

## Capital Goods - Engineering

## LPKF Laser &amp; Electronics

- Technology breakthrough -

Closing price: €11.25

(05 October 2010)

- ◆ **The company's LDS technology is an innovative process in the production of 3D-MIDs (three dimensional moulded interconnect devices). 3D-MIDs are expected to increasingly substitute conventional printed circuit boards. The LDS technology has made a breakthrough in the mass production of smart phone antennas. Due to several advantages over traditional processes, the LDS technology is predicted to become the standard method in the mass production of mobile phone antennas.**
- ◆ **For 2010F we estimate revenues to grow by 43.4% YoY which is ahead of management's guidance of 34.1% YoY. For 2011F and 2012F, we forecast top-line growth of 12.0% YoY and 12.5% YoY. EPS should rise by 24.6% YoY in 2011F and by 16.0% YoY in 2012F, we estimate.**
- ◆ **We initiate coverage of LPKF with Strong Buy on significant upside and a TP of €14.60. Our valuation is based on a DCF model and a peer group analysis. The main risk is a slower than estimated adoption of the LDS technology.**

Key ratios (€m)	2009 Actual	2010F BHF-BANK	2010F Consensus*	2011F BHF-BANK	2012F BHF-BANK
Sales	50.7	72.7	71.2	81.4	91.6
YoY	11.7%	43.4%	44.1%	12.0%	12.5%
EBITDA	9.9	17.1	17.5	20.6	23.7
EBITDA margin	19.4%	23.5%	24.5%	25.4%	25.9%
EBIT	7.0	13.1	13.8	16.2	18.7
EBIT margin	13.7%	18.0%	19.4%	20.0%	20.5%
Net income (rep.)	4.7	9.1	9.6	11.3	13.1
Net income (adj.)	4.7	8.9	n.a.	11.1	12.9
EPS (rep.) (€)	0.43	0.82	0.88	1.02	1.18
EPS (adj.) (€)	0.43	0.81	n.a.	1.01	1.17
Dividend per share (€)	0.20	0.33	0.33	0.41	0.48
Free cash flow	7.8	2.1	6.7	7.4	8.5
Net debt (+) / net cash (-)	-6.7	-6.4	n.a.	-9.9	-13.6
EV/Sales	1.6	1.6	1.6	1.4	1.2
EV/EBITDA	8.4	7.0	6.7	5.6	4.7
EV/EBIT	11.9	9.1	8.5	7.1	6.0
PER	18.4	13.7	12.7	11.0	9.5
Dividend yield	2.5%	2.9%	3.0%	3.6%	4.3%

\*Bloomberg Finance LP

Source: Company data, BHF-BANK estimates

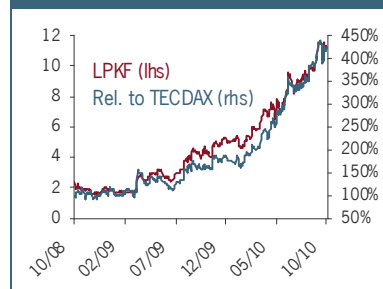
## Strong Buy

Initiating coverage

Target price: €14.60

Main trigger:  
Valuation

## Share price performance



Source: Datastream, BHF-BANK

## Share data

Market cap. (€m)	122
Free float (%)	62.9
Daily volume Ø ('000)	28
Reuters Code	LPKG.DE
Bloomberg Code	LPK GY
Index	Prime

Source: Datastream, BHF-BANK

## Performance (%)

	1 M	6 M	12 M
Absolute	5.5	64.9	181.1
Relative	4.6	72.3	177.0

Source: Datastream, BHF-BANK

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# Summary

We initiate LPKF with a Strong Buy rating and a target price of €14.60. Our calculation is derived from the equal weighting of a DCF analysis and a peer group comparison. Our DCF model implies a fair value for LPKF of €15.20. The stock currently trades at a discount to its peer group of 21% as measured by EV/EBITDA, 22% by EV/EBIT and 29% by PER. Our target price of €14.60 implies upside of 30%.

LPKF's patent-registered LDS (Laser-Direct-Structuring) technology is an innovative process in the production of injected three dimensional moulded thermoplastics with integrated circuit traces (3D-MIDs). As 3D-MIDs unify electronic and mechanical functions on a single component, the number of parts used and assembly steps can be reduced. These result in lower production costs per unit. 3D-MIDs offer more design flexibility which in combination with less parts used reduce the weight and fitting space required by the end product. Thanks to their advantages in efficiency, environmental compatibility and design flexibility are predicted to increasingly substitute conventional printed circuit boards.

Industry experts (e.g. Molex, Tyco) claim that LDS is superior to traditional processes. The LDS method enables high-resolution CAD artwork to be directly transferred to a part manufactured using conventional injection-moulding technology and makes highly complex geometrical structures and very high precisions possible which cannot be achieved with traditional processes. Furthermore, LDS is characterized by high degrees of flexibility as the technology is not tied to product-specific tools. This enables rapid changes of the circuit layout without costly and time-consuming tool changes.

In 2009, LPKF's LDS technology made a breakthrough in the mass production of smart phone antennas. Smart phone manufacturers are confronted with pricing pressure, shorter product cycles, consumer demand for miniaturization and trendy designs. At the same time the up-to-date devices must be equipped with a growing number of functions. Features like short, wideband and global connectivity require several antennas that must be available inside the ever smaller devices. Thanks to LDS technology, the footprint of antennas can be lowered considerably as it is directly incorporated onto the existing plastic part or even onto the mobile phone cover. Molex, a world leader in the production of mobile phone antennas, predicts LDS to become the standard process in the mass production of mobile phone antennas.

We view management's 2010F guidance of revenues of at least €68.0m and an EBIT margin of above 17.0% as too conservative and forecast sales of €72.7m (+43.4% YoY) and an EBIT margin of 18.0%. Due to ongoing demand for LDS systems, laser systems for plastic welding and for scribing thin-film solar panels, we estimate revenues to grow by 12.0% YoY in 2011 and by 12.5% YoY in 2012. Thanks to a favorable product mix, economies of scale and higher production efficiency, we estimate EBIT margins to rise to 20.0% and 20.5% in 2011 and 2012, respectively. We expect EPS growth of 90.1% YoY in 2010F, 24.6% YoY in 2011 and 16.0% YoY in 2012.

LPKF has a sound balance sheet, characterized by an equity ratio of above 60% and an estimated net cash cushion of €6.4m at the end of 2010F. Given the forecast rise in earnings, good working capital management and moderate capex requirements, we expect FCFs to rise and thereby the company's net cash position to increase in the upcoming years. As we believe management will stick to a stable pay-out ratio, we predict an increase in dividend to €0.33 per share for 2010F, to €0.41 for 2011F and to €0.48 for 2012F, up from €0.20 in 2009.

# Valuation & recommendation

The valuation of LPKF is based on a discounted cash flow model and a peer group comparison. Our target price of €14.60 per share derives from the average amount of the two valuation approaches. On the basis of our target price and the closing price on 5 October 2010, we see an upside potential of 30%. We initiate coverage with a Strong Buy rating on significant upside of more than 20%.

## DCF model indicates a fair value of €15.20.

We value LPKF on the basis of a three-phase DCF model. The detailed planning phase (phase I) comprises the years 2011F and 2012F and is based on our estimates for the P&L accounts, cash flow statements and balance sheets in these business years. In phase II, which is from 2013F to 2020F, we anticipate sales to grow until 2014F. After that, we project sales growth to remain positive but fading to our terminal growth rate. Beyond the year 2020F (phase III), we expect a terminal growth rate for free cash flow of 2.0% and a sustainable EBIT margin of 14.5%. According to our estimates, the average annual growth rate is 7.9% between 2011F and 2020F. We assume for the EBIT margin that it will reach its peak level in 2014F and will then fall successively to lower levels.

The free cash flows in our model are discounted by WACC (weighted average cost of capital) of 9.0%. Our WACC calculation is based on a risk-free interest rate of 4.0% and a market risk premium of 5.0%. The past few years have shown that LPKF's business model is less cyclical than that of other high-tech engineering companies. However, to be on the conservative side, we use a beta of 1.0x. This leads to equity costs of 9.0% and costs of debt after taxes of 4.2%.

