UBS

Global Equity Research

Americas

Electric Components & Equipment

# UBS Investment Research

# MEMC Electronic Materials

| | |
|---|---|
| Rating | Buy 2 |
| | *Unchanged* |
| Price target | US$27.00 |
| | *Prior:US$21.00* |
| Price | US$20.77 |

RIC: WFR.N BBG: WFR US

27 September 2005

## Raising Estimates and Price Target

### ■ Checks indicate early signs of silicon wafer pricing power

Our industry research suggests that MEMC's largest competitor Shin-Etsu (Japan) began to increase semiconductor wafer prices to Samsung by 5% in 3Q05. We now estimate MEMC's blended average selling prices will increase 4% in 2006 compared to 1% previously.

### ■ MEMC's pricing power likely materializes in 1Q06

We believe 35-40% of MEMC's annual contracts are up for renewal in late November and early December. With polysilicon spot prices nearing $80/kg and contract prices about $60/kg (versus $30/kg at the end of 2004), our channel checks suggest that MEMC has declined multiple customer requests in 3Q05 to renegotiate contracts early.

### ■ Increasing 2006 Estimates

We raised our 2006 revenue, margin, and EPS estimate for MEMC given our increased confidence in the company's pricing power next year. We forecast 2006 EPS of $1.60 (previously $1.41) on revenues of $1.3B (+16.8% revenue growth YoY; previously 12.9%), and gross margin of 43.0% (previously 40.4%).

### ■ Valuation: Maintain Buy 2 rating, Raising PT to $27 from $21

Our new 12-month price target is based on applying a 17x multiple (up from 15x) to our new 2006 EPS estimate of $1.60. We believe a higher multiple is justified given our view that MEMC likely enters the solar wafer market in 2006, and note this is still a 22% discount to its Japanese peers Shin-Etsu and Tokuyama.

| Highlights (US$m) | 12/03 | 12/04 | 12/05E | 12/06E | 12/07E |
|---|---|---|---|---|---|
| Revenues | 781 | 1,028 | 1,118 | 1,307 | - |
| EBIT | 143 | 259 | 301 | 444 | - |
| Net income (UBS) | 117 | 225 | 273 | 371 | - |
| EPS (UBS, US$) | 0.53 | 0.90 | 1.10 | 1.60 | - |
| Net DPS (UBS, US$) | 0.00 | 0.00 | 0.00 | 0.00 | - |
| **Profitability & Valuation** | **5-yr hist. av.** | **12/04** | **12/05E** | **12/06E** | **12/07E** |
| EBIT margin % | -3.7 | 25.2 | 26.9 | 34.0 | - |
| ROIC (EBIT) % | -3.6 | 58.4 | 49.0 | 58.7 | - |
| EV/EBITDA x | 18.2 | 7.3 | 12.9 | 8.9 | - |
| PE (UBS) x | -7.3 | 10.5 | 18.9 | 13.0 | - |
| Dividend yield % | 0.0 | 0.0 | 0.0 | 0.0 | - |

*Source: Company accounts, Thomson Financial, UBS estimates. UBS adjusted EPS is stated before goodwill-related charges and other adjustments for abnormal and economic items at the analysts' judgement.*

*Valuations: based on an average share price that year, (E): based on a share price of US$20.77 on 26 Sep 2005 18:55 EDT*

**Trading data**

| | |
|---|---|
| 52-wk. range | US$21.26-8.05 |
| Market cap. | US$4.34bn |
| Shares o/s | 209m |
| Free float | 37% |
| Avg. daily volume ('000) | 2,022 |
| Avg. daily value (US$m) | 36.4 |

**Balance sheet data 12/05E**

| | |
|---|---|
| Shareholders' equity | US$0.70bn |
| P/BV (UBS) | 6.7x |
| Net cash (debt) | US$0.05bn |

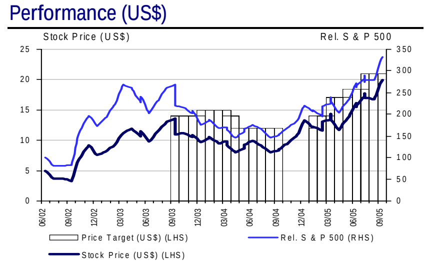
**Forecast returns**

| | |
|---|---|
| Forecast price appreciation | +30.0% |
| Forecast dividend yield | 0.0% |
| Forecast stock return | +30.0% |
| Market return assumption | 9.0% |
| Forecast excess return | +21.0% |

**EPS (UBS, US$)**

| | 12/05E | | | 12/04 |
|---|---|---|---|---|
| | From | To | Cons. | Actual |
| Q1 | 0.23 | 0.23 | *0.23* | 0.16 |
| Q2 | 0.26 | 0.26 | *0.26* | 0.20 |
| Q3E | 0.29 | 0.29 | *0.29* | 0.27 |
| Q4E | 0.32 | 0.32 | *0.32* | 0.27 |
| 12/05E | 1.10 | 1.10 | *1.10* | |
| 12/06E | 1.41 | 1.60 | *1.38* | |

