

Caesar Bryan

GAMCO Gold Fund, Inc.

Shareholder Commentary – December 31, 2009

To Our Shareholders,

The net asset value (“NAV”) of the GAMCO Gold Fund’s Class AAA Shares rose by 5.0% for the fourth quarter of 2009. Gold equities took a breather during the quarter following their strong performance during the third quarter. Although the gold price appreciated by almost 9% in the fourth quarter, the XAU Index of leading gold and silver stocks rose by a modest 1.7%. For comparison the average gold oriented fund monitored by Lipper returned 7.5% for the quarter.

For 2009 the NAV per Class AAA Share of the GAMCO Gold Fund rose by 52.1% which compares with a rise of 36.6% for the XAU Index and 51.0% for the average gold fund monitored by Lipper. Gold bullion closed the year at \$1,096.95 per ounce, a rise of \$214.90 per ounce over the twelve months, which represents a rise of 24.4%.

Comparative Results

Average Annual Returns through December 31, 2009 (a)

	Quarter	1 Year	3 Year	5 Year	10 Year	Since Inception (7/11/94)
GAMCO Gold Fund Class AAA	5.01%	52.14%	10.58%	19.05%	20.29%	9.35%
Philadelphia Gold and Silver Index	1.87	36.62	6.64	12.25	10.95	3.74(b)
Lipper Gold Fund Average	7.46	51.10	9.48	17.32	18.53	5.74
S&P 500 Index	6.04	26.47	(5.62)	0.42	(0.95)	8.03

The expense ratio in the current prospectus is 1.44% for the Fund’s Class AAA Shares. Class AAA Shares do not have a sales charge.

(a) **Returns represent past performance and do not guarantee future results.** Total returns and average annual returns reflect changes in share price and reinvestment of distributions and are net of expenses. Investment returns and the principal value of an investment will fluctuate. When shares are redeemed, they may be worth more or less than their original cost. Performance returns for periods of less than one year are not annualized. Current performance may be lower or higher than the performance data presented. Visit www.gabelli.com for performance information as of the most recent month end. **Investors should carefully consider the investment objectives, risks, charges, and expenses of the Fund before investing. The prospectus contains more information about this and other matters and should be read carefully before investing.** See page 7 for further details about additional classes of shares. Investing in foreign securities involves risks not ordinarily associated with investments in domestic issues, including currency fluctuation, economic, and political risks. Investing in gold is considered speculative and is affected by a variety of worldwide economic, financial, and political factors. The Philadelphia Gold & Silver Index is an unmanaged indicator of stock market performance of large North American gold and silver companies, while the Lipper Average reflects the average performance of mutual funds classified in this particular category. The Standard & Poor’s (“S&P”) 500 Index is an unmanaged indicator of stock market performance. Dividends are considered reinvested. You cannot invest directly in an index.

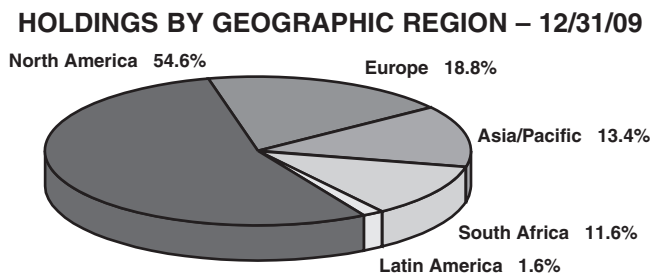
(b) Since June 30, 1994.

Our Approach

We look at a number of company specifics in order to determine which gold stocks are relatively undervalued. Our focus is on capitalization per ounce of production and, more importantly, on capitalization per ounce of recoverable reserves. This determines how much gold actually backs every dollar invested in a gold company. We appreciate that every mining company must replace the gold that it mines, and we place a heavy emphasis on the quality of management and their ability to create shareholder wealth. We invest globally with an emphasis on gold producing companies.

