

BERYLLS CAPITAL MARKETS EV STARTUPS ON THE STOCK MARKET – PROMISE OR DOWNFALL?

MARCH 2024

BERYLLS CAPITAL MARKETS

AGENDA

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EV STARTUPS ON THE STOCK MARKET - A JUSTIFIED HYPE?

In the last five years, many new EV players entered the stock market. Companies like NIO, Rivian, Lucid, VinFast, and XPENG are among the firms in the hunt for fresh capital to fund their ambitious endeavors. Initially, investors seemed to be on the edge of their seats, eagerly anticipating who was going to follow in the footsteps of EV pioneer Tesla. When Rivian went public at the Nasdaq stock exchange in November 2021, it resonated like an earthquake in automotive circles. At an initial valuation of USD 66.5 bn, they were valued at a similar level to established players Mercedes-Benz and BMW, only two months after producing their first ever customer-ready car. However, despite this initial hype around newly emerging EV players, the recent performance of Rivian and its EV-peers on the stock market is quite underwhelming. While the rise of new electric vehicle manufacturers seemed very attractive for investors from the get-go, popular companies like Rivian, Lucid or Fisker are currently valued at less than 20% of their initial valuation. This underperformance of many emerging BEV players on the stock market raises question marks. Was the hype around EV startup stocks justified?

Therefore, we will look at four key questions in this article:

How did stock market entries of EV players develop in the last years?

How does their performance look like?

How did the companies use the raised capital?

What is our take on the recent developments?

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TIMELINE OF EV PLAYERS GOING PUBLIC

Since its early days at the beginning of the last century, the automotive industry stacked up huge market entry barriers. R&D investments, long supply chains with multiple stakeholders, costly production lines, and complex sales processes require significant upfront investments, and the automotive value chain is still one of the most complex ones across major industries. Confronted with these challenges, emerging car manufacturers have huge capital demands and are often lacking the cash to fund their operations and scale up their business. Through going public, these firms can make use of a relatively simple tool to raise capital and significantly increase their overall visibility among investors, customers, and potential employees.

For this piece, we analyzed the IPOs of the ten most significant newly emerging EV players next to Tesla, excluding any company that did not enter the stock market as an EV manufacturer (e.g., BYD) or that is also offering plug-in hybrid electric vehicles (e.g., Li Auto).1

In Figure 1, they are sorted by their stock market entry time, classified into two main clusters: initial public offerings (IPOs) and mergers with special purpose acquisition companies (SPACs).

FIGURE 1: RECENT STOCK MARKET ENTRIES OF EV STARTUPS 1, TESLA 2, NIO 3, XPENG 4, EISKER 5, CANOD 6, FARADAY FUTURE 7, LUCID 8, RIVIAN 9, POLESTAR 10, LEAPMOTOR 11, VINEAST



¹ Polestar initially offered a PHEV (Polestar 1), but ended production in the year of entering the stock market. Now, they are solely manufacturing EVs and are therefore included.

As can be guickly derived from figure 1, While an IPO requires a firm to go through Tesla has a unique position in the landscaa lengthy and often taxing administrative process, a SPAC merger is quite different. It pe of pure EV players. Its IPO dates all the way back to June 2010, when EVs were still offers a much quicker road to going public, in their infancy and only few believed in the as a SPAC is a company that is founded and listed on the stock exchange with the sole technology. This changed dramatically in the following years, driven largely by signifipurpose of acquiring another firm. Next to cant technological advances in battery the speedier process, the main advantage technology, regulatory incentives with the of a SPAC merger is certainty of funding, as aim of mitigating climate change, and chanthe uncertainty of the valuation process taking place at the start of IPOs is left out of ging customer demands. the equation. Through this way, firms can From 2018 onwards, public listings of EV often be sure to secure the necessary capistartups began to pick up pace, pushed on tal for research, development, and producby technological maturity and low interest tion scale-up before their stock market enrates. Starting with NIO, ten more players try even takes place. As is displayed in figure entered the stock market, with three each 1, SPAC mergers are on the upper hand in coming in in 2020 and 2021, two in 2022, recent stock market premieres among EV and one in 2023. Among those ten compacompanies. Sides are split 60 to 40, with nies, four chose the traditional way of an NIO, Rivian, XPENG and Leapmotor choo-IPO, while the rest took advantage of a resing the traditional path of an IPO. On the cent trend on the stock market: the merger other hand, Fisker, Canoo, Faraday Future, with a SPAC. Lucid, Polestar and VinFast opted for a SPAC merger. For more information please also find a previous Berylls' insight:

BERYLLS INSIGHT SPAC: THE PANACEA FOR NEW MOBILITY FINANCING? **CLICK HERE TO READ THE INSIGHT**

WALL

But how much capital could the analyzed companies raise?