**Performance (US$)**




*Source: UBS*

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This report has been prepared by UBS Securities LLC

ANALYST CERTIFICATION AND REQUIRED DISCLOSURES BEGIN ON PAGE 11

## Early Signs of Silicon Wafer Pricing Power Appearing

- Our industry research suggests that MEMC's largest competitor Shin-Etsu Handotai (Japan) has begun to increase silicon wafer prices by 5% to Samsung in 3Q05. We view this to be consistent with the continued tightening supply of polysilicon (a raw material) required to make silicon wafers. We expect increasing polysilicon prices (due to the demand from solar panel companies) to likely drive wafer prices up, as producers without their own captive supply of polysilicon such as Shin-Etsu pass on the higher cost of polysilicon to semiconductor customers.

- Given these recent price increases by Shin-Etsu, we have raised our estimate of MEMC's price increases to 4% in 2006 (compared to 1% previously), as we believe that MEMC will also likely be successful in raising wafer prices.

- We believe that MEMC will begin to see benefits from higher prices of silicon wafers in early 2006, as we believe that 35-40% of the company's silicon wafer contracts expire in late November and early December.

## Industry research suggests polysilicon prices are likely to continue to rise

- Our recent discussions with industry contacts continue to indicate that:

  - Prices for polysilicon have continued to rise as demand from the solar cell industry continues. Polysilicon spot prices are reported to be in the $80/kg to $85/kg range, while contract prices are in the $55/kg to $60/kg range. This compares to contract prices of about $30/kg in December 2004.

  - During the last 2 to 3 years, the solar cell segment has grown at an annual rate of 40-50%; the CAGR for the last 10 years has been about 30%.

  - Beyond 2 to 3 years, it appears that the growth visibility of the solar cell industry is still not clear, our contacts suggest a sustainable growth rate is likely to exceed 10%.

  - Believe prices of polysilicon will increase in 2006/2007**.**

  - Wafer companies are concerned as AsiMi (#5 polysilicon supplier by market share) has shifted the poly feed stock to the solar market. We believe AsiMi will still honor existing long-term supply agreements, of which Komatsu's is likely the most important (Komatsu sold its 75% stake in AsiMi to Renewable Energy Corporation earlier this year).

- Polysilicon contract prices for solar and semiconductor applications are similar, at around $60/kg and $65/kg respectively. However, solar and semiconductor grade polysilicon are different in that the former is more forgiving than the latter in terms of purity requirements (the impurity restriction for semi grade poly is in the parts per trillion range, while it is in the parts per million or parts per billion range for solar grade poly). Thus, it is more natural for companies like Hemlock to supply polysilicon to the solar industry rather than to the semi industry, as the manufacturing process of poly for solar applications is less rigorous, implying lower cost and higher margins.

- Hemlock (#1 polysilicon supplier) and Wacker (#3 polysilicon supplier) expect the shortage of polysilicon to continue through 2010, according to a presentation they presented at the SEMICON trade show (July 2005).

- The ongoing shift to 300mm wafers is another important driver for increasing mix-adjusted ASPs. In 2004, 300mm wafers represented 12.2% of total silicon area shipped, up from 8.2% in 2003. We expect 300 mm wafers to account for 19% of total silicon area in 2005, and 24% in 2006. We believe 300mm wafers have higher margins than 200 mm wafers, as they sell for about $200-$250/wafer which is about a 4-5x premium to 200mm wafers and a 2-2.5x premium on a price per square inch basis.

## MEMC’s polysilicon asset remains a key competitive edge

Polysilicon is manufactured in special chemical plants using sand and fertilizer by-products which are converted into silane gas. The silane gas is further processed into polysilicon. Polysilicon is the raw material to manufacture silicon wafers for both semiconductor and solar cell applications.

MEMC owns 2 polysilicon plants: one in Pasadena, TX that produces granular polysilicon, and another one in Merano, Italy that produces chunk polysilicon. The Pasadena plant represents about two thirds of MEMC’s total internal capacity of polysilicon. The company uses most of its polysilicon production in the manufacturing of silicon wafers; any excess polysilicon is currently being sold mainly to solar cell producers.

The Pasadena plant is located 10 miles southeast of Houston, TX, in the area of influence of Hurricane Rita, which made landfall this past weekend. MEMC issued a press release on Monday September 26th indicating that the Pasadena plant sustained no major damage from the hurricane. Employees in the Pasadena area are safe, and operations at the Pasadena plant were resumed on Sunday September 25th. We estimate that the Pasadena plant may have foregone a maximum of 3 to 4 days worth of full polysilicon production. As a result, we don't expect any major impact to MEMC's Q3 results.

