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Payton Planar - A Hidden Gem Under The Electric Vehicle Hood

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Summary

- Electric Vehicles (EVs) are expected to hit the road en masse over the next several years. Instead of guessing who will win the car manufacturers' race, it's wise to look under the hood for niche suppliers.
- Planar Transformers (PT) has thus far been a niche market, mainly involved in medical, trains and military apps. But, by 2025, EVs should propel parabolic demand growth for PT.
- Each EV contains 10 times more PT than an internal combustion engine (ICE) car. Once a PT vendor was selected for a certain model, switching costs are enormous.
- Payton Planar, the leading PT pure player, sells to the top tier-1 car suppliers (like Delphi and Lear). The company grew its operating and net profit 50% in the last 2 years, organically.
- The backlog is growing far faster than revenues, suggesting that 2018 should experience >50% YoY profit growth. With a forward P/E of 9, Payton seems like a hidden gem.
- Note that Payton Planar stock trades on Euronext Paris, under the ticker PAY.

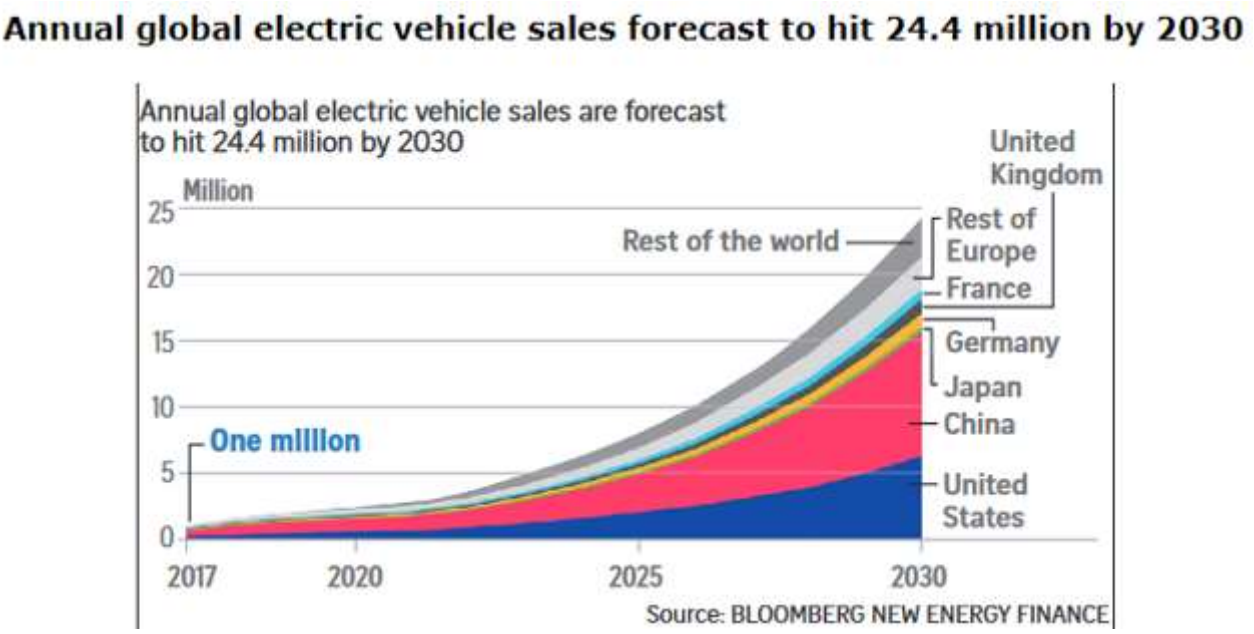
Investment Thesis

When a technology shift like EV rattles an industry, usually the front-row companies like Tesla (TSLA) get plenty of attention and trade at lofty valuations. Instead of guessing who will win the EV race out of Tesla, General Motors (GM), Nissan (OTCPK:NSANY) or Toyota (TM), a good strategy is to find under-the-hood suppliers along the value chain that will prosper no matter who wins the giants war.

Payton Planar (PAY.EPA - Euronext) seems like a hidden gem; an under-the-radar, boutique EV supplier that has only started to reap the benefits of the massive shift to EV, which is expected to accelerate in the coming years.

