SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 10-Q/A
AMENDMENT NO. 1 TO
QUARTERLY REPORT UNDER SECTION 13 or 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For Quarter Ended March 31, 1999
Commission File Number 1-3761
TEXAS INSTRUMENTS INCORPORATED
(Exact name of Registrant as specified in its charter)

## Delaware

(State of Incorporation)

$$
75-0289970
$$

(I.R.S. Employer Identification No.)

8505 Forest Lane P.O. Box 660199, Dallas, Texas 75266-0199
(Address of principal executive offices) $\quad$ (Zip Code)
Registrant's telephone number, including area code (972) 995-3773
Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or $15(\mathrm{~d})$ of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes $X$ No

$$
391,978,086
$$

Number of shares of common stock outstanding as of March 31, 1999


PART II
6. Exhibits and Reports on Form 8-K.................................................. 18

Text of Amendments
Explanatory Note:
Each of the above listed Items is hereby amended by deleting the Item in its entirety and replacing it with the Items included herein.

The purpose of the amendment is to make certain changes to the Financial Statements (Item 1) and the Management's Discussion and Analysis of Financial Condition and Results of Operations (Item 2) in Part I of the Quarterly Report on Form 10-Q for the quarter ended March 31, 1999 of Texas Instruments Incorporated (the "company" or "TI") that was filed on April 23, 1999 (the "Original Filing"), and to the Exhibits and Reports on Form 8-K (Item 6) in Part II of the Original Filing.

The amendment is being made to reflect certain comments received by TI from the Securities and Exchange Commission (the "SEC"). The SEC requested that TI amend the Original Filing to, among other things, (i) reorder its Management's Discussion and Analysis of Financial Condition and Results of Operations in order to place the discussion of inclusive results ahead of results without special charges and gains, (ii) provide additional disclosures, in notes to its financial statements and in its Management's Discussion and Analysis of Financial Condition and Results of Operations, regarding certain special charges taken by TI, and (iii) restate results of operations to reduce costs of revenues by $\$ 16$ million, which reduction resulted in income for the quarter increasing from $\$ 233$ million to $\$ 244$ million and earnings per share increasing from $\$ 0.58$ to $\$ 0.60$. The $\$ 16$ million reduction in the first quarter costs of revenues will be charged to expense as depreciation ratably through the end of 2000.

Any items in the Original Filing not expressly changed hereby shall be as set forth in the Original Filing. All information contained in this amendment and the Original Filing is subject to updating and supplementing as provided in the company's periodic reports filed with the SEC subsequent to the date of such reports.

## ITEM 1. Financial Statements

TEXAS INSTRUMENTS INCORPORATED AND SUBSIDIARIES
Consolidated Financial Statements
(In millions of dollars, except per-share amounts.)



1. Diluted earnings per common share are based on average common and dilutive potential common shares outstanding (404.3 and 400.0 million shares for the first quarters of 1999 and 1998).
2. At the request of the Securities and Exchange Commission, the results of operations for the first quarter of 1999 have been restated to reduce cost of revenues by $\$ 16$ million, described as follows. The $\$ 16$ million, which was previously recorded as part of a $\$ 17$ million fixed asset impairment charge for Hatogaya, Japan in the first quarter, will be charged to depreciation expense ratably beginning with the second quarter of 1999 and extending through the end of 2000. Additional depreciation expense of $\$ 1$ million was recorded in the first quarter of 1999. This restatement increased net income and diluted earnings per share by $\$ 11$ million and $\$ 0.02$ in the first quarter. The information in the following paragraph reflects this restatement.

In the first quarter of 1999, the company announced a consolidation of semiconductor manufacturing operations in Japan to improve manufacturing efficiencies and reduce costs. The consolidation is expected to be completed by the end of the year 2000. The action resulted in a pretax charge of $\$ 14$ million in the first quarter, of which $\$ 13$ million was for severance for the elimination of 153 jobs in Hatogaya, Japan and $\$ 1$ million for other related costs. At March 31, 1999, the pay-out of the severance cost obligation had not yet begun. Of the $\$ 14$ million charge, $\$ 11$ million was included in cost of revenues and $\$ 3$ million in marketing, general and administrative expense.
3. In the first quarter of 1999, sale of the Micron subordinated note and other securities generated $\$ 172$ million in cash.
4. In connection with TI's acquisition of Butterfly VLSI, Ltd. (Butterfly) in the first quarter of 1999, TI recorded a charge of $\$ 10$ million for the value of purchased in-process R\&D (purchased R\&D) at the acquisition date, based upon the appraised value of the related developmental projects. The purchased R\&D projects were assessed, analyzed and valued within the context and framework articulated by the Securities and Exchange Commission.

Butterfly's research and development relates to short distance wireless semiconductor and systems technology. This technology is used to achieve higher data rates at 2.4 GHz and above frequencies for use in voice-plus-data transmission products.

