# UNITED STATES <br> SECURITIES AND EXCHANGE COMMISSION <br> 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, 2012

OR
o Transition report pursuant to Section 13 of 15(d) of the Securities Exchange Act of 1934
For the transition period from $\qquad$ to $\qquad$
Commission File Number: 000-23329

## Charles \& Colvard, Ltd.

(Exact name of registrant as specified in its charter)

## North Carolina

(State or other jurisdiction of incorporation or organization)

300 Perimeter Park Drive, Suite A
Morrisville, North Carolina
(Address of principal executive offices)

56-1928817
(I.R.S. Employer

Identification No.)
(919) 468-0399
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:
Title of each class
Name of each exchange on which registered
Common Stock, no par value per share

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.
Yes $\square$ No x

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes $\square$

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No $\square$

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, 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.

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.

Large accelerated filer $\quad \square \quad$ Accelerated filer
Non-accelerated filer $\quad \square$ (Do not check if a smaller reporting company) Smaller reporting company $\quad$ x

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes $\square$ No x
As of June 30, 2012, the aggregate market value of the registrant's voting and non-voting common stock held by non-affiliates of the registrant was $\$ 66,424,784$ based on the closing sales price as reported on the NASDAQ Global Select Market.

As of March 25, 2013, there were 19,664,675 shares of the registrant's common stock, no par value per share, outstanding.

## DOCUMENT INCORPORATED BY REFERENCE

Certain portions of the Proxy Statement for the registrant's 2013 Annual Meeting of Shareholders to be held on May 23, 2013 are incorporated by reference into Part III of this Annual Report on Form 10-K.

## CHARLES \& COLVARD, LTD.

## FORM 10-K

For the Fiscal Year Ended December 31, 2012
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This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Statements expressing expectations regarding our future and projections relating to products, sales, revenues, and earnings are typical of such statements and are made under the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, but are not limited to, statements about our plans, objectives, representations, and contentions and are not historical facts and typically are identified by use of terms such as "may," "will," "should," "could," "expect," "plan," "anticipate," "believe," "estimate," "predict," "continue," and similar words, although some forward-looking statements are expressed differently.

All forward-looking statements are subject to the risks and uncertainties inherent in predicting the future. You should be aware that although the forwardlooking statements included herein represent management's current judgment and expectations, our actual results may differ materially from those projected, stated, or implied in these forward-looking statements as a result of many factors including, but not limited to, our dependence on consumer acceptance and growth of sales of our products resulting from our strategic initiatives; dependence on a limited number of customers; our ability to fulfill orders on a timely basis; the financial condition of our major customers; dependence on Cree, Inc. as the sole current supplier of the raw material; our current wholesale customers' potential perception of us as a competitor in the finished jewelry business; intense competition in the worldwide jewelry industry; general economic and market conditions, including the current economic environment; risks of conducting business in foreign countries; the pricing of precious metals, which is beyond our control; the potential impact of seasonality on our business; our ability to protect our intellectual property; the risk of a failure of our information technology infrastructure to protect confidential information and prevent security breaches; possible adverse effects of governmental regulation and oversight; and the failure to evaluate and integrate strategic opportunities, in addition to the other risks and uncertainties described in more detail in "Risk Factors" in Part I, Item 1A of this Annual Report on Form 10-K. Forward-looking statements speak only as of the date they are made. We undertake no obligation to update or revise such statements to reflect new circumstances or unanticipated events as they occur except as required by the federal securities laws, and you are urged to review and consider disclosures that we make in the reports that we file with the Securities and Exchange Commission, or SEC, that discuss other factors relevant to our business.

## PART I

## Item 1. Business

## General

Charles \& Colvard, Ltd., a North Carolina corporation founded in 1995 (which may be referred to as Charles \& Colvard, we, us, or our), manufactures, markets, and distributes Charles \& Colvard Created Moissanite ${ }^{\circledR}$ jewels (which we refer to as moissanite or moissanite jewels) and finished jewelry featuring moissanite for sale in the worldwide jewelry market. Moissanite, also known by its chemical name of silicon carbide, or SiC , is a rare mineral first discovered in a meteor crater. Because naturally occurring SiC crystals are too small for commercial use, larger crystals must be grown in a laboratory. Leveraging our advantage of being the sole source worldwide of created moissanite jewels, our strategy is to establish Charles \& Colvard with reputable, high-quality, and sophisticated brands and to position moissanite as an affordable, luxurious alternative to other gemstones, such as diamond. We believe this is possible due to moissanite's exceptional brilliance, fire, luster, durability, and rarity like no other jewel available on the market. We sell loose moissanite jewels and finished jewelry at wholesale to distributors, manufacturers, and retailers and at retail to end consumers through our wholly owned operating subsidiaries Moissanite.com, LLC and Charles \& Colvard Direct, LLC.

We manage our business primarily by our two distribution channels that we use to sell our product lines, loose jewels and finished jewelry. Accordingly, we determined our two operating and reporting segments to be wholesale distribution transacted through our parent entity and direct-to-consumer distribution transacted through our wholly owned operating subsidiaries, Moissanite.com, LLC and Charles \& Colvard Direct, LLC.

United States, or U.S., sales represented $75 \%$ and $67 \%$ of total consolidated net sales for the years ended December 31, 2012 and 2011, respectively. Our two largest customers during the year ended December 31, 2012 accounted for $27 \%$ and $11 \%$, respectively, of our total consolidated sales compared to $15 \%$ and $12 \%$, respectively, during the year
ended December 31, 2011. A third customer accounted for $11 \%$ of our total consolidated sales during the year ended December 31, 2011 but did not account for more than $10 \%$ of our total consolidated sales during the year ended December 31, 2012. No additional customers accounted for more than $10 \%$ of total consolidated sales in 2012 or 2011.

Our future growth strategy is closely linked to our statement of purpose: "We will grow by providing consumers in all parts of the world an affordable luxury experience." We plan to accomplish this by growing our core loose jewel and finished jewelry wholesale distribution segment with key distributors, jewelry manufacturers, and retailers while working to develop and expand our direct-to-consumer distribution segment, which includes our e-commerce and homeparty direct selling businesses through our wholly owned subsidiaries Moissanite.com, LLC and Charles \& Colvard Direct, LLC, respectively. We plan to support these initiatives by increasing consumer awareness, clearly communicating to the consumer the value proposition of our products, and developing and distributing leading global brands for our moissanite jewel and finished jewelry featuring moissanite with an unrelenting focus on design.

- Wholesale - We will continue to focus on our core business of manufacturing and distributing the loose moissanite jewel and finished jewelry featuring moissanite through wholesale sales channels, because this is currently the primary way we reach consumers and we believe there is substantial opportunity to capture a larger share of the jewelry market. Our wholesale loose jewel business has historically been the largest percentage of our total sales, and this trend has continued despite significant growth in our wholesale finished jewelry business that we launched in 2010. For the years ended December 31, 2012 and 2011, our wholesale distribution segment represented $93 \%$ and $99 \%$ of our total consolidated net sales, respectively, of which wholesale loose jewel sales comprised $71 \%$ and $76 \%$, respectively, of total net wholesale distribution segment sales and wholesale finished jewelry sales comprised $29 \%$ and $24 \%$ of total net wholesale distribution sales, respectively. Our wholesale finished jewelry business continues to expand through select retailers and television shopping networks, and we believe there is significant opportunity to further expand these sales channels.
- Direct-to-consumer e-commerce - Our direct-to-consumer e-commerce website, www.moissanite.com, went live to the public on August 23, 2011. In May 2012, we partnered with a preeminent Chicago-based web design firm to develop a new lifestyle look as well as technologies to personalize the content of the site based on how the site is accessed. We successfully re-launched Moissanite.com in October 2012 to feature a more intuitive site design with increased functionality to enhance the customer experience and convert more traffic into sales. We believe our direct-to-consumer ecommerce sales channel will not only add to our top-line revenues in a significant manner, but will also play a key role in our campaign to increase overall consumer awareness of moissanite.
- Direct-to-consumer home parties - According to the Direct Selling Association, the U.S. direct sales business is an estimated $\$ 30$ billion market, dominated primarily by women at $78 \%$ of the nearly 16 million direct-sales representatives nationwide. Direct sales offers a flexible earning opportunity as well as a social outlet. Since sales of moissanite are highest when the consumer is educated about its attributes and has the opportunity to see and touch it, we believe social selling and home parties are an excellent venue for selling our product and expanding consumer awareness. In the second quarter of 2011, we began developing a direct-to-consumer home party sales model, culminating in a pilot test launched in April 2012 of Lulu Avenue ${ }^{T M}$, a home party brand featuring over 200 jewelry styles blending fashion and moissanite jewelry. In October 2012, we entered into an exclusive services and licensing agreement with JudeFrances Jewelry, Inc., or JudeFrances, a well-known designer jewelry brand. Under the agreement, JudeFrances will custom design and source finished fashion and moissanite jewelry and provide branding direction for Lulu Avenue ${ }^{T M}$. The first phase of the JudeFrances integration was completed in March 2013 and the launch of Lulu Avenue ${ }^{T M}$ is targeted for August 2013.

In June 2012, we launched a moissanite jewel with optical properties that are significantly whiter than our standard very good, or VG, grade jewels. We are marketing these whiter jewels under the Forever Brilliant ${ }^{\circledR}$ trademark as a premier brand to differentiate from other grades of our moissanite as well as moissanite sold by potential competitors in the future. We are also exploring additional product lines and branding strategies involving technologies for treating moissanite to produce such colors as pink, blue, and yellow, among others.

We believe our efforts to position Forever Brilliant ${ }^{\circledR}$ as the whitest and brightest moissanite jewel available anywhere in the world and the introduction of designer finished jewelry brands will help us to build brand recognition and increase consumer awareness of our products. We also expect that this strategy of building brand recognition will help to support revenue streams as our intellectual property rights expire in the future.

## Moissanite

Moissanite is a rare, naturally occurring mineral that is generally very small in size, dark green or black in color, and not a commercially viable source of gemstone material. Therefore, we expect only lab-grown SiC crystals to provide a sustainable source of moissanite for jewels.

In addition to carat size, important characteristics of a gemstone are beauty, durability, and rarity. The beauty of a gemstone is characterized by its color, brilliance, fire, and luster. The brilliance of a gemstone is measured by its refractive index, or the extent to which, when coupled with the facet design, the gemstone reflects light. The fire of a gemstone, or the breaking of light rays into spectral colors, is measured by its dispersion. Luster is the amount of light that is reflected back to the observer from the surface of a gemstone. Durability is determined by a gemstone's hardness, or resistance to scratching; and toughness, or resistance to chipping or cleaving. Rarity is the availability or perceived availability of a gemstone.

Moissanite jewels have a unique combination of brilliance, fire, luster, durability, and rarity. Moissanite's beauty is objectively derived from its refractive index, which is higher than other gemstones, including diamond, and its hardness is greater than all known gemstone materials except diamond. As a result, moissanite jewels, like diamond, can be cut with sharp, well-defined, and highly polished facets that accentuate their brilliance and fire. The cutting specifications (facet arrangement and proportions) for moissanite jewels are designed to maximize the brilliance and fire of the material. Additionally, we evaluate the finished jewels to exacting standards with automated video-imaging equipment and specially trained quality control personnel. Due to the rare natural occurrence of moissanite and both the proprietary and technical limitations in producing mass quantities of gem-grade moissanite, we believe that moissanite is among the rarest of jewels.

To date, we have focused our development, manufacturing, and distribution efforts on near-colorless moissanite jewels, although we have produced and sold limited quantities of green, blue, yellow, and pink moissanite jewels and expect to increase our sales and marketing efforts of these and other colored moissanite jewels.

The following table compares the physical properties of moissanite jewels with other fine gemstone materials:

| Comparison Chart ${ }^{(1)}$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Description | Refractive Index | Dispersion | Luster | $\begin{gathered} \text { Hardness } \\ (\text { Mohs Scale) })^{(2)} \end{gathered}$ | Toughness |
| Charles \& Colvard Created Moissanite ${ }^{\circledR}$ | 2.65-2.69 | 0.104 | 20.4\% | $91 / 4$ | Excellent |
| Diamond | 2.42 | 0.044 | 17.2\% | 10 | Excellent* |
| Ruby | 1.77 | 0.018 | 7.7\% | 9 | Excellent** |
| Sapphire | 1.77 | 0.018 | 7.7\% | 9 | Excellent** |
| Emerald | 1.58 | 0.014 | 5.1\% | $711 / 2$ | Good to Poor |
| *In cleavage direction, toug |  | Except twin |  |  |  |

1. Sources: Gemological Institute of America, Gem Reference Guide for GIA Colored Stones, Gem Identification and Colored Stone Grading Courses 32-35, 65-82, 87-90 (1995); Cornelius S. Hurlburt, Jr. \& Robert C. Kammerling, Gemology 320-324 (2d Ed. 1991); Kirk-Othmer, Encyclopedia of Chemical Technology. 524-541 ( $5^{\text {th }} \mathrm{Ed}$. 2004); Institution Of Electrical Engineers, Properties of Silicon Carbide (Gary L. Harris, Ed., 1995); Robert Webster, Gems: Their Sources, Descriptions and Identification $889-940$ ( $5^{\text {th }}$ Ed. 1994); W. von Muench, "Silicon Carbide" in Landolt-Börnstein Numerical Data and Functional Relationships in Science and Technology, New Series, Group III, Vol. 17C, pp. 403-416 and 585-592 (M. Schultz and H. Weiss, Eds., 1984); Kurt Nassau, Shane F. McClure, Shane Elen \& James E. Shigley, "Synthetic Moissanite: A New Diamond Substitute", Gems \& Gemology, Winter 1997, 260-275; Kurt Nassau. "Moissanite: A New Synthetic Gemstone Material", Journal of Gemmology, 425-438 (1999).

The Mohs Scale is a relative scale only, and quantitative comparisons of different gemstone materials cannot be made directly
2. using the Mohs Scale. Moissanite jewels, while harder than all other known gemstones, are approximately one-half as hard as diamond.

## Products and Product Development

## Moissanite jewels

We primarily sell near-colorless moissanite jewels, including our whiter Forever Brilliant ${ }^{\circledR}$ jewels, cut in a variety of shapes including round, square brilliant, princess, cushion, radiant, pear, marquise, heart, and oval, among others, in sizes ranging from approximately 1.3 to 12 millimeters (approximately 0.008 to 5.3 carats). In the future, we may elect to offer, from time to time, additional cuts and sizes of moissanite jewels.

To evaluate the market potential of colored moissanite, we had produced and distributed with moderate success in prior years a limited quantity of green moissanite jewels. Beginning in the latter part of 2011, we increased our marketing efforts of green jewels, including those set in finished jewelry mountings, and identified several markets into which we expanded our sales of green jewels in 2012. During 2013, we plan to evaluate the market potential of blue, yellow, and pink moissanite, in addition to green moissanite.

## Finished jewelry

We began manufacturing finished jewelry featuring moissanite in early 2010, with sales commencing in April 2010. Our basic designs include stud earnings, solitaire and three-stone rings, pendants, and bracelets. We are also manufacturing more fashion-oriented, designer-inspired moissanite jewelry that we offer as an expansion to the basic line of jewelry. The primary ingredients of our moissanite finished jewelry are loose moissanite jewels that we have on hand as part of our finished goods inventory, white or yellow gold settings, and labor to mount the jewels into the settings. We have also created several pieces of jewelry in alternative metals such as sterling silver and palladium.

In addition, we purchase fashion finished jewelry comprised of base metals and non-precious gemstones for sale through Lulu Avenue ${ }^{T M}$. This finished jewelry is fashion oriented and subject to styling trends that may change with each catalog season. Beginning with our exclusive services and licensing agreement with JudeFrances, the majority of this finished jewelry is custom designed for us.

## Source of Raw Material

Our moissanite jewels are made from gem-grade SiC crystals. Our sole supplier of SiC crystals is Cree, Inc., or Cree, with which we have certain exclusive supply rights for SiC crystals to be used for gemstone applications. We source the metals used for our finished jewelry, including white and yellow gold, sterling silver, and palladium, from a number of manufacturers located primarily in the U.S. or internationally in China, the Dominican Republic, India, Mexico, South Korea, or Thailand.

## Amended and Restated Exclusive Supply Agreement with Cree

In June 1997, we entered into an Amended and Restated Exclusive Supply Agreement with Cree, or the Cree Exclusive Supply Agreement, in which we agreed to purchase from Cree at least $50 \%$, by dollar volume, of our raw material SiC crystal requirements for use in the manufacture of moissanite jewels in each calendar quarter during the term of the Cree Exclusive Supply Agreement, and Cree agreed to supply this amount of crystals to us. In September 2008, we suspended our commitment to purchase SiC crystals that Cree had previously manufactured, and we subsequently purchased these previously manufactured SiC crystals. We made no SiC crystal purchases in 2011 or 2012. At December 31, 2012, we had no outstanding purchase commitments under the Cree Exclusive Supply Agreement.

Effective February 8, 2013, we entered into an amendment to a prior letter agreement with Cree, which provides a framework for our purchases of SiC crystals under the Cree Exclusive Supply Agreement. Pursuant to this amendment, we agreed to purchase at least $\$ 4.00$ million of SiC crystals in an initial new order. After the initial new order, we have agreed to issue non-cancellable, quarterly orders that must equal or exceed a set minimum order quantity. Our total purchase commitment under the amendment until July 2015, including the initial new order, is dependent upon the grade of the material and ranges between approximately $\$ 7.64$ million and approximately $\$ 18.56$ million.

The Cree Exclusive Supply Agreement prohibits us, without Cree's consent, from entering into an exclusive marketing or distribution agreement with any party that Cree reasonably believes is affiliated with any of the following parties:

- DeBeers;
- the Central Selling Organization (the international cartel of diamond producers) or its successors;
- any party whose primary business is the development, manufacture, marketing, or sale of diamond gemstones; or
- any non-gemstone and non-jewelry industry competitor of Cree.

These provisions may limit our potentially available avenues of distribution and could prevent us from entering into certain potentially profitable transactions.

## Intellectual Property

We have U.S. product and method patents for moissanite jewels, expiring in 2015 , under which we have broad, exclusive rights to manufacture, use, and sell moissanite jewels in the U.S. We have these same patents in 25 foreign jurisdictions primarily across Asia and Europe, expiring in 2016, and in Mexico, expiring in 2021. In addition, we have certain trademarks and pending trademark applications that support our moissanite branding strategy. Our success and our ability to compete successfully depend in part upon our proprietary technology. In addition to our patents, we rely on trade secret laws and employee, consultant, and customer confidentiality agreements to protect certain aspects of our technology. We currently are not subject to any claims that our products or processes infringe on the proprietary rights of third parties. At the present time, we are also dependent on Cree's technology for the production of SiC crystals. Cree is exclusively licensed to use a patent concerning a process for growing large single crystals of SiC, has certain patents of its own relating to growth of large single crystals of SiC , and has a patent for a process for growing near-colorless SiC crystals.

On July 26, 2011, we learned that BetterThanDiamond.com requested that the U.S. Patent and Trademark Office, or USPTO, conduct an ex parte reexamination of our U.S. Patent No. 5,723,391, or the '391 Patent, for manufacturing SiC gemstones based on claims of prior art. On October 5, 2011, the USPTO granted the re-examination request based on its finding that the information provided in the request raised "a substantial new question of patentability." On May 30, 2012, the USPTO issued a non-final Office Action in Ex Parte Re-examination that rejected Claims 1 through 3 of the ' 391 Patent based on its initial review of the prior art. On July 27, 2012, we responded to the USPTO. On October 1, 2012, the USPTO issued a Notice of Intent to Issue Ex Parte Re-examination Certificate that upheld all claims under our '391 Patent for manufacturing SiC gemstones.

## Manufacturing and Quality Assurance

## Moissanite jewels

The production of Charles \& Colvard Created Moissanite ${ }^{\circledR}$ jewels is an elaborate process developed over a number of years of collaborative research and development, acquired and learned knowledge from scientists, and considerable investment expense.

Following are the key manufacturing processes of our moissanite jewels:

- growing gem-grade raw SiC crystals;
- manufacturing rough preforms;
polishing jewels; and
inspecting, sorting, and grading.

Growing gem-grade raw SiC crystals - SiC crystal growth suitable for gem-grade usage at commercial quantities is proprietary both in design and in operational methodology. Cree has grown the majority of our SiC crystals in accordance with the terms of the Cree Exclusive Supply Agreement. We routinely evaluate the yield and quality of saleable moissanite jewels from SiC crystals. The yield of saleable jewels from each crystal is one of the most significant factors affecting the volume and cost of moissanite jewels available for sale. Yield is dependent on the quality of the crystals, and variations in crystal quality can adversely affect our gross margin percentage.

Manufacturing rough preforms - We have made considerable investment in the design, development, and customization of a proprietary manufacturing process that includes equipment, software, and procedures to maximize raw material yield. The result is production of intermediary shapes, called "preforms," that vary depending upon the size and shape of the finished jewel. We continue to invest research and development resources to improve raw material yield, including studying alternate preform shapes and cutting technologies, due to the dramatic effect such an improvement could have on our gross margin percentage.

Polishing jewels - Each preform is hand faceted and polished based on master designs with multiple quality control measures built into the process. Gemcutter training is a regimented program involving several months of progressive hands-on bench training.

Inspecting, sorting, and grading - Similar to other gemstones, each faceted moissanite jewel is individually graded against established master standards using specially trained personnel. Additionally, as part of our overall quality assurance program, a representative sample from each batch of jewels is submitted to an image analyzer to ensure critical angles and other attributes designed to maximize moissanite's optical properties are consistently maintained. This phase of manufacturing is relatively labor-intensive and requires skills not readily available in the general work force. In the future, we may elect to outsource certain portions of this stage of the manufacturing process to independent third parties that we will require to adhere to our rigorous quality control and monitoring standards.

## Finished jewelry

Our line of finished jewelry featuring moissanite is developed by a team of industry experts integrating our moissanite jewels into many forms of jewelry, generally made of 14 karat gold, but also certain alternative metals such as sterling silver and palladium, either designed or purchased by us utilizing a core group of suppliers, manufacturers, and finishers.

Our line of fashion finished jewelry, comprised of base metals and non-precious gemstones for sale through Lulu Avenue ${ }^{T M}$, is either designed exclusively for us by JudeFrances and manufactured to our specifications or purchased from a core group of suppliers and manufacturers.

All finished jewelry components procured are sourced from our approved suppliers, and each finished jewelry item is jobbed and/or tracked by stock keeping unit, or SKU, utilizing our enterprise resource planning system. The components of moissanite finished jewelry comprised in each job are then manufactured into finished jewelry by assemblers either in the U.S. or internationally in China, the Dominican Republic, India, Mexico, South Korea, or Thailand.

All finished jewelry produced by us undergoes a multi-point inspection process. A representative sampling of manufactured finished jewelry items undergoes stone and metals testing to ensure that the items for sale are of the quality that we strive to maintain. If required by government ordinance or requested by a customer, we facilitate the inspection of our finished jewelry by internationally recognized testing facilities to comply with legal requirements and to ensure consumer confidence.

## Marketing and Distribution

## Marketing

## Wholesale Distribution Segment

- Cooperative advertising - A number of our loose moissanite jewel wholesale customers participate in our cooperative advertising program, which reimburses, via a credit towards future purchases, a portion of their marketing costs based on the amount of their purchases from us, subject to the customer adhering to our branding guidelines and other conditions. With the world market opportunities being an integral part of our overall goals, we will continue to explore cooperative advertising and other international promotional support initiatives.
- Marketing to the trade - In 2012, we targeted the trade with print advertisements featuring our new whiter Forever Brilliant ${ }^{\mathbb{B}}$ moissanite jewel and finished jewelry featuring the Forever Brilliant ${ }^{\circledR}$ jewel both through our own print campaigns in InStore and Jewelers' Circular Keystone (JCK) magazines and the

New York Times and Wall Street Journal newspapers; and in joint print campaigns with several of our larger U.S. wholesale distributors. In addition, we maintain relationships with major jewelry industry organizations and jewelry trade publications as an opportunity to communicate with our peers on a consistent basis through media coverage, trade shows, action committees, and charitable events, among others.

- Trade shows - Our attendance at leading jewelry trade shows worldwide as a sponsor, an exhibitor, or a participant assisting our loose moissanite jewel and finished jewelry wholesale customers has helped us extend our outreach to customers. In 2013, we plan to attend major domestic and international jewelry industry trade shows, including JCK in Las Vegas and the Hong Kong Gem and Jewellery Fair.


## Direct-to-Consumer Distribution Segment

- Consumer advertising - We are supporting our initiative to increase consumer awareness of moissanite and our finished jewelry primarily with print advertising and various forms of electronic communication, including social media campaigns.
- Consumer education - Because education of the consumer is so important to sell-through of moissanite products, we redesigned and deployed our corporate website www.charlesandcolvard.com during 2012 to include extensive educational information about moissanite, in addition to general background information about our company. Our direct-to-consumer e-commerce site, Moissanite.com, features much of the same educational content that allows a consumer to learn more about moissanite prior to purchase.
- Public relations - We continue to pursue our public relations activities, which include news coverage of our company by business, trade, and investment periodicals and television broadcasts, the possible identification of one or more celebrity spokespersons, and product placement opportunities.


## Distribution

## Wholesale Distribution Segment

We generally have contracts and agreements with our domestic and international distributor, manufacturer, and retailer wholesale customers with some variations in terms and duration.

- Domestic - Finished jewelry featuring moissanite is sold through our wholesale distribution segment to consumers through a broad range of channels, including single- and multiple-location independent jewelry stores, jewelry store chains, online retailers, television shopping networks, department stores, and catalogs. Historically, we have primarily sold our loose moissanite jewels to wholesale distributors and finished jewelry manufacturers, which in turn set them in mountings and sold to retailers or resold the loose jewels at a markup. While we plan to continue this aspect of our business, in 2010 we began mounting our loose jewels into our own jewelry, which we currently sell at wholesale to home shopping networks and select retailers. In addition, we have allowed a limited amount of loose moissanite jewel and finished jewelry inventory to be placed in stores on a consignment basis.
- International - Our international wholesale distribution is currently comprised primarily of loose moissanite jewels that are sold to international distributors for resale to jewelry manufacturers and retailers in their local markets. We currently have approximately 24 international wholesale distributors for loose moissanite jewels covering portions of Western Europe, Australia, India, Southeast Asia, and the Middle East. We have continued to invest in certain international markets that we believe have the most potential with respect to acceptance and sales of the moissanite jewel, including Australia, China, India, Italy, and the United Kingdom. Export sales aggregated approximately $\$ 5.58$ million, or $25 \%$ of total consolidated net sales, and $\$ 5.37$ million, or $33 \%$ of total consolidated net sales, in 2012 and 2011, respectively. It should be noted that a portion of our international sales consists of jewels sold internationally that may be re-imported to U.S. retailers.