Looking at the composition of the displayed capital raises in figure 2 in combination with the cumulative vehicle sales, two observations jump right to the eye: The amount of raised capital stands in no direct relation to the sales performance of the analyzed players (1). Most companies, however, raised the largest share of capital after going public, thus using the IPO/SPAC merger as a

tool to leverage their access to funding (2). This underlines the importance of a public listing for an EV player, giving them access to new ways of funding and a broad public of investors, who historically seem to have kept the maturity and current market success of an EV player somewhat out of the equation when making an investment decision. Highlighting the direct proceeds, the analyzed companies took up fresh capital during their IPO with a total amount between 30 million and 11.9 billion USD. Rivian stands out at the top of the range, collecting almost 4 times as much capital as Lucid, the second-best performer regarding direct proceeds in the list. While Tesla is positioned close to the bottom of the lot with their mere 226 million USD raised, it is important to consider that their IPO took place all the way back in 2010. This was long before the recent hype around EV startups started, when electric vehicles still had negligible market penetration.

The analyzed SPAC mergers have taken in direct profit from going public with amounts ranging between 30 million and 3 billion US Dollars. At first look, the lower end might seem quite underwhelming.

Source: company information, Crunchbase, Berylls estimate, S&P global

However, there are often additional investments related to such a deal. When choosing a SPAC merger, two of the key rationales involved are the desire to expose the business to new investors and to increase fundraising opportunities in the long run. The successful implementation of such an approach can be demonstrated impressionably at the example of VinFast, who managed to secure a direct investment of Chinese Company Gotion Inc. amounting to USD 150 million in direct relation to their merger – still peanuts in automotive terms, but coming in at a hefty 500% bonus to their SPAC-proceeds.

Four of the top five companies that were able to raise the most capital did so via the traditional way of an IPO, unveiling an advantage in raising capital through this way. Except Tesla, these players have not yet been able to gain a clear competitive advantage over SPACs in terms of achieved sales volume. Although the classic route helped to convince more investors, it remains to be seen if IPO-funded players will manage to increase the gap to SPAC mergers in the world's auto markets in the next years.

HISTORICAL STOCK PERFORMANCES RAISE DOUBTS ABOUT THE LONG-TERM PERSPECTIVE

FIGURE 3: HISTORICAL STOCK PERFORMANCE



Figure 3: Historical stock performance of the analyzed companies, indexed to their respective date of entering the stock market. SPACs marked dashed.

Source: Bloomberg

When looking at the historical stock perfor-When putting the stocks in comparison, it is mance of EV players, one thing stands out: to be kept in mind that they entered the all analyzed EV manufacturers except Tesla market under significantly varying macroehave lost market value since going public. conomic conditions. That is why we put the Tesla serves as a prominent benchmark for performance of each stock into relation to the rest of the industry, standing at a valuathe MSCI world index in the same time tion of more than ten thousandfold of their frame. The result is as simple as it is striking IPO market capitalization. In aggregate - except Tesla and to date, none of the stucomparison, other US startups have perfordied stocks has managed to beat the permed worse on the stock market, driven by formance of the global index. Even Vinfast, Faraday Future, Canoo, Fisker, Lucid the best performing stock in relation to the Motors, and Rivian. The worst performer MSCI world, still lost over 60% compared to was by far Faraday Future, which stands at the index in just half a year since going less than 0,1% of its initial valuation when public. This underlines that the initial hype going public through a SPAC acquisition around EV startups has cooled down signiwith Property Solutions Acquisition Corp on ficantly. Initial investors are more and more 22/07/2021. Another striking observation is realizing that they made a calamitous error that the firms that used a SPAC to go public giving their money to a business that was performed far worse than those that chose far from being an established market player. Now, they are one after the other drathe rocky path of an IPO – NIO, Leapmotor, Rivian and XPENG are all at the upper end wing out their cash in light of the enormous challenges these companies must face in among their peers. The only exception to this rule is Vinfast, the latest addition to the the process of scaling up their business. stock market among the lot, who still must

leave its mark.