EV revolution hits the road

According to Bloomberg "*Sales of electric vehicles (EVs) will increase from a record 1.1 million worldwide in 2017, to 11 million by 2025 and then surging to 24.4 million by 2030 as they become cheaper to make than internal combustion engine (ICE) cars*"



EV revolution is not something that will happen in the future; it's happening now - according to April 18' release of Frost & Sullivan's "Global Electric Vehicle Market Looks to Fire on All Motors in 2018":

> *"Global sales are poised to climb from 1.2 million in 2017 to 1.6 million by 2018 and further upwards to an estimated 2 million by 2019".*

Investing in a car supplier, whose products are 15 times more plentiful in Electric Vehicles than ICE cars, seems like an appealing opportunity.

Planar Transformers - A negligible niche industry being transformed by EVs

What are Planar Transformers and what are their benefits over conventional ones?

As opposed to conventional "wire-wound-on-a-bobbin" transformers, planar transformers usually contain winding turns made of thin copper sheets riveted together at the ends of turns in case of high current windings, or windings etched on a PCB in a spiral form. As the current conductors are thin sheets of copper, the operating frequency is not limited by the "skin effect."

As such, Planar Transformers have the following benefits over conventional ones:

- Unmatched converting efficiency of 99.5%
- Low profile, small-scale - ideal for high power density equipment designs.
- Lightweight: 15g per 100W.
- Unmatched repeatability and predictability, all windings are pre-tooled which means they are ultra-reliable.
- Minimum Electromagnetic Interference (EMI).
- Wide operating temperature range: -40°C to +130°C with unparalleled working frequency range: 50 kHz to 1MHz.

Those benefits overcome the higher PT costs, make PT ideal for demanding applications such as aerospace, telecom equipment, electric trains:



Source: Payton Planar website

The PT industry has been low-profile niche with a total market size estimated around $100-200M (due to its limited size, it isn't covered by leading market research companies). The industry is led by specialized players like Payton Planar, Hi-Mag (*which was acquired by Payton*), Standex-Meder Electronics (SXI), and Coilcraft, Inc.

But in the recent years, EV and Industrial Robotics are transforming the demands for PT.

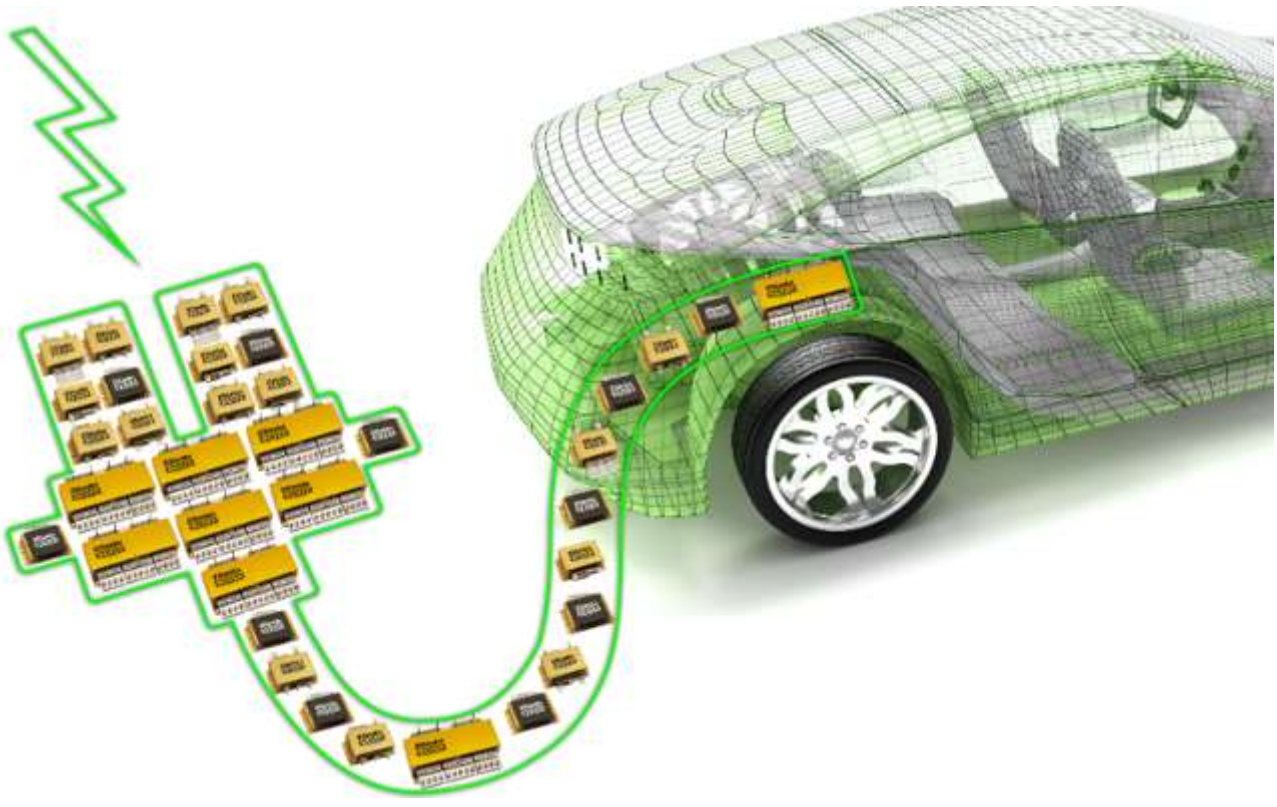
Planar Transformers demand is expected to grow 25 times by 2025 driven by Electric Vehicles (EV) - Each EV has 15x more Planar Transformers than an internal combustion engine (ICE) car

