

11 August 2009

## Lombard Medical Technologies

Year End	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	P/E (x)	Yield (%)
12/07	1.0	(10.7)	(15.4)	0.0	N/A	N/A
12/08	2.0	(11.0)	(6.8)	0.0	N/A	N/A
12/09e	2.7	(7.7)	(0.9)	0.0	N/A	N/A
12/10e	3.4	(4.8)	(0.5)	0.0	N/A	N/A

Note: \*PBT and EPS are normalised, excluding goodwill amortisation and exceptional items

### Investment summary: Widening the angle

The recent EU approval of Aorfix for high neck angle abdominal aortic aneurysm provides Lombard with a unique label claim for its stent graft system, and this should strengthen its hand in negotiations with potential US distribution partners. This in turn is a key factor in the investment case. Meanwhile, the US registration study is nearing full recruitment and should allow Lombard to file for a similar high-angle claim in the US after 12-month outcome data become available in late 2010.

#### EU approval for up to 90° angulation

The recent EU approval for high neck angle AAA means Aorfix is the only stent graft approved for use in patients whose AAAs have a 75-90° neck angle. Up to one in five AAA patients have such challenging anatomies and these currently can only be treated by open surgery, a more expensive and invasive procedure.

#### PYTHAGORAS trial nears recruitment target

Lombard's US registration study (PYTHAGORAS) is expected to complete its recruitment in Q4, and this should allow a filing for a similar 0-90° label in the US after 12-month outcome data are available by the end of 2010. US approval is therefore possible in late 2011.

#### Funding from a partner should secure future

Securing a global (ie, including US) distribution partner for Aorfix and obtaining a signature fee that provides funding nearer to expected break-even in 2012 is critical to Lombard's investment case. Lombard is currently funded to early 2010, expects to sign a deal within 12 months, and is exploring additional funding options.

#### Valuation: £35m NPV

We suggest a value of £35m or 4.2p per share for Lombard, based on a DCF using a 12.5% cost of capital and a 3% long-term growth rate. This is lower than previously indicated, principally because of delays in US timelines. This in turn was caused by a slowdown of recruitment into PYTHAGORAS last year, when the company's funding situation looked uncertain.

Price 1.6p  
Market cap £13m

#### Share price graph



#### Share details

Code LMT  
Listing AIM  
Sector Healthcare Equipment & Services  
Shares in issue 841m

#### Price

52-week High 8.68p Low 0.43p

#### Balance sheet as at 30 June 2009

Debt/equity (%) N/A  
NAV per share (p) 0.9p  
Net cash (£m) 4.0m

#### Business

Lombard Medical Technologies is developing a range of cardiovascular devices, principally the Aorfix stent graft system for the treatment of abdominal aortic aneurysm (AAA).

#### Valuation

	2008	2009e	2010e
P/E relative	N/A	N/A	N/A
P/CF	N/A	N/A	N/A
EV/sales	0.8	3.6	3.6
ROE	N/A	N/A	N/A

#### Revenues by geography

	UK	Europe	US	Other
	30%	40%	15%	15%

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## Investment summary: Widening the angle

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### Company description: Stent graft specialist

Lombard Medical Technologies is a UK medical device company principally focused on the development and commercialisation of its Aorfix stent graft system for endovascular repair of abdominal aortic aneurysm (AAA). Lombard listed in its current form on AIM in 2005, while a predecessor company, Lombard Medical plc, was listed on the stock market in 2000–03. Lombard and its predecessor have raised a cumulative total of £75m in various equity issues since inception (including £46m since the 2005 AIM listing).

### Sensitivities

The principal sensitivities to the investment case are commercial/financial and effectively centre on Lombard's ability to secure a US distribution partner on attractive economic terms. Ideally, the company must do so on terms that reduce or eliminate its funding requirement in 2010-12. There is little technical or development risk associated with Aorfix, as a result of its CE mark approval in Europe and documented use on some 850 patients. Furthermore, a high proportion of these patients are captured in Lombard's RADAR registry, which should provide additional confidence for regulators. As a result, we have not discounted our valuation to reflect development risk.

Aorfix has a strong competitive profile, being the only stent graft system approved in Europe for treating AAAs with neck angles of up to 90°. (Endurant has approval to treat AAAs with neck angles of up to 75° in certain circumstances.) Aorfix also offers performance advantages over existing products in normal angle (0°-60°) AAA. However, Lombard is a small player in a highly competitive marketplace dominated by large med-tech firms and has found it difficult to make major inroads with Aorfix to date.

