



Semiconductor AG

Report

Q2

english

2000

## **Preface**

Dear shareholders,

ELMOS Semiconductor AG is starting to win new business areas. On our General Meeting of Shareholders in May, we presented our business unit structure which includes apart from the key area automotive the new areas telecommunication, chip cards and sensor technology.

Many of you attended our General Meeting of Shareholders. The fact that you supported our future plans was a mark of confidence for us that we are on the right track. At the same time, it was also an incentive to achieve our targets even earlier. With a newly composed supervisory board you called well-founded expertise from future markets to our controlling body. The foundations for future expansion have been laid. The course has been set!

We are in a very close contact with various key customers from the above-mentioned areas telecommunication and chip cards IC's and in the meantime, in August 2000, a first major order from a key customer

of the telecommunication area has been won. Due to the extraordinary importance of this major order, we have decided to analyze this challenge in the present report.

We have been able to successfully transfer to other areas our know-how and our experience gathered in the automotive key area. This increases our future potential in a significant way.

The end of the second quarter also means a look back on the first half year of 2000. In this half year, ELMOS was extraordinarily successful again. The trend of the first quarter has been continued. Overproportional increase in profit, combined with an increase in sales which is clearly above the average in this industry. A gross margin that could be raised clearly above the 50% limit and a jump in sales of 30% compared to the equivalent previous year period speak for themselves.

Dortmund, August 2000



Knut S. Hinrichs

- The Board of Management -



Dr. Klaus G. Weyer

- The Board of Management -



*Dr. Klaus G. Weyer,*  
Vorstand

*Knut S. Hinrichs,*  
Sprecher des Vorstandes

## **General Meeting of Shareholders on May 25, 2000**

The first Ordinary General Meeting of Shareholders of ELMOS Semiconductor AG took place on May 25, 2000 in the Industrieclub in Düsseldorf. The meeting was held under the chairmanship of the chairman of the supervisory board, Mr. Prof. Dr. Günter Zimmer.

In order to avoid a liquidity reduction for ELMOS AG by paying the dividends, the EFH ELMOS finance holding has committed itself at an early date to make available the dividend amount of 17.4 million DM by increasing the capital.

### **Excerpts of some decisions**

The General Meeting has decided to use the balance sheet profit of 17.4 million DM for paying a dividend of 0.90 DM per share. The dividends were paid on May 30, 2000.

By using the profit according to the "pay out and take back" principle it is possible to anticipate the advantages of the tax reform planned by the Federal Government.

The "pay out and take back" principle means that the public company (in this case ELMOS AG) pays dividends for the year 1999 in order to reduce the corporate tax burden. As a result, the corporate tax normally to be paid and the additional solidarity charge totaling 42% are reduced to 31.6% afterwards (./ 25%).

### **New Supervisory Board**

- Prof. Dr. Günter Zimmer, Chairman
- Dr. Burkard Dreher, Vice-chairman
- Prof. Dr. Karsten Klaus Heinrich Ehlers
- Dave A. Ranhoff
- Herbert Sporea
- Dr. Wolfgang Ziebart



## Sales

The growth in sales in the second quarter, at 47.7% as against the previous year, was considerably higher than our expectations. The figure is significantly higher than Q. I 2000 (+19%). And the comparison of the first half-year (1.1.- 30.6.2000) with the corresponding period in the previous year shows growth of 32.1%, which is also higher than our forecasts. This is all the more remarkable as throughout the whole of the automotive branch only slight growth can be seen at present, or even stagnation. The reason for this is that ELMOS is overproportionately represented in higher-value vehicle sectors. The large share of

electronics in these vehicles is responsible for the excellent growth.

Production sales grew in Q. II by 45.7% (+ DM 16 million) as against the previous year. Here as well the first half of the year shows an unexpectedly high increase with 35.6% (+ DM 26.2 million). The trend to apportion development and tooling costs (masks, test programmes, etc.) to series production is continuing in principle, as the comparison of the half-yearly figures shows. However, this trend is over-compensated by the higher growth rates in the field of production. ■

| Sales       | Q2/00  | Q2/99  | Change (%) | 1 <sup>st</sup> half 00 | 1 <sup>st</sup> half 99 | Change (%) | Q1/00  | Q2/Q1 (%) |
|-------------|--------|--------|------------|-------------------------|-------------------------|------------|--------|-----------|
| Total       | 53.431 | 36.169 | 47.7       | 103.432                 | 78.295                  | 32.1       | 50.001 | 6.9       |
| thereof     |        |        |            |                         |                         |            |        |           |
| Production  | 51.127 | 35.092 | 45.7       | 99.895                  | 73.652                  | 35.6       | 48.767 | 4.8       |
| Development | 1.500  | 0.352  | 326.3      | 2.120                   | 2.858                   | -25.8      | 0.620  | 142.1     |
| Other       | 0.803  | 0.725  | 10.8       | 1.417                   | 1.785                   | -20.6      | 0.614  | 30.9      |