Fig 1 DCF model

(€m)	2011F	2012F	2013F	2014F	2015F	2016F	2017F	2018F	2019F	2020	Terminal Value
<b>Sales</b>	<b>81.4</b>	<b>91.6</b>	<b>103.5</b>	<b>117.5</b>	<b>129.2</b>	<b>139.6</b>	<b>147.9</b>	<b>153.9</b>	<b>158.5</b>	<b>161.6</b>	
YoY	12.0%	12.5%	13.0%	13.5%	10.0%	8.0%	6.0%	4.0%	3.0%	2.0%	
<b>EBIT</b>	<b>16.2</b>	<b>18.7</b>	<b>21.7</b>	<b>25.3</b>	<b>25.8</b>	<b>26.5</b>	<b>26.6</b>	<b>26.2</b>	<b>25.4</b>	<b>23.4</b>	
EBIT margin	20.0%	20.5%	21.0%	21.5%	20.0%	19.0%	18.0%	17.0%	16.0%	14.5%	
Tax	4.8	5.6	6.5	7.6	7.7	7.9	8.0	7.8	7.6	7.0	
Adjusted tax rate	29.8%	29.9%	29.9%	29.9%	29.9%	29.9%	29.9%	29.9%	29.9%	29.9%	
<b>NOPAT</b>	<b>11.4</b>	<b>13.1</b>	<b>15.2</b>	<b>17.7</b>	<b>18.1</b>	<b>18.6</b>	<b>18.7</b>	<b>18.3</b>	<b>17.8</b>	<b>16.4</b>	
Depreciation and amortization	4.4	5.0	6.0	6.8	7.8	8.4	9.2	9.5	10.3	10.5	
Depreciation / sales	5.4%	5.5%	5.8%	5.8%	6.0%	6.0%	6.2%	6.2%	6.5%	6.5%	
<b>Net operating cash flow</b>	<b>15.8</b>	<b>18.1</b>	<b>21.2</b>	<b>24.5</b>	<b>25.9</b>	<b>27.0</b>	<b>27.8</b>	<b>27.9</b>	<b>28.1</b>	<b>26.9</b>	
Change in WC	3.2	3.8	4.2	4.8	4.9	5.3	5.6	5.5	5.8	1.4	
Change in WC / sales	3.9%	4.1%	4.1%	4.1%	3.8%	3.8%	3.8%	3.6%	3.6%	0.9%	
Capex	5.3	6.0	6.7	7.6	8.4	9.1	9.6	10.0	10.3	10.5	
Capex / sales	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	
<b>Free cash flow</b>	<b>7.3</b>	<b>8.4</b>	<b>10.3</b>	<b>12.1</b>	<b>12.6</b>	<b>12.6</b>	<b>12.6</b>	<b>12.4</b>	<b>12.0</b>	<b>15.0</b>	<b>214.5</b>
WACC	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%
<b>Discounted free cash flows</b>	<b>6.7</b>	<b>7.1</b>	<b>7.9</b>	<b>8.6</b>	<b>8.2</b>	<b>7.5</b>	<b>6.9</b>	<b>6.2</b>	<b>5.5</b>	<b>6.3</b>	<b>90.6</b>
Enterprise value	161.6										
Adjusted net cash (debt)	6.4										
Minorities	3.4										
<b>Net present value</b>	<b>164.6</b>										
Number of shares outstanding (m)	10.9										
<b>Net present value per share (€)</b>	<b>15.20</b>										

Source: BHF-BANK estimates

## Multiple analysis results in a fair value of €14.00

To adequately value LPKF, we also use a peer group comparison which includes companies out of the laser industry for industrial material processing (Coherent, Cymer, IPG Photonics, Jenoptik, Newport, Rofin-Sinar) and other German-based engineering companies with analogical market positions and balance sheets (AIXTRON, Mühlbauer, Pfeiffer Vacuum).

We are basing our multiple approach on EV/EBITDA, EV/EBIT and PER for 2011F. Based on the consensus forecasts and closing prices on 5 October 2010, the following key ratios can be derived for the peers of LPKF.

**Fig 2 Peer group comparison**

Company	Ccy	Closing price as of 05/10/10	EV/EBITDA	2011F EV/EBIT	PER
AIXTRON	€	20.91	5.7	6.2	10.9
Coherent	US\$	40.71	5.8	7.5	17.2
Cymer	US\$	37.48	2.8	3.2	12.5
IPG Photonics	US\$	23.62	11.0	14.2	22.7
Jenoptik	€	4.32	6.2	11.2	15.4
Mühlbauer	€	26.25	6.9	8.9	14.0
Newport	US\$	11.65	5.8	8.3	10.9
Pfeiffer Vacuum	€	68.34	10.2	11.5	16.8
Rofin-Sinar	US\$	26.15	9.1	11.2	19.4
<b>Mean Peers</b>			<b>7.0</b>	<b>9.1</b>	<b>15.5</b>
<b>LPKF</b>	<b>€</b>	<b>11.25</b>	<b>5.6</b>	<b>7.1</b>	<b>11.0</b>
<b>Discount/(premium)</b>			<b>-20.7%</b>	<b>-22.2%</b>	<b>-29.1%</b>
<b>Fair Value LPKF</b>	<b>€</b>		<b>13.58</b>	<b>13.75</b>	<b>14.52</b>
<b>Average fair values</b>	<b>€</b>	<b>14.00</b>			

Source: Estimates based on Bloomberg Finance LP, BHF-BANK estimates

On a 2011F PER of 11.0x, LPKF trades at a 29.1% discount to its sector average of 15.5x; the EV/EBIT multiple of 7.1x and EV/EBITDA multiple of 5.6x are at smaller but still substantial discounts of 22.2% and 20.7%, respectively. With 2011F EPS growth of 24.6% at LPKF compared with 22.2% for the peer group, we see no reason for this discount.

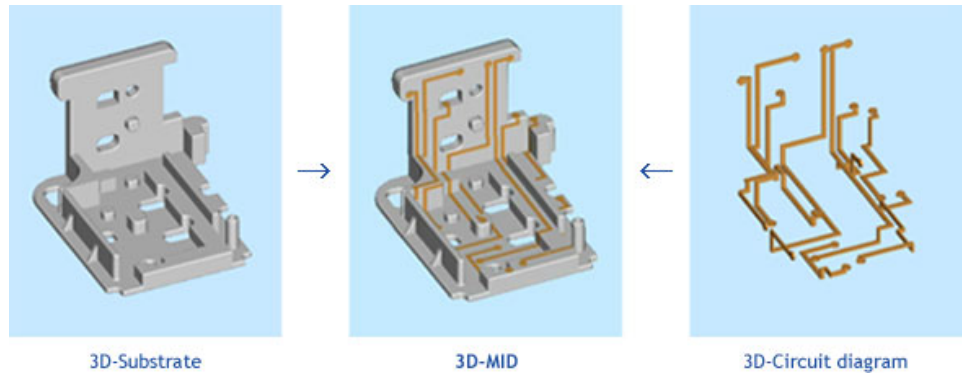
According to our peer group comparison, LPKF is presently trading with a significant discount to its peers which we believe is not justified. Based on our estimates, the peer group comparison points to a target price of €14.00 per share.

# 3D-MIDs: Substitute for PCBs

## What are 3D-MIDs?

3D-MIDs, or three-dimensional moulded interconnect devices, are injected three dimensional moulded thermoplastics parts with integrated circuit traces.

**Fig 3 3D-MID**



Source: 3D-MID e.V.

As 3D-MIDs unify electronic and mechanical functions on a single component, 3D-MIDs lower the number of parts used (integration of antennas, heated plates directly on the thermoplastic part), and thus, reduce the number of assembly steps. Both of these factors result in lower production costs per unit. Moreover, due to their three dimensional layout, 3D-MIDs offer more flexibility in design which in combination with less parts used reduce the weight and fitting space of the end product.

Two decades ago, 3D-MIDs were expected to revolutionize the electronics industry by increasingly substituting traditional printed circuit boards (PCBs) which, on the one hand, are very robust and reliable but, on other hand, only applicable as two-dimensional parts which in many applications produce constraints in the design of the electronic device. However, due to several factors such as the very complex manufacturing technology in those days, high development costs and the absence of a broad industry network, the electronics industry did not take the risk to replace conventional technologies. In short, 3D-MIDs failed to become a commodity. Nevertheless, due to the ever growing need for miniaturization, new functions and tighter electronic packaging, new processes, materials and cost-efficient 3D-MID production methods like LDS have emerged and improved in the past few years. Given its advantages in terms of cost efficiency, environmental compatibility and design flexibility, 3D-MIDs are expected to increasingly substitute conventional printed circuit boards.

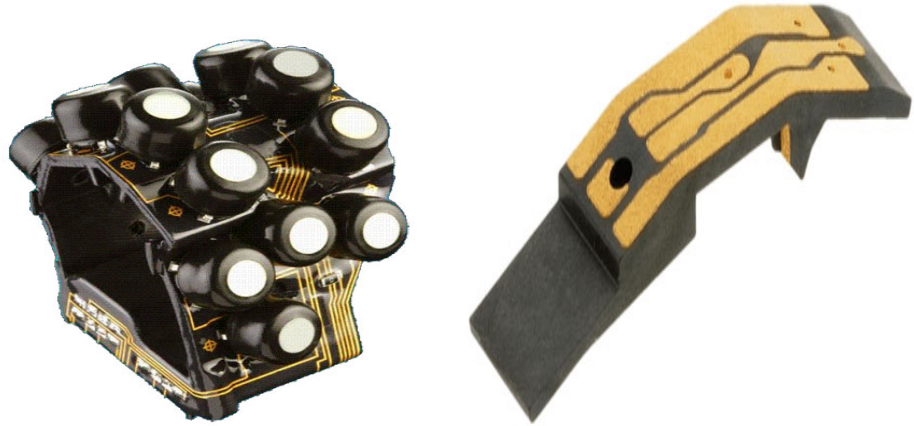
**Fig 4 Key advantages of the MID technology vs. conventional methods**

Design flexibility	Economization	Environmental compatibility
Integration electronics-mechanics-optics	Less number of parts	Reduction of material mix
High shape flexibility	Shorter process chains	Recycling of materials
Miniaturization	Reduced use of materials	Decreased use of materials
New functions	Increased reliability	Uncritical disposal

Source: 3D-MID e.V., BHF-BANK

Today 3D-MIDs are increasingly used in the automotive (e.g. steering wheels), telecommunications (e.g. smart phone antennas) and medical device (e.g. hearing aids) industries. The figure below shows examples for 3D-MID serial applications which have been manufactured using LPKF's Laser-Direct-Structuring Technology (LDS).