EV designers need to squeeze every last ounce of efficiency from each part of the vehicle. Automotive drivetrain design engineers are embracing energy saving technology, and planar transformers are at the forefront of the revolution.

According to the reputed PowerGuru.org:

> *"Planar transformers offer an electrical efficiency of up to 99.5% and provide higher power density than their conventional counterparts. In addition, not only are planar transformers considerably smaller than their conventional counterparts, they also offer a significant weight advantage - the lighter the moving object, the less required to move it"*

Given that the battery is the #1 cost item in EV, and given the huge space toll associated with batteries, the highly efficient, low-weight, small-scale and ultra-reliable Planar Transformers are a perfect fit. So it is easy to understand why the demand for planar transformers is growing rapidly.



Source: Standex-Meder website

Further, by design, the EV cars require far more complicated and demanding electricity transformation than ICE.

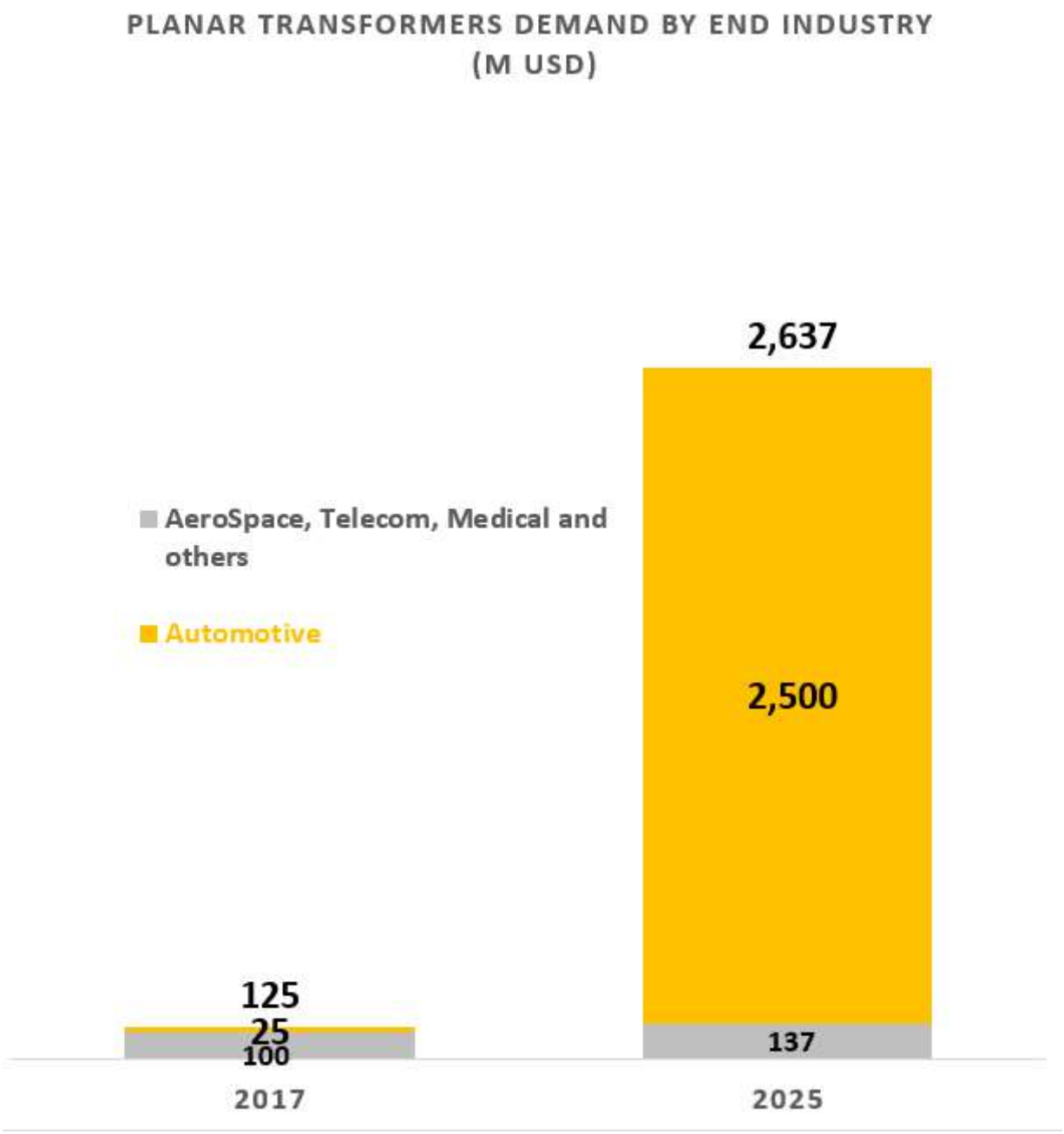
Customers' perspective - How tier-1 cars suppliers think of the future of PT

From the conversations we had with electrical engineering executives in Tier-1 car suppliers like Valeo (OTCPK:VLEEY), Delphi (DLPH), and others, it was reinforced that EVs have 10-15 times more PT than ICE vehicles.

Specifically, the Head of Powertrain in one of the car suppliers mentioned above (that is a current customer of Payton) told us:

> *"ICE car has 150g of Planar Transformers, each EV contains 1500-2500 grams of such transformers"*

The PT industry overall is expected to grow 25 times from $100-150M industry in 2017 to $2.5B by 2025