(Figures in million DM or %)

## Sales according to regions

In Q. II 2000 the internationalisation of sales continued unchanged. The share of sales outside Germany is almost 60%. The largest increases in sales fall on EU countries, both absolutely and in percentage terms. A total of 48.6% of sales, with a value of DM 25.972 million, was generated in this economic area in

Q. II 2000. In the comparable period in 1999 that share was DM 15.964 million (44.1% of sales). In the same period, exports to the USA almost doubled absolutely from DM 2.209 million (6.1% of sales) to DM 4.336 million, and are now 8.1% of sales. ■

| Sales              | Q2/00  | Q2/99  | Change (%) | 1 <sup>st</sup> half 00 | 1 <sup>st</sup> half 99 | Change (%) | Q1/00  | Q2/Q1 (%) |
|--------------------|--------|--------|------------|-------------------------|-------------------------|------------|--------|-----------|
| Total              | 53.431 | 36.169 | 47.7       | 103.432                 | 78.295                  | 32.1       | 50.001 | 6.9       |
| thereof            |        |        |            |                         |                         |            |        |           |
| Germany            | 21.843 | 15.810 | 38.2       | 41.843                  | 32.813                  | 27.5       | 20.000 | 9.2       |
| Other EU countries | 25.972 | 15.964 | 62.7       | 49.540                  | 35.509                  | 39.5       | 23.569 | 10.2      |
| USA                | 4.336  | 2.209  | 96.3       | 8.873                   | 5.452                   | 62.7       | 4.537  | -4.4      |
| Other countries    | 1.280  | 2.186  | -41.4      | 3.176                   | 4.521                   | -29.8      | 1.895  | 32.4      |

(Figures in million DM or %)



## Incoming orders

In the second quarter 2000 incoming orders increased by 32.7% above the figures for the previous year and totalled DM 60.669 million. The comparable half-yearly figures were even exceeded by around 52.7%. Both quarterly and half-yearly figures highlight the stormy growth trend as against the previous year. The sales share of ELMOS AG in the automotive industry is about 85%. Because the first quarter of a year usually has the greatest ordering dynamism, the fall of incoming orders in the second quarter of 2000 in comparison to Q. I (10.7%) is a seasonal effect. The book-to-bill ratios "incoming orders/sales" (Q. I: 1.39; Q. II: 1.19; first six months 2000: 1.29) show a solid growth trend.

In the first six months of this year the success of the previous year was continued with regard to the Design-Wins. Together with the CMOS camera project

and the platform decision "Integrated safety system" (see Q1/00 report) additional eight new development projects in the field of automobile electronics were acquired. Over the project running periods this will result in additional production sales in the future from the new projects of about DM 56 million per year. In the USA, ELMOS was able to make use of its many years of experience in the field of safety applications (19 ICs) to acquire a system manufacturer as a new customer. Here ELMOS received orders for two new airbag ICs. Along with the core business area of automobile electronics, ELMOS is intensifying as planned the development of other business areas. The next challenge is the extremely dynamically growing telecommunications market, and successes from the acquisition of new projects can be reckoned with in Q3/00. ■