Global Allocation

The accompanying chart presents the Fund's holdings by geographic region as of December 31, 2009. The geographic allocation will change based on current global market conditions. Countries and/or regions represented in the chart and below may or may not be included in the Fund's future portfolio.



Commentary

The Indian Central Bank purchase of about half of the 400 tonnes of gold being offered for sale by the International Monetary Fund (IMF) was a significant event in the gold market for the quarter. The IMF had received permission to sell about 12.5% of its 3,200 tonnes of gold to raise cash to aid less wealthy countries and to fund its core mission. There has been much speculation as to how this disposal would be managed. In mid October, the IMF and the Central Bank of India announced the transaction at a price of \$1,045 per ounce. While this represents only about \$16.9 billion compared with India's total foreign exchange reserves of \$260 billion, we believe that this is a significant transaction as it validates gold's role as a monetary asset within a central bank's reserve portfolio. According to the World Gold Council, about 6.4% of India's foreign exchange reserves were held in gold at the end of 2009 following this transaction. It is possible that India may purchase the remaining IMF gold.

Soon after India's announcement, Sri Lanka and Mauritius announced they had purchased gold from the IMF. Hardly significant, but this indicates that central bankers, especially those from the developing countries, are thinking about adding to their nation's gold reserves. It is those countries such as China and members of OPEC that have accumulated vast foreign exchange reserves. The market had speculated that China, with its foreign exchange reserves totaling \$2.4 trillion dollars would be the buyer of the IMF gold. We doubt that they will purchase the remaining 190 tonnes, as a number of Chinese officials have commented that the gold price is "too high." As the world's largest producer of gold, we instead expect China to continue purchasing gold from domestic production. Clearly there has been a change in the central bank's perception of gold. As a group they were net sellers and now, for the first time in decades, they are net buyers. We expect this to continue for an extended time frame.

The role of the dollar as the world's reserve currency is increasingly questioned by a variety of senior overseas financial officials. This stems not as a result of its value relative to other currencies (many believe the dollar to be undervalued relative to the Euro and the Yen) but rather due to its management by the Federal Reserve. To combat the financial crisis, the Federal Reserve has embarked on a policy of zero interest rates and quantitative easing, otherwise known as the printing of money. This has not occurred since President Nixon took the dollar off the gold standard in August 1971. Although the Federal Reserve has increased its balance

sheet by “only” \$170 billion the past twelve months, it has replaced its emergency measures with the outright purchase of securities. The numbers are enormous. The Federal Reserve Bank has raised its holdings of mortgage backed and federal agency debt securities to \$1.13 trillion, an increase of \$1.06 trillion over the past twelve months. In addition, they have added \$300 billion of U.S. Treasury securities to take their holdings to \$777 billion by early January. What is their exit strategy? Who will buy these securities and at what price? The rise of short term rates is unlikely in the near term; the banking system is being nursed back to health with the profits from borrowing at nothing and turning around and buying longer dated securities sporting much higher yields.

On the surface it seems that a measure of normalcy has returned to financial markets. The global economy is recovering, the dollar has started to strengthen, and stability has returned to the leading banks. However, confidence in central banks has been eroded. Their ability to control events has proven to be false and investors, public and private, will continue to add to their gold holdings. Although gold has quadrupled since its low, it is still an underowned asset and remains the ultimate hedge against financial uncertainty.

Investment Scorecard

Gold exploration and development companies and smaller producers continued to outperform larger gold producers during the fourth quarter. Although small positions, we own a number of these companies in the portfolio. For example, we own four companies that rose in excess of 50%, but they amounted to only 2.1% of the total portfolio. Noteworthy performers among positions in excess of 1% of the portfolio include Semafo +59.7% (1.1%), Centamin Egypt +29.8% (1.3%), and Red Back Mining +27.7% (1.5%). Among our larger holdings the best performers were Eldorado +25.6% (5.0%), Lihir Gold +19.4% (4.6%), Impala Platinum +19.4% (3.1%), and Freeport-McMoRan Copper & Gold +17.0% (4.0%).

