

# UBS Investment Research

## MEMC Electronic Materials

### Pricing Power Story Still an Early 2006 Event

#### ■ Delivers solid Jun-05 results

MEMC reported sales of \$275.4M (+7% q/q) and EPS of \$0.26 which exceeded our estimates of \$268M and \$0.25, and the company's guidance. Sales strength was due to unit volume growth (we estimate 8% q/q) and higher polysilicon sales (we estimate 10% of total) while EPS benefited from 30bps higher GM and 1% lower opex.

#### ■ Expect higher gross and operating margins are sustainable

MEMC increased its long term gross and operating margin targets to 35-40% and 25-30% from 35% and 23% respectively. We believe MEMC can exceed these levels in 2006 when increased pricing power is likely seen (blended prices were likely down 1% q/q in 2Q05).

#### ■ Maintaining estimates

Given MEMC's 3Q05 outlook for sales growth of 3-5% q/q and its higher long term gross and operating margin levels now in line with our estimates, our 2005 and 2006 EPS estimates are unchanged. Our 2006 estimates assume volume increase of 12% and average selling price increase of 1%.

#### ■ Valuation: Maintain Buy 2 rating;raising PT from 18.50 to \$21

Our 12-month price target is based on applying a 15x multiple (up from 13x) to our CY06 EPS estimate of \$1.41. We believe a higher multiple is justified given our increased confidence in MEMC achieving our gross/operating margin targets and note the stock trades at a 22-29% discount to the market multiple (16x) and its Japanese peers (17x).

Highlights (US\$m)	12/03	12/04	12/05E	12/06E	12/07E
Revenues	781	1,028	1,118	1,262	-
EBIT	143	259	301	391	-
Net income (UBS)	117	225	273	326	-
EPS (UBS, US\$)	0.53	0.90	1.10	1.41	-
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	31.0	-
ROIC (EBIT) %	-3.6	58.4	49.0	52.0	-
EV/EBITDA x	18.2	7.3	10.9	8.5	-
PE (UBS) x	-7.3	10.5	15.9	12.4	-
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\$17.50 on 27 Jul 2005 19:55 EDT

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## Global Equity Research

Americas

Electric Components & Equipment

**Rating** **Buy 2**  
**Unchanged**

**Price target** **US\$21.00**  
**Prior:US\$18.50**

**Price** **US\$17.50**

RIC: WFR.N BBG: WFR US

28 July 2005

#### Trading data

52-wk. range	US\$18.29-7.39
Market cap.	US\$3.66bn
Shares o/s	209m
Free float	37%
Avg. daily volume ('000)	1,670
Avg. daily value (US\$m)	25.2

#### Balance sheet data 12/05E

Shareholders' equity	US\$0.70bn
P/BV (UBS)	5.6x
Net cash (debt)	US\$0.05bn

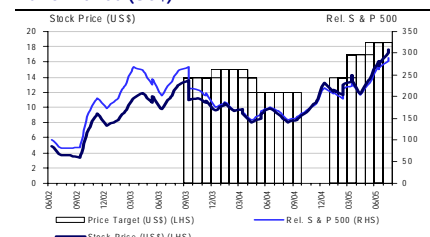
#### Forecast returns

Forecast price appreciation	+20.0%
Forecast dividend yield	0.0%
Forecast stock return	+20.0%
Market return assumption	9.0%
Forecast excess return	+11.0%

#### EPS (UBS, US\$)

	12/05E		12/04	12/06
	From	To	Cons.	Actual
Q1	0.23	0.23	0.23	0.16
Q2	0.25	0.26	0.26	0.20
Q3E	0.29	0.29	0.30	0.27
Q4E	0.32	0.32	0.33	0.27
12/05E	1.10	1.10	1.12	
12/06E	1.41	1.41	1.34	

#### Performance (US\$)



Source: UBS

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#### ANALYST CERTIFICATION AND REQUIRED DISCLOSURES BEGIN ON PAGE 7

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## Solid 2Q with further improvements in 3Q

WFR's 2Q sales of \$275.4M were up 7% q/q and exceeded the company's prior guidance for a 2% to 5% q/q increase. Strength in the quarter was from both 300mm and 200mm sales, which we estimate were both up q/q in the quarter, and increased sales of polysilicon to solar panel customers which we estimate represented over 10% of sales (up from 5% last quarter).

The higher than expected EPS of \$0.26 was driven mostly from a 7% sequential increase in sales, a 30bps increase in gross margin to 36.5% and a 1% q/q decline in operating expenses. This led operating margin to improve to 25.8%, which was 110bps higher q/q.

SG&A rose slightly to \$18.3M (compared to \$18.2M last quarter), and R&D declined from \$11.4M to \$11.0M. Operating expenses are expected to be flat to slightly down in 3Q05.