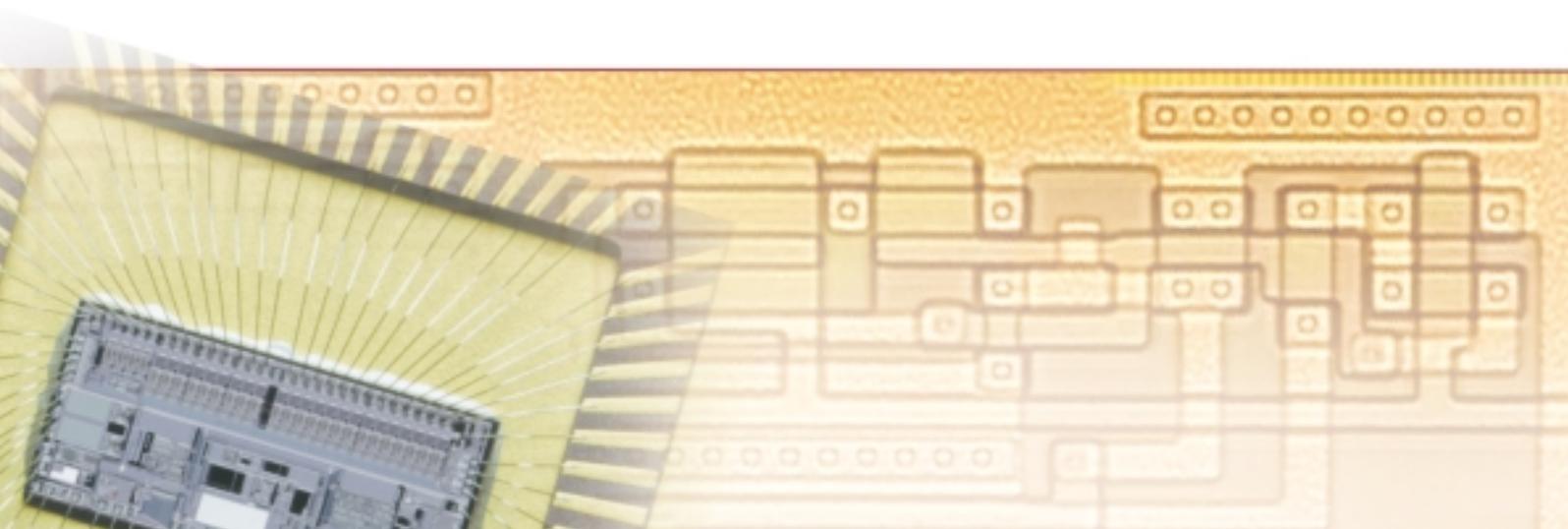
| Incoming orders                     | Q2/00  | Q2/99  | Change (%) | 1 <sup>st</sup> half 00 | 1 <sup>st</sup> half 99 | Change (%) | Q1/00  | Q2/Q1 (%) |
|-------------------------------------|--------|--------|------------|-------------------------|-------------------------|------------|--------|-----------|
| Total                               | 60.669 | 45.714 | 32.7       | 128.575                 | 84.206                  | 52.7       | 67.906 | 10.6      |
| <i>(Figures in million DM or %)</i> |        |        |            |                         |                         |            |        |           |

## Gross margin

In the second quarter, the gross margin achieved an excellent level with 55.5% of sales. This meant that the figures for the comparative period in 1999 were exceeded by 46.1%. If we also take into account that, on the one hand, external sourcing from Infineon (around 20% production share) reduced the results by 3% of sales, and, on the other hand, the high dollar rate also had an unfavourable effect with 2% of sales, in the second quarter ELMOS achieved a result of

over 60% of sales on self-processed wafers. The half-yearly figures were correspondingly good. A gross margin of 52.9% was achieved, which, in absolute figures, is 3.2% of sales above the same period in the previous year. In absolute terms, the operating result was increased by DM 15.8 million, or 40.5%. This means that the very good results from the first quarter were increased again by DM 4.6 million, or 18.3%. ■

| Gross margin                        | Q2/00  | Q2/99  | Change (%) | 1 <sup>st</sup> half 00 | 1 <sup>st</sup> half 99 | Change (%) | Q1/00  | Q2/Q1 (%) |
|-------------------------------------|--------|--------|------------|-------------------------|-------------------------|------------|--------|-----------|
| Total                               | 29.643 | 20.296 | 46.1       | 54.694                  | 38.926                  | 40.5       | 25.050 | 18.3      |
| % of Sales                          | 55.5   | 56.1   |            | 52.9                    | 49.7                    |            | 50.1   |           |
| <i>(Figures in million DM or %)</i> |        |        |            |                         |                         |            |        |           |



## Research and development

In the second quarter of 2000 R&D costs increased to DM 5.777 million as against DM 4.256 million in the comparable period in 1999. This corresponds to an increase of 35.7%. As a whole, the expenses for research and development activities in the first quarter of 2000 total 11.8% of sales, or a total volume of DM 12.109 million. The R&D projects will be consistently driven forwards, in particular to

- transfer the high-voltage CMOS 0.8µm technology with 0.6µm and 0.45µm shrink to production ahead of schedule, and
- to implement 3-layer metallisation.