Two of our larger holdings hurt performance. They were long term portfolio holdings, Agnico-Eagle Mines (6.4%) and Kinross Gold (5.6%). They declined by 20.4% and 15.0%, respectively. Both companies suffered some operational difficulties, which resulted in investor disappointment. We appreciate that mining is extremely difficult and generally it pays to be patient. In the case of these two companies, we believe that their mines have the potential to perform well over the long term.

Let's Talk Stocks

The following are stock specifics on selected holdings of our Fund. Favorable earnings prospects do not necessarily translate into higher stock prices, but they do express a positive trend that we believe will develop over time. Individual securities mentioned are not necessarily representative of the entire portfolio. For the following holdings, the percentage of net assets and their share prices stated in U.S. dollar equivalent terms are presented as of December 31, 2009.

AngloGold Ashanti (2.9% of net assets as of December 31, 2009) (AU - \$40.18 - NYSE) is a geographically diversified gold producer. Although the company is headquartered in South Africa, it is in the process of actively diversifying outside of this base of operations. The company's long time parent, Anglo American, sold its final 11% stake in the company to a private investor in March of 2009. AngloGold is benefiting from a new management team, which is intent on efficiently allocating capital to the projects in its pipeline with the highest potential return on investment, while reducing cash costs per ounce on a unit basis.

Detour Gold (0.5%) (DGC CN - \$17.10 - Toronto Stock Exchange) is a development stage gold mining company with a resource north of the Timmins camp in northern Ontario. With 22 million ounces of total resource and a projected 600,000 ounces of annual production by 2013, Detour is one of the largest development projects in Canada.

Franco-Nevada Corp. (3.9%) (FNV CN - \$26.87 - Toronto Stock Exchange) is a royalty company with interests in over 190 mineral operations. In 2009, we expect that over 70% of the company's revenue will be derived from gold royalties. The structure of Franco-Nevada's royalty agreements is such that it receives a fixed payment based on revenue generated from the mines in which it has an interest. The company therefore bears no cost risk and little operational risk relative to the assets and is more of a pure play on the gold that the mines produce. With over \$700 million in cash available to employ in new deals for royalties, we are expecting Franco-Nevada to benefit from an increasing gold price.

Hochschild Mining (2.1%) (HOC LN - \$5.52 - London Stock Exchange) is a primary silver producer with mining assets in Peru, Argentina, and Mexico. The company has an expertise in mining high grade underground deposits and is actively exploring to find new deposits that will fit into its area of expertise. Hochschild also owns equity stakes in development stage gold projects in Canada and Mexico. The company increased its stakes in these companies in order to provide financing for their development.

IAMGOLD (1.4%) (IAG - \$15.64 - NYSE) is a mid tier gold producer with operating mines in Canada, South America, and Africa. The company should produce close to 1 million ounces in 2010, growing to around 1.3 million ounces by 2013 as new projects begin operation. We estimate that IAMGOLD's flagship Rosebel project in Suriname increased production by approximately 25%, while cash costs declined on a unit basis.

Kinross Gold (5.6%) (KGC - \$18.40 - NYSE) is a Canadian based gold producer with mines in the United States, Russia, and South America. We expect gold production to increase from 2.2 million ounces in 2009 to over 2.5 million ounces by 2013. The company's Fruta del Norte project in Ecuador, acquired in its purchase of Aurelian Resources, is a potentially long life, low cost project with exploration upside.

MAG Silver (0.2%) (MVG - \$6.02 - AMEX) is a development stage silver company with assets in Mexico. Its primary project is the high grade Juanicipio deposit in Zacatecas, Mexico, adjacent to mining major Fresnillo's expansion project in their namesake mine. Fresnillo owns 19.9% of the shares outstanding of MAG Silver, and in November of 2008, made an offer to acquire all of the shares of the company. MAG Silver's board of directors rejected the offer as being inadequate.