**Table 1: MEMC - Quarterly Results from Operations (\$'s in millions)**

	2Q 04	3Q 04	4Q 04	1Q 05	2Q 05	3Q 05E Guidance
Sales	\$255.5	\$275.3	\$268.4	\$257.9	\$275.4	\$284M to \$289M
Sequential Change	11.7%	7.7%	-2.5%	-3.9%	6.8%	3% to 5%
Gross Margin \$'s	\$87.2	\$110.7	\$98.2	\$93.3	\$100.4	x
Gross Margin %	34.1%	40.2%	36.6%	36.2%	36.5%	Flat to up Slightly
SG&A	-\$17.8	-\$17.8	-\$19.2	-\$18.2	-\$18.3	
R&D	-\$9.3	-\$9.4	-\$10.4	-\$11.4	-\$11.0	
Operating Income \$	\$60.0	\$83.6	\$68.6	\$63.7	\$71.1	
Operating Income %	23.5%	30.4%	25.6%	24.7%	25.8%	
EBITDA \$'s	\$70.3	\$95.0	\$80.2	\$77.1	\$85.4	
EBITDA Margin %	27.5%	34.5%	29.9%	29.9%	31.0%	
Proforma EPS	\$0.20	\$0.27	\$0.27	\$0.23	\$0.26	

Source: Company Reports

The company's guidance for 3Q05 was a 3% to 5% q/q increase in sales (range of \$283.7M to \$289.2M). We are estimating 3Q05 unit growth of 4.5% and average selling prices to be flat q/q. We also note that 3Q05 will benefit from modest 300mm sales from Taisil, MEMC's facility located in Taiwan.

We have modeled gross and operating margins to improve in 3Q05. Our 3Q05 estimates are sales of \$287.8M and proforma EPS of \$0.29 with gross margin of 37.8% and operating margin of 27.7%.

**Table 2: MEMC – Sales Breakdown Estimates**

	2004	1Q 05	2Q 05	3Q 05E	4Q 05E	2005E	2006E
Sales (\$M)	1,028.0	257.9	275.4	287.8	297.3	1,118.4	1,262.4
% Change		-3.9%	6.8%	4.5%	3.3%	8.8%	12.9%
Shipment estimate (MSI)	870	211	228	238	245	923	1,033
% Change		-2.0%	7.9%	4.5%	3.0%	6.2%	11.9%
ASP estimate (\$/Sq.Inch)	1.18	1.22	1.21	1.21	1.21	1.21	1.22
% Change		-2.0%	-1.0%	0.0%	0.3%	2.5%	0.9%

Note: MEMC does not provide shipments or ASP data. All of the shipment and ASP data shown are UBS's estimates.  
Source: Company Reports and UBS estimates.

In the tables below we highlight selected commentary from key end customers of MEMC. In the past, the company's three largest customers have been Samsung, TI, and ST Micro with Samsung representing more than 10% of WFR's total sales in CY04.

**Table 3: Texas Instruments & ST Microelectronics – Sales Guidance**

	Mar-05	Jun-05	Sep-05 E *
TI Semiconductor Sales (q/q change)	-7.20%	6.50%	+3% to +11%
ST Micro Sales (q/q change)	-10.50%	3.80%	Flat to +6%

(\*) Company Guidance.

Source: Company Reports

**Table 4: TSMC & UMC – Shipment Guidance**

	Mar-05	Jun-05	Sep-05 E (*)
TSMC Wafer Shipments change q/q (1)	-9%	15%	up mid-teen % pts
UMC Wafer Shipments change q/q (1)	-14%	12%	up mid-teen % pts

(\*) Company Guidance.

(1) Shipments expressed in 8-inch equivalent wafers.

Source: Company Reports

## Updated long term, steady state business model viewed positively

MEMC increased its long term financial targets as shown in Table 5. We estimate MEMC can reach these level in 2Q06. The company reported that it had an example of a customer which was on an annual contract who wanted to renegotiate its contract sooner than the normal timeframe would allow. We view this as a key leading indicator that the likely price increases can show up in early 2006.

With gross and operating margin of 36.5% and 25.8% in 3Q05, MEMC is already at the low end of the range of its new target model. For the company to reach the high end of that range, we believe a combination of higher volumes and pricing is necessary.

We believe the outlook for higher units is firm, given increases in wafer starts reported by semiconductor companies. On the pricing front, it used to be the case that MEMC would have pricing power at or above 95% utilization rate of its manufacturing plants. However, given the continued tight supply in the polysilicon market (the key raw material to manufacture silicon wafers), we believe the company can achieve pricing power at lower capacity utilization rates than in the past. MEMC indicated that in 2Q05 its capacity utilization rate was in the mid to high 80% range, with 200mm utilization being slightly lower than 300mm utilization.