Significant assumptions used in determining the value of purchased R\&D for Butterfly included projected operating cash flows and the discount rate. Projected operating cash flows were expected to begin in 2000. The discount rate selected for Butterfly's in-process technologies was $25 \%$.

At the time of the acquisition, Butterfly management estimated the remaining cost and time to complete the purchased R\&D projects to be \$5 million and 264 engineer-months. The term "engineer-month" refers to the average amount of research work expected to be performed by an engineer in a month. TI expects to essentially meet its original return expectations.

The relative stage of completion and projected operating cash flows of the underlying in-process projects acquired were the most significant and uncertain assumptions utilized in the valuation analysis of the in-process research and development. Such
uncertainties could give rise to unforeseen budget overruns and/or revenue shortfalls in the event that TI is unable to successfully complete and commercialize the projects. TI management is primarily responsible for estimating the value of the purchased R\&D in all acquisitions accounted for under the purchase method.
5. In the first quarter of 1998 , TI's U.S. DRAM semiconductor manufacturing joint venture with Hitachi, Ltd. was discontinued as a result of a combination of severe price declines and overcapacity in the DRAM market. As part of this first quarter discontinuance, TI purchased the assets of the venture for approximately $\$ 98$ million. Also as part of this first quarter discontinuance, TI and Hitachi decided to assume and share equally in the payment of the venture's obligations. TI's share of those payments was $\$ 219$ million, which was paid and charged to cost of revenues in the first quarter.
6. In connection with TI's acquisition of GO DSP and Spectron, both of which occurred in the first quarter of 1998, TI recorded charges of $\$ 10$ million and $\$ 15$ million, for purchased in-process R\&D (purchased R\&D), based upon the appraised value of the related developmental projects. The Income Approach, which included an analysis of the markets, cash flows, and risks associated with achieving such cash flows, was the primary technique utilized in valuing each purchased R\&D project.

GO DSP's and Spectron's research and development related to DSP software tools. These software tools, which include real-time operating systems, allow DSP systems developers to improve productivity and reduce time-to-market. TI's goal in these acquisitions was to extend its leadership in digital signal processing solutions by offering a complete development environment, simplifying DSP development, and making TI DSP solutions more attractive for a broad range of fast-growing markets.

Significant assumptions used in determining the value of purchased R\&D for GO DSP and Spectron included projected operating cash flows and the discount rate. Projected operating cash flows were expected to begin in late 1998. The discount rate selected for GO DSP's and Spectron's in-process technologies was $30 \%$.

At the time of the acquisitions, GO DSP and Spectron management estimated the remaining cost and time to complete the purchased R\&D projects was approximately $\$ 7$ million and 540 engineer-months. The term "engineer-month" refers to the average amount of research work expected to be performed by an engineer in a month. All the in-process projects were essentially completed on schedule. TI expects to essentially meet its original return expectations.

The relative stage of completion and projected operating cash flows of the underlying in-process projects acquired were the most significant and uncertain assumptions utilized in the valuation analysis of the in-process research and development. Uncertainties regarding projected operating cash flows could give rise to unforeseen budget over-runs and/or revenue shortfalls in the event that TI is unable to successfully commercialize the projects. TI management is primarily responsible for estimating the fair value of the purchased R\&D in all acquisitions accounted for under the purchase method.
7. Total comprehensive income, i.e., net income plus investment and pension liability adjustments to stockholders' equity, for the first quarters of 1999 and 1998 was $\$ 254$ million and $\$ 4$ million.
8. There has been no significant change in the status of the audit and investigation concerning grants from the Italian government.
9. Certain amounts in the prior period's financial statements have been reclassified to conform to the 1999 presentation.
10. The statements of income, statements of cash flows and balance sheet at March 31, 1999, are not audited but reflect all adjustments which are of a normal recurring nature and are, in the opinion of management, necessary to a fair statement of the results of the periods shown.
11. Business segment information is as follows:

|  | For Three Mar. 31 1999 |  | $\begin{aligned} & \text { Ended } \\ & .31 \\ & 998 \end{aligned}$ |
| :---: | :---: | :---: | :---: |
| Business Segment Net Revenues (millions of dollars) |  |  |  |
| Semiconductor |  |  |  |
| Trade. | 1,664 |  | 1,593 |
| Intersegment | 9 |  | 5 |
|  | 1,673 |  | 1,598 |
| Materials \& Controls |  |  |  |
| Trade. | 245 |  | 242 |
| Intersegment | -- |  | -- |
|  | 245 |  | 242 |
| Educational \& Productivity Solutions |  |  |  |
| Trade. | 81 |  | 76 |
| Corporate activities | 22 |  | 48 |
| Divested activities | 18 |  | 223 |
| Total. | \$ 2,039 | \$ | 2,187 |
| Business Segment Profit (Loss) (millions of dollars) |  |  |  |
| Semiconductor | \$ 340 | \$ | 358 |
| Materials \& Controls | 40 |  | 36 |
| Educational \& Productivity Solutions | 10 |  | 1 |
| Corporate activities. | (75) |  | (44) |
| Special charges. | (24) |  | (244) |
| Interest on loans/other income (expense) | 60 |  | 39 |
| Divested activities. | 8 |  | (129) |
| Income before provision for income taxes | \$ 359 | \$ | 17 |

