FERRO CORP
Form 10-K
February 28, 2011

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

(Mark One)

x **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2010

or

o **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from to

Commission file number 1-584

FERRO CORPORATION
(Exact name of registrant as specified in its charter)

Ohio	**34-0217820**
(State of Corporation)	*(IRS Employer Identification No.)*
1000 Lakeside Avenue **Cleveland, OH**	**44114**
(Address of principal executive offices)	*(Zip Code)*

Registrant s telephone number, including area code: 216-641-8580

Securities Registered Pursuant to section 12(b) of the Act:

Title of Each Class	**Name of Each Exchange on Which Registered**
Common Stock, par value $1.00	New York Stock Exchange

Securities Registered Pursuant to Section 12(g) of the Act:
6.50% Convertible Senior Notes due August 15, 2013
7.875% Senior Notes due August 15, 2018
Series A ESOP Convertible Preferred Stock, without Par Value

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES x NO o

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. YES o   NO x

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(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 o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). YES o   NO o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained here, and will not be contained, to the best of registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer,   accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer o	Accelerated filer x	Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). YES o   NO þ

The aggregate market value of Ferro Corporation Common Stock, par value $1.00, held by non-affiliates and based on the closing sale price as of June 30, 2010, was approximately $624,595,000.

On January 31, 2011, there were 86,193,176 shares of Ferro Corporation Common Stock, par value $1.00 outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for Ferro Corporation s 2011 Annual Meeting of Shareholders are incorporated into Part III of this Annual Report on Form 10-K.

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PART I

Item 1 *Business*

History, Organization and Products

Ferro Corporation was incorporated in Ohio in 1919 as an enameling company. When we use the terms Ferro, we, us or the Company, we are referring to Ferro Corporation and its subsidiaries unless we indicate otherwise. Today, we are a leading producer of specialty materials and chemicals that are sold to a broad range of manufacturers who, in turn, make products for many end-use markets. In approximately 40 manufacturing sites around the world, we produce the following types of products:

Electronic, Color and Glass Materials Conductive metal pastes and powders, polishing materials, glazes, enamels, pigments, decoration colors, and other performance materials; and

Polymer and Ceramic Engineered Materials Polymer additives, engineered plastic compounds, pigment dispersions, glazes, frits, porcelain enamel, pigments, and high-potency pharmaceutical active ingredients.

We refer to our products as performance materials and chemicals because we formulate them to perform specific functions in the manufacturing processes and end products of our customers. The products we develop often are delivered to our customers in combination with customized technical service. The value of our products stems from the benefits they deliver in actual use. We develop and deliver innovative products to our customers through our key strengths in:

Particle Engineering Our ability to design and produce very small particles made of a broad variety of materials, with precisely controlled characteristics of shape, size and size distribution. We understand how to disperse these particles within liquid, paste and gel formulations.

Color and Glass Science Our understanding of the chemistry required to develop and produce pigments that provide color characteristics ideally suited to customers applications. We have a demonstrated ability to provide glass-based coatings with properties that precisely meet customers needs in a broad variety of applications.

Surface Chemistry and Surface Application Technology Our understanding of chemicals and materials used to develop products and processes that involve the interface between layers and the surface properties of materials.

Product Formulation Our ability to develop and manufacture combinations of materials that deliver specific performance characteristics designed to work within customers particular manufacturing processes.

We deliver these key technical strengths to our customers in a way that creates additional value through our integrated applications support. Our applications support personnel provide assistance to our customers in their material specification and evaluation, product design and manufacturing process characterization in order to help them optimize the efficient and cost-effective application of our products.

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We divide our operations into seven business units, which comprise six reportable segments. We have grouped these units by their product group below:

Polymer and Ceramic Engineered Materials

- Polymer Additives
- Specialty Plastics
- Pharmaceuticals
- Tile Coating Systems(1)
- Porcelain Enamel(1)

Electronic, Color and Glass Materials

- Electronic Materials
- Color and Glass Performance Materials

(1) Tile Coating Systems and Porcelain Enamel are combined into one reportable segment, Performance Coatings, for financial reporting purposes.

Financial information about our segments is included herein in Note 20 to the consolidated financial statements under Item 8 of this Annual Report on Form 10-K.

Markets and Customers

Ferro s products are used in a variety of product applications in markets including:

- Appliances
- Automobiles
- Building and renovation
- Electronics
- Household furnishings
- Industrial products
- Packaging
- Pharmaceuticals
- Photovoltaic products

Many of our products are used as coatings on our customers products, such as glazes and decorations on tile, glass and dinnerware. Other products are applied as pastes in products such as solar cells and other electronic components. Still other products are added during our customers manufacturing processes to provide desirable properties to their end product. Often, our products are a small portion of the total cost of our customers products, but they can be critical to the appearance or functionality of those products.

Our leading customers include manufacturers of ceramic tile, major appliances, construction materials, automobile parts, glass, bottles, vinyl flooring and wall coverings, solar cells, and pharmaceuticals. Many of our customers, including makers of major appliances and automobile parts, purchase materials from more than one of our business units. Our customer base is well diversified both geographically and by end market.

We generally sell our products directly to our customers. However, a portion of our business uses indirect sales channels, such as agents and distributors, to deliver products to market. In 2010, no single customer or related group of customers represented more than 10% of net sales. In addition, none of our reportable segments is dependent on any single customer or related group of customers.

Backlog of Orders and Seasonality

Generally, there is no significant lead time between customer orders and delivery in any of our business segments. As a result, we do not consider that the dollar amount of backlogged orders believed to be firm is material information for an understanding of our business. We also do not regard any material part of our business to be seasonal. However, customer demand has historically been higher in the second quarter when building and renovation markets are particularly active, and this quarter is normally the strongest for sales and operating profit.

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Competition

In most of our markets, we have a substantial number of competitors, none of which is dominant. Due to the diverse nature of our product lines, no single competitor directly matches all of our product offerings. Our competition varies by product and by region, and is based primarily on price, product quality and performance, customer service and technical support, and our ability to develop custom products to meet specific customer requirements.

We are a worldwide leader in the production of glass enamels, porcelain enamels, ceramic glaze coatings, and conductive metal pastes used in solar cells. There is strong competition in our markets, ranging from large multinational corporations to local producers. While many of our customers purchase custom products and formulations from us, our customers could generally buy from other sources, if necessary.

Raw Materials and Supplier Relations

Raw materials widely used in our operations include:

Metal Oxides:(1)(2)
- Aluminum oxide(3)
- Cerium oxide(3)
- Cobalt oxide
- Nickel oxide
- Titanium dioxide(4)
- Zinc oxide

Precious and Non-precious Metals:(1)(3)
- Aluminum
- Bismuth
- Copper
- Gold
- Palladium
- Platinum
- Silver

Polymers:(4)
- Polyethylene
- Polypropylene
- Polystyrene
- Unsaturated polyester

Other Inorganic Materials:
- Boric acid(1)(2)
- Feldspar(1)(2)
- Fiberglass(4)
- Lithium (1)(2)
- Silica(1)(2)
- Zircon(1)(2)

Other Organic Materials:(5)
- Butanol
- Phthalic anhydride
- Soybean oil
- Tallow
- Toluene

Energy:
- Electricity
- Natural gas

(1) Primarily used by Color and Glass Performance Materials.
(2) Primarily used by Tile Coating Systems and Porcelain Enamel.
(3) Primarily used by Electronic Materials.
(4) Primarily used by Specialty Plastics.
(5) Primarily used by Polymer Additives.

These raw materials make up a large portion of our product costs in certain of our product lines, and fluctuations in the cost of raw materials may have a significant impact on the financial performance of the related

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businesses. We attempt to pass through to our customers raw material cost increases, including those related to precious metals.

We have a broad supplier base and, in many instances, multiple sources of essential raw materials are available worldwide if problems arise with a particular supplier. We maintain many comprehensive supplier agreements for strategic and critical raw materials. We did not encounter raw material shortages in 2010 that significantly affected our manufacturing operations, but we are subject to volatile raw material costs that can affect our results of operations.

Environmental Matters

As part of the production of some of our products, we handle, process, use and store hazardous materials. As a result, we operate manufacturing facilities that are subject to a broad array of environmental laws and regulations in the countries in which we operate, particularly for plant wastes and emissions. In addition, some of our products are subject to restrictions under laws or regulations such as California Proposition 65 or the European Union s (EU) hazardous substances directive. The costs to comply with complex environmental laws and regulations are significant and will continue for the industry and us for the foreseeable future. These routine costs are expensed as they are incurred. While these costs may increase in the future, they are not expected to have a material impact on our financial position, liquidity or results of operations. We believe we are in substantial compliance with the environmental regulations to which our operations are subject and, to the extent we may not be in compliance with such regulations, non-compliance will not have a materially adverse effect on our financial position, liquidity or results of operations.

Our policy is to operate our plants and facilities in a manner that protects the environment and the health and safety of our employees and the public. We intend to continue to make expenditures for environmental protection and improvements in a timely manner consistent with available technology. Although we cannot precisely predict future environmental spending, we do not expect the costs to have a material impact on our financial position, liquidity or results of operations. Capital expenditures for environmental protection were $1.5 million in 2010, $2.4 million in 2009, and $2.4 million in 2008.

We also accrue for environmental remediation costs when it is probable that a liability has been incurred and we can reasonably estimate the amount. We determine the timing and amount of any liability based upon assumptions regarding future events, and inherent uncertainties exist in such evaluations primarily due to unknown conditions, changing governmental regulations and legal standards regarding liability, and evolving technologies. We adjust these liabilities periodically as remediation efforts progress, the nature and extent of contamination becomes more certain, or as additional technical or legal information becomes available.

Research and Development

We are involved worldwide in research and development activities relating to new and existing products, services and technologies required by our customers continually changing markets. Our research and development resources are organized into centers of excellence that support our regional and worldwide major business units. We also conduct research and development activities at our Posnick Center for Innovative Technology in Independence, Ohio. These centers are augmented by local laboratories, which provide technical service and support to meet customer and market needs of particular geographic areas.

Total expenditures in continuing operations for product and application technology, including research and development, customer technical support and other related activities, were $37.2 million in 2010, $34.9 million in 2009, and $41.4 million in 2008. These amounts include expenditures for company-sponsored research and development activities of approximately $27.3 million in 2010, $28.3 million in 2009, and $33.6 million in 2008.

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Patents, Trademarks and Licenses

We own a substantial number of patents and patent applications relating to our various products and their uses. While these patents are of importance to us and we exercise diligence to ensure that they are valid, we do not believe that the invalidity or expiration of any single patent or group of patents would have a material adverse effect on our businesses. Our patents will expire at various dates through the year 2030. We also use a number of trademarks that are important to our businesses as a whole or to a particular segment. We believe that these trademarks are adequately protected.

Employees

At December 31, 2010, we employed 5,034 full-time employees, including 3,390 employees in our foreign consolidated subsidiaries and 1,644 in the United States (U.S.). Total employment decreased by 290 in our foreign subsidiaries from the prior year end primarily due to our various restructuring and cost reduction programs. Employment in the U.S. increased by 111 from the prior year end, primarily to support the growth in sales revenue, particularly in Electronic Materials.

Collective bargaining agreements cover approximately 19% of our U.S. workforce. Approximately 6% of the U.S. employees are affected by labor agreements that expire in 2011, and we expect to complete renewals of these agreements without significant disruption to the related businesses. We consider our relations with our employees, including those covered by collective bargaining agreements, to be good.

Our employees in Europe have protections afforded them by local laws and regulations through unions and works councils. Some of these laws and regulations may affect the timing, amount and nature of restructuring and cost reduction programs in that region.

Domestic and Foreign Operations

We began international operations in 1927. Our products are manufactured and / or distributed through our consolidated subsidiaries and unconsolidated affiliates in the following countries:

Consolidated Subsidiaries:			
Argentina	Egypt	Mexico	Thailand
Australia	France	Netherlands	United Kingdom
Austria	Germany	Portugal	United States
Belgium	Indonesia	Russia	Venezuela
Brazil	Italy	Spain	
China	Japan	Taiwan	
Unconsolidated Affiliates:			
Italy	Spain	South Korea	Thailand

Financial information for geographic areas is included in Note 20 to the consolidated financial statements under Item 8 of this Annual Report on Form 10-K. More than 50% of our net sales are outside of the U.S. Our customers represent more than 30 industries and operate in approximately 100 countries.

Our U.S. parent company receives technical service fees and/or royalties from many of its foreign subsidiaries. As a matter of corporate policy, the foreign subsidiaries have historically been expected to remit a portion of their annual earnings to the U.S. parent company as dividends. To the extent earnings of foreign subsidiaries are not remitted to the U.S. parent company, those earnings are indefinitely re-invested in those subsidiaries.

Available Information

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, including any amendments, will be made available free of charge on our Web site, www.ferro.com, as soon as reasonably practical, following the filing of the reports with the U.S. Securities and Exchange Commission (SEC). Our Corporate Governance Principles, Legal and Ethical Policies, Guidelines for Determining Director Independence, and charters for our Audit Committee, Compensation Committee, Finance Committee, and Governance and Nomination Committee are available free of charge on our Web site or to any shareholder who requests them from the Ferro Corporation Investor Relations Department located at 1000 Lakeside Avenue, Cleveland, Ohio, 44114-1147.

Forward-looking Statements

Certain statements contained here and in future filings with the SEC reflect our expectations with respect to future performance and constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements are subject to a variety of uncertainties, unknown risks and other factors concerning our operations and the business environment, which are difficult to predict and are beyond our control.

Item 1A. *Risk Factors*

Many factors could cause our actual results to differ materially from those suggested by statements contained in this filing and could adversely affect our future financial performance. Such factors include the following:

We sell our products into industries where demand has been unpredictable, cyclical or heavily influenced by consumer spending, and such demand and our results of operations may be further impacted by macro-economic circumstances and uncertainty in credit markets.