Both projects are absolutely essential for the expected telecommunication orders. In addition, considerable funds will be used to qualify the SOI technology (high temperature, etc.) industrially. ■

| R&D expenses | Q2/00 | Q2/99 | Change (%) | 1 <sup>st</sup> half 00 | 1 <sup>st</sup> half 99 | Change (%) | Q1/00 | Q2/Q1 (%) |
|--------------|-------|-------|------------|-------------------------|-------------------------|------------|-------|-----------|
| Total        | 5.777 | 4.256 | 35.7       | 12.109                  | 7.557                   | 60.2       | 6.331 | - 8.8     |
| % of Sales   | 10.8. | 11.8  |            | 11.7                    | 9.7                     |            | 12.7  |           |

(Figures in million DM or %)

## Marketing and Sales

The costs for marketing and sales increased by 23.6% in comparison with the previous year, although their share of sales fell slightly. In the first six months of

2000, costs amounted to 3.2% of sales as against 3.6% in the comparable period in 1999. ■

| Marketing and selling expenses | Q2/00 | Q2/99 | Change (%) | 1 <sup>st</sup> half 00 | 1 <sup>st</sup> half 99 | Change (%) | Q1/00 | Q2/Q1 (%) |
|--------------------------------|-------|-------|------------|-------------------------|-------------------------|------------|-------|-----------|
| Total                          | 1.747 | 1.413 | 23.6       | 3.333                   | 2.805                   | 18.8       | 1.586 | 10.2      |
| % of Sales                     | 3.3   | 3.9   |            | 3.2                     | 3.6                     |            | 3.2   |           |

(Figures in million DM or %)

## General administration expenses

Expenses for administration and for general costs increased by DM 1.601 million, or 40.1%, in comparison with the same quarter in the previous year. It should be noted here that in particular the costs

resulting from the AG's extended publicity obligations contributed to this increase. In relation to sales, however, these costs fell from 11% in Q. II 1999 to 10.5% in the comparable period in 2000. ■

| General and administration expenses | Q2/00 | Q2/99 | Change (%) | 1 <sup>st</sup> half 00 | 1 <sup>st</sup> half 99 | Change (%) | Q1/00 | Q2/Q1 (%) |
|-------------------------------------|-------|-------|------------|-------------------------|-------------------------|------------|-------|-----------|
| Total                               | 5.597 | 3.996 | 40.1       | 10.120                  | 7.507                   | 34.8       | 4.523 | 23.7      |
| % of Sales                          | 10.5  | 11.0  |            | 9.8                     | 9.6                     |            | 9.1   |           |

(Figures in million DM or %)

## Operating income

In comparison with the same quarter in the previous year, the operating income was increased by DM 5.9 million, or 55.4%. With an operating income of 30.9% of sales, an advance into a new dimension was achieved for the first time. On the basis of own products (i.e. without external services Infineon) and excluding the unfavourable effect of the dollar

(approx. 2% of sales) a margin of 35.9% of sales was in fact achieved.

The half-yearly results increased by DM 8.1 million, or 38.3%, to DM 29.1 million (28.2% of sales). The gratifying results in the first quarter in 2000 were increased again by DM 3.9 million, or 31%. ■

| Operating income | Q2/00  | Q2/99  | Change (%) | 1 <sup>st</sup> half 00 | 1 <sup>st</sup> half 99 | Change (%) | Q1/00  | Q2/Q1 (%) |
|------------------|--------|--------|------------|-------------------------|-------------------------|------------|--------|-----------|
| Total            | 16.522 | 10.631 | 55.4       | 29.132                  | 21.057                  | 38.3       | 12.610 | 31.0      |
| % of Sales       | 30.9   | 29.4   |            | 28.2                    | 26.9                    |            | 25.2   |           |

(Figures in million DM or %)

## Comprehensive income

The comprehensive income (including foreign currency adjustment) increased in Q. II 2000 to DM 9.066 million as against DM 6.099 million in the comparable period in 1999. This is an increase of 48.6%. This is the best quarterly result for ELMOS AG in the company's history. For the first six months of 2000

the comprehensive income increased clearly by 49.4% as against the first six months in 1999. The tax calculation took place once again on the "pay out and take back" principle that is planned for the optimisation of tax for the business year 2000. ■

| Comprehensive income | Q2/00 | Q2/99 | Change (%) | 1 <sup>st</sup> half 00 | 1 <sup>st</sup> half 99 | Change (%) | Q1/00 | Q2/Q1 (%) |
|----------------------|-------|-------|------------|-------------------------|-------------------------|------------|-------|-----------|
| Total                | 9,066 | 6,099 | 48,6       | 16,011                  | 10,717                  | 49,4       | 6,945 | 30,5      |
| % of Sales           | 17,0  | 16,8  |            | 15,5                    | 13,7                    |            | 13,9  |           |

(Figures in million DM or %)