**Fig 5 3D-circuit board and microphone module**



Source: 3D-MID e.V., BHF-BANK

## 3D-MID production processes

Presently, there are four different methods which are used in the serial production of 3D-MIDs, each with its specific advantages and disadvantages:

- Two-component injection moulding (2-shot moulding)
- Hot stamping
- Insert moulding
- Laser direct structuring (additive and subtractive)

2-shot moulding and hot stamping have so far been the most widely used 3D-MID manufacturing variants whereas LPKF's LDS method is a relatively new technology which recently has gained lots of attention. Industry experts as well as world leading 3D-MID antenna manufacturers such as Molex and Tyco Electronics claim that the LDS technology has several advantages compared to conventional processes. The LDS method enables high-resolution CAD artwork to be directly transferred to a part manufactured using conventional injection-moulding technology and makes highly complex geometrical structures and very high precisions possible which cannot be achieved with traditional processes. Furthermore, LDS is characterized by high degrees of flexibility as the technology is not tied to product specific tools. This enables rapid changes of the circuit layout without costly and time-consuming tool changes.

Firstly, 2-shot-moulding is characterized by long development times and high initial costs for products-specific tools. Moreover, in the case of a design change of the device, costly and time-consuming tooling modifications are required. Economically, all these factors constrain its use to large volume production while at the same time it clearly limits its prototyping ability shortly before serial production. Additionally, the trend towards further miniaturization of the circuits on 3D-MID parts involves rising tooling-up

time and expense. Secondly, even though tooling costs for hot stamping are lower than for 2-shot moulding, this process can mainly be used for larger parts where very high precision is not such a strong requirement. The LDS method meets the growing need for miniaturization as it allows for a very high precision which cannot be achieved with conventional processes. For instance, the LDS technology allows for ultra fine circuitry, i.e. for a width of less than 100 microns compared to 400 and 1000 microns for 2-shot moulding and hot stamping, respectively Overall, with the two mature 2-shot-moulding and hot-stamping processes only a very limited number of serial applications of 3D-MID could be implemented in the market. Thirdly, compared to the more complex subtractive laser structuring, the LPKF-LDS process has a shorter process chain and shorter lead times.

## LPKF-LDS: a technology that revolutionizes the 3D-MID production process

Since 1997 LPKF is developing its LDS technology and introduced it to the market first in 2002. However, not until 7 years later, with the market launch of the company's Fusion3D laser system, the LDS technology has made its breakthrough. Compared to the previous generation, the "Fusion3D" laser system finally made the production of 3D-MIDs economical as it achieves a 3-5 times higher throughput whereas the pricing of the Fusion3D only doubled, clearly lowering the cost of ownership for the customer.

The main steps of the LDS process, i.e. injection moulding, laser activation and metallization, are displayed in the figure below.

**Fig 6 The LPKF-LDS process**



Source: Company data, BHF-BANK

1) Injection Moulding: Via 1-shot injection moulding, a laser-activatable thermoplastic with a special additive is processed into a component part. To guarantee special material supply suitable for the LDS process, the company has license contracts with some well-known polymer producers such as Lanxess, Evonik, Mitsubishi, DSM, Ticona, Chemex, SABIC and BASF.

2) Due to the laser energy, the additives in the plastic compound are activated. Next to activation, the laser beam creates a microscopically rough surface on which the copper is firmly anchored during the next step.

3) Metallization: Following a cleaning step to remove laser debris, an additive build-up of tracks takes place via electroless copper baths finally followed by plating with current-free nickel and flash gold.

## Smart phones with LDS-antennas: the first cycle

Producers of mobile phones/smart phones (=mobile devices with PC-like features) are confronted with pricing pressure and consumers demand for smaller, lighter and stylish looking designs. At the same time, the up-to-date devices must be equipped with a growing number of functions as for instance media features (music players, high-quality cameras) and multimodal wireless technologies (3G, GPS, GPRS, Wi-Fi/WLAN, Bluetooth). Features such as short, wideband and global connectivity require several antennas which next to other (innovative) functions must be placed inside the shrinking devices. Thanks to LDS technology, the footprint of antennas can be considerably reduced as it is directly incorporated onto the mobile phone cover. Overall, the LDS process is an innovative process which accounts for mobile phone/smart phone manufacturers' needs for cost reduction due to aggressive pricing practices, miniaturization, flexibility in design and shorter product life cycles.

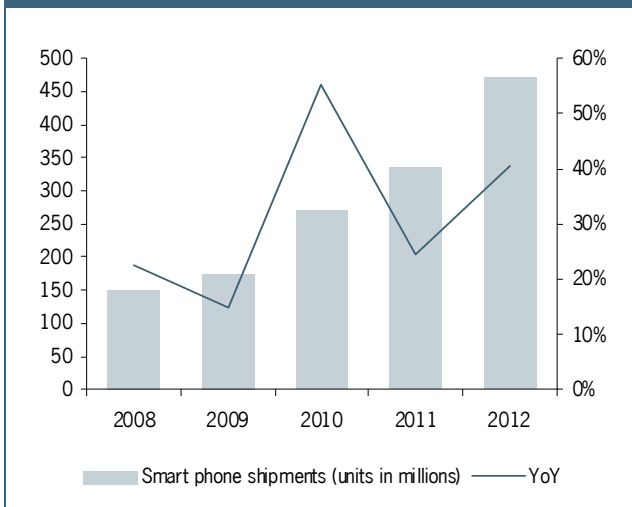
In 2009, the LDS technology has made its breakthrough in the mass production of smart phone antennas. In September 2010 Molex, a world leader in the design, development and manufacture of custom mobile phone antennas announced the manufacturing of the 100 millionth antenna using LDS technology since the start of LDS antenna production in summer 2008. In future, Molex predicts LDS to become the standard process in the mass production of mobile phone antennas. Although we share this view, we believe that at first LPKF's LDS technology will predominately be used in the manufacturing of antennas for higher-end smart phones such as the well-known iPhone or BlackBerry as space reduction is of even greater importance than for conventional mobile phones. According to management, currently approximately 150m mobile devices, corresponding to an estimated penetration of c15%, are equipped with LDS antennas.

## Smart phone market set for significant volume growth in the next few years

With regard to future market opportunities for the LDS technology, the smart phone market offers high potential. In 2009 smart phone volumes experienced 15% growth over the previous year despite the economic recession and thus, clearly outperformed the mobile phone market which was down by 5% YoY. In future, market researcher IDC predicts smart phones to be the fastest growing portion of the mobile phone market. The transition from voice-only (including SMS) mobile phones to smart phones is driven by several key factors: 1) availability of cheaper and more powerful, iconic smart phones, 2) lower data service pricing, 3) increasing end-user demand for mobile data (email/instant/multimedia messaging, social networking, music/movies/games, browsing and searching the internet) and 4) faster wireless networks.

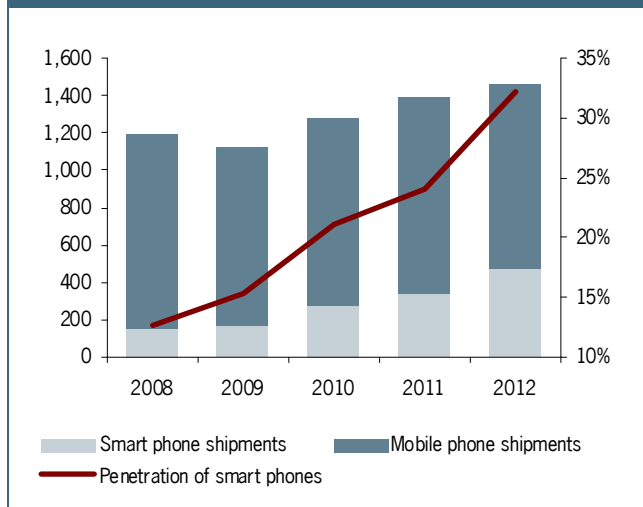
According to IDC forecasts, global smart phone unit shipments are predicted to expand from 174m in 2009 to 270m in 2010 (+55% YoY) and to 336m in 2011 (+25% YoY) while in 2012 volumes should exceed 470m (+40% YoY). Market researcher Gartner forecasts penetration of smart phones to reach 40% by 2013, up from the current rate of about 20%. These numbers are also underlined by Vodafone, one of the world's largest telecommunications companies, who expects smart phones to account for more than 70% of its total handset sales in 2013, up from 30% at present.

