even though it started from a lower base, US EV sales more than doubled. IEA projects that there will be 145mn EVs on the road globally by 2030, which accounts for roughly 7% of the total road vehicle fleet. IEA predicts that number could grow even bigger if governments roll out more aggressive policies, which could result in 230mn EVs on the road by 2030, or around 12% of all vehicles.

Carmakers announced increasingly ambitious electrification plans. Out of the world's top-20 carmakers, which made up around 90% of new car registrations in 2020, 18 have plans to expand their offerings and to quickly scale up production of light-duty EVs. The model availability of heavy-duty EVs is also expanding, with four major truck manufacturers planning for an all-electric future. Consumer spending on EV purchases rose to USD120bn in 2020. In parallel, governments across the world spent USD 14 billion to support electric car sales, up 25% from 2019, mostly from stronger incentives in Europe. Nonetheless, the portion of government incentives in total spending on EVs has fallen over the past few years, which indicates that EVs have grown more popular with consumers.

In 1Q21, global EV sales surged by nearly 140% compared to the same period in 2020, driven by sales in China and Europe. Meanwhile, US sales more than doubled compared to 1Q20.

In 1Q21, global EV sales skyrocketed by nearly 140% compared to the same period in 2020. The 2020s will see more than simply the mass adoption of light-duty EVs to meet climate goals, governments will also likely implement policies to promote the deployment of medium- and heavy-duty EVs and with them the fast-charging infrastructure. In order for EVs to reach their full potential to mitigate carbon emissions, progress is required to build out charging infrastructure, and ChargePoint is on point to benefit from this.

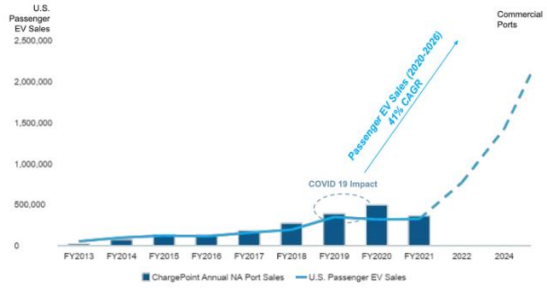
Electricity will soon be the dominant fuel for moving people and goods. As EV ownership rises, people will want to charge their vehicles at home. And many people call apartment buildings home. EV-driving residents will choose apartments that offer the amenities they want and/or need. That means home charging will be essential as EVs become the norm. EV charging is rapidly becoming a standard amenity in high-density housing properties. Many states already require charging spots, including California, which requires a minimum of 3% of all new parking spaces to be ready for EV charging in new multi-family communities. Some cities require even more: In LA, NYC and Vancouver between 5% and 20% of parking spaces must be EV-ready.

Some believe that public charging stations will not grow much as consumers will opt for home charging systems, but many of these voices are from the same cut of naysayers who were dubious about the speed and strength at which the market would demand EVs. And everyone knows how that is turning out with Tesla becoming the world's third USD1tn company, just behind Apple and Microsoft. Moreover, what such short-sighted individuals fail to consider is the large number of apartment and condo dwellers, who would like to drive EVs but need charging infrastructure in their complexes. The fact of the matter is that public charging is integral to EV adoption and EV drivers living in multi-family dwellings and apartments depend on public charging from ChargePoint and others. 81% of Americans live in urban areas, and 18% of homes are multi-family. 36% of households live in rental housing and based on the above 33% or more of 2030 energy demand from charging infrastructure may go to public charging. ChargePoint is positioned to capture the lion's share of this market.

Fig 1. ChargePoint at a glance

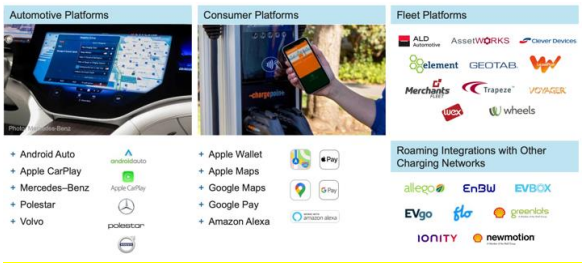
Fig 2. ChargePoint growth directly proportional to EV penetration

Source: ChargePoint,, Hyundai Motor Securities



Source: Historical EV sales from InsideEVs, Baum and BNEF. Future EV sales projections from BNEF., Hyundai Motor Securities

Fig 3. Integrated to the EV ecosystem



Source: ChargePoint, Hyundai Motor Securities

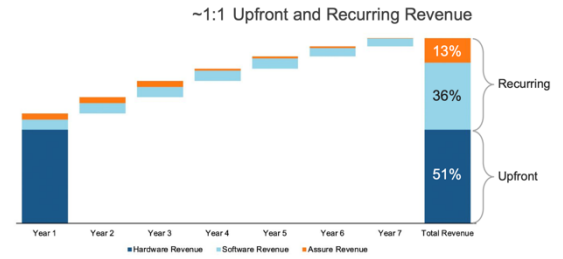
Fig 4. Select customers participating in the new fueling network