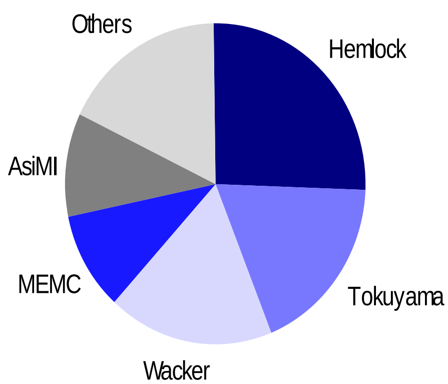
In March 2005, we estimated that polysilicon represented less than 5% of MEMC's total sales. We believe that in the June 2005 quarter it rose to the low double digits (in terms of percent of sales), driven by higher polysilicon prices and the fact that MEMC started selling silicon ingots to solar cell companies (that have more value added than raw polysilicon) in 1Q05.

Polysilicon market continues to be tight; supply expected to grow less than demand

Our industry checks continue to indicate that the increasing demand of polysilicon from solar panel producers (Kyocera, Sharp, BP Solar, Shell Solar, etc.) has resulted in an increasingly tight supply situation for polysilicon. According to our industry checks, the polysilicon plant expansions that are scheduled to come will not be enough to cope with the rising demand. We note that the lead time to build a new plant can is about 2 years and the expansion of existing plants can take up to 1 year.

The main polysilicon suppliers are shown in the chart below, with our estimates of global polysilicon capacity shares.

Chart 1: Estimated Polysilicon Market Share 2005E




Source: UBS estimates

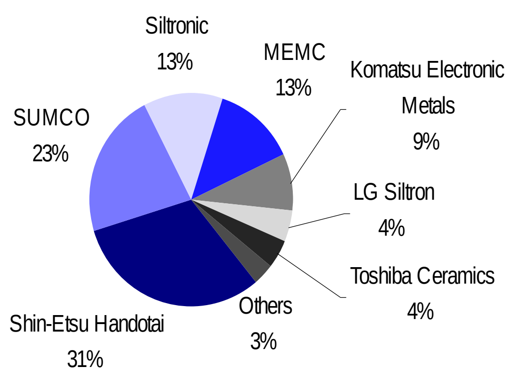
In April 2005, Komatsu (the #5 silicon wafer supplier) sold its 75% stake in ASiMI to solar energy company Renewable Energy Corporation (REC) from Norway. REC had indicated that it will gradually shift ASiMI's polysilicon business to PV (solar panel) applications from electronic (silicon wafers for ICs) applications. According to news reports, in early September REC indicated that it will no longer sell polysilicon for semiconductor applications. ASiMI is still expected to honor the long-term agreement with Komatsu to provide the latter with its polysilicon needs.

Shin-Etsu Handotai, MEMC's main competitor, has a 25% stake in Hemlock, which suggests that Shin-Etsu likely has its polysilicon needs covered. We believe SUMCO, the # 2 silicon wafer producer, has long-term agreements with Tokuyama while Siltronic buys its polysilicon needs from parent Wacker.

Although Komatsu (#5 player) sold its ASiMI polysilicon producer business, it maintains a long- term agreement with buyer REC.

We believe the smallest silicon wafer producers such as Toshiba Ceramics (#6 player, 4.3% market share) and LG Siltron (# 7 player, 4.2% market share) are likely negatively impacted the most by ongoing polysilicon shortages, and that MEMC can benefit as a result and increase its market share.

Chart 2: Wafer Market Share – 2004




Source: Gartner Dataquest

Importantly, while it seems that the major wafer producers would have their poly supply more or less assured by long-term contracts, they are subject to market prices. Therefore, higher poly prices should trigger these producers to pass these cost increases to semiconductor customers. MEMC stands to benefit the most, as it will likely follow its competitors' price increases but, contrary to its peers, it will be able to keep the margin.

We believe MEMC is seeking ways to increase its participation in the growing solar market

We believe MEMC is looking for ways to more actively participate in the growing solar market. The solar cell industry revenues are estimated at about $7B and industry researchers expect it to grow at a 20-40% CAGR in the next few years. We believe MEMC could potentially develop some kind of partnership or joint venture with one of the big solar cell producers (Kyocera, Shell Solar, Sharp, BP Solar) to produce solar wafers for their solar cells.

Costs savings in the manufacturing of semi wafers possible in 2006 – would result in higher than forecast margin expansion

Importantly, we believe that MEMC has developed a methodology that would enable it to use solar-grade polysilicon (which is of lower quality than semiconductor-grade polysilicon) to manufacture semiconductor wafers. The company expects to implement such methodology in 2006. Although it's too early to quantify potential cost savings, if this process is successful, it would reduce MEMC's cost of producing semiconductor wafers and lead to margin expansion.