### Valuation

We calculate a value for Lombard of £35m, equivalent to 4.2p per share, using a 12.5% cost of capital and 3% long-term growth rate. This value is more than twice its current market capitalisation and is based on a financial model which assumes Lombard is able to capture a c10% share of the AAA market by volume, which we believe to be conservative (this is around half the level Lombard's management believes is possible). The valuation also makes no assumption of payments associated with a US distribution agreement or sums received from the disposal of the non-core assets, the polymer coatings divisions and equity interest in Vascular Concepts Holdings.

### Financials

Lombard intends to reduce cash consumption to under £6m in 2009, and we expect it to end the year with cash of just under £1m. Half-year cash stood at £4m. The company has indicated that its current funds will last to early 2010, and our financial model suggests a relatively modest funding requirement (£6m in 2011) to see it through to break-even in 2012.

## Company description: Stent graft specialist

Lombard Medical Technologies is a UK medical technology firm principally focused on the development and commercialisation of the Aorfix stent graft system for the endovascular repair of abdominal aortic aneurysm (AAA). This product is sold in Europe and Latin America and is in the final stages of a major registration trial in the US.

Lombard has two other medical devices in development, a thoracic stent graft and an endovascular stapling device, although all work on these products is currently suspended for financial reasons. Lombard also has a 100%-owned subsidiary, PolyBioMed, which is developing advanced coatings for medical devices, and a 9.4% equity interest in Vascular Concepts Holdings, a distributor of medical devices, both of which are considered non-core (and are potentially available for sale). The company's three key products are summarised in Exhibit 1.

**Exhibit 1: Lombard Medical Technologies product summary**

Product	Description	Development stage/notes
Aorfix AAA stent graft	Modular stent graft system for endovascular repair of abdominal aortic aneurysm (AAA)	Sold in 21 countries in Europe (including Russia, Turkey) and Latin America (Brazil and Argentina) through a network of national distributors, with direct sales in Germany, Italy, Spain and the UK. CE mark approval for use in neck angles of up to 90°. Undergoing a registration trial (PYTHAGORAS) in the US, which is expected to complete recruitment in Q4 2009, allowing PMA filing by Q1 2011, after 12-month follow up data are available in late 2010.
TAA stent graft	Larger-diameter version of Aorfix for endovascular repair of thoracic aortic aneurysm (TAA)	Prototype product incorporating a similar coil design to Aorfix. Development activities could restart once funding is available and/or with a partners.
EndoRefix	Endovascular stapling device for surgical fixation using repositionable nitinol clips	CE marked in Europe for fixation of endovascular stent grafts but not commercially available. Registration study for use for fixing/re-fixing stent grafts is two thirds recruited but on hold for financial reasons. Currently generated data are being considered for a potential regulatory filing. Possible future development for fixation of thoracic stent grafts, percutaneous heart valves and for closure in certain (eg urinary and gastrointestinal) surgeries.

Source: Edison Investment Research

### US marketing partner key to investment case

Lombard's investment case hinges on its ability to secure a global (ie, including the US) distribution partner for Aorfix. Ideally, it must do this later this year and on attractive economic terms, achieving signature fees from a potential partner that reduce (or eliminate) its financing requirement in 2010-12. Lombard intends to sign a deal within 12 months, and says it has had positive dialogue with several potential partners.

Possible events that might trigger a deal include full enrolment into the PYTHAGORAS trial, preliminary (30-day) data that could show a clear path to approval, and the submission of several modules of the PMA filing. If a partner is not on board by the end of this year around £3-6m might be needed to achieve break-even in a mid-case scenario. Lombard has held exploratory talks with potential investors to raise additional funds.

The company struggled to raise finance last year, eventually managing to secure £6.0m (net) in early 2009, although this required the issue of some 650m shares. Although Lombard has reduced headcount by 50%, current cash (£4m at the half year) will only support operations to early 2010.

## Abdominal aortic aneurysm

Lombard's lead product, Aorfix, is an endovascular stent graft for treating aortic aneurysm, which is a dangerous balloon-like swelling in the blood vessel resulting from a weakened vessel wall. Aortic aneurysms usually occur in the abdominal section, ie, below the renal arteries (less commonly they can occur above the renal arteries, when they are considered thoracic aortic aneurysms). Clinically, an AAA is defined as an enlargement of the aorta of at least 1.5x its normal diameter.

Once an aneurysm develops it will tend to expand unpredictably and, if untreated, eventually becomes susceptible to rupture. Such an event causes massive internal haemorrhage and in the majority of cases leads to death (the 13th leading cause of death in western countries). Aneurysms are largely asymptomatic and are usually identified as a result of screening for other conditions. However, AAAs are now specifically screened for under health programmes for the over 65s.