Newcrest Mining Ltd. (4.6%) (NCM.AX - \$31.74 - Australian Stock Exchange) is the largest Australian domiciled gold producer with operations in Australia and Indonesia. The company has a portfolio of low cost, long life operating mines, a strong pipeline of growth projects, and highly prospective brown and greenfield exploration projects. Newcrest has a substantial reserve and resource base combined with a long reserve life. The company has substantial leverage to the gold price. Low gearing and a strong balance sheet place the company in a good position to fund major development projects and to capitalize on external growth opportunities.

Newmont Mining (5.2%) (NEM - \$47.31 - NYSE) is one of the largest gold producing companies in the world with mines on five continents. Newmont recently acquired 100% of the Boddington project in western Australia. Boddington is expected to be a low cost, long life asset, which will allow Newmont to grow to six million ounces of production by 2012. We believe that Newmont will generate significant cash flow in 2010 and beyond with gold at current prices.

Red Back Mining (1.5%) (RBI CN - \$14.34 - Toronto Stock Exchange) is a growing gold producer with assets in Mauritania and Ghana in West Africa. We forecast that Red Back has produced over 500,000 ounces of gold in 2009. The company continues to explore throughout its substantial land positions surrounding both of its mines. At Tasiast, its property in Mauritania, Red Back has discovered the beginnings of a highly prospective zone.

Conclusion

Apart from extremely loose monetary policies being pursued by most leading central banks, investor confidence is being further eroded by the rapid buildup in public sector debt and budget deficits. Indeed this may be the year of investor fear of sovereign debt. Again, the numbers are large and generally without precedent, certainly in the absence of a major war. The federal budget deficit in the U.S. is running at about 10% of GDP and public sector deficits are significantly higher in a number of overseas countries. In the U.K., the public sector deficit is approaching 13.5% of the economy. Within the Euro zone, Greece is in particularly poor shape. Martin Wolf wrote in the Financial Times, "Greece is the canary in the fiscal coal mine." According to the Organisation for Economic Co-Operation and Development, their deficit is about 13% of GDP and total public sector debt is approaching 90% of GDP. Unlike the U.K., Greece does not run its own monetary policy and cannot devalue its currency. This will be an interesting year for the Euro and its policymakers. Gold is no one else's liability, cannot be devalued, and is always liquid.

We will continue to concentrate the portfolio in gold companies that have extensive proven reserves of gold, which we believe can be brought to account at a reasonable cost. As the gold price rises, these companies should be able to generate considerable free cash flow, which can be returned to shareholders in the form of sharply increased dividends. This, we believe, will differentiate gold equities from gold bullion, which pays no interest. We expect that in a higher gold price environment, gold equities will significantly outperform gold bullion.

Sincerely,



Caesar Bryan, Portfolio Manager

January 29, 2010

Note: The views expressed in this Shareholder Commentary reflect those of the Portfolio Manager only through the end of the period stated in this Shareholder Commentary. The Portfolio Manager's views are subject to change at any time based on market and other conditions. The information in this Portfolio Manager's Shareholder Commentary represents the opinions of the individual Portfolio Manager and is not intended to be a forecast of future events, a guarantee of future results, or investment advice. Views expressed are those of the Portfolio Manager and may differ from those of other portfolio managers or of the Firm as a whole. This Shareholder Commentary does not constitute an offer of any transaction in any securities. Any recommendation contained herein may not be suitable for all investors. Information contained in this Shareholder Commentary has been obtained from sources we believe to be reliable, but cannot be guaranteed.

Minimum Initial Investment – \$1,000

The Fund's minimum initial investment for regular accounts is \$1,000. There are no subsequent investment minimums. No initial minimum is required for those establishing an Automatic Investment Plan. Additionally, the Fund and other Gabelli/GAMCO Funds are available through the no-transaction fee programs at many major brokerage firms. The Fund imposes a 2% redemption fee on shares sold in seven days or less of a purchase. See the prospectus for more details.

www.gabelli.com

Please visit us on the Internet. Our homepage at www.gabelli.com contains information about GAMCO Investors, Inc., the Gabelli/GAMCO Mutual Funds, IRAs, 401(k)s, current and historical quarterly reports, closing prices, and other current news. We welcome your comments and questions via e-mail at info@gabelli.com.

