

### Capacity and Plant Development (continued)

Recently we have also concluded negotiations with the landlord of our equipment facility in Hong Kong to take up an additional floor. This 28,000 sq.ft. area, to be available starting the third quarter, will provide more room for our expanding R&D and marketing activities. In line with current business levels and typical of past years, we have budgeted HK\$160 million for 2003 capacity and plant development. This will provide new analytical equipment, hardware and software to support R&D, logistics and management information, stamping dies, QFN etched frame production, as well as funding the new, integrated stamped frame plant in China and the soon to be enlarged equipment facility in Hong Kong.

### Research and Development

ASM is committed to the long term success of the Company, and this means constantly pushing new technological frontiers. In this industry, companies compete not only in the current product offerings but also in innovation rate and time-to-market of new and better products. ASM has demonstrated marked strengths in this respect, with a reputation for providing customers with continuous process enhancements, packaging development support and factory automation solutions. To achieve all these, our 2002 gross R&D expenditure increased by 11% to HK\$188.4 million, representing 12.9% of our equipment sales, in line with our R&D funding guidelines.

This budget is used to support a number of product development programs. To sustain our leadership in the ball and wedge bonder markets, ASM has extensive in-house process development and close collaboration with selected customers and research institutes. All these are important in tackling technological challenges such as low k dielectric, shrinking line width and copper interconnect increasingly used in advanced wafer fabrication. An equally important objective is to meet our customers' continuous cost reduction targets. We now offer bonding process solutions for both fine and thicker copper wires, the latter mainly used to replace the larger diameter gold and aluminium wires commonly found in power devices. In addition, a high productivity gold wire bonder will be introduced this year, while in mid 2003 we will launch a fine pitch aluminium wire bonder based on advanced linear motor technology to solidify our dominant position in the chip-on-board market.

### 生產力及廠房發展(續)

最近我們亦與香港設備業務廠房之業主商議完畢，決定增租一層，樓面面積為二萬八千平方呎，第三季可遷入。該層樓會用作擴充集團的研究及發展和市場推廣業務。按照現時之事務水平及貫徹過往數年的慣例，本集團在預算中已撥出港幣一億六千萬元作為二零零三年生產及廠房發展之用。該筆款項可用作添置新的分析設備、軟件及硬件以支援研究發展、物流及管理資訊、沖壓模具、QFN蝕片生產機器，以及配合中國的綜合沖壓框架新廠房和香港即將擴充設備業務廠房的融資需要。

### 研究及發展

ASM着眼於集團的長遠成果，所以要不斷勇闖新的科技領域。行內不單止以現有產品競爭，亦以創新速率和新產品及改良產品的產銷週期一較高下。ASM在這方面一向表現出眾，以不斷為客戶提供改良工序、包裝發展技術支援及各種生產自動化解決方案，深受各方人士稱頌。為達到這些目標，本集團二零零二年度之總研究發展開支增加百分之十一達至一億八千八百四十萬港元，佔設備銷售額百分之十二點九，與集團訂立的撥款指引相符。

此預算可用於多個產品發展項目。為維持本集團在圓球及鍍焊接機市場之領先地位，ASM以內部資源積極發展工序，亦挑選客戶和研究機構，共同合作研發。這對應付各種科技上之挑戰，例如先進晶片組裝上需求日大的低k電介體、更微細的管線闊度及銅線交接尤其重要。另一個同樣重要的目標就是要達到我們的客戶減低成本的訴求。我們現在為細和粗的銅線都有提供焊接工序解決方案，後者主要用來代替電源裝置中常見的較粗的金和鋁線。集團將於今年內推出一款高產能的金線焊機，此外，為鞏固ASM在軟包裝市場的主導地位，將於二零零三年年中推出一款以直線馬達技術開發的微距鋁線焊機。

### Research and Development (continued)

Our flip chip related equipment development has also received a sizable portion of the R&D resources. We work closely with our customers to explore high performance yet cost-effective flip chip packaging for both IC and optoelectronics applications. Last year, we built our first flip chip machine, the AD900, with eutectic solder process. Now we have also developed solutions for gold and copper stud bumping capable of handling 300mm wafers. Moreover, we have enhanced our AD900 flip chip bonder with new thermosonic chip attachment capabilities. These two machines are ready for field testing during the first half of 2003.

For the sake of brevity, we will only highlight two other exciting programs on the R&D front. Over the last 2 - 3 years, we have mastered the soft solder process and designed a higher throughput yet lower cost machine than the leading competitor to address this market segment. We are now ready to launch a soft solder die bonder for power device chip attachment, which represents a growth opportunity for us because we will be entering a market in which we did not compete in the past. At the same time, we have also been active in our long term diversification plan to serve the optical communication component industry, as mentioned in last year's annual report: we have developed an advanced optical fibre alignment and welding machine capable of sub-micron accuracy. We expect to send our prototype machines for customer testing during 2003, and these new products promise to generate revenue for the Company in the near future.

### Financial

ASM's strong financial position is the result of our consistently profitable and cash generating business performance in past years, as well as our conservative fiscal policy, prudent investment planning and strict liquidity control.

In spite of the most severe downturn in the history of semiconductor and its equipment industries, ASM remained profitable and at the same time reduced our total inventory by HK\$101.4 million, or 16.7% compared with twelve months ago. As such, we generated a free cashflow of HK\$358.8 million and a return on invested capital of 19.6% in 2002.