AAA is more common in men than women (c 3x) and the main risk factors are age, hypertension, smoking and family history. 3-6% of men over the age of 60 in the US are thought to have AAA, and some 1.5 million people have a diagnosis, with 190,000 new cases are identified per year. The market for AAA stent grafts was worth \$820m in 2008, and is expected to reach \$1bn by 2010.

Traditionally, treatment of aortic aneurysm was open surgical repair (OSR), which requires dissection of the artery and the placement of a synthetic graft under general anesthesia (although this can also be done laparoscopically). Patients undergoing OSR require a significant period of recovery in hospital and the procedure carries a 5-6% intra-operative mortality rate.

## Endovascular aneurysm repair

With the advent of stent grafts in the early 1990s, it became possible to repair AAAs by a minimally invasive procedure known as EVAR or endovascular aneurysm repair (TEVAR for TAAs). In this technique, a catheter is used to introduce a stent graft inside the blood vessel, via an incision in the femoral artery, to bridge the aneurysm. Patient suitability for EVAR is determined principally by the shape of the aneurysm, expressed by its neck length, width and degree of angulation.

The number of EVAR procedures is rising as a result of greater detection of AAAs and a higher proportion of patients being treated endovascularly. EVAR accounts for just over 50% of all AAA repairs in the US, the largest EVAR market, and in some the conversion rate is considerably higher. The advantages of EVAR over OSR include a lower time under general anaesthetic, the elimination of pain/trauma associated with major abdominal surgery, reduced blood loss and a reduced length of stay in hospital and ICU.

Conversion to EVAR has been driven by cost effectiveness and outcome data. Attempts to quantify cost savings vary considerably, but studies have shown savings of upwards of \$10,000 per quality-adjusted life year (QALY) (eg, Patel *et al*, J Vasc Surg, 2000 Aug; 32(2):247-57). Meanwhile, a recent paper by Shermerhorn *et al* (NEJM, 2008; 358:464-474) based on 22,830 matched pairs of US Medicare patients showed that EVAR was associated with lower rates of death and complications than OSR (eg, perioperative mortality of 1.2% vs 4.7%).

## Stent grafts

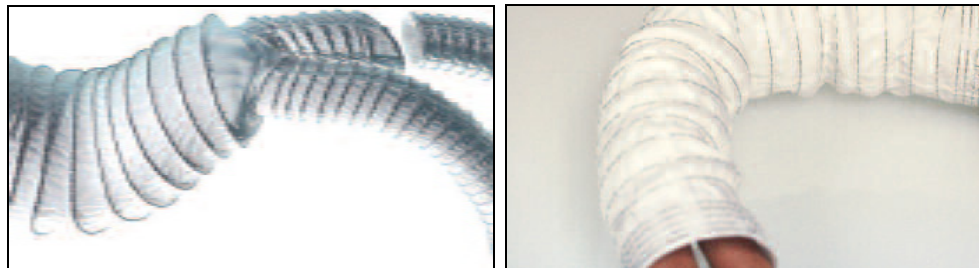
Stent grafts are flexible self-expanding metal reinforced fabric tubes which channel the blood flow over the weakened area of the artery. These usually consist of a Nitinol (nickel–titanium alloy) stent attached to a woven polyester or ePTFE fabric. Nitinol is superelastic at body temperature and has the property of return to a pre-programmed memory shape once deployed.

AAA stent grafts are usually bifurcated (inverted “Y” shape) devices, which extend into both iliac arteries. The graft is introduced on one side of the body and a smaller contralateral iliac limb connected via a catheter is introduced in the other femoral artery. Additional modular components, including aortic and iliac extender cuffs, are used to prevent endoleaks (an incomplete seal or backflow of blood). The stent graft components are attached together and to the aortic wall by wires, hooks and anchors.

The first generation of stent grafts suffered from various shortcomings, particularly poor fixation and limitations of the neck angle (because of their tendency to kink and/or migrate). Poor fixation can result in migration, which in turn can cause endoleaks.

Aorfix is a second-generation device which has been specifically designed to overcome problems with the first-generation devices. For example, the Nitinol reinforcement wire in Aorfix is sewn to the fabric in a ladder pattern, which is folded longitudinally to form the tube shape (circumferential rings are added at the ends for reinforcement). This makes Aorfix resistant to kinking and, it is understood, easier to manufacture than competitors' products. Aorfix and Lombard's prototype thoracic stent graft are pictured in Exhibit 2.

