EDISON

Thin Film Electronics

Q2 results

Full steam ahead to producer status

Software & comp services

Thinfilm made major strides in Q2 in its evolution from a research company to a product company, with a trebling in EAS tag production and reporting the first significant order for NFC Opensense. We expect more positive order newsflow from the Opensense and EAS products over the next six to nine months as well as benefits from de-bottlenecking and capacity expansion. This, along with greater visibility as the market reassesses Thinfilm as a product company, should alleviate recent pressure on the shares.

Year end	Revenue ($m)	PBT* ($m)	EPS* (c)	DPS (c)	EV/Sales (x)	Yield (%)
12/13	1.9	(10.4)	(2.5)	0.0	96.8	N/A
12/14	4.5	(24.9)	(5.0)	0.0	40.9	N/A
12/15e	5.5	(27.2)	(5.1)	0.0	33.4	N/A
12/16e	20.7	(26.3)	(4.7)	0.0	8.9	N/A

Note: *PBT and EPS are normalised, excluding intangible amortisation, exceptional items and share-based payments.

Q215 financials: EAS order driving Q2 revenue

Sales revenue for Q2 grew 25%, principally on a trebling of shipments of EAS tags to Nedap. Increased government grant inflows (including from the EU) and stable rental income from the San Jose property had positive effects on the quarter's results. With employee numbers growing in keeping with the company's re-orientation towards production, payroll costs rose 6%, contributing to an underlying 7% rise in opex and a flat operating result y-o-y. A successful $22m capital raising in June boosted cash reserves to $36m at the end of the quarter, which represents well over 12 months' cash burn at the H1 rate.

Visibility and product mix lead to lower forecasts

On the back of the rapid pace of developments in recent months and the additional disclosure around product sales, we have reset our forecast base and will now assess Thinfilm as a product company rather than a concept business. This has reduced our forecast 2015 and 2016 revenues by 45% and 38%, respectively, leading to a 17% and 25% increase in our operating loss forecasts. We continue to expect Thinfilm to generate a positive operating result in 2019 helped by order inflows and increasing economies of scale.

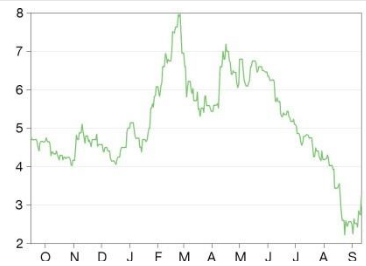
Valuation: Sensitivity is still the key

We have also updated our base case DCF valuation with a reduction in the terminal licence fee as a percentage of ASP from 10% to 5%, to reflect current licensing pricing trends as regards established technology. We have also reduced our forecast of average selling prices in 2024 from $0.28 to $0.22 on lower terminal price assumptions. We have maintained our forecast of 8 billion labels being sold in 2020 and 80% of labels being produced externally with a peak EBITDA margin of 50%. This gives rise to a revised valuation of NOK9 at the current exchange rate (NOK8.17/$), down from NOK19.

14 September 2015

Price	**NOK3.24**
Market cap	**NOK1799m**
	NOK8.17/$
Net cash ($m) at 30 June 2015	36.3m
Shares in issue	555.2m
Free float	31.1%
Code	THIN
Primary exchange	Oslo
Secondary exchange	N/A

Share price performance



%	1m	3m	12m
Abs	(17.6)	(44.0)	(32.2)
Rel (local)	(10.2)	(36.5)	(24.3)
52-week high/low		NOK8.0	NOK2.2

Business description

Thin Film Electronics (Thinfilm) commercialises printed electronics and owns key patents for printing rewritable, non-volatile memory and printable NFC circuits. It also licenses technology from others to develop complete printed systems.

Next events

Q3 results	16 November 2015
Q4 results	26 February 2016

Analysts

Tom Grady +44 (0)20 3077 5767

Anna Bossong +44 (0)20 3077 5737

tmt@edisongroup.com

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Business update

In the Q2 results Thinfilm released for the first time the number of units sold and the revenue from product sales. As a results, we are moving into a position where we can treat Thinfilm as a product company rather than a concept business and track the quarterly performance of product sales. We have therefore rebased our estimates and valuation.