**Fig 7 Global smart phone shipments (2008-2012)**



Source: IDC, isuppli, BHF-BANK estimates

**Fig 8 Mobile phone and smart phone shipments (units in millions)**

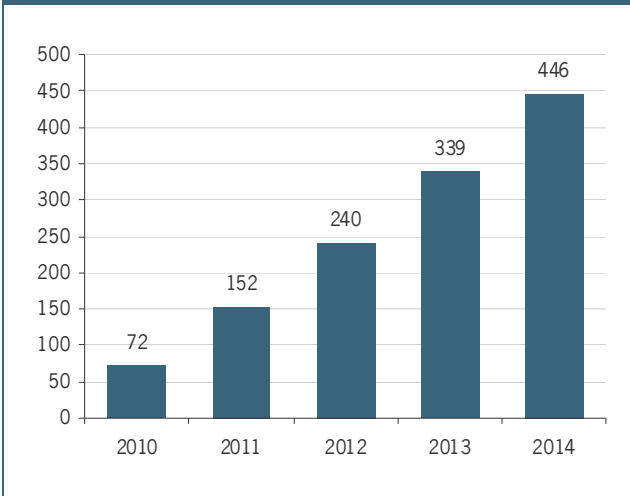


Source: IDC, isuppli, NOKIA, BHF-BANK estimates

The graphs below display a rough forecast for LDS systems (Fusion3D and MicroLine3D) as required in 2010-2014 in order to satisfy demand from smart phone antenna manufacturers. Our underlying assumptions include:

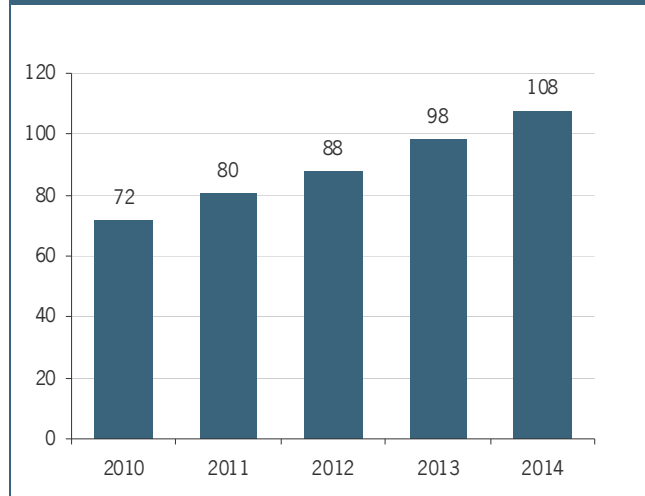
- Smart phone volume shipments by several market data providers (e.g. IDC)
- Penetration rates of LDS antennas in smart phones in 2010: 40%, 2011: 72%, 2012: 80%, 2013: 82%, 2014: 85%
- An average production time of 10 seconds per LDS antenna (note that the production time can vary considerably, for instance, depending on how many of the up to five antennas included in a smart phone are manufactured with the LDS process and depending on the used LDS system, i.e. Fusion3D or MicroLine3D )
- Yields of 70% in 2010, 75% in 2011, 78% in 2012, 81% in 2013 and 83% in 2014
- Running times of LDS system: 20 hours per day, 6 days a week. In summary, we estimate that 2.2m (2.5m) LDS antennas are produced per system and per year in 2010-2012 (2013-2014).
- A variable to account for the likely voluntary capacity overshoot of demand in the market, i.e. 0% in 2010, 5% in 2011, 10% in 2012, 15% in 2013 and 2014 each.
- We want to underline that our assumptions for LDS system demand in 2010-2014 do not include the adoption of the LDS technology in conventional mobile phones which we believe might be the case in future.

**Fig 9 Number of LDS systems required by the market (2010-2014)**



Source: BHF-BANK estimates

**Fig 10 Incremental number of LDS systems required by the market (2010-2014)**

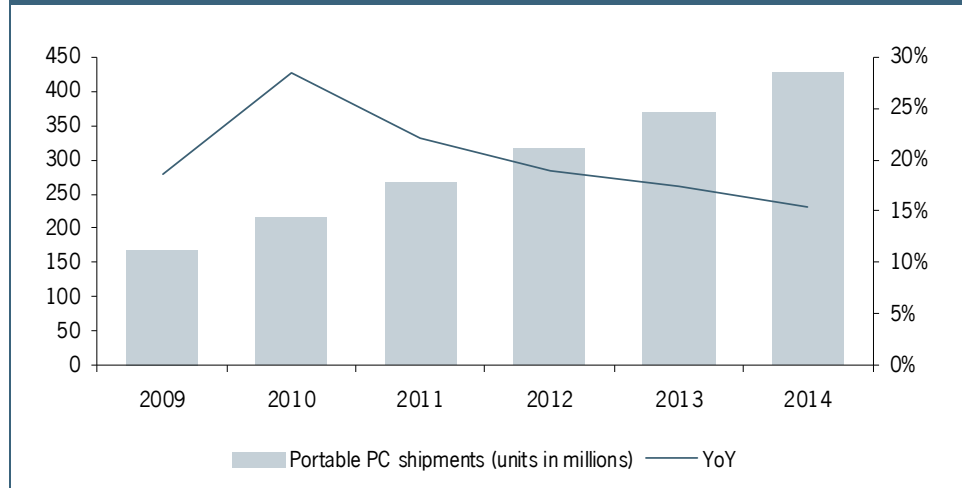


Source: BHF-BANK estimates

## LDS antennas in portable PCs: the second cycle

Besides to the antenna market for mobile phones, the antenna market for portable PCs, i.e. notebooks, netbooks and tablets, offers considerable potential for LPKF's LDS technology and is expected to become the next revenue growth driver. For the time being, the penetration of LDS antennas in portable PCs is negligible for two reasons. Firstly, as it was with the mobile phone industry, engineers in the portable PC sector must become aware of the LDS technology which typically is a time consuming process. Secondly, the current LDS system is mainly designed for the machining of small parts. However, LPKF plans the market launch of the second generation of LDS systems in 2H11. Compared to the current Fusion3D system, the next generation is not only characterized by higher throughput and shorter set-up times but it also allows a much easier handling of bigger parts such as notebook chassis. As the advantages of the LDS technology in the production of mobile phone antennas also apply to the manufacturing of notebook antennas, we see no reason why the LDS process should not be successful in this new application.

**Fig 11 Portable PC shipments (units in millions)**



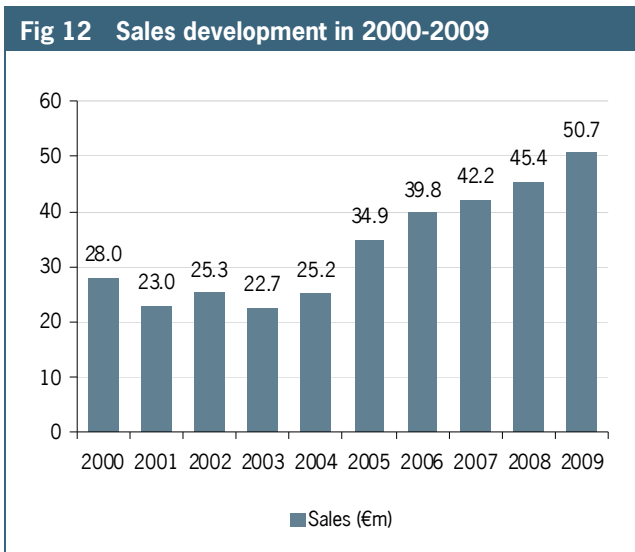
Source: IDC, BHF-BANK

# Company profile

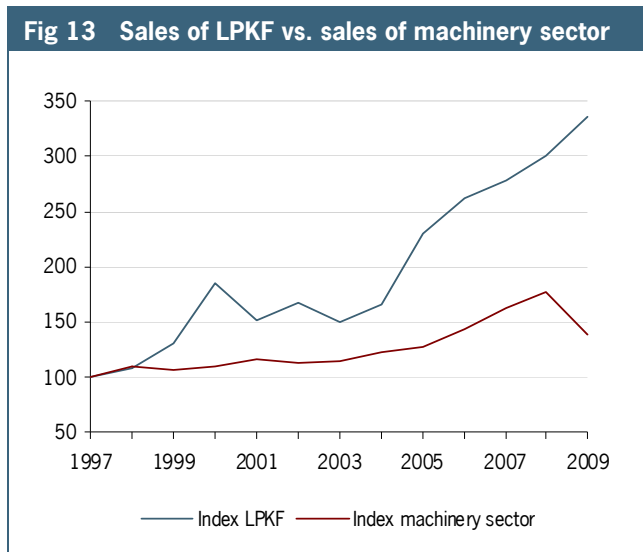
Founded in 1976, LPKF Laser & Electronics AG with its headquarters in Garbsen (near Hanover, Germany) develops, produces and sells systems for industrial material processing. The company's core competences are in laser technology & optics, control technology and precision drive technology. LPKF has a leading position in several niche markets for micro material processing using lasers with the strongest sales to the electronics, medical, automotive and photovoltaic industries. Manufacturing facilities are located in Germany and Slovenia. With additional sales & service centres in the US, France and China as well as a comprehensive distribution network, the company is present in 79 countries. LPKF has a headcount of 430 employees and is managed by Dr. Ingo Bretthauer (CEO), Kai Bentz (CFO) and Bernd Lange (CTO).

