

## OVERVIEW

Driven by robust demand from the personal computer and telecommunication sectors and building on the heavy momentum it gathered in 1999, the semiconductor industry experienced three strong quarters in the year 2000. When the market for electronic goods softened, the industry entered into an inventory adjustment phase that began in October and has continued since. Overall, the semiconductor industry registered a 37% growth to US\$204 billion last year.

With our world-class products and a solid business foundation laid over the last decade, ASM seized this market opportunity and delivered outstanding results. Group turnover more than doubled to reach US\$512.5 million, with our die and gold wire bonders contributing the major portion of the increase. Sales growth was experienced in all products and territorial markets.

In spite of the market softening towards the end of 2000, our strong order backlog resulted in our second half billings being 6% higher than the first half year, which itself had already registered a 61% increase over the preceding six months.

The quantum leap in equipment revenue led to improved gross and net margins, resulting in a record profit of HK\$1.08 billion for the Group and an unprecedented profit growth rate of 227%. In fact, this is the second consecutive year that we attained record turnover and unprecedented profit. We also achieved high asset utilization and excellent returns for our shareholders, with an inventory turn of 6.91, and return on sales and return on equity boosted to 28.9% and 61.0% respectively.

The second half of the year saw ASM launch a new generation of gold and aluminium wire bonders, the AB339 Eagle and the AB520. In addition to preparing ourselves for volume production, we have successfully converted the existing gold wire bonder customers to the enhanced version. Furthermore, we sent the new Eagle wire bonder to a number of potential customers for field evaluation, and preliminary feedback from these benchmarking tests is encouraging.

## 總覽

在個人電腦及電訊業的強勁需求帶動下，加上在一九九九年凝聚了的龐大動力，半導體工業在二零零零年錄得三季強勁增長。及至電子產品市場放緩後，半導體工業隨即於十月份進入存貨調整階段至今。整體而言，半導體工業去年錄得增長率高達百分之三十七，總值增至二千零四十億美元。

ASM集團以其世界級產品以及在過往十年奠定的穩固業務基礎，得以把握這個市場機會，並締造傑出的業績。集團營業額倍增，高達五億一千二百五十萬美元，其中尤以管芯及金線焊機所佔升幅最大。各類產品及地域市場之銷售額均錄得增長。

儘管二零零零年底市場放緩，集團積存訂單依然強勁，以致下半年度銷售額較上半年度高出百分之六，而上半年度與其前六個月相比之下，升幅亦高達百分之六十一。

設備銷售額大幅躍進，導致毛利率及純利率提升，遂令集團盈利創下港幣十億八千萬元高紀錄，而增長率亦創下前所未有的百分之二百二十七的佳績。事實上，此為集團連續兩屆創新營業額及空前盈利紀錄的年度。集團更達致高水平的資產使用率，並為股東締造超卓的回報率。其中存貨周轉率達6.91，而銷售回報率及資本股東權益回報率分別提升至百分之二十八點九及百分之六十一。

ASM在下半年推出新一代金線及鋁線焊接機 AB339 Eagle 及 AB520型。除了已準備大量投產外，集團更成功說服現有的金線焊接機客戶改用此新升級型號。此外，集團更付運Eagle 焊線機予其他客戶，供作實地評估之用，而此等基準測試的初步反應甚為令人鼓舞。

**OVERVIEW (continued)**

Leveraging our broad-based assembly process technologies and expertise in microelectronics packaging and factory automation, we differentiate ourselves from other competitors by offering technical support to customers' packaging development. This business strategy helps to solidify our strategic partnership with many customers, as well as enhancing the marketability of our equipment and leadframe products. Currently we are providing technical solutions to customers in the design of QFN leadframes, the establishment of various CSP manufacturing processes and addressing their in-line factory automation needs.

Due to the semiconductor industry's current inventory correction and the slowing of the U.S. economy, it appears we have a challenging year ahead of us. However, it is also a golden opportunity to gain market share. With our diversified products addressing different application markets and some of the new hot CSP packages, our spread of customers and territorial bases, our significantly improved market position gained in the last three years and our strong balance sheet, we believe ASM will once again weather the industry fluctuation and come out ahead of its competition.