## Ongoing shift from 200mm wafers to 300mm wafers benefiting MEMC

The industry continues to transition to 300mm wafers given the cost advantages that this represents for chip makes. The proportion of 300mm wafers in MEMC's product mix is of key importance, given the 2.0 – 2.5x price premium (per unit of silicon area) that these larger wafers enjoy over smaller diameters and a 5-10% point estimated difference in gross margin. We estimate that 300 mm wafers will represent 19% of total silicon area by the end of 2005 (up from 12% in 2004) and 24% in 2006.

The SICAS capacity utilization report indicates that 300mm wafer consumption continues to grow at a higher clip that overall wafer consumption. 300 mm wafer starts grew 8% and 32% quarter over quarter in 2Q05 and 1Q05 respectively, versus 7% and 1% for overall IC wafer starts.

Table 1: Global Wafer Starts (thousand wafer starts per week, 8" equivalent wafers)

| | 1Q04 | 2Q04 | 3Q04 | 4Q04 | 1Q05 | 2Q05 |
|---|---|---|---|---|---|---|
| 300 mm wafers | 55.1 | 110.3 | 117.2 | 142.9 | 189 | 204.5 |
| % of total | 4% | 8% | 9% | 11% | 15% | 15% |
| q/q growth | | 100% | 6% | 22% | 32% | 8% |
| 200 mm wafers | 796.2 | 816.2 | 816.6 | 766.2 | 805.9 | 853.4 |
| % of total | 62% | 61% | 61% | 61% | 63% | 62% |
| q/q growth | | 3% | 0% | -6% | 5% | 6% |
| < 200 mm wafers | 430.3 | 414.4 | 411.4 | 351.8 | 284.7 | 309.2 |
| % of total | 34% | 31% | 31% | 28% | 22% | 23% |
| q/q growth | | -4% | -1% | -14% | -19% | 9% |
| Total ICs wafer starts | 1,281.6 | 1,340.9 | 1,345.2 | 1,260.9 | 1,279.6 | 1,367.1 |
| q/q growth | | 5% | 0% | -6% | 1% | 7% |

Source: SICAS

Because margins on 300 mm wafers are more favorable than those of 200 mm wafers, no 200mm capacity is scheduled to come on line in the future. Instead, wafer producers are expanding 300 mm capacity to serve the increasing demand. The table below summarizes our estimates of 300 mm capacity for the industry.

Table 2: Global 300mm bare wafer capacity (in thousand's of wafers per month)

| Company | Capacity By End of 2004 | Capacity By End of 2005 | Capacity By End 2006 |
|---|---|---|---|
| MEMC | 100 | 200 | 350 |
| Shin-Etsu Handotai | 300 | 400 | 500 |
| SUMCO | 200 | 300 | 400 |
| Siltronic | 75 | 225 | 225 |
| Other | 69 | 109 | 159 |
| Komatsu | 45 | 75 | 125 |
| Toshiba Ceramics | 14 | 24 | 24 |
| LG Siltron | 10 | 10 | 10 |
| Total Capacity | 744 | 1,234 | 1,634 |
| Total Capactiy (MSI* per year) | 978 | 1,622 | 2,147 |

* Note: MSI (millions of square inches)

Source: Company Reports and UBS estimates

MEMC manufactures its 300mm wafers at two facilities: MEMC Japan (Utsonomiya, Japan) and Taisil (Hsinchu, Taiwan). The Japanese facility will reach 200,000 wafers per month before the end of 2005. Taisil started production of 300mm wafers in late August, and is currently ramping up production. It is expected that by the end of 2006, Taisil will reach 150,000 wafers per month of capacity, bringing MEMC's total capacity to 350,000 wafers. In addition, management has indicated that Taisil's capacity could be further expanded to 400,000 wafers per month capacity if market conditions warranted such expansion.

## Taisil likely contributes to higher margins

The company's Taisil subsidiary in Taiwan should also contribute to higher gross margins, particularly next year, as we estimate production costs in Taiwan are lower than in other regions. Taisil started production of 300mm wafers in September 2005, and is currently ramping up production.

In addition, production of 300 mm wafers in Taiwan, positions MEMC to better serve the Asia (ex-Japan) region, given its proximity to large semiconductor clients in Taiwan, Korea, and China.

## Raising Estimates

- We are raising our 2006 EPS estimate for WFR on higher revenue and margin assumptions, as we believe wafer prices can increase about 4% on average in 2006. Our new EPS forecast is $1.60 (previously $1.41) on revenues of $1,307M (+16.8% revenue growth YoY; previously 12.9%), and gross margin of 43.0% (previously 40.4%). Our 2005 EPS estimate of $1.10 remains unchanged.

- Since March 2005 we have been highlighting that higher polysilicon prices could enhance MEMC's pricing power in 2006 (see our notes *Upgrading to Buy 2*, dated March 2, 2005, and *Pricing Power Story Still an Early 2006 Even*, dated July 28, 2005). However, we now believe our average selling price (ASP) and margin impact assumptions were too conservative. Thus, we are increasing both our ASPs and gross margin assumptions for MEMC. The tables below summarize our new and old estimates.