### Exhibit 2: Aorfix AAA and TAA stent grafts



Aorfix AAA bifurcated stent graft

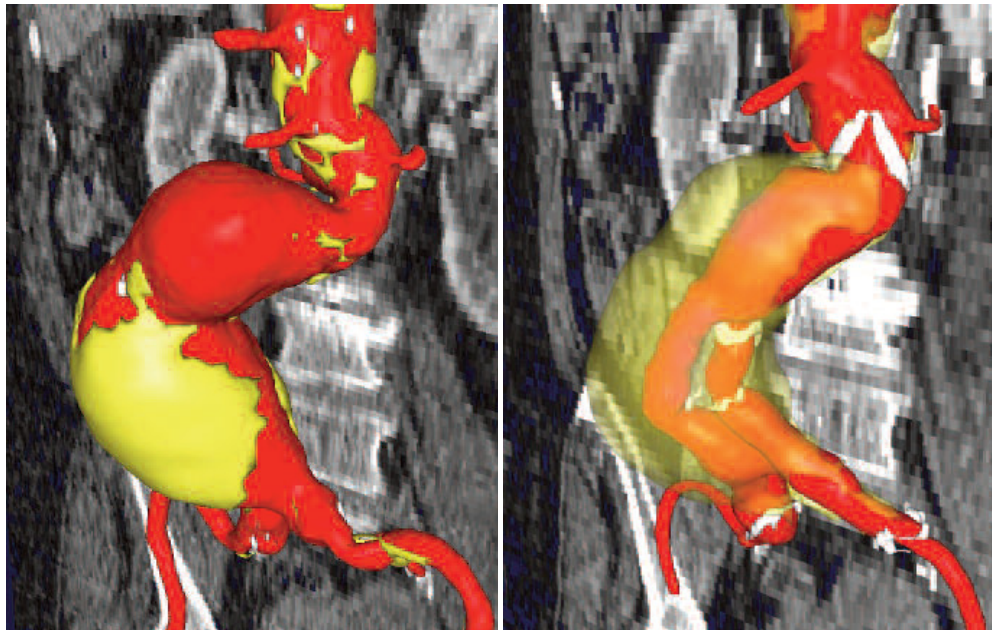
Thoracic stent

Source: Lombard Medical Technologies

Proximal endoleaks are an important risk factor following stenting of AAA, and the risk of leak increases as the angle of the proximal "neck" increases. A bench-test study published by Jean-Noel Albertini *et al* (*Vascular*, 2005 Nov-Dec; 13(6):321-6) showed that Aorfix was the only stent graft device which did not develop endoleaks, regardless of the angulation of the abdominal aorta. The study compared endoleak flow rate to neck angle for various competing stent grafts. Endoleaks occur either when blood continues to flow through the aneurysm because the seal is incomplete (type 1) or because of backfilling of the aneurysm from other small vessels in the aneurysm wall (type 2).

Exhibit 3 shows the results of treatment of a large and tortuous AAA with an Aorfix stent graft. The left hand image is before treatment and the right hand afterwards.

**Exhibit 3: Before and after treatment with Aorfix**



Source: Dr Marc Glickman, Sentara Heart Hospital, Norfolk, VA/Lombard Medical

### **PYTHAGORAS trial**

Lombard is in the final stages of recruitment into its US regulatory trial, codenamed PYTHAGORAS, which is designed to support a pre-market application (PMA) of Aorfix for treatment of AAA of up to 90° neck angulation. This study is recruiting 160 patients, of which at least 120 will have a high-angle aneurysm (ie, 60° to 90°). The primary endpoints are freedom from early serious adverse events (at 30 days) and freedom from endoleaks, device fracture and migration (at 12 months).

As of 31 July, Lombard had completed recruitment of normal-angle cases and had of the open surgery case controls, and only needed to recruit around 20 more of the 120 high-angle AAA cases. 146 implants in total had been completed; five operations are already scheduled for August, and more might be booked. Recruitment had slowed over the summer, partly because of Lombard's restructuring and partly owing to fewer patients being put forward and a relatively high attrition rate in patients meeting the inclusion criteria for the trial.

Lombard is confident of completing recruitment in Q4, and assuming this is possible 12-month outcome data would be published at the end of 2010, leading to filing of the clinical portion of the PMA shortly thereafter and US approval in late 2011. The PMA filing comprises five modules, and over the next 12 months, while the trial is ongoing, three of these are expected to be submitted on a rolling basis.

### **RADAR update**

Lombard is maintaining a registry of patients who have been treated with Aorfix, known as RADAR (Retrospective Aorfix Data Retrieval), which it updates at key scientific meetings. At the last update, RADAR contained data on 619 implants out of more than 800 performed at that point worldwide

(now over 900). This is a very high proportion of the total implants compared with the (albeit larger) patient registries of its competitors.