Source: Lucid Capital process based on Bloomberg's EV estimates and interviews of Tier-1 car suppliers

Payton Planar is the leader in the intimate PT market, designs & sells tailored PT while enjoying a solid moat

Payton Planar was founded in 1992. The company is the leading Planar Transformers supplier (according to its own statements from its financial reports and marketing materials).

It designs and manufactures (using a factory in Israel and mainly sub-contractors in China) custom-made Planar Transformers tailored to suit each customer's needs.

Here is Payton's marketing video from 2013 that explains what it does:

Payton Planar

Source: Payton Planar's YouTube channel

As noted above, its stock is traded in Euronext ($80M market cap) and its parent company, Payton Industries (PAYT:TASE) which holds 66.2% of Payton Planar (which is sole activity of the Payton Industries) is traded in Tel Aviv stock exchange (see valuations ratios for both stocks below).

Here is the list of Payton's customers. Note the prominence of car suppliers like Harman, Delphi, GM, Lear Corporation (LEA), etc.



When looking at Payton's top 3 customers, we see that the top customers' revenues increased from 10% to 18% in 2016.

2. Principal customers

The sales revenues include sales to principal customers (which make up in excess of 10% of the sales of the Group):

	For the year ended December 31	
	2016	2015
	%	%
Customer A	**18**	10
Customer B	**11**	10
Customer C	*	11

* Less than 10% of the Group's consolidated sales.

Source: Note 17, Payton's 2016 report

Competition and moat

Until now, the PT industry was a niche, and has been mainly composed of boutique suppliers in the size of Payton, like Standex-Meder Electronics, and Coilcraft, Inc.

As the leading PT player, Payton has been known for its superb electric design capabilities.