Thinfilm's key milestones for the second quarter were:

Nedap EAS order – trebling of production in first major order: EAS sales contributed over 60% of Sales Revenues in 2Q helped by Thinfilm trebling shipments quarter-on-quarter of EAS (Electronic Article Surveillance) tags to the Dutch retail solutions provider Nedap. Shipment volumes under the order reached 4.5 million units after c 1.0 million in Q115. The bulk of the remainder of the 13 million order is due to be shipped in Q3.

Management expects to be negotiating follow-on orders from Nedap in H2. We understand that the end customer is a retailer with annual shoe sales of approximately 30 million units and even higher volume garment sales, giving good scope for increased demand if the tags are incorporated across the product range.

The EAS order has had another benefit to the company in terms of it sharpening its back and front end operations, in preparation for increased order inflows in other product areas.

NFC Opensense – new orders and agreements with more potential customers: Diageo and a Chinese-owned Australian wine producer Ferngrove took samples of the NFC Opensense label in Q215 and are working towards field trials in H2. Ferngrove placed an order conditional on a successful outcome to the pilot programme for more than 1 million tags. If a Diageo pilot project is successful it should lead to significant orders in coming quarters. With annual sales of Johnnie Walker Blue Label whisky currently running at 24 million, and the tags expected to be priced at $0.3-0.5 in 2016, we see the potential for annual sales to Diageo to exceed $7m per year if the pilot programme is successful.

Thinfilm also signed a number of agreements for Opensense with Fortune 500 consumer packaged goods companies in Q2 in the areas of spirits, tobacco and fast moving consumer goods, which we believe should lead to several pilot programmes in the fourth quarter. Thinfilm's ability to publicise these agreements has been hampered by the natural desire for companies operating in fields vulnerable to counterfeiting to keep a low profile to avoid unnecessary damage to their brands.

Taking into account the small average order size Opensense tags are expected to sell for 45-50c per unit this year (as compared with c 5-7c for EAS labels) and we estimate a first-time contribution of c $1,000,000 to 2015 revenues based on the forecast sale of 2.2 million tags at a unit price of $0.45.

New EU 'Horizon 2020' grant: Thinfilm was awarded a €444,000 grant from the EU's 'Horizon 2020' research and innovation programme during the quarter. The programme will add $140,000 per year to revenues over the next three years and will be used to develop high-resolution printing of organic transistors for Large-Area Smart Surfaces.

Review of results

Exhibit 1: Review of interim results

Amounts in $000s	Q215	Q214	Q2 y-o-y	H115	H114	H1 y-o-y	Q115	Q1 y-o-y
Sales revenue	**478**	**408**	**17.2%**	**731**	**757**	**(3.4%)**	**253**	**(27.5%)**
Other Operating revenue	492	457	7.7%	872	745	17.0%	380	31.9%
Other Income	107	(5)	N/A	172	508	N/A	65	(87.3%)
Total revenue	**1,077**	**860**	**25.2%**	**1,775**	**2,010**	**(11.7%)**	**698**	**(39.3%)**
Payroll	(3,797)	(3,584)	5.9%	(8,021)	(7,144)	12.3%	(4,224)	18.7%
Share-based payments	(352)	(596)	(40.9%)	(393)	197	(299.5%)	(41)	(105.2%)
Premises, supplies	(1,557)	(1,309)	18.9%	(2,945)	(2,337)	26.0%	(1,388)	35.0%
Other operating costs	(2,032)	(1,940)	4.7%	(3,521)	(4,022)	(12.5%)	(1,489)	(28.5%)
Total operating costs	**(7,738)**	**(7,429)**	**4.2%**	**(14,880)**	**(13,306)**	**11.8%**	**(7,142)**	**21.5%**
D&A	(308)	(355)	(13.2%)	(652)	(576)	13.2%	(344)	55.7%
Operating profit	**(6,969)**	**(6,924)**	**0.6%**	**(13,757)**	**(11,872)**	**15.9%**	**(6,788)**	**37.2%**

Source: Thinfilm, Edison Investment Research

Thinfilm's Q2 sales revenue (comprising product sales, licensing and partnership revenues) grew 17% y-o-y, boosted by a trebling of EAS label shipments, which added an estimated $200,000 in revenues. Other operating revenue, principally comprised of government grants, grew at a more moderate 8% rate, helped by winning a new three-year €444,000 grant from the EU Commission. The revenue contribution from leasing out unused capacity at the San Jose plant also provided a useful contribution to revenues in Q2, being the bulk of the other income line.

