Overview

The semiconductor industry experienced another rough year in 2002. The purchase of IC assembly and packaging equipment for expansion was simply not an active strategy in many companies. As a result, all our leading competitors suffered both revenue declines and operating losses for the second year in a row. In sharp contrast, we achieved gains in both turnover and net profit. Indeed, maintaining our strong impetus towards enlarging our market share, we raced to the number one position in the assembly and packaging equipment industry.

Such achievement is no accident. Rather, it represents a combination of the determination and hard work of every employee coupled with the Company's prudent business strategy in the quest for industry leadership. This manifests itself in the solid business foundation laid over the years by our widely accepted products in diversified territorial and application markets, an extremely efficient cost structure and continuous success in new product introduction. Our strength is also well demonstrated from a historical perspective: we gained market share in both good years (e.g. 1999 and 2000) and bad years (e.g. 2001 and 2002) for the industry.

If we examine the results for year 2002 more closely, we can gain an insight into the market and consequent opportunities for ASM. It is true that the world's weak economy, war uncertainty and volatile stock markets across the globe are generally unfavourable conditions for business. Yet we have already seen some signs of improvement. In 2002, the Group's revenue from the second half year exceeded that of the first by 23.3 %. With many IDMs and subcons setting up their factories in China, this fast growing territory became our second largest market last year, representing 15% of the Group's turnover.

Major industry analysts have predicted double-digit recovery for the semiconductor and the assembly & packaging equipment industries in 2003. Although customers necessarily remain cautious in adding capacity in the near term, many of their equipment purchases for IC packaging are related to technological advancements and new package types like QFN. As such, ASM has a clear advantage: whilst most of our competitors are cutting headcount and projects, we have in contrast been putting more resources into technology and product developments. This has and continues to provide a significant payoff for the Company as detailed in the next few sections below. On the marketing front, we are also aggressively building strategic partnerships with customers through packaging development support.

總覽

半導體業在二零零二年再次經歷了艱苦的一年，許多公司皆不以購買集成電路裝嵌及包裝設備作擴展業務之積極策略。因此，我們所有主要競爭對手連續第二年收益下降、營運虧損。但本集團則剛好相反，無論營業額及淨溢利均有所增長。而且，在我們繼續積極擴大市場佔有率之努力下，成功進佔裝嵌及包裝設備業第一位。

本集團能達此佳績誠非僥倖，實有賴各階層員工努力不懈，以及本集團為成為業內翹楚而訂下審慎的營運策略。這正好反映出本集團多年來透過在不同地域及應用市場推銷廣受歡迎之產品、訂立有效的成本結構及不斷創新產品，已成功建立穩固的基礎。我們之優勢在過往業績亦可見一斑：無論在半導體業的全盛時期(一九九九及二零零零年)或困難時期(二零零一及二零零二年)，我們的市場佔有率皆有增長。

如果我們仔細研究二零零二年的業績，即能洞察市場實況及ASM的商機所在。 全球經濟疲弱、戰爭一觸即發，以及環球股市反覆欠穩誠然對商業帶來負面影響，但我們已看到市道好轉的先兆。集團在二零零二年下半年的收益比上半年增長達百分之二十三點三。由於眾多集成裝置製造商和包裝公司在中國設置廠房，這個發展迅速的地域成為我們去年第二大市場，佔集團總營業額百分之十五。

業界主要分析機構均預測半導體和裝嵌及包裝設備業於二零零三年會回復以雙位數字增長。雖然近期客戶在增加產能時格外謹慎，他們的大部份採購都屬於技術提升類別及新包裝類別(如QFN)。正因如此，ASM之優點顯而易見：當大部份其他競爭對手要削減人手和縮減項目規模，我們反而投入更多資源來發展技術和產品。以下數節會詳述這個策略如何在過往及未來為本集團帶來重要的好處。此外，在市場推廣方面，我們亦透過設立包裝發展技術支援，積極與客戶建立策略夥伴關係。

Overview (continued)

We believe these proactive measures, when combined with dedicated employees who put customer satisfaction as our highest priority, will ensure that ASM continues to outpace our industry peers. ASM will certainly remain a favourable investment holding for our shareholders during the current poor economic environment. Business conditions may still be difficult, but this will not deter us from making advanced products to meet our customers' needs. We believe that tough times never last, but tough companies do - and we are determined to soar higher on wings like eagles in all circumstances.