Currently, all of our direct-to-consumer distribution is domestic. Sales made to international shipping addresses through our Moissanite.com e-commerce website are shipped to a domestic third-party intermediary that assumes all risks and liabilities for the international transaction.

We sell our loose moissanite jewels and finished jewelry featuring moissanite at retail through our direct-to-consumer Moissanite.com e-commerce website at www.moissanite.com. We maintain on-hand stock for such basic designs as stud earrings, solitaire and three-stone rings, pendants, and bracelets and fulfill orders from our main facility. Other finished jewelry styles offered for sale on the website are made-to-order by several of our key distributors who also assist in providing fulfillment of these products directly to the end consumer.

Our finished fashion and moissanite jewelry offered by Lulu Avenue ${ }^{T M}$ is sold to consumers online at www.luluavenue.com; and in convenient, comfortable venues by independent sales representatives, which we refer to as Style Advisors, using sample pieces contained in a sales kit purchased by the Style Advisor as part of the enrollment process. The Style Advisors supplement the sample pieces with additional styles displayed in seasonal catalogs and online at www.luluavenue.com. Orders are entered by the Style Advisor into a back office system, and the products are fulfilled by a third-party logistics company that ships the products to the Style Advisor or end consumer.

More details on our financial information by geographic area and by segment are included in Note 3 to our consolidated financial statements included in Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K.

## Seasonality

Sales in the retail jewelry industry are typically seasonal due to increased consumer purchases during the Christmas and holiday season. Because historically we have primarily sold our loose moissanite jewels and finished jewelry featuring moissanite at wholesale to distributors, manufacturers, and retailers, our sales to support the holiday season largely have taken place during the third and beginning of the fourth calendar quarters, depending on the sales channel and the level of advance planning and production our customers undertook; however, the effect of seasonality on our business is also impacted by the timing of orders we receive to support new or expanded distribution and the level of current inventory position held by our customers. In the years ended December 31 , 2012 and 2011, we experienced a higher degree of seasonality in the fourth quarter than we have previously experienced in prior years primarily as a result of Christmas and holiday season wholesale finished jewelry sales to television shopping networks. In the fourth quarter of 2012, we also experienced a higher level of sales to end consumers through our direct-to-consumer e-commerce website, Moissanite.com. In future periods as sales of our finished jewelry increase to retailers and directly to consumers, both in dollars and as a percent of total sales, we anticipate a seasonality trend more typical with the retail jewelry industry, and these factors may significantly affect our results of operations in a given quarter.

## Working Capital Practices

Our primary source of working capital is cash on hand and cash generated by operations. Because the Cree Exclusive Supply Agreement prohibits Cree from selling SiC crystals for jewelry applications to anyone but us, Cree may, upon the expiration of the Cree Exclusive Supply Agreement and as a condition of renewal, negotiate minimum purchase commitments with us that may result in inventories that are higher than we might otherwise maintain. Our current inventory levels are sufficient to enable us to respond promptly to most customer orders, but we currently have backlogs in some loose moissanite jewel shapes and sizes, especially certain sizes of melee, or jewels smaller than 2.0 millimeters in diameter. We have responded to this backlog by increasing production of these jewels.

Our standard wholesale customer payment terms on trade receivables are generally between 30 and 90 days, though we may offer extended terms in limited circumstances and on significant orders from time to time. We extend credit to our customers based upon a number of factors, including an evaluation of the customer's financial condition and credit history, the customer's payment history with us, the customer's reputation in the trade, and/or an evaluation of the customer's opportunity to introduce our moissanite jewels or finished jewelry featuring moissanite to new or expanded markets.

Our return policy allows for the return of jewels and finished jewelry for credit generally within 30 days of shipment and must be returned for a valid reason, such as quality problems or an error in shipment. From time to time, some wholesale customers may have a contractual right to return a certain percentage of sales for any reason for specified periods of time. We have established an allowance for returns based on our historical return rate, which takes into account any contractual return privileges granted to our customers. Periodically, we ship loose jewel and jewelry finished goods to wholesale customers on consignment terms. Under these terms, the customer assumes the risk of loss and has an absolute right of return for a specified period.

## Competition

Our competitive success is reliant upon, in part, the following:

- our continued success in developing and promoting brands for our moissanite jewel and finished jewelry featuring moissanite, resulting in increased interest and demand for moissanite jewelry at the consumer level;
- the continued willingness and ability of our jewelry distributors and other jewelry suppliers, manufacturers, and designers to market and promote Charles \& Colvard Created Moissanite ${ }^{\circledR}$ jewels and Forever Brilliant ${ }^{\circledR}$ jewels to the retail jewelry trade;
- the continued willingness of distributors, retailers, and others in the channel of distribution to purchase loose Charles \& Colvard Created Moissanite ${ }^{\circledR}$ jewels and Forever Brilliant ${ }^{\circledR}$ jewels and the continued willingness of manufacturers, designers, and retail jewelers to undertake setting of the loose jewels;
our continued ability and the ability of manufacturers, designers, and retail jewelers to select jewelry settings that encourage consumer acceptance of and demand for our moissanite jewels and finished jewelry;
- our continued ability and the ability of jewelry manufacturers and retail jewelers to set loose moissanite jewels in finished jewelry with high-quality workmanship;
our continued ability and the ability of retail jewelers to effectively market and sell finished jewelry featuring moissanite, including finished jewelry featuring our Forever Brilliant ${ }^{\mathbb{R}}$ jewels, to consumers; and our ability to operationally execute our direct-to-consumer e-commerce and home party businesses.


## Moissanite jewels

Gemstone materials can be grouped into three types:

- natural gemstone, which is found in nature;
- synthetic gemstone, which has the same chemical composition and essentially the same physical and optical characteristics of natural gemstone but is created in a lab; and
- simulated or substitute material, which is similar in appearance to natural gemstone but does not have the same chemical composition, physical properties, or optical characteristics.

Our moissanite jewel competes with fine gemstones such as ruby, sapphire, emerald, and tanzanite as well as with natural, synthetic, and treated diamonds. We may also face competition from synthetic diamonds, synthetic diamond films, and other sources of synthetic moissanite not presently available in qualities, sizes, and volumes suitable for use as gemstones. Some suppliers of diamonds and other fine gemstones, as well as the suppliers of synthetic and simulated gemstones, have substantially greater financial, technical, manufacturing, and marketing resources and greater access to distribution channels than we do.

We market our unique jewel as an affordable, luxurious alternative to diamond at price points that make our jewel more attainable by many consumers. The diamond industry enjoys higher consumer desirability and acceptance, which has been iconicized by the "Diamonds are Forever" marketing campaign. Historical efforts to differentiate moissanite from diamond as a unique jewel by virtue of its distinctive composition and its superior optical characteristics remain a challenge, as moissanite resembles diamond in the eyes of consumers. Therefore, we shifted our marketing strategy of moissanite to be a highquality alternative to diamond beginning in the fourth quarter of 2009.

The worldwide market for large, uncut, high-quality natural diamonds is significantly consolidated and controlled by DeBeers (headquartered in South Africa), Alrosa (Russia), Rio Tinto (Australia), and BHP (Canada). These companies have a major impact on the worldwide supply and pricing of natural diamonds at both the wholesale and retail levels. Diamond producers may undertake additional marketing or other activities designed to protect the
diamond jewelry market against sales erosion from consumer acceptance of moissanite jewels.

We may also face competition from treated and synthetic diamonds. Treated diamonds, which are natural diamonds with imperfections or flaws that have been altered in some manner to enhance their appearance, have been available in the jewelry industry for the past several decades and are generally less expensive than diamonds of similar size, cut, and color that have not been altered. Synthetic diamonds are also available in the marketplace and are produced for jewelry applications available to consumers; however, most synthetic diamonds that are sold today are in the yellow color range. Although we believe that colorless gemstone-quality synthetic and treated diamonds presently cannot be produced at prices competitive with those currently offered for our nearcolorless moissanite jewels, there can be no assurances that such competitive prices cannot be achieved in the future by the producers of either or both synthetic and treated diamonds. The primary producers of synthetic diamonds used for industrial applications are DeBeers, Sumitomo, and GE. There are also a number of Russian producers of synthetic diamonds for industrial uses. In addition, companies such as Gemesis Corporation, Chatham, and Apollo Diamonds are synthesizing diamonds in limited quantities, limited carat sizes, and in limited ranges of color. Synthetic diamond films can be grown at commercially viable prices in thicknesses that can be applied to various surfaces such as other synthetic materials.

Although we believe that our moissanite jewel has a proprietary position, we could face competition from other companies that develop competing SiC technologies. Some of these technologies could be developed by producers of SiC used for other industrial applications. Manufacturers of industrial SiC products include The Carborundum Corporation (currently for abrasive uses); and Cree, Siemens AG, Norstel, Bridgestone, ABB, Dow Chemical, SiC Crystal AG, and Northrop Grumman Corporation (currently for semiconductor uses). We believe that Cree is currently the only supplier of SiC crystals in colors, sizes, and volumes that are suitable for gemstone applications. It is possible, however, that these or other producers of SiC could develop SiC crystals suitable for gemstone applications and produce moissanite jewels until we could obtain judicial enforcement of our patent rights. It is also possible that such competition could emerge in geographic territories where we might not have adequate patent protection.

We may also, to a lesser degree, face competition from existing diamond simulants and other synthetic gemstones, including cubic zirconia. Producers and sellers of these products may see the markets for these products being eroded by the market penetration of our moissanite jewels. We believe that the substantially lower price of these products is the primary basis upon which they will compete with our moissanite jewels; however, they are not considered fine jewelry products.

## Finished jewelry

The global jewelry market is approximately $\$ 145$ billion and competition is fierce. Such well-known jewelry designers and manufacturers as David Yurman, Tacori, Harry Winston, Tiffany \& Co., and Pandora, among others, have a variety of jewelry collections featuring diamonds and other precious and semiprecious gemstones, strong brand recognition, and a loyal consumer following. These companies also have greater financial resources than we do to develop and market their products.

We intend to expand our market share and compete with these well-known brands primarily on the basis of price, as moissanite is the highest quality, affordable alternative available to more expensive gemstones such as diamond. We believe that focusing on the clear advantages in its retail price points, especially in the one-carat and larger sizes, will provide a key point of differentiation and value proposition to the end consumer who may not have had the opportunity previously to purchase fine jewelry due to limitations in discretionary spending income.

In addition, we believe that the Charles \& Colvard Created Moissanite ${ }^{\circledR}$ brand, in addition to other brands for both the moissanite jewel, including Forever Brilliant ${ }^{\circledR}$ for our whiter jewels, and fashion and moissanite finished jewelry that we are developing pursuant to our marketing programs, may create a longterm competitive advantage for our products as we build brand recognition. We endeavor to partner with recognized designers and jewelry companies, in addition to our own proprietary brands of finished jewelry. Our exclusive services and licensing agreement with JudeFrances to custom design fashion and moissanite jewelry for Lulu Avenue ${ }^{T M}$ was made pursuant to this strategy, and we continue to seek other opportunities for such partnerships. While our finished jewelry business is still developing, our goal is to build multiple strong brands sought after by the end consumer as our intellectual property rights expire in the future. We propose to focus our marketing efforts on emphasizing our attractive designs, coupled
with moissanite's exceptional brilliance, fire, luster, durability, and rarity to establish moissanite as a primary consumer choice in fine jewelry.

Our design, manufacture, and marketing of finished jewelry featuring moissanite under exclusive brands for sale at wholesale to distributors and retailers and at retail to end consumers through our Moissanite.com e-commerce and Lulu Avenue ${ }^{T M}$ home party sales channels may result in some of our current wholesale customers perceiving us as a competitor, despite our efforts to use primarily non-conflicting sales channels. As we continue to develop our finished jewelry business, we intend to increase distribution through new and existing channels without diminishing existing distributor and manufacturer relationships similarly to how many other companies have executed cross-channel marketing and distribution strategies. Due to the size of the finished jewelry market, we believe that such sales channels can co-exist, with the overall end result being increased consumer and brand awareness of moissanite products and a corresponding increased demand for not only our products, but those of our distributor and manufacturer customers as well.

Competition in the direct selling industry is intense. Such well-known jewelry direct selling companies as Stella \& Dot, lia sophia, Silpada, Park Lane, and Cookie Lee, among others, have a large number of independent sales representatives selling their products, strong brand recognition, and a loyal consumer following. These companies also have greater financial resources than we do to develop and market their products and recruit independent sales representatives into their businesses. Start-up companies in the direct selling industry often follow an "incubation" period of several years in which product offerings and marketing messaging are developed and refined, systems are implemented, and independent sales representatives are enrolled into the business. We expect our Lulu Avenue ${ }^{T M}$ home party business to compete with other well-established jewelry direct selling companies based on our exclusive fashion and moissanite jewelry designs by JudeFrances. We also believe that Lulu Avenue ${ }^{T M}$ will afford a higher earning opportunity and appeal to independent sales representatives due to the perceived value and higher price points of moissanite jewelry, available through no other jewelry direct selling company.

## Government Regulation

We are subject to governmental regulations in the manufacture and sale of moissanite jewels and finished jewelry. In particular, the Federal Trade Commission, or FTC, has issued regulations and guidelines governing the marketing of synthetic gemstones and other gemstones similar to diamond that require such gemstones to be clearly identified in any promotional or marketing materials. In addition, the precious metal in our finished jewelry may be subject to requirements, which vary by country and by state, such as hallmarking and alloy content. While we have a policy to ensure compliance with applicable regulations, if our actions are found to be in violation of FTC or other governmental regulations, we may be required to suspend marketing of our products and could incur significant expenses in developing new marketing strategies and materials that would not violate FTC regulations.

## Research and Development

We invested approximately $\$ 17,000$ and $\$ 146,000$ in research and development during the years ended December 31, 2012 and 2011 , respectively, primarily for the study of product enhancement and manufacturing process efficiencies.

## Employees

As of March 25, 2013, we had a total of 55 employees, all of which were full-time. None of our employees are represented by a labor union. We believe that our employee relations are good.

## Directors and Executive Officers of Charles \& Colvard, Ltd.

The members of our current Board of Directors are the following:

## George R. Cattermole

Chairman of the Board

David B. Barr
Chairman of PMTD Restaurants LLC; Chairman of the Board of Directors of Rita Restaurants LLC; Member of the Boards of Directors of Del Frisco's Restaurant Group, LLC; Mrs. Fields Original Cookies, Inc.; and Bistro Restaurant Group

## H. Marvin Beasley

Retired former Chief Executive Officer of Helzberg Diamonds, a retail jewelry store chain

## Anne M. Butler

Chief Executive Officer of Butler Advisors, a consulting firm specializing in strategic and operational advising to private equity, venture capital, and institutional investors on direct selling acquisitions and management

## Steven M. Larkin

Senior Vice President, Direct at Golfsmith International Holdings, Inc., a specialty retailer of golf and tennis equipment, apparel, and accessories
Dr. Charles D. Lein
Retired former President and Chief Operating Officer of Stuller, Inc., a manufacturer and distributor of jewelry and jewelry-related products

## Randall N. McCullough

President and Chief Executive Officer of Charles \& Colvard, Ltd.
Ollin B. Sykes
President of Sykes \& Company, P.A., a regional accounting firm specializing in accounting, tax, and financial advisory services

Our current executive officers are the following:

## Randall N. McCullough

Chief Executive Officer
Timothy L. Krist
Chief Financial Officer and Treasurer
Thomas G. Pautz
President, Wholesale Division

## Available Information

Our corporate information is accessible through our Internet website at www.charlesandcolvard.com. We are not including the information contained on our website as a part of, or incorporating it by reference into, this Annual Report on Form 10-K. We make available, free of charge, access on our website to all reports we file with, or furnish to, the SEC, including our Annual Reports on Form 10-K, our Quarterly Reports on Form 10-Q, our Current Reports on Form $8-\mathrm{K}$, and amendments to these reports, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. A copy of this Annual Report on Form 10-K and our other reports is available without charge upon written request to Investor Relations, Charles \& Colvard, Ltd., 300 Perimeter Park Drive, Suite A, Morrisville, North Carolina 27560.

## Item 1A.Risk Factors

We operate in a dynamic and rapidly changing business environment that involves substantial risk and uncertainty, and these risks may change over time. The following discussion addresses some of the risks and uncertainties that could cause, or contribute to causing, actual results to differ materially from expectations. In evaluating our business, you should pay particular attention to the descriptions of risks and uncertainties described below. If any of these risks actually occur, our business, financial condition, or results of operations could be materially and adversely affected.

Our future financial performance depends upon increased consumer acceptance, growth of sales of our products, and operational execution of our strategic initiatives. We believe that most consumers are not generally aware of the existence and attributes of moissanite jewels and that the consumer market for moissanite jewels and finished jewelry featuring moissanite remains in the early stages of development. Total moissanite jewelry retail sales have historically been less than $1 \%$ of the total jewelry market. The degree of future market acceptance and demand is subject to a significant amount of uncertainty. Our future financial performance will depend, in part, upon greater consumer acceptance of moissanite jewels, including our whiter Forever Brilliant ${ }^{\circledR}$ jewels, as an affordable, luxurious alternative to other gemstones, such as diamond; and our ability to develop brands and execute strategic initiatives, including our direct-to-consumer e-commerce and home party businesses, to grow our sales and operating income. In addition, consumer acceptance may be affected by retail jewelers' and jewelry manufacturers' acceptance of moissanite jewels and finished jewelry featuring moissanite. The quality, design, and workmanship of the jewelry settings, whether manufactured by us or other manufacturers, could affect both consumers' perception and acceptance of our jewels and costs incurred by returns and markdowns.

Thus, our future financial performance may be affected by:
our continued success in developing and promoting brands for our moissanite jewel and finished jewelry featuring moissanite, resulting in increased interest and demand for moissanite jewelry at the consumer level;
the continued willingness and ability of our jewelry distributors and other jewelry suppliers, manufacturers, and designers to market and promote Charles \& Colvard Created Moissanite ${ }^{\circledR}$ jewels and Forever Brilliant ${ }^{\circledR}$ jewels to the retail jewelry trade;
the continued willingness of distributors, retailers, and others in the channel of distribution to purchase loose Charles \& Colvard Created Moissanite ${ }^{\circledR}$ jewels and Forever Brilliant ${ }^{\circledR}$ jewels and the continued willingness of manufacturers, designers, and retail jewelers to undertake setting of the loose jewels;
our continued ability and the ability of manufacturers, designers, and retail jewelers to select jewelry settings that encourage consumer acceptance of and demand for our moissanite jewels and finished jewelry;
our continued ability and the ability of jewelry manufacturers and retail jewelers to set loose moissanite jewels in finished jewelry with high-quality workmanship;
our continued ability and the ability of retail jewelers to effectively market and sell finished jewelry featuring moissanite, including finished jewelry featuring our Forever Brilliant ${ }^{\circledR}$ jewels, to consumers; and
our ability to operationally execute our direct-to-consumer e-commerce and home party businesses.
We are currently substantially dependent on a limited number of distributors, jewelry manufacturers, and retailers for the sale of our products. The majority of the moissanite jewels and finished jewelry featuring moissanite that we sell are distributed through a limited number of distributors, manufacturers, and retailers and, therefore, we are substantially dependent upon these companies for distribution of our products. During 2012, our three largest customers, two of which are loose jewel and finished jewelry distributors and one of which is a television shopping network loose jewel and finished jewelry retailer, collectively accounted for $46 \%$ of gross sales. As we continue to build our finished jewelry business, we anticipate in the near term that the majority of the moissanite jewels and finished jewelry featuring moissanite that we sell will continue to be to a limited number of manufacturers, distributors, and retailers.

Our business and our results of operations could be materially adversely affected as a result of our inability to fulfill orders on a timely basis. As sales of our loose moissanite jewels increase, including our whiter Forever Brilliant ${ }^{\circledR}$ jewels, certain shapes and sizes may be at risk for depletion. In addition, finished jewelry has a large variety of styles of which we maintain on-hand stock for such basic designs as stud earrings, solitaire and three-stone rings, pendants, and bracelets; and make-to-order under strict deadlines for certain wholesale and direct-to-
consumer e-commerce customers. We must adequately forecast demand and operate within the lead times of third parties that facet and/or enhance the jewels and manufacture the finished jewelry setting to ensure adequate on-hand quantities and/or the shipment of customer orders in a timely manner. The inability to fulfill orders on a timely basis and within promised customer deadlines could result in a cancellation of the orders and loss of customer goodwill that could materially and adversely affect our business, results of operations, and financial condition.

The financial difficulties or insolvency of one or more of our major customers could adversely affect results. We are subject to a concentration of credit risk amongst our major customers, and a default by any of these customers on their debts to us could have a material adverse effect on our financial position. Future sales and our ability to collect accounts receivable depend, in part, on the financial strength of our customers. We estimate an allowance for accounts for which collectibility is at risk and this allowance adversely impacts profitability. In the event customers experience greater than anticipated financial difficulties or insolvency, we expect profitability to be adversely impacted by our failure to collect accounts receivable in excess of the estimated allowance. Given the current economic environment, constrained access to capital and general market contractions may heighten our exposure to customer default.

We expect to remain dependent upon Cree for the sole supply of our SiC crystals for the foreseeable future. If we are unable to obtain sufficient, highquality SiC crystals from Cree and we have a significant increase in demand for our moissanite jewel, then we may not be able to meet that demand. Cree has certain proprietary rights relating to its process for growing large single crystals of SiC and its process for growing near-colorless SiC crystals. Under the Cree Exclusive Supply Agreement, we are obligated to buy from Cree, and Cree is obligated to sell to us, at least $50 \%$, by dollar volume, of our requirements for SiC material for the production of gemstones in each calendar quarter through June 2015. Effective February 8, 2013, we entered into an amendment to a prior letter agreement with Cree, which provides a framework for our purchases of SiC crystals under the Cree Exclusive Supply Agreement. Pursuant to this amendment, we agreed to purchase at least $\$ 4.00$ million of SiC crystals in an initial new order. After the initial new order, we have agreed to issue noncancellable, quarterly orders that must equal or exceed a set minimum order quantity. Our total purchase commitment under the amendment until July 2015 , including the initial new order, is dependent upon the grade of the material and ranges between approximately $\$ 7.64$ million and approximately $\$ 18.56$ million. However, there can be no assurance that Cree will be able to continue to produce and supply us with SiC crystals of sufficient quality, sizes, and volumes that we desire or that we will successfully negotiate future purchase commitments at acceptable prices that enable us to manage our inventories and raw material costs effectively.

Our current wholesale customers may potentially perceive us as a competitor in the finished jewelry business. As described above, we are currently substantially dependent on a limited number of customers, including distributors and jewelry manufacturers, for the sale of our products. Our design, manufacture, and marketing of finished jewelry featuring moissanite under exclusive brands for sale to distributors and retailers may result in some of these current customers perceiving us as a competitor, despite our efforts to use primarily non-conflicting sales channels. In response, these customers may choose to reduce their orders for our products. This reduction in orders could occur faster than our sales growth in this new business, which could materially and adversely affect our business, results of operations, and financial condition.

We face intense competition in the worldwide jewelry industry. The jewelry industry is highly competitive and we compete with numerous other jewelry products. In addition, we face competition from treated diamonds, synthetic diamonds, and companies developing other synthetic jewelry technologies. A substantial number of companies supply products to the jewelry industry, many of which we believe have greater financial resources than we do. Competitors could develop new or improved technologies that may render the price point for moissanite noncompetitive, which would have an adverse effect on our business, results of operations, and financial condition.

Our business and our results of operations could be materially adversely affected as a result of general economic and market conditions, including the current economic environment. Global financial markets have experienced extreme disruptions, including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates, and uncertainty about economic stability. We are unable to predict the likely duration and severity of the effects of these disruptions in the financial markets and the adverse global economic conditions, and if the current uncertainty continues or economic conditions further deteriorate, our business and results of operations could be materially and adversely affected. The consequences of such adverse effects could include interruptions or delays in our suppliers' performance of our contracts, reductions and delays in customer purchases, delays in or the inability of customers to obtain financing to
purchase our products, and bankruptcy of customers and/or suppliers.
Luxury products, such as fine jewelry, are discretionary purchases for consumers. The reduction in consumer discretionary spending, largely attributed to the conditions described above, has affected our industry more significantly than many other industries. Consumer discretionary spending is strongly affected by economic factors outside our control, including the condition of financial markets, consumer credit availability, prevailing interest rates, energy costs, employment levels, salary levels, and tax rates. A continued reduction in discretionary consumer spending could have a material adverse effect on our business, results of operations, and financial condition.

We are subject to certain risks due to our international distribution channels and vendors. We currently have approximately 24 international distributors for moissanite jewels covering portions of Western Europe, Australia, India, Southeast Asia, and the Middle East. Our long-term strategy is to expand the number of international markets for our products. In addition, we use certain companies based outside the U.S. to facet our moissanite jewels and to manufacture finished jewelry. Due to our reliance on development of foreign markets and use of foreign vendors, we are subject to the risks of conducting business outside of the U.S. These risks include the following:

- the adverse effects on U.S.-based companies operating in foreign markets that might result from war; terrorism; changes in diplomatic, trade, or business relationships; or other political, social, religious, or economic instability;
- the continuing adverse economic effects of the recent global financial crisis;
- unexpected changes in, or impositions of, legislative or regulatory requirements;
delays resulting from difficulty in obtaining export licenses;
- tariffs and other trade barriers and restrictions;
- the burdens of complying with a variety of foreign laws and other factors beyond our control;
- the potential difficulty of enforcing agreements with foreign customers and suppliers; and
- the complications related to collecting receivables through a foreign country's legal system.