## Sales development

LPKF managed to achieve organic average annual sales growth of 6.8% in 2000-2009. For 2010F management targets revenues of €68.0m (vs. BHF-BANK estimate of €72.7m). The growth driver for this development was Cutting and Structuring Lasers unit which includes LDS systems.



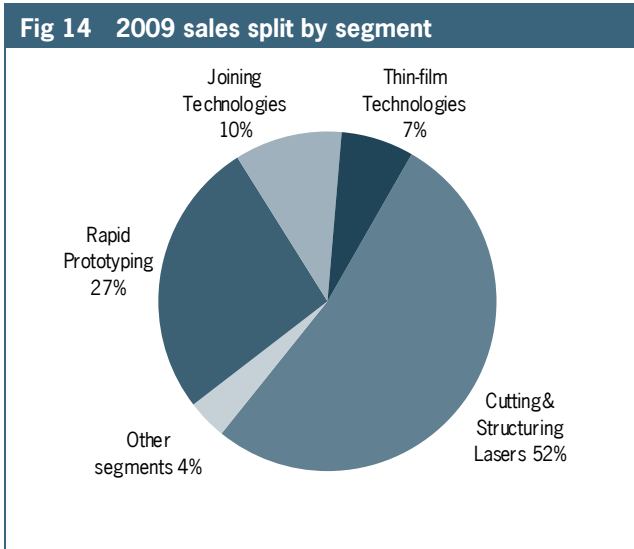
Source: Company data, BHF-BANK



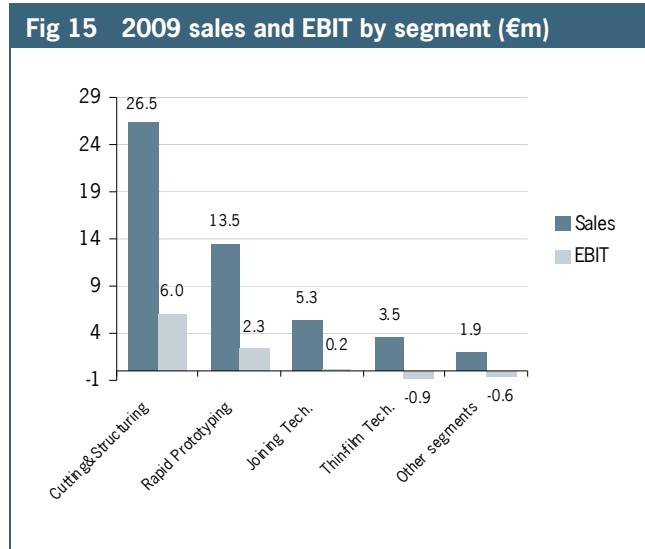
Source: VDMA, company data, BHF-BANK

# Segments

The product portfolio is divided into five subcategories: Cutting and Structuring Lasers, Rapid Prototyping, Joining Technologies, Thin-film Technologies and other segments.



Source: Company data, BHF-BANK



Source: Company data, BHF-BANK

## 1) Cutting and Structuring Lasers: the revenue driver

**Product portfolio:** The first business unit is divided into three sub-segments, i.e. LDS (Laser-Direct-Structuring), Stencils and PCB Processing/Depaneling.

- LDS: In this segment, LPKF offers laser systems for the production of three-dimensional moulded interconnect devices (please, also refer to chapter “3D-MID production processes”)

- The PCB Processing/Depaneling unit contains laser systems for cutting PCBs (printed circuit boards) and flexible circuit carriers. In future, PCBs and components will further decrease in size. At the same time, the density of components on PCBs will increase which in turn will cause highly sensitive components to be positioned towards the edges of the PCBs. Therefore, the depaneling of unassembled or assembled separate boards requires very high precision and cleanliness as well as minimal mechanical stress for the material which makes lasers superior to conventional tools such as saws, routers and punches.

- In the Stencils business, LPKF supplies laser cutting machines for the manufacturing of SMT screen printing stencils. Stencils are used to quickly and precisely apply solder paste on the surface of PCBs.

**Customers:** Typically, the clients come out of the electronics industry.

**Competition:** In the market for Stencils, LPKF holds a market share of c70%, mainly competing with TechSource (USA). In the field of PCB Processing/Depaneling, the company is rather a small supplier competing with HAN's (China), ESI (USA) and a number of smaller companies. Lastly, LPKF is the only supplier of LDS systems for the manufacturing of 3D-MIDs. Thus, competition only arises from alternative production technologies.

## 2) Rapid Prototyping: a stable business

**Product portfolio:** In this segment the company offers key equipment (e.g. machines, tools, applications, consumables) which allows customers to develop, produce and assemble PCBs in-house, both individual items for R&D projects and small series, almost without the use of chemicals. In-house PCB prototyping offers a series of benefits to customers such as shorter development times as, for instance, waiting on a prototype to return from an external manufacturer is skipped. Moreover, no critical data has to be given to a third party.

**Customers:** Main customers are R&D departments of industrial companies and public institutions, universities and schools. Given the customer structure, we consider this segment as low-cyclical.

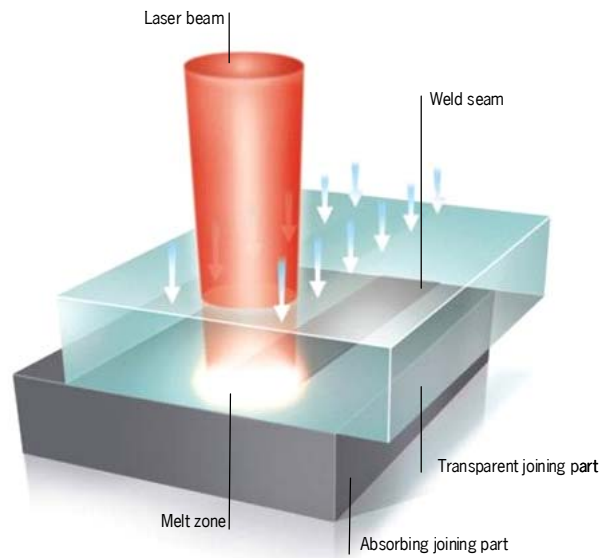
**Competition:** LPKF commands a world-leading position with an estimated market share of c70%. Other competitors are MITS Electronics (Japan), T-Tech (USA) and Everprecision (Taiwan).

## 3) Joining Technologies: laser plastic welding - a promising technology

**Product portfolio:** Includes standardized and customized laser systems for welding plastic components.

Laser plastic welding is a relatively new technology, being firstly used in industrial applications at the end of the nineties.

In laser welding of thermoplastics, more precisely referred to as laser transmission welding, transparent and absorbing parts are bonded together. In the transmission laser welding technique, a material transparent to the laser wavelength lies on top of an absorbent material. The laser beam penetrates through the transparent component and is converted to heat in the absorbing plastic. As a clamping tool presses together the parts to be joined during the process, heat is conducted from the absorbing to the transparent component, allowing both materials to melt and create a bond. Internal joining pressure is also generated through the local warming and thermal expansion. The internal and external joining pressures ensure strong welding of both parts.

**Fig 16 Laser welding concept**

Source: Company data, BHF-BANK

Laser technology offers a number of advantages over traditional joining techniques, i.e. ultrasonic and vibration welding, mirror and hot-gas welding, hot-melt technology and gluing. The benefits of laser welding include minor mechanical impact on the components, no surface damage, no extra rooms for drying of glued parts, no particulate development, highest visual quality joint line, no tool wear and tear as well as minor tool costs compared to ultrasonic and vibration welding. Over mirror and hot-gas welding, laser welding is characterized by minor thermal stressing of components, lower melt overflow, considerably shorter cycle times and lower machine and tool costs. Lastly, compared to the hot-melt technology and gluing, laser technology requires no additives, has higher quality and long-term stability as well as shorter cycle times.

Given these advantages, we believe that in future manufacturing industries will continue to convert traditional joining methods to laser-based joining technologies.

**Customers:** Next to the automotive supplier industry, the medical device sector is the largest end market.

**Competition:** LPKF is one of the top 3 manufacturers of laser systems for plastic welding. Main competitors are Swiss-based Leister, Bielomatik (Germany) and Branson (USA).

#### 4) Thin-film Technologies: weak market position

**Product portfolio:** This segment focuses on the sale of laser systems for scribing thin-film solar panels. Despite different thin-film technologies, the manufacturing processes relevant for laser tool suppliers are quite similar as shown in the table below. Moreover, in contrast to deposition tools which need to be optimized for the specific thin-film technology, laser scribing tools can be used in the same format by all three leading technologies. Between the successive coating processes, the thin-film panel undergoes the so-called scribing in which the actual cell structure is defined. The precision of this process is crucial for the ultimate efficiency and power output for the module. As precision is key to a successful scribing, laser tools are superior to other methods like mechanical or chemical treatment.