Payton works tightly with the R&D of its customers, meaning that instead of the power supply design engineer needing to design his system around limited standard "off-the-shelf" transformers, he can design in the knowledge that the planar transformer will do exactly what he needs it to do. Needless to say, it forms a lock-in mechanism for the customer, especially for Automotive and Aerospace applications where once a certain design is locked, switching costs to another PT supplier don't make sense economically or like a Tier-1 cars supplier told us:

> *"The new supplier will need to provide as deep as 40-50% discount for us to justify the pesky, costly re-design"*

That means that once Payton lands a design win for a car model (e.g. Nissan Leaf), it will recognize revenues along the commercial sales of the model, as well as from spare parts.

In the auto industry, it generally takes 3-4 years from a design-win to cars hitting the roads en masse and another 4-5 years for a typical commercial life-span of a model. Given the nascent stage of the EV, and the proliferation of models hitting the road in 2019-20, it would seem that Payton has just begun to realize revenues from its automotive design wins.

Details of those engagements are usually kept in the dark by all sides (the PT suppliers don't want to invite unnecessary competitors and the customers' car OEMs and their Tier-1 suppliers don't want to disclose any details about their future models to the competitors).

However, according to tier-1 car suppliers we talked with, Payton's PTs are part of the current Renault-Nissan EV cars as well as the upcoming Volvo (OTCPK:VOLVF) EV line, whose CEO just stated that by 2025 fully electric cars to make up half its sales. The first Volvo model to get the fully electric treatment will be the XC40, which is due to go on sale in 2019. We don't have any formal confirmation of the above from the company but Payton's backlog, which includes only assured orders for the coming year (Remember that Payton started both 2016 and '17 with ~$10M backlog and finished each of these years with ~$33M revenues) may suggest that the company keeps landing new design wins:

I. Order Backlog

As at December 31, 2017 this backlog amounted to USD 16,796 thousand, and as of March 12, 2018 to USD 21,86 thousand (December 31, 2016 - USD 10,681 thousand). The backlog is composed of the Company and its two full owned subsidiaries firm orders.

Management estimates that most of the backlog as of 31.12.17 will be supplied until the end of December 2018.

Source: Payton Planar 2017 report

Note the backlog jump from 2016 through 2017 into 2018:

	31.12.2016	31.12.2017	12.3.2018
Payton's Backlog ($M)	10.7	16.8	21.9

Usually, the company received orders ~6 months in advance, so the above backlog likely excludes Volvo (which aims to launch its EV SUV only in H2/2019) and further Nissan orders (If indeed Payton is the supplier for Volvo and Nissan, as we heard). Also, the backlog excludes any other recent EV design wins that are set to hit the road only in the next couple years (BMW? (OTCPK:BMWYY) GM?).

According to Payton's management, the current design wins are the fruits of a rigorous qualification process and tight work done with the Tier-1 automotive suppliers since 2012. If it took Payton, as the PT leader 5-6 years to penetrate the automotive industry, how long it would take to others?

The automotive industry is very conservative when it comes to new suppliers. The fact Payton has already designed and supplied successfully PT to Delphi, Harman and Lear - the cream of the Tier-1 car suppliers - smoothens its penetration to other tier-1 car suppliers. It's worth noting that Payton's leading position makes it a possible acquisition target for the likes of Siemens (OTCPK:SIEGY), ABB (ABB) or Vishay (VSH).

Even under a catastrophic assumption that Payton loses 10% market share of new design wins every year (meaning going from its current 25% to 15% market share by 2025), its revenues for 2018-2021 will likely be barely affected due to the time lag between previous design wins and revenues.

Even assuming the above 10% market share loss, we estimate that by 2025 Payton would still generate $375M (15% X $2,500M) in revenues.

Payton's Backlog

Payton is cashing in on Electric Vehicle growth. Since 2016, its EBIT has grown 57%, and the backlog suggests that the best is definitely still ahead.