The most recent update of RADAR, presented at the Charing Cross Symposium in April, were published showing no loss of patency (ie, blood flow) or stent migration at one year (n=73), and endoleak rates at 20.5% were similar to average rates quoted in studies of EVAR of less difficult patients. Endoleak rates at one year for cases with neck angles of <60° (n=111) at just 9.0% (8.1% type 2) demonstrated the value of using Aorfix in normal as well as difficult cases.

Furthermore, for the first time, Lombard published data on the outcomes in a subset of patients for which neck angle information is held (n=374). The implant registry includes information on some extreme anatomies where implantation was performed in patients with neck-angulations >90° (100°, 110° and 120°). Data from the patient registry are shown in Exhibit 4.

**Exhibit 4: RADAR results (as of April 2009)**

	Normal angle <60°	High angle >60°	All cases (n=619)
All-cause 30-day mortality (of those fit for open surgery)	N/A	1.47%	1.45%
Stent migration at 12 months	0%	0%	0%
Number of eligible cases with one-year follow-up	111	73	343
Mean aneurysm neck angle	29°	80°	48°
Wire fracture at 12 months	0.0%	0.0%	<0.5%
Endoleaks at 12 months	9.0% total (8.1% type 2)	20.5% total (16.4% type 2)	10.5% total (8.7% type 2)

Source: Lombard Medical Technologies

Data were also presented at the Charing Cross Symposium on changes in the aneurysm diameter a year after implantation. This showed that in 97% of cases there was a decrease or no change (+/- 3mm) in aneurysm sac diameter, indicating that the aneurysm was under control. Further updates of RADAR are planned at various meetings, including the Cardiovascular and Interventional Radiological Society of Europe (CIRSE, 19-23 September) and Veith (18-22 Nov 2008).

Balasubramaniam *et al* (J Cardiovasc Surg (Torino), 2009 Apr; 50(2):139-43) published a retrospective review of 40 patients in whom Aorfix stent grafts were implanted at two centres. All patients were treated successfully, with four requiring proximal extensions due to severe neck angulation; no deaths or secondary interventions in the follow-up period and no incidence of graft migration or endoleaks were identified 12 months after the procedure. Patient notes and imaging findings were used to identify technical success, 30-day mortality, rupture rates during follow-up, postoperative complications including endoleaks, graft migration and any secondary interventions.

## Competition

Aorfix competes with a number of stent graft products, principally Cook's Zenith AAA, EndoLogix's Powerlink, Medtronic's Talent and Gore's Excluder. While Cook is the global market share leader (36%; Medtech Ventures, Feb 2008), Medtronic is thought to control around 50% of the US market and has been eroding Core's dominance there. Medtronic's Endurant has taken significant market share in Europe since its launch in mid-2008, as a result of which, through Talent and Endurant, Medtronic is now the market leader in Europe.

Exhibit 5 lists the current status of stent graft products.

