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UMC IS...

...RESHAPING THE SEMICONDUCTOR INDUSTRY

Pure-play foundries are a crucial part of the current shift sweeping the semiconductor industry as more and more high-tech companies are realizing the competitive benefits of outsourcing their cutting-edge designs to foundries. Without the burden of high manufacturing costs, design companies are able to concentrate their efforts on creating next generation product designs. As a world leading independent foundry, UMC stands out by offering our customers world-class service and delivering industry-leading manufacturing technologies.





→ After Development Inspection, Operators inspect the quality of individual 300mm wafers.

→ Over-Head Transfer System. Fab 12A's state-of-the-art FOUP automatic transfer system safely and efficiently transports wafer pods between stations with just the push of a few buttons.



The background image shows a vast, brightly lit semiconductor manufacturing plant. In the foreground, a worker wearing a white cleanroom suit and a red headband is seen from the side, working near a piece of equipment. The ceiling is high and features a complex network of blue overhead cranes and white ductwork. A large, white, box-like piece of machinery with a red panel and the number '07' is suspended from the ceiling. The overall atmosphere is one of a high-tech, industrial environment.

...INVESTING FOR OUR CUSTOMERS' GROWTH

As foundries take on an increasingly centralized role in the manufacture of the world's integrated circuits (ICs), customers are taking advantage of the latest in cutting-edge semiconductor process technology, design services and manufacturing processes. UMC's continued investment in these critical areas directly benefits UMC customers by giving them the necessary resources to increase their overall market competitiveness and pave the way for growth and market success.

A modern interior scene featuring a brown leather sofa, a white lamp, and a large window with a grid pattern. The text is overlaid on the sofa and window area.

...PARTNERING FOR THE SUCCESS OF TOMORROW'S MARKET LEADERS

Many of today's start-up IC design companies will undoubtedly grow to become tomorrow's market leaders. That's why we partner with our customers through every part of their engagement with UMC from design-in to product delivery. With quick and easy access to our technology through user-friendly customer service programs and comprehensive design resources, market leaders of today and tomorrow can rely on UMC as their foundry partner for success.



→ Engineers check the wafer processing status at a 300mm coater/developer station.



...RESPONDING TO THE NEEDS OF A NEW GENERATION OF IC DESIGNERS

Tomorrow's technology products won't be powered by today's technologies. Instead, they will be powered by IC designs taking advantage of next generation semiconductor manufacturing and processes. UMC is empowering the next generation of IC designers by providing open access to the world's most advanced technologies such as copper interconnects, 300mm manufacturing, low-k dielectrics and embedded DRAM to enable tomorrow's system-on-chip (SOC) designs.



Global Acq. Transfer Network





...BUILDING A GLOBAL SERVICE NETWORK


The semiconductor industry is a global industry. Today, integrated circuits might be designed in North America or Europe, manufactured in Taiwan, and assembled in Asia. UMC has established an extensive service network with offices that span throughout these key semiconductor regions to satisfy the needs of our global customers. UMC's worldwide service network provides customers with convenient access to regional support, increasing the ease and speed in which global customers can access our foundry services.





...LEVERAGING THE POWER OF THE INTERNET

Three years ago, UMC achieved an industry first with the introduction of the My UMC online service portal, providing customers with 24-hour Internet access to individual account information. Today, My UMC has evolved to provide an even broader range of advanced e-service applications, services that allow customers to track individual orders throughout the entire manufacturing process, manage corporate account information, and even book manufacturing capacity in advance through the industry's first Available-to-Promise (ATP) online system.

A person wearing a full white cleanroom suit, including a hood and mask, stands in a photolithography area. The background is filled with a warm, orange glow from special lighting, with various pieces of equipment and structures visible. Another person in a similar suit is partially visible in the background. The overall scene is a clean, industrial environment.

→ Wafer patterns are developed in the fab's photolithography area, which can be distinguished by its special colored lighting.

...DELIVERING TECHNOLOGIES THAT ARE ENABLING A WHOLE NEW WORLD OF PRODUCTS

UMC continues to be the Foundry of Choice for leading IC companies by responding to the needs of customers through our continued customization of both technologies and services. UMC's commitment to providing access to the latest in process and manufacturing technologies, service, and support is allowing today's IC designers to bring to life tomorrow's technology products.