Additionally, while the majority of our foreign transactions are denominated in U.S. dollars, foreign currency fluctuations could impact demand for our products or the ability of our foreign suppliers to continue to perform. Further, some of our foreign distributors operate relatively small businesses and may not have the financial stability to assure their continuing presence in their markets. There can be no assurance that the foregoing factors will not adversely affect our operations in the future or require us to modify our anticipated business practices.

Sales of moissanite jewelry could be dependent upon the pricing of precious metals, which is beyond our control. Any increases in the market price of precious metals (primarily gold) could affect the pricing and sales of jewelry incorporating moissanite jewels, including jewelry manufactured by us. The majority of price increases in precious metals are passed on to the end consumer in the form of higher prices for finished jewelry. These higher prices could have a negative impact on the sell-through of moissanite jewelry at the retail level. From the beginning of 2006 through 2012, the price of gold has increased significantly (approximately $214 \%$ ), resulting in higher retail price points for gold jewelry. This has had a negative impact on both sales of moissanite jewelry and the jewelry industry as a whole.

Seasonality of our business may adversely affect our net sales and operating income. Sales in the retail jewelry industry are typically seasonal due to increased consumer purchases during the Christmas and holiday season. Because historically we have primarily sold our loose jewels and finished jewelry featuring moissanite at wholesale to distributors, manufacturers, and retailers, our sales to support the holiday season largely have taken place during the third and beginning of the fourth calendar quarters, depending on the sales channel and the level of advance planning and production our customers undertook. As sales of our finished jewelry featuring moissanite to retailers and directly to consumers increase, both in dollars and as a percentage of total sales, our fourth quarter results may depend upon the general level of retail sales during the Christmas and holiday season as well as general economic conditions and other factors beyond our control. In anticipation of increased sales activities during the fourth quarter, we may incur significant additional expenses, including higher inventory of finished jewelry in the second half of the year. In 2012 and 2011, we experienced a higher degree of seasonality in the fourth quarter than we have previously experienced primarily as a result of Christmas and holiday season finished jewelry sales to television shopping networks. In the fourth quarter of 2012, we also experienced a higher level of sales to end consumers through our direct-to-consumer e-commerce website, Moissanite.com. Our quarterly results of operations may continue to fluctuate as a result of a number of factors, including seasonal cycles, the timing of new product introductions, the timing of orders by our customers, and the mix of product sales demand and these factors may
significantly affect our results of operations in a given quarter.

## We may not be able to adequately protect our intellectual property, which could harm the value of our products and brands and adversely affect our

business. We rely primarily on patent, copyright, trademark, and trade secret laws, as well as confidentiality procedures and contractual restrictions, to establish and protect our proprietary rights, all of which provide only limited protection. We have U.S. product and method patents for moissanite jewels, expiring in 2015 , under which we believe that we have broad, exclusive rights to manufacture, use, and sell moissanite jewels in the U.S. We have these same patents in a number of foreign jurisdictions, most of which expire in 2016. We believe that these patents create substantial technological barriers to our potential competitors. At the present time, we are also dependent on Cree's technology for the production of SiC crystals. There can be no assurance that any patents issued to or licensed by or to us or Cree will provide any significant commercial protection, that we or Cree will have sufficient resources to protect our respective patents, that any additional patents will be issued in the future, or that any existing or future patents will be upheld by a court should we or Cree seek to enforce our respective rights against an infringer.

Our former South Korean patent is no longer valid as a result of a ruling by the South Korean Patent Court, and there can be no assurance that we will not incur similar outcomes in other jurisdictions in the future. For example, on August 14, 2012, we learned that BetterThanDiamond.com requested that the Canadian Intellectual Property Office, or CIPO, conduct a re-examination of our Canadian Patent No. 2,230,262, or the ' 262 Patent, for manufacturing SiC gemstones based on claims of prior art. On November 3, 2012, the CIPO granted the re-examination request based on its finding that the information provided in the request raises "a substantial new question of patentability." The USPTO upheld in October 2012 all claims of the ' 391 Patent in a similar challenge by BetterThanDiamond.com, but there is no certainty of the same outcome with respect to the challenge of the ' 262 Patent. If the CIPO were to determine that some or all of the claims in the '262 Patent are invalid, our business, financial condition, and results of operations could be negatively impacted. In addition, the re-examination of the ' 262 Patent could result in substantial legal expenses and could divert our management's time and attention away from our business operations. We believe that all of the claims of the ' 262 Patent are valid and enforceable, and we intend to vigorously defend the patents that protect our moissanite jewels and technology.

The existence of valid patents does not prevent other companies from independently developing competing technologies. Existing producers of SiC crystals or others may refine existing processes for growing SiC crystals or develop new technologies for growing large single crystals of SiC or colorless SiC crystals in a manner that does not infringe patents owned or licensed by us or Cree. Accordingly, existing and potential competitors may be able to develop products that are competitive with or superior to our products, and such competition could have a material adverse effect on our business, results of operations, and financial condition.

In addition, we have certain trademarks and pending trademark applications that support our moissanite branding strategy, and we use certain brand names for which we do not currently have proprietary rights. The success of our growth strategy depends on our continued ability to use our existing brand names in order to increase consumer awareness and further develop strong brands around our moissanite jewel and finished jewelry collections. We cannot assure that any future trademark or other registrations will be issued for pending or future applications or that we will be able to obtain licenses or other contractual rights to use brand names that may infringe the proprietary rights of third parties. We also cannot assure that any registered or unregistered trademarks or other intellectual property or contractual rights will be enforceable or provide adequate protection of our proprietary rights. Our inability to secure proprietary protection with respect to our brands could have a material adverse effect on our business, results of operations, and financial condition.

We also cannot be certain that our products and brand names do not or will not infringe valid patents, trademarks, and other intellectual property rights held by third parties. We may be subject to legal proceedings and claims from time to time relating to the intellectual property of others in the ordinary course of our business. Litigation to determine the validity of any third party's claims could result in significant expense and divert the efforts of our technical and management personnel, whether or not such litigation is determined in our favor. In the event of an adverse result of any such litigation, we could be required to expend significant resources to develop non-infringing technology or to obtain licenses for, and pay royalties on the use of, the technology subject to the litigation. We have no assurance that we would be successful in such development or that any such license would be available on commercially reasonable terms.

A failure of our information technology (IT) infrastructure or a failure to protect confidential information of our customers and our network against security breaches could adversely impact our business and operations. We rely upon the capacity, reliability, and security of our information technology infrastructure and our ability to expand and continually update this infrastructure in response to the changing needs of our business. For example, we are continuing to implement new modules of jewelry-specific enterprise resource planning software and other IT systems, such as those that support our Moissanite.com e-commerce and Lulu Avenue ${ }^{T M}$ home party businesses. As we implement and integrate the new systems, they may not perform as expected. We also face the challenge of supporting our older systems and implementing necessary upgrades. If we experience a problem with the functioning of an important IT system or a security breach of our IT systems, the resulting disruptions could have an adverse effect on our business.

In addition, we and certain of our third-party vendors receive and store personal information associated with our sales operations and other aspects of our business. In connection with our e-commerce and home party businesses, we rely on encryption and authentication technology licensed from third parties to effect secure transmission of confidential information, including credit card numbers. Despite our implementation of security measures, our IT systems and ecommerce and home party businesses are vulnerable to damages from computer viruses, natural disasters, unauthorized access, cyber attack, and other similar disruptions. An increasing number of websites and Internet companies have reported breaches of their security. Any such compromise of our security could damage our reputation, business, and brand and expose us to a risk of loss or litigation and possible liability, which could substantially harm our business and results of operations. In addition, anyone who is able to circumvent our security measures could misappropriate proprietary information or cause interruptions in our operations, damage our computers or those of our customers, or otherwise damage our reputation and business. These issues are likely to become more difficult as we expand the number of countries in which our e-commerce and home party websites operate. We may need to expend significant resources to protect against security breaches or to address problems caused by breaches.

Governmental regulation and oversight might adversely impact our operations. We are subject to governmental regulations in the manufacture and sale of moissanite jewels and finished jewelry. In particular, the FTC has issued regulations and guidelines governing the marketing of synthetic gemstones and other gemstones similar to diamond that require such gemstones to be clearly identified in any promotional or marketing materials. In addition, the precious metal in our finished jewelry may be subject to requirements, which vary by country and by state, such as hallmarking and alloy content. We may be under close scrutiny both by governmental agencies and by competitors in the gemstone industry, any of which may challenge our promotion and marketing of our moissanite jewel and finished jewelry products. While we have a policy to ensure compliance with applicable regulations, if our production or marketing of moissanite jewels and/or finished jewelry is challenged by governmental agencies or competitors, or if regulations are issued that restrict our ability to market our products, our business, results of operations, and financial condition could be materially adversely affected.

Some anti-takeover provisions of our charter documents and agreements may delay or prevent a takeover of our company. A number of provisions of our articles of incorporation and bylaws impact matters of corporate governance and the rights of shareholders. Certain of these provisions have an anti-takeover effect and may delay or prevent takeover attempts not first approved by our Board of Directors (including takeovers that certain shareholders may deem to be in their best interests). These provisions also could delay or frustrate the removal of incumbent directors or the assumption of control by shareholders. We believe that these provisions are appropriate to protect our interests and the interests of all of our shareholders.

Under the terms of the Cree Exclusive Supply Agreement, we are prohibited from entering into an exclusive marketing or distribution agreement with DeBeers or its affiliates or any party whose primary business is the development, manufacture, marketing, or sale of diamond gemstones or any non-gemstone and non-jewelry industry competitor of Cree. The agreement also prohibits us from entering into certain merger, acquisition, sale of assets, or similar transactions with a prohibited party. These provisions of the agreement could limit the price that third parties might be willing to pay in the future for some or all of the shares of our common stock. In addition, this agreement could prevent us from entering into certain potentially profitable transactions with such prohibited parties.

If we fail to evaluate, implement, and integrate strategic acquisition or disposition opportunities successfully, our business may suffer. From time to time we evaluate strategic opportunities available to us for product, technology, or business acquisitions or dispositions. If we choose to make acquisitions or dispositions, we face certain risks, such as failure of an acquired business to meet our performance expectations, diversion of management attention,
retention of existing customers of our current and acquired business, and difficulty in integrating or separating a business's operations, personnel, and financial and operating systems. We may not be able to successfully address these risks or any other problems that arise from future acquisitions or dispositions. Any failure to successfully evaluate strategic opportunities and address risks or other problems that arise related to any acquisition or disposition could adversely affect our business, results of operations, and financial condition.

## Item 1B. Unresolved Staff Comments

Not applicable.

## Item 2. Properties

We lease approximately 16,500 square feet of mixed-use space (general office, light manufacturing, and laboratory) in the Research Triangle Park area of North Carolina from an unaffiliated third party that is used by both of our operating and reporting segments. This lease expires in January 2017. This space houses the majority of all U.S. personnel, including our executive offices, sales offices, administrative personnel, and production facilities.

## Item 3. Legal Proceedings

Other than as set forth below, there are no material pending legal proceedings to which we are a party or to which any of our property is subject.

On July 26, 2011, we learned that BetterThanDiamond.com requested that the USPTO conduct an ex parte re-examination of the ' 391 Patent based on claims of prior art. On October 5, 2011, the USPTO granted the re-examination request based on its finding that the information provided in the request raised "a substantial new question of patentability." On May 30, 2012, the USPTO issued a non-final Office Action in Ex Parte Re-examination that rejected Claims 1 through 3 of the ' 391 Patent based on its initial review of the prior art. On July 27, 2012, we responded to the USPTO. On October 1, 2012, the USPTO issued a Notice of Intent to Issue Ex Parte Re-examination Certificate that upheld all claims under our ' 391 Patent for manufacturing SiC gemstones.

## Item 4. Mine Safety Disclosures

Not applicable

## PART II

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

## Market for Registrant's Common Equity

Our common stock is traded on the NASDAQ Global Select Market under the symbol "CTHR." The following table presents, for the periods indicated, the high and low sales prices of our common stock, as reported by the NASDAQ Global Select Market. As of March 25, 2013 there were 266 shareholders of record of our common stock.

|  | High | Low |
| :---: | :---: | :---: |
| Year Ended December 31, 2011: |  |  |
| First Quarter | \$3.99 | \$2.54 |
| Second Quarter | \$3.78 | \$2.42 |
| Third Quarter | \$2.85 | \$2.02 |
| Fourth Quarter | \$2.84 | \$1.58 |
| Year Ended December 31, 2012: |  |  |
| First Quarter | \$4.93 | \$2.46 |
| Second Quarter | \$4.75 | \$3.45 |
| Third Quarter | \$3.90 | \$3.34 |
| Fourth Quarter | \$4.15 | \$3.41 |

We did not pay any dividends on our common stock during 2012 or 2011. We will regularly review and consider the best policies and practices for our company, including the dividend policy. The payment of future dividends will be dependent on the facts and circumstances at the time of that review.

## Item 6. Selected Financial Data

Not applicable.

## Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion is intended to provide a better understanding of our consolidated financial statements, including a brief discussion of our business and products, key factors that impacted our performance, and a summary of our operating results. This information should be read in conjunction with Item 1A, "Risk Factors" and our consolidated financial statements and the notes thereto included in Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K. Historical results and percentage relationships among any amounts in the consolidated financial statements are not necessarily indicative of trends in operating results for future periods.

## Overview

We manufacture, market, and distribute Charles \& Colvard Created Moissanite ${ }^{\circledR}$ jewels (which we refer to as moissanite or moissanite jewels) and finished jewelry featuring moissanite for sale in the worldwide jewelry market. Moissanite, also known by its chemical name of silicon carbide, or SiC, is a rare mineral first discovered in a meteor crater. Because naturally occurring SiC crystals are too small for commercial use, larger crystals must be grown in a laboratory. Leveraging our advantage of being the sole source worldwide of created moissanite jewels, our strategy is to establish Charles \& Colvard with reputable, high-quality, and sophisticated brands and to position moissanite as an affordable, luxurious alternative to other gemstones, such as diamond. We believe this is possible due to moissanite's exceptional brilliance, fire, luster, durability, and rarity like no other jewel available on the market.

We manage our business primarily by our two distribution channels that we use to sell our product lines, loose jewels and finished jewelry. Accordingly, we determined our two operating and reporting segments to be wholesale distribution transacted through our parent entity and direct-to-consumer distribution transacted through our wholly owned operating subsidiaries, Moissanite.com, LLC and Charles \& Colvard Direct, LLC. We sell our loose moissanite jewels at wholesale to some of the largest distributors and manufacturers in the world, which mount them into fine jewelry to be sold at retail outlets and via the Internet. We also sell loose moissanite jewels and finished jewelry featuring moissanite at wholesale to retailers to be sold to end consumers and, in the third quarter of 2011, we established a direct-to-consumer e-commerce sales channel through our wholly owned operating subsidiary Moissanite.com, LLC that sells both loose moissanite jewels and finished jewelry featuring moissanite. Additionally, in April 2012 we launched a pilot test of a direct-to-consumer home party sales channel through our wholly owned operating subsidiary Charles \& Colvard Direct, LLC, or Charles \& Colvard Direct, that sells fashion and moissanite finished jewelry. We believe the expansion of our sales channels to the jewelry trade and the end consumer with branded finished moissanite jewelry creates a more compelling consumer value proposition to drive increased demand.

We are continuing to focus on our core business of manufacturing and distributing the loose moissanite jewel and finished jewelry featuring moissanite through wholesale sales channels, because this is currently the primary way we reach consumers. We believe there is substantial opportunity to grow our wholesale business and to capture a larger share of the jewelry market as we execute our strategy to increase consumer awareness of moissanite.

The wholesale finished jewelry business that we launched in 2010 is currently expanding through select retailers and television shopping networks, and we believe there is significant opportunity to further expand these sales channels. We believe our finished jewelry business, including finished jewelry sold through our direct-to-consumer e-commerce and home party sales channels, allows us to have more control over the end product and enhance our relationships with consumers, as well as provide incremental sales and gross profit dollars due to the higher price points of finished jewelry containing moissanite relative to loose jewels.

During 2012, we focused on executing the following critical aspects of our strategic plan that are continuing into 2013:

- Developing brand strategies - Our goal is to build multiple strong brands around the moissanite jewel and finished jewelry collections in attractive and desirable jewelry designs, especially those featuring larger center stones that leverage moissanite's point of differentiation and value proposition. We believe branding will allow us to increase consumer awareness, which we expect to help drive sales and develop consumer brand recognition and loyalty.
- In June 2012, we launched a moissanite jewel with optical properties that are significantly whiter than our standard VG grade jewels. We are marketing these whiter jewels under the Forever Brilliant ${ }^{\circledR}$ trademark as a premier brand to differentiate from other grades of our moissanite as well as moissanite sold by potential competitors in the future.

We expect demand for our Forever Brilliant ${ }^{\circledR}$ loose jewel and finished jewelry featuring the Forever Brilliant ${ }^{\circledR}$ jewel to grow, both in our wholesale channel and on our Moissanite.com e-commerce website, and that Forever Brilliant ${ }^{\mathbb{B}}$ will become an increasingly important brand for Charles \& Colvard as we execute future branding initiatives. We are also exploring additional product lines and branding strategies involving technologies for treating moissanite to produce such colors as pink, blue, and yellow, among others.

In October 2012, Charles \& Colvard Direct entered into an exclusive services and licensing agreement with JudeFrances, a well-known designer jewelry brand. Under the agreement, JudeFrances will custom design and source finished fashion and moissanite jewelry and provide branding direction for Lulu Avenue ${ }^{T M}$, the home party direct sales brand of Charles \& Colvard Direct. We believe this agreement serves as the point of differentiation that positions Lulu Avenue ${ }^{T M}$ ahead of other jewelry home party direct sales companies and will excite both consumers and women searching for unique business ownership opportunities. We continue to seek additional opportunities to partner with recognized finished jewelry designers for our wholesale and other retail sales channels to create exclusive, branded pieces.

We believe our efforts to position Forever Brilliant ${ }^{\circledR}$ as the whitest and brightest moissanite jewel available anywhere in the world and the introduction of designer finished jewelry brands will help us to build brand recognition and increase consumer awareness of our products. We also expect that this strategy of building brand recognition will help to support revenue streams as our intellectual property rights expire in the future.

- Expanding our direct-to-consumer e-commerce business - In May 2012, we partnered with a preeminent Chicago-based web design firm to develop a new lifestyle look as well as technologies to personalize the content of our direct-to-consumer e-commerce website, Moissanite.com, based on how the site is accessed. We successfully re-launched Moissanite.com in October 2012 to feature a more intuitive site design with increased functionality to enhance the customer experience and convert more traffic into sales. Additionally, we continue to expand the website's jewelry collections and its loose moissanite jewel assortment by featuring a variety of colors and shapes. To complement our improved functionality and assortment on the website, we have invested resources in advertising and marketing campaigns. In 2013, we plan to continue fine-tuning such marketing efforts to maximize return on investment, increasing product assortment, and building new site functionality designed to increase sales conversion rates. We believe our direct-to-consumer e-commerce sales channel will not only add to our top-line revenues in a significant manner, but will also play a key role in our campaign to increase overall consumer awareness of moissanite. We also envision e-commerce as a part of a broader effort to establish online connections with consumers that build our brands and our business with retail partners.
- Developing our direct-to-consumer home party business - In October 2012, our direct-to-consumer home party business, Lulu Avenue ${ }^{T M}$, began the integration of JudeFrances designs into the current jewelry line and also engaged a number of independent sales representatives that had been selling the JudeFrances jewelry line with a previous company. The first phase of the integration was completed in March 2013. In addition, we are in the process of hiring a President of Lulu Avenue ${ }^{T M}$ whose focus will be on the scale-up of the sales force, and we have hired a Director of Finance and Administration, who will also lead the back office technology and supply chain efforts of Lulu Avenue ${ }^{T M}$. With these key personnel along with marketing personnel added in the fourth quarter of 2012, we are positioned to complete the final phase of the integration process targeted for August 2013. We believe our direct-to-consumer home party sales channel will provide future sales growth and play a key role in our campaign to increase overall consumer

As we execute our strategy to build and reinvest in the business, expenses and investment of cash will be required ahead of the revenue streams we expect in the future, and this may result in some unprofitable quarters as we experienced in the first quarter of 2012. However, one of our primary goals is to maintain positive cash flow each quarter to protect our cash position, and we were successful in generating $\$ 2.78$ million in cash flow from operations during the year ended December 31, 2012. We will continue to diligently focus on cost containment and monitor our cash burn rate as we grow the business.

Our total consolidated net sales for the year ended December 31, 2012 of $\$ 22.45$ million were $40 \%$ greater than total consolidated net sales during the year ended December 31, 2011. Wholesale distribution segment net sales for the year ended December 31, 2012 of $\$ 20.81$ million were $31 \%$ greater than wholesale distribution segment net sales during the year ended December 31, 2011. Direct-to-consumer distribution segment net sales for the year ended December 31, 2012 of $\$ 1.64$ million were $709 \%$ greater than direct-to-consumer distribution segment net sales during the year ended December 31, 2011, which was the year in which operations commenced.

Loose jewel sales comprised $67 \%$ of our total consolidated net sales and increased $24 \%$ to $\$ 14.99$ million, compared with $\$ 12.07$ million in the previous year. Finished jewelry sales comprised $33 \%$ of our total consolidated net sales and increased $88 \%$ to $\$ 7.46$ million, compared with $\$ 3.97$ million in the previous year. We expect these increases in sales by product mix to continue as we execute our strategy of developing new wholesale and direct-to-consumer sales channels and expanding our finished jewelry business.

## 2012 Summary

The following is a summary of key financial results and certain non-financial results achieved for the year ended December 31, 2012:

- We grew our total consolidated net sales by $\$ 6.42$ million, or $40 \%$, to $\$ 22.45$ million in 2012 from $\$ 16.03$ million in 2011. The improvement in 2012 sales was primarily due to the ongoing execution of our growth strategies, including initiatives to increase consumer awareness of moissanite through marketing support of our customer base; the addition of several new wholesale customers and the expansion of existing wholesale customer relationships; the introduction of our new whiter Forever Brilliant ${ }^{\mathbb{B}}$ moissanite jewel; and the growth of our wholesale customers' moissanite finished jewelry lines with styles that include both Forever Brilliant ${ }^{\circledR}$ and our other grades of loose jewels. The improvement in 2012 consolidated net sales was also attributable to an over $150 \%$ increase in finished jewelry sales to a major home shopping network wholesale customer; and the growth of our direct-to-consumer businesses, Moissanite.com and Lulu Avenue ${ }^{T M}$, which collectively increased their net sales $709 \%$ to $\$ 1.64$ million.
- Operating expenses increased by $\$ 4.00$ million, or $49 \%$, to $\$ 12.22$ million in 2012 from $\$ 8.22$ million in 2011 primarily as a result of personnel additions and advertising, marketing, and branding initiatives incurred to position our company for future growth, especially with respect to the two wholly owned operating subsidiaries formed in 2011 for our e-commerce and home party direct sales businesses. As we grow our business, we intend to continue to closely manage our operating expenses by seeking the most cost effective and efficient solutions to our operating requirements.
- Net income increased by $\$ 2.81$ million, or $179 \%$, to $\$ 4.38$ million in 2012 from $\$ 1.57$ million in 2011. Earnings per share was $\$ 0.22$ and $\$ 0.08$ per diluted share in 2012 and 2011, respectively. Net income for the year ended December 31, 2012 included a $\$ 4.05$ million net income tax benefit, which contributed $\$ 0.20$ per diluted share, comprised of a reduction of a valuation allowance on certain deferred tax assets based on our expectation of their future utilization and the reversal of a liability for an uncertain tax position resulting from a voluntary disclosure agreement we entered into with a taxing authority. As discussed above, sales increases in 2012 were offset by higher operating expenses as we continued the investment in our strategic initiatives.
- We generated positive cash flows from operations of $\$ 2.78$ million in 2012 compared to $\$ 3.45$ million in 2011. The primary drivers of positive cash flow were our net income of $\$ 4.38$ million that included $\$ 1.45$ million of net non-cash benefit, a decrease in interest receivable of $\$ 11,000$, a net decrease in inventory of $\$ 2.11$ million, and an increase in trade accounts payable of $\$ 1.05$ million. These factors more than offset an
increase in trade accounts receivable of $\$ 2.63$ million, an increase in prepaid expenses and other assets of $\$ 316,000$, and a net decrease in accrued liabilities of $\$ 377,000$.

Cash and liquid government agency investments at December 31, 2012 were $\$ 12.37$ million compared to $\$ 10.46$ million at December 31, 2011. The primary reason for this increase is the $\$ 2.78$ million cash flow from operations.

- Total inventory, including long-term and consignment inventory, was $\$ 32.80$ million as of December 31, 2012, down from approximately $\$ 35.01$ million at December 31, 2011. This decrease is primarily a result of higher sales, offset in part by purchases in 2012 of jewelry castings, findings, and other jewelry components; purchases of fashion finished jewelry in support of our Lulu Avenue ${ }^{T M}$ home party direct sales business; and production of moissanite jewels. We believe we have a significant opportunity to build our cash position as we sell down our on-hand loose moissanite jewel inventory.

We continue to carry no long-term debt and believe we can fund our growth strategies for the foreseeable future from operating cash flows.

## Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which we prepared in accordance with accounting principles generally accepted in the United States, or U.S. GAAP. The preparation of these consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues, and expenses and related disclosures of contingent assets and liabilities. "Critical accounting policies and estimates" are defined as those most important to the financial statement presentation and that require the most difficult, subjective, or complex judgments. We base our estimates on historical experience and on various other factors that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Under different assumptions and/or conditions, actual results of operations may materially differ. The most significant estimates impacting our consolidated financial statements relate to valuation and classification of inventories, accounts receivable reserves, deferred tax assets, uncertain tax positions, cooperative advertising, and revenue recognition on transactions with extended payment terms. We also have other policies that we consider key accounting policies, but these policies typically do not require us to make estimates or judgments that are difficult or subjective.