**總覽 (續)**

集團利用廣泛基礎的組裝工序技術，微電子包裝及自動化廠房的專業知識，為客戶提供技術以支援他們的包裝發展需求，從而在競爭對手中脫穎而出。這個業務策略有助鞏固集團與許多客戶之間策略性夥伴關係，以及提升集團旗下設備及引線框架產品的銷售能力。目前我們向客戶提供的技術，包括QFN引線框架設計、各種CSP生產工序，以及解決客戶的整線式生產自動化需要。

由於半導體工業目前進入存貨調整以及美國經濟放緩，展望未來一年將會充滿挑戰性。然而，這也是我們爭取市場佔有率的黃金機會。憑著集團旗下各種順應不同應用市場的多元化產品以及一些嶄新如CSP包裝等熾熱需求之能力、現有廣泛的客戶及地區基礎、集團在過往三年來顯著改善的市場地位，以及雄厚的財政狀況，我們相信ASM將會再度安然過渡業內波動，並可在競爭中脫穎而出。

## MARKET AND PRODUCT DEVELOPMENT

### Equipment Division

Last year ASM achieved a record turnover of US\$437.5 million with an unprecedented growth rate of 129%, and now ranks second by revenue among the world's semiconductor assembly equipment manufacturers. Equipment sales represent 85.4% of the Group's turnover.

With other leading assembly equipment manufacturers only growing around 75% in calendar year 2000, ASM has clearly been gaining market share. In fact, in the 4th quarter our die and wire bonder revenue alone already exceeded that of the industry leader. Die and gold wire bonders contributed slightly more than 70% of our equipment turnover, while the balance was spread over aluminium wire, factory automation and various types of package related equipment, creating a healthy product portfolio.

More customers, especially for addressing high-density matrix substrates, have accepted our IDEALine factory automation. Over 100 complete or segmented lines are now operating in the field at various customer factories. We expect the market momentum to continue.

The AB339 Eagle product transition took place as planned. We successfully converted our existing wire bonder customers to this new model, as well as introducing it to a number of potential customers who are running evaluations. Initial results of these field tests are encouraging.

Good progress has also been made with our various types of post-encapsulation equipment. With the wider adoption of chip scale packages (CSP) especially for CSBGA and QFN, we have carved out a leading position in the saw singulation, pick and place system market sector. We also provided strip-testing for both leaded and ball array packages, standalone or integrated with other backend processes, and have installations in three factory locations. ASM is currently the forerunner in this strip-testing arena, which may prove to be a far more cost-effective testing solution for some integrated circuits (ICs).

## 市場及產品發展

### 設備系列

去年ASM創下營業額高達四億三千七百五十萬美元，增長率亦達百分之一百二十九的空前高紀錄。以收益計名列全球第二大半導體組裝設備生產商。設備銷售額佔集團營業額百分之八十五點四。

其他著名組裝設備生產商於二零零零年內錄得增長約百分之七十五，由此可見ASM之市場佔有率顯然有所增加。事實上，單是在第四季內，集團名下管芯及焊線機收益已超逾業內之領導者。管芯及金線焊機佔設備系列營業額稍多於百分之七十，而其餘則為鋁線、生產自動化及各式與包裝有關設備，組成一個穩健的產品組合。

現在越來越多客戶，尤其是致力生產高密度的矩陣底板(high-density matrix substrates)者，現已接受集團的IDEALine生產自動化設備。目前在各地客戶工廠內投入作業的全套或分組生產線超過一百套。預料這方面將會保持市場動力。

AB339 Eagle產品過渡現正按計劃進行。集團已成功說服現有焊線機客戶改用新型號，同時向若干客戶進行推介，已獲接納進行評估。這方面的初步成果令人鼓舞。

各類後塑封設備亦取得美滿進展。隨著晶積度包裝(CSP)，尤其是CSBGA及QFN等包裝獲得市場普遍採用，集團現已在鋸分系列(saw singulation)、拾置系列(pick and place)等後塑設備市場奠定了領導地位。集團亦提供獨立式或與幕台工序整合式並適用於引線及焊珠排列包裝等之整片測試系統，並已在三間廠房安裝完成。ASM集團現已成為整片測試的先驅，事實證明這是某些集成電路(IC)的較具成本效益的測試方案。