The Fund's daily NAV is available in the financial press and each evening after 7:00 PM (Eastern Time) by calling 800-GABELLI (800-422-3554). The Fund's Nasdaq symbol is GOLDX for Class AAA Shares. Please call us during the business day for further information.

You may sign up for our e-mail alerts at www.gabelli.com and receive early notice of quarterly report availability, news events, media sightings, and mutual fund prices and performance.

e-delivery

We are pleased to offer electronic delivery of Gabelli fund documents. Direct shareholders of our open-end mutual funds can now elect to receive their Annual, Semiannual, and Quarterly Fund Reports, Manager Commentaries and Prospectuses via e-delivery. For more information or to sign-up for e-delivery, please visit our website at www.gabelli.com.

Multi-Class Shares

The GAMCO Gold Fund began offering additional classes of Fund shares in December 2002. Class AAA Shares are no-load shares offered directly by selected broker/dealers. Class A and Class C Shares are targeted to the needs of investors who seek advice through financial consultants. Class I Shares are available solely to certain institutions that invest directly with the Fund. The minimum initial investment amount for Class I Shares is \$500,000. The Board of Directors determined that expanding the types of Fund shares available through various distribution options would enhance the ability of the Fund to attract additional investors.

GAMCO Gold Fund Average Annual Returns – December 31, 2009 (a)

	Class AAA Shares	Class A Shares	Class B Shares	Class C Shares	Class I Shares
1 Year	52.14%	52.10%	50.97%	50.95%	52.46%
		43.35(b)	45.97(c)	49.95(d)	
5 Year	19.05	19.05	18.14	18.15	19.18
		17.65(b)	17.93(c)	18.15	
10 Year	20.29	20.29	19.64	19.66	20.35
		19.58(b)	19.64	19.66	
Life of Fund (e)	9.35	9.36	8.97	8.99	9.39
		8.94(b)	8.97	8.99	
Current Expense Ratio . .	1.44	1.44	2.19	2.19	1.20
Maximum Sales Charge . .	None	5.75	5.00	1.00	None
Ticker SymbolsGOLDX	GLDAX	GLDBX	GLDCX	GLDIX

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The Class AAA Share NAVs per share are used to calculate performance for the periods prior to the issuance of Class A Shares, Class B Shares, and Class C Shares on December 23, 2002 and Class I Shares on January 11, 2008. The actual performance of the Class B Shares and Class C Shares would have been lower due to the additional expenses associated with these classes of shares. The actual performance of the Class I Shares would have been higher due to lower expenses related to this class of shares.

(b) Includes the effect of the maximum 5.75% sales charge at the beginning of the period.

(c) Performance results include the deferred sales charges for the Class B Shares upon redemption at the end of the one year and five year periods of 5% and 2%, respectively, of the Fund's NAV at the time of purchase or sale, whichever is lower. Class B Shares are not available for new purchases.

(d) Performance results include the deferred sales charges for the Class C Shares upon redemption at the end of the one year period of 1% of the Fund's NAV at the time of purchase or sale, whichever is lower.

(e) Performance is calculated from the inception of Class AAA Shares on July 11, 1994.

We have separated the portfolio manager's commentary from the financial statements and investment portfolio due to corporate governance regulations stipulated by the Sarbanes-Oxley Act of 2002. We have done this to ensure that the content of the portfolio manager's commentary is unrestricted. The financial statements and investment portfolio are mailed separately from the commentary. Both the commentary and the financial statements, including the portfolio of investments, will be available on our website at www.gabelli.com/funds.

GAMCO Gold Fund, Inc.