**Fig 17 Thin-film production line process stages**

Glass cleaning	Coating TCO	TCO etching	Coating absorber	Coating back contact	Laser/mechanical scribing	Laser edge ablation	Front glass lamination	Module testing & production
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Source: MANZ Automation, BHF-BANK

**Customers:** Solar cell manufacturers and turnkey suppliers

**Competition:** MANZ Automation is the undisputed market leader in laser scribing tools while LPKF only holds a rather small global market share. Other competitors include Oerlikon (Switzerland), Newport (USA), Rofin-Sinar (Germany) and InnoLas Systems (Germany).

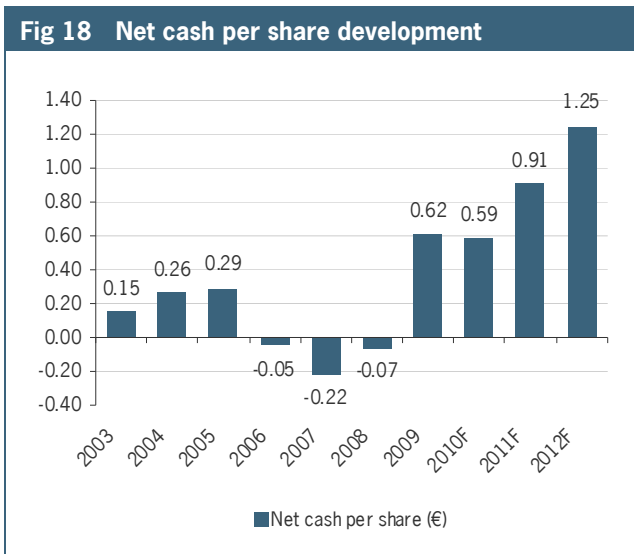
## Sound EBIT margins

In the past few years LPKF has succeeded in raising its EBIT margin from originally 5.7% in 2003 to 13.7% in 2009. Furthermore, given the success of its high-margin LDS tool, management guides for an outstanding EBIT margin of at least 17.0% in the current year (vs. BHF-BANK estimate of 18.0%), despite increasing staff and material costs. Several factors are responsible for this development:

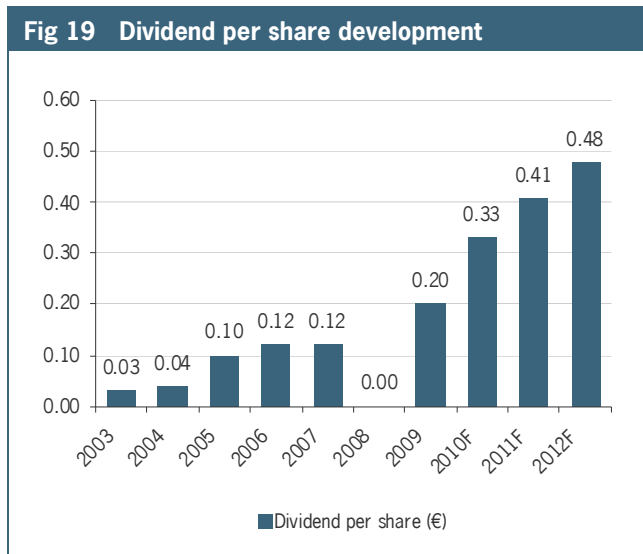
- The rising contribution to revenues from high-margin LDS systems.
- Economies of scale and strict cost management: Even though personnel expenses considerably increased in absolute terms, management managed to lower its share on sales.
- Optimization of the production process such as the centralization of production sites in Slovenia in 2006.
- As the only supplier of the LDS technology, the company has a certain pricing power for its product.
- Budgeting of R&D projects.
- Higher standardization of products.

## Healthy balance sheet and solid FCFs expected: dividend increase likely

LPKF has a very healthy balance sheet. At the end of 2Q10, the company had an equity ratio of 63% and a net cash cushion €6.9m/€0.64 per share even after dividend payments of €2.2m/€0.20 per share. On the back of an estimated earnings increase, good working capital management as well as moderate capex requirements, we expect a boost in free cash flows and thus, an increase of the company's net cash position in the upcoming years. As we expect management to stick to a stable pay-out ratio, we predict an increase in dividend to €0.33 per share for 2010F, to €0.41 for 2011F and to €0.48 for 2012F, up from €0.20 in 2009.



Source: Company data, BHF-BANK estimates



Source: Company data, BHF-BANK estimates

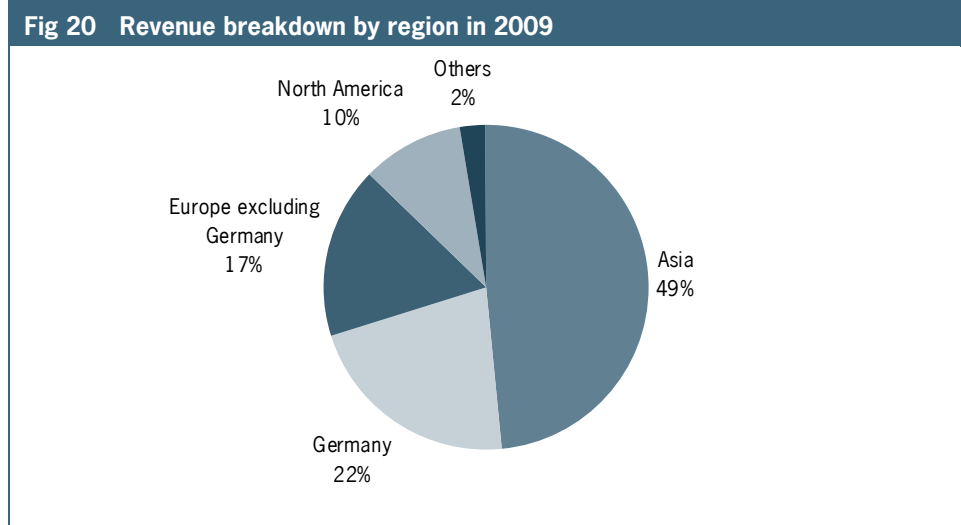
## R&D – the backbone of market leadership

In an ongoing effort to strengthen its current market position, to gain market share and to expand its product portfolio and thereby the potential number of applications, LPKF’s management dedicates a considerably amount of money to R&D, i.e. around 10% of sales which is above the ratio of other companies in our coverage. In 2009, the company employed 82 employees in the field of R&D (percentage of R&D employees versus total headcount: 21%).

The latest initiatives include the development of its own UV-laser source for its laser cutting systems MicroLine 1000S used for the depaneling of assembled PCBs. Previously, the laser source was supplied by third parties. As the laser source typically accounts for a significant cost fraction of the laser system (manufacturers of laser sources normally generate very healthy margins), the increased value-add reduced the selling price of the system significantly, now being in the price range of conventional sawing and milling machines. However, the laser is superior to conventional mechanical cutting machines as it allows for high precision and flexibility as well as cutting substrates without causing mechanical stress. Overall, by considerably lowering the cost of ownership for customers, LPKF’s MicroLine1000S laser systems has made a breakthrough underlined by a large order received in June 2010.

R&D work is also carried out on the next generation of LDS-systems which next to the production of antennas for mobile phones also allows for the cost-efficient production of notebook/netbooks/tablets antennas.

## FX exposure



Source: Company data, BHF-BANK

LPKF generates its lion's share of revenues in non-European countries. However, currency risks are relatively low as product sales are predominately billed in euro, i.e. 85-90%. FX risks mainly exist versus the US\$ and marginally against the Chinese Renminbi and the Yen. In a move to hedge against FX risks, the company in general hedges 50-80% of its budgeted revenues. Furthermore, larger orders are fully hedged.

# Forecasts

## Management's 2010F guidance too conservative

In our view, LPKF will be able to end 2010F successfully and increase its sales and earnings significantly. In the current year, we predict LPKF to post sales of €72.7m (+43.4% YoY) and an EBIT of €13.1m (EBIT margin: 18.0%) which is ahead of management's guidance, targeting for revenues of at least €68.0m and an EBIT of above €11.6m (EBIT margin: >17%). The company's 1H10 results, i.e. revenues of €36.5m and EBIT of €8.4m as well as the high order backlog of €23.9m at the end of 2Q10 underline our view that management's outlook is too conservative. Regarding segments, with the exception of the Thin-film Technologies unit, we expect all segments to contribute to YoY top-line growth with the strongest revenue increase clearly seen in the Cutting & Structuring Lasers unit.

## 2011F and 2012F: ... and the growth continues

For 2011F and 2012F we forecast revenues growth of 12.0% YoY and 12.5% YoY, respectively. In absolute terms, as already seen in the previous year, the main revenue driver will be the company's Cutting and Structuring Laser unit despite the already high basis. In this segment we believe demand will stem from two sources, namely LDS and PCB Processing/Depaneling. In our view, demand for LDS systems will be boosted by increasing penetration rates of LDS antennas in smart phones while at the time smart phone volumes itself are expected to rise. Moreover, we believe that with the market launch of the second generation LDS system, the LDS technology will also be adopted for the manufacturing of notebook antennas.

In the PCB Processing/Depaneling business unit, we anticipate good demand for the company's MicroLine1000S which thanks to a more attractive pricing of €0.15m is now competitive to traditional cutting tools. We expect the company to sell 40 MicroLine1000S tools in 2010F, corresponding to revenues of €6.0m and the company to ship 50 systems in 2011F (corresponding to revenues of €7.5m) and 70 systems in 2012F (corresponding to revenues of €10.5m).