**Table 5: MEMC – Long term financial model**

	New Model	Prior Model
Operating Profit	25% to 30%	23%+
Gross Margin	35% to 40%	35%+
Operating Expenses	Approx 10%	12% or less
Capex	15% or less	15% or less
Operating Cash Flow	25% to 30%	20%+
Free Cash Flow	10% to 15%	5% to 10%
Annual EPS Growth	Approx 20%	Not provided

Source: Company Reports.

## Expect a further update on the solar wafer opportunity

We continue to expect the shortage of polysilicon, due to increased demand from solar panel companies to lead to modest increased pricing power for MEMC that likely shows up in MEMC's financials in early 2006. In addition, our industry checks suggest that MEMC continues to remain in active discussions with most of the leading solar panel manufacturers (includes Sharp and Kyocera). We believe that MEMC can more efficiently manufacture solar wafers for these customers and estimate it could represent more than 20% of MEMC's total sales in 2007. We continue to expect that an announcement could be likely before the end of the year and view this as a potential catalyst for the stock.

## Balance sheet likely strengthens going forward

During the quarter, MEMC's cash balance decreased by \$15M to \$101M, and debt decreased by \$6M to \$130M, for a net debt position of \$29M, or \$0.13 per share (up from \$0.09 per share in the prior quarter). However, given the company's strong cash generation, we believe it will be in a net cash position in the third or fourth quarter of 2005.

During 2Q05, MEMC established a new line of credit of \$200M, which replaces the old credit facilities and has more favorable terms, both in terms of interest rate (we believe 25 to 50 bps lower), and covenants. Of the \$200M, \$60M were used to replace the drawn portion of the old credit line. In 3Q05, MEMC will record in its income statement a non-cash expense of approximately \$1.9M related to the cancellation of its old credit line, as it must write-off the remaining portion of the cost of that line that it has not yet amortized.

In 2Q05, MEMC generated \$46M in cash from operations, but spent \$51M in capital expenditures, repaid \$4M in debt's principal, and spent \$10M in dividends to minorities. MEMC's capex is front-end loaded this year, given the company's 300mm expansion since the beginning of the year. For the second half of the year, we estimate capex of \$59M (about \$30M in each of the next two quarters), for a total of \$165M in capex in 2005 (14.8% of sales). Going forward, management has indicated that capex will remain at 15% of sales or less annually.

Days receivables decreased by 3 to 46 days during the quarter, as account receivables increased less than revenues. Day inventories increased by 5 to 69 days in 2Q05, on higher COGS and a small decrease in inventories.

**Table 6: MEMC – Selected Balance Sheet Metrics (\$'s in millions)**

	2Q 04	3Q 04	4Q 04	1Q 05	2Q 05
Cash and Equivalents	\$129	\$103	\$92	\$116	\$101
Debt	\$242	\$203	\$140	\$136	\$130
Net Debt	\$112	\$99	\$48	\$20	\$29
Net Debt Per Share	\$0.51	\$0.44	\$0.22	\$0.09	\$0.13
Cash From Operations	\$82	\$46	\$212	\$73	\$46
Capex	\$46	\$26	\$52	\$54	\$51
Free Cash Flow	\$36	\$20	\$161	\$19	-\$5
Accounts Receivable	\$139	\$152	\$141	\$131	\$132
AR DSO's	49	50	47	46	43
Inventory	\$113	\$120	\$128	\$135	\$135
Inventory Days	60	66	67	74	69

Source: Company Reports.

## Valuation remains attractive

MEMC trades at a 2006 PE ratio of 12.4x, which represents a 22.5% discount to the market multiple of 16x.

Further, MEMC's 2006 PE of 12.4x represents a:

- 27% discount to Shin-Etsu Chemical's (the parent company of leading silicon wafer producer Shin-Etsu Handotai) 2006 PE of 17.0x, and
- 29% discount to Tokuyama's (the #2 polysilicon manufacturer) 2006 PE of 17.4x.

The above compares to MEMC's discount of about 10-15% to Shin-Etsu Chemical and Tokuyama in the past. We believe further multiple expansion is possible if MEMC is able to execute on market share gains.

We have increased our 12-month target price to \$21.00 (from \$18.50). Our target price is based on a 15x PE multiple (previously 13x) applied to our 2006 EPS estimate of \$1.41. We believe a higher target multiple is justified given our

increased confidence in MEMC achieving our gross/operating margin targets. Our 15x target multiple for MEMC is a 13% discount to the 17.2x average PE at which Shin-Etsu and Tokuyama are trading.