Table 3: MEMC – Summary of UBS's new estimates

| | 1Q05 A | 2Q05 A | 3Q05 E | 4Q05 E | 2005 E | 1Q06 E | 2Q06 E | 3Q06 E | 4Q06 E | 2006 E |
|---|---|---|---|---|---|---|---|---|---|---|
| Shipment estimate (MSI) | 211 | 228 | 238 | 245 | 923 | 250 | 256 | 261 | 266 | 1,033 |
| Q/q change | -2.0% | 7.9% | 4.5% | 3.0% | 6.2% | 2.0% | 2.2% | 2.0% | 1.8% | 11.9% |
| ASP ($/MSI) | 1.22 | 1.21 | 1.21 | 1.21 | 1.21 | 1.24 | 1.26 | 1.28 | 1.29 | 1.27 |
| Q/q change | -2.0% | -1.0% | 0.0% | 0.3% | 2.5% | 2.0% | 2.0% | 1.5% | 0.5% | 4.5% |
| Revenues ($ M) | 258 | 275 | 288 | 297 | 1,118 | 309 | 322 | 334 | 341 | 1,307 |
| Q/q change | -3.9% | 6.8% | 4.5% | 3.3% | 8.8% | 4.0% | 4.2% | 3.6% | 2.3% | 16.8% |
| Gross Margin | 36.2% | 36.5% | 37.8% | 39.0% | 37.4% | 40.7% | 42.5% | 44.0% | 44.5% | 43.0% |
| EPS | $0.23 | $0.26 | $0.29 | $0.32 | $1.10 | $0.35 | $0.39 | $0.42 | $0.44 | $1.60 |

Source: Company Reports and UBS estimates

Table 4: MEMC – Summary of UBS's old estimates

| | 1Q05 A | 2Q05 A | 3Q05 E | 4Q05 E | 2005 E | 1Q06 E | 2Q06 E | 3Q06 E | 4Q06 E | 2006 E |
|---|---|---|---|---|---|---|---|---|---|---|
| Shipment estimate (MSI) | 211 | 228 | 238 | 245 | 923 | 250 | 256 | 261 | 266 | 1,033 |
| Q/q change | -2.0% | 7.9% | 4.5% | 3.0% | 6.2% | 2.0% | 2.2% | 2.0% | 1.8% | 11.9% |
| ASP ($/MSI) | 1.22 | 1.21 | 1.21 | 1.21 | 1.21 | 1.21 | 1.2208 | 1.2269 | 1.2294 | 1.22 |
| Q/q change | -2.0% | -1.0% | 0.0% | 0.3% | 2.5% | 0.0% | 0.8% | 0.5% | 0.2% | 0.9% |
| Revenues ($ M) | 258 | 275 | 288 | 297 | 1,118 | 303 | 312 | 320 | 327 | 1,262 |
| Q/q change | -3.9% | 6.8% | 4.5% | 3.3% | 8.8% | 2.0% | 3.0% | 2.5% | 2.0% | 12.9% |
| Gross Margin | 36.2% | 36.5% | 37.8% | 39.0% | 37.4% | 39.4% | 40.0% | 41.0% | 41.0% | 40.4% |
| EPS | $0.23 | $0.26 | $0.29 | $0.32 | $1.10 | $0.32 | $0.34 | $0.37 | $0.37 | $1.41 |

Source: Company Reports and UBS estimates

## Valuation and Target Price

MEMC trades at a 12.9x our new 2006 EPS estimate of $1.60, which represents a 16% discount to the market multiple of 16x. Further, MEMC's 2006 PE of 12.9x represents a:

- 37% discount to Shin-Etsu Chemical's (the parent company of leading silicon wafer producer Shin-Etsu Handotai) 2006 PE of 17.0x, and

- 44% discount to Tokuyama's (the #2 polysilicon manufacturer) 2006 PE of 17.4x.

The above compares to MEMC's discount of about 30% to Shin-Etsu Chemical and Tokuyama in the past 3 years. We believe further multiple expansion is possible if MEMC is able to execute on market share gains, leveraging on its polysilicon advantage, or if the company outgrows its peers by entering the solar wafer market.

We have increased our 12-month target price to $27.00 (from $21.00). Our target price is based on a 17x PE multiple (previously 15x) applied to our 2006 EPS estimate of $1.60. We believe a higher target multiple is justified given our view that MEMC likely enters the solar wafer market in 2006.

Our 17x target multiple for MEMC represents a 22% discount to the 21.7x average PE at which Shin-Etsu and Tokuyama are trading.