總覽(續)

我們相信這些主動的措施，加上本集團員工竭盡所能、以客為先，必能令ASM在業內保持領導地位。在目前經濟不景的環境下，ASM定會繼續成為投資上佳之選。我們無懼營商條件困難，堅持為客戶研製最先進的產品，以達到他們的需求。我們深信艱難日子終會過去，惟勇於面對艱難者永久長存；我們決心如雄鷹展翅，在任何逆境之中奮勇高飛。

Market and Product Development

Equipment Division

In a year when all our leading competitors faced sequential revenue decline and industry analysts estimated a market demand reduction of 15 - 20%, ASM, unique in our industry, achieved turnover growth of 17.5% to reach US$187.1 million. While our diversified products, broad customer base and wider application markets provided us with more resilience during the downturn, our continuous gain in market share across all products drove this unparalleled performance. We have overtaken the leading competitor, who dominated the industry over the past few decades, by 4.7% in 2002, and in fact surpassed this company in each of the three recent quarters.

Both our wire and die bonders showed positive results. Launched in mid 2002, our Eagle 60 wire bonder, the industry's first production machine capable of 35μm fine pitch bonding, furthered strengthened ASM's leadership and protected our market position. As observed during the past few months' customer benchmarking exercises, the Eagle 60 demonstrated superior throughput, bond-quality consistency and process capability especially in ultra fine pitch applications. Our volume production has simultaneously migrated to this new model, and we are now ready to ramp up output when there is a higher inflow of orders. Likewise, our innovative, high speed IC and discrete bonders have been steadily gaining ground with their abilities to handle very small and thin dies, stacked dies and particles-controlled image sensors applications.

Other exciting new products, such as our flip chip bonder, die sorter, matrix test handler and tape & reel finishing system all progressed through their introduction phase. Each product has been successfully delivered to multiple customers and some are already enjoying repeat orders. Although still serving the same customers or related activities, these new products opened up new market segments where we did not compete in the past, such as in flip chip packaging, LED die fabrication and IC product testing and packing. In due course and with our continuous efforts, these new products are expected to generate higher revenue and reinforce ASM's business foundations.

市場及產品發展

設備系列

過去一年當主要競爭對手收益持續減少，而行業分析機構估計市場需求收縮百分之十五至二十，ASM在行內卻一枝獨秀，營業額增長了百分之十七點五，達一億八千七百一十萬美元。市道下滑時，我們以多元化產品、客源廣泛和更大的應用市場，增強了復原能力；加上我們全線產品的市場佔有率都持續上升，因此創下驕人業績。在二零零二年，我們領先曾雄霸本行業數十年之主要對手百分之四點七，且於最近三個季度的銷量均超越此競爭對手。

我們的焊線機和管芯焊接機皆有良好成績。於二零零二年中旬推出的Eagle 60焊線機，是業內首部可作35μm微距焊線之焊線機，進一步鞏固了ASM的領導地位和市場基礎。過去數月間客戶進行的基準測試顯示，尤其在超微距焊線的應用上，Eagle 60生產量龐大、焊接質素穩定，而且製程能力令人滿意。同時這新型號已邁向量產階段，我們已準備就緒，待訂單增多時即可把產量調高。同樣地，我們高速嶄新的集成電路和獨立焊接機，善於處理極細薄管芯、層疊式管芯和粒子操控影像感應的應用，因此銷量穩步上升。

其他令人驚喜的新產品，例如覆晶焊接機、管芯分類機、距陣測試處理器以及卷軸完成系統等，皆已推出市場。每種產品已成功付運予多家客戶，其中部份產品訂單陸續而來。這些產品雖然售予現有客戶，但其實開拓了我們以前從未涉足的新市場，如覆晶片包裝、LED管芯組裝以及集成電路產品測試及包裝。在我們不斷努力之下，這些新產品相信不久即能帶來更大收益，並令ASM之業務基礎更穩健。

Market and Product Development (continued)

Leadframe Division

With the global IC unit volume on the rise, SEMI estimated that the leadframe market grew 10.1% in 2002. ASM raced ahead of the industry with turnover increasing by 21.6%, achieving US$49.6 million as leadframe revenue, representing 21% of the Group's total sales.