**Table 7: MEMC – Valuation Comparisons**

Company	Ticker	Rating	\$17.35	Price	Market	EPS	EPS	P/E	P/E
			7/27/05	Target	Cap (\$ M)	2005E (per shr.)	2006E (per shr.)	CY05E	CY06E
MEMC Electronic Materials	WFR	Buy 2	\$17.50	\$18.50	\$3,656	\$1.10	\$1.41	16.0	12.4
Shint-Etsu Chemical (1)	4063.JP	Neutral 1	¥4,250	¥4,300	\$16,268	¥237.62	¥249.85	17.9	17.0
Tokuyama Corporation (2)	4043.JP	Not Rated	¥860	NA	\$1,947	¥45.77	¥49.41	18.8	17.4
S&P 500			1,236.79			73.14	77.29	16.9	16.0

(1) Shin-Etsu Chemical is the parent company of Shin-Etsu Handotai, the largest bare wafer manufacturer. Fiscal year ends in March.

(2) Tokuyama is a Japanese diversified chemical company that produces cement, soda chemicals, and polysilicon. Fiscal year ends in March. EPS estimates from I/B/E/S/.

Source: Reuters, Bloomberg 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 cyclical nature 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 40% are held by the company's largest shareholder Texas Pacific Group (TPG). Potential share sales by TPG could increase the supply of shares in the market and limit appreciation in MEMC's share price. 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 3% of our official \$1.41 EPS estimate.

#### ■ Analyst Certification

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

UBS rating	Definition	UBS rating	Definition	Rating category	Coverage <sup>1</sup>	IB services <sup>2</sup>
<b>Buy 1</b>	FSR is > 10% above the MRA, higher degree of predictability	<b>Buy 2</b>	FSR is > 10% above the MRA, lower degree of predictability	<b>Buy</b>	40%	41%
<b>Neutral 1</b>	FSR is between -10% and 10% of the MRA, higher degree of predictability	<b>Neutral 2</b>	FSR is between -10% and 10% of the MRA, lower degree of predictability	<b>Hold/Neutral</b>	49%	43%
<b>Reduce 1</b>	FSR is > 10% below the MRA, higher degree of predictability	<b>Reduce 2</b>	FSR is > 10% below the MRA, lower degree of predictability	<b>Sell</b>	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.

**Core Banding Exceptions (CBE):** Exceptions to the standard +/-10% bands may be granted by the Investment Review Committee (IRC). Factors considered by the IRC include the stock's volatility and the credit spread of the respective company's debt. As a result, stocks deemed to be very high or low risk may be subject to higher or lower bands as they relate to the rating. When such exceptions apply, they will be identified in the Companies Mentioned table in the relevant research piece.

### Companies mentioned

Company Name	Reuters	Rating	Price	Price date/time
<b>MEMC Electronic</b> <sup>2,4,16</sup>	WFR.N	Buy 2	US\$17.65	26 Jul 2005 19:36 EDT
<b>Shin-Etsu Chemical</b> <sup>16</sup>	4063.T	Neutral 1	¥4,250	27 Jul 2005 20:38 JST

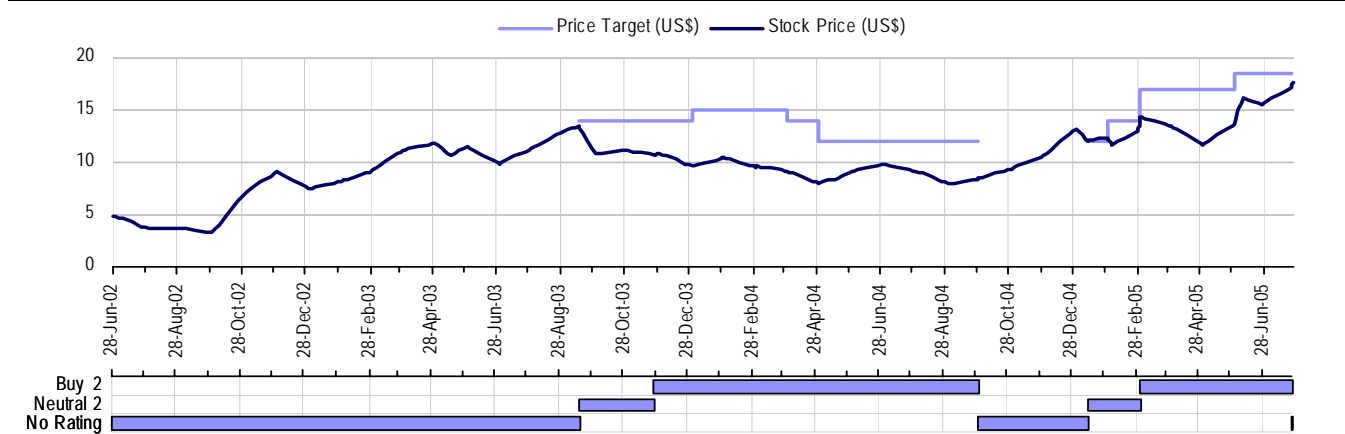


Source: UBS. EDT: Eastern daylight time; JST: Japanese standard time.

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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 27 July 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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