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Net Asset Value per share available daily by calling
800-GABELLI after 7:00 P.M.

GAMCO

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Portfolio Manager

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Gabelli & Company, Inc.

Custodian, Transfer Agent, and Dividend Agent

State Street Bank and Trust Company

Legal Counsel

Paul, Hastings, Janofsky & Walker LLP

GAMCO Gold Fund, Inc.

This report is submitted for the general information of the shareholders of GAMCO Gold Fund, Inc. It is not authorized for distribution to prospective investors unless preceded or accompanied by an effective prospectus.

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**SHAREHOLDER COMMENTARY
DECEMBER 31, 2009**

GAMCO Gold Fund, Inc.

Annual Report
December 31, 2009



Caesar Bryan

To Our Shareholders,

The Sarbanes-Oxley Act requires a fund's principal executive and financial officers to certify the entire contents of the semi-annual and annual shareholder reports in a filing with the Securities and Exchange Commission ("SEC") on Form N-CSR. This certification would cover the portfolio manager's commentary and subjective opinions if they are attached to or a part of the financial statements. Many of these comments and opinions would be difficult or impossible to certify.

Because we do not want our portfolio managers to eliminate their opinions and/or restrict their commentary to historical facts, we have separated their commentary from the financial statements and investment portfolio and have sent it to you separately. Both the commentary and the financial statements, including the portfolio of investments, will be available on our website at www.gabelli.com/funds.

Enclosed are the audited financial statements including the investment portfolio as of December 31, 2009 with a description of factors that affected the performance during the past year.

Performance Discussion (Unaudited)

For the year ended December 31, 2009, the GAMCO Gold Fund (the "Fund") (Class AAA) net asset value ("NAV") per share rose 52.14% compared with gains of 51.10% and 36.62% for the Lipper Gold Fund Average and the Philadelphia Gold and Silver Index, respectively.

As has been evidenced by India's purchase of 200 tons of gold from the IMF, a sea change has occurred among central bank attitudes towards gold. Central banks are no longer net sellers of gold and have instead largely changed course. It is now apparent that central bankers are beginning to recognize the value in holding an asset which is no one else's liability.

This demand from central banks, along with continued demand from investors seeking to own an asset which will retain its value during inflationary times, should continue to bolster the gold price. Although the stocks of many gold and natural resource companies are at their fifty-two week highs, we feel that many remain undervalued in an environment of steady or rising future commodity prices. As gold and metals companies begin to generate significant cash flow, we are encouraging them to return cash to shareholders in the form of increased dividends. As this begins to occur, we feel that the equities of metals producers will become a more attractive alternative to holding the physical metal.

Randgold Resources Ltd., the Fund's largest holding (13.1% of net assets as of December 31, 2009) contributed to the Fund's positive performance in 2009. Randgold Resources is a gold mining company with operations and development opportunities focused in West Africa. Additional selected holdings that contributed to the Fund's positive performance for the year were Freeport-McMoRan Copper & Gold Inc. (4.0%), Fresnillo (3.3%), Kingsgate Consolidated Ltd. (1.5%), and SEMAFO (1.1%). SEMAFO is also a West African focused gold miner with operations in Guinea, Niger, and Burkina Faso. Some of our weaker performing stocks during the year were Kinross Gold Corp. (5.6%) and Royal Gold Inc. (1.3%).