Source: ChargePoint, Hyundai Motor Securities

Fig 5. 76% of Fortune 50 use ChargePoint

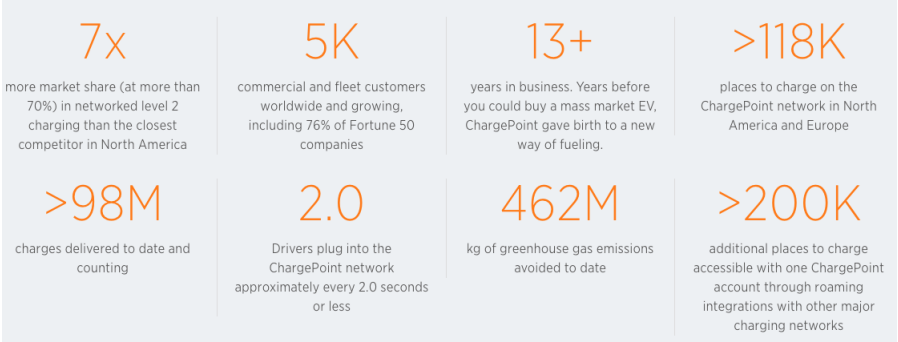
Source: ChargePoint, Hyundai Motor Securities

Fig 6. Illustrative unit economics



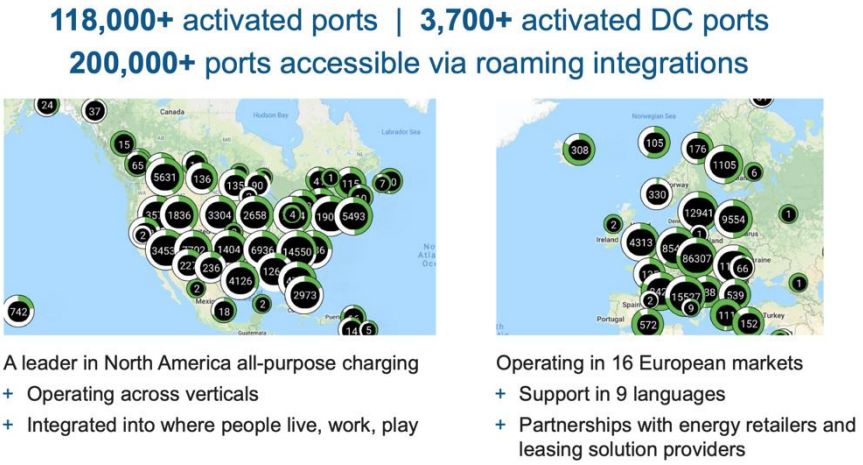
Source: ChargePoint, Hyundai Motor Securities

Fig 7. ChargePoint by the numbers



Source: ChargePoint, Hyundai Motor Securities

Fig 8. Winning North America, expanding in Europe



Source: ChargePoint, Hyundai Motor Securities

Fig 9. Winning formula of hardware+software+services

Source: ChargePoint, Hyundai Motor Securities

Valuation and risks

Like many SPAC stocks, ChargePoint has been very volatile over its brief trading history. For ChargePoint the P/S and P/B are the most appropriate valuation measures. With a P/S of 35.56x, is on the lofty side but very reasonable compared to its competitor Blink Charging's (BLNK) P/S of 78.87x. Its P/B is of 14.94x is higher than Blink's 5.89xChargePoint's EPS growth (MRQ) is 29.61% and revenue growth is 38.54% vs. Blink's -78.84% and 95.12%.