We sell our products to a wide variety of customers who supply many different market segments. Many of these market segments, such as building and renovation, major appliances, transportation, and electronics, are cyclical or closely tied to consumer demand. Consumer demand is difficult to accurately forecast and incorrect forecasts of demand or unforeseen reductions in demand can adversely affect costs and profitability due to factors such as underused manufacturing capacity, excess inventory, or working capital needs.

Our results of operations are materially affected by conditions in capital markets and economies in the U.S. and elsewhere around the world. General economic conditions around the world deteriorated sharply at the end of 2008, and difficult economic conditions continue to exist. Concerns over fluctuating prices, energy costs, geopolitical issues, government deficits and debt loads, the availability and cost of credit, the U.S. mortgage market and a declining real estate market have contributed to increased volatility, diminished expectations, and uncertainty regarding economies around the world. These factors, combined with reduced business and consumer confidence, increased unemployment, and volatile raw materials costs, precipitated an economic slowdown and recession in a number of markets around the world. As a result of these conditions, our customers may experience cash flow problems and may modify, delay, or cancel plans to purchase our products. Additionally, if customers are not successful in generating sufficient revenue or are precluded from securing financing, they may not be able to pay, or may delay payment of, accounts receivable that are owed to us. Any reduction in demand or inability of our current and/or potential customers to pay us for our products may adversely affect our earnings and cash flow.

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***Uncertainty in the development of the solar energy market could reduce the revenue we generate from product sales to this market*.**

Our conductive pastes are used in the manufacture of solar cells and income attributable to the solar energy market has been increasing. The solar energy market is at a relatively early stage of development and the extent to which solar energy technology will be widely adopted is uncertain. Solar industry demand is affected by the availability and size of government and economic incentives related to the use of solar power. Reductions in, or eliminations or expirations of, governmental and economic incentives could result in decreased demand for solar cells, and, consequently, our products, which could have an adverse impact on our results of operations.

We strive to improve operating margins through sales growth, price increases, productivity gains, and improved purchasing techniques, but we may not achieve the desired improvements.

We work to improve operating profit margins through activities such as growing sales to achieve increased economies of scale, increasing prices, improving manufacturing processes, and adopting purchasing techniques that lower costs or provide increased cost predictability to realize cost savings. However, these activities depend on a combination of improved product design and engineering, effective manufacturing process control initiatives, cost-effective redistribution of production, and other efforts that may not be as successful as anticipated. The success of sales growth and price increases depends not only on our actions but also the strength of customer demand and competitors pricing responses, which are not fully predictable. Failure to successfully implement actions to improve operating margins could adversely affect our financial performance.

Our implementation of new business information systems and processes could adversely affect our results of operations and cash flow.

We are designing and implementing a new enterprise-wide information system and related processes to consolidate our legacy operating systems into an integrated system. The objective is to standardize and streamline business processes. We may be unable to complete the implementation in accordance with our timeline and we could incur additional costs. The implementation could result in operating inefficiencies and could impact our ability to perform business transactions. These risks could adversely impact our results of operations, financial condition, and cash flows.

We depend on reliable sources of energy and raw materials, including petroleum-based materials, minerals and other supplies, at a reasonable cost, but the availability of these materials and supplies could be interrupted and/or their prices could escalate and adversely affect our sales and profitability.

We purchase energy and many raw materials, including petroleum-based materials and other supplies, which we use to manufacture our products. Changes in their availability or price could affect our ability to manufacture enough products to meet customers demands or to manufacture products profitably. We try to maintain multiple sources of raw materials and supplies where practical, but this may not prevent unanticipated changes in their availability or cost and, for certain raw materials, there may not be alternative sources. We may not be able to pass cost increases through to our customers. Significant disruptions in availability or cost increases could adversely affect our manufacturing volume or costs, which could negatively affect product sales or profitability of our operations.

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The global scope of our operations exposes us to risks related to currency conversion rates, new and different regulatory schemes and changing economic, regulatory, social and political conditions around the world.

More than 50% of our net sales during 2010 were outside of the U.S. In order to support global customers, access regional markets and compete effectively, our operations are located around the world. We may encounter difficulties expanding into additional growth markets around the world. Our operations have additional complexity due to economic, regulatory, social and political conditions in multiple locations and we are subject to risks relating to currency conversion rates. Other risks inherent in international operations include the following:

- New and different legal and regulatory requirements and enforcement mechanisms in local jurisdictions;
- U.S. and other export licenses may be difficult to obtain and we may be subject to export duties or import quotas or other trade restrictions or barriers;
- Increased costs of, and decreased availability of, transportation or shipping;
- Credit risk and financial conditions of local customers and distributors;
- Risk of nationalization of private enterprises by foreign governments or restrictions on investments;
- Potentially adverse tax consequences, including imposition or increase of withholding and other taxes on remittances and other payments by subsidiaries; and
- Local political, economic and social conditions, including the possibility of hyperinflationary conditions, deflation, and political instability in certain countries.

In particular, we have subsidiaries in Venezuela, a country that has established very rigid controls over the ability of foreign companies to repatriate cash, and in Egypt, a country with recent political instability. Such conditions could potentially impact our ability to recover both the cost of our investments and earnings from those investments. While we attempt to anticipate these changes and manage our business appropriately in each location where we do business, these changes are often beyond our control and difficult to forecast.

The consequences of these risks may have significant adverse effects on our results of operations or financial position, and if we fail to comply with applicable laws and regulations, we could be exposed to civil and criminal penalties, reputational harm, and restrictions on our operations.

We have a growing presence in the Asia-Pacific region where it can be difficult for a multi-national company, such as Ferro, to compete lawfully with local competitors, which may cause us to lose business opportunities.

Many of our most promising growth opportunities are in the Asia-Pacific region, especially the People s Republic of China. Although we have been able to compete successfully in those markets to date, local laws and customs can make it difficult for a multi-national company such as Ferro to compete on a level playing field with local competitors without engaging in conduct that would be illegal under U.S. or other countries anti-bribery laws. Our strict policy of observing the highest standards of legal and ethical conduct may cause us to lose some otherwise attractive business opportunities to local competition in the region.

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Regulatory authorities in the U.S., European Union and elsewhere are taking a much more aggressive approach to regulating hazardous materials and other substances, and those regulations could affect sales of our products.

Legislation and regulations concerning hazardous materials and other substances can restrict the sale of products and/or increase the cost of producing them. Some of our products are subject to restrictions under laws or regulations such as California Proposition 65 or the European Union s (EU) hazardous substances directive. The EU REACH registration system became effective June 1, 2007, and requires us to perform toxicity studies of the components of some of our products and to register the information in a central database, increasing the cost of these products. As a result of such regulations, customers may avoid purchasing some products in favor of perceived greener, less hazardous or less costly alternatives. It may be impractical for us to continue manufacturing heavily regulated products, and we may incur costs to shut down or transition such operations to alternative products. These circumstances could adversely affect our business, including our sales and operating profits.

Our businesses depend on a continuous stream of new products, and failure to introduce new products could affect our sales, profitability and liquidity.

One way that we remain competitive in our markets is by developing and introducing new and improved products on an ongoing basis. Customers continually evaluate our products in comparison to those offered by our competitors. A failure to introduce new products at the right time that are price competitive and that provide the features and performance required by customers could adversely affect our sales, or could require us to compensate by lowering prices. In addition, when we invest in new product development, we face risks related to production delays, cost over-runs and unanticipated technical difficulties, which could impact sales, profitability and/or liquidity.

We have limited or no redundancy for certain of our manufacturing facilities, and damage to those facilities could interrupt our operations, increase our costs of doing business and impair our ability to deliver our products on a timely basis.

If certain of our existing production facilities become incapable of manufacturing products for any reason, we may be unable to meet production requirements, we may lose revenue and we may not be able to maintain our relationships with our customers. Without operation of certain existing production facilities, we may be limited in our ability to deliver products until we restore the manufacturing capability at the particular facility, find an alternative manufacturing facility or arrange an alternative source of supply. Although we carry business interruption insurance to cover lost revenue and profits in an amount we consider adequate, this insurance does not cover all possible situations. In addition, our business interruption insurance would not compensate us for the loss of opportunity and potential adverse impact on relations with our existing customers resulting from our inability to produce products for them.

We may not be able to complete future acquisitions or successfully integrate future acquisitions into our business, which could adversely affect our business or results of operations.

As part of our growth strategy, we intend to pursue acquisitions. Our success in accomplishing this growth may be limited by the availability and suitability of acquisition candidates and by our financial resources, including available cash and borrowing capacity. Acquisitions involve numerous risks, including difficulty determining appropriate valuation, integrating operations, technologies, services and products of the acquired product lines or businesses, personnel turnover and the diversion of management s attention from other business matters. In addition, we may be unable to achieve anticipated benefits from these acquisitions in the time frame that we anticipate, or at all, which could affect adversely our business or results of operations.

We have significant deferred tax assets, and if we are unable to utilize these assets, our results of operations may be adversely affected.

To fully realize the carrying value of our net deferred tax assets, we will have to generate adequate taxable profits in various tax jurisdictions. As of December 31, 2010, we had $143.0 million of net deferred tax assets, after valuation allowances. If we do not generate adequate profits within the time periods required by applicable tax statutes, the carrying value of the tax assets will not be realized. If it becomes unlikely that the carrying value of our net deferred tax assets will be realized, the valuation allowances may need to be increased in our consolidated financial statements, adversely affecting results of operations. Further information on our deferred tax assets is presented in Note 8 to the consolidated financial statements under Item 8 of this Annual Report on Form 10-K.

The markets for our products are highly competitive and subject to intense price competition, which could adversely affect our sales and earnings performance.

Our customers typically have multiple suppliers from which to choose. If we are unwilling or unable to provide products at competitive prices, and if other factors, such as product performance and value-added services do not provide an offsetting competitive advantage, customers may reduce, discontinue, or decide not to purchase our products. If we could not secure alternate customers for lost business, our sales and earnings performance could be adversely affected.

If we are unable to protect our intellectual property rights or to successfully resolve claims of infringement brought against us, our product sales and financial performance could be affected adversely.

Our performance may depend in part on our ability to establish, protect and enforce intellectual property rights with respect to our products, technologies and proprietary rights and to defend against any claims of infringement, which involves complex legal, scientific and factual questions and uncertainties. We may have to rely on litigation to enforce our intellectual property rights. In addition, we may face claims of infringement that could interfere with our ability to use technology or other intellectual property rights that are material to our business operations. If litigation that we initiate is unsuccessful, we may not be able to protect the value of some of our intellectual property. In the event a claim of infringement against us is successful, we may be required to pay royalties or license fees to continue to use technology or other intellectual property rights that we have been using or we may be unable to obtain necessary licenses from third parties at a reasonable cost or within a reasonable time.

Our operations are subject to operating hazards and, as a result, to stringent environmental, health and safety regulations, and compliance with those regulations could require us to make significant investments.

Our production facilities are subject to hazards associated with the manufacture, handling, storage and transportation of chemical materials and products. These hazards can cause personal injury and loss of life, severe damage to, or destruction of, property and equipment and environmental contamination and other environmental damage and could have an adverse effect on our business, financial condition or results of operations.

We strive to conduct our manufacturing operations in a manner that is safe and in compliance with all applicable environmental, health and safety regulations. Compliance with changing regulations may require us to make significant capital investments, incur training costs, make changes in manufacturing processes or product formulations, or incur costs that could adversely affect our profitability, and violations of these laws could lead to substantial fines and penalties. These costs may not affect competitors in the same way due to differences in product formulations, manufacturing locations or other factors, and we could be at a competitive disadvantage, which might adversely affect financial performance.

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We are subject to stringent labor and employment laws in certain jurisdictions in which we operate, we are party to various collective bargaining arrangements, and our relationship with our employees could deteriorate, which could adversely impact our operations.

A majority of our full-time employees are employed outside the U.S. In certain jurisdictions where we operate, labor and employment laws are relatively stringent and, in many cases, grant significant job protection to certain employees, including rights on termination of employment. In addition, in certain countries where we operate, our employees are members of unions or are represented by a works council. We are often required to consult and seek the consent or advice of these unions and/or works councils. These regulations and laws, coupled with the requirement to consult with the relevant unions or works councils, could have a significant impact on our flexibility in managing costs and responding to market changes.

Furthermore, with respect to our employees who are subject to collective bargaining arrangements or similar arrangements (approximately 19% of our U.S. workforce as of December 31, 2010), there can be no assurance that we will be able to negotiate labor agreements on satisfactory terms or that actions by our employees will not disrupt our business. If these workers were to engage in a strike, work stoppage or other slowdown or if other employees were to become unionized, we could experience a significant disruption of our operations and/or higher ongoing labor costs, which could adversely affect our business, financial condition and results of operations.

Employee benefit costs, especially postretirement costs, constitute a significant element of our annual expenses, and funding these costs could adversely affect our financial condition.

Employee benefit costs are a significant element of our cost structure. Certain expenses, particularly postretirement costs under defined benefit pension plans and healthcare costs for employees and retirees, may increase significantly at a rate that is difficult to forecast and may adversely affect our financial results, financial condition or cash flows. Declines in global capital markets may cause reductions in the value of our pension plan assets. Such circumstances could have an adverse effect on future pension expense and funding requirements. Further information regarding our retirement benefits is presented in Note 10 to the consolidated financial statements under Item 8 of this Annual Report on Form 10-K.

We depend on external financial resources, and the economic environment and credit market uncertainty could interrupt our access to capital markets, borrowings, or financial transactions to hedge certain risks, which could adversely affect our financial condition.