## Human resources

As of 30th June 2000 ELMOS AG employed 498 people as against 480 on 30th June 1999. ELMOS has realised the growth described above (32.1% of sales) through internal productivity gains. Personnel figures in the areas Production, Administration and Sales

are stagnating. An exception is formed by the areas Process Development and Design, which have been additionally strengthened to support the accelerated growth process. ■

## Cash flow

The cash and cash equivalents at the end of Q. II 2000 amounted to DM 129.2 million as against DM 97.2 million on 31st March 2000 and DM 85.0 million on 31st December 1999. We assume that our increasing

investment activity will have an effect on the cash and cash equivalents in the further course of the business year 2000. ■

Frankfurter Wertpapierbörse - Bekanntmachungen vom 11.10.99

|    |      |        |  |                   |
|----|------|--------|--|-------------------|
| 05 | ELG  | 567710 | ELMOS SEMICONDUCTOR AG - ERSTE TAXE        | 22,00-24,00       |
| 05 | WBVB | 845308 | WUERTT. U. BAD. VERS. AG -BZR-             | ERSTER HANDELSTAG |
| 02 |      |        | NEUER MARKT                                |                   |
| 02 | ELG  | 567710 | ELMOS SEMICONDUCTOR AG - ERSTER HANDELSTAG |                   |
| 02 | BDT  | 523281 | BERTRANDT AG JUNGE - ERSTER HANDELSTAG     |                   |

Notierungsaufnahme Neuer Markt:

|        |                        |             |               |
|--------|------------------------|-------------|---------------|
| 567710 | ELMOS Semiconductor AG | Erste Taxe: | Erster Preis: |
|        |                        | 22,00-24,00 |               |

Abzeichnungen: Tel: 2101-1310 Handelsüberwachungsstelle FNB  
Störungen der Handels- und Anzeigesysteme:  
2101-1050 Market Supervision Floor

**Preliminary note:**

The financial data is prepared in accordance with US-GAAP. (\*unaudited)

**Consolidated Balance Sheets**

| DM  | June 30, 2000* | June 30, 1999 |
|---|----------------|---------------|
| <b>Assets</b>   |                |               |
| Current assets:   |                |               |
| Cash  | 129.214.455    | 1.501.203     |
| Marketable securities   | 9.735.144      | 0             |
| Trade accounts receivable, less allowance<br>for doubtful accounts of DM 2.939.359,<br>DM 939.000 in 2000 and 1999,<br>respectively | 38.681.973     | 25.818.465    |
| Inventories   | 30.828.520     | 25.430.711    |
| Prepaid expenses and other  | 12.509.079     | 2.858.374     |
| Total current assets  | 220.969.171    | 55.608.753    |
| Deferred taxes  | 2.562.692      | 2.936.361     |
| Investments in unconsolidated subsidiaries  | 811.366        | 1.002.882     |
| Property, plant and equipment:  |                |               |
| Land  | 3.303.787      | 3.303.787     |
| Buildings and improvements  | 58.709.789     | 55.806.890    |
| Machinery, equipment and other  | 138.637.134    | 132.002.320   |
| Software  | 7.646.966      | 6.732.467     |
| Construction in progress  | 23.481.795     | 15.577.615    |
| Less accumulated depreciation   | (118.839.791)  | (108.905.247) |
|   | 112.939.680    | 104.517.832   |
| Total assets  | 337.282.909    | 164.065.828   |

| DM  | June 30, 2000*     | June 30, 1999      |
|---|--------------------|--------------------|
| <b>Liabilities and shareholders' equity</b>       |                    |                    |
| Current liabilities:                              |                    |                    |
| Amounts payable to banks                          | 12.772.363         | 44.170.073         |
| Trade accounts payable                            | 15.497.479         | 13.048.744         |
| Accrued payroll, benefits and taxes               | 4.753.092          | 5.182.708          |
| Other accrued liabilities                         | 7.817.323          | 4.921.140          |
| Accrued income taxes                              | 8.011.319          | 4.667.763          |
| Capital free payment                              | 20.634.007         | 0                  |
| Current portion of long-term debt                 | 1.250.219          | 1.549.820          |
| Deferred taxes                                    | 2.272.582          | 228.068            |
| <b>Total current liabilities</b>                  | <b>73.008.384</b>  | <b>73.768.316</b>  |
| Long-term dept, less current portion              | 44.827.787         | 50.421.857         |
| Minority interest                                 | 381.632            | 417.927            |
| Shareholders' equity:                             |                    |                    |
| Share capital                                     | 37.747.519         | 29.924.200         |
| Paid-in capital                                   | 165.382.119        | 0                  |
| Cumulative foreign currency translation           | 49.765             | 47.403             |
| Retained earnings                                 | 15.885.703         | 9.486.125          |
| <b>Total shareholders' equity</b>                 | <b>219.065.106</b> | <b>39.457.728</b>  |
| <b>Total liabilities and shareholders' equity</b> | <b>337.282.909</b> | <b>164.065.828</b> |