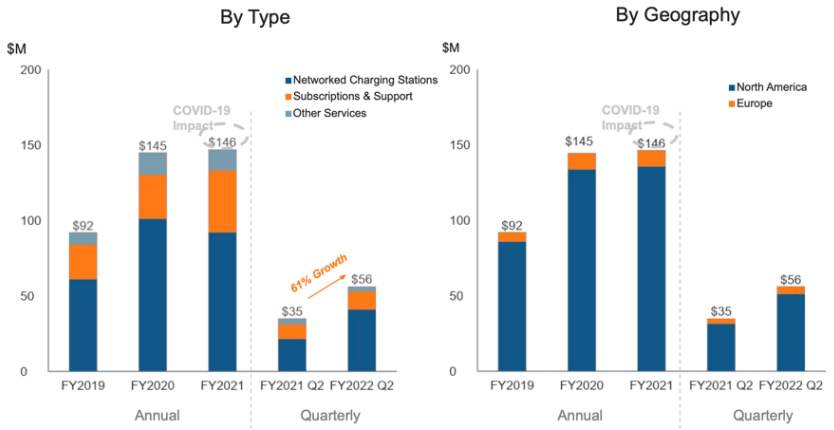
ChargePoint could fail to meet expectations. ChargePoint shares will only rise if the company can beat estimates over the next several years. Earnings and expectations ultimately drive stock prices. If the EV market does not grow as expected, which is unlikely, ChargePoint may see slower growth. Europe can also slow ChargePoint's growth, every country has different laws, regulations, taxes, etc. An end of government subsidies would also pose a problem but as evidenced with the latest US infrastructure bill proposal, this is unlikely to happen anytime soon. The US government as well as other governments around the world are cognizant of the need to subsidize the development of the EV industry and it would be politically risky to backtrack on progress, in our view.

ChargePoint is the market leader, however new competitors will enter the market and existing competitors will expand, ChargePoint could surrender some market share. ChargePoint's major publicly traded competitors are Blink and EVgo (EVGO). In addition, considerable volatility is inevitable, and as such, investors who are uncomfortable with considerable price swings may want to abstain from the EV infrastructure business.

The bottom line

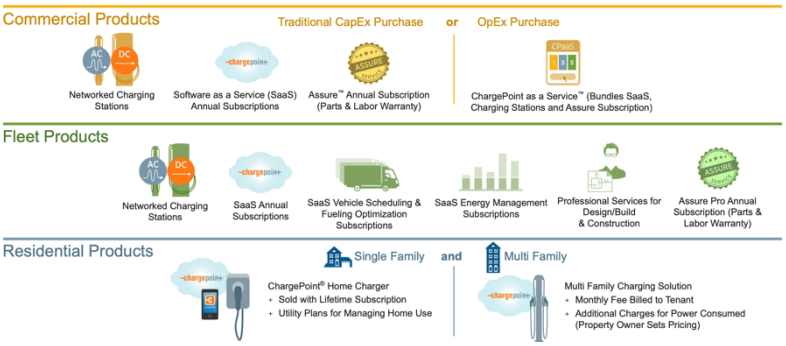
The commitment of the US federal, state, and world governments as well companies to go all-electric all but guarantees the continued growth of the EV charging infrastructure industry. In addition, ChargePoint has a first mover advantage, which makes it a compelling long-term growth story, in our view.

Fig 10. Revenue diversity by type and geography



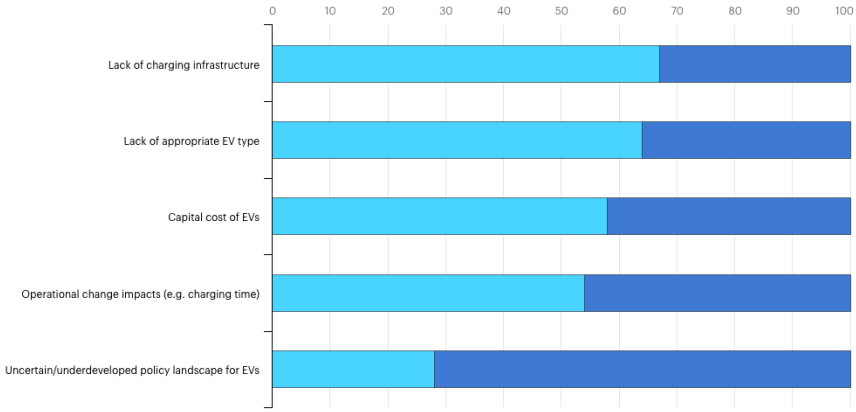
Source: ChargePoint, Hyundai Motor Securities

Fig 11. ChargePoint sells hardware, subscription software, and services



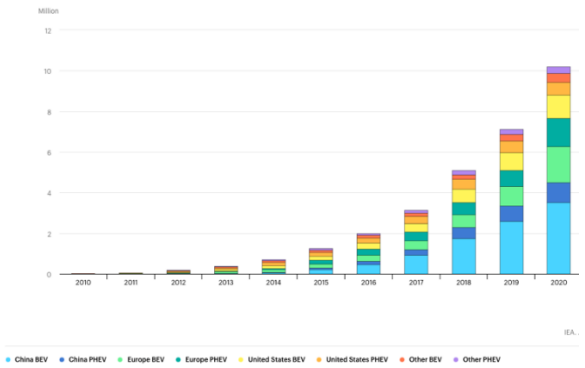
Source: ChargePoint, Hyundai Motor Securities