As of December 31, 2010, we had approximately $294.6 million of short-term and long-term debt with varying maturities and approximately $221.3 million of off balance sheet arrangements, including consignment arrangements for precious metals, international receivables sales programs, bank guarantees, and standby letters of credit. These arrangements have allowed us to make investments in growth opportunities and fund working capital requirements. In addition, we may enter into financial transactions to hedge certain risks, including foreign exchange, commodity pricing, and sourcing of certain raw materials. Our continued access to capital markets, the stability of our lenders, customers and financial partners and their willingness to support our needs are essential to our liquidity and our ability to meet our current obligations and to fund operations and our strategic initiatives. An interruption in our access to external financing or financial transactions to hedge risk could adversely affect our business prospects and financial condition. See further information regarding our liquidity in Capital Resources and Liquidity under Item 7 and in Note 6 to the consolidated financial statements under Item 8 of this Annual Report on Form 10-K.

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We have undertaken several restructuring programs to improve our operating performance and achieve cost savings, but we may not be able to implement and/or administer these programs in the manner contemplated and these restructuring programs may not produce the desired results.

We have undertaken several restructuring programs in the last two years, and we may initiate new restructuring programs in the future. These programs involve, among other things, plant closures and staff reductions. Although we expect these programs to help us achieve operational improvements, including incremental cost savings, we may not be able to implement and/or administer these programs, including the implementation of plant closures and staff reductions, in the manner contemplated, which could cause the restructuring programs to fail to achieve the desired results. Additionally, the implementation of restructuring programs may result in impairment charges, some of which could be material. Even if we do implement and administer these restructuring programs in the manner contemplated, they may not produce the desired results. Accordingly, the restructuring programs that we have implemented and those that we may initiate in the future may not improve our operating performance and may not help us achieve cost savings. Failure to successfully implement and/or administer these restructuring programs could have an adverse effect on our financial performance.

We are exposed to lawsuits in the normal course of business, which could harm our business.

We are from time to time exposed to certain legal proceedings, which may include claims involving product liability, infringement of intellectual property rights of third parties and other claims. Due to the uncertainties of litigation, we can give no assurance that we will prevail on claims made against us in the lawsuits that we currently face or that additional claims will not be made against us in the future. We do not believe that lawsuits we currently face are likely to have a material adverse effect on our business, operating results or financial condition. Future claims or lawsuits, if they were to result in an adverse ruling to us, could give rise to substantial liability, which could have a material adverse effect on our business, operating results or financial condition.

We are exposed to intangible asset risk, and a write down of our intangible assets could have an adverse impact to our operating results and financial position.

We have recorded intangible assets, including goodwill, in connection with business acquisitions. We are required to perform goodwill impairment tests on at least an annual basis and whenever events or circumstances indicate that the carrying value may not be recoverable from estimated future cash flows. As a result of our annual and other periodic evaluations, we may determine that the intangible asset values need to be written down to their fair values, which could result in material charges that could be adverse to our operating results and financial position.

Interest rates on some of our borrowings are variable, and our borrowing costs could be adversely affected by interest rate increases.

Portions of our debt obligations have variable interest rates. Generally, when interest rates rise, our cost of borrowings increases. We estimate, based on the debt obligations outstanding at December 31, 2010, that a one percent increase in interest rates would cause interest expense to increase by less than $0.1 million annually. Continued interest rate increases could raise the cost of borrowings and adversely affect our financial performance. See further information regarding our interest rates on our debt obligations in Quantitative and Qualitative Disclosures about Market Risk and in Note 6 to the consolidated financial statements under Item 8 of this Form 10-K.

Many of our assets are encumbered by liens that have been granted to lenders, and those liens affect our flexibility to dispose of property and businesses.

Certain of our debt obligations are secured by substantially all of our assets. These liens could reduce our ability and/or extend the time to dispose of property and businesses, as these liens must be cleared or waived by the lenders prior to any disposition. These security interests are described in more detail in Note 6 to the consolidated financial statements under Item 8 of this Annual Report on Form 10-K.

We are subject to a number of restrictive covenants under our credit facilities and the indenture governing our senior notes, which could affect our flexibility to fund ongoing operations and strategic initiatives, and, if we are unable to maintain compliance with such covenants, could lead to significant challenges in meeting our liquidity requirements.

Our credit facilities and the indenture governing our senior notes contain a number of restrictive covenants, including those described in more detail in Note 6 to the consolidated financial statements under Item 8 of this Annual Report on Form 10-K. These covenants include customary operating restrictions that limit our ability to engage in certain activities, including additional loans and investments; prepayments, redemptions and repurchases of debt; and mergers, acquisitions and asset sales. We are also subject to customary financial covenants under our credit facilities, including a leverage ratio and a fixed charge coverage ratio. These covenants under our credit facilities restrict the amount of our borrowings, reducing our flexibility to fund ongoing operations and strategic initiatives. These facilities and our senior notes are described in more detail in Capital Resources and Liquidity under Item 7 and in Note 6 to the consolidated financial statements under Item 8 of this Annual Report on Form 10-K.

Breaches of these covenants could become defaults under our credit facilities and the indenture governing our senior notes and cause the acceleration of debt payments beyond our ability to pay. Compliance with some of these covenants is based on financial measures derived from our operating results. If economic conditions in key markets deteriorate, we may experience material adverse impacts to our business and operating results, such as through reduced customer demand and inflation. A significant decline in our business could make us unable to maintain compliance with these financial covenants, in which case, our lenders could demand immediate payment of outstanding amounts and we would need to seek alternate financing sources to pay off such debts and to fund our ongoing operations. Such financing may not be available on favorable terms, if at all.

We may not pay dividends on our common stock at any time in the foreseeable future.

Holders of our common stock are entitled to receive such dividends as our board of directors from time to time may declare out of funds legally available for such purposes. Our board of directors has no obligation to declare dividends under Ohio law or our amended Articles of Incorporation. We may not pay dividends on our common stock at any time in the foreseeable future. Any determination by our board of directors to pay dividends in the future will be based on various factors, including our financial condition, results of operations and current, anticipated cash needs and any limits our then-existing credit facility and other debt instruments place on our ability to pay dividends.

We are exposed to risks associated with acts of God, terrorists and others, as well as fires, explosions, wars, riots, accidents, embargoes, natural disasters, strikes and other work stoppages, quarantines and other governmental actions, and other events or circumstances that are beyond our control.

Ferro is exposed to risks from various events that are beyond our control, which may have significant effects on our results of operations. While we attempt to mitigate these risks through appropriate insurance, contingency planning and other means, we may not be able to anticipate all risks or to reasonably or cost-effectively manage

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those risks that we do anticipate. As a result, our results of operations could be adversely affected by circumstances or events in ways that are significant and/or long lasting.

The risks and uncertainties identified above are not the only risks that we face. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial also may adversely affect us. If any known or unknown risks and uncertainties develop into actual events, these developments could have material adverse effects on our financial position, results of operations, and cash flows.

Item 1B ***Unresolved Staff Comments***

None.

Item 2 ***Properties***

Our corporate headquarters offices are located at 1000 Lakeside Avenue, Cleveland, Ohio. The Company also owns other corporate facilities, including a centralized research and development facility, which are located in Independence, Ohio. We own principal manufacturing plants that range in size from 29,000 sq. ft. to over 800,000 sq. ft. Plants we own with more than 250,000 sq. ft. are located in: Spain; Germany; Cleveland, Ohio; and Penn Yan, New York. The locations of these principal manufacturing plants by reportable segment are as follows:

Performance Coatings U.S.: Cleveland, Ohio. Outside the U.S.: Argentina, Brazil, China, Egypt, France, Indonesia, Italy, Mexico, Spain, Thailand and Venezuela.

Electronic Materials U.S.: Penn Yan, New York; and South Plainfield, New Jersey. Outside the U.S.: China.

Color and Glass Performance Materials U.S.: Washington, Pennsylvania, and Orville, Ohio. Outside the U.S.: Brazil, China, France, Germany, Mexico, Spain, the United Kingdom and Venezuela.

Polymer Additives U.S.: Bridgeport, New Jersey; Cleveland, Ohio; Walton Hills, Ohio; and Fort Worth, Texas. Outside the U.S.: Belgium and the United Kingdom.

Specialty Plastics U.S.: Evansville, Indiana; Plymouth, Indiana; Edison, New Jersey; and Stryker, Ohio. Outside the U.S.: Spain.

Pharmaceuticals U.S.: Waukegan, Illinois.

Ferro s revolving credit facility has a security interest in the real estate of the parent company and its domestic material subsidiaries.

In addition, we lease manufacturing facilities for the Electronic Materials segment in Germany, Japan, and Vista, California; for the Color and Glass Performance Materials segment in Austria, Japan and Italy; and for the Specialty Plastics segment in Carpentersville, Illinois. In some instances, the manufacturing facilities are used for two or more segments. Leased facilities range in size from 18,000 sq. ft. to over 100,000 sq. ft. at the plant located in Carpentersville, Illinois.

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Item 3 *Legal Proceedings*

As previously disclosed, for the year ended December 31, 2007, the Company submitted deviation reports required by the Title V air emission permit issued under the New Jersey Air Pollution Control Act (the Title V Air Permit), which contained numerous deviations from the standards required by the Title V Air Permit at our South Plainfield, New Jersey, facility. In November 2009, the Company entered a settlement agreement with the New Jersey Department of Environmental Protection, pursuant to which the Company performed $100,000 worth of supplemental environmental projects in the community during 2009 and made cash payments totaling $300,000 in 2010.

There are various other lawsuits and claims pending against the Company and its consolidated subsidiaries. We do not expect the ultimate liabilities, if any, to materially affect the consolidated financial position, results of operations, or cash flows of the Company.

On January 4, 2011, the Company received an administrative subpoena from the U.S. Department of the Treasury s Office of Foreign Assets Control (OFAC). OFAC has requested that the Company provide documents and information related to the possibility of direct or indirect transactions with or to a prohibited country. The Company is cooperating with OFAC in connection with the administrative subpoena. The Company cannot predict the length, scope or results of the inquiry from OFAC, or the impact, if any, on its business activities or results of operations.

Executive Officers of the Registrant

The executive officers of the Company as of February 28, 2011, are listed below, along with their ages and positions held during the past five years. The year indicates when the individual was named to the indicated position. No family relationship exists between any of Ferro s executive officers.

James F. Kirsch 53
Chairman, President and Chief Executive Officer, 2006
Mark H. Duesenberg 49
Vice President, General Counsel and Secretary, 2008
Executive Director, Legal and Government Affairs, Lenovo Group Ltd., a global manufacturer of personal computers and electronic devices, 2008
Legal Director Europe, Middle East and Africa, Lenovo Group Ltd., 2005
Ann E. Killian 56
Vice President, Human Resources, 2005
Thomas R. Miklich 63
Vice President and Chief Financial Officer, 2010
Independent Consultant, 2007
Chief Financial Officer, Titan Technology Partners, an information technology consulting firm, 2005
Michael J. Murry 59
Vice President, Electronic, Color and Glass Materials, 2009
Vice President, Inorganic Specialties, 2006
Peter T. Thomas 55
Vice President, Polymer and Ceramic Engineered Materials, 2009
Vice President, Organic Specialties, 2006

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PART II

Item 5 ***Market for Registrant s Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities***

Our common stock is listed on the New York Stock Exchange under the ticker symbol FOE. At January 31, 2011, we had 1,441 shareholders of record for our common stock. The closing price of the common stock on January 31, 2011, was $15.42 per share.

The chart below compares Ferro s cumulative total shareholder return for the five years ended December 31, 2010, to that of the Standard & Poor s 500 Index and the Standard & Poor s MidCap Specialty Chemicals Index. In all cases, the information is presented on a dividend-reinvested basis and assumes investment of $100.00 on December 31, 2005.

COMPARISON OF FIVE-YEAR
CUMULATIVE TOTAL RETURNS

The quarterly high and low intra-day sales prices and dividends declared per share for our common stock during 2010 and 2009 were as follows:

	2010			2009		
	High	**Low**	**Dividends**	**High**	**Low**	**Dividends**
First Quarter	$ 9.16	$ 6.93	$	$ 7.77	$ 0.81	$ 0.01
Second Quarter	11.62	6.91		6.00	1.33	
Third Quarter	13.77	6.68		10.46	1.95	
Fourth Quarter	15.53	12.44		8.98	5.40	

If we pay cash dividends in excess of a base dividend amount in any single quarterly period, the conversion rate on our 6.50% Convertible Senior Notes will be increased by formula. The base dividend amount is $0.145 per share, subject to adjustment in certain events.

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The restrictive covenants contained in our credit facility limit the amount of dividends we can pay on our common stock. For further discussion, see Management s Discussion and Analysis of Financial Condition and Results of Operations under Item 7 of this Annual Report on Form 10-K.

We did not repurchase any of our common stock during the fourth quarter of 2010.

Item 6 ***Selected Financial Data***

The following table presents selected financial data for the last five years ended December 31st:

	2010	2009	2008	2007	2006
		(Dollars in thousands, except per share data)			
Net sales	$ 2,101,865	$ 1,657,569	$ 2,245,152	$ 2,147,904	$ 1,987,606
Income (loss) from continuing operations	7,273	(40,040)	(52,882)	(97,502)	17,181
Basic earnings (loss) per share from continuing operations attributable to Ferro Corporation common shareholders	0.06	(0.85)	(1.28)	(2.34)	0.33
Diluted earnings (loss) per share from continuing operations attributable to Ferro Corporation common shareholders	0.06	(0.85)	(1.28)	(2.34)	0.33
Cash dividends declared per common share		0.01	0.58	0.58	0.58
Total assets	1,434,355	1,526,355	1,544,117	1,638,260	1,741,602
Long-term debt, including current portion, and redeemable preferred stock	303,269	409,231	577,290	538,758	601,765

In 2008, we sold our Fine Chemicals business. For all periods presented, we report that business as discontinued operations. That divestiture is further discussed in Note 17 to the consolidated financial statements under Item 8 of this Annual Report on Form 10-K.