To enhance long-term competitiveness, management made the difficult decision last year to consolidate all stamped frames production activities currently in Hong Kong and China into a new China plant, starting mid 2003. It is the first time ASM has ever closed a plant in our corporate history and over two hundred loyal employees in Hong Kong will be affected. In addition to expanding our spot silver plating capacity to cope with an increasing volume, we have also enlarged our palladium plating output to a number of leading IDM customers to meet the electronic industry's lead-free timeline.

While the semiconductor industry still requires more time to overcome some cost hurdles such as unit singulation by sawing and leadframes with half-etched tips, QFNs have been increasingly designed into the latest generation of wireless products. In fact, QFNs have an excellent chance to proliferate with their improved thermal dissipation, smaller form factor and potentially lower cost package than those in the market today. In the recent years, ASM has provided strong packaging development support to our customers and offers a total solution including both equipment and leadframes. In preparation for meeting upcoming growth in volume demands, we have been installing reel to reel etching equipment and plating machines to capitalize on this market opportunity.

Capacity and Plant Development

Due to a soft market last year, product demands did not call for capacity expansion. Instead, ASM's management continued our drive for capability and productivity enhancements, focusing on quality, yield improvements, staff training and better utilization of the CNC machines already installed. A good portion of our production capacity was allocated for our R&D prototypes and pilot production to expedite time-to-market of our new products. As a result, capital investments in 2002 amounted to HK$100.8 million, about one third less than our original budget.

Yet it was also an opportune time to make strategic decisions for our leadframe business. As outlined in the Chairman's Statement above, to enhance our competitiveness we have decided to consolidate all stamped frames production in a 260,000 sq.ft. plant in Fu Yong, a town 5 minutes from the Shenzhen airport and 30 minutes from the Hong Kong border by expressway.

市場及產品發展(續)

引線框架系列

隨著全球集成電路產量增加,SEMI估計引線框架市場在二零零二年增長百分之十點一。結果ASM遠遠超越同業,營業額增加了百分之二十一點六,達至四千九百六十萬美元,佔集團總營業額百分之二十一。

為增強競爭力配合集團長遠發展,管理層去年作出一個難於取捨的決定,由二零零三年中開始,將目前香港和中國大陸所有沖壓框架生產運作集中在國內一所新廠。這是ASM創立以來首次關閉廠房,約有二百餘香港僱員將受影響。 除擴展局部鍍銀產能以應付日益增加的需求外,我們亦為若干主要集成裝置製造商客戶增加了鍍鈀產量,以符合電子業的無鉛生產時限。

當半導體業仍需克服某些工序或組件成本高昂的問題,例如晶元要以切割分離和連半蝕末梢的引線框架,QFN已為配合新一代無線產品而越來越多設計。事實上,由於QFN的散熱經過改良、尺寸輕巧,而且很可能較今天市場上其他包裝方法更便宜,所以大有發展機會。 近年來,ASM向客戶提供包括設備及引線框架的全套方案,及完善的包裝發展技術支援。為配合將來日益增加的產量需求,我們已著手安裝卷軸至卷軸蝕片設備及電鍍設備,以充份利用這個市場機會。

生產力及廠房發展

由於去年市道放緩,並沒有因為產品需求量大而需要增加額外的生產力。ASM管理層繼續致力改良產能及生產效率,集中於提升品質、改進良品率、培訓員工及更充份利用現有的電腦數控機床。我們頗大部份的生產力用作研究發展原模及以試驗式生產來加快新產品的產銷週期。因此,二零零二年之資本性投資為一億零八十萬港元,比原預算減少了三份之一。

但這也是一個利好時機為引線框架業務訂立策略決定。正如以上主席報告中所述,為了加強競爭優勢,我們決定將沖壓框架的所有生產工序集中在佔地二十六萬平方呎的福永廠房內,該鎮離深圳機場只有五分鐘車程及離香港邊境三十分鐘高速公路車程。