### Table 5: Comparable Valuations

| Company | Ticker | Rating | Price 9/26/05 | Price Target | Market Cap ($ M) | EPS 2005E (per shr.) | EPS 2006E (per shr.) | P/E CY05E | P/E CY06E |
|---|---|---|---|---|---|---|---|---|---|
| MEMC Electronic Materials | WFR | Buy 2 | $20.64 | $27.00 | $4,312 | $1.10 | $1.60 | 18.7 | 12.9 |
| Shint-Etsu Chemical (1) | 4063.JP | Neutral 1 RRD | ¥5,110 | ¥4,300 | $19,630 | ¥237.62 | ¥249.85 | 21.5 | 20.5 |
| Tokuyama Corporation (2) | 4043.JP | Not Rated | ¥1,145 | NA | $2,597 | ¥46.38 | ¥49.87 | 24.7 | 23.0 |
| S&P 500 | | | 1,216.37 | | | 74.00 | 78.81 | 16.4 | 15.4 |

(1) Shin-Etsu Chemical is the parent company of Shin-Etsu Handotai, the largest silicon wafer manufacturer. Fiscal year ends in March.
(2) Tokuyama is a Japanese diversified chemical company that produces polysilicon, cement, and soda chemicals. Fiscal year ends in March. EPS estimates from Factset.
Source: Reuters, Factset and UBS estimates.

# MEMC – UBS Forecast

Table 6: MEMC – Summary Income Statement

| MEMC (WFR) UBS 212.713.4111 | FY 2002 | FY 2003 | FY 2004 | 1Q Mar-05 | 2Q Jun-05 | 3Q E Sep-05 | 4Q E Dec-05 | FY E 2005 | 1Q E Mar-06 | 2Q E Jun-06 | 3Q E Sep-06 | 4Q E Dec-06 | FY E 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sales | 687 | 781 | 1,028 | 258 | 275 | 288 | 297 | 1,118 | 309 | 322 | 334 | 341 | 1,307 |
| Cost of Goods Sold | 514 | 548 | 659 | 165 | 175 | 179 | 181 | 700 | 183 | 185 | 187 | 189 | 745 |
| Gross Margin | 173 | 233 | 369 | 93 | 100 | 109 | 116 | 418 | 126 | 137 | 147 | 152 | 562 |
| SG&A | 66 | 57 | 71 | 18 | 18 | 19 | 19 | 74 | 19 | 19 | 19 | 19 | 75 |
| R&D | 27 | 33 | 38 | 11 | 11 | 11 | 11 | 43 | 11 | 11 | 11 | 11 | 42 |
| Operating Expenses | 93 | 90 | 109 | 30 | 29 | 29 | 29 | 117 | 29 | 30 | 29 | 29 | 118 |
| Operating Margin | 80 | 143 | 260 | 64 | 71 | 80 | 87 | 301 | 97 | 107 | 118 | 122 | 444 |
| Interest Income | -45 | 13 | -4 | -1 | -1 | -3 | 0 | -6 | 0 | 1 | 1 | 2 | 5 |
| Pre-Tax Income | 35 | 156 | 257 | 62 | 70 | 77 | 86 | 295 | 97 | 108 | 119 | 125 | 449 |
| Taxes (benefit) | 17 | 37 | 45 | 8 | 9 | 10 | 11 | 38 | 15 | 16 | 18 | 19 | 67 |
| Income before equity inc and minority in | 18 | 119 | 212 | 54 | 61 | 67 | 75 | 257 | 83 | 92 | 101 | 106 | 381 |
| Equity Income | 1 | 6 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Minority Interest | -9 | -9 | -11 | -2 | -2 | -3 | -3 | -9 | -3 | -3 | -3 | -3 | -10 |
| Preferred Stock Dividends | -17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Net Income | -7 | 117 | 199 | 53 | 59 | 65 | 73 | 249 | 80 | 90 | 99 | 103 | 371 |
| Shares | 130 | 219 | 222 | 224 | 225 | 226 | 228 | 226 | 230 | 231 | 233 | 235 | 232 |
| EPS | -$0.05 | $0.53 | $0.90 | $0.23 | $0.26 | $0.29 | $0.32 | $1.10 | $0.35 | $0.39 | $0.42 | $0.44 | $1.60 |
| YOY Sales Growth | -37.5% | 13.7% | 31.6% | 12.7% | 7.8% | 4.5% | 10.8% | 8.8% | 20.0% | 17.1% | 16.0% | 14.8% | 16.9% |
| Sequential Sales Growth | | | | -3.9% | 6.8% | 4.5% | 3.3% | | 4.0% | 4.2% | 3.5% | 2.3% | |
| Gross Margin | 25.2% | 29.8% | 35.9% | 36.2% | 36.5% | 37.8% | 39.0% | 37.4% | 40.7% | 42.5% | 44.0% | 44.5% | 43.0% |
| SG&A | 9.6% | 7.3% | 6.9% | 7.0% | 6.7% | 6.4% | 6.3% | 6.6% | 6.0% | 5.8% | 5.7% | 5.6% | 5.8% |
| R&D | 4.0% | 4.2% | 3.7% | 4.4% | 4.0% | 3.6% | 3.5% | 3.9% | 3.4% | 3.3% | 3.1% | 3.1% | 3.2% |
| Operating Expenses | 13.6% | 11.5% | 10.6% | 11.5% | 10.7% | 10.1% | 9.8% | 10.5% | 9.4% | 9.2% | 8.8% | 8.6% | 9.0% |
| Operating Margin | 11.7% | 18.3% | 25.3% | 24.7% | 25.8% | 27.7% | 29.2% | 26.9% | 31.3% | 33.3% | 35.2% | 35.9% | 34.0% |
| Interest Income | -6.6% | 1.7% | -0.4% | -0.5% | -0.5% | -0.9% | -0.2% | -0.5% | 0.1% | 0.2% | 0.4% | 0.6% | 0.4% |
| Pre-Tax Income | 5.1% | 20.0% | 25.0% | 24.2% | 25.3% | 26.8% | 29.0% | 26.4% | 31.4% | 33.6% | 35.6% | 36.5% | 34.3% |
| Tax Rate | 47.6% | 23.6% | 17.4% | 13.0% | 12.4% | 13.0% | 13.0% | 12.9% | 15.0% | 15.0% | 15.0% | 15.0% | 15.0% |
| Net Income | -1.0% | 14.9% | 19.4% | 20.4% | 21.4% | 22.4% | 24.4% | 22.2% | 25.9% | 27.8% | 29.5% | 30.3% | 28.4% |