Inventories - Inventories are stated at the lower of cost or market on an average cost basis. Our finished goods inventory consists primarily of near-colorless moissanite jewels that meet rigorous grading criteria and are of cuts and sizes most commonly used in the jewelry industry. As of December 31, 2012, we carried only a limited amount of moissanite jewels in finished jewelry settings, and the carrying value of these jewels is included in the finished jewelry valuation described below. Our loose moissanite jewel inventories do not degrade in quality over time and are not subject to fashion trends. We have very small market penetration in the worldwide jewelry market and have the exclusive right in the U.S. through mid-2015 and in many other countries through mid-2016 to produce and sell created SiC for use in jewelry applications. In view of the foregoing factors, we have concluded that no excess or obsolete loose jewel inventory reserve requirements existed as of December 31, 2012.

Jewelry inventories consist primarily of finished goods, a portion of which we acquired as part of a January 2009 settlement agreement with a former manufacturer customer to reduce the outstanding receivable to us. Due to the lack of a plan to market this inventory at that time, a jewelry inventory reserve was established to reduce the majority of the acquired jewelry inventory value to scrap value, or the amount we would expect to obtain by melting the gold in the jewelry and returning to loose-jewel finished goods inventory those jewels that meet grading standards. To determine the amount of the jewelry reserve, we needed to estimate the amount of gold in each piece of jewelry, the price per ounce we would receive for the gold, and the amount of jewels that could be returned to finished goods inventory. The scrap reserve of $\$ 132,000$ and $\$ 173,000$ at December 31,2012 and 2011, respectively, established for this acquired inventory at the time of the agreement is adjusted at each reporting period for the market price of gold and has generally declined as the associated jewelry is sold down. In 2010, we entered the finished jewelry business and began manufacturing finished jewelry featuring moissanite pursuant to an operational plan to market and sell the inventory. As a result, the moissanite finished jewelry we currently produce is not subject to this reserve.

Relative to loose moissanite jewels, finished jewelry is more fashion oriented and subject to styling trends that could render certain designs obsolete. The majority of our finished jewelry featuring moissanite is held in inventory for resale and consists of such basic designs as stud earrings, solitaire and threestone rings, pendants, and bracelets that tend not to be subject to significant obsolescence risk due to their classic styling. In addition, we manufacture small individual quantities of designer-inspired moissanite fashion jewelry as part of our sample line that are used in the selling process to our wholesale customers.

In 2011, we began purchasing fashion finished jewelry comprised of base metals and non-precious gemstones for sale through Lulu Avenue ${ }^{T M}$, the direct-toconsumer home party division of our wholly owned operating subsidiary, Charles \& Colvard Direct. This finished jewelry is fashion oriented and subject to styling trends that may change with each catalog season, of which there are several each year. Typically in the jewelry industry, slow-moving or discontinued lines are sold as closeouts or liquidated in alternative sales channels. We review the finished jewelry inventory on an ongoing basis for any lower of cost or market and obsolescence issues and have concluded that no such finished jewelry inventory reserve requirements relating to our new line of finished jewelry featuring moissanite and fashion finished jewelry products existed as of December 31, 2012.

We also maintain loose jewel and finished jewelry inventory reserves for shrinkage, recuts, and repairs. Shrinkage refers to loose jewels and finished jewelry on review with customers and vendors that may not be returned to us. The recuts reserve is for the projected material loss resulting from the recutting of damaged jewels into smaller loose jewels to remove the damage. The repairs reserve is for finished jewelry in need of repair before it can be returned to finished goods inventory and be available for sale.

Any inventory on hand at the measurement date in excess of our current requirements based on historical and anticipated levels of sales is classified as longterm on our consolidated balance sheets. Our classification of long-term inventory requires us to estimate the portion of inventory that can be realized over the next 12 months and does not include precious metal, labor, and other inventory purchases expected to be both purchased and realized over the next 12 months.

Accounts Receivable Reserves - Estimates are used to determine the amount of two reserves against trade accounts receivable. The first reserve is an allowance for sales returns. At the time revenue is recognized, we estimate future returns using a historical return rate that is reviewed quarterly with consideration of any contractual return privileges granted to customers, and we reduce sales and trade accounts receivable by this estimated amount. The allowance for sales returns was $\$ 463,000$ and $\$ 156,000$ at December 31, 2012 and 2011, respectively.

The second reserve is an allowance for doubtful accounts for estimated losses resulting from the failure of our customers to make required payments. This allowance reduces trade accounts receivable to an amount expected to be collected. Based on historical percentages of uncollectible accounts by aging category, changes in payment history, and facts and circumstances regarding specific accounts that become known to management when evaluating the adequacy of the allowance for doubtful accounts, we determine a percentage based on the age of the receivable that we deem uncollectible. The allowance is then calculated by applying the appropriate percentage to each of our accounts receivable aging categories, with consideration given to individual customer account activity subsequent to the current period, including cash receipts, in determining the appropriate allowance for doubtful accounts in the current period. Any increases or decreases to this allowance are charged or credited, respectively, as a bad debt expense to general and administrative expenses. We generally use an internal collection effort, which may include our sales personnel as we deem appropriate. After all internal collection efforts have been exhausted, we generally write off the account receivable.

Any accounts with significant balances are reviewed separately to determine an appropriate allowance based on the facts and circumstances of the specific account. During our reviews for 2012 and 2011, we analyzed several of our slower-paying customers and determined that no additional reserves were necessary. Based on these criteria, we determined that allowances for doubtful accounts receivable of $\$ 549,000$ and $\$ 380,000$ at December 31, 2012 and 2011, respectively, were required.

Deferred Tax Assets - U.S. GAAP guidance requires that all deferred tax assets of the company be assessed to determine if a valuation allowance is required. A valuation allowance is required if it is determined that it is more likely than not, or greater than a $50 \%$ probability, that some portion or all of the deferred tax assets will not be realized. The guidance states further that "forming a conclusion that a valuation allowance is not needed is difficult when there is negative evidence such as cumulative losses in recent years." Based on our tax losses in prior tax years

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and the lack of verifiable positive evidence of sufficient future taxable income to fully use our net operating loss carryforward and other deferred tax assets, we established valuation allowances against all U.S. deferred tax assets of $\$ 4.43$ million as of December 31, 2011. As of each reporting date, management considers new evidence, both positive and negative, that could impact its view with regard to future realization of deferred tax assets. For the year ended December 31, 2012, cumulative positive taxable income over the last three years had been generated, offsetting the negative evidence of cumulative losses in previous years. We also determined that our expectations of future taxable income in upcoming tax years would be sufficient to result in full utilization of these net operating loss carryforwards and deferred tax assets prior to any statutory expiration. As a result, management determined that sufficient positive evidence exists as of December 31, 2012 to conclude that it is more likely than not deferred tax assets of $\$ 3.73$ million are realizable, and we reduced our valuation allowance accordingly. The reduction of the valuation allowances against these deferred tax assets resulted in an income tax benefit during the year ended December 31 , 2012 of $\$ 3.73$ million. A valuation allowance remains against certain deferred tax assets relating to state net operating loss carryforwards from our e-commerce and home party operating subsidiaries due to the timing uncertainty of when the subsidiaries will generate cumulative positive taxable income to utilize the associated deferred tax assets. A valuation allowance also remains against certain deferred tax assets relating to investment loss carryforwards because our current investments are classified as held-to-maturity, indicating they will be redeemed at par value and will not generate gains sufficient to utilize the associated deferred tax assets.

Our deferred tax assets in Hong Kong were fully reserved with a valuation allowance of \$996,000 as of December 31, 2012 and 2011 and had been fully reserved in all prior periods due to the uncertainty of future taxable income in this jurisdiction to utilize the deferred tax assets. Our Hong Kong subsidiary ceased operations during 2008 and became a dormant entity during 2009. If we use any portion of our deferred tax assets in future periods, the valuation allowance would need to be reversed and may impact our future operating results.

Uncertain Tax Positions - Effective January 1, 2007, we adopted U.S. GAAP guidance regarding the de-recognition, classification, accounting in interim periods, and disclosure requirements for uncertain tax positions. Determining which tax positions qualify as uncertain positions and the subsequent accounting for these positions requires significant estimates and assumptions. Our net accrued income tax liability under the provisions of this guidance was $\$ 384,000$ and $\$ 742,000$ at December 31, 2012 and 2011, respectively. This liability is only resolved when we obtain an official ruling from the tax authority on the positions or when the statute of limitations expires. We resolved an outstanding uncertain position with one tax authority during 2012 and one tax authority during 2011 that reduced our liability and created net tax benefits of $\$ 326,000$ and $\$ 252,000$, respectively. In addition, we reduced a valuation allowance associated with expired research and development credits by $\$ 24,000$.

Cooperative Advertising - We offer a cooperative advertising program to many of our wholesale customers that reimburses, via a credit towards future purchases, a portion of their marketing costs based on their net purchases from us. At the end of any given period, we estimate the amount of cooperative advertising expense that has not yet been submitted for credit by our customers. These amounts were $\$ 200,000$ and $\$ 213,000$ at December 31,2012 and 2011 , respectively. We estimate this amount based on our historical experience with each customer and the related contractual arrangements to provide certain levels of cooperative advertising for our customers. Any differences in actual amounts to our estimates will result in a charge or credit to sales and marketing expenses.

Revenue Recognition - Revenue is recognized when title transfers at the time of shipment from our or a third-party fulfillment company's facility, excluding consignment shipments as discussed below; evidence of an arrangement exists; pricing is fixed and determinable; and collectibility is reasonably assured. Our standard wholesale customer payment terms are generally between 30 and 90 days, though we may offer extended terms from time to time. Some wholesale customers and all direct-to-consumer customers are required to prepay prior to shipment. At the time revenue is recognized, an allowance for estimated returns is established. Any change in the allowance for returns is charged against net sales. Our return policy allows for the return of loose jewels and finished jewelry for credit generally within 30 days of shipment and must be returned for a valid reason, such as quality problems or an error in shipment. From time to time, some wholesale customers may have a contractual right to return a certain percentage of goods for any reason for specified periods of time. In these instances, we only recognize revenue when the contractual right of return is exhausted. Periodically, we ship finished goods inventory to wholesale customers on consignment terms. Under these terms, the customer assumes the risk of loss and has an absolute right of return for a specified period that typically ranges from six months to one year. Our wholesale customers are generally required to make payments on consignment shipments within 60 days upon the customer informing us that it will keep the inventory. Accordingly, we do not recognize revenue on these consignment transactions until the earlier of (1) the customer informing us that it will keep the inventory or (2) the expiration of the right of return period.

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Recent Accounting Pronouncements - See Note 2 to our consolidated financial statements in Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K for a description of recent accounting pronouncements, including the expected dates of adoption and estimated effects, if any, on our consolidated financial statements.

## Results of Operations

The following table sets forth certain consolidated statements of operations data for the years ended December 31, 2012 and 2011.

|  | Year Ended December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |
| Net sales | \$ | 22,450,498 | \$ | 16,033,408 |
| Costs and expenses: |  |  |  |  |
| Cost of goods sold |  | 9,971,663 |  | 6,510,452 |
| Sales and marketing |  | 7,443,784 |  | 3,312,383 |
| General and administrative |  | 4,756,432 |  | 4,671,111 |
| Research and development |  | 17,013 |  | 145,720 |
| Loss on abandonment of assets |  | 2,016 |  | 94,408 |
| Total costs and expenses |  | 22,190,908 |  | 14,734,074 |
| Income from operations |  | 259,590 |  | 1,299,334 |
| Other income (expense): |  |  |  |  |
| Interest income |  | 69,520 |  | 85,271 |
| Interest expense |  | $(1,260)$ |  | $(1,141)$ |
| Gain on call of long-term investments |  | - |  | 721 |
| Total other income |  | 68,260 |  | 84,851 |
| Income before income taxes |  | 327,850 |  | 1,384,185 |
| Income tax net benefit |  | 4,049,804 |  | 183,947 |
| Net income | \$ | 4,377,654 | \$ | 1,568,132 |

## Consolidated Net Sales

Consolidated net sales for the years ended December 31, 2012 and 2011 comprise the following:

|  | Year Ended December 31, |  |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  | Dollars |  | Percent |
| Loose jewels | \$ | 14,991,398 | \$ | 12,065,414 | \$ | 2,925,984 | 24\% |
| Finished jewelry |  | 7,459,100 |  | 3,967,994 |  | 3,491,106 | 88\% |
| Total consolidated net sales | \$ | 22,450,498 | \$ | 16,033,408 | \$ | 6,417,090 | 40\% |

Consolidated net sales were $\$ 22.45$ million for the year ended December 31, 2012 compared to $\$ 16.03$ million for the year ended December 31, 2011, an increase of $\$ 6.42$ million, or $40 \%$. The improvement in 2012 consolidated net sales was due primarily to an increase in loose jewel sales to our wholesale customer base resulting from the June 2012 launch of our new whiter Forever Brilliant ${ }^{\mathbb{B}}$ moissanite jewel and the growth of our wholesale customers’ moissanite finished jewelry lines with styles that include both Forever Brilliant ${ }^{\circledR}$ and our loose jewel standard grades. The improvement in 2012 consolidated net sales was also attributable to a significant increase in finished jewelry sales to a major home shopping network wholesale customer; and the growth of our direct-to-consumer businesses, Moissanite.com and Lulu Avenue ${ }^{T M}$, which collectively increased $709 \%$ to $\$ 1.64$ million. We anticipate orders and related sales of both loose moissanite jewels and finished jewelry featuring moissanite in both our wholesale distribution segment and direct-to-consumer distribution segment will improve as we continue to execute our growth strategies.

Sales of loose jewels represented $67 \%$ and $75 \%$ of total consolidated net sales for the years ended December 31, 2012 and 2011, respectively. For the year ended December 31, 2012, loose jewel sales were $\$ 14.99$ million compared to $\$ 12.07$ million for the year ended December 31 , 2011 , an increase of $\$ 2.93$ million, or $24 \%$. This
increase was primarily attributable to robust orders received from our wholesale customer base upon the June 2012 launch of our new whiter Forever Brilliant ${ }^{\mathbb{B}}$ moissanite jewel as well as increased orders for Forever Brilliant ${ }^{\circledR}$ and other grades of loose jewels resulting from the growth of our wholesale customers' moissanite finished jewelry lines.

Sales of finished jewelry represented $33 \%$ and $25 \%$ of total consolidated net sales for the years ended December 31, 2012 and 2011, respectively. For the year ended December 31, 2012, finished jewelry sales were $\$ 7.46$ million compared to $\$ 3.97$ million for the year ended December 31, 2011, an increase of $\$ 3.49$ million, or $88 \%$. This increase was attributable to our ongoing expansion into the finished jewelry business through the creation of new sales channels, including televised home shopping networks in our wholesale distribution segment and the growth of our e-commerce and home party businesses in our direct-to-consumer distribution segment. In the years ended December 31, 2012 and 2011, we experienced a higher degree of seasonality in the fourth quarter than we have previously experienced in prior years primarily as a result of Christmas and holiday season wholesale finished jewelry sales to television shopping networks. In the fourth quarter of 2012, we also experienced a higher level of sales to end consumers through our direct-to-consumer e-commerce website, Moissanite.com. In future periods as sales of our finished jewelry increase to retailers and directly to consumers, both in dollars and as a percent of total sales, we anticipate a seasonality trend more typical with the retail jewelry industry, and these factors may significantly affect our results of operations in a given quarter.
U.S. net sales accounted for approximately $75 \%$ and $67 \%$ of total consolidated net sales during the years ended December 31, 2012 and 2011, respectively. U.S. net sales increased $58 \%$ during 2012 primarily due to an increase in loose jewel sales to our wholesale customer base resulting from the launch of our new whiter Forever Brilliant ${ }^{\circledR}$ moissanite jewel and the growth of our wholesale customers' moissanite finished jewelry lines. The increase in U.S. sales was also attributable to a significant increase in finished jewelry sales to a major home shopping network wholesale customer and the growth of our direct-toconsumer businesses, Moissanite.com and Lulu Avenue ${ }^{T M}$.

Our two largest U.S. customers during the year ended December 31, 2012 accounted for $27 \%$ and $11 \%$, respectively, of our total consolidated sales compared to $15 \%$ and $12 \%$, respectively, during the year ended December 31, 2011. A third U.S. customer accounted for $11 \%$ of our total consolidated sales during the year ended December 31, 2011 but did not account for more than $10 \%$ of our total consolidated sales during the year ended December 31, 2012. No additional U.S. customers accounted for more than $10 \%$ of total consolidated sales in 2012 or 2011 . We expect that we will remain dependent on our ability, and that of our largest customers, to maintain and enhance retail programs. A change in or loss of any of these customer or retailer relationships could have a material adverse effect on our results of operations.

International net sales accounted for approximately $25 \%$ and $33 \%$ of total consolidated net sales during the years ended December 31, 2012 and 2011, respectively. International net sales increased $4 \%$ during 2012 primarily as a result of restocking orders from our existing international wholesale customer base due to the growth of their moissanite businesses. No international customers accounted for more than $10 \%$ of total consolidated sales in 2012 or 2011. A portion of our international consolidated sales represents jewels sold internationally that may be re-imported to U.S. retailers. Our top three international distributors by sales volume during the year ended December 31, 2012 were located in Hong Kong and China.

## Costs and Expenses

## Cost of Goods Sold

Cost of goods sold for the years ended December 31, 2012 and 2011 are as follows:

|  | Year Ended December 31, |  |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  | Dollars |  | Percent |
| Product line cost of goods sold |  |  |  |  |  |  |  |
| Loose jewels | \$ | 4,686,526 | \$ | 3,809,579 | \$ | 876,947 | 23\% |
| Finished jewelry |  | 3,587,458 |  | 2,193,997 |  | 1,393,461 | 64\% |
| Total product line cost of goods sold |  | 8,273,984 |  | 6,003,576 |  | 2,270,408 | 38\% |
| Non-product line cost of goods sold |  | 1,697,679 |  | 506,876 |  | 1,190,803 | 235\% |
| Total cost of goods sold | \$ | 9,971,663 | \$ | 6,510,452 | \$ | 3,461,211 | 53\% |

Total cost of goods sold was $\$ 9.97$ million for the year ended December 31, 2012 compared to $\$ 6.51$ million for the year ended December 31, 2011, an increase of $\$ 3.46$ million, or $53 \%$. Product line cost of goods sold is defined as product cost of goods sold in each of our wholesale distribution and direct-toconsumer distribution operating segments excluding non-capitalized expenses from our manufacturing and production control departments, comprising personnel costs, depreciation, rent, utilities, and corporate overhead allocations; freight out; inventory valuation allowance adjustments; and other inventory adjustments, comprising costs of quality issues, damaged goods, and inventory write-offs.

The increase in cost of goods sold was primarily due to a $\$ 877,000$ increase in loose jewel product line cost of goods sold resulting from the $24 \%$ increase in loose jewel sales, a $\$ 1.39$ million increase in finished jewelry product line cost of goods sold resulting from the $88 \%$ increase in finished jewelry sales offset in part by improved product margins, and a net increase in non-product line cost of goods sold of $\$ 1.19$ million. The net increase in non-product line cost of goods sold comprises a $\$ 679,000$ net increase in non-capitalized manufacturing and production control expenses primarily due to staffing increases and investments in improved processing capabilities; a $\$ 367,000$ increase in inventory valuation adjustments, including inventory shrinkage, recuts, repairs, and scrap reserves; a $\$ 114,000$ increase in other inventory adjustments, and a $\$ 31,000$ increase in freight out.

## Sales and Marketing

Sales and marketing expenses for the years ended December 31, 2012 and 2011 are as follows:

|  | Year Ended December 31, |  |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  | Dollars |  | Percent |
| Sales and marketing | \$ | 7,443,784 | \$ | 3,312,383 | \$ | 4,131,401 | 125\% |

Sales and marketing expenses were $\$ 7.44$ million for the year ended December 31, 2012 compared to $\$ 3.31$ million for the year ended December 31 , 2011, an increase of $\$ 4.13$ million, or $125 \%$.

The increase in sales and marketing expenses was primarily due to a $\$ 1.45$ million net increase in advertising expenses; a $\$ 1.43$ million net increase in compensation costs; a $\$ 641,000$ increase in professional services related to the addition of temporary personnel, consulting services, and the maintenance of software platforms for our direct-to-consumer e-commerce and home party lines of business; a $\$ 223,000$ increase in travel-related expenses resulting from new sales and marketing personnel and expanding business opportunities; a $\$ 188,000$ increase in office-related expenses to support a larger sales and marketing organization; and a $\$ 164,000$ increase in depreciation expense related to the Moissanite.com and Lulu Avenue ${ }^{T M}$ e-commerce websites. The increase in advertising expenses comprises an increase in Internet marketing of \$746,000 due primarily to paid search advertising in support of our Moissanite.com and Lulu Avenue ${ }^{T M}$ e-commerce websites, an increase in print media advertising of $\$ 349,000$ due primarily to our whiter Forever Brilliant ${ }^{\circledR}$ moissanite jewel trade awareness campaign, and an increase in cooperative advertising expenses of $\$ 190,000$ resulting primarily from the increase in sales of loose jewels compared to the same period in the prior year and a special incentive offered to a small number of wholesale customers in exchange for targeted holiday marketing. In addition, agency retainer expenses increased by $\$ 74,000$; television media advertising increased by $\$ 50,000$ due to a special allowance granted to a customer in exchange for a targeted moissanite campaign; and targeted marketing, trade shows, and sponsorships increased by $\$ 40,000$. Compensation costs increased primarily as a result of merit salary adjustments that became effective in the first quarter of 2012 and new sales and marketing personnel added during the latter part of 2011 and during 2012 in the aggregate of $\$ 1.33$ million and an increase in commissions of $\$ 283,000$ due to increasing sales and the timing of orders by specific customers under which commission plans of sales representatives are based. These increases in compensation costs were offset in part by a decrease in bonus expense of $\$ 121,000$, a decrease in employee relocation costs of $\$ 31,000$, and a decrease in stock-based compensation expense of $\$ 21,000$.

We expect our total sales and marketing expenses will continue to increase as sales increase, but the rate of growth should slow and become a lower percentage of sales as expenses more variable in nature, such as advertising and commissions, increase as part of our strategy to build sales; but fixed expenses, such as compensation costs, remain relatively constant.

## General and Administrative

General and administrative expenses for the years ended December 31, 2012 and 2011 are as follows:


General and administrative expenses were $\$ 4.76$ million for the year ended December 31,2012 compared to $\$ 4.67$ million for the year ended December 31 , 2011 , an increase of $\$ 85,000$, or $2 \%$.

The increase in general and administrative expenses was primarily due to a $\$ 113,000$ increase in depreciation and amortization expense related to additional information technology infrastructure to support a growing organization, a $\$ 98,000$ increase in consulting and other professional services primarily relating to the support of our enterprise resource planning system that was placed in service during the first quarter of 2012 and the re-launch of our corporate website during the third quarter of 2012, a $\$ 51,000$ net increase in compensation costs, a $\$ 44,000$ increase in Board member compensation due to the addition of a Board seat and greater number of committee meetings held during the year for strategic matters, a $\$ 35,000$ increase in recruiting expenses associated with newly created positions to support our administration and information technology departments, a $\$ 35,000$ increase in office-related expenses to support a larger general and administrative organization, and a $\$ 21,000$ increase in personal property and franchise taxes. These increases were offset in part by a $\$ 213,000$ decrease in bad debt expense associated with our allowance for doubtful accounts reserve policy, a $\$ 61,000$ decrease in legal professional services, a $\$ 20,000$ decrease in commercial insurance expenses, an $\$ 11,000$ net decrease in investor and public relations services due to the expiration of a public relations services contract, and a $\$ 7,000$ decrease in travel-related expenses associated with investor, customer, and supplier meetings. Compensation costs increased primarily as a result of merit salary adjustments that became effective in the first quarter of 2012 and new general and administrative personnel added during the latter part of 2011 and during 2012 in the aggregate of $\$ 157,000$, an increase in stock-based compensation expense of $\$ 33,000$, and an increase in employee relocation costs of $\$ 13,000$. These increases in compensation costs were offset in part by a decrease in bonus expense of $\$ 152,000$.

## Research and Development

Research and development expenses for the years ended December 31, 2012 and 2011 are as follows:

|  | Year Ended December 31, |  |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  | Dollars |  | Percent |
| Research and development | \$ | 17,013 | \$ | 145,720 | \$ | $(128,707)$ | -88\% |

Research and development expenses were $\$ 17,000$ for the year ended December 31,2012 compared to $\$ 146,000$ for the year ended December 31,2011 , a decrease of $\$ 129,000$, or $88 \%$.

The decrease in research and development expenses was primarily due to a $\$ 129,000$ decrease in compensation and office-related expenses. Specifically, internal research and development resources were no longer necessary as a result of our agreement with Serenity Technologies, Inc. to color enhance our moissanite jewels and were redeployed to the manufacture of loose jewels.

## Loss on Abandonment of Assets

Loss on abandonment of assets for the years ended December 31, 2012 and 2011 is as follows:

|  | Year Ended December 31, |  |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  | Dollars |  | Percent |
| Loss on abandonment of assets | \$ | 2,016 | \$ | 94,408 | \$ | $(92,392)$ |  |

Loss on abandonment of assets was $\$ 2,000$ for the year ended December 31, 2012 compared to $\$ 94,000$ for the year ended December 31 , 2011, a decrease of $\$ 92,000$, or $98 \%$.

The decrease in loss on abandonment of assets was due to the fact that, during the second quarter of 2011, we identified jewelry-specific manufacturing software that we believed would improve our merchandising, production, and inventory efficiencies and reporting. Because our management decided to purchase and implement this software, prior capitalized manufacturing software modifications not yet placed in service of approximately $\$ 94,000$ to our thencurrent enterprise resource planning system were abandoned and recorded as a loss on abandonment of assets during the year ended December 31 , 2011.

## Interest Income

Interest income for the years ended December 31, 2012 and 2011 is as follows:

|  | Year Ended December 31, |  |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  | Dollars |  | Percent |
| Interest income | \$ | 69,520 | \$ | 85,271 | \$ | $(15,751)$ | -18\% |

Interest income was $\$ 70,000$ for the year ended December 31,2012 compared to $\$ 85,000$ for the year ended December 31 , 2011, a decrease of $\$ 16,000$, or $18 \%$.