12. The following is a reconciliation of individual restructuring accruals (in millions of dollars).

YEAR OF CHARGE


## *Abbreviations

| SC | $=$ | Semiconductor Business |
| :--- | :--- | :--- |
| MCB | $=$ | Mobile Computing Business |
| DIPD | $=$ | Digital Imaging Printing Development Program |
| Corp. | $=$ | Corporate Division |

ITEM 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The Registrant (the "company" or "TI") announced first-quarter 1999 diluted earnings per share (EPS) of $\$ 0.60$, an increase of $\$ 0.57$ from the year-ago quarter. Compared to the fourth quarter of 1998, EPS was up $\$ 0.13$, despite profit-sharing expenses for the quarter that increased $\$ 0.08$ per share. This higher profit-sharing expense reflects management expectations of significantly increased operating margins in 1999 compared to 1998, which included the losses of the divested memory business.

TI's gross profit margin increased to 45.5 percent, compared with 30.6 percent in the year-ago quarter, and 44.1 percent in the fourth quarter of 1998.

Semiconductor orders were strong, increasing 19 percent from a year ago, primarily reflecting increased demand for TI's analog and digital signal processing products. Semiconductor orders increased 13 percent from the fourth quarter of 1998, primarily due to demand in analog products. Orders have increased sequentially for the past three quarters.

Digital signal processor (DSP) revenues increased 16 percent from the year-ago quarter, driven primarily by strength in wireless communications and to a lesser extent the mass market, more than offsetting a decline in modems.

During the quarter, TI made good progress in expanding the use of DSPs into new applications and markets. TI announced the industry's first use of DSP technology to enhance the performance of desktop color laser printers. Called xStream DSP(TM) Technology, the solution prints documents with complex color images and graphics in half the time of current printer technologies. The acquisition of Butterfly VLSI, Ltd., adds expertise to address the emerging short-distance wireless market. And TI and Liquid Audio, Inc. announced the development of hardware and software solutions that will enable digital music to be downloaded from the Internet for portable audio products.

Note: Throughout this report, TI total financial results for the first quarter of 1998 are reported with the memory business, which was divested in the third quarter of 1998. All semiconductor results are reported without memory.

## FINANCIAL RESULTS

TI revenues for the first quarter of 1999 were $\$ 2039$ million, compared to $\$ 2187$ million in the first quarter of 1998. The decrease was due to the absence of revenue from the divested memory business. Revenues were up slightly from the fourth quarter of 1998 . TI orders in the first quarter were $\$ 2230$ million, up 4 percent from the year-ago quarter, and up 13 percent from the fourth quarter of 1998, due to strength across all businesses.

Profit from operations was $\$ 299$ million for the quarter, leading to an operating margin of 14.7 percent. In the year-ago quarter, loss from operations was $\$ 22$ million. The improvement was primarily due to the non-recurrence of a special charge associated with the discontinuance of the company's memory-chip manufacturing joint venture with Hitachi, Ltd., and, to a lesser extent, the absence of losses from the divested memory business. Profit from operations was up $\$ 29$ million from the fourth quarter of 1998,
notwithstanding increased profit-sharing expenses. Income for the quarter was $\$ 244$ million compared with $\$ 11$ million in the year-ago quarter, due primarily to the non-recurrence of a special charge associated with the discontinuance of the company's memory-chip manufacturing joint venture with Hitachi, and, to a lesser extent, the absence of losses from the divested memory business.

Results for the quarter include special charges of $\$ 24$ million. These charges include $\$ 14$ million related to the consolidation of semiconductor manufacturing operations in Japan, and $\$ 10$ million for purchased in-process research and development associated with the previously announced acquisition of Butterfly VLSI, Ltd. (Butterfly).

In the first quarter of 1998, there was a special charge of $\$ 219$ million for discontinuing the dynamic random access memory (DRAM) manufacturing joint venture with Hitachi, Ltd. and $\$ 25$ million for purchased in-process R\&D.

Results for the fourth quarter of 1998 included special charges of $\$ 72$ million, substantially all of which was related to the closing of an assembly/test joint venture with Samsung Electronica, Lda. in Portugal and the sale of the Aversa, Italy plant.