**Exhibit 5: AAA stent graft competitive space**

Company	Product	Stent/graft materials/fixation	Development status/notes.
Medtronic	AneuRx AAAdvantage	Nitinol/polyester/ radial force anchors + radial force	Launched in EU in 1997; US in 1999. Indicated for neck angle <45°. Data registry available on more than 1,000 patients in clinical trials and 70,000 implants since 1996. Primarily sold in US. Was market leader but has lost share. 728-pt PIVOTAL Phase IV trial under way to compare AneuRx versus surveillance in subjects with smaller AAA (4-5cm) with respect to survival rupture and related deaths (results: April 2012).
WL Gore	Excluder	Nitinol/ePTFE/ anchors and radial force	Launched in EU in 1998, US in 2002. Neck angle <45°. More than 87,000 implants worldwide to date. New larger-diameter 31mm version launched in the US (May 2009), has been available outside the US since 2004 and has been implanted in >3,300 patients.
Cook	Zenith Flex AAA	stainless steel/ polyester/ suprarenal hooks	Launched in EU in 1998; US in 2003. Indicated for neck angle <60°. European market leader. 275-patient study for TAA under way, started March 2004; expected completion date: December 2010. trial of Zenith Low Profile AAA (16 French diameter delivery system).
Endologix	Powerlink	cobalt chromium alloy/ePTFE/sits on bifurcation	Launched in EU in 2000, US in 2004. Indicated for neck angle <60°. 230-pt longer term follow-up study (results: Dec 2010).
Medtronic	Talent AAA	Nitinol/polyester/ radial force	Launched in EU in 1998. Approved in US 2008. Market leader outside the US. Requires proximal aortic neck length of only 10mm. Phase III study >500 patients with smaller (4-5cm) AAA fully enrolled. 94-pt post-approval study under way (VITALITY). A 10-year single-centre prospective study of endovascular abdominal aortic aneurysm repair with the talent stent-graft (Espinosa <i>et al</i> , J Endovasc Ther, 2009 Apr; 16(2):136).
Terumo (Vascutek)	Anaconda	Nitinol/polyester	Launched in EU in 2005. US Phase II trial starting. Can be used in tortuous anatomy. Magnet wire technology used to facilitate the deployment of the contralateral leg.
LeMaitre Vascular	UniFit	Nitinol/ePTFE	CE marked. 90-pt UNITE trial under way (results were due March 2009). Comparison against open surgery with the primary endpoint is aneurysm exclusion at one-year follow-up.
Lombard Medical	AorFix	Nitinol/polyester/ anchors and radial force.	Uni-iliac device launched in EU in 2001; Gen-1 bifurcated device launched in EU in 2004; Gen-2 device in 2006. CE-marked for neck angles <90°.
Cordis (J&J)	Quantum LP	Nitinol/polyester/ infrarenal barbs	300-pt Phase III study completed (April 2009).
Aptus Endograft	Aptus Endovascular AAA Repair System	Nitinol/polyester	US Phase II trial under way, CE mark in the EU expected 2009. Enrolment completed for 155-pt STAPLE-2 pivotal study (12-month follow-up due in Q1 2010). Active proximal fixation using helical screws.
Medtronic	Endurant	Nitinol/woven polyester	Enrolment in study complete; data expected in H210 will be used to support PMA submission for US approval.
Nellix Endo- vascular		N/A	Preclinical. Radically different approach to aneurysm exclusion, which relies on filling aneurysm sac with a polymer. Presumably lower profile. Should primarily address and ablate type 2 endoleak.

Source: Edison Investment Research

## Sensitivities

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The sensitivities to Lombard's investment case are principally commercial and financial, while unusually there is little technical or development risk associated with Aorfix. The key sensitivity is the ability to secure a US distribution partner on attractive economic terms, ideally allowing Lombard to reach break-even without the need for a further fundraising.

We consider Aorfix to have a low development risk because of its approval in Europe and use in more than 900 patients. Moreover, a high proportion of these patients are captured in Lombard's patient registry, which should provide additional confidence for the US regulator. As a result, we have not discounted our valuation to reflect development risk.

Aorfix has a strong competitive profile, being the only stent graft system approved in Europe for treating AAAs with neck angles of up to 90°. (Endurant has approval to treat AAAs with neck angles of up to 75° in certain circumstances.) Aorfix also offers performance advantages over existing products in normal angle (0°-60°) AAA. However, as it is a small player in a highly competitive marketplace dominated by large med-tech firms, Lombard has so far found it difficult to make major inroads with Aorfix in markets where the three major players already have a significant presence.

## Valuation

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We calculate a net present value (NPV) for Lombard of £35m, equivalent to 4.2p per share, using a 12.5% cost of capital and 3% long-term growth rate. This is over twice the current market capitalisation. This is based on a financial model which assumes that Lombard is able to capture a c10% share of the AAA market by volume, around half the level that Lombard's management believes is possible.

The valuation also makes no assumption of payments associated with a US distribution agreement (management expects this to be signed within the next 12 months) or sums received from the disposal of the non-core assets, the polymer coatings divisions and the equity interest in Vascular Concepts Holdings.

## Financials

Lombard's first-half revenue rose by 14% to £1.3m, including Aorfix sales of £1.1m (+68%). The company spent £2.5m on R&D, £2m of this being accounted for by the ongoing US PYTHAGORAS trial of Aorfix. Following the restructuring administrative spending fell by 3% to £1.1m, and there was an additional £480k in redundancy costs.

Thanks to a £6m fund raising first-half net cash stood at £4m (unchanged compared with 12 months ago), and both tranches of convertible debt (issued October 2008 and January 2009) have now been fully converted into equity.

Edison's valuation and our financial model, summarised in Exhibit 7, are generated from a long-term revenue-generation estimate taken out to 2016, which envisages Lombard capturing a c10% share of EVAR procedures with Aorfix (in line with the prevalence of high-angulation AAA). This suggests that Lombard could break even in 2012 and become strongly cash generative soon thereafter. Edison's long-term revenue model is shown in Exhibit 6.