The decrease in interest income resulted primarily from investing less cash in U.S. government agency securities due to the $\$ 3.25$ million in such securities called during the year ended December 31, 2012 and holding on average more cash in lower yielding money market accounts during 2012 as compared to 2011.

## Provision for Income Taxes

We recognized an income tax net benefit of approximately $\$ 4.05$ million and $\$ 184,000$ for the years ended December 31 , 2012 and 2011 , respectively.

During 2008, we recorded a full valuation allowance against certain deferred tax assets consisting primarily of net operating loss carryforwards. Due to uncertainty over sufficient future taxable income to fully utilize these deferred tax assets, we did not record an income tax expense for the pretax income incurred during the year ended December 31, 2011, with the exception of an alternative minimum tax in the amount of $\$ 12,000$, nor did we reduce the valuation allowance against these deferred tax assets. As of each reporting date, management considers new evidence, both positive and negative, that could impact its view with regard to future realization of deferred tax assets. For the year ended December 31, 2012, cumulative positive taxable income over the last three years had been generated, offsetting the negative evidence of cumulative losses in previous years. We also determined that our expectations of future taxable income in upcoming tax years would be sufficient to result in full utilization of these net operating loss carryforwards and deferred tax assets prior to any statutory expiration. As a result, management determined that sufficient positive evidence exists as of December 31, 2012 to conclude that it is more likely than not deferred tax assets of $\$ 3.73$ million are realizable, and we reduced our valuation allowance accordingly. The reduction of the valuation allowances against these deferred tax assets resulted in an income tax benefit during the year ended December 31, 2012 of $\$ 3.73$ million. A valuation allowance remains against certain deferred tax assets relating to state net operating loss carryforwards from our e-commerce and home party operating subsidiaries due to the timing uncertainty of when the subsidiaries will generate cumulative positive taxable income to utilize the associated deferred tax assets. A valuation allowance also remains against certain deferred tax assets relating to investment loss carryforwards because our current investments are classified as held-to-maturity, indicating they will be redeemed at par value and will not generate gains sufficient to utilize the associated deferred tax assets.

During the year ended December 31, 2012, we also entered into a voluntary disclosure agreement with a taxing authority for which we had previously recorded a liability for an uncertain tax position. As a result of the agreement, we reduced our total recorded liabilities relating to uncertain tax positions by approximately $\$ 374,000$, paid approximately $\$ 48,000$ to the taxing authority, and recognized a corresponding income tax benefit of $\$ 326,000$. This benefit was offset by approximately $\$ 16,000$ of net income tax expense for the year ended December 31, 2012 for estimated tax, penalties, and interest for other uncertain tax positions. We also reduced our net liability for uncertain tax positions by approximately $\$ 24,000$ and recognized a corresponding income tax benefit due to the expiration of a portion of research and development tax credits included in our deferred tax assets.

During the year ended December 31, 2011, we entered into a voluntary disclosure agreement with a taxing authority for which we had previously recorded a liability for an uncertain tax position. As a result of the agreement, we
reduced our total recorded liabilities relating to uncertain tax positions by approximately $\$ 252,000$ and recognized a corresponding income tax benefit. This benefit was offset by approximately $\$ 57,000$ of income tax expense for estimated tax, penalties, and interest for other uncertain tax positions.

Our statutory tax rate is $36.7 \%$ and consists of the federal income tax rate of $34 \%$ and a blended state income tax rate of $2.7 \%$, net of the federal benefit.

## Liquidity and Capital Resources

We require cash to fund our operating expenses and working capital requirements, including outlays for capital expenditures. As of December 31, 2012, our principal sources of liquidity were cash and cash equivalents totaling $\$ 11.86$ million, trade accounts receivable of $\$ 8.14$ million, and short-term inventory of $\$ 8.44$ million, as compared to cash and cash equivalents totaling $\$ 6.70$ million, trade accounts receivable of $\$ 6.06$ million, and short-term inventory of $\$ 6.85$ million as of December 31, 2011. We had $\$ 3.76$ million of highly liquid U.S. government agency securities at December 31, 2011 that we classified as held-to-maturity long-term assets on our consolidated balance sheets due to our positive intention and ability to hold these securities until their maturity dates. During the year ended December 31, 2012, U.S. government agency securities totaling $\$ 3.25$ million were called by issuers prior to their maturity dates, resulting in a net held-to-maturity investments balance at December 31, 2012 of $\$ 505,000$. Because these underlying securities mature in less than one year, they have been classified as current assets on our consolidated balance sheets.

During the year ended December 31, 2012, our working capital increased by approximately $\$ 9.82$ million to $\$ 28.01$ million from $\$ 18.19$ million at December 31, 2011. As described more fully below, the increase in working capital at December 31, 2012 is primarily attributable to an increase in cash and cash equivalents, an increase in trade accounts receivable, a greater allocation of inventory to short-term, the reclassification of held-to-maturity investments to short-term, an increase in prepaid expenses and other assets, an increase in deferred income taxes, and a net decrease in accrued expenses and other liabilities, offset in part by a decrease in interest receivable and an increase in trade accounts payable.

During the year ended December 31, 2012, $\$ 2.78$ million of cash was provided by operations. The primary drivers of positive cash flow were our net income of $\$ 4.38$ million that included $\$ 1.45$ million of net non-cash benefit, a decrease in interest receivable of $\$ 11,000$, a net decrease in inventory of $\$ 2.11$ million, and an increase in trade accounts payable of $\$ 1.05$ million. These factors more than offset an increase in trade accounts receivable of $\$ 2.63$ million, an increase in prepaid expenses and other assets of $\$ 316,000$, and a net decrease in accrued liabilities of $\$ 377,000$. Inventories decreased primarily due to sales in excess of production of loose jewels and finished jewelry, as we have limited production of loose jewels and continued to sell down finished jewelry produced in prior years in addition to new jewelry styles produced in the current year. Accounts payable increased primarily as a result of the timing of costs incurred but not yet paid as of December 31, 2012 associated with inventory-related purchases and professional services incurred but not yet due under our vendors' payment terms. Accounts receivable increased primarily due to higher sales in the fourth quarter of 2012 and extended wholesale customer payment terms that we offer from time to time that may not immediately increase liquidity as a result of current-period sales. We believe our competitors and other vendors in the wholesale jewelry industry have also expanded their use of extended payment terms and, in aggregate, we believe that by expanding our use of extended payment terms, we have provided a competitive response in our market and that our net sales have been favorably impacted. We are unable to estimate the impact of this program on our net sales, but if we ceased providing extended payment terms in select instances, we believe we would not be competitive for some wholesale customers in the marketplace and that our net sales and profits would likely decrease. We have not experienced any significant accounts receivable write-offs related to revenue arrangements with extended payment terms.

We manufactured approximately $\$ 2.69$ million in loose jewels and $\$ 5.13$ million in finished jewelry, which includes the cost of the loose jewels and the purchase of precious metals and labor in connection with jewelry production, during the year ended December 31, 2012. We expect our purchases of precious metals and labor to increase as we increase our finished jewelry business. In addition, from the beginning of 2006 through 2012, the price of gold has increased significantly (approximately $214 \%$ ), resulting in higher retail price points for gold jewelry. Because the market price of gold and other precious metals is beyond our control, the recent upward price trends could continue and have a negative impact on our operating cash flow as we manufacture finished jewelry.

Historically, our raw material inventories of SiC crystals had been purchased under exclusive supply agreements with a limited number of suppliers. Because the supply agreements restricted the sale of these crystals exclusively to us, the suppliers negotiated minimum purchase commitments with us that, when combined with our reduced sales, have resulted in levels of inventories that are higher than we might otherwise maintain. We did not make any purchases of raw material SiC crystals inventory during the year ended December 31, 2012. As of December 31, 2012, $\$ 24.35$ million of our inventories were classified as long-term assets. Loose jewel sales and finished jewelry that we manufacture will utilize the finished good loose jewels currently on hand and, as we deplete certain shapes and sizes, our on-hand raw material SiC crystals of $\$ 3.19$ million are expected to meet our replenishment needs until new raw material is delivered by Cree during fiscal 2013.

In connection with the Cree Exclusive Supply Agreement, which expires in July 2015, we have committed to purchase from Cree a minimum of $50 \%$, by dollar volume, of our raw material SiC crystal requirements. If our orders require Cree to expand beyond specified production levels, we must commit to purchase certain minimum quantities. As of December 31, 2012, we had no outstanding purchase commitments under the Cree Exclusive Supply Agreement.

Effective February 8, 2013, we entered into an amendment to a prior letter agreement with Cree, which provides a framework for our purchases of SiC crystals under the Cree Exclusive Supply Agreement. Pursuant to this amendment, we agreed to purchase at least $\$ 4.00$ million of SiC crystals in an initial new order. After the initial new order, we have agreed to issue non-cancellable, quarterly orders that must equal or exceed a set minimum order quantity. Our total purchase commitment under the amendment until July 2015, including the initial new order, is dependent upon the grade of the material and ranges between approximately $\$ 7.64$ million and approximately $\$ 18.56$ million. We expect to use existing cash and cash equivalents and other working capital, together with future cash expected to be provided by operating activities, to finance this purchase commitment.

We made approximately $\$ 53,000$ of income tax payments during the year ended December 31, 2012, consisting of a net approximate $\$ 5,000$ federal alternative minimum tax payment; and approximately $\$ 48,000$ of net tax payments to various states, the majority of which was to one state to settle prior year tax liabilities previously treated as an uncertain tax position. As of December 31, 2012, we had approximately $\$ 881,000$ of remaining federal income tax credits, $\$ 533,000$ of which expire between 2018 and 2021 and the balance without an expiration, which can be carried forward to offset future income taxes. As of December 31, 2012, we also had a federal tax net operating loss carryforward of approximately $\$ 5.73$ million expiring between 2020 and 2030, which can be used to offset against future federal taxable income, a North Carolina tax net operating loss carryforward of approximately $\$ 8.40$ million expiring between 2015 and 2025, and various other state tax net operating loss carryforwards expiring between 2016 and 2030, which can be used to offset against future state taxable income.

In November 2009, our Board of Directors authorized a repurchase program for up to 1,000,000 shares of our common stock. On August 7, 2012, the Board authorized an extension of the program through August 12, 2013. Repurchases can be made in the open market or in privately negotiated transactions. We expect to use available cash to finance these purchases and will determine the timing and amount of stock repurchases based on our evaluation of market conditions, the market price of our common stock, and management's assessment of our liquidity and cash flow needs. During the year ended December 31, 2012, we repurchased no shares. As of March 25, 2013, we have repurchased an aggregate of 190,787 shares, and there remain 809,213 shares of our common stock approved for repurchase under the repurchase program.

We believe that our existing cash and cash equivalents and other working capital, together with future cash expected to be provided by operating activities, will be sufficient to meet our working capital and capital expenditure needs over the next 12 months. Our future capital requirements and the adequacy of available funds will depend on many factors, including our rate of sales growth; the expansion of our sales and marketing activities, including the operating capital needs of our wholly owned subsidiaries; the timing and extent of raw materials and labor purchases in connection with loose jewel production to support our moissanite jewel business and precious metals and labor purchases in connection with jewelry production to support our finished jewelry business; the timing of capital expenditures; and risk factors described in more detail in "Risk Factors" in Part I, Item 1A of this Annual Report on Form 10K. Also, we may make investments in, or acquisitions of, complementary businesses, which could also require us to seek additional equity or debt financing.

## Off-Balance Sheet Arrangements

We do not use off-balance sheet arrangements with unconsolidated entities or related parties, nor do we use other forms of off-balance sheet arrangements. Accordingly, our liquidity and capital resources are not subject to off-balance sheet risks from unconsolidated entities. As of December 31, 2012, we did not have any off-balance sheet arrangements, as defined in Item 303(a)(4)(ii) of SEC Regulation S-K.

We have entered into an operating lease for approximately 16,500 square feet of mixed-use space from an unaffiliated third party for our offices and manufacturing facility in the normal course of business. This type of arrangement is often referred to as a form of off-balance sheet financing.

## Item 7A.Quantitative and Qualitative Disclosures About Market Risk

Not applicable.

## INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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## Report of Independent Registered Public Accounting Firm

## Board of Directors and Shareholders

Charles \& Colvard, Ltd
Morrisville, North Carolina
We have audited the accompanying consolidated balance sheets of Charles \& Colvard, Ltd. as of December 31, 2012 and 2011 and the related consolidated statements of operations, shareholders' equity, and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements 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. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, 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, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Charles \& Colvard, Ltd. at December 31, 2012 and 2011, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.
/s/ BDO USA, LLP
Raleigh, North Carolina
March 29, 2013

## CHARLES \& COLVARD, LTD.

## CONSOLIDATED BALANCE SHEETS

|  | December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |
| ASSETS |  |  |  |  |
| Current assets: |  |  |  |  |
| Cash and cash equivalents | \$ | 11,860,842 | \$ | 6,701,701 |
| Accounts receivable, net |  | 8,138,358 |  | 6,064,764 |
| Interest receivable |  | 694 |  | 12,109 |
| Held-to-maturity investments |  | 505,068 |  |  |
| Inventory, net |  | 8,442,430 |  | 6,849,592 |
| Prepaid expenses and other assets |  | 737,406 |  | 419,729 |
| Deferred income taxes |  | 1,211,772 |  |  |
| Total current assets |  | 30,896,570 |  | 20,047,895 |
| Long-term assets: |  |  |  |  |
| Held-to-maturity investments |  | - |  | 3,760,399 |
| Inventory, net |  | 24,353,580 |  | 28,157,497 |
| Property and equipment, net |  | 1,746,792 |  | 1,420,971 |
| Intangible assets, net |  | 346,732 |  | 248,812 |
| Deferred income taxes |  | 2,520,818 |  |  |
| Other assets |  | 12,199 |  | 13,746 |
| Total long-term assets |  | 28,980,121 |  | 33,601,425 |
| TOTAL ASSETS | \$ | 59,876,691 | \$ | 53,649,320 |

## LIABILITIES AND SHAREHOLDERS' EQUITY

Current liabilities:

| Accounts payable | \$ | 2,112,585 | \$ | 1,060,937 |
| :---: | :---: | :---: | :---: | :---: |
| Accrued cooperative advertising |  | 200,000 |  | 213,000 |
| Accrued expenses and other liabilities |  | 574,522 |  | 581,009 |
| Total current liabilities |  | 2,887,107 |  | 1,854,946 |
| Long-term liabilities: |  |  |  |  |
| Accrued income taxes |  | 383,730 |  | 741,645 |
| Total liabilities |  | 3,270,837 |  | 2,596,591 |
| Commitments and contingencies |  |  |  |  |
| Shareholders' equity: |  |  |  |  |
| Common stock, no par value; 50,000,000 shares authorized; 19,654,050 and 19,454,689 shares issued and |  |  |  |  |
| Additional paid-in capital - stock-based compensation |  | 8,459,020 |  | 7,767,877 |
| Accumulated deficit |  | (5,171,210) |  | (9,548,864) |
| Total shareholders' equity |  | 56,605,854 |  | 51,052,729 |
| TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY | \$ | 59,876,691 | \$ | 53,649,320 |

See Notes to Consolidated Financial Statements.

## CHARLES \& COLVARD, LTD.

## CONSOLIDATED STATEMENTS OF OPERATIONS

|  | Year Ended December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |
| Net sales | \$ | 22,450,498 | \$ | 16,033,408 |
| Costs and expenses: |  |  |  |  |
| Cost of goods sold |  | 9,971,663 |  | 6,510,452 |
| Sales and marketing |  | 7,443,784 |  | 3,312,383 |
| General and administrative |  | 4,756,432 |  | 4,671,111 |
| Research and development |  | 17,013 |  | 145,720 |
| Loss on abandonment of assets |  | 2,016 |  | 94,408 |
| Total costs and expenses |  | 22,190,908 |  | 14,734,074 |
| Income from operations |  | 259,590 |  | 1,299,334 |
| Other income (expense): |  |  |  |  |
| Interest income |  | 69,520 |  | 85,271 |
| Interest expense |  | $(1,260)$ |  | $(1,141)$ |
| Gain on call of long-term investments |  | - |  | 721 |
| Total other income |  | 68,260 |  | 84,851 |
| Income before income taxes |  | 327,850 |  | 1,384,185 |
| Income tax net benefit |  | 4,049,804 |  | 183,947 |
| Net income | \$ | 4,377,654 | \$ | 1,568,132 |
|  |  |  |  |  |
| Net income per common share: |  |  |  |  |
| Basic | \$ | 0.22 | \$ | 0.08 |
| Fully diluted | \$ | 0.22 | \$ | 0.08 |
|  |  |  |  |  |
| Weighted average number of shares used in computing net income per common share: |  |  |  |  |
| Basic |  | 19,581,670 |  | 19,443,288 |
| Fully diluted |  | 19,967,271 |  | 19,703,204 |

See Notes to Consolidated Financial Statements.

|  | Common Stock |  |  | Additional <br> Paid-in <br> Capital - <br> Stock-Based <br> Compensation |  | Accumulated Deficit |  | Total Shareholders' Equity |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number of Shares |  | Amount |  |  |  |  |  |  |
| Balance at December 31, 2010 | 19,291,568 | \$ | 53,113,608 | \$ | 6,811,688 | \$ | (11,116,996) | \$ | 48,808,300 |
| Stock-based compensation | - |  | - |  | 983,504 |  | - |  | 983,504 |
| Issuance of restricted stock | 278,866 |  | - |  | - |  | - |  | - |
| Stock option exercises | 33,372 |  | 74,549 |  | $(27,315)$ |  | - |  | 47,234 |
| Share repurchases | $(149,117)$ |  | $(354,441)$ |  | - |  | - |  | $(354,441)$ |
| Net income | - |  | - |  | - |  | 1,568,132 |  | 1,568,132 |
| Balance at December 31, 2011 | 19,454,689 | \$ | 52,833,716 | \$ | 7,767,877 | \$ | (9,548,864) | \$ | 51,052,729 |
| Stock-based compensation | - |  | - |  | 1,017,078 |  | - |  | 1,017,078 |
| Issuance of restricted stock | 113,593 |  | - |  | - |  | - |  | - |
| Stock option exercises | 85,768 |  | 484,328 |  | $(325,935)$ |  | - ${ }^{-}$ |  | 158,393 |
| Net income | - |  | - |  | - |  | 4,377,654 |  | 4,377,654 |
| Balance at December 31, 2012 | 19,654,050 | \$ | 53,318,044 | \$ | 8,459,020 | \$ | (5,171,210) | \$ | 56,605,854 |

See Notes to Consolidated Financial Statements.

## CHARLES \& COLVARD, LTD.

## CONSOLIDATED STATEMENTS OF CASH FLOWS

|  | r Ended December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |
| CASH FLOWS FROM OPERATING ACTIVITIES: |  |  |  |  |
| Net income | \$ | 4,377,654 | \$ | 1,568,132 |
| Adjustments to reconcile net income to net cash provided by operating activities: |  |  |  |  |
| Depreciation and amortization |  | 608,165 |  | 299,550 |
| Amortization of bond premium |  | 5,331 |  | 4,498 |
| Stock-based compensation |  | 1,017,078 |  | 983,504 |
| Provision for uncollectible accounts |  | 245,582 |  | 430,261 |
| Provision for sales returns |  | 307,000 |  | 39,000 |
| Provision for inventory reserves |  | 102,000 |  | $(274,000)$ |
| Benefit for deferred income taxes |  | (3,732,590) |  |  |
| Loss on abandonment of assets |  | 2,016 |  | 94,408 |
| Gain on call of long-term investments |  | - |  | (721) |
| Changes in assets and liabilities: |  |  |  |  |
| Accounts receivable |  | $(2,626,176)$ |  | $(2,854,884)$ |
| Interest receivable |  | 11,415 |  | $(5,946)$ |
| Income tax receivable |  | - |  | 113,030 |
| Inventory |  | 2,109,079 |  | 2,649,412 |
| Prepaid expenses and other assets, net |  | $(316,130)$ |  | $(88,348)$ |
| Accounts payable |  | 1,051,648 |  | 518,853 |
| Accrued cooperative advertising |  | $(13,000)$ |  | $(101,000)$ |
| Accrued income taxes |  | $(357,915)$ |  | $(195,769)$ |
| Other accrued liabilities |  | $(6,487)$ |  | 272,356 |
| Net cash provided by operating activities |  | 2,784,670 |  | 3,452,336 |
|  |  |  |  |  |
| CASH FLOWS FROM INVESTING ACTIVITIES: |  |  |  |  |
| Purchases of property and equipment |  | $(868,986)$ |  | $(1,385,132)$ |
| Purchases of long-term investments |  | - |  | $(6,995,625)$ |
| Proceeds from call of long-term investments |  | 3,250,000 |  | 4,250,000 |
| Patent, license rights, and trademark costs |  | $(164,936)$ |  | $(48,715)$ |
| Net cash provided by (used in) investing activities |  | 2,216,078 |  | (4,179,472) |
|  |  |  |  |  |
| CASH FLOWS FROM FINANCING ACTIVITIES: |  |  |  |  |
| Stock option exercises |  | 158,393 |  | 47,234 |
| Share repurchases |  | - |  | $(354,441)$ |
| Net cash provided by (used in) financing activities |  | 158,393 |  | $(307,207)$ |
|  |  |  |  |  |
| NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS |  | 5,159,141 |  | $(1,034,343)$ |
| CASH AND CASH EQUIVALENTS, BEGINNING OF PERIOD |  | 6,701,701 |  | 7,736,044 |
| CASH AND CASH EQUIVALENTS, END OF PERIOD | \$ | $\underline{11,860,842}$ | \$ | 6,701,701 |
|  |  |  |  |  |
| Supplemental disclosure of cash flow information: |  |  |  |  |
| Cash paid during the year for interest | \$ | 1,260 | \$ | 1,141 |
| Cash paid during the year for income taxes | \$ | 52,523 | \$ |  |

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## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

## 1. DESCRIPTION OF BUSINESS

Charles \& Colvard, Ltd. (the "Company"), a North Carolina corporation founded in 1995, manufactures, markets, and distributes Charles \& Colvard Created Moissanite ${ }^{\circledR}$ jewels (hereinafter referred to as moissanite or moissanite jewels) and finished jewelry featuring moissanite for sale in the worldwide jewelry market. Moissanite, also known by its chemical name of silicon carbide ("SiC"), is a rare mineral first discovered in a meteor crater. Because naturally occurring SiC crystals are too small for commercial use, larger crystals must be grown in a laboratory. Leveraging its advantage of being the sole source worldwide of created moissanite jewels, the Company's strategy is to establish itself with reputable, high-quality, and sophisticated brands and to position moissanite as an affordable, luxurious alternative to other gemstones, such as diamond. The Company believes this is possible due to moissanite's exceptional brilliance, fire, luster, durability, and rarity like no other jewel available on the market. The Company sells loose moissanite jewels and finished jewelry at wholesale to distributors, manufacturers, and retailers and at retail to end consumers through its wholly owned operating subsidiaries Moissanite.com, LLC and Charles \& Colvard Direct, LLC.

## 2. BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Principles of Consolidation - The accompanying consolidated financial statements as of and for the years ended December 31, 2012 and 2011 include the accounts of the Company and its wholly owned subsidiaries Moissanite.com, LLC, formed in 2011; Charles \& Colvard Direct, LLC, formed in 2011; and Charles \& Colvard (HK) Ltd., the Company's Hong Kong subsidiary that became a dormant entity in the second quarter of 2009 and the operations of which ceased in 2008. All intercompany accounts have been eliminated.

Fiscal Year - The Company's fiscal year ends December 31. References to fiscal 2012, for example, refer to the fiscal year ending December 31, 2012.
Use of Estimates - The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. The most significant estimates impacting the Company's consolidated financial statements relate to valuation and classification of inventories, accounts receivable reserves, deferred tax assets, uncertain tax positions, stock compensation expense, and cooperative advertising. Actual results could differ materially from those estimates.

Reclassifications - Certain amounts in the prior year's consolidated financial statements have been reclassified to conform to the current year presentation.
Cash and Cash Equivalents - All highly liquid investments with an original maturity of three months or less from the date of purchase are considered to be cash equivalents.

Concentration of Credit Risk - Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents, investments, and trade accounts receivable. The Company maintains cash, cash equivalents, and investments with high-quality financial institutions and invests in low-risk securities, primarily money market funds or long-term United States ("U.S.") government agency obligations. At times, cash balances may exceed the Federal Deposit Insurance Corporation ("FDIC") insurable limits. The Company has never experienced any losses related to these balances. All of the Company's non-interest bearing cash balances were fully insured at December 31, 2012 due to a temporary federal program in effect from December 31, 2010 through December 31, 2012. Under the program, there is no limit to the amount of insurance for eligible accounts. Beginning in 2013, insurance coverage will revert to $\$ 250,000$ per depositor at each financial institution, and the Company's non-interest bearing cash balances may again exceed federally insured limits. Interest-bearing amounts on deposit in excess of FDIC insurable limits at December 31, 2012 approximated $\$ 8.26$ million.

Trade receivables potentially subject the Company to credit risk. The Company's standard wholesale customer payment terms on trade receivables are generally between 30 and 90 days, though it may offer extended terms in limited circumstances and on significant orders from time to time. The Company believes its competitors and other
vendors in the wholesale jewelry industry have also expanded their use of extended payment terms and, in aggregate, the Company believes that by expanding its use of extended payment terms, it has provided a competitive response in its market and that its net sales have been favorably impacted. The Company is unable to estimate the impact of this program on its net sales, but if it ceased providing extended payment terms in select instances, the Company believes it would not be competitive for some wholesale customers in the marketplace and that its net sales and profits would likely decrease. The Company extends credit to its customers based upon a number of factors, including an evaluation of the customer's financial condition and credit history, the customer's payment history with the Company, the customer's reputation in the trade, and/or an evaluation of the Company's opportunity to introduce its moissanite jewels or finished jewelry featuring moissanite to new or expanded markets. Collateral is not generally required from customers. The need for an allowance for doubtful accounts is determined based upon factors surrounding the credit risk of specific customers, historical trends, and other information. The Company has not experienced any significant accounts receivable write-offs related to revenue arrangements with extended payment terms.