\*unaudited

### Consolidated Profit and Loss Statements

| DM   | Six month ended June 30, |            |
|--|--------------------------|------------|
|  | 2000*                    | 1999       |
| Net sales  | 103.431.709              | 78.295.096 |
| Cost of sales  | 48.738.159               | 39.369.165 |
| Gross margin   | 54.693.550               | 38.925.931 |
| Research and development   | 12.108.559               | 7.557.451  |
| Marketing and selling expenses   | 3.333.107                | 2.805.155  |
| General and administrative expenses  | 10.119.867               | 7.506.490  |
| Operating income   | 29.132.017               | 21.056.835 |
| Interest expense   | (1.129.292)              | 2.435.295  |
| Foreign exchange (gain) loss-net   | 843.150                  | 41.065     |
| Other (income) expense-net   | 166.161                  | (817.367)  |
| Income (loss) before income taxes, equity in loss of unconsolidated subsidiaries and minority interest | 29.251.998               | 19.397.842 |
| Income tax expense (benefit)   |                          |            |
| Current  | 13.168.213               | 7.978.471  |
| Deferred   | (353.970)                | 337.639    |
|  | 12.814.243               | 8.316.110  |
| Net income before equity in loss of unconsolidated subsidiaries and minority interest                  | 16.437.755               | 11.081.732 |
| Equity in loss of unconsolidated subsidiaries  | 0                        | 319.503    |
| Minority interest in earnings of consolidated subsidiaries   | 179.865                  | 112.167    |
| Net Income   | 16.257.890               | 10.650.062 |
| Change in foreign currency translations  | (246.857)                | 67.244     |
| Comprehensive income   | 16.011.033               | 10.717.306 |

\*unaudited

**Consolidated Cash-Flow Statements**

| DM  | Six month ended June 30,<br>2000*                      1999 |                     |
|---|---|---------------------|
| <b>Operating activities:</b>                                      |   |                     |
| Net Income  | 16.257.890  | 10.650.062          |
| Depreciation  | 9.859.757   | 10.850.717          |
| Deferred income taxes   | (353.970)   | 337.639             |
| Minority interest   | 179.865   | 112.167             |
| Equity in losses of unconsolidated subsidiaries:                  | 0   | 319.503             |
| <b>Changes in operating assets and liabilities</b>                |   |                     |
| Accounts receivable   | (4.488.363)   | (10.450.796)        |
| Inventories   | (5.271.301)   | (4.689.654)         |
| Prepaid assets and other  | 2.543.443   | 347.736             |
| Accounts payable  | (3.583.223)   | 2.688.901           |
| Accrued liabilities   | 2.384.062   | (4.752.961)         |
| Accrued income taxes payable                                      | 8.011.319   | (569.470)           |
| <b>Net cash (used) provided by operating activities</b>           | <b>25.539.479</b>   | <b>4.843.844</b>    |
| <b>Investing activities:</b>                                      |   |                     |
| Capital expenditures  | (9.998.868)   | (14.626.485)        |
| Disposal of fixed assets  | 4.105   | 136.456             |
| Sale (Purchase) of marketable securities                          | 19.377.386  | 0                   |
| Sale (Purchase) of in investments                                 | (690.000)   | 0                   |
| <b>Net cash (used) in investing activities</b>                    | <b>8.692.623</b>  | <b>(14.490.029)</b> |
| <b>Financing activities:</b>                                      |   |                     |
| Dividends paid  | (17.370.001)  | (123.962)           |
| Capital free payment  | 20.634.007  | 0                   |
| Dividends paid by consolidated subsidiary to minority shareholder | (251.949)   | 0                   |
| Repayments of long-term debt                                      | (2.416.215)   | (5.376.061)         |
| Increase (decrease) in amounts payable to bank                    | 9.374.211   | 10.572.033          |
| <b>Net cash (used) provided in financing activities</b>           | <b>9.970.053</b>  | <b>5.072.010</b>    |
| Increase (decrease) in cash                                       | 44.202.155  | (4.574.175)         |
| Cash and cash equivalents at December 31, 1999 and 1998           | 85.012.300  | 6.075.378           |
| <b>Cash and cash equivalents at June 30, 2000 and 1999</b>        | <b>129.214.455</b>  | <b>1.501.203</b>    |

## **Outlook**

### ***ELMOS Semiconductor AG enters new market!***

#### ***Large order received for mobile telecommunication electronics!***

#### ***Long term sales growth increased by 50%!***

ELMOS Semiconductor AG has received a large order for the development and production of LCD-drivers to be used in mobile telephones. This order is ELMOS' entry point into the rapidly growing telecommunications market. As usual in this market, the development time for the new product will be within a 6-month period of time, thus the product will significantly contribute to 2001 sales. The booking volume for deliveries to be made within 2001 to 2003 is 80 to 100 million DM.