On the back of the less cyclical end markets on the Rapid Prototyping business, we only forecast a slight revenue increase. For the Joining Technologies business unit, revenue growth should stem from rising conversion of traditional joining methods to laser-based joining technologies (for the advantages of laser-based joining technologies compared to traditional joining processes, please revert to chapter: "*Joining Technologies: laser plastic welding-a promising technology*"). Lastly, we anticipate a demand recovery from the depressed levels in LPKF's Thin-film Technologies unit.

We estimate LPKF to be successful in further raising its EBIT margins in the next two years, reaching 20.0% in 2011F and 20.5% in 2012F. Main factors for assumption include a favourable product mix, i.e. a high revenue share of the Cutting and Structuring Lasers unit, higher production efficiency and economies of scale.

The following table displays the revenues and EBIT performance by segment in since 2005 as well as our sales and EBIT forecast from 2010F to 2012F.

**Fig 21 Sales and EBIT by segments**

(€m)	2005	2006	2007	2008	2009	2010F	2011F	2012F
<b>Sales</b>								
Cutting and Structuring Lasers	16.4	20.3	17.5	15.7	26.5	46.4	51.0	57.3
Rapid Prototyping	10.5	12.7	15.3	15.0	13.5	14.0	14.3	15.0
Joining Technologies	1.7	3.2	3.6	5.8	5.3	7.5	8.3	10.5
Thin-film Technologies	0.0	0.0	3.7	6.9	3.5	2.5	5.5	6.5
Other segments	6.3	3.6	2.1	2.0	1.9	2.3	2.3	2.3
<b>Total</b>	<b>34.9</b>	<b>39.8</b>	<b>42.2</b>	<b>45.4</b>	<b>50.7</b>	<b>72.7</b>	<b>81.4</b>	<b>91.6</b>
<b>YoY</b>								
Cutting and Structuring Lasers	-	23.8%	-13.8%	-10.3%	68.8%	75.1%	10.0%	12.3%
Rapid Prototyping	-	21.0%	20.5%	-2.0%	-10.0%	3.7%	2.1%	4.9%
Joining Technologies	-	88.2%	12.5%	61.1%	-8.6%	41.5%	10.7%	26.5%
Thin-film Technologies	-	-	-	86.5%	-49.3%	-28.6%	120.0%	18.2%
Other segments	-	-42.9%	-41.7%	-4.8%	-5.0%	21.1%	0.0%	0.0%
<b>Total</b>	<b>38.6%</b>	<b>14.1%</b>	<b>6.1%</b>	<b>7.6%</b>	<b>11.7%</b>	<b>43.4%</b>	<b>12.0%</b>	<b>12.5%</b>
<b>In % of sales</b>								
Cutting and Structuring Lasers	47.0%	51.0%	41.5%	34.6%	52.3%	63.8%	62.7%	62.6%
Rapid Prototyping	30.1%	31.9%	36.2%	33.0%	26.6%	19.3%	17.6%	16.4%
Joining Technologies	4.9%	8.0%	8.5%	12.8%	10.5%	10.3%	10.2%	11.5%
Thin-film Technologies	0.0%	0.0%	8.8%	15.2%	6.9%	3.4%	6.8%	7.1%
Other segments	18.1%	9.0%	5.0%	4.4%	3.7%	3.2%	2.8%	2.5%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
<b>EBIT</b>								
Cutting and Structuring Lasers	-	-	-	0.9	6.0	12.2	13.3	15.1
Rapid Prototyping	-	-	-	1.5	2.3	2.7	2.8	2.9
Joining Technologies	-	-	-	0.2	0.2	0.5	0.8	1.1
Thin-film Technologies	-	-	-	1.0	-0.9	-1.6	0.0	0.2
Other segments	-	-	-	-0.6	-0.6	-0.7	-0.6	-0.6
<b>Total</b>	<b>6.0</b>	<b>6.4</b>	<b>6.0</b>	<b>3.1</b>	<b>7.0</b>	<b>13.1</b>	<b>16.2</b>	<b>18.7</b>
<b>EBIT margin</b>								
Cutting and Structuring Lasers	0.0%	0.0%	0.0%	5.7%	22.6%	26.3%	26.1%	26.3%
Rapid Prototyping	0.0%	0.0%	0.0%	10.0%	17.0%	19.2%	19.3%	19.5%
Joining Technologies	0.0%	0.0%	0.0%	3.4%	3.8%	7.0%	9.1%	10.5%
Thin-film Technologies	0.0%	0.0%	0.0%	14.5%	-25.7%	-64.0%	0.0%	3.7%
Other segments	0.0%	0.0%	0.0%	-30.0%	-31.6%	-30.4%	-26.1%	-26.1%
<b>Total</b>	<b>17.1%</b>	<b>16.0%</b>	<b>14.2%</b>	<b>6.8%</b>	<b>13.7%</b>	<b>18.0%</b>	<b>20.0%</b>	<b>20.5%</b>

Source: Company data, BHF-BANK estimates

# Risks to our rating

## Company specific risks

1. Loss of management risk: Although LPKF has grown strongly in the past years, it may still be too small to cope with the sudden departure of key management members.
2. Technological risk: as a leading player in a market that is characterized by quick technological change, LPKF could miss out on changing trends in the market for micro material processing using lasers
3. Dependency on customer risk: In 2009, LPKF achieved 16% of total revenues with a single client and 25% of total revenues with the three clients. A loss of major customers might have a significant negative impact on the company's sales and earnings.

## Market risks

1. Economic recession: A worsening in the economic environment could cause significant cuts in consumer spending for electronic devices such as mobile phones and portable PCs. This could dampen demand for LDS antennas and therefore, demand for LPKF's LDS systems.
2. A slower than predicted adoption of the LDS technology: In our view, the penetration of LDS antennas in smart phones will sharply rise in the upcoming years and thus, demand for LPKF's LDS systems. In the case that the LDS process would not become the standard process for the manufacturing of smart phone antennas, the company's revenues and earnings might decrease considerably

# Financials

**Fig 22 Income statement**

(€m)	2008	2009	2010F	2011F	2012F
Sales	45.4	50.7	72.7	81.4	91.6
Change in finished goods and work in progress	1.2	1.8	1.7	1.7	1.7
Material expenses	14.6	15.0	21.1	23.8	26.7
Personnel expenses	17.0	17.9	22.3	23.8	26.6
Depreciation and amortization (excl. goodwill)	2.6	2.9	4.0	4.4	5.0
Other operating income	1.3	1.8	2.4	2.2	2.2
Other operating expenses	10.6	11.6	16.3	17.1	18.5
Operating income (EBIT)	3.1	7.0	13.1	16.2	18.7
Adjusted operating income (EBIT)	3.1	7.0	13.1	16.2	18.7
Other income, net	-0.2	-0.2	-0.1	-0.1	-0.1
Earnings before taxes	2.9	6.8	13.0	16.1	18.7
Taxes on income	0.6	2.1	3.9	4.8	5.6
Net income	2.3	4.7	9.1	11.3	13.1
Minority interests	0.5	0.1	0.2	0.2	0.2
Net income after minorities	1.8	4.7	8.9	11.1	12.9
Adjusted net income	1.8	4.7	8.9	11.1	12.9
Adjusted earnings per share (basic)	0.17	0.43	0.82	1.02	1.18
Adjusted earnings per share (diluted)	0.17	0.43	0.81	1.01	1.17
<b>Income statement (YoY)</b>					
Sales	7.6%	11.7%	43.4%	12.0%	12.5%
Change in finished goods and work in progress	-48.4%	57.4%	-7.7%	0.0%	0.0%
Material expenses	11.0%	2.9%	40.8%	12.8%	12.1%
Personnel expenses	9.8%	5.6%	24.4%	6.7%	11.8%
Depreciation and amortization (excl. goodwill)	17.3%	11.4%	38.3%	10.0%	13.6%
Other operating income	-25.3%	42.9%	30.1%	-8.3%	0.0%
Other operating expenses	13.1%	9.4%	40.2%	4.9%	8.2%
Operating income (EBIT)	-48.3%	124.5%	88.2%	23.9%	15.4%
Adjusted operating income (EBIT)	-48.3%	124.5%	88.2%	23.9%	15.4%
Other income, net	192.4%	-24.7%	-42.5%	0.0%	-40.0%
Earnings before taxes	-51.5%	136.5%	91.6%	24.1%	15.7%
Taxes on income	-67.8%	270.8%	89.8%	24.1%	15.7%
Net income	-44.8%	104.4%	92.4%	24.1%	15.7%
Minority interests	51.3%	-89.5%	277.4%	0.0%	0.0%
Net income after minorities	-53.2%	158.6%	90.3%	24.6%	16.0%
Adjusted net income	-53.2%	158.6%	90.3%	24.6%	16.0%
Adjusted earnings per share (basic)	-53.2%	158.6%	90.1%	24.6%	16.0%
Adjusted earnings per share (diluted)	-53.2%	158.6%	87.5%	24.6%	16.0%
<b>Income statement (of total)</b>					
Sales	100.0%	100.0%	100.0%	100.0%	100.0%
Change in finished goods and work in progress	2.6%	3.6%	2.3%	2.1%	1.9%
Material expenses	32.1%	29.5%	29.0%	29.2%	29.1%
Personnel expenses	37.4%	35.4%	30.7%	29.2%	29.0%
Depreciation and amortization (excl. goodwill)	5.7%	5.7%	5.5%	5.4%	5.5%
Other operating income	2.8%	3.6%	3.3%	2.7%	2.4%
Other operating expenses	23.4%	22.9%	22.4%	21.0%	20.2%
Operating income (EBIT)	6.8%	13.7%	18.0%	20.0%	20.5%
Adjusted operating income (EBIT)	6.8%	13.7%	18.0%	20.0%	20.5%
Other income, net	-0.5%	-0.3%	-0.1%	-0.1%	-0.1%
Earnings before taxes	6.3%	13.4%	17.9%	19.8%	20.4%
Taxes on income	1.2%	4.1%	5.4%	5.9%	6.1%
Net income	5.1%	9.3%	12.5%	13.9%	14.3%
Minority interests	1.1%	0.1%	0.3%	0.2%	0.2%
Net income after minorities	4.0%	9.2%	12.3%	13.6%	14.1%
Adjusted net income	4.0%	9.2%	12.3%	13.6%	14.1%