See Note 12, "Major Customers and Concentration of Credit Risk," for further discussion of credit risk within trade accounts receivable.
Accounts Receivable Reserves - Estimates are used to determine the amount of two reserves against trade accounts receivable. The first reserve is an allowance for sales returns. At the time revenue is recognized, the Company estimates future returns using a historical return rate that is reviewed quarterly with consideration of any contractual return privileges granted to customers, and it reduces sales and trade accounts receivable by this estimated amount. The allowance for sales returns was $\$ 463,000$ and $\$ 156,000$ at December 31, 2012 and 2011, respectively.

The second reserve is an allowance for doubtful accounts for estimated losses resulting from the failure of the Company's customers to make required payments. This allowance reduces trade accounts receivable to an amount expected to be collected. Based on historical percentages of uncollectible accounts by aging category, changes in payment history, and facts and circumstances regarding specific accounts that become known to management when evaluating the adequacy of the allowance for doubtful accounts, the Company determines a percentage based on the age of the receivable that it deems uncollectible. The allowance is then calculated by applying the appropriate percentage to each of the Company's accounts receivable aging categories, with consideration given to individual customer account activity subsequent to the current period, including cash receipts, in determining the appropriate allowance for doubtful accounts in the current period. Any increases or decreases to this allowance are charged or credited, respectively, as a bad debt expense to general and administrative expenses. The Company generally uses an internal collection effort, which may include its sales personnel as it deems appropriate. After all internal collection efforts have been exhausted, the Company generally writes off the account receivable.

Any accounts with significant balances are reviewed separately to determine an appropriate allowance based on the facts and circumstances of the specific account. During its reviews for 2012 and 2011, the Company analyzed several of its slower-paying customers and determined that no additional reserves were necessary. Based on these criteria, management determined that allowances for doubtful accounts receivable of $\$ 549,000$ and $\$ 380,000$ at December 31, 2012 and 2011, respectively, were required.

The following is a reconciliation of the allowance for doubtful accounts:

|  | Year Ended December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |
| Balance, beginning of period | \$ | 380,000 | \$ | 866,000 |
| Additions charged to operations |  | 245,582 |  | 430,261 |
| Write-offs, net of recoveries |  | $(76,582)$ |  | $(916,261)$ |
| Balance, end of period | \$ | 549,000 | \$ | 380,000 |

Although the Company believes that its reserves are adequate, if the financial condition of its customers deteriorates, resulting in an impairment of their ability to make payments, or if it underestimates the allowances required, additional allowances may be necessary, which would result in increased expense in the period in which such determination is made.

Investments - Investments in certain securities may be classified into three categories:

- Held-to-maturity - Debt securities that the Company has the positive intent and ability to hold to maturity are reported at amortized cost.
- Trading securities - Debt and equity securities that are bought and held principally for the purpose of selling in the near term are reported at fair value with unrealized gains and losses included in earnings.

Available-for-sale - Debt and equity securities not classified as either securities held-to-maturity or trading securities are reported at fair value with unrealized gains or losses excluded from earnings and reported as a separate component of shareholders' equity.

The Company reassesses the appropriateness of the classification of its investments at the end of each reporting period. The Company has determined that its debt securities should be classified as held-to-maturity as of December 31, 2012 and 2011. This classification was based upon management's determination that it has the positive intention and ability to hold the securities to maturity, as the underlying cash invested in these securities is not required for current operations.

Inventories - Inventories are stated at the lower of cost or market on an average cost basis. Inventory costs include direct material and labor, inbound freight, purchasing and receiving costs, inspection costs, and warehousing costs. Any inventory on hand at the measurement date in excess of the Company's current requirements based on historical and anticipated levels of sales is classified as long-term on the Company's consolidated balance sheets. The Company's classification of long-term inventory requires it to estimate the portion of on-hand inventory that can be realized over the next 12 months and does not include precious metal, labor, and other inventory purchases expected to be both purchased and realized over the next 12 months.

The Company's work-in-process inventories include raw SiC crystals on which processing costs, such as labor and sawing, have been incurred; and components, such as metal castings and finished good moissanite jewels, that have been issued to jobs in the manufacture of finished jewelry. The Company's moissanite jewel manufacturing process involves the production of intermediary shapes, called "preforms," that vary depending upon the size and shape of the finished jewel. To maximize manufacturing efficiencies, preforms may be made in advance of current finished inventory needs but remain in work-inprocess inventories. As of December 31, 2012 and 2011, work-in-process inventories issued to active production jobs approximated $\$ 1.12$ million and $\$ 513,000$, respectively.

The Company has historically sold one grade of jewel that is classified as very good ("VG") and consists of near-colorless jewels that meet certain standards. Previously, only VG jewels were valued in inventory. During the first quarter of 2010, the Company began a project of sorting its jewels into multiple grades and identified several customers for the sale of lower grades of loose jewels and finished jewelry containing these jewels. As a result, various costs associated with this loose jewel inventory incurred subsequent to the identification of this market have been capitalized.

All inventories are carefully reviewed for quality standards before they are entered into finished goods. As conditions warrant, the Company's grading standards change. The Company reviews the inventory on an ongoing basis to ensure its inventory meets current quality standards.

The Company's jewels do not degrade in quality over time and inventory generally consists of the shapes and sizes most commonly used in the jewelry industry. In addition, the majority of jewel inventory is not mounted in finished jewelry settings and is therefore not subject to fashion trends nor is obsolescence a significant factor. The Company has very small market penetration in the worldwide jewelry market, and the Company has the exclusive right in the U.S. through mid-2015 and in many other countries through mid-2016 to produce and sell created SiC for use in jewelry applications. In view of the foregoing factors, management has concluded that no excess or obsolete loose jewel inventory reserve requirements existed as of December 31, 2012.

In 2010, the Company began manufacturing finished jewelry featuring moissanite. Relative to loose moissanite jewels, finished jewelry is more fashion oriented and subject to styling trends that could render certain designs obsolete. The majority of the Company's finished jewelry featuring moissanite is held in inventory for resale and consists of such basic designs as stud earrings, solitaire and three-stone rings, pendants, and bracelets that tend not to be subject to significant obsolescence risk due to their classic styling. In addition, the Company manufactures small
individual quantities of designer-inspired moissanite fashion jewelry as part of its sample line that are used in the selling process to its wholesale customers.
In 2011, the Company began purchasing fashion finished jewelry comprised of base metals and non-precious gemstones for sale through Lulu Avenue ${ }^{T M}$, the direct-to-consumer home party division of its wholly owned operating subsidiary, Charles \& Colvard Direct, LLC. This finished jewelry is fashion oriented and subject to styling trends that may change with each catalog season, of which there are several each year. Typically in the jewelry industry, slow-moving or discontinued lines are sold as closeouts or liquidated in alternative sales channels. The Company reviews the finished jewelry inventory on an ongoing basis for any lower of cost or market and obsolescence issues and has concluded that no such finished jewelry inventory reserve requirements relating to the Company's new line of finished jewelry featuring moissanite and fashion finished jewelry products existed as of December 31, 2012.

Jewelry inventories consist primarily of finished goods, a portion of which the Company acquired as part of a January 2009 settlement agreement with a former manufacturer customer to reduce the outstanding receivable to the Company. Due to the lack of a plan to market this inventory at that time, a jewelry inventory reserve was established to reduce the majority of the acquired jewelry inventory value to scrap value, or the amount the Company would expect to obtain by melting the gold in the jewelry and returning to loose-jewel finished goods inventory those jewels that meet grading standards. Because the finished jewelry the Company began manufacturing in 2010 after it entered that business was made pursuant to an operational plan to market and sell the inventory, it is not subject to this reserve.

The Company also maintains inventory reserves for shrinkage, recuts, and repairs. Shrinkage refers to loose jewels and finished jewelry on review with customers and vendors that may not be returned to the Company. The recuts reserve is for the projected material loss resulting from the recutting of damaged jewels into smaller loose jewels to remove the damage. The repairs reserve is for finished jewelry in need of repair before it can be returned to finished goods inventory and be available for sale.

The need for adjustments to inventory reserves is evaluated on a period-by-period basis.

Property and Equipment - Property and equipment are stated at cost and are depreciated over their estimated useful lives using the straight-line method as follows:

| Machinery and equipment | 5 to 12 years |
| :--- | :--- |
| Computer hardware | 3 to 5 years |
| Computer software | 3 years |
| Furniture and fixtures | 5 to 10 years |
|  | Shorter of the estimated useful life or <br> the lease term |
| Leasehold improvements |  |

Intangible Assets - The Company capitalizes costs associated with obtaining or defending patents issued or pending for inventions and license rights related to the manufacture of moissanite jewels. Such costs are amortized over the life of the patent, generally 17 years. The Company also capitalizes licenses it obtains for the use of certain advertising images and external costs incurred for trademarks. Such costs are amortized over the period of the license or estimated useful life of the trademark, respectively.

Impairment of Long-Lived Assets - The Company evaluates the recoverability of its long-lived assets by reviewing them for possible impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. Recoverability of assets to be held and used is measured by comparing the carrying amount of the asset to future net undiscounted cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment is measured as the amount by which the carrying amount exceeds the fair value and is recognized as an operating expense in the period in which the determination is made. Assets to be disposed are reported at the lower of the carrying amount or fair value less costs to sell. As of December 31, 2012, the Company did not identify any indicators of long-lived asset impairment.

In addition to the recoverability assessment, the Company routinely reviews the remaining estimated useful lives of its long-lived assets. Any reduction in the useful-life assumption will result in increased depreciation and amortization expense in the period when such determination is made, as well as in subsequent periods. During the year ended December 31, 2012, no change in useful lives was deemed necessary by management. In July 2011, the

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Company identified jewelry-specific manufacturing software that it believed would improve its merchandising, production, and inventory efficiencies and reporting. Because the Company's management decided to purchase and implement this software with a go-live date in January 2012, management reduced the remaining estimated useful life of the Company's existing enterprise resource planning system, which resulted in increased depreciation expense during the year ended December 31, 2011 of $\$ 59,000$.

Revenue Recognition - Revenue is recognized when title transfers at the time of shipment from the Company's or a third-party fulfillment company's facility, excluding consignment shipments as discussed below; evidence of an arrangement exists; pricing is fixed and determinable; and collectibility is reasonably assured. At the time revenue is recognized, an allowance for estimated returns is established. Any change in the allowance for returns is charged against net sales. The Company's return policy allows for the return of loose jewels and finished jewelry for credit generally within 30 days of shipment and must be returned for a valid reason, such as quality problems or an error in shipment. From time to time, some wholesale customers may have a contractual right to return a certain percentage of goods for any reason for specified periods of time. In these instances, the Company only recognizes revenue when the contractual right of return is exhausted. Periodically, the Company ships finished goods inventory to wholesale customers on consignment terms. Under these terms, the customer assumes the risk of loss and has an absolute right of return for a specified period that typically ranges from six months to one year. The Company's wholesale customers are generally required to make payments on consignment shipments within 60 days upon the customer informing the Company that it will keep the inventory. Accordingly, the Company does not recognize revenue on these consignment transactions until the earlier of (1) the customer informing the Company that it will keep the inventory or (2) the expiration of the right of return period.

Cost of Goods Sold - Cost of goods sold is primarily composed of inventory sold during the period; inventory written off during the period due to ongoing quality reviews or through customer returns; salaries and payroll-related expenses for personnel involved in preparing and shipping product to customers; an allocation of shared expenses such as rent, utilities, communication expenses, and depreciation related to preparing and shipping product to customers; and outbound freight charges.

Advertising Costs - Advertising production costs are expensed as incurred. Media placement costs are expensed the first time the advertising appears.
The Company also offers a cooperative advertising program to certain of its wholesale customers that reimburses, via a credit towards future purchases, a portion of their marketing costs based on the customers' net purchases from the Company and is subject to the customer providing documentation of all advertising performed that includes the Company's products. For the years ended December 31, 2012 and 2011, these amounts were approximately $\$ 626,000$ and $\$ 436,000$, respectively, and are included as a component of sales and marketing expenses.

Advertising expenses, inclusive of the cooperative advertising program, for the years ended December 31, 2012 and 2011 were approximately $\$ 2.16$ million and $\$ 712,000$, respectively.

Sales and Marketing - Sales and marketing costs are expensed as incurred. These costs include all expenses of promoting and selling the Company's products and include such items as the salaries, payroll-related expenses, and travel of sales and marketing personnel; advertising; trade shows; market research; sales commissions; and an allocation of overhead expenses attributable to these activities. Except for an allocation to general and administrative expenses, these costs also include the operating expenses of the Company's two wholly owned operating subsidiaries Moissanite.com, LLC and Charles \& Colvard Direct, LLC.

General and Administrative - General and administrative costs are expensed as incurred. These costs include the salaries and payroll-related expenses of executive, finance, information technology, and administrative personnel; legal, investor relations, and professional fees; general office and administrative expenses; Board of Directors fees; rent; bad debts; and insurance.

Research and Development - Research and development costs are expensed as incurred. These costs primarily comprise salary allocations and consultant fees associated with the study of product enhancement and manufacturing process efficiencies.

Stock-Based Compensation - The Company recognizes compensation expense for stock-based awards based on estimated fair values on the date of grant. The Company uses the Black-Scholes-Merton option pricing model to determine the fair value of stock options. The fair value of other stock-based compensation awards is determined by the market price of the Company's common stock on the date of grant. The expense associated with stock-based compensation is recognized on a straight-line basis over the requisite service period of each award.

Fair value of stock options using the Black-Scholes-Merton option pricing model is estimated on the date of grant utilizing certain assumptions for dividend yield, expected volatility, risk-free interest rate, and expected lives of the awards, as follows:

- Dividend yield- Although the Company issued dividends in prior years, a dividend yield of zero is used due to the uncertainty of future dividend payments.
- Expected volatility- Volatility is a measure of the amount by which a financial variable such as share price has fluctuated (historical volatility) or is expected to fluctuate (expected volatility) during a period. The Company estimates expected volatility giving primary consideration to the historical volatility of its common stock.

Risk-free interest rate - The risk-free interest rate is based on the published yield available on U.S. Treasury issues with an equivalent term remaining equal to the expected life of the stock option.

- Expected lives - The expected lives of the stock options represent the estimated period of time until exercise or forfeiture and are based on historical experience of similar awards.

The assumptions used in calculating the fair value of share-based payment awards represent management's best estimates, but these estimates involve inherent uncertainties and the application of management's judgment. As a result, if factors change and the Company uses different assumptions, the Company's stock-based compensation expense could be materially different in the future. In addition, the Company is required to estimate the expected forfeiture rates of stock-based awards and only recognize expense for those shares expected to vest. In estimating the Company's forfeiture rates, the Company analyzed its historical forfeiture rates, the remaining lives of unvested stock-based awards, and the amount of vested awards as a percentage of total awards outstanding. If the Company's actual forfeiture rates are materially different from its estimates, or if the Company re-evaluates the forfeiture rates in the future, the stock-based compensation expense could be significantly different from what the Company has recorded in the current period.

Income Taxes - Deferred income taxes are recognized for the income tax consequences of "temporary" differences by applying enacted statutory income tax rates applicable to future years to differences between the financial statement carrying amounts and the income tax bases of existing assets and liabilities. Valuation allowances are established when necessary to reduce deferred income tax assets to the amount that is more likely than not to be realized.

Other Comprehensive Income - For the years ended December 31, 2012 and 2011, the Company did not have any other comprehensive income.

Net Income per Common Share - Basic net income per common share is computed by dividing net income by the weighted average number of common shares outstanding during the periods. Fully diluted net income per common share is computed using the weighted average number of common and dilutive common equivalent shares outstanding during the periods. Common equivalent shares consist of stock options that are computed using the treasury stock method.

The following table reconciles the differences between the basic and fully diluted earnings per share presentations:

|  | Year Ended December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |
| Numerator: |  |  |  |  |
| Net income | \$ | 4,377,654 | \$ | 1,568,132 |
|  |  |  |  |  |
| Denominator: |  |  |  |  |
| Weighted average common shares outstanding: |  |  |  |  |
| Basic |  | 19,581,670 |  | 19,443,288 |
| Stock options |  | 385,601 |  | 259,916 |
| Fully diluted |  | 19,967,271 |  | 19,703,204 |
|  |  |  |  |  |
| Net income per common share: |  |  |  |  |
| Basic | \$ | 0.22 | \$ | 0.08 |
| Fully diluted | \$ | 0.22 | \$ | 0.08 |

For the years ended December 31, 2012 and 2011, stock options to purchase approximately 354,000 and 713,000 shares, respectively, were excluded from the computation of fully diluted net income per common share because the exercise price of the stock options was greater than the average market price of the common shares or the effect of inclusion of such amounts would be anti-dilutive to net income per common share.

Recently Adopted/Issued Accounting Pronouncements - ASU 2012-04: Technical Corrections and Improvements. In October 2012, the Financial Accounting Standards Board ("FASB") issued new U.S. GAAP guidance to amend various SEC sections in the Accounting Standards Codification (the "Codification") as a result of multiple improvements provided through the Codification's feedback process. Amendments have been made to source literature, guidance clarification, reference corrections, and relocations of guidance. Amendments subject to transition guidance will be effective prospectively for reporting periods beginning after December 15,2012 . The adoption of this guidance is not expected to have a material impact on the Company's consolidated financial statements.

ASU 2013-02: Comprehensive Income (Topic 220): Reporting of Amounts Reclassified Out of Accumulated Other Comprehensive Income. In February 2013, the FASB issued new U.S. GAAP guidance that requires disclosure by component of the amounts reclassified out of accumulated other comprehensive income ("AOCI"). In addition, significant amounts reclassified out of AOCI must be presented either on the face of the financial statements or in the notes to the financial statements by the respective line items of net income, but only if the reclassified amounts are required to be reclassified in their entireties in the same reporting period. For amounts that are not required to be reclassified in their entirety to net income, cross references to other disclosures that provide additional details about those amounts are required. The new guidance is effective prospectively for reporting periods beginning after December 15, 2012, and adoption of the guidance is not expected to have a material impact on the Company's consolidated financial statements.

All other new and recently issued, but not yet effective, accounting pronouncements have been deemed to be not relevant to the Company and therefore are not expected to have any impact once adopted.

## 3. SEGMENT INFORMATION AND GEOGRAPHIC DATA

The Company reports segment information based on the "management" approach. The management approach designates the internal reporting used by management for making operating decisions and assessing performance as the source of the Company's operating and reportable segments.

The Company manages its business primarily by its two distribution channels that it uses to sell its product lines, loose jewels and finished jewelry. Accordingly, the Company determined its two operating and reporting segments to be wholesale distribution transacted through the parent entity and direct-to-consumer distribution transacted through the Company's wholly owned operating subsidiaries, Moissanite.com, LLC and Charles \& Colvard Direct, LLC. The accounting policies of these segments are the same as those described in Note 2, "Basis of Presentation and Significant Accounting Policies."

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The Company evaluates the financial performance of its segments based on net sales; product line gross profit, or the excess of product line sales over product line cost of goods sold; and operating income (loss). The Company's inventories are maintained in the parent entity's wholesale distribution segment and are transferred without intercompany markup to the operating subsidiaries as product line cost of goods sold when sold to the end consumer. Product line cost of goods sold is defined as product cost of goods sold in each of the Company's wholesale distribution and direct-to-consumer distribution operating segments excluding non-capitalized expenses from the Company's manufacturing and production control departments, comprising personnel costs, depreciation, rent, utilities, and corporate overhead allocations; freight out; inventory valuation allowance adjustments; and other inventory adjustments, comprising costs of quality issues, damaged goods, and inventory write-offs.

The Company allocates certain general and administrative expenses from its parent entity to its two direct-to-consumer operating subsidiaries primarily based on net sales. Unallocated expenses, which also include interest and taxes, remain in the parent entity's wholesale distribution segment.

Summary financial information by reporting segment is as follows:

|  | Year Ended December 31, 2012 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Wholesale |  | Direct-toConsumer |  | Total |  |
| Net sales |  |  |  |  |  |  |
| Loose jewels | \$ | 14,770,191 | \$ | 221,207 | \$ | 14,991,398 |
| Finished jewelry |  | 6,044,727 |  | 1,414,373 |  | 7,459,100 |
| Total | \$ | 20,814,918 | \$ | 1,635,580 | \$ | 22,450,498 |
|  |  |  |  |  |  |  |
| Product line cost of goods sold |  |  |  |  |  |  |
| Loose jewels | \$ | 4,551,052 | \$ | 135,474 | \$ | 4,686,526 |
| Finished jewelry |  | 2,884,728 |  | 702,730 |  | 3,587,458 |
| Total | \$ | 7,435,780 | \$ | 838,204 | \$ | 8,273,984 |
|  |  |  |  |  |  |  |
| Product line gross profit |  |  |  |  |  |  |
| Loose jewels | \$ | 10,219,139 | \$ | 85,733 | \$ | 10,304,872 |
| Finished jewelry |  | 3,159,999 |  | 711,643 |  | 3,871,642 |
| Total | \$ | 13,379,138 | \$ | 797,376 | \$ | 14,176,514 |
|  |  |  |  |  |  |  |
| Operating income (loss) | \$ | 4,370,028 | \$ | $(4,110,438)$ | \$ | 259,590 |
|  |  |  |  |  |  |  |
| Depreciation and amortization | \$ | 390,044 | \$ | 218,121 | \$ | 608,165 |
|  |  |  |  |  |  |  |
| Total assets | \$ | 58,823,642 | \$ | 1,053,049 | \$ | 59,876,691 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |


|  | Year Ended December 31, 2011 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Wholesale |  | Direct-toConsumer ${ }^{(1)}$ |  | Total |  |
| Net sales |  |  |  |  |  |  |
| Loose jewels | \$ | 12,023,914 | \$ | 41,500 | \$ | 12,065,414 |
| Finished jewelry |  | 3,807,259 |  | 160,735 |  | 3,967,994 |
| Total | \$ | 15,831,173 | \$ | 202,235 | \$ | 16,033,408 |
|  |  |  |  |  |  |  |
| Product line cost of goods sold |  |  |  |  |  |  |
| Loose jewels | \$ | 3,804,090 | \$ | 5,489 | \$ | 3,809,579 |
| Finished jewelry |  | 2,137,337 |  | 56,660 |  | 2,193,997 |
| Total | \$ | 5,941,427 | \$ | 62,149 | \$ | 6,003,576 |
|  |  |  |  |  |  |  |
| Product line gross profit |  |  |  |  |  |  |
| Loose jewels | \$ | 8,219,824 | \$ | 36,011 | \$ | 8,255,835 |
| Finished jewelry |  | 1,669,922 |  | 104,075 |  | 1,773,997 |
| Total | \$ | 9,889,746 | \$ | 140,086 | \$ | 10,029,832 |
|  |  |  |  |  |  |  |
| Operating income (loss) | \$ | 2,108,128 | \$ | $(808,794)$ | \$ | 1,299,334 |
|  |  |  |  |  |  |  |
| Depreciation and amortization | \$ | 240,178 | \$ | 59,372 | \$ | 299,550 |
|  |  |  |  |  |  |  |
| Total assets | \$ | 53,207,429 | \$ | 441,891 | \$ | 53,649,320 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

(1) Direct-to-consumer operations commenced in August 2011.

A reconciliation of the Company's product line cost of goods sold to cost of goods sold as reported in the consolidated financial statements is as follows:

|  | Year Ended December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |
| Product line cost of goods sold | \$ | 8,273,984 | \$ | 6,003,576 |
| Non-capitalized manufacturing and production control expenses |  | 1,348,029 |  | 668,787 |
| Freight out |  | 111,639 |  | 80,876 |
| Inventory valuation allowances |  | 93,000 |  | $(274,000)$ |
| Other inventory adjustments |  | 145,011 |  | 31,213 |
| Cost of goods sold | \$ | 9,971,663 | \$ | 6,510,452 |

The Company's net inventories by product line maintained in the parent entity's wholesale distribution segment are as follows:

|  | December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |
| Loose jewels |  |  |  |  |
| Raw materials | \$ | 3,189,320 | \$ | 6,047,047 |
| Work-in-process |  | 3,650,322 |  | 2,505,219 |
| Finished goods |  | 19,074,526 |  | 21,722,869 |
| Finished goods on consignment |  | 75,131 |  | 505,753 |
| Total | \$ | $\underline{\text { 25,989,299 }}$ | \$ | $\underline{30,780,888}$ |
|  |  |  |  |  |
| Finished jewelry |  |  |  |  |
| Raw materials | \$ | 259,366 | \$ | 226,972 |
| Work-in-process |  | 250,628 |  | 85,786 |
| Finished goods |  | 5,451,178 |  | 3,292,810 |
| Finished goods on consignment |  | 748,022 |  | 499,577 |
| Total | \$ | 6,709,194 | \$ | 4,105,145 |

Supplies inventories of approximately $\$ 98,000$ and $\$ 121,000$ at December 31, 2012 and 2011, respectively, included in finished goods inventories in the consolidated financial statements are omitted from inventories by product line because they are used in both product lines and are not maintained separately. The Company's operating subsidiaries comprising the direct-to-consumer distribution segment carry no net inventories, and inventory is transferred without intercompany markup from the parent entity's wholesale distribution segment as product line cost of goods sold when sold to the end consumer.

The Company recognizes sales by geographic area based on the country in which the customer is based. A portion of the Company's international wholesale distribution segment sales represents products sold internationally that may be re-imported to U.S. retailers. Sales to international end consumers made by the Company's direct-to-consumer distribution segment are included in U.S. sales because products are shipped and invoiced to a U.S.-based intermediary party that assumes all international shipping and credit risks. The following presents certain data by geographic area:

|  | Year Ended December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |
| Net sales |  |  |  |  |
| United States | \$ | 16,869,397 | \$ | 10,665,215 |
| International |  | 5,581,101 |  | 5,368,193 |
| Total |  | 22,450,498 | \$ | 16,033,408 |


|  | December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |
| Property and equipment, net |  |  |  |  |
| United States | \$ | 1,746,792 | \$ | 1,420,971 |
| International |  | - |  |  |
| Total | \$ | 1,746,792 | \$ | 1,420,971 |


|  | December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |
| Intangible assets, net |  |  |  |  |
| United States | \$ | 152,038 | \$ | 73,701 |
| International |  | 194,694 |  | 175,111 |
| Total | \$ | 346,732 | \$ | 248,812 |

## 4. INVESTMENTS

Investments consist of long-term U.S. government agency securities carried at amortized cost using the effective interest method. The Company classifies its marketable securities as held-to-maturity based upon management's positive intention and ability to hold these securities until their maturity dates.