Item 7 ***Management s Discussion and Analysis of Financial Condition and Results of Operations***

Overview

Market conditions improved during 2010 as customer demand continued to recover from the sharp decline in late 2008 and early 2009. As a result, sales volumes increased across our business. Customer demand was particularly strong within our Electronic Materials segment where demand for our products resulted in significantly higher sales volume, especially for conductive pastes used to produce solar cells.

Net sales increased by 27% compared with 2009. Sales increased in all reporting segments during the year with the highest growth rates in Electronic Materials, Polymer Additives and Color and Glass Performance Materials. Higher precious metal costs, which are passed through to customers, contributed to the sales growth in Electronic Materials.

Manufacturing rationalization activities and other cost reduction actions continued during 2010, resulting in a number of plant closures and reduced worldwide employment. The major operational activities related to the restructuring programs that were initiated in 2006 were completed during 2010. The planned plant closings and associated transfer of manufacturing assets between locations have largely been completed, although we expect some activities to continue in 2011 related to product production transfers, customer product re-qualifications and site cleanup. The restructuring activities completed in 2010 and prior years contributed to higher gross margins and income from continuing operations during 2010.

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Gross profit increased in 2010 compared with 2009, driven by higher sales, improved product mix and improved manufacturing efficiency. Gross margin percentage increased compared to 2009 and was higher than was recorded prior to the global recession in 2008 and 2009. For the year, raw material cost increases were offset by product price increases, in aggregate, so the cost increases had little effect on gross profit.

Selling, general and administrative (SG&A) expenses increased during 2010. Drivers of the increased SG&A expenses included higher incentive compensation accruals and the resumption of normal wage adjustments. In addition, higher special charges, primarily related to manufacturing rationalization projects, contributed to the higher SG&A expenses during the year.

Restructuring and impairment charges were higher in 2010 compared with 2009. The majority of the charges related to our manufacturing rationalization activities in Europe, which resulted in ending manufacturing activities at selected sites in France, the United Kingdom, Portugal and the Netherlands.

Interest expense declined in 2010, primarily as a result of lower average borrowing levels. Interest expense also declined as a result of debt refinancing actions taken during the year which reduced amortization expenses that are included in interest expense. We recorded losses on extinguishment of debt in 2010 that resulted primarily from our purchase of a portion of the Company s outstanding 6.5% Convertible Senior Notes in connection with our refinancing actions.

We recorded income from continuing operations during 2010 compared with a loss in 2009. The increased income was the result of higher gross profit and lower interest expense. These benefits were partially offset by higher restructuring and impairment charges, losses on extinguishment of debt, increased SG&A expenses, and higher income tax expense.

Outlook

We expect demand for our products to improve during 2011 compared with 2010. The growth rate of sales is likely to be less in 2011 than in 2010, as growth in 2010 was enhanced by a rebound in customer demand after the global economic downturn. Raw material input costs have increased in the past several quarters as global economic activity has increased, and these costs are expected to continue to rise. We will attempt to raise product prices to maintain our gross margin percentage, but our ability to do so will be dependent on market conditions and our competitors pricing actions.

During 2010, we ended production of several products, including certain metal oxides, commodity dielectric materials and precious metal preparations, as a result of restructuring activities and business transactions with third parties.

We have been engaged in significant manufacturing rationalization activities and expense reduction projects for several years. The major operational changes related to these projects have been largely completed, but we expect some continuing restructuring-related activities during 2011, including product production transfers, product re-qualifications and site clean-up. As a result, we expect to incur restructuring charges at a significantly reduced level in 2011 as we complete the final tasks related to these projects.

Factors that could adversely affect our future financial performance are described under the heading Risk Factors in Item 1A.

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Results of Operations

Comparison of the years ended December 31, 2010 and 2009

	2010	2009	$ Change	% Change
	(Dollars in thousands, except per share data)			
Net sales	$ 2,101,865	$ 1,657,569	$ 444,296	26.8%
Cost of sales	1,643,200	1,343,297	299,903	22.3%
Gross profit	458,665	314,272	144,393	45.9%
Gross margin percentage	21.8%	19.0%		
Selling, general and administrative expenses	293,736	272,259	21,477	7.9%
Restructuring and impairment charges	63,732	19,337	44,395	
Other expense (income):				
Interest expense	44,568	63,918	(19,350)	
Interest earned	(651)	(896)	245	
Losses on extinguishment of debt	23,001		23,001	
Foreign currency losses, net	4,724	3,827	897	
Miscellaneous expense (income), net	5,814	(618)	6,432	
Income (loss) before income taxes	23,741	(43,555)	67,296	
Income tax expense (benefit)	16,468	(3,515)	19,983	
Income (loss) from continuing operations	7,273	(40,040)	47,313	
Loss on disposal of discontinued operations, net of income taxes		(325)	325	
Net income (loss)	$ 7,273	$ (40,365)	$ 47,638	
Diluted earnings (loss) per share attributable to Ferro Corporation common shareholders	$ 0.06	$ (0.86)	$ 0.92	

Net sales increased by 27% in the year ended December 31, 2010. The increased sales reflected recovering customer demand from the economic downturn in 2009. Increased sales volume in 2010 compared with 2009 accounted for approximately 20 percentage points of the sales increase. Changes in product mix and prices accounted for an additional 8 percentage points of the sales growth. Changes in foreign currency exchange rates reduced the growth in sales by approximately 1 percentage point. The changes in sales volume, product mix and prices included the effects of increased sales of precious metals. Higher precious metal sales contributed approximately 9 percentage points to the overall sales increase during the year. Sales increased in all segments during 2010. Sales in the U.S. and international sales both increased compared to 2009.

Gross profit increased during 2010 as a result of the growth in sales volume. Cost reduction initiatives that were completed during 2010, including staffing reductions, plant consolidations and restructuring actions, also contributed to the gross profit improvement. Gross margin percentage increased approximately 280 basis points in 2010 compared with 2009. In aggregate, increases in raw material costs of approximately $47 million were offset by increased product prices. Special charges, primarily related to manufacturing rationalization activities, reduced gross profit by approximately $9.0 million during 2010. Gross profit was reduced by charges of $5.0 million in 2009, also primarily due to manufacturing rationalization activities.

Selling, general and administrative (SG&A) expenses increased by $21.5 million in 2010 compared with the prior-year period. SG&A expenses declined to 14.0% of net sales in 2010 compared with 16.4% of net sales in 2009. Higher incentive compensation accruals and higher special charges were the primary drivers of the increased SG&A expenses. The 2010 SG&A expenses included $18.1 million in charges, primarily related to manufacturing rationalization projects, employee severance and corporate development activities. In 2009, SG&A expenses included $12.2 million in charges, primarily driven by expense reduction activities.

Restructuring and impairment charges were $63.7 million in 2010, an increase of $44.4 million compared with the prior-year period. The largest contributors to the charges in 2010 were restructuring initiatives involving the closure of a manufacturing plant in France, two manufacturing sites in the Netherlands and certain manufacturing operations in Portugal. Approximately $35.0 million of the restructuring and impairment charges were related to employee severance costs associated with manufacturing rationalization projects. Asset impairments of $12.6 million and pension settlements and curtailments of $7.4 million contributed to the total restructuring and impairment charges for 2010. Also included in the restructuring and impairment charges for 2010 were costs of $3.1 million related to lease termination at sites in Germany and Portugal. The remaining charges were primarily related to site cleanup and dismantling costs at various sites.

Interest expense declined by $19.4 million during 2010 compared with 2009. The reduction was driven primarily by a decline in our average borrowing levels. Interest expense was also lower as a result of lower average interest rates and the effects of refinancing activities during the year, including the write-off of unamortized debt issuance costs related to our previous credit facility. The refinancing activities reduced interest expense beginning in August 2010. Our average borrowing levels declined as a result of reduced requirements to provide cash collateral for our precious metal consignment programs, debt reduction in late 2009 subsequent to our equity offering, and debt reduction as cash generated from operations during 2010 was used to repay borrowings. As of December 31, 2010, we had $28.1 million of cash on deposit as collateral for precious metals, a decline from $112.4 million on December 31, 2009. Our 2010 interest expense included a $2.3 million noncash write-off of debt issuance costs related to repayments of our term loans prior to their scheduled repayment. Interest expense in 2009 included a $3.2 million write-off of unamortized credit facility issuance costs that was triggered by debt repayments.

We recorded losses from extinguishment of debt of $23.0 million during 2010 related to our debt refinancing activities. The charge included a write-off of unamortized debt issuance costs and the difference between the carrying value and the fair value of the portion of our 6.5% convertible notes purchased during 2010. The purchases were made pursuant to a tender offer and subsequently on the open market. The losses on extinguishment charge also included a write-off of unamortized debt issuance costs associated with our previous credit facility.

We manage currency risks in a wide variety of foreign currencies principally by entering into forward contracts to mitigate the impact of currency fluctuations on transactions arising from international trade. The carrying values of these contracts are adjusted to market value and the resulting gains or losses are charged to income or expense during the period. Foreign currency translation losses in 2010 included a write-down of approximately $2.6 million related to receivables affected by a devaluation of the Venezuelan currency.

As part of our miscellaneous expense in 2010, we recorded a net pre-tax gain of $8.3 million as a result of a business combination in which Ferro Corporation and Heraeus of Hanau, Germany, acquired from each other certain business lines related to decoration materials for ceramic and glass products. In addition, we recorded a charge of $6.8 million to settle our interest rate swaps in connection with the extinguishment of term loans that were part of our previous credit facility and a charge of $9.2 million for an increased reserve for environmental remediation costs related to a non-operating facility in Brazil.

In 2010, income tax expense was $16.5 million, or 69.3% of income before taxes. In the prior-year period, we recorded an income tax benefit of $3.5 million, or 8.1% of the loss before income taxes. The tax expense in 2010 was affected by a number of items including a $9.8 million net increase to valuation allowances due to a determination that it is not more likely than not that certain deferred tax assets will be realized; a $1.5 million increase in tax expense related to a change in U.S. laws; and a $2.1 million decrease due to a tax benefit related to U.S. manufacturing income. The tax benefit in 2009 was affected by a number of items including a reduction of $4.2 million due to rate differences between non-U.S. and U.S. jurisdictions; a reduction of $2.9 million resulting from goodwill impairment not recognized for tax purposes; a $2.9 million reduction due to a decrease in reserves for uncertain tax positions; and a $4.4 million increase resulting from U.S. credits for increasing research activities.

We recorded income from continuing operations of $7.3 million in 2010. The income was a $47.3 million improvement from a loss on continuing operations recorded in 2009. The improvement was primarily the result of higher gross profit and reduced interest expense, partially offset by higher restructuring and impairment charges, increased SG&A expenses, losses on extinguishment of debt and higher income tax expense.

	2010	2009	$ Change	% Change
	(Dollars in thousands)			
Segment Sales				
Electronic Materials	$ 675,401	$ 426,896	$ 248,505	58.2%
Performance Coatings	555,023	487,891	67,132	13.8%
Color and Glass Performance Materials	382,155	321,750	60,405	18.8%
Polymer Additives	302,352	249,510	52,842	21.2%
Specialty Plastics	163,058	149,524	13,534	9.1%
Pharmaceuticals	23,876	21,998	1,878	8.5%
Total segment sales	$ 2,101,865	$ 1,657,569	$ 444,296	26.8%
Segment Operating Income				
Electronic Materials	$ 132,585	$ 45,344	$ 87,241	192.4%
Performance Coatings	39,416	29,551	9,865	33.4%
Color and Glass Performance Materials	31,514	13,123	18,391	140.1%
Polymer Additives	18,387	6,708	11,679	174.1%
Specialty Plastics	11,348	10,164	1,184	11.6%
Pharmaceuticals	814	438	376	85.8%
Total segment operating income	$ 234,064	$ 105,328	$ 128,736	122.2%

Electronic Materials Segment Results. Sales increased in Electronic Materials in all product areas, led by higher sales of conductive pastes and powders. Increased sales volume accounted for approximately $159 million of the sales increase during 2010. Changes in product pricing and mix contributed an additional $85 million to sales growth, and changes in foreign currency exchange rates accounted for $5 million of the higher sales. An increase in precious metal sales of $141 million, reflecting changes in both sales volume and pricing, contributed to the overall change in sales for the year. The costs of precious metals are passed through to our customers as an element of our product prices. Sales from our U.S. manufacturing sites grew the most in 2010. Sales of products manufactured in the U.S. are recorded as U.S. sales, although many of the products are exported to international customers. Sales also grew in Asia-Pacific, as we increased production at a conductive paste manufacturing facility in China, and in the Europe-Middle East-Africa region. Operating income increased due to a $90 million increase in gross profit, driven primarily by increased sales volume. Partially offsetting the improved gross profit was a $3 million increase in SG&A expenses.

Performance Coatings Segment Results. Sales increased in Performance Coatings primarily as a result of increased sales volume. Higher sales volume accounted for approximately $80 million in higher sales. This increase was partially offset by a $14 million reduction in sales due to changes in foreign currency exchange rates. Changes in product mix and pricing increased sales by $1 million. Sales were higher in all regions, with the largest increase in

Europe-Middle East-Africa. Operating income increased due to a $20 million increase in gross profit, primarily driven by improved sales volume and changes in product pricing and mix. Partially offsetting the improved gross profit was a $10 million increase in SG&A expenses including higher incentive compensation accruals, salaries and benefits, increased commissions and higher information technology expenses.

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Color and Glass Performance Materials Segment Results. Sales increased in Color and Glass Performance Materials primarily due to higher sales volume. Increased sales volume contributed approximately $56 million to the sales growth during 2010. Changes in product pricing and mix contributed an additional $10 million to the sales growth while changes in foreign currency exchange rates reduced sales by $6 million. Sales growth was recorded in Europe-Middle East-Africa, the United States and Asia-Pacific. Operating income increased due to a $24 million increase in gross profit that was primarily driven by increased sales volume. The increase in gross profit was partially offset by a $6 million increase in SG&A expenses.