Stripping out share-based compensation, underlying opex grew at 7% y-o-y. Payroll costs, up 6% y-o-y, reflected the increased rate of hiring for the new production line in San Jose over the previous six months, with staff numbers rising 36% to 105. Overall growth in pay costs was moderate, however, due to the shift in the employee mix towards lower cost production staff.

Operating losses were kept within 1% of the Q214 figure, reaching 57% of our full-year estimates.

Estimate changes

With lumpy order flows and a variety of promising new products that are in the early stages of uptake, quarterly earnings forecasting for Thinfilm is a far from exact science. With the rapid pace of developments in recent months we have made the following changes to our model:

- reduced the assumed licence fee percentage from 15% to 12%, reflecting changes in the licensing market;
- reduced sales expectations for NFC Smart labels from 1.0 million to 0.2 million in 2015 to reflect the production qualification process that is hampering the ability to deliver on demand, and a reduction in NFC Opensense sales from 5.0 million to 2.2 million units this year, on a slower than expected intake of orders. We have maintained our forecast of 22 million units in 2016 in view of strong interest expressed in the product, particularly from Diageo, which has a similar level of annual sales (of 24 million pa) from its Blue Label Johnnie Walker whisky;
- reduced the ASP of EAS from $0.08 to the implied $0.064 per unit in the Q2 results; and
- a trimming in Thinfilm's margin on sourcing of ASIC products to Xerox customers in 2016 from 7% to 5%.

The above changes have resulted in a reduction in our assumed ASPs for 2015 and 2016 from $0.19 and $0.12 to $0.10 and $0.09, respectively. The net impact on our forecasts is a reduction in the 2015 and 2016 revenue forecasts by 45% and 38% and an increase in our operating loss forecasts by 17% and 25%, respectively.

On a five-year outlook, we believe that growth in sales of higher value-added NFC and Smart Label products will lead to a steady increase in average product prices from 2016/17. This growth in sales volumes will give the business scale, while increases in operating capacity and debottlenecking should help deliver further margin expansion. As a result, we expect the group to strongly emerge into operating profits in 2019.

Exhibit 2: Change in earnings forecasts

Amounts in US$'000	2015 new	2015 old	var	var (%)	2016 new	2016 old	var	var (%)	H115
Sales Revenue	**3,226**	**n.a.**	**n.a.**	**n.a.**	**18,150**	**n.a.**	**n.a.**	**n.a.**	**731**
Other Operating revenue	1,871	n.a.	n.a.	n.a.	2,058	n.a.	n.a.	n.a.	872
Other Income	399	n.a.	n.a.	n.a.	482	n.a.	n.a.	n.a.	172
Total revenue	**5,496**	**9,963**	**(4,467)**	**(44.8)**	**20,690**	**33,281**	**(12,591)**	**(37.8)**	**1,775**
Payroll	(16,554)	(10,875)	(5,679)	52.2	(18,810)	(12,539)	(6,271)	50.0	(8,021)
Share based payments	(1,033)	(1,540)	507	(32.9)	(1,411)	(1,790)	379	(21.2)	(393)
Premises, supplies	(7,347)	(5,764)	(1,583)	27.5	(17,666)	(12,154)	(5,512)	45.3	(2,945)
Other operating costs	(7,548)	(14,821)	7,272	(49.1)	(8,302)	(23,970)	15,668	(65.4)	(3,521)
Total operating costs	**(32,482)**	**(33,000)**	**518**	**(1.6)**	**(46,189)**	**(50,453)**	**4,264**	**(8.5)**	**(14,880)**
D&A	(1,431)	(1,231)	(201)	16.3	(1,860)	(2,298)	438	(19.1)	(652)
Operating profit	**(28,418)**	**(24,267)**	**(4,150)**	**17.1**	**(24,267)**	**(19,471)**	**(4,796)**	**24.6**	**(13,757)**

Source: Thinfilm, Edison Investment Research

Balance sheet and cash flow

Thinfilm had $36.3m of cash at the end of June 2015 after raising $20.3m (net of costs) in a private placing in June. Cash outflow from operating activities for the six-months to 30 June 2015 was $12.1m and a further $1.9m was spent on purchasing PPE and intangible assets. We expect $17m of the $20m raised in the private placing to be spent on expanding production facilities over the next 12-24 months, and forecast an increase in capex to $6.4m in H215 and $10m in FY16. Additional funding is therefore likely to be required in FY16. Our current forecasts assume net debt of $24m at the end of FY16 assuming no equity raising is undertaken during the year.