Notwithstanding that HK\$381.6 million was paid as dividends and HK\$100.8 million was spent in capital investments during the twelve-month period, cash on hand as of 31 December, 2002 was only slightly reduced to HK\$465,569,000 (2001: HK\$478,487,000), with all capital investments being funded by the current year's depreciation of HK\$156.4 million.

### 研究及發展(續)

本集團關於覆晶設備的開發亦一直佔研究開發資源的頗大部份。我們與客戶緊密合作，為集成電路及光電元件的應用開拓高成效低成本的覆晶包裝技術。去年，我們製成了第一台採用低共熔焊接工序的覆晶焊接機AD900。現在我們已開發了可處理300mm晶片的金及銅釘頭解決方案。而且，我們亦已改良AD900覆晶焊接機，令其提供熱能超聲波焊接的能力。這兩款機器將可於二零零三年上半年作實地測試。

為免令本報告過於冗長，我們在此只再舉兩個令人驚喜的研究開發項目。過去兩三年間，我們掌握了軟焊料焊接技術，並為這個市場設計了一款比競爭對手有更高產量但成本更低的焊接機。我們正準備推出一款為電源芯片設計的軟焊料晶片焊機。以往集團從未參與這個市場，所以這是個拓展業務的良機。與此同時，我們亦正如去年年報中提及的，積極進行長遠的多元化計劃，擴闊產品系列，進軍光纖通訊配件業。我們已研發了先進的光纖調準及有超微米準確度的焊接機，並可望於二零零三年內運送原型機器給客戶實地測試。這些新產品必可在不久將來為集團帶來盈利。

### 財務表現

ASM財政狀況雄厚穩健，除了有賴過往持續錄得盈利及帶來現金進賬的業務外，亦有賴本集團多年來貫徹採取審慎的財政策略、精明的投資計劃及嚴格的流動資金管制。

儘管半導體及其設備行業出現了史無前例的嚴重衰退，但ASM去年仍繼續錄得盈餘，並且同時把總存貨量減少了港幣一億一百四十萬元，或較十二個月前降低了百分之十六點七。由此我們於二零零二年產生港幣三億五千八百八十萬的自由現金流量，及錄得資本收益率達百分之十九點六。

雖然在過去十二個月期間派發了港幣三億八千一百六十萬元股息，並斥資港幣一億零八十萬元作資本性投資，於二零零二年十二月三十一日的手頭現金只微跌至港幣四億六千五百五十六萬九千元(二零零一年：港幣四億七千八百四十八萬七千元)，而所有的資本性投資乃由是年港幣一億五千六百四十萬元的折舊所支付。

**Financial** (continued)

With no bank borrowing except for a JPY53 million loan, raised to hedge against our Yen-based assets' exposure to currency fluctuation, ASM achieved an all bank debt to equity ratio of only 0.2% in 2002. The Group's shareholders' funds decreased slightly to HK\$1,756,072,000 as of 31 December, 2002 (2001: HK\$1,829,047,000). Since there were no long-term borrowings, gearing of the Group was zero, the same as for the past three years.

Due to a significant drop in interest rates, interest income only amounted to HK\$6.5 million for the year. Receivables were tightly monitored during the year, resulting in 80.8 days sales outstanding. Management has closely scrutinized all receivable accounts and concluded that bad debt exposure, if any, is immaterial and well covered by provisions made in conformity with the Company's policy. With our rigorous monitoring of current assets and current liabilities, current ratio stood comfortably at 3.96. Order backlog was US\$35 million as of 31 December, 2002.

Having established a solid foundation in the microelectronics market, the Group intends to further its organic growth strategy in the near term. With no short term need for major cash outlay and in view of our strong liquidity and rising equity base, we aim to operate the Group with the optimum shareholder fund and return any excessive cash holdings to our shareholders. The strong financial position of the Company should allow ASM to weather the slowdown and sustain leadership position in its industry.

**財務表現** (續)

除一項五千三百萬日圓貸款以對沖日圓資產面對的匯率波動外，ASM並無任何銀行借貸，於二零零二年，銀行貸款對股本比率僅為百分之零點二。於二零零二年十二月三十一日，集團的股東資金輕微下降至港幣十七億五千六百零七萬二千元（二零零一年：港幣十八億二千九百零四萬七千元）。如過去三年一樣，集團並無長期借貸，資產負債比率為零。

由於利率大幅下調，本年度的利息收入只有港幣六百五十萬元。於年內集團緊密監察應收賬款，令應收賬款週轉率維持在八十點八天。管理層已詳細審查所有應收賬款，認為縱使出現任何壞賬風險，亦屬微不足道，且有關賬款已依據公司政策撥備。由於集團嚴格監控流動資產及流動負債，令流動比率處於三點九六的充裕水平。於二零零二年十二月三十一日，積存訂單為三千五百萬美元。

本集團已在微電子市場奠定穩固基礎，現計劃在不久將來進一步加強推動本體增長之策略。由於短期內並無重大現金支出，加上本集團擁有充裕的流動資金和股本增加的情況下，管理層旨在預留適量的股本作集團營運之用外，將剩餘現金回饋予股東。本集團穩健的財政狀況應有助ASM安然渡過市道衰退的困境，並繼續於業內保持領導地位。