Fig 12. Top five barriers to EV adoption reported by EV100 member companies



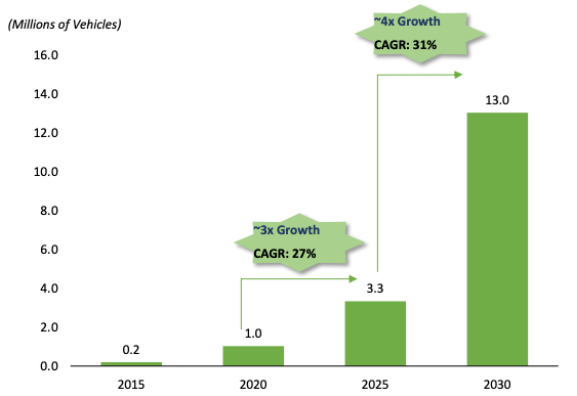
Source: IEA, Hyundai Motor Securities

Fig 13. Global electric passenger car stock, 2010-20



Source: IEA, Hyundai Motor Securities

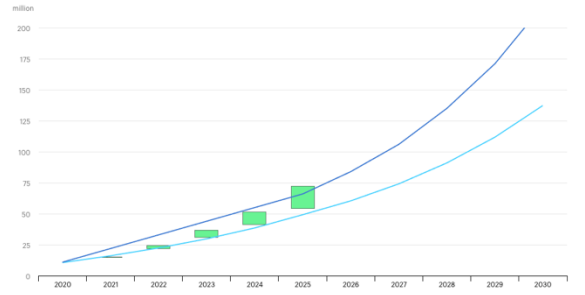
Fig 13. EVs are here to stay



	2015	2020	2025	2030
Vehicle Sales (mm)	0.1	0.2	0.9	3.2
US BEV % of Sales	1%	2%	7%	24%

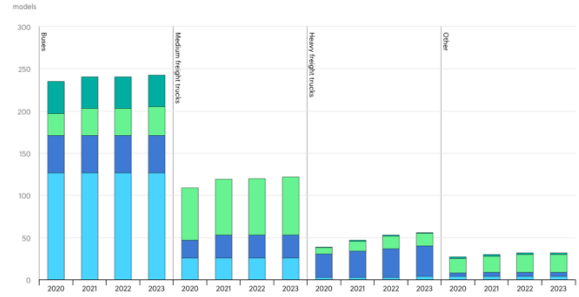
Source: Bloomberg New Energy Finance, data as of May 2020. BCG, "Who Will Drive Electric Cars to the Tipping Point?" (2020), Blink, Hyundai Motor Securities

Fig 14. OEMs' announcements compared to light-duty EVs stock projections, 2021-25



Source: IEA, Hyundai Motor Securities

Fig 15. Flexible tech fits business needs (SW and services)

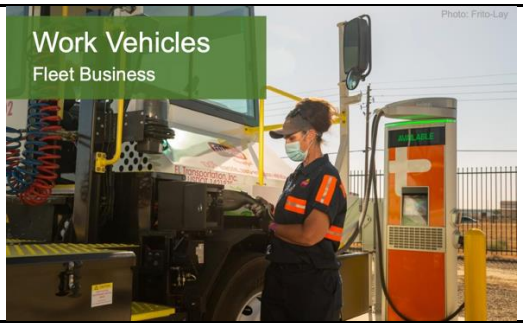


Source: IEA, Hyundai Motor Securities

Fig 16. Electric fueling I

Source: ChargePoint, Hyundai Motor Securities

Fig 17. Electric fueling II



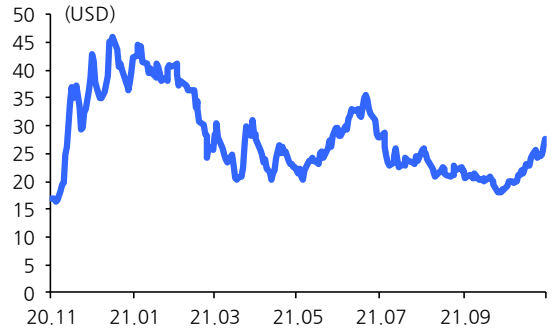
Source: ChargePoint, Hyundai Motor Securities

Fig 18. Peer Valuation

Company	Ticker	Market Cap(USDmn)	P/E Ratio	P/S Ratio	EV/EBITDA	Sales Growth (%)
ChargePoint	CHPT	8,967	NA	NA	NA	NA
Blink Charging Co.	BLNK	1,647	NA	117.11	113.90	NA
EVgo, Inc.	EVGO	3,553	NA	177.74	-96.19	NA

Source: Thomson One, Hyundai Motor Securities

Fig 19. CHPT Stock Price



Source: Bloomberg, Hyundai Motor Securities

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