K USD	2015A	2016A	2017A	2018E Conservative	2018 assumptions
Backlogs as of year start	10,378	11,010	10,681	**16,796**	As of Mar 12th, 2018, the company reported a backlog of $21.9M
Revenues	27,372	32,354	33,043	47,100	Company stated it had already realized $5M of 31.12.17 backlog by 12.3.18 and will realize additional $20M of 12.3.2018 backlog by 2018 end. On top of this $25M backlog, we assume that Payton can generate $22M of revenues during 2018 like it did in '16 (Conservative assumption, given the growth trajectory).
COGS	-17,247	-20,191	-20,064	-28,600	
GP	10,125	12,163	12,979	18,500	
% GP	37.0%	37.6%	39.3%	39.3%	No gross margin improvements despite the upward trend seen in '16 and '17 and much favorable USD/ILS rate (90% of the salaries are in ILS which depreciated ~4% since the start of 2018)
R&D	-949	-1,012	-1,240	-1,400	
S&M	-2,149	-2,254	-2,269	-2,800	
G&A	-2,959	-3,101	-3,075	-3,373	
Other	6	-633	4	0	
EBIT	4,074	5,163	6,399	10,927	
%EBIT	14.9%	16.0%	19.4%	23.2%	
Interest (expense) gains	1	141	314	1	No interest rate gain assumed despite $24M net cash and rising interest rates
Net Profit	3,263	4,179	5,419	8,749	
% Net Profit	11.9%	12.9%	16.4%	20.6%	

Source: Payton Planar 2017 annual report

The key takeaways from the P&L:

- 20% revenues growth from 2015 to 2017.
- Lean and mean operations which yield sound profit margins despite modest revenues.
- Operating leverage kicks in as EBIT grew 57%
- Backlog doubled during 2018 vs. 2017 indicating the tsunami of EV cars hitting the roads in 2018 and Q1/19 (backlogs numbers go only 1-year forward, given the EV growth rates stated above we believe it's the tip of the iceberg for 2019 onwards).
- With conservative costs assumptions, based on the Mar '18 backlogs numbers, it seems that 2018 EBIT can grow 50% over 2017.
- Note that 90% of the salaries costs are in NIS, which depreciated 5% against the USD since 1.1.2018. The 2018 forecast does not take that into account, and the upside could be an extra $1.5M to the annual EBIT.

Valuation is extremely compelling at P/E of 9 and EV/FCF of 7

Payton Planar's valuation appears very compelling at a P/E of 9x and an EV/FCF of 7x. The market cap is around 68M Euro ($80M), inferring a 2017 P/E of 14 and forward 2018 P/E of 9. Similar companies are traded at a 20x 2018 forward P/E (see POWI comparison below).

Payton also does not carry any debt, and has $24M in cash and short-term deposits as of 2017 year-end. We calculate the EV as:

EV = Market Value - Cash & ST Deposits = $80m - $24m = $56m

It's worth noting that Payton Planar owns a factory not far from Tel Aviv, carried at a book value of ~$10m. Approximately $5M is attributed to the land in Ness Ziona (20 minutes by car from Tel Aviv) that was bought for $5M in 2010. Since then land and real-estate prices in that area went up 40-50%.





Payton's factory in Israel (recall it also works with sub-contractors in China)

Source: Author photo

Payton Planar Magnetics Ltd.

Consolidated Statements of Financial Position as at December 31

	Note	2017 $ thousands	2016 $ thousands
Current assets			
Cash and cash equivalents	4	5,089	8,150
Short-term deposits	5	19,359	12,051
Trade accounts receivable	6	6,545	7,793
Other accounts receivable	6	406	554
Inventory	7	3,647	3,668
Total current assets		35,046	32,216
Non-current assets			
Fixed assets	8	11,641	11,985
Intangible assets	9	22	44
Deferred taxes	17	3	39
Total non-current assets		11,666	12,068
Total assets		46,712	44,284

	Note	2017 $ thousands	2016 $ thousands
Liabilities and equity			
Current liabilities			
Trade payables		3,092	3,738
Other payables	10	1,478	1,425
Current tax liability		926	676
Employee benefits	11	457	412
Total current liabilities		5,953	6,251
Non-current liabilities			
Employee benefits	11	514	359
Deferred tax liabilities	17	767	611
Total non-current liabilities		1,281	970
Total liabilities		7,234	7,221
Equity			
Share capital	15	4,836	4,836
Share premium		8,993	8,993
Retained earnings		25,649	23,234
Total equity		39,478	37,063
Total liabilities and equity		46,712	44,284