STRATEGIC AND OPERATIVE DEVELOPMENTS AFTER GOING PUBLIC

Speaking of scaling up, it is of particular interest to look at the strategic and operative developments at a company right after entering the stock market, when they are equipped with fresh capital. Did they use it to acquire new personnel, conduct more extensive R&D, build additional facilities, finance production ramp-ups, or simply "burn" the cash in the face of running costs?

For this purpose, we analyzed a selection of four companies, including only those that took up over 1 billion USD in direct proceeds from going public and are publically traded for over two years. Through these criteria, it is ensured that the firms took up enough capital to realize their intentions and the covered time frame is long enough for effects to be seen.

FIGURE 4: OPERATIVE DEVELOPMENTS AND STRATEGIC POSITIONING

	CATEGORY			XPENG	LUCID	RIVIAN
CORE DATA	DATE OF GOING PUBLIC		12.09.2018	27.08.2020	25.07.2021	10.11.2021
	INTENTION OF STOCK MARKET ENTRY		R&D, MARKETING, EXPANDING MANUFACTURING CAPACITIES	R&D, SALES GROWTH	BUSINESS EXPANSION	SALES GROWTH, PRODUCT Extension
	DIRECT PROCEEDS FROM IPO / SPAC-MERGER		\$ 1.002 mn.	\$ 1.496 mn.	\$ 3.000 mn.	\$ 11.934 mn.
	PERFORMANCE AGAINST MSCI WORLD (IPO-02/2024)		-63%	-94%	-93%	-86%
NTS	HEADCOUNT DEVELOPMENT	YEAR OF GOING PUBLIC	9.834	5.084	3.900	3.178
PME		+1	7.442 (-24% yoy)	13.978 (175% yoy)	7.200 (85% yoy)	10.422 (228% yoy)
NELC		+2	7.763 (4% yoy)	15.829 (13% yoy)	n.a.	13.122 (26% yoy)
	R&D EXPENSES (USD)	YEAR OF GOING PUBLIC	581 mn.	264 mn.	750 mn.	766 mn.
RATIV		+1	636 mn. (9% yoy)	630 mn. (139% yoy)	821 mn. (9% yoy)	1.850 mn. (142% yoy)
OPE		+2	381 mn. (-40% yoy)	775 mn. (23% yoy)	n.a.	n.a.
AING	PRODUCTION NETWORK EXPANSION		2 NEW ANNOUNCED FACTORIES (CHINA/ 2023)	2 NEW ANNOUNCED FACTORIES (CHINA/ 2020 & 2021)	1 ANNOUNCED FACTORY (SAUDI ARABIA/ 2021)	1 ANNOUNCED FACTORY (USA/ 2021)
TEGIC POSITION	ACQUISITIONS/ INVESTMENTS		3 INVESTMENTS (NUCLEAR FUSION, LITHIUM MINING, AI COPILOT)	5 INVESTMENTS (ELECTRIC DRIVETRAIN & BATTERY, AUTONOMOUS DRIVING)	n.a.	1 ACQUISITION (ROUTE PLANNING APP)
STRA	LAUNCH OF NEW MODELS		ECG (2020) ETS (2022) ETT (2022) EST (2022) ECT (2023) ETG (2025)	P5 (2021) G9 (2023) G9 (2023) X9 (2023)	GRAVITY (2024)	RIS (2022) R2 (2025)
CONCLUSION	USE OF RAISED CAPITAL (INDICATIVE)		» PRODUCT PORTFOLIO EXTENSION » PRODUCTION NETWORK EXPANSION	» HEADCOUNT AND R&D EXPENSE INCREASE » MULTIPLE INVESTMENTS INTO CRITICAL DRIVETRAIN AND STEERING TECHNOLOGY » PRODUCTION NETWORK EXPANSION	» HEADCOUNT AND R&D EXPENSE INCREASE » PRODUCTION NETWORK EXPANSION	» HEADCOUNT AND R&D EXPENSE INCREASE » PRODUCTION NETWORK EXPANSION

Figure 4: Operative developments and strategic positioning of NIO, XPENG, Lucid and Rivian after entering the stock market.