The following table summarizes information about held-to-maturity investments at December 31, 2012:

U.S. government agency securities $\quad$\begin{tabular}{|cccccc}

\& \begin{tabular}{c}
Amortized <br>
Cost

 \& 

Gross <br>
Unrealized <br>
Gains

 \& 

Estimated <br>
Fair Value
\end{tabular} <br>

\hline
\end{tabular}

As of December 31, 2012, the estimated fair value of the investments was greater than the amortized cost. Because management intends to hold the investments until their maturity dates, this unrealized gain was not recorded in the consolidated financial statements.

The maturities of held-to-maturity investments at December 31, 2012 were as follows:

|  | Less than 1 Year |  | Total |  |
| :---: | :---: | :---: | :---: | :---: |
| U.S. government agency securities | \$ | 505,068 | \$ |  |

## 5. FAIR VALUE MEASUREMENTS

Under U.S. GAAP, fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. U.S. GAAP also establishes a hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are obtained from independent sources and can be validated by a third party, whereas unobservable inputs reflect assumptions regarding what a third party would use in pricing an asset or liability. The fair value hierarchy consists of three levels based on the reliability of inputs, as follows:

- Level 1 - quoted prices in active markets for identical assets and liabilities
- Level 2 - inputs other than Level 1 quoted prices that are directly or indirectly observable
- Level 3 - unobservable inputs that are not corroborated by market data

The Company evaluates assets and liabilities subject to fair value measurements on a recurring and non-recurring basis to determine the appropriate level to classify them for each reporting period. This determination requires significant judgments to be made by management of the Company. The instruments identified as subject to fair value measurements on a recurring basis are cash and cash equivalents, trade accounts receivable, held-to-maturity investments, trade accounts payable, and accrued expenses. All instruments other than held-to-maturity investments are reflected in the consolidated balance sheets at carrying value, which approximates fair value due to the short-term nature of these instruments. The estimated fair value of the Company's held-to-maturity investments as of December 31, 2012 utilized Level 2 inputs of similar investments traded on active securities exchanges.

Assets that are measured at fair value on a non-recurring basis include property and equipment and intangible assets, comprising patents, license rights, and trademarks. These items are recognized at fair value when they are considered to be impaired. Level 3 inputs are primarily based on the estimated future cash flows of the asset determined by market inquiries to establish fair market value of used machinery or future revenue expected to be generated with the assistance of patents, license rights, and trademarks.

## 6. INVENTORIES

The Company's total inventories, net of reserves, consisted of the following as of December 31, 2012 and 2011:

|  | December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |
| Raw materials | \$ | 3,448,686 | \$ | 6,274,019 |
| Work-in-process |  | 3,900,950 |  | 2,591,005 |
| Finished goods |  | 24,978,221 |  | 25,398,735 |
| Finished goods on consignment |  | 843,153 |  | 1,016,330 |
| Less inventory reserves |  | $(375,000)$ |  | $(273,000)$ |
| Total | \$ | 32,796,010 | \$ | 35,007,089 |
|  |  |  |  |  |
| Short-term portion | \$ | 8,442,430 | \$ | 6,849,592 |
| Long-term portion |  | 24,353,580 |  | 28,157,497 |
| Total | \$ | 32,796,010 | \$ | 35,007,089 |

Periodically, the Company ships finished goods inventory to wholesale customers on consignment terms. Under these terms, the customer assumes the risk of loss and has an absolute right of return for a specified period. Finished goods on consignment at December 31, 2012 and 2011 are net of shrinkage reserves of $\$ 20,000$ and $\$ 11,000$, respectively, to allow for certain loose jewels and finished jewelry on consignment with wholesale customers that may not be returned or may be returned in a condition that does not meet the Company's current grading or quality standards.

Total net loose jewel inventories at December 31, 2012 and 2011, including inventory on consignment net of reserves, were $\$ 25.99$ million and $\$ 30.78$ million, respectively. The loose jewel inventories at December 31, 2012 and 2011 include a shrinkage reserve of $\$ 36,000$ and $\$ 25,000$, respectively, including shrinkage reserves of $\$ 17,000$ and $\$ 11,000$, respectively, on inventory on consignment. Loose jewel inventories at December 31, 2012 and 2011 also include a recuts reserve of $\$ 109,000$ and $\$ 30,000$, respectively.

Total net jewelry inventories at December 31, 2012 and 2011, including inventory on consignment net of reserves, finished jewelry featuring moissanite manufactured by the Company since entering the finished jewelry business in 2010, and fashion finished jewelry purchased by the Company for sale through Lulu Avenue ${ }^{T M}$, were $\$ 6.71$ million and $\$ 4.11$ million, respectively. Jewelry inventories consist primarily of finished goods, a portion of which includes the finished jewelry acquired by the Company as part of a January 2009 settlement agreement with a former manufacturer customer to reduce the outstanding receivable to the Company. The scrap reserve established for this acquired inventory at the time of the agreement is adjusted at each reporting period for the market price of gold and has generally declined as the associated jewelry is sold down, with a balance of $\$ 132,000$ and $\$ 173,000$ at December 31, 2012 and 2011, respectively. The finished jewelry inventories at December 31, 2012 also include a shrinkage reserve of $\$ 98,000$, including a shrinkage reserve of $\$ 3,000$ on inventory on consignment; and finished jewelry inventories at December 31, 2011 include a repairs reserve of $\$ 45,000$.

During the year ended December 31, 2012, the Company entered into an asset purchase agreement (the "Purchase Agreement") with a direct sales jewelry company. Pursuant to the Purchase Agreement, the Company acquired certain assets in exchange for consideration consisting of $\$ 645,645$ in cash and $\$ 32,170$ of associated direct expenses, which was allocated among certain jewelry inventory, a direct selling software platform, and certain trademark and license rights.

Related to the Purchase Agreement, net jewelry inventories at December 31, 2012 included approximately $\$ 563,000$ in fashion finished jewelry. Management estimated the fair value to be approximately $\$ 628,000$ with the difference allocated to other assets under the Purchase Agreement based on their relative fair values.

## 7. PROPERTY AND EQUIPMENT

Property and equipment consists of the following:

|  | December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |
| Computer software | \$ | 1,626,618 | \$ | 1,026,532 |
| Machinery and equipment |  | 791,634 |  | 688,096 |
| Computer hardware |  | 468,615 |  | 384,359 |
| Leasehold improvements |  | 432,759 |  | 404,244 |
| Furniture and fixtures |  | 303,232 |  | 268,836 |
| Total |  | 3,622,858 |  | 2,772,067 |
| Less accumulated depreciation |  | $(1,876,066)$ |  | $(1,351,096)$ |
| Property and equipment, net | \$ | 1,746,792 | \$ | 1,420,971 |

Approximately $\$ 72,000$ of computer software at December 31, 2012 related to the Purchase Agreement discussed in Note 6, "Inventories." Management estimated the fair value to be approximately $\$ 81,000$ with the difference allocated to other assets under the Purchase Agreement based on their relative fair values.

Depreciation expense for the years ended December 31, 2012 and 2011 was approximately $\$ 541,000$ and $\$ 247,000$, respectively.

## 8. INTANGIBLE ASSETS

Intangible assets consist of the following:

|  | December 31, |  |  |  | Weighted Average Amortization Period (in Years) |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |  |
| Patents | \$ | 748,939 | \$ | 630,633 | 3.2 |
| Trademarks |  | 50,437 |  | 10,525 | 4.5 |
| License rights |  | 6,718 |  | - | 1.8 |
| Total |  | 806,094 |  | 641,158 |  |
| Less accumulated amortization |  | $(459,362)$ |  | $(392,346)$ |  |
| Intangible assets, net | \$ | 346,732 | \$ | 248,812 |  |

Amortization expense for the years ended December 31, 2012 and 2011 was approximately $\$ 67,000$ and $\$ 52,000$, respectively. Amortization expense on existing intangible assets is estimated to be $\$ 109,000$ per year for 2013 and $2014, \$ 83,000$ for $2015, \$ 36,000$ for 2016, $\$ 8,000$ for 2017 , and $\$ 2,000$ thereafter.

Approximately $\$ 36,000$ and $\$ 7,000$ of trademarks and license rights, respectively, related to the Purchase Agreement discussed in Note 6 , "Inventories." Management estimated the fair values to be approximately $\$ 40,000$ and $\$ 8,000$, respectively, with the differences allocated to other assets under the Purchase Agreement based on their relative fair values.

## 9. COMMITMENTS AND CONTINGENCIES

## Lease Commitments

In March 2004, the Company entered into a seven-year lease, beginning in August 2004, for approximately 16,500 square feet of mixed-use space from an unaffiliated third party at a base cost with escalations throughout the lease term plus additional common-area expenses based on the Company's proportionate share of the lessor's operating costs. The lease provided for two rent holidays, during which no rent was payable, and a moving allowance. In January 2011, the Company amended the lease effective January 1, 2011 to extend the term through January 2017 in exchange for a reduced rental rate and $50 \%$ rent abatement in the first 12 months of the extended term. The amended
lease includes $3 \%$ annual rent escalations and a one-time option to terminate the lease effective as of July 31,2014 . The Company recognizes rent expense on a straight-line basis, giving consideration to the rent holidays, the moving allowance paid to the Company, and the rent abatement. At the Company's option, the amended lease can be extended for one five-year period.

As of December 31, 2012, the Company's future minimum payments under this operating lease were as follows:

| 2013 | \$ | 139,307 |
| :---: | :---: | :---: |
| 2014 |  | 143,486 |
| 2015 |  | 147,791 |
| 2016 |  | 152,224 |
| 2017 |  | 13,066 |
| Total | \$ | 595,874 |

Rent expense for the years ended December 31, 2012 and 2011 was approximately $\$ 196,000$ and $\$ 210,000$, respectively.

## Purchase Commitments

On June 6, 1997, the Company entered into an amended and restated exclusive supply agreement with Cree, Inc. ("Cree"). The exclusive supply agreement had an initial term of ten years that was extended in January 2005 to July 2015. In connection with the amended and restated exclusive supply agreement, the Company has committed to purchase from Cree a minimum of $50 \%$, by dollar volume, of its raw material SiC crystal requirements. If the Company's orders require Cree to expand beyond specified production levels, the Company must commit to purchase certain minimum quantities. There exist no outstanding purchase commitments under the amended and restated exclusive supply agreement as of December 31, 2012. Effective February 8 , 2013, the Company entered into an amendment to a prior letter agreement with Cree, which provides a framework for the Company's purchases of SiC crystals under the amended and restated exclusive supply agreement. Pursuant to this amendment, the Company agreed to purchase at least $\$ 4.00$ million of SiC crystals in an initial new order. After the initial new order, the Company has agreed to issue non-cancellable, quarterly orders that must equal or exceed a set minimum order quantity. The total purchase commitment under the amendment until July 2015, including the initial new order, is dependent upon the grade of the material and ranges between approximately $\$ 7.64$ million and approximately $\$ 18.56$ million.

## Legal Proceedings

On July 26, 2011, the Company learned that BetterThanDiamond.com requested that the U.S. Patent and Trademark Office ("USPTO") conduct an ex parte re-examination of the Company's U.S. Patent No. 5,723,391 (the "'391 Patent") for manufacturing silicon carbide gemstones based on claims of prior art. On October 5, 2011, the USPTO granted the re-examination request based on its finding that the information provided in the request raised "a substantial new question of patentability." On May 30, 2012, the USPTO issued a non-final Office Action in Ex Parte Re-examination that rejected Claims 1 through 3 of the '391 Patent based on its initial review of the prior art. On July 27, 2012, the Company responded to the USPTO. On October 1, 2012, the USPTO issued a Notice of Intent to Issue Ex Parte Re-examination Certificate that upheld all claims under the Company's ' 391 Patent for manufacturing SiC gemstones.

## 10. SHAREHOLDERS' EQUITY AND STOCK-BASED COMPENSATION

## Common Stock

The Company is authorized to issue $50,000,000$ shares of common stock, no par value. As of December 31, 2012 and 2011, it had 19,654,050 and 19,454,689 shares of common stock outstanding, respectively. Holders of common stock are entitled to one vote for each share held.

In November 2009, the Board of Directors authorized a repurchase program for up to $1,000,000$ shares of the Company's common stock. On August 7 , 2012, the Board authorized an extension of the program through August 12, 2013. Repurchases can be made in the open market or in privately negotiated transactions. The Company expects to use available cash to finance these purchases and will determine the timing and amount of stock
repurchases based on its evaluation of market conditions, the market price of its common stock, and management's assessment of the Company's liquidity and cash flow needs. During the year ended December 31, 2012, the Company repurchased no shares. As of March 25, 2013, the Company has repurchased an aggregate of 190,787 shares, and there remain 809,213 shares of the Company's common stock approved for repurchase under the repurchase program. Repurchased shares become authorized but unissued shares of the Company's common stock available for issuance.

## Preferred Stock

The Board of Directors is authorized, without further shareholder approval, to issue up to $10,000,000$ shares of preferred stock, no par value. The preferred stock may be issued from time to time in one or more series. No shares of preferred stock had been issued as of December 31, 2012.

## Shareholder Rights Plan

On February 21, 1999, the Company adopted, as a means to guard against abusive takeover tactics, a Shareholder Rights Plan (the "Rights Plan"), as amended by Amendment No. 1 dated as of February 18, 2009, under which all common shareholders of record as of March 8, 1999 received a dividend distribution of one right for each outstanding share of the Company's common stock to purchase shares of a new series of preferred stock. One right would also be distributed for each share of common stock issued after March 8,1999 until the distribution date, which would occur upon the earlier of (i) 10 business days following a public announcement that a person or group of affiliated or associated persons had acquired beneficial ownership of $20 \%$ or more of the outstanding shares of the Company's common stock, or (ii) 10 business days following the commencement of a tender offer or exchange offer that would, if consummated, result in a person or group beneficially owning $20 \%$ or more of such outstanding shares of the Company's common stock, subject to certain limitations. The rights would be exercisable only if a person or group acquires or announces a tender offer to acquire $20 \%$ or more of the Company's common stock. If a person or group acquires $20 \%$ or more of the Company's common stock, all shareholders except the purchaser would be entitled to acquire the Company's common stock at a $50 \%$ discount. The rights would trade with the Company's common stock, unless and until they are separated upon the occurrence of certain future events. On August 15, 2011, the Company and American Stock Transfer \& Trust Company, LLC, as rights agent, entered into Amendment No. 2 to the Rights Plan (the "Rights Amendment") amending the Company's Rights Plan. The Rights Amendment accelerated the expiration of the preferred share purchase rights issued under the Rights Agreement in connection with the Rights Plan from the close of business on February 22 , 2019 to the close of business on August 15, 2011. Accordingly, as of the close of business on August 15, 2011, the rights issued under the Rights Plan expired and are no longer outstanding. The Rights Amendment has the effect of terminating the Rights Plan effective August 15, 2011.

## Equity Compensation Plans

## 1996 Stock Option Plan

In 1996, the Company adopted the 1996 Stock Option Plan of Charles \& Colvard, Ltd. (the "1996 Option Plan"), under which stock options to acquire $1,020,402$ common shares, reduced by the number of stock options granted outside the 1996 Option Plan, could be granted to key employees, directors, and independent contractors. Under the 1996 Option Plan, both incentive and non-qualified stock options could be granted under terms and conditions established by the Compensation Committee of the Board of Directors. The exercise price for incentive stock options was the fair market value of the related common stock on the date the stock option was granted. Stock options granted under the 1996 Option Plan generally vested equally over a three-year period and had terms of 10 years. As of December 31, 2012 and 2011, there were no outstanding stock options under the 1996 Option Plan, and the Company currently has no plans to award additional stock options under this plan.

## 1997 Omnibus Stock Plan

In 1997, the Company adopted the 1997 Omnibus Stock Plan of Charles \& Colvard, Ltd. (the "1997 Omnibus Plan"). The 1997 Omnibus Plan authorized the Company to grant stock options, stock appreciation rights, and restricted stock awards (collectively, "awards") to selected employees, independent contractors, and directors of the Company and related corporations in order to promote a closer identification of their interests with those of the Company and its shareholders. All stock options granted under the 1997 Omnibus Plan have an exercise price equal
to the market price of the Company's common stock on the date the stock option was granted. Stock options granted to employees under the 1997 Omnibus Plan generally vest over three years and have terms of up to 10 years, with the exception of stock options granted in 2005 under the Executive Compensation Plan (which is governed by and subject to the 1997 Omnibus Plan) that vested immediately and stock options granted in 2006 under the Executive Compensation Plan that vested at the end of three years. Stock options granted to the Board of Directors under the 1997 Omnibus Plan generally vested over one year and have terms of up to 10 years. The terms of stock options granted to independent contractors varied depending on the specific grant, but the terms are no longer than 10 years. Restricted stock awards granted to members of the Board of Directors vested at the end of one year. The 1997 Omnibus Plan expired (with respect to future grants) on September 30, 2007. As of December 31, 2012 and 2011, there were 25,685 and 70,892 stock options outstanding under the 1997 Omnibus Plan, respectively.

## 2008 Stock Incentive Plan

In May 2008, the shareholders of the Company approved the adoption of the Charles \& Colvard, Ltd. 2008 Stock Incentive Plan (the " 2008 Plan"), which replaced the 1997 Omnibus Plan. The 2008 Plan authorizes the Company to grant stock options, stock appreciation rights, restricted stock, and other equity awards to selected employees, directors, and independent contractors. The aggregate number of shares of the Company's common stock that may be issued pursuant to awards granted under the 2008 Plan shall not exceed the sum of $3,000,000$ plus any shares of common stock subject to an award granted under the 1997 Omnibus Plan or any other stock incentive plan maintained by the Company prior to the 2008 Plan (each, a "Prior Plan") that is forfeited, cancelled, terminated, expires, or lapses for any reason without the issuance of shares pursuant to the award, or shares subject to an award granted under a Prior Plan which shares are forfeited to, or repurchased or reacquired by, the Company. Stock options granted to employees under the 2008 Plan generally vest over three years and have terms of up to 10 years. The vesting schedules and terms of stock options granted to independent contractors vary depending on the specific grant, but the terms are no longer than 10 years. Restricted stock awards granted to members of the Board of Directors vest at the end of one year on the date of the Annual Meeting of Shareholders. The vesting schedules of restricted stock awards granted to employees or independent contractors vary depending on the specific grant but are generally three years or less. Only stock options and restricted stock have been granted under the 2008 Plan. As of December 31, 2012 and 2011, there were $1,122,162$ and $1,086,687$ stock options outstanding under the 2008 Plan, respectively.

## Stock-Based Compensation

The following table summarizes the components of the Company's stock-based compensation included in net income:

|  | Year Ended December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |
| Employee stock options | \$ | 483,534 | \$ | 449,747 |
| Consultant stock options |  | - |  | 85,726 |
| Restricted stock awards |  | 533,544 |  | 448,031 |
| Income tax benefit |  | $(193,442)$ |  | $(193,519)$ |
| Total | \$ | 823,636 | \$ | 789,985 |

No stock-based compensation was capitalized as a cost of inventory during the years ended December 31, 2012 and 2011.

## Stock Options

The following is a summary of the stock option activity for the years ended December 31, 2012 and 2011:

|  | Shares | Weighted Average Exercise Price |  |
| :---: | :---: | :---: | :---: |
| Outstanding, December 31, 2010 | 660,450 | \$ | 1.97 |
| Granted | 568,440 | \$ | 2.61 |
| Exercised | $(33,372)$ | \$ | 1.42 |
| Forfeited | $(16,885)$ | \$ | 1.51 |
| Expired | $(21,054)$ | \$ | 10.16 |
| Outstanding, December 31, 2011 | 1,157,579 | \$ | 2.16 |
| Granted | 146,136 | \$ | 4.02 |
| Exercised | $(85,768)$ | \$ | 1.85 |
| Forfeited | $(44,098)$ | \$ | 2.71 |
| Expired | $(26,002)$ | \$ | 6.28 |
| Outstanding, December 31, 2012 | $\underline{ }$ 1,147,847 | \$ | 2.31 |

The weighted average grant date fair value of stock options granted during the years ended December 31, 2012 and 2011 was $\$ 2.84$ and $\$ 1.83$, respectively. The total fair value of stock options that vested during the years ended December 31,2012 and 2011 was approximately $\$ 439,000$ and $\$ 420,000$, respectively. The fair value of each stock option is estimated on the date of grant using the Black-Scholes-Merton option pricing model with the following weighted average assumptions for stock options granted during the years ended December 31, 2012 and 2011:

|  | Year Ended December 31, |  |
| :--- | :---: | :---: | :---: |
|  | 2012 | 2011 |
| Dividend yield | $0.0 \%$ | $0.0 \%$ |
| Expected volatility | $92.8 \%$ | $91.2 \%$ |
| Risk-free interest rate | $0.82 \%$ | $1.40 \%$ |
| Expected lives (years) | 5.0 | 5.0 |

The following table summarizes information about stock options outstanding at December 31, 2012:

| Options Outstanding |  |  |
| :---: | :---: | :---: |
|  | Weighted | Weighted |
|  | Average | Weing |
| Balance | Remaining | Average |
| as of | Contractual | Exercise |
| $\frac{12 / 31 / 2012}{1,147,847}$ | Life (Years) | Price |
|  | 7.89 | 2.31 |


| Options Exercisable |  |  |
| :---: | :---: | :---: |
|  | Weighted |  |
| Average | Weighted |  |
| Balance | Remaining | Average |
| as of | Contractual | Exercise |
| $\frac{12 / 31 / 2012}{}$ | Life (Years) | Price |
|  | 748,547 | $\$$ |


| Options Vested or Expected to Vest |  |  |
| :---: | :---: | :---: |
|  | Weighted |  |
|  | Average | Weighted |
| Balance | Remaining | Average |
| as of | Contractual | Exercise |
| $\frac{12 / 31 / 2012}{1,102,672}$ | Life (Years) | Price |
|  |  | $\$ .86$ |

As of December 31, 2012, the unrecognized stock-based compensation expense related to unvested stock options was approximately $\$ 634,000$, which is expected to be recognized over a weighted average period of approximately 21 months.

The aggregate intrinsic value of stock options outstanding, exercisable, and vested or expected to vest at December 31, 2012 was approximately $\$ 2.00$ million, $\$ 1.55$ million, and $\$ 1.95$ million, respectively. This amount is before applicable income taxes and represents the closing market price of the Company's common stock at December 31, 2012 less the grant price, multiplied by the number of stock options that had a grant price that is less than the closing market price. This amount represents the amount that would have been received by the optionees had these stock options been exercised on that date. During the years ended December 31, 2012 and 2011, the aggregate intrinsic value of stock options exercised was approximately $\$ 188,000$ and $\$ 48,000$, respectively.

## Restricted Stock

The following is a summary of the restricted stock activity for the years ended December 31, 2012 and 2011:

|  | Shares | Weighted Average Grant Date Fair Value |  |
| :---: | :---: | :---: | :---: |
| Unvested, December 31, 2010 | 108,512 | \$ | 2.35 |
| Granted | 278,866 | \$ | 2.91 |
| Vested | $(147,989)$ | \$ | 2.49 |
| Canceled | - | \$ | - |
| Unvested, December 31, 2011 | 239,389 | \$ | 2.92 |
| Granted | 114,843 | \$ | 3.68 |
| Vested | $(162,389)$ | \$ | 2.91 |
| Canceled | - | \$ | - |
| Unvested, December 31, 2012 | $\underline{\text { 191,843 }}$ | \$ | 3.38 |

As of December 31, 2012, the unrecognized stock-based compensation expense related to unvested restricted stock was approximately $\$ 375,000$, which is expected to be recognized over a weighted average period of approximately 20 months.

## Dividends

The Company has not paid any cash dividends during the years ended December 31, 2012 and 2011.

## 11. INCOME TAXES

The Company accounts for income taxes under the liability method. Under the liability method, deferred income taxes are recognized for the income tax consequences of "temporary differences" by applying enacted statutory income tax rates applicable to future years to differences between the financial statement carrying amounts and the income tax bases of existing assets and liabilities.