Source: Company data, BHF-BANK estimates

Fig 23 Balance sheet

(€m)	2008	2009	2010F	2011F	2012F
<b>Assets</b>					
Cash and cash equivalents	6.0	10.8	10.3	13.8	17.5
Accounts receivable, net	10.1	10.9	12.5	13.6	15.1
Inventories	15.0	14.5	19.3	21.9	24.3
Other current assets	1.5	1.9	2.3	2.3	2.3
Current assets	32.7	38.1	44.4	51.6	59.2
Property, plant and equipment, net	13.7	13.4	17.0	17.9	18.9
Intangible assets, net	4.1	5.1	5.0	5.0	5.0
Financial assets	0.2	0.3	1.3	1.3	1.3
Other non-current assets	0.9	0.8	1.4	1.4	1.4
Non-current assets	18.8	19.6	24.7	25.6	26.6
<b>Total assets</b>	<b>51.5</b>	<b>57.6</b>	<b>69.1</b>	<b>77.2</b>	<b>85.8</b>
<b>Liabilities and shareholders' equity</b>					
Accounts payables	1.6	2.2	4.0	4.5	4.6
Advance payments	0.0	0.0	0.0	0.0	0.0
Short-term debt	3.1	1.3	1.4	1.4	1.4
Other current liabilities	6.2	9.2	11.8	11.8	11.8
Current liabilities	10.9	12.7	17.2	17.7	17.8
Long-term debt	3.5	2.8	2.5	2.5	2.5
Pension provisions	0.1	0.0	0.0	0.0	0.0
Deferred revenue	0.0	0.0	0.0	0.0	0.0
Minority interests	3.3	3.5	3.4	3.5	3.6
Other non-current liabilities	1.7	1.9	1.5	1.6	1.7
Total liabilities	19.6	21.0	24.6	25.3	25.6
Shareholders' equity	31.9	36.7	44.5	51.9	60.2
<b>Total liabilities and shareholders' equity</b>	<b>51.5</b>	<b>57.6</b>	<b>69.1</b>	<b>77.2</b>	<b>85.8</b>
<b>Balance sheet (of total)</b>					
Cash and cash equivalents	11.7%	18.7%	15.0%	17.9%	20.4%
Accounts receivable, net	19.7%	19.0%	18.1%	17.6%	17.6%
Inventories	29.2%	25.1%	27.9%	28.4%	28.3%
Other current assets	2.9%	3.2%	3.3%	3.0%	2.7%
Current assets	63.4%	66.0%	64.3%	66.8%	69.0%
Property, plant and equipment, net	26.6%	23.3%	24.6%	23.2%	22.0%
Intangible assets, net	7.9%	8.8%	7.3%	6.5%	5.9%
Financial assets	0.4%	0.4%	1.9%	1.7%	1.5%
Other non-current assets	1.7%	1.5%	2.0%	1.8%	1.6%
Non-current assets	36.6%	34.0%	35.7%	33.2%	31.0%
<b>Total assets</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
Accounts payables	3.2%	3.8%	5.8%	5.8%	5.4%
Advance payments	0.0%	0.0%	0.0%	0.0%	0.0%
Short-term debt	6.0%	2.3%	2.0%	1.8%	1.6%
Other current liabilities	12.1%	16.0%	17.1%	15.3%	13.8%
Current liabilities	21.2%	22.1%	24.8%	22.9%	20.7%
Long-term debt	6.9%	4.8%	3.7%	3.3%	3.0%
Pension provisions	0.2%	0.0%	0.0%	0.0%	0.0%
Deferred revenue	0.0%	0.0%	0.0%	0.0%	0.0%
Minority interests	6.5%	6.1%	4.9%	4.5%	4.2%
Other non-current liabilities	3.2%	3.4%	2.2%	2.1%	2.0%
Total liabilities	38.0%	36.4%	35.6%	32.8%	29.9%
Shareholders' equity	62.0%	63.6%	64.4%	67.2%	70.1%
<b>Total liabilities and shareholders' equity</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: Company data, BHF-BANK estimates

**Fig 24 Cash flow statement**

(€m)	2008	2009	2010F	2011F	2012F
Net income	2.3	4.7	9.1	11.3	13.1
Depreciation and amortization	2.6	2.9	4.0	4.4	5.0
Other non-cash items	1.4	5.2	2.6	0.7	0.3
Cash earnings	6.3	12.8	15.7	16.4	18.4
Change in working capital	0.1	-1.4	-6.6	-3.7	-3.9
Net cash provided by operating activities	6.4	11.4	9.1	12.7	14.5
Capital expenditure	-3.3	-4.0	-6.2	-5.3	-6.0
Proceeds from disposal of assets	0.0	0.4	0.3	0.0	0.0
Acquisitions, net of cash acquired	0.0	0.0	0.0	0.0	0.0
Others	-0.2	0.0	-1.0	0.0	0.0
Net cash used in investing activities	-3.5	-3.7	-7.0	-5.3	-6.0
Free cash flow	2.9	7.8	2.1	7.4	8.5
Issuance of common stock	0.0	0.0	0.0	0.0	0.0
Purchase of treasury stock	0.0	0.0	0.0	0.0	0.0
Dividends paid	-1.4	0.0	-2.3	-3.7	-4.6
Net proceeds from/repayment of debt	1.8	-3.1	-0.2	0.0	0.0
Others	-0.5	-0.3	0.1	-0.2	-0.2
Cash flow from financing activities	-0.1	-3.4	-2.3	-3.9	-4.8
Effect of exchange rate changes	0.1	-0.1	0.3	0.0	0.0
Change in cash and cash equivalents	3.0	4.3	0.1	3.5	3.7
Cash and cash equivalents at beginning of period	3.0	6.0	10.3	10.3	13.8
Cash and cash equivalents at end of period	6.0	10.3	10.3	13.8	17.5

Source: Company data, BHF-BANK estimates

**Fig 25 Key ratios**

(€m)	2008	2009	2010F	2011F	2012F
Net debt (-) / cash (+)	-0.7	6.7	6.4	9.9	13.6
Working capital	23.5	23.3	27.8	31.0	34.8
Capital employed	41.3	41.7	49.8	53.9	58.7
ROE	5.7%	12.8%	20.5%	21.8%	21.7%
ROCE	7.5%	16.7%	26.3%	30.1%	31.9%
Net gearing	2.3%	-18.2%	-14.5%	-19.1%	-22.6%

Source: Company data, BHF-BANK estimates

**Fig 26 Valuation**

	2008	2009	2010F	2011F	2012F
PER	86.0	18.4	13.7	11.0	9.5
P/NAV	4.9	2.4	2.7	2.4	2.0
EV/Sales	3.5	1.6	1.6	1.4	1.2
EV/EBITDA	28.1	8.4	7.0	5.6	4.7
EV/EBIT	51.5	11.9	9.1	7.1	6.0
Dividend yield	0.0%	2.5%	2.9%	3.6%	4.3%

Source: Company data, BHF-BANK estimates

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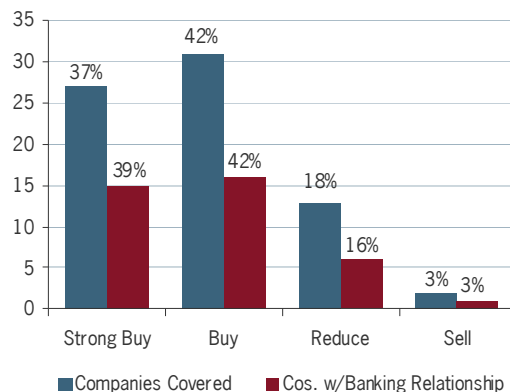
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Company	ISIN	Price	Disclosure
LPKF Laser & Electronics	DE0006450000	€11.25 (05/10/2010)	-



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