Excluding special items, operating margin for the quarter was 15.9 percent, up almost 6 percentage points from the year-ago quarter, EPS was \$0.65, up \$0.21 from the year-ago quarter and income for the quarter was $\$ 261$ million, up 48 percent from the year-ago quarter. The company believes that, for analytical purposes, the effect of these items should be excluded from operating results because they are not necessarily indicative of future operating results or of future financial condition. Additional information relating to these items appears below under the heading "Special Charges and Gains."

## OUTLOOK

TI expects increased growth in semiconductor in the second quarter, with revenues continuing to build through the year, based on continued strength in wireless, continued improvement in mass market, and recovery in hard disk drives (HDD). Higher second-quarter revenues also are expected from the calculator business, as it begins shipments for the back-to-school season.

With the continuing improvement in the large end-equipment markets and the additional focus on emerging end-equipment businesses, TI is raising its 1999 spending projections for R\&D to $\$ 1.2$ billion from $\$ 1.1$ billion, and for capital to $\$ 1.3$ billion from $\$ 1.0$ billion.

Wireless communications continues to be a significant market for TI's DSP and analog products, driven by strong demand for digital cellular handsets. In 1998, TI shipped 100 million DSPs into this market. TI expects the number of digital handsets to grow about 50 percent in 1999, from 153 million in 1998 to 230 million this year. TI expects continued strength for DSP and analog products in the mass market, as recent design-in successes move into production and DSPs continue to penetrate new application areas. TI expects strength to build this year in its HDD business. TI is the leading semiconductor supplier to the HDD industry, providing a range of analog, mixed-signal, DSP, and
application-specific integrated circuit (ASIC) products. The HDD market has a growing need for DSPs to handle higher-density requirements, driven by the rise in Internet downloads.

According to market analyst Forward Concepts, DSP sales are expected to increase 25 percent in 1999, to $\$ 4.4$ billion, and reach $\$ 10.2$ billion in 2002.

Market analyst Dataquest estimates analog growth of 16 percent for the year.

## SEMICONDUCTORS

Semiconductor revenues were up 5 percent from the first quarter of 1998, primarily due to gains in DSP. Semiconductor revenues were up 3 percent from the fourth quarter of 1998.

DSP revenues increased 16 percent from the year-ago quarter. As has been typical in the first quarter, DSP revenues declined slightly from the fourth quarter, primarily due to seasonality in HDD, which offset record sequential growth in the DSP mass market of 27 percent. Analog revenues were up 4 percent from the year-ago quarter, driven by higher demand in wireless.

Analog revenues were flat sequentially, limited by seasonal conditions in HDD and temporary manufacturing issues that have been resolved.

TI's remaining semiconductor revenues come from a broad range of products, including standard logic, ASICs, microcontrollers, and reduced instruction-set computing (RISC) microprocessors. Revenues for these combined areas declined from the year-ago quarter and increased from the fourth quarter.

Semiconductor revenues included one-time royalty revenues.
Semiconductor operating margins of 20.3 percent were down 2.1 percentage points from the year-ago quarter, primarily due to the accrual of increased profit-sharing expenses.

During the quarter, TI strengthened its product offerings with a number of new complementary analog and DSP catalog chips. Announcements included high-performance digital-to-analog converters designed to work with the `C6000 DSP family for a wide range of video and graphics applications, and two new floating-point DSPs that bring low-cost precision to applications such as speech recognition, games and robotics. Additionally, TI announced it was shipping samples of a single-chip digital baseband product for wireless cellular phones, the industry's first such device with transistor feature sizes of 0.18 -micron drawn (0.15 L-effective). This highly integrated `C5000 DSP-based device offers customers improved power, cost and space savings.

Further strengthening TI's DSP systems-level integration capabilities were
licensing agreements that will expand TI's embedded microprocessor portfolio. Licenses with MIPS Technologies, Inc. and NEC Corporation will provide TI access to RISC cores, which combine with TI DSPs for applications such as communications and digital consumer devices.

Highlighting TI's continuing leadership in DSP and analog were recent reports from market analysts. Forward Concepts stated that TI extended its lead in DSP to 47 percent market share, the only DSP vendor to gain share the last five years in a row. Dataquest named TI as the number one supplier in analog for the second straight year, the only major supplier to gain share in each of the last three years.

Revenues for the M\&C business were $\$ 245$ million, about even with the first quarter of 1998. Revenues were up 7 percent sequentially, primarily due to strength in the industrial market, including seasonal build in the heating, ventilation and air-conditioning (HVAC) area, and to a lesser extent, increased demand in Asia. Operating margin was 16.4 percent, up 1.6 percentage points from the year-ago quarter, primarily due to actions taken in support of M\&C's best-cost producer strategy.

In the TIRIS[TM] business, the Tag-it[TM] line pilot program was launched with British Airways in partnership with suppliers of luggage-handling equipment.