**Exhibit 6: Lombard revenue model**

	2008	2009e	2010e	2011e	2012e	2013e	2014e
US Aorfix units	77	70	70	500	1,300	2,700	5,000
US sales (\$'000)	490	840	588	3,500	9,100	18,900	35,000
US sales (£'000)	331	568	397	2,365	6,149	12,770	23,649
EU/RoW Aorfix units	270	500	800	1,200	2,000	3,000	5,000
Sales revenue from distributed sales (£'000)	654	1,008	1,728	2,765	4,896	7,344	12,240
Direct + indirect sales (£'000)	1,100	1,858	2,688	3,917	6,336	9,504	15,840
<b>W/W Aorfix sales (£'000)</b>	<b>1,431</b>	<b>2,426</b>	<b>3,085</b>	<b>6,282</b>	<b>12,485</b>	<b>22,274</b>	<b>39,489</b>
Aorfix TAA no of units	0	0	0	0	0	250	500
Aorfix TAA sales	0	0	0	0	0	1,041	2,083
<b>Total Aorfix (£'000)</b>	<b>1,643</b>	<b>2,426</b>	<b>3,085</b>	<b>6,282</b>	<b>12,485</b>	<b>23,316</b>	<b>41,571</b>

Source: Edison Investment Research

Lombard has indicated that it will reduce cash consumption to £6m in 2009. We forecast R&D spending of £5.1m in 2009 and £2.7m in 2010. The company is funded until early 2010, and intends to sign a global distribution partner for Aorfix within the next 12 months; in the meantime, it is investigating other financing possibilities.

Lombard has said that its spending plans will depend on the up-front amount it can command under a distribution deal, and as such it is difficult to put a precise amount on its funding requirement; our model considers a mid-case scenario and estimates a cash requirement of £3.1m in 2010, rising to £6m in 2011, in the absence of additional funding. Because, in the interest of clarity, our financial model does not consider partnership deals that have not yet been signed, both amounts are illustrated as increases in long-term debt.

Lombard has tax losses of £35m, representing an unrecognised tax asset worth around £10m.

## Exhibit 7: Financial model

	£'000s	2007	2008	2009e	2010e	2011e
Year end 31 December						
<b>PROFIT &amp; LOSS</b>						
<b>Revenue</b>		<b>1,007</b>	<b>1,953</b>	<b>2,691</b>	<b>3,350</b>	<b>6,547</b>
Cost of sales		(793)	(1,109)	(1,377)	(1,675)	(3,216)
Gross profit		214	844	1,313	1,675	3,331
<b>EBITDA</b>		<b>(10,783)</b>	<b>(10,846)</b>	<b>(7,597)</b>	<b>(4,512)</b>	<b>(1,879)</b>
<b>Operating profit (before GW and except.)</b>		<b>(10,941)</b>	<b>(11,085)</b>	<b>(7,747)</b>	<b>(4,662)</b>	<b>(2,004)</b>
Goodwill amortisation		(54)	(48)	0	0	0
Exceptionals		299	(598)	0	0	0
Stock option charge/other		(353)	(251)	(200)	(250)	(250)
<b>Operating profit</b>		<b>(11,049)</b>	<b>(11,982)</b>	<b>(7,947)</b>	<b>(4,912)</b>	<b>(2,254)</b>
Net interest		202	132	25	(150)	(250)
<b>Profit before tax (norm)</b>		<b>(10,739)</b>	<b>(10,953)</b>	<b>(7,722)</b>	<b>(4,812)</b>	<b>(2,254)</b>
<b>Profit before tax (FRS 3)</b>		<b>(10,847)</b>	<b>(11,850)</b>	<b>(7,922)</b>	<b>(5,062)</b>	<b>(2,504)</b>
Tax		844	1,971	607	324	180
<b>Profit after tax (norm)</b>		<b>(9,895)</b>	<b>(8,982)</b>	<b>(7,115)</b>	<b>(4,488)</b>	<b>(2,074)</b>
<b>Profit after tax (FRS3)</b>		<b>(10,003)</b>	<b>(9,879)</b>	<b>(7,315)</b>	<b>(4,738)</b>	<b>(2,324)</b>
Average number of shares outstanding (m)		64.3	132.4	782.4	841.3	841.3
EPS - normalised (p)		(15.4)	(6.8)	(0.9)	(0.5)	(0.2)
EPS - FRS 3 (p)		(15.6)	(7.5)	(0.9)	(0.6)	(0.3)
Gross margin (%)		21.2%	43.2%	48.8%	50.0%	50.9%
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
<b>BALANCE SHEET</b>						
<b>Fixed assets</b>		<b>4,561</b>	<b>3,611</b>	<b>3,533</b>	<b>3,483</b>	<b>3,458</b>
Intangible assets		2,455	2,407	2,407	2,407	2,407
Tangible assets		382	354	276	226	201
Investment in associates		0	0	0	0	0
Unquoted investments		1,724	850	850	850	850
<b>Current assets</b>		<b>4,547</b>	<b>4,437</b>	<b>3,763</b>	<b>2,738</b>	<b>4,286</b>
Stocks		886	1,498	1,341	1,086	1,591
Debtors		317	1,400	663	826	1,614
Cash		2,665	775	994	63	317
Other		679	764	764	764	764
<b>Current liabilities</b>		<b>(2,570)</b>	<b>(3,723)</b>	<b>(1,085)</b>	<b>(1,138)</b>	<b>(1,834)</b>
Creditors		(1,168)	(1,023)	(885)	(918)	(1,614)
Other creditors		(1,346)	(1,324)	(200)	(220)	(220)
Short-term borrowings		(56)	0	0	0	0
Minority interests		0	(1,376)	0	0	0
<b>Long-term liabilities</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>(3,100)</b>	<b>(6,000)</b>
Long-term borrowings		0	0	0	(3,100)	(6,000)
Other long-term liabilities		0	0	0	0	0
<b>Net assets</b>		<b>6,538</b>	<b>4,325</b>	<b>6,211</b>	<b>1,984</b>	<b>(90)</b>
<b>CASH FLOW</b>						
<b>Operating cash flow</b>		<b>(10,752)</b>	<b>(11,588)</b>	<b>(6,842)</b>	<b>(4,386)</b>	<b>(2,476)</b>
Net interest		202	192	25	(150)	(250)
Tax		1,222	1,071	1,157	604	180
Capex		(135)	(211)	(72)	(100)	(100)
Acquisitions/disposals		1,208	0	0	0	0
Financing		6,648	8,646	5,951	0	0
Dividends		0	0	0	0	0
Other		(146)	56	0	0	0
Net cash flow		(1,753)	(1,834)	219	(4,032)	(2,646)
<b>Opening net debt/(cash)</b>		<b>(4,362)</b>	<b>(2,609)</b>	<b>(775)</b>	<b>(994)</b>	<b>3,037</b>
HP finance leases initiated		0	0	0	0	0
Other		0	0	0	0	0
<b>Closing net debt/(cash)</b>		<b>(2,609)</b>	<b>(775)</b>	<b>(994)</b>	<b>3,037</b>	<b>5,683</b>