Income tax net benefit comprises the following:

|  | Year Ended December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |
| Current: |  |  |  |  |
| Federal | \$ | $(5,186)$ | \$ | $(11,821)$ |
| State |  | 322,400 |  | 195,768 |
| Total |  | 317,214 |  | 183,947 |
|  |  |  |  |  |
| Deferred: |  |  |  |  |
| Federal |  | 3,263,177 |  | - |
| State |  | 469,413 |  | - |
| Total |  | 3,732,590 |  | - |
| Income tax net benefit | \$ | 4,049,804 | \$ | 183,947 |

Significant components of the Company's deferred income tax assets are as follows:

|  | December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |
| Current: |  |  |  |  |
| Reserves and accruals | \$ | 880,542 | \$ | 698,930 |
| Prepaid expenses |  | $(94,110)$ |  | $(68,716)$ |
| Federal net operating loss ("NOL") carryforwards |  | 375,624 |  | - |
| State NOL carryforwards |  | 113,414 |  | - |
| Valuation allowance |  | $(63,698)$ |  | $(630,214)$ |
| Total | \$ | 1,211,772 | \$ |  |


|  | December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |
| Noncurrent: |  |  |  |  |
| Federal NOL carryforwards | \$ | 1,530,636 | \$ | 2,112,236 |
| State NOL carryforwards |  | 462,155 |  | 676,914 |
| Hong Kong and China NOL carryforwards |  | 995,566 |  | 995,566 |
| Federal benefit on state taxes under uncertain tax positions |  | 124,333 |  | 223,274 |
| Stock-based compensation |  | 108,770 |  | 145,495 |
| Investment loss |  | 53,737 |  | 54,339 |
| Research tax credit |  | 434,637 |  | 542,000 |
| Alternative minimum tax credit |  | 347,213 |  | 351,189 |
| Depreciation |  | $(461,875)$ |  | (358,673) |
| Loss on impairment of long-lived assets |  | 53,720 |  | 54,355 |
| Valuation allowance |  | $(1,128,074)$ |  | $(4,796,695)$ |
| Total |  | 2,520,818 |  | - |
| Total deferred income tax assets, net | \$ | 3,732,590 | \$ | - |

A reconciliation between expected income taxes, computed at the statutory federal income tax rate of $34 \%$ applied to pretax accounting income, and the income tax expense included in the consolidated statements of operations for the years ended December 31, 2012 and 2011 is as follows:

|  | Year Ended December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2012 |  | 2011 |  |
| Anticipated income tax expense at statutory rate | \$ | $(87,012)$ | \$ | $(483,375)$ |
| State income tax benefit, net of federal tax effect |  | 919 |  | 136,903 |
| Research and development credits expiration |  | $(131,764)$ |  | - |
| Effect of foreign operations |  |  |  | $(60,437)$ |
| Income tax effect of uncertain tax positions |  | 239,745 |  | 195,769 |
| Return to provision adjustments |  | $(100,417)$ |  | 3,195 |
| Stock-based compensation |  | $(87,723)$ |  | $(138,166)$ |
| Other changes in deferred income tax assets, net |  | $(17,489)$ |  | $(3,084)$ |
| Decrease in valuation allowance |  | 4,233,545 |  | 533,142 |
| Income tax net benefit | \$ | 4,049,804 | \$ | 183,947 |

For the year ended December 31, 2011, the Company did not recognize an income tax benefit for any of its deferred tax assets, primarily related to net operating loss carryforwards, due to the uncertainty of sufficient future taxable income to fully utilize its deferred tax assets. As of each reporting date, the Company's management considers new evidence, both positive and negative, that could impact its view with regard to future realization of deferred tax assets. For the year ended December 31, 2012, cumulative positive taxable income over the last three tax years had been generated, offsetting the negative evidence of cumulative losses in previous years. The Company also determined that its expectations of future taxable income in upcoming tax years would be sufficient to result in full utilization of these net operating loss carryforwards and deferred tax assets prior to any statutory expiration. As a result, the Company's management determined that sufficient positive evidence exists as of December 31, 2012 to conclude that it is more likely than not deferred tax assets of $\$ 3.73$ million are realizable, and it reduced its valuation allowance accordingly. The reduction of the valuation allowances against these deferred tax assets resulted in an income tax benefit during the year ended December 31, 2012 of $\$ 3.73$ million. A valuation allowance remains against certain deferred tax assets relating to state net operating loss carryforwards from the Company's e-commerce and home party operating subsidiaries due to the timing uncertainty of when the subsidiaries will generate cumulative positive taxable income to utilize the associated deferred tax assets. A valuation allowance also remains against certain deferred tax assets relating to investment loss carryforwards because the Company's current investments are classified as held-tomaturity, indicating they will be redeemed at par value and will not generate gains sufficient to utilize the associated deferred tax assets.

As of December 31, 2012, the Company had approximately $\$ 881,000$ of remaining federal income tax credits, $\$ 533,000$ of which expire between 2018 and 2021 and the balance without an expiration, which can be carried forward to offset future income taxes. As of December 31, 2012, the Company also had a federal tax net operating

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loss carryforward under U.S. GAAP of approximately $\$ 5.73$ million expiring between 2020 and 2030, which can be used to offset against future federal taxable income, a North Carolina tax net operating loss carryforward of approximately $\$ 8.40$ million expiring between 2015 and 2025, and various other state tax net operating loss carryforwards expiring between 2016 and 2030, which can be used to offset against future state taxable income.

As of December 31, 2012, there was approximately $\$ 6.03$ million in net operating loss carryforwards in Hong Kong. In accordance with the Hong Kong tax code, these amounts can be carried forward indefinitely to offset future taxable income in Hong Kong. The Company's deferred tax assets in Hong Kong were fully reserved with a valuation allowance of $\$ 996,000$ as of December 31, 2012 and 2011 and had been fully reserved in all prior periods due to the uncertainty of future taxable income in this jurisdiction to utilize the deferred tax assets.

## Uncertain Tax Positions

The gross liability for income taxes associated with uncertain tax positions at December 31, 2012 was $\$ 483,000$. This amount is shown net of approximately $\$ 99,000$ recorded as a direct reduction to the associated deferred tax asset. The gross liability, if recognized, would favorably affect the Company's effective tax rate. The Company recorded a federal income tax benefit of approximately $\$ 124,000$ for state income taxes and timing differences resulting from the uncertain tax positions. For the year ended December 31, 2012, the total income tax benefit attributable to uncertain tax positions was approximately $\$ 240,000$. During the year ended December 31, 2012, the Company entered into a voluntary disclosure agreement with a taxing authority for which the Company had previously recorded a liability for an uncertain tax position. As a result of the agreement, the Company reduced its total recorded liabilities relating to uncertain tax positions by approximately $\$ 374,000$, paid approximately $\$ 48,000$ to the taxing authority, and recognized a corresponding income tax benefit of $\$ 326,000$. This benefit was offset by approximately $\$ 16,000$ of net income tax expense for the year ended December 31,2012 for estimated tax, penalties, and interest accrued under U.S. GAAP for other uncertain tax positions. The Company also reduced its net liability for uncertain tax positions by approximately $\$ 24,000$ and recognized a corresponding income tax benefit due to the expiration of a portion of research and development tax credits included in its deferred tax assets.

The gross liability for income taxes associated with uncertain tax positions at December 31, 2011 was $\$ 865,000$. This amount is shown net of approximately $\$ 123,000$ recorded as a direct reduction to the associated deferred tax asset. The gross liability, if recognized, would favorably affect the Company's effective tax rate. A federal income tax benefit for state income taxes and timing differences of approximately $\$ 223,000$ resulting from the uncertain tax positions was fully reserved by a valuation allowance consistent with the full valuation allowance on the Company's other deferred tax assets. For the year ended December 31,2011 , the total income tax benefit attributable to uncertain tax positions was approximately $\$ 196,000$. During the year ended December 30, 2011, the Company entered into a voluntary disclosure agreement with a taxing authority for which the Company had previously recorded a liability for an uncertain tax position. As a result of the agreement, the Company reduced its total recorded liabilities relating to uncertain tax positions by approximately $\$ 252,000$ and recognized a corresponding income tax benefit. This benefit was offset by approximately $\$ 57,000$ of net income tax expense for the year ended December 31, 2011 for estimated tax, penalties, and interest accrued under U.S. GAAP for other uncertain tax positions, including $\$ 4,000$ for new uncertain tax positions during 2011.

The Company's policy for recording interest and penalties associated with tax audits is to record such items as a component of the provision for income taxes. During 2012 and 2011, the Company accrued interest and penalties associated with uncertain tax positions of approximately $\$ 16,000$ and $\$ 57,000$, respectively. Including the interest and penalties recorded for uncertain tax positions, there is a total of approximately $\$ 115,000$ and $\$ 263,000$ of interest and penalties included in the accrued income tax liability for uncertain tax positions at December 31, 2012 and 2011, respectively. To the extent interest and penalties are not ultimately incurred with respect to uncertain tax positions, amounts accrued will be reduced and reflected as a reduction of the overall income tax provision.

In all of the significant federal and state jurisdictions where it is required to file income tax returns, the Company has analyzed filing positions for all tax years in which the statute of limitations is open. The only periods subject to examination by the major tax jurisdictions where the Company does business are the 2009 through 2011 tax years. The Company does not believe that the outcome of any examination will have a material impact on its consolidated financial statements and does not expect settlement on any uncertain tax positions within the next 12 months.

The following summarizes the activity related to the Company's gross liability for uncertain tax positions from January 1, 2011 through December 31, 2012:

| Balance as of January 1, 2011 | $\$, 060,595$ |
| :--- | ---: |
| Increases related to prior year tax positions | 52,961 |
| Increases related to current year tax positions | 3,613 |
| Decreases related to reversal of prior year tax positions by amendment of returns | $(252,343)$ |
| Balance as of December 31, 2011 | 864,826 |
| Increases related to prior year tax positions | 18,184 |
| Decreases related to current year tax filings | $(1,693)$ |
| Decreases related to expired tax credits | $(24,401)$ |
| Decreases related to reversal of prior year tax positions by amendment of returns | $(374,406)$ |
| Balance as of December 31, 2012 | $\$ \mathbf{4 8 2 , 5 1 0}$ |

## 12. MAJOR CUSTOMERS AND CONCENTRATION OF CREDIT RISK

As of December 31, 2012, one customer accounted for $30 \%$ of trade accounts receivable. As of December 31, 2011, three customers accounted for $29 \%, 12 \%$, and $10 \%$ of trade accounts receivable, respectively.

A significant portion of sales is derived from certain customer relationships. The following is a summary of customers that represent greater than or equal to $10 \%$ of total gross sales:

|  | Year Ended December 31, |  |
| :---: | :---: | :---: |
|  | 2012 | 2011 |
| Customer A | 27\% | 15\% |
| Customer B | 11\% | 12\% |
| Customer C | 8\% | 11\% |

## 13. EMPLOYEE BENEFIT PLAN

All full-time employees who meet certain age and length of service requirements are eligible to participate in the Company's 401(k) Plan. The plan provides for matching contributions by the Company in such amounts as the Board of Directors may annually determine, as well as a $401(\mathrm{k}$ ) option under which eligible participants may defer a portion of their salaries. The Company contributed a total of $\$ 54,000$ and $\$ 41,000$ to the plan during the years ended December 31, 2012 and 2011, respectively.

## 14. SUBSEQUENT EVENT

Effective February 8, 2013, the Company entered into an amendment to a prior letter agreement with Cree, which provides a framework for the Company's purchases of SiC crystals under the amended and restated exclusive supply agreement. Pursuant to this amendment, the Company agreed to purchase at least $\$ 4.00$ million of SiC crystals in an initial new order. After the initial new order, the Company has agreed to issue non-cancellable, quarterly orders that must equal or exceed a set minimum order quantity. The total purchase commitment under the amendment until July 2015, including the initial new order, is dependent upon the grade of the material and ranges between approximately $\$ 7.64$ million and approximately $\$ 18.56$ million.

## Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

## Item 9A.Controls and Procedures

## Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2012. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the
reports that it files or submits under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate, to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, as ours are designed to do, and management necessarily applies its judgment in evaluating the costbenefit relationship of possible controls and procedures. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of December 31, 2012, our disclosure controls and procedures were effective at the reasonable assurance level.

## Changes in Internal Control Over Financial Reporting

We routinely review our internal control over financial reporting and from time to time make changes intended to enhance the effectiveness of our internal control over financial reporting. We will continue to evaluate the effectiveness of our disclosure controls and procedures and internal control over financial reporting on an ongoing basis and will take action as appropriate. During the three months ended December 31, 2012, we made no changes to our internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act, that we believe materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

## Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Our internal control system was designed to provide reasonable assurance to our management and Board of Directors regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Our internal control over financial reporting includes those policies and procedures that:
(i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets;
(ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and
(iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on the financial statements.

All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to the reliability of financial reporting and the preparation of financial statements.

In making the assessment of internal control over financial reporting, our management used the criteria issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework. Based on that assessment and those criteria, management determined that our internal control over financial reporting was effective as of December 31, 2012.

## Item 9B. Other Information

None.

## PART III

## Item 10. Directors, Executive Officers and Corporate Governance

## Item 11. Executive Compensation

## Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

## Item 13. Certain Relationships and Related Transactions, and Director Independence

## Item 14. Principal Accounting Fees and Services

The information called for in Items 10 through 14 is incorporated by reference from our definitive Proxy Statement relating to our 2013 Annual Meeting of Shareholders, which will be filed with the SEC within 120 days after the end of fiscal 2012.

## PART IV

## Item 15. Exhibits, Financial Statement Schedules

(a)(1) and (2). The consolidated financial statements and report of our independent registered public accounting firm are filed as part of this report (see "Index to Financial Statements," at Part II, Item 8). The financial statement schedules are not included in this Item as they are either not applicable or the information is otherwise included in the consolidated financial statements or the notes to the consolidated financial statements.
(a)(3). The following exhibits have been or are being filed herewith and are numbered in accordance with Item 601 of Regulation S -K:

## Exhibit No. Description

2.1 Asset Purchase Agreement, dated October 19, 2012, between Charles \& Colvard Direct, LLC and Bamboo Pink, Inc. (incorporated herein by reference to Exhibit 2.1 to our Current Report on Form 8-K, as filed with the SEC on October 25, 2012)
3.1 Restated Articles of Incorporation of Charles \& Colvard, Ltd. (incorporated herein by reference to Exhibit 3.1 to our Annual Report on Form 10K for the year ended December 31, 2004)
3.2 Bylaws of Charles \& Colvard, Ltd., as amended and restated, effective May 19, 2011 (incorporated herein by reference to Exhibit 3.1 to our Current Report on Form 8-K, as filed with the SEC on May 24, 2011)
4.1 Specimen Certificate of Common Stock (incorporated herein by reference to Exhibit 4.1 to our Annual Report on Form 10-K for the year ended December 31, 1998)
10.1 Amended and Restated Exclusive Supply Agreement, dated as of June 6, 1997, between Cree Research, Inc. and C3, Inc. (incorporated herein by reference to Exhibit 10.11 to our Registration Statement on Form S-1 (File No. 333-36809), as filed with the SEC on September 30, 1997)*
10.2 Notice of Extension of Amended and Restated Exclusive Supply Agreement, dated January 6, 2005, from Charles \& Colvard, Ltd. to Cree, Inc. (incorporated herein by reference to Exhibit 10.69 to our Current Report on Form 8-K, as filed with the SEC on January 7, 2005)
10.3 Letter Agreement, dated January 31, 1996, between Cree Research, Inc. and C3, Inc. (incorporated herein by reference to Exhibit 10.14 to our Registration Statement on Form S-1 (File No. 333-36809), as filed with the SEC on September 30, 1997)*

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10.4 Letter Agreement, dated November 12, 2007, between Cree, Inc. and Charles \& Colvard, Ltd. (incorporated herein by reference to Exhibit 10.108 to our Current Report on Form 8-K, as filed with the SEC on November 13, 2007)*
10.5 Letter Agreement, dated September 18, 2008, between Cree, Inc. and Charles \& Colvard, Ltd. (incorporated herein by reference to Exhibit 10.123 to our Current Report on Form 8-K, as filed with the SEC on September 24, 2008)
10.6 Letter Agreement, effective March 22, 2010, between Cree, Inc. and Charles \& Colvard, Ltd. (incorporated herein by reference to Exhibit 10.6 to our Annual Report on Form 10-K for the year ended December 31, 2009)*
10.7 Amendment to Letter Agreement, effective February 8, 2013, between Charles \& Colvard, Ltd. and Cree, Inc. (incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K, as filed with the SEC on February 14, 2012)*
10.8 Letter Agreement, dated February 9, 2005 and effective February 21, 2005, between The Bell Group, d/b/a Rio Grande and Charles \& Colvard, Ltd. (incorporated herein by reference to Exhibit 10.73 to our Current Report on Form 8-K, as filed with the SEC on February 23, 2005)*
10.9 Letter Agreement, effective July 11, 2008, between Samuel Aaron Inc. and Charles \& Colvard, Ltd. (incorporated herein by reference to Exhibit 10.120 to our Current Report on Form 8-K, as filed with the SEC on July 17, 2008)*
10.10 Licensing Agreement, dated July 11, 2008, by and between Charles and Colvard, Ltd. and Samuel Aaron Inc. (incorporated herein by reference to Exhibit 10.121 to our Current Report on Form 8-K, as filed with the SEC on July 17, 2008)
10.11 Letter Agreement, effective November 4, 2009, between Stuller, Inc. and Charles \& Colvard, Ltd. (incorporated herein by reference to Exhibit 10.1 to our Current Report on Form 8-K, as filed with the SEC on November 10, 2009)*
10.12 Memorandum of Understanding, dated January 24, 2012, between Charles \& Colvard, Ltd. and Serenity Technologies, Inc. (incorporated herein by reference to Exhibit 10.1 to our Amendment No. 1 to Current Report on Form 8-K/A, as filed with the SEC on March 20, 2012)*
10.13 Services and Licensing Agreement, dated October 19, 2012, between Charles \& Colvard Direct, LLC and JudeFrances Jewelry, Inc. (incorporated herein by reference to Exhibit 10.1 to our Current Report on Form 8-K, as filed with the SEC on October 25, 2012)*
10.14 Lease Agreement, dated March 26, 2004, by and between Duke Realty Limited Partnership and Charles \& Colvard, Ltd. (incorporated herein by reference to Exhibit 10.62 to our Quarterly Report on Form 10-Q for the quarter ended March 31, 2004)
10.15 First Lease Amendment, dated September 22, 2004, by and between Duke Realty Limited Partnership and Charles \& Colvard, Ltd. (incorporated herein by reference to Exhibit 10.17 to our Annual Report on Form 10-K for the year ended December 31, 2010)
10.16 Second Amendment to Lease Agreement, dated July 30, 2010, by and between Raleigh Flex Owner I, LLC and Charles \& Colvard, Ltd. (incorporated herein by reference to Exhibit 10.18 to our Annual Report on Form 10-K for the year ended December 31, 2010)
10.17 Third Amendment to Lease Agreement, dated January 1, 2011, by and between Raleigh Flex Owner I, LLC and Charles \& Colvard, Ltd. (incorporated herein by reference to Exhibit 10.19 to our Annual Report on Form 10-K for the year ended December 31, 2010)
10.18 Board Compensation Program, effective March 16, 2011 (incorporated herein by reference to Exhibit 10.21 to our Annual Report on Form 10-K for the year ended December 31, 2010)+
10.19 Charles \& Colvard, Ltd. 2008 Stock Incentive Plan (incorporated herein by reference to Exhibit 99 to our Registration Statement on Form S-8 (File No. 333-151255), as filed with the SEC on May 29, 2008)+
10.20 Form of Restricted Stock Award Agreement under the Charles \& Colvard, Ltd. 2008 Stock Incentive Plan (incorporated herein by reference to Exhibit 10.115 to our Current Report on Form 8-K, as filed with the SEC on June 2, 2008)+
10.21 Form of Employee Incentive Stock Option Agreement under the Charles \& Colvard, Ltd. 2008 Stock Incentive Plan (incorporated herein by reference to Exhibit 10.116 to our Current Report on Form 8-K, as filed with the SEC on June 2, 2008)+
10.22 Form of Employee Nonqualified Stock Option Agreement under the Charles \& Colvard, Ltd. 2008 Stock Incentive Plan (incorporated herein by reference to Exhibit 10.118 to our Current Report on Form 8-K, as filed with the SEC on June 2, 2008)+
10.23 Form of Director Nonqualified Stock Option Agreement under the Charles \& Colvard, Ltd. 2008 Stock Incentive Plan (incorporated herein by reference to Exhibit 10.119 to our Current Report on Form 8-K, as filed with the SEC on June 2, 2008)+
10.24 Form of Special Committee Restricted Stock Award Agreement under the Charles \& Colvard, Ltd. 2008 Stock Incentive Plan (incorporated herein by reference to Exhibit 10.129 to our Annual Report on Form 10-K for the year ended December 31, 2008)+
10.25 Corporate Incentive Plan, effective January 1, 2010 (incorporated herein by reference to Exhibit 10.1 to our Current Report on Form 8-K, as filed with the SEC on March 23, 2010)+
10.26 Form of Indemnification Agreement (incorporated herein by reference to Exhibit 10.109 to our Current Report on Form 8-K, as filed with the SEC on December 10, 2007)+
10.27 Employment Agreement, effective as of June 23, 2009, by and between Charles and Colvard, Ltd. and Timothy L. Krist (incorporated herein by reference to Exhibit 10.130 to our Current Report on Form 8-K, as filed with the SEC on June 26, 2009)+
10.28 Employment Agreement, effective as of October 12, 2009, by and between Charles and Colvard, Ltd. and Thomas G. Pautz (incorporated herein by reference to Exhibit 10.45 to our Annual Report on Form 10-K for the year ended December 31, 2009)+
10.29 Employment Agreement, effective as of November 5, 2009, by and between Charles \& Colvard, Ltd. and Randy N. McCullough (incorporated herein by reference to Exhibit 10.1 to our Current Report on Form 8-K, as filed with the SEC on November 12, 2009)+
10.30 Consultant Agreement, dated September 28, 2012, between Charles \& Colvard, Ltd. and Anne Butler (incorporated herein by reference to Exhibit 10.1 to our Quarterly Report on Form 10-Q for the quarter ended September 30, 2012)+
21.1 Subsidiaries of Charles \& Colvard, Ltd.
23.1 Consent of BDO USA, LLP
31.1 Certification by Chief Executive Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

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31.2 Certification by Chief Financial Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1 Certification by Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2 Certification by Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

101 The following materials from Charles \& Colvard, Ltd.'s Annual Report on Form 10-K for the year ended December 31, 2012 formatted in XBRL (eXtensible Business Reporting Language) and furnished electronically herewith: (i) Consolidated Balance Sheets; (ii) Consolidated Statements of Operations; (iii) Consolidated Statements of Shareholders' Equity; (iv) Consolidated Statements of Cash Flows; and (v) Notes to Consolidated Financial Statements.++

* Asterisks located within the exhibit denote information which has been redacted pursuant to a request for confidential treatment filed with the SEC.
+ Management contract or compensatory plan or arrangement.
++ Pursuant to Rule 406T of Regulation S-T, the Interactive Data Files in Exhibit 101 hereto are deemed not filed or part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act, are deemed not filed for purposes of Section 18 of the Exchange Act, and otherwise are not subject to liability under those sections.

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

March 29, 2013
By: /s/ Randy N. McCullough
Randy N. McCullough
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

March 29, 2013

March 29, 2013

March 29, 2013

March 29, 2013

March 29, 2013

March 29, 2013

March 29, 2013

March 29, 2013

March 29, 2013

By: /s/ Randy N. McCullough
Randy N. McCullough
Director, President and Chief Executive Officer

By: /s/ Timothy L. Krist
Timothy L. Krist
Chief Financial Officer
(Principal Financial Officer and Chief Accounting Officer)
By: /s/ George R. Cattermole
George R. Cattermole
Chairman of the Board of Directors

By: /s/ David B. Barr
David B. Barr
Director

By: /s/H. Marvin Beasley
H. Marvin Beasley

Director

By: /s/ Anne M. Butler
Anne M. Butler
Director

By: /s/ Steven M. Larkin
Steven M. Larkin
Director

By: /s/ Charles D. Lein
Charles D. Lein
Director

By: /s/ Ollin B. Sykes
Ollin B. Sykes
Director
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32.2 Certification by Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

101 The following materials from Charles \& Colvard, Ltd.'s Annual Report on Form 10-K for the year ended December 31, 2012 formatted in XBRL (eXtensible Business Reporting Language) and furnished electronically herewith: (i) Consolidated Balance Sheets; (ii) Consolidated Statements of Operations; (iii) Consolidated Statements of Shareholders' Equity; (iv) Consolidated Statements of Cash Flows; and (v) Notes to Consolidated Financial Statements.++

* Asterisks located within the exhibit denote information which has been redacted pursuant to a request for confidential treatment filed with the SEC.
+ Management contract or compensatory plan or arrangement.
++ Pursuant to Rule 406T of Regulation S-T, the Interactive Data Files in Exhibit 101 hereto are deemed not filed or part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act, are deemed not filed for purposes of Section 18 of the Exchange Act, and otherwise are not subject to liability under those sections.

| Company Name |  |  |
| :--- | :--- | :--- |
| Moissanite.com, LLC |  | Jurisdiction Carolina |
| Charles \& Colvard Direct, LLC | North Carolina |  |
|  |  |  |

## Consent of Independent Registered Public Accounting Firm

Charles \& Colvard, Ltd.
Morrisville, North Carolina
We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 333-43613 and 333-93211) of C3, Inc. (now known as Charles \& Colvard, Ltd.) and Form S-8 (No. 333-151255 and 333-100883) of Charles \& Colvard, Ltd. of our report dated March 29, 2013, relating to the consolidated financial statements of Charles \& Colvard, Ltd. which appears in this Form 10-K.
/s/ BDO USA, LLP
Raleigh, North Carolina
March 29, 2013

# CERTIFICATION PURSUANT TO SECURITIES AND EXCHANGE ACT OF 1934 RULE 13a-14(a) AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002 

## I, Randy N. McCullough, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2012 of Charles \& Colvard, Ltd.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d15(f)) for the registrant and have:
(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

# CERTIFICATION PURSUANT TO SECURITIES AND EXCHANGE ACT OF 1934 RULE 13a-14(a) AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002 

I, Timothy L. Krist, certify that:

1. I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2012 of Charles \& Colvard, Ltd.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d$15(\mathrm{f})$ ) for the registrant and have:
(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

# CERTIFICATION PURSUANT TO <br> 18 U.S.C. SECTION 1350 AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002 

In connection with the Annual Report of Charles \& Colvard, Ltd. (the "Company") on Form 10-K for the year ended December 31, 2012 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Randy N. McCullough, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to my knowledge, that:
(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

## /s/ Randy N. McCullough

Randy N. McCullough
President and Chief Executive Officer
March 29, 2013
This Certification is being furnished solely to accompany the Report pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the SarbanesOxley Act of 2002, and shall not be deemed "filed" by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and shall not be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Report, irrespective of any general incorporation language contained in such filing.

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

# CERTIFICATION PURSUANT TO <br> 18 U.S.C. SECTION 1350 AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002 

In connection with the Annual Report of Charles \& Colvard, Ltd. (the "Company") on Form 10-K for the year ended December 31, 2012 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Timothy L. Krist, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to my knowledge, that:
(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

## /s/ Timothy L. Krist

Timothy L. Krist
Chief Financial Officer
March 29, 2013
This Certification is being furnished solely to accompany the Report pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the SarbanesOxley Act of 2002, and shall not be deemed "filed" by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and shall not be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Report, irrespective of any general incorporation language contained in such filing.

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.


[^0]:    See Notes to Consolidated Financial Statements.