This new product will utilize special capabilities of the ELMOS submicron High-Voltage-CMOS process technology. Optimized ELMOS driver circuits with higher voltage drive capability are making possible "local brightness control" of oversized displays, which will be increasingly used in next generation mobile communicators.

As a first step, the LCD-driver will be produced in a new 0.8  $\mu\text{m}$ , 3-layer metal high-voltage analog mixed signal CMOS technology. After reaching the volume range for serial production within 2001 the product will be shrunk to 0.6  $\mu\text{m}$  structures.

Within the telecommunications market ELMOS will achieve gross margins comparable to the automotive

market, due to ELMOS' outstanding manufacturing technology with its high packing densities. ELMOS expects further large orders from new strategic key customers in the telecommunications market.

The market share of ELMOS' key telecommunications customer is in the double figure percent range in Germany, England and France.

Thus ELMOS has achieved its strategic goal to win a share of the rapidly growing market for telecommunication electronics. This complements its highly profitable and long term oriented business in automotive electronics.

Therefore, ELMOS' long-term growth rate of about 20% can be raised to about 30%, reflecting a 50% increase.

With margins comparable to ELMOS' automotive business, the financial results will increase significantly.



### Market: Custom LCD Drivers

Every participant in the mobile telephone market tries to achieve a high product price at large quantities by technical innovation. The key areas of development at this time are:

- Miniaturization
- Battery lifetime (active, passive)
- Internet compatibility (large information displays - LCDs)

In the future the primary interface to communication devices is going to move from the microphone to displays and input devices. The LCD will have an ever-increasing influence on the product design and its market acceptance. ELMOS, with its specialty in custom integrated circuits, has won a position in this strategic market.

The technical requirements are extremely demanding, with the LCDs of ever increasing size:

- Achieve the largest possible resolution and brilliance
- While using the lowest possible current

### ELMOS High-Voltage-Sub-Micron-CMOS-Technology (HV-CMOS)

The outstanding performance of our technology is demonstrated by exceptionally high growth in sales and revenue for our core automotive market. We know

of no other company with comparable success in this market, characterized by extreme competition and highest quality requirements.

Besides the high productivity of our own wafer fab, ELMOS' high voltage capability and the modularity of its CMOS processes are the drivers behind this success. The manufacturing processes of our global competitors, using BIPOLAR-CMOS (BICMOS, BCD), require between 25% and 50% higher mask complexity, depending on the application. This mask complexity has a double negative impact, because

- the production costs per wafer is increased and
- the yield (good dies) per wafer is decreased.

The high revenue in the automotive sector results from the superior concept behind our competing technology.

Following the project to convert our fab from 4 inch wafers to 6 inch wafers (1996 to 1999), we have drastically increased our Research and Development (R&D) budget, in order to strengthen our process capability long term.

For comparison:

|             | million DM | % of Sales |
|-------------|------------|------------|
| 1998        | 15         | 11         |
| 1999        | 17         | 10         |
| 2000        | 24 *       | 12         |
| * (planned) |            |            |

Vision

Communication

As a result of the long term investment in our process technology, the start of series production for our 0.6  $\mu\text{m}$  HV-CMOS technology will be moved forward into the year 2001 and 0.5  $\mu\text{m}$  into the year 2002.

With our 0.6  $\mu\text{m}$  technology we will achieve profit margins in telecommunications that are comparable to our current high margins in automotive.

Obviously, the new technologies will also increase competitiveness, sales and revenue ability for the automotive sector.

### ***ELMOS Analog Mixed Signal Design Strategy***

The ELMOS marketing concept focuses over 90% of our sales on full custom integrated circuits. While ELMOS is developing full custom solutions for its customers (ASIC = Application Specific Integrated Circuit), our global competitors (e.g. Infineon, Motorola, Philips, ST-Microelectronic) are trying to satisfy market needs with standard products. In order to maintain the competitiveness of these products, investments in production facilities continue to grow (US\$ 2-3 billion for a 300mm fab).