Exhibit 3: Financial summary

US$000s	2012	2013	2014	2015e	2016e
Year-end 31 December	IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS	**USD**	**USD**	**USD**	**USD**	**USD**
Revenue	620	1,897	4,479	5,496	20,690
EBITDA	(6,880)	(10,420)	(23,550)	(25,953)	(24,088)
Operating Profit (before amort. and except.)	(6,963)	(10,688)	(24,855)	(27,385)	(25,943)
Intangible Amortisation	0	0	0	0	0
Exceptionals	0	(2,154)	0	0	0
Share-based payments	(718)	(847)	(941)	(1,033)	(1,411)
Operating Profit	(7,682)	(13,689)	(25,796)	(28,418)	(27,354)
Net Interest	53	274	0	225	(361)
Profit Before Tax (norm)	(6,911)	(10,415)	(24,855)	(27,159)	(26,303)
Profit Before Tax (FRS 3)	(7,629)	(13,416)	(25,796)	(28,192)	(27,714)
Tax	0	0	0	0	0
Profit After Tax (norm)	(6,911)	(10,415)	(24,855)	(27,159)	(26,303)
Profit After Tax (FRS 3)	(7,629)	(13,416)	(25,796)	(28,192)	(27,714)
Average Number of Shares Outstanding (m)	330.1	412.7	493.5	535.3	555.2
EPS - normalised (c)	(2.1)	(2.5)	(5.0)	(5.1)	(4.7)
EPS - normalised fully diluted (c)	(2.1)	(2.5)	(4.6)	(4.5)	(4.2)
EPS - (IFRS) (c)	(2.3)	(3.3)	(5.2)	(5.3)	(5.0)
Dividend per share (c)	0.0	0.0	0.0	0.0	0.0
EBITDA Margin (%)	N/A	N/A	N/A	N/A	N/A
Operating Margin (before GW and except.) (%)	N/A	N/A	N/A	N/A	N/A
BALANCE SHEET					
Fixed Assets	449	3,112	7,189	14,358	22,575
Intangible Assets	0	0	2,319	2,387	2,458
Tangible Assets	449	3,112	4,870	11,971	20,117
Investments	0	0	0	0	0
Current Assets	6,124	45,121	33,870	19,992	8,648
Stocks	0	0	451	1,011	3,643
Debtors	723	1,318	2,565	3,011	9,069
Cash	5,401	43,803	30,854	15,969	(4,065)
Other	0	0	0	0	0
Current Liabilities	(1,616)	(5,865)	(4,748)	(5,324)	(27,570)
Creditors	(1,616)	(5,865)	(4,748)	(5,324)	(7,570)
Short term borrowings	0	0	0	0	(20,000)
Long Term Liabilities	0	0	0	0	0
Long term borrowings	0	0	0	0	0
Other long term liabilities	0	0	0	0	0
Net Assets	4,957	42,367	36,311	29,026	3,653
CASH FLOW					
Operating Cash Flow	(6,486)	(7,905)	(24,078)	(26,384)	(30,533)
Net Interest	77	234	569	570	570
Tax	0	0	0	0	0
Capex	(316)	(2,487)	(3,217)	(7,926)	(10,071)
Acquisitions/disposals	0	0	(2,700)	(674)	0
Financing	10,919	48,560	16,477	19,530	0
Dividends	0	0	0	0	0
Net Cash Flow	4,194	38,402	(12,949)	(14,885)	(40,035)
Opening net debt/(cash)	(1,207)	(5,401)	(43,803)	(30,854)	(15,969)
HP finance leases initiated	0	0	0	0	0
Other	0	0	0	0	0
Closing net debt/(cash)	(5,401)	(43,803)	(30,854)	(15,969)	24,065

Source: Edison Investment research, company accounts. Note: FY12 and FY13 have been translated from reported numbers using an exchange rate of NOK7.47/$. Reporting currency changed from NOK to $ in Q115.

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