Polymer Additives Segment Results. Sales increased in Polymer Additives as a result of higher sales volume and changes in product pricing and mix. Increased sales volume accounted for approximately $36 million of the sales growth for the year. Changes in product pricing and mix contributed an additional $21 million to the growth in sales. Changes in foreign currency exchange rates reduced sales by $4 million. Sales growth was primarily in the United States and Europe-Middle East-Africa. Operating profit increased due to a $12 million increase in gross profit that was primarily due to increased sales volume and improved manufacturing effectiveness.

Specialty Plastics Segment Results. Sales increased in Specialty Plastics due to a combination of changes in product pricing and mix, and higher sales volumes. Changes in product pricing and mix contributed approximately $10 million to the higher sales in 2010. Increased sales volumes accounted for an additional $6 million of the sales growth, while changes in foreign currency exchange rates reduced sales growth by $3 million. Sales growth was primarily in the United States. Operating income increased due to a reduction of $2 million in SG&A expenses, partially offset by a $1 million decline in gross profit.

Pharmaceutical Segment Results. Sales increased in Pharmaceuticals as a result of changes in product mix. Operating income increased as a result of a $2 million increase in gross profit that was partially offset by a $1.6 million increase in SG&A expenses.

	2010	2009	$ Change	% Change
		(Dollars in thousands)		
Geographic Revenues				
United States	$ 1,039,457	$ 758,048	$ 281,409	37.1%
International	1,062,408	899,521	162,887	18.1%
Total geographic revenues	$ 2,101,865	$ 1,657,569	$ 444,296	26.8%

During 2010, sales increased in the United States and internationally. Sales of products manufactured in the United States were 49% of total net sales for the year, compared with 46% of total sales in 2009. Sales grew more rapidly in the United States than internationally in 2010 primarily as a result of strong sales of electronic materials products. Many of our electronic materials products are manufactured in the United States and exported to other regions. Sales recorded in each region include products that are exported to customers located in other regions. The increase in international sales was driven by higher sales in Europe-Middle East-Africa and Asia-Pacific.

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Comparison of the years ended December 31, 2009 and 2008

	2009	2008	$ Change	% Change
	(Dollars in thousands, except per share data)			
Net sales	$ 1,657,569	$ 2,245,152	$ (587,583)	(26.2)%
Cost of sales	1,343,297	1,841,485	(498,188)	(27.1)%
Gross profit	314,272	403,667	(89,395)	(22.1)%
Gross margin percentage	19.0%	18.0%		
Selling, general and administrative expenses	272,259	297,119	(24,860)	(8.4)%
Restructuring and impairment charges	19,337	106,142	(86,805)	
Other expense (income):				
Interest expense	63,918	51,290	12,628	
Interest earned	(896)	(714)	(182)	
Losses on extinguishment of debt		5,531	(5,531)	
Foreign currency losses, net	3,827	742	3,085	
Miscellaneous income, net	(618)	(357)	(261)	
Loss before income taxes	(43,555)	(56,086)	12,531	
Income tax benefit	(3,515)	(3,204)	(311)	
Loss from continuing operations	(40,040)	(52,882)	12,842	
Income from discontinued operations, net of income taxes		5,014	(5,014)	
(Loss) gain on disposal of discontinued operations, net of income taxes	(325)	9,034	(9,359)	
Net loss	$ (40,365)	$ (38,834)	$ (1,531)	
Diluted loss per share attributable to Ferro Corporation common shareholders	$ (0.86)	$ (0.95)	$ 0.09	

Net sales declined by 26% in 2009, primarily due to reduced sales volume resulting from the worldwide economic downturn. Lower sales volume accounted for approximately 22 percentage points of the overall sales decline. Changes in product mix and prices accounted for approximately 2.6 percentage points of the sales decline. Changes in foreign currency exchange rates also contributed to the lower net sales, accounting for approximately 1.5 percentage points of the sales decline. The changes in sales volume, product mix and prices include the effects of lower sales of precious metals. Lower precious metal sales contributed approximately 3.1 percentage points to the lower sales for the year. Sales declined in all segments and in all regions compared with the prior-year period.

Gross profit declined in 2009 as a result of the decline in net sales. Cost reduction initiatives, including staffing reductions, plant closures and restructuring actions, partially offset the decline in gross profit. As a result, despite the decline in sales, gross profit percentage increased approximately 100 basis points in 2009 compared with 2008. Raw material prices declined, in aggregate, by approximately $98 million during 2009 compared with the prior-year period. The benefit from lower raw material costs was largely offset by lower product prices. Charges, primarily related to manufacturing rationalization activities, reduced gross profit by approximately $5.0 million during 2009. Gross profit was reduced by approximately $3.1 million in 2008 as a result of charges for asset write-offs and costs associated with our manufacturing rationalization initiatives. In 2008, gross profit was also reduced by approximately $3.3 million spent to clean up an accidental discharge of product into the wastewater treatment facility at our Bridgeport, New Jersey, manufacturing location.

Selling, general and administrative (SG&A) expenses declined by $24.9 million in 2009 compared with 2008. SG&A expenses were 16.4 percent of sales in 2009 compared with 13.2 percent of sales in 2008 due to lower sales. SG&A expenses declined as a result of expense reduction efforts we made in response to weak customer demand. The expense reductions included reduced staffing and reduced discretionary spending. In 2009, these actions contributed to a reduction of approximately $17.8 million in salary and wage expense and a $10.8 million reduction in travel and entertainment expense compared with 2008. Partially offsetting these declines was an increase of approximately $20.1 million in pension expense. SG&A expenses in 2009 included charges of approximately $12.2 million primarily related to expense reduction initiatives. The 2008 SG&A expenses included charges of approximately $3.9 million related to corporate development activities, asset write-offs and employee severance expenses, partially offset by benefits from litigation settlements and insurance proceeds.

We recorded restructuring and impairment charges of $19.3 million during 2009 consisting of $11.1 million related to manufacturing rationalization activities in our European manufacturing operations and other cost-reduction actions, and $8.2 million for a reduction in goodwill associated with our Pharmaceuticals business. The impairment in goodwill was triggered by changes made to the assumptions used to determine valuation under the market approach. In 2008, restructuring and impairment charges were $106.1 million. The 2008 charges included a $58.4 million reduction in goodwill and a $21.8 million charge related to long-lived assets in the Tile Coating Systems business within the Performance Coatings segment, the Specialty Plastics segment, and the Electronic Materials segment. In addition, we recorded restructuring charges of $25.9 million in 2008, primarily associated with the rationalization of our manufacturing operations in the Performance Coatings and Color and Glass Performance Materials segments, and other activities to reduce costs and expenses throughout all of our businesses.

Interest expense increased during 2009 compared with the prior-year period. Interest expense increased approximately $7.0 million due to higher interest rates, primarily resulting from an amendment to our credit facilities that we signed in March 2009 and approximately $2.4 million due to increased borrowings. Additional changes in interest expense resulted from differences in the amortization of debt issuance costs and discounts. Interest expense in 2009 included a required $3.2 million write-off of unamortized credit facility debt issuance costs triggered by debt repayments. A primary driver of the increased borrowing levels in 2009 was a requirement to provide cash collateral for precious metal consignment programs. As of December 31, 2009, we had $112.4 million of cash on deposit as collateral for precious metals.

During 2008, we refinanced our 91/8% coupon senior notes using the proceeds of a new convertible bond offering and additional borrowing from our revolving credit facility. The repayment of the senior notes resulted in a loss on extinguishment of debt of $5.5 million. This loss did not recur in 2009.

Net foreign currency transaction losses were $3.8 million in 2009 compared with losses of $0.7 million in 2008. We manage currency translation risks in a wide variety of foreign currencies principally by entering into forward contracts to mitigate the impact of currency fluctuations on transactions arising from international trade. The carrying values of these contracts are adjusted to fair value and the resulting gains and losses are charged to income or expense in the period.

During 2009, we recognized a tax benefit of $3.5 million, or 8.1% of the loss before income taxes, compared to a benefit of $3.2 million, or 5.7% of the loss before income taxes in 2008. The tax benefit in 2009 was affected by a number of items including a reduction of $4.2 million due to rate differences between non-U.S. and U.S. jurisdictions; a reduction of $2.9 million resulting from goodwill impairment not recognized for tax purposes; a $2.9 million reduction due to a decrease in our reserves for uncertain tax positions; and a $4.4 million increase resulting from U.S. credits for increasing research activities. The tax benefit in 2008 was impacted by items including a $15.4 million reduction due to goodwill impairment with only a partial tax benefit; a $9.8 million decrease resulting from an increase to valuation allowances due to a determination that it is not more likely than not that certain deferred tax assets will be realized; a $6.5 million decrease from rate differences between non-U.S. and U.S. jurisdictions; a $6.1 million increase due to a favorable tax impact on foreign dividends; and, a $5.7 million increase resulting from a decrease in the reserves for uncertain tax positions.

The 2009 loss from continuing operations was reduced from the loss recorded in 2008 as a result of lower impairment charges, reduced SG&A expenses and lower restructuring charges. Partially offsetting these reduced charges and expenses were lower gross profit and higher interest expense.

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	2009	2008	$ Change	% Change
	(Dollars in thousands)			
Segment Sales				
Electronic Materials	$ 426,896	$ 558,313	$ (131,417)	(23.5)%
Performance Coatings	487,891	627,918	(140,027)	(22.3)%
Color and Glass Performance Materials	321,750	456,644	(134,894)	(29.5)%
Polymer Additives	249,510	349,902	(100,392)	(28.7)%
Specialty Plastics	149,524	225,856	(76,332)	(33.8)%
Pharmaceuticals	21,998	26,519	(4,521)	(17.0)%
Total segment sales	$ 1,657,569	$ 2,245,152	$ (587,583)	(26.2)%
Segment Operating Income				
Electronic Materials	$ 45,344	$ 52,868	$ (7,524)	(14.2)%
Performance Coatings	29,551	36,935	(7,384)	(20.0)%
Color and Glass Performance Materials	13,123	39,112	(25,989)	(66.4)%
Polymer Additives	6,708	6,086	622	10.2%
Specialty Plastics	10,164	5,385	4,779	88.7%
Pharmaceuticals	438	3,524	(3,086)	(87.6)%
Total segment operating income	$ 105,328	$ 143,910	$ (38,582)	(26.8)%

Electronic Materials Segment Results. Sales declined in Electronic Materials primarily as a result of lower sales volume of dielectric materials and metals pastes and powders, partially offset by improvements in product pricing. The decline in sales volume was responsible for an approximately $176 million reduction in sales in 2009. This reduction was partially offset by approximately $40 million due to changes in product pricing and $4 million due to changes in foreign currency exchange rates. A decline in sales of precious metals of $59 million contributed to the sales decline, reflecting both price and volume changes in precious metals. The costs of precious metals included in our products are passed through to customers as an element of our product prices. Sales declined in all three principal regional markets for our electronic materials products: Asia-Pacific, the United States and Europe. Operating income declined due to a $22 million decline in gross profit partially offset by a reduction of $14 million in SG&A expenses. The decline in gross profit was primarily due to the negative effects of lower sales volumes. The decline in SG&A expenses was due to expense reduction initiatives, including staffing reductions and control of discretionary spending.

Performance Coatings Segment Results. Sales declined in Performance Coatings primarily due to reduced sales volumes of tile coatings. The decline in total sales volume was responsible for approximately $85 million of the reduction in sales, while changes in product prices and mix reduced sales by approximately $23 million and changes in foreign currency exchange rates contributed approximately $32 million to the sales decline. The sales decline was the largest in Europe, our largest market for these products. Sales also declined in the United States and Asia-Pacific. Operating income declined primarily due to reduced sales. Gross profit declined by $25 million, driven by the lower sales volume. Partially offsetting the decline in gross profit was a reduction in SG&A expenses of $18 million as a result of staffing reductions and expense reduction initiatives.

Color and Glass Performance Materials Segment Results. Sales declined in Color and Glass Performance Materials as a result of lower sales volume. Lower sales volume reduced sales by approximately $93 million. Changes in product prices and mix contributed an additional $31 million to the sales decline, and changes in foreign currency exchange rates accounted for approximately $10 million of the lower net sales for the segment. Sales for the year were lower in all regions. Operating income declined due to a $38 million decline in gross profit, partially offset by a $12 million reduction in SG&A expenses. The decline in gross profit was primarily due to the negative effects of lower sales volumes. The reduction in SG&A expenses was primarily due to staffing reductions and control of discretionary spending.

Polymer Additives Segment Results. Sales declined in Polymer Additives primarily as a result of lower sales volume and changes in product pricing and mix. The reduction in volume accounted for approximately $67 million of the sales decline, while changes in product pricing and mix contributed an additional $29 million to the reduced sales. Changes in foreign currency exchange rates were responsible for $4 million of the reduction in sales from the prior year. The sales declines occurred primarily in the United States and Europe. Operating income increased, despite the decline in sales, due to a $7.5 million reduction in SG&A expenses that more than offset a $6.9 million decline in gross profit. The decline in gross profit was due primarily to the negative effects of lower sales volume. The decline in SG&A expenses was due to staffing reductions and control of discretionary spending. In addition, during 2008 the operating income in Polymer Additives was reduced by approximately $3.3 million in costs to clean up an accidental discharge of product into the wastewater treatment facility at our Bridgeport, New Jersey, manufacturing plant.