Robert H.C. Tsao



John Hsuan

Dear stockholders,

In 2001, the global semiconductor industry experienced a severe downturn. In this environment, UMC's revenue fell from NT\$105.1 billion in 2000 to only NT\$64.5 billion in 2001. The company also slipped from profitability with earnings dropping from NT\$50.8 billion in 2000 to a loss of NT\$3.2 billion in 2001. Although we managed to achieve our financial forecast for revenue and earnings figures for 2001, the magnitude of the decline was unprecedented.

In 2000, our company's performance in the European market was outstanding, particularly in the communications sector where we secured major customers such as Alcatel, Infineon, and ST Microelectronics. By comparison, our competitor, TSMC was unable to build a meaningful market position in the region. However, due to the poor performance of the communications sector in 2001, our success in building market share in this sector in 2000 caused us to under-perform our competitor this year. As other areas of the industry, such as PC and Consumer related markets, remained relatively stable, our competition suffered less in terms of revenue falloff.

Although our major competitor, TSMC, has taken every opportunity to promote the idea that its market share leadership grew significantly over the course of the year, careful analysis shows that UMC was successful in building up a dominant market position for foundry services in the Asia, Japan and European markets. In fact, our major competitor only managed to establish a lead in the North American market, with almost 80% of its revenue coming from North American customers, and the vast majority of this revenue coming from a small number of large-volume customers. Therefore, it is clear that any claims of increased market share were limited to the North American market, and do not reflect global foundry market leadership.

Although UMC's revenue and earnings suffered in 2001, the industry slowdown provided us an opportunity to reorganize and re-evaluate our internal policies and operations. During the year, in order to enhance competitiveness, we made considerable adjustments to our Marketing, Sales and R&D departments, as well as in quality control and fab operations. We have also re-evaluated our investment and partnership policies, and have taken steps that we believe will significantly benefit UMC in the future. One example was our decision to forgo further participation in our joint venture with Hitachi, Trecenti Technologies. Due to our inability to take management control over the joint venture foundry, we decided to sell our equity stake back to Hitachi. Although we discontinued our participation in Trecenti, during the course of this cooperation, we gained valuable experience in 300mm manufacturing and were able to recoup

the majority of our original investment in the joint venture. At the same time, we stopped incurring any financial losses associated with its operations while maintaining our good relationship with Hitachi. We will continue to re-evaluate our business strategies going forward, and are confident that future operations will be more focused, rational and transparent.

Looking ahead, we have abundant reason to be optimistic and confident. Due to the massive cost associated with investing in 300mm facilities, most integrated device manufacturers (IDMs) become increasingly reluctant to bear the investment burden associated with building and equipping a 300mm fab. Therefore, it is clear that outsourcing to foundries will grow in the coming years.

From a technology standpoint, we have built a remarkable track record, with our accomplishments being increasingly recognized by others in the industry. Texas Instruments' CEO, Tom Engibous, recently commented that UMC's 0.13um process is in the same technology league as that of Intel, TI and IBM. In order to deliver even more advanced process technologies, UMC has already laid the groundwork for the development of 90-nanometer, 65-nanometer, and 45-nanometer devices, and continues to enhance its research and development planning and development roadmaps.

As a further testament to our technology leadership, in February of 2002, AMD signed a long-term agreement with UMC. This alliance includes many exciting aspects such as R&D for high-speed CPU applications, a volume wafer manufacturing agreement, and the establishment

of a joint venture 300mm facility in Singapore. This partnership ensures that we can provide "ultimate performance processes" to our foundry customers for the foreseeable future. Consequently, it enables UMC to enjoy a significant and long-term advantage over its competition in the field of process technology regardless of any inflated claims they may choose to make. Such strategic partnerships will allow us to further expand our market share, and establish ourselves as the leader in the foundry industry.

As the semiconductor industry recovers in 2002, we expect our operations to improve greatly over 2001. We will also continue to work our hardest for the benefit of our customers, stockholders, and employees.



Robert H.C. Tsao
Chairman, UMC



John Hsuan
CEO, UMC

CORPORATE REVIEW