Source: Company Reports and UBS estimates.

## ■ MEMC Electronic Materials

MEMC, headquartered in St Peters, MO, is the world's only publicly traded pure-play silicon wafer manufacturer. The company produces and sells silicon wafers for the semiconductor industry, and is fourth in market share. MEMC sells its products to most semiconductor device manufacturers. Products include prime polished, epitaxial and test/monitor wafers in diameters ranging from 100mm to 300mm. The company operates nine plants that are strategically located close to the major semiconductor markets in the U.S., Europe, and Asia. Texas Pacific Group, a private equity company, controls MEMC.

## ■ Statement of Risk

MEMC's business is subject to the cyclicality of semiconductor demand, which can result in share price volatility. There is a risk of overcapacity of 300mm wafers in the future, which can result in price and margin erosion. In addition, continued investment in R&D and infrastructure are needed to ensure the long-term viability of the business which could limit EPS upside.

MEMC shares have low liquidity, as 25% are held by the company's largest shareholder Texas Pacific Group (TPG). TPG will be allowed to sell more shares starting in mid-November 2005 and potential share sales by TPG could increase the supply of shares in the market and limit appreciation of MEMC's share price. In addition, MEMC has historically used stock options to compensate its employees. We estimate that the company’s potential stock option expense in CY06 is -$0.04 or 2% of our official $1.60 EPS estimate.

## ■ Analyst Certification

Each research analyst primarily responsible for the content of this research report, in whole or in part, certifies that with respect to each security or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about those securities or issuers; and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by that research analyst in the research report.

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### UBS Investment Research: Global Equity Ratings Definitions and Allocations

| UBS rating | Definition | UBS rating | Definition | Rating category | Coverage[1] | IB services[2] |
|---|---|---|---|---|---|---|
| **Buy 1** | FSR is > 10% above the MRA, higher degree of predictability | **Buy 2** | FSR is > 10% above the MRA, lower degree of predictability | **Buy** | 40% | 41% |
| **Neutral 1** | FSR is between -10% and 10% of the MRA, higher degree of predictability | **Neutral 2** | FSR is between -10% and 10% of the MRA, lower degree of predictability | **Hold/Neutral** | 49% | 43% |
| **Reduce 1** | FSR is > 10% below the MRA, higher degree of predictability | **Reduce 2** | FSR is > 10% below the MRA, lower degree of predictability | **Sell** | 11% | 35% |

1: Percentage of companies under coverage globally within this rating category.

2: Percentage of companies within this rating category for which investment banking (IB) services were provided within the past 12 months.

Source: UBS; as of 30 June 2005.

**KEY DEFINITIONS**

**Forecast Stock Return (FSR)** is defined as expected percentage price appreciation plus gross dividend yield over the next 12 months.
**Market Return Assumption (MRA)** is defined as the one-year local market interest rate plus 5% (an approximation of the equity risk premium).
**Predictability Level** The predictability level indicates an analyst's conviction in the FSR. A predictability level of '1' means that the analyst's estimate of FSR is in the middle of a narrower, or smaller, range of possibilities. A predictability level of '2' means that the analyst's estimate of FSR is in the middle of a broader, or larger, range of possibilities.
**Under Review (UR)** Stocks may be flagged as UR by the analyst, indicating that the stock's price target and/or rating are subject to possible change in the near term, usually in response to an event that may affect the investment case or valuation.
**Rating/Return Divergence (RRD)** This qualifier is automatically appended to the rating when stock price movement has caused the prevailing rating to differ from that which would be assigned according to the rating system and will be removed when there is no longer a divergence, either through market movement or analyst intervention.