Specialty Plastics Segment Results. Sales declined in Specialty Plastics primarily due to lower sales volume. Approximately $65 million of the sales decline was the result of lower sales volume. Changes in product pricing and mix contributed $8 million to the lower sales and changes in foreign currency exchange rates reduced sales by an additional $3 million. The sales decline occurred mainly in the United States and Europe, the primary markets for our plastics products. Operating income increased compared with the prior-year period as a result of a $7.3 million decrease in SG&A expenses that more than offset a $2.5 million decrease in gross profit. The decline in gross profit was due to the negative effects of lower sales volumes partially offset by improved manufacturing cost performance. The reduction in SG&A expenses was due to staffing reductions and control of discretionary spending.

Pharmaceuticals Segment Results. Sales declined in Pharmaceuticals primarily as a result of reduced demand for high-value products that caused a change in product mix. Operating income declined primarily due to a $5.0 million reduction in gross profit driven by the change in product mix. The reduction in gross profit was partially offset by a $1.9 million reduction in SG&A expenses. Results related to our Fine Chemicals business, which had previously been combined with the results from our Pharmaceuticals business and reported as Other Businesses, are now reported as discontinued operations following the sale of that business in 2008.

	2009	2008	$ Change	% Change
	(Dollars in thousands)			
Geographic Revenues				
United States	$ 758,048	$ 973,717	$ (215,669)	(22.1)%
International	899,521	1,271,435	(371,914)	(29.3)%
Total geographic revenues	$ 1,657,569	$ 2,245,152	$ (587,583)	(26.2)%

Sales of products shipped from all regions declined as a result of the worldwide economic downturn in 2009. In 2009, sales of products manufactured in the United States were 46% of total net sales compared with 43% of net sales in 2008. The decline in international sales was driven primarily by sales in Europe and Asia-Pacific. Sales in Latin America declined slightly compared with the prior year. Sales recorded in each region include products exported to customers that are located in other regions.

Summary of Cash Flows for the years ended December 31, 2010, 2009 and 2008

	2010	2009	2008
	(Dollars in thousands)		
Net cash provided by (used for) operating activities	$ 198,865	$ 2,151	$ (9,096)
Net cash used for investing activities	(33,322)	(42,654)	(17,050)
Net cash (used for) provided by financing activities	(157,264)	46,625	23,854
Effect of exchange rate changes on cash	2,249	2,194	458
Increase (decrease) in cash and cash equivalents	$ 10,528	$ 8,316	$ (1,834)

Operating activities. Cash flows from operating activities increased $196.7 million from 2009 to 2010. Cash flows improved $196.8 million from decreases in deposit requirements related to our precious metal consignment program, $54.1 million from increases in accrued expenses and other current liabilities, $47.6 million as a result of a lower net loss in 2010, and $41.8 million from increases in accounts payable. These benefits were partially offset by increases in cash used for inventories of $98.9 million, accounts receivable of $37.0 million and other receivables and current assets of $32.5 million.

Cash flows from operating activities increased $11.2 million from 2008 to 2009. Changes in inventory levels provided $82.7 million of additional cash flows, and changes in other receivables and other current assets provided another $54.7 million. Cash outflows of $46.3 million in 2008 related to a note receivable from Ferro Finance Corporation (FFC) did not recur in 2009. Partially offsetting these benefits was $112.4 million used for deposits related to our precious metals consignment program.

Investing activities. Capital expenditures decreased $1.5 million from 2009 to 2010 and decreased $29.8 million from 2008 to 2009. In 2008, capital spending included the construction of a new plant in Spain that produces colors for the European tile market, increased investment in the Company s manufacturing facilities in the Asia-Pacific region to produce electronic materials, and projects related to our manufacturing rationalization programs in the United States and Europe. In 2009 and 2010, we continued capital spending on manufacturing rationalization programs, but the other projects from 2008 had been substantially completed, and we made a concerted effort to defer or scale back new projects in order to conserve cash during a period of reduced customer demand associated with the global economic downturn. In 2010, we received proceeds of $11.4 million from the sale of assets and businesses, primarily property, plant and equipment in the Netherlands and our business operations in precious metal preparations in Asia. In 2008, we sold our Fine Chemicals business and received proceeds, net of transactional costs, of $56.5 million.

Financing activities. At December 31, 2010, our primary credit agreement consisted of a new $350.0 million multi-currency senior revolving credit facility, maturing in 2015. In 2010, we issued $250.0 million of 7.875% Senior Notes in a high yield bond offering, repurchased $136.7 million of our 6.50% Convertible Senior Notes through a tender offer and subsequent market purchases, and repaid all outstanding term loans totaling $231.4 million and our revolving credit line of a net $1.7 million associated with the 2009 Amended and Restated Credit Facility. In 2009, we issued 41.1 million shares of common stock and received net proceeds of $215.7 million. In connection with this equity offering, we converted $100.0 million of revolving loans into new term loans and then used $158.1 million of the equity offering proceeds to pay down new and existing term loans. In 2008, Ferro issued $172.5 million of 6.50% Convertible Senior Notes due 2013. The proceeds from this note offering, along with available cash, including borrowings under our revolving credit facility, were used to purchase all of Ferro s outstanding 91/8% Senior Notes that would have matured in 2009.

We had net repayment to all credit facilities of $144.3 million in 2010 and $155.8 million in 2009, for a net increase in 2010 of $11.5 million in our rate of borrowing. In 2008, we had net borrowings of $64.7 million, for a net decrease in 2009 of $220.5 million in our rate of borrowing. In 2010, we paid $5.7 million to issue the

7.875% Senior Notes and $4.1 million to enter into our 2010 Credit Facility. In 2009, we paid $16.9 million to amend and enter into credit facilities. In 2008, we paid $5.3 million to extinguish the 91/8 Senior Notes and $5.6 million to issue the 6.50% Convertible Senior Notes.

We have paid no dividends on our common stock since the first quarter of 2009, when Ferro s Board of Directors declared a quarterly dividend of $0.01 per common share. In 2008, we paid dividends on our common stock at the quarterly rate of $0.145 per share. Dividends paid, including dividends on our preferred stock, totaled $0.7 million in 2010, $1.1 million in 2009, and $26.1 million in 2008.

Capital Resources and Liquidity

2010 Debt Refinancing

During August 2010, we refinanced the majority of our debt structure. The refinancing allowed us to extend debt maturities, negotiate less restrictive debt covenants and reduce debt costs. We used the proceeds from a high yield debt offering, as well as proceeds from a new credit facility, to repurchase some of our convertible senior notes, repay the term loans and revolver under our prior credit facility, terminate and settle our interest rate swap agreements, and pay fees and expenses associated with the refinancing. The refinancing included the following activities:

Issued $250 million of 7.875% Senior Notes in a high yield bond offering,

Entered into a new $350 million revolving credit agreement, the 2010 Credit Facility,

Repurchased $100.5 million of our 6.50% Convertible Senior Notes, which were tendered pursuant to a tender offer initiated in conjunction with the debt refinancing,

Repaid all outstanding term loans associated with the 2009 Amended and Restated Credit Facility,

Repaid all amounts outstanding under the revolving credit line associated with the 2009 Amended and Restated Credit Facility, and

Terminated the interest rate swap agreements that effectively fixed the interest rate on a portion of the term loans then outstanding under the 2009 Amended and Restated Credit Facility.

As a result of these refinancing activities, we recognized losses on extinguishment of debt of $19.3 million. In addition, we incurred $6.8 million in miscellaneous expense, which was associated with the settlement of the interest rate swap agreements. We also recognized $2.3 million in interest expense related to the write-off of unamortized debt issuance costs. Debt issuance costs of $9.9 million related to the new debt instruments were deferred and will be recognized as interest expense over the life of the debt obligations.

Major debt instruments that were outstanding during 2010 are described in additional detail below.

7.875% Senior Notes

In 2010, we issued $250 million of 7.875% Senior Notes due 2018 (the Senior Notes). We used portions of the proceeds from the offering to repay all of the remaining term loans and revolving borrowings outstanding under a credit facility originally entered into in 2006 and as amended and restated through November 2009 (the 2009

Amended and Restated Credit Facility). We also used portions of the proceeds from the offering to repurchase the 6.50% Convertible Senior Notes (the Convertible Notes) that were tendered pursuant to a related tender offer. The Senior Notes were issued at par and bear interest at a rate of 7.875% per year, payable semi-annually in arrears on February 15 and August 15 of each year, beginning February 15, 2011. The Senior Notes mature on August 15, 2018, and are unsecured. At December 31, 2010, we were in compliance with the covenants under the Senior Notes indenture.

6.50% Convertible Senior Notes

In 2008, Ferro issued $172.5 million of 6.50% Convertible Senior Notes due 2013 (the Convertible Notes). The Convertible Notes bear interest at a rate of 6.5% per year, payable semi-annually in arrears on February 15 and August 15 of each year. The Convertible Notes mature on August 15, 2013. In 2010, we commenced a cash tender offer to purchase all of our Convertible Notes, and we purchased $100.5 million of the Convertible Notes, which were tendered pursuant to the offer. Later in 2010, we purchased an additional $36.2 million of the Convertible Notes on the open market. In connection with these transactions, we recognized losses on extinguishment of debt of $13.1 million, consisting of unamortized debt issuance costs and the difference between the carrying value and the fair value of these notes. The principal amount outstanding was $35.8 million at December 31, 2010. We separately account for the liability and equity components of the Convertible Notes in a manner that will reflect our nonconvertible debt borrowing rate when interest cost is recognized in subsequent periods. The effective interest rate on the liability component is 9.5%. At December 31, 2010, we were in compliance with the covenants under the Convertible Notes indenture.

2009 Amended and Restated Credit Facility

Our 2009 Amended and Restated Credit Facility included a senior term loan facility and a senior revolving credit facility. In 2010, we made early principal payments of $83.6 million on our outstanding term loans and wrote off $2.3 million of related unamortized debt issuance costs to interest expense. Subsequently in 2010, we amended the 2009 Amended and Restated Credit Facility and paid the remaining $147.8 million on our outstanding term loans and the remaining $75.5 million on our outstanding revolving borrowings. As a result of changes in the creditors, we treated the amendment as an extinguishment of the 2009 Amended and Restated Credit Facility and recognized losses on extinguishment of debt of $9.9 million, consisting of unamortized debt issuance costs related to this facility.

2010 Credit Facility

In 2010, we entered into the Third Amended and Restated Credit Agreement with a group of lenders for a five-year, $350 million multi-currency senior revolving credit facility (the 2010 Credit Facility). At December 31, 2010, there were no borrowings under this facility. At December 31, 2010, we had $342.8 million available, after reductions for standby letters of credit secured by this facility. The interest rate under the 2010 Credit Facility is the sum of (A) either (1) LIBOR or (2) the higher of the Federal Funds Rate plus 0.5%, the Prime Rate, or LIBOR plus 1.0% and (B) a variable margin based on the Company s leverage.

The 2010 Credit Facility matures on August 24, 2015, and is secured by substantially all of Ferro s assets, generally including 100% of the shares of the parent company s domestic subsidiaries and 65% of the shares of the foreign subsidiaries directly owned by the parent company, but excluding trade receivables legally sold pursuant to our accounts receivable sales programs.

We are subject to a number of covenants under our 2010 Credit Facility. The covenants include requirements for a fixed charge coverage ratio greater than 1.35 to 1.00 and a leverage ratio less than 3.50 to 1.00 on the last day of any fiscal quarter and calculated using the last four fiscal quarters. In the fixed charge ratio, the numerator consists

of earnings before interest, tax, depreciation and amortization, and special charges, less capital expenditures, and the denominator is the sum of interest expense paid in cash, scheduled principal payments, and restricted payments consisting of dividends and any stock buy backs. In the leverage ratio, the numerator is total debt, which consists of borrowing and letters of credit outstanding on the 2010 Credit Facility and our international facilities, the principal amount outstanding on our senior notes and convertible notes, capital lease obligations, and amounts outstanding on our U.S. and international receivables sales programs, and the denominator is the sum of earnings before interest, tax, depreciation and amortization, and special charges. Our ability to meet these covenants is primarily driven by our net income before interest, income taxes, depreciation and amortization; our total debt; and our interest payments. Our total debt is primarily driven by cash flow items, including net income before amortization, depreciation, and other noncash charges; our capital expenditures; requirements for deposits from participants in our precious metals consignment program; our customers ability to make payments for purchases and the timing of such payments; and our ability to manage inventory and other working capital items. Our interest payments are driven by our debt level, external fees, and interest rates, primarily the Prime Rate and LIBOR. At December 31, 2010, we were in compliance with the covenants of the 2010 Credit Facility.

Our ability to pay common stock dividends is limited by certain covenants in our 2010 Credit Facility and the bond indenture governing the Senior Notes. The covenant in our 2010 Credit Facility is the more limiting of the two covenants and limits our ability to make restricted payments, which include, but are not limited to, common stock dividends and the repurchase of equity interests. We are not permitted to make restricted payments in excess of $30 million dollars in any calendar year. However, if we make less than $30 million of restricted payments in any calendar year, the unused amount can be carried over for restricted payments in future years, provided that the maximum amount of restricted payments in any calendar year cannot exceed $60 million.

Domestic Receivable Sales Program

We have an asset securitization program for substantially all of Ferro s U.S. trade accounts receivable. This program accelerates cash collections at favorable financing costs and helps us manage the Company s liquidity requirements. In June 2010, we extended the maturity of our $50 million facility through May 2011.

We legally sell these trade accounts receivable to Ferro Finance Corporation (FFC), which finances its acquisition of trade receivable assets by selling undivided variable percentage interests in the receivables to certain purchasers under the program. Advances by purchasers are secured by, and repaid through collections on, the receivables owned by FFC. FFC and the purchasers have no recourse to Ferro s other assets for failure of payment of the receivables as a result of the lack of creditworthiness or financial inability to pay of the related obligor.