EDUCATIONAL \& PRODUCTIVITY SOLUTIONS (E\&PS)
Revenues for the E\&PS business were up 7 percent from the first quarter of 1998 to $\$ 81$ million, and about even with the fourth quarter. Revenues reflect the seasonal patterns of this business, with second and third quarters being the peak period for back-to-school shipments. Operating margin was 12.0 percent, up more than 10 percentage points from the year-ago quarter, and up almost 5 percentage points from the fourth quarter of 1998, due to significant improvements in operating costs.

E\&PS continues to grow its portfolio of educational products and services, which comprise its core focus. During the quarter, the business announced the TI-83 Plus, an upgradable graphing calculator enhanced with Flash ROM technology, new applications and more user-available memory, as well as the TI-30X IIS, TI's first scientific calculator with a two-line display.

## DIGITAL IMAGING

Revenues in digital imaging declined from the year-ago quarter, primarily due to timing of new ultraportable product introductions and manufacturing issues associated with the transition to XGA resolution ultraportable products. The operating loss remained at about the level of the year-ago quarter.

Three new ultraportable projectors were introduced by TI customers, including a third XGA resolution ultraportable and an SVGA ultraportable below $\$ 3,000$ from InFocus[R]. The ultraportable projector market continues to grow rapidly and TI's Digital Light Processing[TM] (DLP[TM]) is well positioned.

## ADDITIONAL FINANCIAL INFORMATION

During the first quarter of 1999, cash and cash equivalents plus short-term investments decreased by $\$ 40$ million to $\$ 2209$ million. The sale of the Micron subordinated note and other securities generated $\$ 172$ million of cash. The acquisition of Butterfly VLSI, Ltd., required approximately $\$ 50$ million of cash in the first quarter.

First-quarter 1999 cash flow from operating activities net of additions to property, plant, and equipment was $\$ 15$ million. First-quarter capital expenditures totaled $\$ 202$ million, compared to $\$ 384$ million in the first quarter of 1998, which included the divested memory business.

During the first quarter of 1999, TI continued to purchase shares of common stock as part of its program to reduce the potential dilutive effect of shares to be issued under employee stock options. TI spent $\$ 98$ million of cash for share purchases net of proceeds from sales and other common stock transactions.

Depreciation for the first quarter of 1999 was $\$ 225$ million, compared to $\$ 275$ million in the same quarter a year ago. Depreciation for 1999 is projected at $\$ 1.0$ billion.

The income tax rate for the first quarter of 1999 was 32 percent, which is the estimated rate for the full year.

At the end of the first quarter, the debt-to-total capital ratio was .16 versus .17 at the end of 1998.

## special charges and gains

First Quarter of 1999
In the first quarter of 1999, the company announced a consolidation of semiconductor manufacturing operations in Japan to improve manufacturing efficiencies and reduce costs. This action resulted in a pretax charge of \$14 million in the first quarter, of which $\$ 13$ million was for severance for the elimination of 153 jobs in Hatogaya, Japan, and $\$ 1$ million for other related costs. At March 31, 1999, the pay-out of the severance cost obligation had not yet begun. Of the $\$ 14$ million charge, $\$ 11$ million was included in cost of revenues and $\$ 3$ million in marketing, general and administrative expense. The primary benefit from this consolidation action was reduced people costs which were estimated to reach $\$ 11$ million annually. The benefit was expected to begin in the fourth quarter of 1999.

In connection with TI's acquisition of Butterfly in the first quarter of 1999, TI recorded a charge of $\$ 10$ million for the value of purchased in-process R\&D (purchased R\&D) at the acquisition date, based upon the appraised value of the related developmental projects. The purchased R\&D projects were assessed, analyzed and valued within the context and framework articulated by the Securities and Exchange Commission.

Butterfly's research and development relates to short distance wireless semiconductor and systems technology. This technology is used to achieve higher data rates at 2.4 GHz and above frequencies for use in voice-plus-data transmission products.

Significant assumptions used in determining the value of purchased R\&D for Butterfly included projected operating cash flows and the discount rate. Projected operating cash flows were expected to begin in 2000. The discount rate selected for Butterfly's in-process technologies was $25 \%$.

At the time of the acquisition, Butterfly management estimated the remaining cost and time to complete the purchased R\&D projects to be $\$ 5$ million and 264 engineer-months. The term "engineer-month" refers to the average amount of research work expected to be performed by an engineer in a month. TI expects to essentially meet its original return expectations.

The relative stage of completion and projected operating cash flows of the underlying in-process projects acquired were the most significant and uncertain assumptions utilized in
the valuation analysis of the in-process research and development. Such uncertainties could give rise to unforeseen budget over-runs and/or revenue shortfalls in the event that $T I$ is unable to successfully complete and commercialize the projects. TI management is primarily responsible for estimating the value of the purchased R\&D in all acquisitions accounted for under the purchase method.