The financial success of ELMOS AG shows, that the optimal system integration achieved from ASICs is a strategy that stands up to our global competitors.

In addition, our full custom solutions protect the know-how of our customers from reproduction. It guarantees the IC manufacturer a single source position for the life of the product.

While our competitors are investing their resources in building megafabs for standard products, (the best example is DRAMs), ELMOS is investing in building up its mixed signal design capacity. This is necessary because the strong differentiation (1 customer, 1 application, 1 IC) requires a larger design capacity.

ELMOS currently has approximately 500 employees, of which over 100 work for research & development.

This design strategy, along with almost 15 years of experience, allows ELMOS to develop and deliver prototypes of this new telecommunications product in less than six months, by working in parallel on macro-blocks at three different locations.



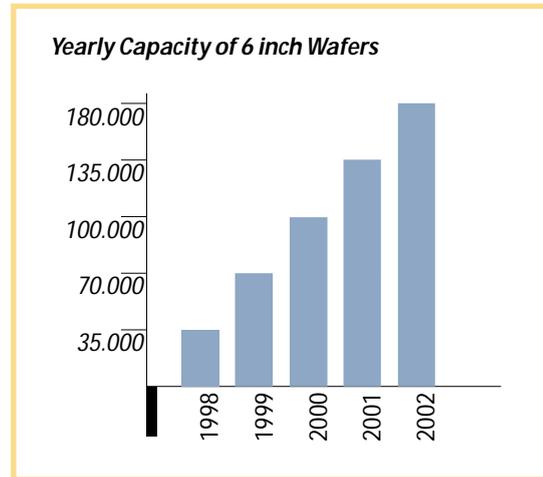
## ELMOS Production Capacity

ELMOS is a single source for over 90% of the products it delivers. This means that ELMOS carries an exceptionally high level of responsibility to insure the delivery of products to its customers. On the other side, the long life cycles of our products (typically 5 to 7 years) provide ELMOS with a solid basis to project sales and plan growth. ELMOS customers have not experienced issues of insufficient or non-existent product supply that many semiconductor users are currently facing. ELMOS delivers exactly, week for week, the quantities ordered from its customers. This has caused some potential customers to re-think their supplier strategy, and paved the way for ELMOS' entrance into the telecommunications market.

The enterprise has the capital available, to achieve the following increase in capacity:

Taking the technology shrink into account (packing density is calculated with the square of the geometry

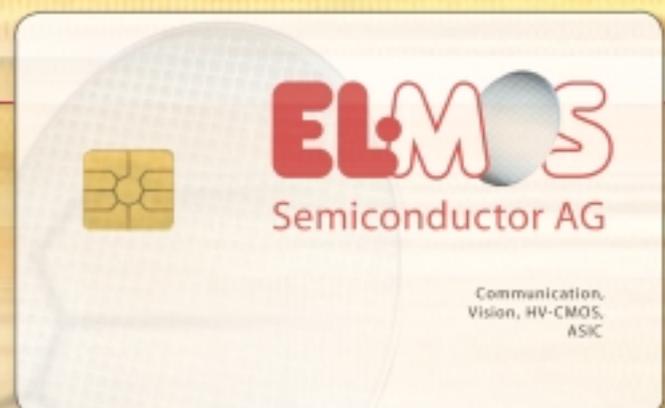
size  $0.8\mu\text{m} : 0.6\mu\text{m} : 0.5\mu\text{m} = 1 : 1.8 : 3$  in packing density), an additional increase in capacity is achieved, partially compensated by higher demands on functionality. This increase in production capacity can be financed by the enterprise's cash flow, and provides for yearly sales of DM 500 million.

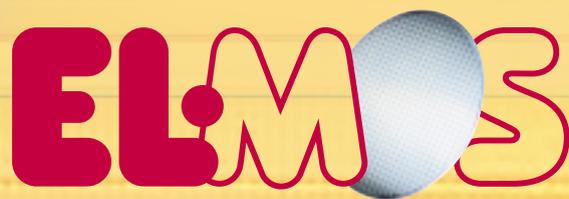


Based on a growth rate of 20%, this capacity would be sufficient until 2004 or 2005. With an increased growth rate of 35%, the capacity limits would be reached in 2003.

However, if as expected by ELMOS, further large orders are received, it will be necessary for ELMOS to accelerate the planning of its 8 inch facility with geometries of  $0.35\mu\text{m}$  to  $0.18\mu\text{m}$ , requiring an

investment of DM 400 – 500 million. This additional capacity, along with the conversion of the 6 inch fab to 8 inch wafers, would provide for yearly sales of DM 2 billion.





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