**EXCEPTIONS AND SPECIAL CASES**

**US Closed-End Fund ratings and definitions are:** Buy: Higher stability of principal and higher stability of dividends; Neutral: Potential loss of principal, stability of dividend; Reduce: High potential for loss of principal and dividend risk.
**UK and European Investment Fund ratings and definitions are:** Buy: Positive on factors such as structure, management, performance record, discount; Neutral: Neutral on factors such as structure, management, performance record, discount; Reduce: Negative on factors such as structure, management, performance record, discount.
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## Companies mentioned

| Company Name | Reuters | Rating | Price | Price date/time |
|---|---|---|---|---|
| **MEMC Electronic**[2,4,16] | WFR.N | Buy 2 | US$19.94 | 23 Sep 2005 23:36 EDT |
| **Shin-Etsu Chemical**[16] | 4063.T | Neutral 1 (RRD) | ¥5,110 | 26 Sep 2005 23:38 JST |
| **Tokuyama**[13] | 4043.T | Not rated | ¥1,145 | 26 Sep 2005 23:38 JST |

Source: UBS. EDT: Eastern daylight time; JST: Japanese standard time.

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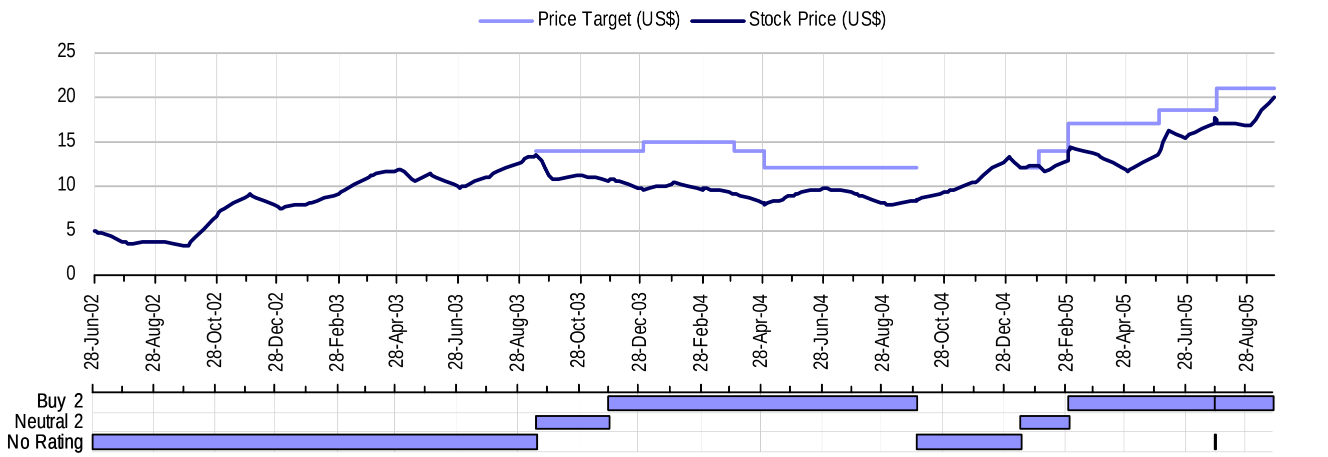
Unless otherwise indicated, please refer to the Valuation and Risk sections within the body of this report.

## MEMC Electronic Materials (US$)




Source: UBS; as of 26 September 2005.

Note: On October 13, 2003, UBS adopted new definition criteria for its rating system. (See 'UBS Investment Research: Global Equity Ratings Definitions and Allocations' table for details.) Between January 11 and October 12, 2003, the UBS ratings and their definitions were: Buy 1: Excess return potential > 15%, smaller range around price target; Buy 2: Excess return potential > 15%, larger range around price target; Neutral 1: Excess return potential between -15% and 15%, smaller range around price target; Neutral 2: Excess return potential between -15% and 15%, larger range around price target; Reduce 1: Excess return potential < -15%, smaller range around price target; Reduce 2: Excess return potential < -15%, larger range around price target. Prior to January 11, 2003, the UBS ratings and definitions were: Strong Buy: Greater than 20% excess return potential, high degree of confidence; Buy: Positive excess return potential; Hold: Low excess return potential, low degree of confidence; Reduce: Negative excess return potential; Sell: Greater than 20% negative excess return potential, high degree of confidence. Under both ratings systems, excess return is defined as the difference between the FSR and the one-year local market interest rate.

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