First Quarter of 1998
In the first quarter of 1998, TI's U.S. DRAM semiconductor manufacturing joint venture with Hitachi, Ltd. was discontinued as a result of a combination of severe price declines and overcapacity in the DRAM market. As part of this first quarter discontinuance, TI purchased the assets of the venture for approximately $\$ 98$ million. Also as part of this first quarter discontinuance, TI and Hitachi decided to assume and share equally in the payment of the venture's obligations. TI's share of those payments was $\$ 219$ million, which was paid and charged to cost of revenues in the first quarter.

In connection with TI's acquisitions of GO DSP and Spectron, both of which occurred in the first quarter of 1998, TI recorded charges of $\$ 10$ million and $\$ 15$ million for purchased in-process R\&D (purchased R\&D), based upon the appraised value of the related developmental projects. The Income Approach, which included an analysis of the markets, cash flows, and risks associated with achieving such cash flows, was the primary technique utilized in valuing each purchased R\&D project.

GO DSP's and Spectron's research and development related to DSP software tools. These software tools, which include real-time operating systems (RTOS), allow DSP systems developers to improve productivity and reduce time-to-market. TI's goal in these acquisitions was to extend its leadership in digital signal processing solutions by offering a complete development environment, simplifying DSP development, and making TI DSP solutions even more attractive for a broad range of fast-growing markets.

Significant assumptions used in determining the value of purchased R\&D for GO DSP and Spectron included projected operating cash flows and the discount rate. Projected operating cash flows were expected to begin in late 1998. The discount rate selected for GO DSP's and Spectron's in-process technologies was $30 \%$.

At the time of the acquisitions, GO DSP and Spectron management estimated the remaining cost and time to complete the purchased R\&D projects was approximately $\$ 7$ million and 540 engineer-months. The term "engineer-month" refers to the average amount of research work expected to be performed by an engineer in a month. All the in-process projects were essentially completed on schedule. TI expects to essentially meet its original return expectations.

The relative stage of completion and projected operating cash flows of the underlying in-process projects acquired were the most significant and uncertain assumptions utilized in the valuation analysis of the in-process research and development. Uncertainties regarding projected operating cash flows could give rise to unforeseen budget over-runs and/or revenue shortfalls in the event that TI is unable to successfully commercialize the projects. TI management is primarily responsible for estimating the value of the purchased R\&D in all acquisitions accounted for under the purchase method.

In the fourth quarter of 1998, the company took further steps to enhance manufacturing efficiency, including the announced closing of a semiconductor assembly operation and sale of a materials \& controls manufacturing operation, both in Europe. The sale was completed on December 31, 1998. The primary benefit from these actions was the consolidation of manufacturing facilities, which increased efficiencies and reduced manufacturing costs. Estimated savings from such actions were approximately $\$ 24$ million annually. The benefit was expected to begin in the first quarter of 1999. The assembly operation closing, which is ongoing, affected 740 employees. As a result of these actions, the company took a fourth-quarter 1998 pretax charge of $\$ 72$ million, of which $\$ 27$ million was included in cost of revenues, $\$ 24$ million in other income (expense) net and $\$ 21$ million in marketing, general and administrative expense. Of this $\$ 72$ million charge, $\$ 35$ million was for severance, $\$ 35$ million for other cash-related costs and $\$ 2$ million for asset write-downs, primarily to adjust fixed assets in the European materials \& controls operation to actual sale value. Of the $\$ 35$ million severance charge, $\$ 19$ million had been paid by year-end 1998 and $\$ 16$ million will be paid in 1999. Of the other $\$ 35$ million charge, $\$ 20$ million was a cash payment required as part of an agreement with the third-party buyer of a materials and controls manufacturing operation in Europe. The balance was for previously-received government grants expected to be repaid as a result of the closing of the European semiconductor assembly operation.

YEAR 2000
Since 1995, TI has been actively engaged in addressing Year 2000 (Y2K) issues. These result from the use of two-digit, rather than four-digit, year dates in software, a practice which could cause date-sensitive systems to malfunction or fail because they may not recognize or process date information correctly.

State of Readiness: To manage its Y2K program, TI has divided its efforts into four program areas:
o Information Technology (computer hardware, software and electronic data interchange (EDI) interfaces);
o Physical Plant (manufacturing equipment and facilities);
o Products (including product development); and
o Extended Enterprise (suppliers and customers).
For each of these program areas, TI is using a four-step approach:
o Ownership (creating awareness, assigning tasks);
o Inventory (listing items to be assessed for Y2K readiness);
o Assessment (prioritizing the inventoried items, assessing their Y2K readiness, planning corrective actions, making initial contingency plans); and
o Corrective Action Deployment (implementing corrective actions, verifying implementation, finalizing contingency plans).

At March 31, 1999, the Ownership, Inventory, and Assessment steps were essentially complete for priority items in Information Technology, Physical Plant and Products. TI's assessment activities for Extended Enterprise will continue through the second quarter of 1999. TI considers priority items to be those that could significantly disrupt TI's business operations. The target completion date for priority items for the remaining step (Corrective Action Deployment) is June 30, 1999 for all program areas.