FFC is a wholly-owned, consolidated subsidiary. At December 31, 2010, Ferro s consolidated balance sheet included outstanding trade accounts receivable legally transferred to FFC of $85.3 million. While there were no advances by purchasers for interests in those receivables at December 31, 2010, the average advances during 2010 were $23.9 million. The need for advances under the asset securitization program varies throughout the year as liquidity needs change. After reductions for non-qualifying receivables, we had $50.0 million of additional borrowings available under the program at December 31, 2010.

Off Balance Sheet Arrangements

International Receivable Sales Programs. We maintain several international programs to sell trade accounts receivable. At December 31, 2010, the commitments supporting these programs, which can be withdrawn at any time, totaled $30.1 million, the amount of outstanding receivables sold under these programs was $6.8 million, and Ferro had received net proceeds under these programs of $3.4 million for outstanding receivables. Based on available and qualifying receivables, there was no additional availability under these programs at December 31, 2010.

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Consignment and Customer Arrangements for Precious Metals. We use precious metals, primarily silver, in the production of some of our products. We obtain most precious metals from financial institutions under consignment agreements (generally referred to as our precious metals consignment program). The financial institutions retain ownership of the precious metals and charge us fees based on the amounts we consign. These fees were $5.3 million for 2010. At December 31, 2010, we had on hand $205.7 million of precious metals, measured at fair value, owned by participants in our precious metals consignment program. We also process precious metals owned by our customers.

The consignment agreements under our precious metals program involve short-term commitments that typically mature within 30 to 90 days of each transaction and are typically renewed on an ongoing basis. As a result, the Company relies on the continued willingness of financial institutions to participate in these arrangements to maintain this source of liquidity. Beginning in 2009, several participants in our precious metals consignment program renewed their requirement for us to deliver cash collateral to secure our obligations arising under the consignment agreements. At December 31, 2010, Ferro had delivered $28.1 million in cash collateral to induce those financial institutions to participate in Ferro s precious metals consignment program at the amounts requested. We may be required to furnish additional cash collateral in the future based on our financial partners requirements or our amounts of consigned precious metals.

Bank Guarantees and Standby Letters of Credit. At December 31, 2010, the Company and its subsidiaries had bank guarantees and standby letters of credit issued by financial institutions that totaled $12.2 million. These agreements primarily relate to Ferro s insurance programs, foreign energy purchase contracts and foreign tax payments.

Other Financing Arrangements

We maintain other lines of credit to provide global flexibility for Ferro s short-term liquidity requirements. These facilities are uncommitted lines for our international operations and totaled $12.9 million at December 31, 2010. We had $9.3 million of additional borrowings available under these lines at December 31, 2010.

Liquidity Requirements

Our liquidity requirements primarily include debt service, purchase commitments, labor costs, working capital requirements, restructuring expenditures, capital investments, precious metals cash collateral requirements, and postretirement obligations. We expect to meet these requirements in the long term through cash provided by operating activities and availability under existing credit facilities or other financing arrangements. Cash flows from operating activities are primarily driven by earnings before noncash charges and changes in working capital needs. In 2010, cash flows from operating activities were sufficient to fund our investing activities, primarily capital expenditures for property, plant and equipment. We had additional borrowing capacity of $402.1 million at December 31, 2010, and $202.4 million at December 31, 2009, available under various credit facilities, primarily our revolving credit facility. We have taken a variety of actions to enhance liquidity, including restructuring activities and suspension of dividend payments on our common stock.

Our level of debt, debt service requirements, and ability to access credit markets could have important consequences to our business operations and uses of cash flows. Uncertainties in the global capital markets have not prohibited us from accessing the capital markets. In 2010, we extended our asset securitization facility, issued 7.875% Senior Notes, which mature in 2018, and entered into the 2010 Credit Facility, which matures in 2015.

We may from time to time seek to retire or repurchase our outstanding debt through open market purchases, privately negotiated transactions or otherwise. Such repurchases, if any, will depend on prevailing market

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conditions, our liquidity requirements, contractual restrictions, and other factors. The amounts involved may be material.

Difficulties experienced in global capital markets could affect the ability or willingness of counterparties to perform under our various lines of credit, receivable sales programs, forward contracts, and precious metal program. These counterparties are major, reputable, multinational institutions, all having investment-grade credit ratings, except for one, which is not rated. Accordingly, we do not anticipate counterparty default. However, an interruption in access to external financing could adversely affect our business prospects and financial condition.

We assess on an ongoing basis our portfolio of businesses, as well as our financial and capital structure, to ensure that we have sufficient capital and liquidity to meet our strategic objectives. As part of this process, from time to time we evaluate the possible divestiture of businesses that are not critical to our core strategic objectives and, where appropriate, pursue the sale of such businesses. We also evaluate and pursue acquisition opportunities that we believe will enhance our strategic position. Generally, we publicly announce divestiture and acquisition transactions only when we have entered into definitive agreements relating to those transactions.

The Company s aggregate amount of contractual obligations for the next five years and thereafter is set forth below:

	2011	2012	2013	2014	2015	Thereafter	Totals
			(Dollars in thousands)				
Loans payable	$ 709	$	$	$	$	$	$ 709
Long-term debt(1)	3,349	2,111	36,968	1,092	1,101	254,514	299,135
Interest(2)	22,017	22,017	22,017	19,688	19,688	59,062	164,489
Operating lease obligations	13,345	8,990	6,080	5,205	4,967	13,087	51,674
Purchase commitments(3)	19,136	3,008	1,920	1,788	1,341		27,193
Taxes(4)	8,823						8,823
Retirement and other postemployment benefits(5)	40,800	46,300					87,100
	$ 108,179	$ 82,426	$ 66,985	$ 27,773	$ 27,097	$ 326,663	$ 639,123

(1) Long-term debt excludes unamortized discounts on the Convertible Notes and imputed interest and executory costs on capitalized lease obligations.
(2) Interest represents only contractual payments for fixed-rate debt.
(3) Purchased commitments are non-cancelable contractual obligations for raw materials and energy.
(4) We have not projected payments past 2011 due to uncertainties in estimating the amount and period of any payments.
(5) The funding amounts are based on the minimum contributions required under our various plans and applicable regulations in each respective country plus a planned one-time payment of $4.9 million in 2011 to improve the funding of a non-U.S. pension plan. We have not projected contributions past 2012 due to uncertainties regarding the assumptions involved in estimating future required contributions.

Critical Accounting Policies

When we prepare our consolidated financial statements we are required to make estimates and assumptions that affect the amounts we report in the consolidated financial statements and footnotes. We consider the policies discussed below to be more critical than other policies because their application requires our most subjective or complex judgments. These estimates and judgments arise because of the inherent uncertainty in predicting future events. Management has discussed the development, selection and disclosure of these policies with the Audit Committee of the Board of Directors.

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Revenue Recognition

We recognize sales typically when we ship goods to our customers and when all of the following criteria are met:

- Persuasive evidence of an arrangement exists;
- The selling price is fixed and determinable;
- Collection is reasonably assured; and
- Title and risk of loss has passed to our customers.

In order to ensure the revenue recognition in the proper period, we review material sales contracts for proper cut-off based upon the business practices and legal requirements of each country. For sales of products containing precious metals, we report revenues gross along with their corresponding cost of sales to arrive at gross profit. We record revenues this way because we act as the principal in the transactions we enter into and take title and the risks and rewards of ownership of the inventory we process, although the timing of when we take title to the inventory during the production process may vary.

Restructuring and Cost Reduction Programs

Between 2006 and 2010, we developed and initiated several restructuring programs across a number of our business segments with the objectives of leveraging our global scale, realigning and lowering our cost structure, and optimizing capacity utilization. The programs are primarily associated with North America, Europe and Asia-Pacific. Management continues to evaluate our businesses, and therefore, there may be supplemental provisions for new plan initiatives, as well as changes in estimates to amounts previously recorded, as payments are made or actions are completed.

Restructuring charges include both termination benefits and asset writedowns. We estimate accruals for termination benefits based on various factors including length of service, contract provisions, local legal requirements, projected final service dates, and salary levels. We also analyze the carrying value of long-lived assets and record estimated accelerated depreciation through the anticipated end of the useful life of the assets affected by the restructuring or record an asset impairment. In all likelihood, this accelerated depreciation will result in reducing the net book value of those assets to zero at the date operations cease. While we believe that changes to our estimates are unlikely, the accuracy of our estimates depends on the successful completion of numerous actions. Delays in moving continuing operations to other facilities or increased cash outlays will increase our restructuring costs to such an extent that it could have a material impact on the Company s results of operations, financial position, or cash flows. Other events, such as a delay in completion of construction of new facilities, may also delay the resulting cost savings.

Goodwill

While goodwill recorded on our balance sheet is no longer amortized, we review it for impairment each year using a measurement date of October 31st or more frequently in the event of an impairment indicator. We estimate the fair value of the reporting unit associated with these assets using the average of both the income approach and the market approach, which we believe provides a reasonable estimate of the reporting unit s fair value, unless facts and circumstances exist that indicate a more representative fair value. The income approach uses projected cash flows attributable to the reporting unit over its useful life and allocates certain corporate expenses to the reporting

unit in the process. We use historical results and trends and our projections of market growth, internal sales efforts, input cost movements, and cost reduction opportunities to estimate future cash flows. Using a risk-adjusted, weighted-average cost of capital, we discount the cash flow projections to the measurement date. The market approach estimates a price reasonably expected to be realized from the sale of similar businesses, including offers from potential acquirers. If the fair value of any of the units were determined to be less than its carrying value, we would proceed to the second step and obtain comparable market values or independent appraisals of its assets to determine the amount of any impairment.

The significant assumptions and ranges of assumptions we used in our impairment analysis of goodwill were as follows:

Significant Assumptions	2010	2009
Weighted-average cost of capital	12.0% - 13.0%	13.5% - 14.0%
Residual growth rate	3.0% - 5.0%	3.0% - 5.0%

Our estimates of fair value can be affected by a variety of factors. Reductions in actual or projected growth or profitability at our business units due to unfavorable market conditions or significant increases in previous levels of capital spending could lead to the impairment of any related goodwill. Additionally, an increase in inflation, interest rates or the risk-adjusted, weighted-average cost of capital could also lead to a reduction in the value of one or more of our business units and therefore lead to the impairment of goodwill.

We had three reporting units with goodwill balances as of our most recent measurement date. The fair values exceeded the carrying values of the respective reporting units by amounts ranging from 47% to 233% at the 2010 measurement date. There were no known material uncertainties that would have led to an indicator of impairment for 2010. While no impairment was indicated as a result of our 2010 annual test for any reporting unit that had a goodwill balance, a future potential impairment is possible for any of these reporting units if actual results should differ materially from forecasted results. Some of the factors that could negatively affect our cash flows and as a result not support the carrying values of our assets are: new environmental regulations or legal restrictions on the use of our products that would either reduce our product revenues or add substantial costs to the manufacturing process reducing operating margins; new technologies that could make our products less competitive or require substantial capital investment in new equipment; and substantial downturns in economic conditions such as those experienced in late 2008 and for most of 2009.

Income Taxes

The breadth of our operations and complexity of income tax regulations require us to assess uncertainties and make judgments in estimating the ultimate amount of income taxes we will pay. Our income tax expense, deferred tax assets and liabilities and reserves for unrecognized tax benefits reflect management s best assessment of estimated future taxes to be paid. The final income taxes we pay are based upon many factors, including existing income tax laws and regulations, negotiations with taxing authorities in various jurisdictions, outcomes of tax litigation, and resolution of disputes arising from federal, state, and international income tax audits. The resolution of these uncertainties may result in adjustments to our income tax assets and liabilities in the future.

Deferred income taxes result from differences between the financial and tax basis of our assets and liabilities and we adjust our deferred income tax assets and liabilities for changes in income tax rates and income tax laws when changes are enacted. We record valuation allowances to reduce deferred income tax assets when it is more likely than not that a tax benefit will not be realized. Significant judgment is required in evaluating the need for and the magnitude of appropriate valuation allowances against deferred income tax assets. The realization of these assets is dependent on generating future taxable income, our ability to carry back or carry forward net operating losses and credits to offset taxable income in a prior year, as well as successful implementation of various tax strategies to generate taxable income where net operating losses or credit carryforwards exist. In evaluating our ability to realize the deferred income tax assets, we rely principally on the reversal of existing temporary differences, the availability of tax planning strategies, and forecasted taxable income using historical and projected future operating results.

We have significant operations outside the U.S. Many of these non-U.S. tax jurisdictions have statutory income tax rates that are lower than the rates in the U.S. Because we carry a majority of our debt in the U.S., we also have significant cash needs in the U.S. to service this debt. As a result, it is necessary for us to perform significant tax and treasury planning and analysis to determine the best actions to achieve the goals of meeting our U.S. cash needs, while also reducing our worldwide taxable income. In this tax and treasury planning, we consider future taxable income in the U.S. and non-U.S. jurisdictions, future cash needs in the U.S., and the timing and amount of dividend repatriations. Our ability to balance future taxable income and cash flows between the U.S. and foreign locations depends on various strategies, such as the charging of management fees for intercompany services, transfer pricing, intercompany royalties, intercompany sales of technologies and intellectual property, and choosing between allowable tax methods.

The amount of income taxes we pay is subject to ongoing audits by federal, state and foreign tax authorities. The calculation of our tax liabilities involves dealing with uncertainties in the application of complex tax laws and regulations in a multitude of jurisdictions across our global operations. Changes in tax laws and rates could also affect recorded deferred tax assets and liabilities in the future.

We recognize a tax benefit from an uncertain tax position when it is more likely than not that the position will be sustained upon examination, including resolutions of any related appeals or litigation processes, based on the technical merits. Our estimate of the potential outcome of any uncertain tax issue is subject to management s assessment of relevant risks, facts, and circumstances existing at that time. We record a liability for the difference between the benefit recognized and measured based on a more-likely than-not threshold and the tax position taken or expected to be taken on the tax return. To the extent that our assessment of such tax positions changes, the change in estimate is recorded in the period in which the determination is made. We report tax-related interest and penalties as a component of income tax expense.