Valuation Conclusion

Payton Planar is a bargain, 30% of its market cap is cash. 2017 EV/FCF of 11 and 2018 P/E of 9 (7 excluding cash)

Payton is traded at a very low valuation - both on absolute valuation metrics and also when comparing Payton to Power Integrations, Inc., a "s*upplier of high-performance electronic components used in high-voltage power-conversion systems*" :

	2017 P/E	2017 EV*/FCF	2018 P/E	2018 EV/FCF
Payton Planar	**14**	**11**	**9**	**7**
Power Integrations	**28**	**22**	**26**	**22**

Source: POWI - Yahoo Finance, Analysts Estimates for 2018. Payton's EV includes just the net cash and excludes the land and the factory.

The valuation looks even more appealing considering Payton's promising secular growth, as increasing numbers of EV cars hit the road for the coming five years.

A hint that management is also very optimistic can be deduced from its comments in Payton Planar's 2016 and 2017 reports. First, looking at 2016:

E. Global Environment and External factors effect on the Group's activity

Nowadays market fluctuations are very rapid and unpredictable, therefore 2017 trend is very hard to foresee. The economy in Europe seems to keep slowing down; however, the U.S. economy is catching up.
The challenge in this global economy is to catch up increasing demands, raise productivity, address and develop new markets and to expand the Group's core business.

2017's report, when discussing 2018, is far more optimistic, and focuses on the challenge to meet demand and not the demand itself.

E. Global Environment and External factors effect on the Group's activity

The Group expects the market trend for 2018 to reflect the increase in the global economy and increasing demands. In order to successfully follow its potential, Payton will aim its efforts to increase its production capabilities as well as automating production lines.

Bear in mind that every word carries legal implication, especially given the strict Israeli law that equips minor shareholders with powerful tools to sue a public company (and its controlling shareholders as well) for misleading statements.

I opine that company management likely carefully considered and discussed the phrasing change.

Payton pays a regular dividend, in each of the last three years it paid a ~$3M dividend (5% yield on the current price) and has +$20M available for distribution of buybacks.

Recent Investor Interest in Parent Company Payton Industries

Sophisticated Israeli investors and hedge funds have bought Payton stock in Israel, which now trades at 30% premium compared to the Euronext stock.

Payton Industries is an envelope firm, meaning all of its business is the 66.2% stake it has in Payton Planar. Payton Industries stock is traded on the Tel Aviv Stock Exchange (PAYT:TASE), and since the beginning of 2017 the stock has enjoyed massive purchases by Israeli hedge funds. They have been willing to pay up to a 30% premium above the Euronext stock due to tax and currency exposure considerations.

Here is a graph of TASE stock (blue) vs. the Euronext stock (black) for the last 2 years:



Recently the premium gap widened to more than 30%

Payton Planar-Euronext Stock Price (Euro)	Mkt Cap (M Euro)	Mkt Cap (M ILS*)	Implied market cap (M ILS) for the Israeli parent company - Payton Ind. that holds 66.2% of Payton Planar	Actual market cap (M ILS) of Payton Ind. As trading in Tel Aviv Stock Exchange (TASE)	**Premium of the TASE stock compared to the Euronext stock**
3.76	67	288	191	251.6	**32%**

*EUR/ILS = 4.3

Bottom Line

The Bottom Line - Payton Planar appears to be a compelling investment opportunity, especially at its current price.

Investing in Payton embodies the risks of a small vendor that is highly dependent on 5-10 OEMs and Tier-1 customers, as well as uncertainties regarding whether Payton will be able to maintain its position in the 5+ year time frame.

Payton Planar's market cap includes 30% cash + ST Investments, and another 10% in land and factory. I expect EBIT to grow substantially, given doubled backlog and near-guaranteed revenues stream for the coming 3 years from the current design wins.

Taking a longer-term perspective, Payton's current valuation (mkt cap $80M, EV $56M for the Euronext stock which is traded at 30% discount compared to the Israeli one), together with the EV explosion, leaves a wide margin of safety.

Payton Planar appears to be a hidden gem; we have a significant long position.

I would like to thank Colibri Fund (long-short equity hedge fund, specializing in Israeli stock market) for their comments and contribution to the research.

This article was written by



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