As of March 31, 1999, the status for each program area is as follows:
o Information Technology: Corrective actions have been deployed for substantially all of TI's legacy business strategic information systems (manufacturing, marketing, financial and human resources). In the ordinary course of business, TI continues to install new business systems as appropriate. Verification of Y2K readiness is incorporated into the process of implementing these new systems. Assessment of infrastructure hardware and software that support TI's enterprise-wide networks and servers is essentially complete, and deployment of corrective actions is under way. TI has also deployed an assessment tool and corrective action process for desktop computers. The Y2K readiness of TI's EDI interfaces has been assessed, and testing continues with major customers. Testing of EDI interfaces with suppliers is complete, and TI believes that those interfaces are Y2K ready.
o Physical Plant: Assessment of manufacturing equipment and facilities is substantially complete and corrective actions are under way.
o Products: TI is essentially complete with the Y2K readiness assessment of its products and is providing product status information on its company web site. Divested product lines are not part of the assessment. This effort includes semiconductor devices sold within the past five years. TI's assessment indicates that the majority of semiconductor products either have no date logic or are programmable devices that require customer assessment of any software and firmware or other elements added by or at the request of TI's customers. TI has identified date-related issues with certain of TI's semiconductor application software development tools and is providing corrective software patches. The company believes these development tool issues are unlikely to cause significant problems for TI customers. Assessment of products of the materials \& controls, educational \& productivity solutions and digital light processing businesses indicates they are either Y2K ready or have no date logic.
o Extended Enterprise: TI's Y2K supplier program attempts to assess the readiness of TI suppliers, focusing on those that could significantly disrupt TI's business operations. TI began contacting its suppliers in 1997 to assess their readiness. This effort, which is ongoing and expected to be complete by June 30, 1999, has included sending Y2K surveys and conducting onsite Y2K reviews with selected suppliers. TI intends to develop contingency plans by June 30, 1999, on the basis of information gathered through the assessment process. TI continues to discuss Y2K status with selected strategic customers.

Costs to Address Y2K Issues: TI's estimated aggregate costs for its Y2K activities from 1995 through 2000 are expected to range from $\$ 70$ million to $\$ 90$ million. Through March 31, 1999, TI has spent approximately $\$ 57$ million.

Risks of Y2K Issues and Contingency Plans: TI continues to review Y2K issues relating to its information technology, physical plant, products, suppliers and customers. As noted above, TI expects to develop a set of contingency plans by June 30, 1999, on the basis of information available as of that time. It will refine those plans as needed in response to further information gathered through the end of the year.

TI's contingency planning process is intended to mitigate worst-case business disruptions. TI believes that its most reasonably likely worst-case Y2K scenario would relate to disruption of supply from third parties as a result of Y2K problems experienced by those parties or their suppliers. TI's manufacturing, sales and service operations are dependent on an ongoing supply of infrastructure services (such as electricity, water and telecommunications services), materials and equipment spare parts from third parties as well as third-party transportation services. In many cases, TI depends on a limited number of suppliers for those services and materials. A disruption in supply could interrupt manufacturing operations and result in damage to work in process as well as delays in product deliveries to customers. These results could affect TI revenues and lead to claims by customers against the company. As part of contingency planning to address these risks, TI is considering alternatives such as the creation of buffer inventories of critical supplies and identification of alternative suppliers.

TI customers may experience Y2K disruptions that affect the quantity or timing of their orders to TI or their ability to make timely payment. If these disruptions occur, TI revenues and cash flow may be affected. TI cannot predict the likelihood of these disruptions or the extent of their impact on TI. It is unknown whether customers will change their spending patterns in preparation for the Year 2000 (for example, by accelerating or delaying orders).

Certain discontinued products and divested product lines present Y2K issues. In the event of product failure, these issues could expose TI to product liability or other types of claims. It is difficult to predict the extent of potential liability. However, for several reasons, TI does not expect these issues to result in claims that will have a material effect on its results of operations. The reasons include the age of the products (resulting in many being retired from service or upgraded in the ordinary course of business before the Year 2000), expiration of applicable warranty periods, widespread customer awareness of Y2K risks, and the efforts of TI and the acquirers of its divested product lines to alert customers to Y2K issues affecting the products. TI continues to review legal risks that may be associated with discontinued products and divested product lines.

ITEM 6. Exhibits and Reports on Form 8-K.
(a) Exhibits

Designation of Exhibits
in this Report
Description of Exhibit


11

12

27

> Computation of Basic and Diluted Earnings Per Common and Dilutive Potential Common Share

> Computation of Ratio of Earnings to Fixed Charges

> Financial Data Schedule as of March 31, 1999 and for the 3 months then ended
(b) Reports on Form 8-K.