Derivative Financial Instruments

We use derivative financial instruments in the normal course of business to manage our exposure to fluctuations in interest rates, foreign currency exchange rates, commodity prices, and precious metal prices. The accounting for derivative financial instruments can be complex and can require significant judgment. Generally, the derivative financial instruments that we use are not complex, and observable market-based inputs are available to measure their fair value. We do not engage in speculative transactions for trading purposes. Financial instruments, including derivative financial instruments, expose us to counterparty credit risk for non-performance. We manage our exposure to counterparty credit risk through minimum credit standards and procedures to monitor concentrations of credit risk. We enter into these derivative financial instruments with major, reputable, multinational financial institutions. Accordingly, we do not anticipate counter-party default. We continuously evaluate the effectiveness of derivative financial instruments designated as hedges to ensure that they are highly effective. In the event the hedge becomes ineffective, we discontinue hedge treatment. Except as noted below, we do not expect any changes in our risk policies or in the nature of the transactions we enter into to mitigate those risks.

Our exposure to interest rate changes arises from our debt agreements with variable market interest rates. To reduce our exposure to interest rate changes on variable-rate debt, we had entered into interest rate swap agreements. These swaps effectively converted a portion of our variable-rate debt to a fixed rate. In the third quarter of 2010, in conjunction with repayment of our remaining outstanding term loans, we settled these swaps.

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We manage foreign currency risks in a wide variety of foreign currencies principally by entering into forward contracts to mitigate the impact of currency fluctuations on transactions arising from international trade. Our objective in entering into these forward contracts is to preserve the economic value of non-functional currency cash flows. Our principal foreign currency exposures relate to the Euro, the British Pound Sterling, the Japanese Yen, and the Chinese Yuan. We mark these forward contracts to fair value based on market prices for comparable contracts and recognize the resulting gains or losses as other income or expense from foreign currency transactions.

Precious metals (primarily silver, gold, platinum and palladium) represent a significant portion of raw material costs in our Electronic Materials products. We also use precious metals in our Color and Glass Performance Materials products. When we enter into a fixed price sales contract at the customer s request to establish the price for the precious metals content of the order, we also enter into a forward purchase arrangement with a precious metals supplier to completely cover the value of the precious metals content. Our current precious metal contracts are designated as normal purchase contracts, which are not marked to market.

We also purchase portions of our energy requirements, including natural gas and electricity, under fixed price contracts to reduce the volatility of cost changes. Our current energy contracts are designated as normal purchase contracts, which are not marked to market.

Pension and Other Postretirement Benefits

We sponsor defined benefit plans in the U.S. and many countries outside the U.S., and we also sponsor retiree medical benefits for a segment of our salaried and hourly work force within the U.S. The U.S. pension plans represent approximately 82% of pension plan assets, 78% of benefit obligations and 53% of net periodic pension cost.

The assumptions we use in actuarial calculations for these plans have a significant impact on benefit obligations and annual net periodic benefit costs. We meet with our actuaries annually to discuss key economic assumptions used to develop these benefit obligations and net periodic costs. In accordance with U.S. GAAP, actual results that differ from the assumptions are accumulated and amortized over future periods and, therefore, affect expense recognized and obligations recorded in future periods.

We determine the discount rate for the U.S. pension and retiree medical plans based on a bond model. Using the pension plans projected cash flows, the bond model considers all possible bond portfolios that produce matching cash flows and selects the portfolio with the highest possible yield. These portfolios are based on bonds with a quality rating of AA or better under either Moody s Investor Services, Inc. or Standard & Poor s Rating Group, but exclude certain bonds, such as callable bonds, bonds with small amounts outstanding, and bonds with unusually high or low yields. The discount rates for the non-U.S. plans are based on a yield curve method, using AA-rated bonds applicable in respective capital markets. The duration of each plan s liabilities is used to select the rate from the yield curve corresponding to the same duration.

For the market-related value of plan assets, we use fair value, rather than a calculated value that recognizes changes in fair value in a systematic and rational manner over several years. We calculate the expected return on assets at the beginning of the year for defined benefit plans as the weighted-average of the expected return for the target allocation of the principal asset classes held by each of the plans. In determining the expected returns, we consider both historical performance and an estimate of future long-term rates of return. The Company consults with and considers the opinion of its actuaries in developing appropriate return assumptions. Our target asset allocation percentages are 30% fixed income and 70% equity investments for U.S. plans and 73% fixed income, 24% equity, and 3% other investments for non-U.S. plans. In 2010, investment returns on average plan assets were approximately 12% within U.S. plans and 10% within non-U.S. plans. Future actual pension expense will depend on future investment allocation and performance, changes in future discount rates and various other factors related to the population of participants in the Company s pension plans.

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All other assumptions are reviewed periodically by our actuaries and us and may be adjusted based on current trends and expectations as well as past experience in the plans.

The following table provides the sensitivity of net annual periodic benefit costs for our pension plans, including a U.S. nonqualified retirement plan, and the retiree medical plan to a 25-basis-point decrease in both the discount rate and asset return assumption:

	25- Basis-Point Decrease in Discount Rate	25-Basis-Point Decrease in Asset Return Assumption
	(Dollars in thousands)	
U.S. pension plans	$ 1,241	$ 645
U.S. retiree medical plan	4	
Non-U.S. pension plans	252	141
Total	$ 1,497	$ 786

The following table provides the rates used in the assumptions and the changes between 2010 and 2009:

	2010	2009	Change
Discount rate used to measure benefit cost:			
U.S. pension plans	6.20%	6.74%	(0.54)%
U.S. retiree medical plan	5.85%	6.45%	(0.60)%
Non-U.S. pension plans	5.88%	5.85%	0.03%
Discount rate used to measure benefit obligations:			
U.S. pension plans	5.85%	6.20%	(0.35)%
U.S. retiree medical plan	5.45%	5.85%	(0.40)%
Non-U.S. pension plans	5.51%	5.88%	(0.37)%
Expected return on plan assets:			
U.S. pension plans	8.50%	8.50%	%
Non-U.S. pension plans	5.28%	5.24%	0.04%

Our overall net periodic benefit cost for all defined benefit plans decreased $0.6 million to $29.4 million in 2010 from $30.0 million in 2009. In 2010, amortization of unrecognized net actuarial losses decreased by $3.6 million, primarily because the beginning of the year unrecognized net actuarial losses decreased by $28.1 million from the prior year. These unrecognized losses arise from differences between actual and assumed results and from changes in actuarial assumptions and are recognized in future periods. In addition, our expected return on plan asset increased by $2.5 million due to higher asset balances largely resulting from market gains in 2009, the interest component of net periodic benefit cost decreased $1.5 million primarily due to lower discount rates, and service costs decreased $1.0 million as a result of various restructuring activities. These favorable effects were mostly offset by an increase of $7.6 million in net settlement and curtailment losses, led by a settlement loss of $12.2 million related to establishing a fully insured arrangement for benefit obligations at Rotterdam, Netherlands.

For 2011, we expect our overall net periodic benefit cost to decrease to approximately $19 million, a decrease of $10 million. In 2010, we recorded $6.4 million of one-time net curtailment and settlement losses. In addition, these curtailments and settlements were the primary drivers of a $93.0 million decrease during 2010 in our non-U.S. plans benefit obligation. This decrease in the benefit obligation will reduce 2011 interest cost in our non-U.S. plans by $4.5 million.

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Inventories

We value inventory at the lower of cost or market, with cost determined utilizing the first-in, first-out (FIFO) method. We periodically evaluate the net realizable value of inventories based primarily upon their age, but also upon assumptions of future usage in production, customer demand and market conditions. Inventories have been reduced to the lower of cost or realizable value by allowances for slow moving or obsolete goods. If actual circumstances are less favorable than those projected by management in its evaluation of the net realizable value of inventories, additional write-downs may be required. Slow moving, excess or obsolete materials are specifically identified and may be physically separated from other materials, and we rework or dispose of these materials as time and manpower permit.

Environmental Liabilities

Our manufacturing facilities are subject to a broad array of environmental laws and regulations in the countries in which they operate. The costs to comply with complex environmental laws and regulations are significant and will continue for the foreseeable future. We expense these recurring costs as they are incurred. While these costs may increase in the future, they are not expected to have a material impact on our financial position, liquidity or results of operations.

We also accrue for environmental remediation costs when it is probable that a liability has been incurred and we can reasonably estimate the amount. We determine the timing and amount of any liability based upon assumptions regarding future events. Inherent uncertainties exist in such evaluations primarily due to unknown conditions, changing governmental regulations and legal standards regarding liability, and evolving technologies. We adjust these liabilities periodically as remediation efforts progress or as additional technical or legal information becomes available.

Impact of Newly Issued Accounting Pronouncements

Refer to Note 2 to the consolidated financial statements under Item 8 of this Annual Report on Form 10-K for a discussion of accounting standards we recently adopted or will be required to adopt.

Item 7A *Quantitative and Qualitative Disclosures about Market Risk*

The primary objective of the following information is to provide forward-looking quantitative and qualitative information about our exposure to instruments that are sensitive to fluctuations in interest rates, foreign currency exchange rates, and costs of raw materials and energy.

Our exposure to interest rate risk arises from our debt portfolio. We manage this risk by controlling the mix of fixed versus variable-rate debt after considering the interest rate environment and expected future cash flows. Our objective is to limit variability in earnings, cash flows and overall borrowing costs caused by changes in interest rates, while preserving operating flexibility. To reduce our exposure to interest rate changes on variable-rate debt, we had entered into interest rate swap agreements. These swaps effectively converted a portion of our variable-rate debt to a fixed rate. In August 2010, in conjunction with repayment of our remaining outstanding term loans, we settled these swaps.

We operate internationally and enter into transactions denominated in foreign currencies. These transactions expose us to gains and losses arising from exchange rate movements between the dates foreign currencies are recorded and the dates they are settled. We manage this risk by entering into forward currency contracts that offset these gains and losses.

We are subject to cost changes with respect to our raw materials and energy purchases. We attempt to mitigate raw materials cost increases through product reformulations, price increases, and other productivity improvements. We enter into forward purchase arrangements with precious metals suppliers to completely cover the value of the

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precious metals content of fixed price sales contracts. These agreements are designated as normal purchase contracts, which are not marked to market, and had purchase commitments totaling $22.7 million at December 31, 2010. In addition, we purchase portions of our natural gas and electricity requirements under fixed price contracts to reduce the volatility of these costs. These energy contracts are designated as normal purchase contracts, which are not marked to market, and had purchase commitments totaling $25.1 million at December 31, 2010.

The notional amounts, carrying amounts of assets (liabilities), and fair values associated with our exposure to these market risks and sensitivity analyses about potential gains (losses) resulting from hypothetical changes in market rates are presented below:

	2010	2009
	(Dollars in thousands)	
Variable-rate debt and utilization of asset securitization program:		
Change in annual interest expense from 1% change in interest rates	$ 41	$ 1,170
Fixed-rate debt:		
Carrying amount	283,368	161,050
Fair value	302,942	160,275
Change in fair value from 1% increase in interest rate	(15,635)	(4,814)
Change in fair value from 1% decrease in interest rate	16,759	5,000
Foreign currency forward contracts:		
Notional amount	187,291	178,922
Carrying amount and fair value	(240)	723
Change in fair value from 10% appreciation of U.S. dollar	7,735	5,571
Change in fair value from 10% depreciation of U.S. dollar	(9,454)	(6,809)
Interest rate swaps:		
Notional amount		150,000
Carrying amount and fair value		(9,516)
Change in fair value from 1% increase in interest rate		2,226
Change in fair value from 1% decrease in interest rate		(2,263)

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Item 8 ***Financial Statements and Supplementary Data***

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Ferro Corporation
Cleveland, Ohio

We have audited the accompanying consolidated balance sheets of Ferro Corporation and subsidiaries (the Company) as of December 31, 2010 and 2009, and the related consolidated statements of operations, equity, and cash flows for each of the three years in the period ended December 31, 2010. Our audits also included the financial statement schedule listed in the index at Item 15. These financial statements and financial statement schedule are the responsibility of the Company s management. Our responsibility is to express an opinion on the financial statements and financial statement schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Ferro Corporation and subsidiaries as of December 31, 2010 and 2009, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2010, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, such financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company s internal control over financial reporting as of December 31, 2010, based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 28, 2011, expressed an unqualified opinion on the Company s internal control over financial reporting.

/s/ Deloitte & Touche LLP

Cleveland, Ohio
February 28, 2011

FERRO CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

	Years Ended December 31,		
	2010	**2009**	**2008**
	(In thousands, except per share amounts)		
Net sales	$ 2,101,865	$ 1,657,569	$ 2,245,152
Cost of sales	1,643,200	1,343,297	1,841,485
Gross profit	458,665	314,272	403,667
Selling, general and administrative expenses	293,736	272,259	297,119
Restructuring and impairment charges	63,732	19,337	106,142
Other expense (income):			
Interest expense	44,568	63,918	51,290
Interest earned	(651)	(896)	(714)
Losses on extinguishment of debt	23,001		5,531
Foreign currency losses, net	4,724	3,827	742
Miscellaneous expense (income), net	5,814	(618)	(357)
Income (loss) before income taxes	23,741	(43,555)	(56,086)
Income tax expense (benefit)	16,468	(3,515)	(3,204)
Income (loss) from continuing operations	7,273	(40,040)	(52,882)
Income from discontinued operations, net of income taxes			5,014
(Loss) gain on disposal of discontinued operations, net of income taxes		(325)	9,034
Net income (loss)	7,273	(40,365)	(38,834)
Less: Net income attributable to noncontrolling interests	1,577	2,551	1,596
Net income (loss) attributable to Ferro Corporation			