Source: Edison Investment Research

Growth	Profitability	Balance sheet strength	Sensitivities evaluation	
N/A	N/A		Litigation/regulatory	○
			Pensions	○
			Currency	◐
			Stock overhang	○
			Interest rates	○
			Oil/commodity prices	○

Growth metrics	%	Profitability metrics	%	Balance sheet metrics		Company details	
EPS CAGR 06-10e	N/A	ROCE9e	N/A	Gearing 09e	N/A	Address:	
EPS CAGR 08-10e	N/A	Avg ROCE 06-10e	N/A	Interest cover 09e	N/A	4 Trident Park	
EBITDA CAGR 06-10e	N/A	ROE 09e	N/A	CA/CL 09e	4.2	Didcot	
EBITDA CAGR 08-10e	N/A	Gross margin 09e	N/A	Stock turn 09e	182	Phone	01235 750800
Sales CAGR 06-10e	68.4	Operating margin 09e	N/A	Debtor days 09e	90	Fax	01235 750879
Sales CAGR 08-10e	45.9	Gr mgn / Op mgn 09e	N/A	Creditor days 09e	120	www.lombardmedical.com	

Principal shareholders		%	Management team
Invesco Limited		28.0	<b>CEO: Brian Howlett</b>
Craig Rennie (non-executive director)		12.8	Appointed CEO in 2005. Previously general manager of Boston Scientific (1999-2005). Mr Howlett has over 20 years' experience in the pharmaceutical industry, having served as managing director and business development director of Cobe Laboratories and Fisons.
evYsio Medical Devices ULC (Canadian med-tech firm)		12.6	
Fidelity International		9.5	
Straus Partners Funds		4.5	<b>CFO: Tim Hall</b>
Patrick Paul		4.3	
Camden Partners Strategic Funds		4.1	
Forthcoming announcements/catalysts		Date	<b>Chairman: Simon Neathercoat</b> Appointed non-executive chairman in Oct 2007. Also a NED of Derwent London and former NED of Provident Insurance and Aesica Pharmaceuticals and chairman of Highbury House Communications (2004-05). He was previously at Dresdner Kleinwort Wasserstein and Hoare Govett.
Completion of recruitment into US study		H2 2009*	
CIRSE 2009 (RADAR update)		19-23 Sep 2008	
Veith Symposium (RADAR Update)		18-22 Nov 2008	
<i>Note: *estimated</i>			

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