None.
"Safe Harbor" Statement under the Private Securities Litigation Reform Act of 1995:

This Form 10-Q/A includes "forward-looking statements" intended to qualify for the safe harbor from liability established by the Private Securities Litigation Reform Act of 1995. These forward-looking statements generally can be identified by phrases such as TI or its management "believes," "expects," "anticipates," "foresees," "forecasts," "estimates" or other words or phrases of similar import. Similarly, such statements herein that describe the company's business strategy, outlook, objectives, plans, intentions or goals also are forward-looking statements. All such forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from those in forward-looking statements.

We urge you to carefully consider the following important factors that could cause actual results to differ materially from the expectations of the company or its management:
o Market demand for semiconductors, particularly for digital signal processors and analog chips in key markets, such as telecommunications and computers;
o TI's ability to develop, manufacture and market innovative products in a rapidly changing technological environment;
o TI's ability to compete in products and prices in an intensely competitive industry;
o TI's ability to maintain and enforce a strong intellectual property portfolio and obtain needed licenses from third parties;
o Timely completion by customers and suppliers of their Year 2000 programs, accurate assessment of TI's Year 2000 readiness and of risks associated with its
current and past products, and effective implementation of contingency plans and corrective actions;

Timely completion of announced acquisitions;
o Global economic, social and political conditions in the countries in which TI and its customers and suppliers operate, including fluctuations in foreign currency exchange rates;

Losses or curtailments of purchases from key customers; TI's ability to recruit and retain skilled personnel;
o Availability of raw materials and critical manufacturing equipment;
o Realization of savings from announced restructuring efforts and consolidation of manufacturing operations.

For a more detailed discussion of these factors, see the text under the heading "Cautionary Statements Regarding Future Operations" in Item 1 of the company's Form 10-K for 1998. The forward-looking statements included in this Form $10-Q / A$ are made only as of the date of this Form 10-Q/A and the company undertakes no obligation to publicly update the forward-looking statements to reflect subsequent events or circumstances.

Pursuant to the requirements of Rule 12b-15 of the Securities Exchange Act of 1934, the Registrant has duly caused this amendment to be signed on its behalf by the undersigned, thereunto duly authorized, on August 6, 1999.

TEXAS INSTRUMENTS INCORPORATED

BY: /s/ WILLIAM A. AYLESWORTH
William A. Aylesworth
Senior Vice President
Treasurer and
Chief Financial Officer

## Description of Exhibit

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Computation of Basic and Diluted Earnings Per Common and Dilutive Potential Common Share

Computation of Ratio of Earnings to Fixed Charges

Financial Data Schedule as of March 31, 1999 and for the 3 months then ended

Paper (P) or Electronic (E)

TEXAS INSTRUMENTS INCORPORATED AND SUBSIDIARIES EARNINGS PER COMMON AND DILUTIVE POTENTIAL COMMON SHARE

|  | For Three Months Ended |  |  |
| :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Mar. } 31 \\ 1999 \end{gathered}$ |  | $98^{31}$ |
| Net income (in millions) | \$ 244 | \$ | 11 |
| Diluted earnings per common and dilutive potential common share: |  |  |  |
| Weighted average common shares outstanding (in thousands)...... | 391,798 |  | , 019 |
| Weighted average dilutive potential common shares: Stock option and compensation plans............. | 12,454 |  | , 961 |
| Weighted average common and dilutive potential common shares. | 404, 252 |  | , 980 |
| Diluted earnings per common share. | \$ 0.60 | \$ | 0.03 |
| Basic Earnings Per Common Share: |  |  |  |
| Weighted average common shares outstanding (in thousands) | 391,798 |  | , 019 |
| Basic earnings per common share. | \$ 0.62 | \$ | 0.03 |

TEXAS INSTRUMENTS INCORPORATED AND SUBSIDIARIES COMPUTATION OF RATIO OF EARNINGS TO FIXED CHARGES (DOLLARS IN MILLIONS)

|  |  |  |
| :--- | :--- | :--- | :--- |

[^0]This schedule contains summary financial information extracted from THE CONSOLIDATED FINANCIAL STATEMENTS OF TEXAS INSTRUMENTS INCORPORATED AND SUBSIDIARIES AS OF MARCH 31, 1999, AND FOR THE THREE MONTHS THEN ENDED, and is qualified in its entirety by reference to such financial statements.

1,000,000

3-MOS
DEC-31-1999
MAR-31-1999
893
1,316
1,471
56
641
4,968
6,472
3,130
11, 131
2, 048
0
989

0
393
11, 131
6,297
$\begin{array}{lr}2,039 & 2,039 \\ 1,111 & 1,11\end{array}$
1,111 306
0
18
359
115
244
0
0
244
. 62
.60


[^0]:    *Not meaningful. The coverage deficiency was \$43 million in 1996.