Source: Berylls, Bloomberg, company information

Of the four analyzed companies, the cen-In summary, it can be observed that the players significantly increased their R&D tral intentions behind entering the stock expenses, while also going on a hiring spree market all revolve around expanding their business. While NIO stated its goals quite in most cases. As all companies show the largest growth rates in expenses and headdetailed, naming they wanted to use the additional funding for investments into count in the year that directly follows to go-R&D, marketing and manufacturing capaciing public, the utilization of the raised capities, the others formulated less granular intal can be directly observed. While Chinese players focus on a large model range and tentions revolving mostly around sales growth. In the pursuit of those goals, three rapidly launch new models in addition to of the players significantly increased their planning new factories, US players are more headcount in the two years that followed to cautious with such rapid expansions. As all going public. Only NIO falls out of line, going analyzed companies have failed to transthrough a significant restructuring shortly form their initiatives into positive stock reafter their IPO. In line with their intentions turns for their investors, their efforts were of expanding their business, all four comfor now just a drop in the ocean. It is to be panies invested into the foundation of fuseen who will survive and come out on top ture success by increasing their R&D exin the long run. That is why we'll continue to penses within their first year on the stock put a close look on their developments in market. On the strategic side, the observed the future. approaches are quite diverse. While NIO and XPENG seem to aim at quickly gaining footprint on the Chinese market by building new production facilities and massively expanding their vehicle portfolio, US-based players Lucid and Rivian are much less active, using a focused model palette and not conducting significant transactions in the years that follow their IPO.



OUR VIEW

In summary, the IPOs of EV startups mostly resulted in significant losses for their initial investors, being outperformed by the general stock market. While scaling up, electric vehicle manufacturers need substantial financial resources for initiating production, conducting research and development, hiring qualified personnel, and funding further operations. Regardless of the drivetrain technology, an automotive company still has to establish organizational structures and set up and qualify complex supply chains. For example, the implementation of intricate development and production processes requires the hiring of highly qualified experts, which are coming in at hefty price points. As electric powertrains for passenger cars are still a relatively new technology, enormous technology leaps are to be expected in the next years. To keep pace with the development of technology and to build up necessary battery production capacities as well as the related supply chains, gigantic investments must be made. Other typical challenges of the industry, like the enormous up-front investments for main production and assembly facilities or regulatory guidelines for passenger safety, apply the same way to EV players as to traditional OEMs, which have spent decades mastering the craft. By going

public, EV startups gained access to large amounts of fresh capital and exposed themselves to a broad range of investors, who were eagerly looking to identify who will be the next company to follow in the footsteps of Tesla – a continuous outperformer of the stock market in recent years. As a prominent industry example, it serves as a benchmark for investors anticipating similar successes from other EV startups. However, achieving such success is a gradual and arduous process. To triumph in the long run, EV players must stem enormous investments, while facing intense competition from both established OEMs and numerous peers who are in the hunt for the same trophy. Compared to Tesla's development, all EV start-ups have disappointed investors so far. Perhaps it just takes time, considering the enormous challenges they are facing? After all, Tesla did not achieve overnight success either.

Looking forward, we expect to see further capital calls of the analyzed EV players, aiming to satisfy an enormous hunger for cash. In times of higher interest rates and increasing BEV shares of traditional players, we expect a stronger focus of investors on new BEV players exceeding targets in terms of market shares, growth rates and profitability. Just having a visionary investment story won't be enough in 2024 and beyond. It is time to put words into action.

Based on the recent developments, we formulate three central hypotheses:

3.

As the required amount of capital to scale-up an EV startup is enormous, they tend to enter the stock market to gain access to additional capital that secures their business in a critical time, rather than building long-term shareholder value.

2.

None of the new EV players could collect enough capital to get through to the stage of self-funding. Based on their weak stock performance and intense competition from other newly rising competitors as well as established OEMs, chances are that they will not be able to come back again and again to fund their growth losses. Therefore, only few of the new players will prevail and achieve long-term successes we take bets on who will be the first to delist.

forward.

In light of the immense challenges EV startups are facing and investors being more cautious than previously, intelligently leveraging the available capital to quickly achieve positive returns will be of the essence for EV startups going

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