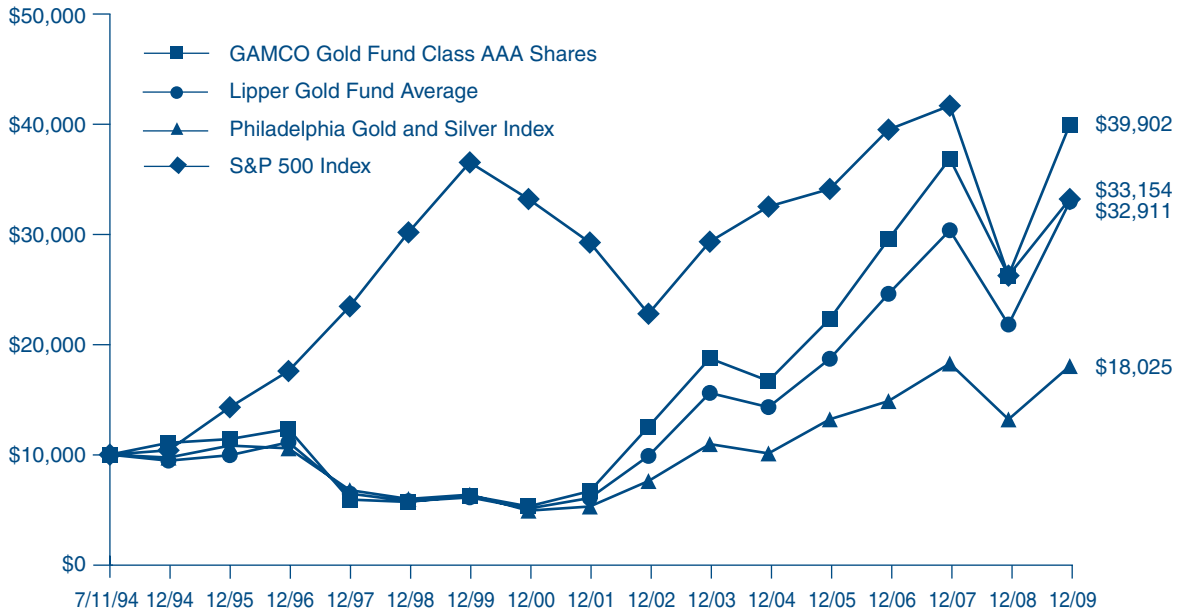
Sincerely yours,



Bruce N. Alpert
President

February 19, 2010

COMPARISON OF CHANGE IN VALUE OF A \$10,000 INVESTMENT IN THE GAMCO GOLD FUND CLASS AAA SHARES, THE LIPPER GOLD FUND AVERAGE, THE PHILADELPHIA GOLD AND SILVER INDEX, AND THE S&P 500 INDEX (Unaudited)



Past performance is not predictive of future results. The performance tables and graph do not reflect the deduction of taxes that a shareholder would pay on fund distributions or the redemption of fund shares.

Comparative Results

Average Annual Returns through December 31, 2009 (a) (Unaudited)

	Quarter	1 Year	3 Year	5 Year	10 Year	Since Inception (7/11/94)
GAMCO Gold Fund Class AAA	5.01%	52.14%	10.58%	19.05%	20.29%	9.35%
Philadelphia Gold and Silver Index	1.87	36.62	6.64	12.25	10.95	3.74
Lipper Gold Fund Average	7.46	51.10	9.48	17.32	18.53	5.74
S&P 500 Index	6.04	26.47	(5.62)	0.42	(0.95)	8.03
Class A	4.96	52.10	10.58	19.05	20.29	9.36
Class B	(1.07)(b)	43.35(b)	8.42(b)	17.65(b)	19.58(b)	8.94(b)
Class C	(0.24)(c)	45.97(c)	8.91(c)	17.93(c)	19.64	8.97
Class I Shares	4.77	50.95	9.76	18.15	19.66	8.99
	3.77(d)	49.95(d)	9.76	18.15	19.66	8.99
Class I Shares	5.04	52.46	10.77	19.18	20.35	9.39

In the current prospectus, the expense ratios for Class AAA, A, B, C, and I Shares are 1.44%, 1.44%, 2.19%, 2.19%, and 1.20%, respectively. See page 10 for the expense ratios for the year ended December 31, 2009. Class AAA and Class I Shares do not have a sales charge. The maximum sales charge for Class A, B, and C Shares is 5.75%, 5.00%, and 1.00%, respectively.

- (a) **Returns represent past performance and do not guarantee future results.** Total returns and average annual returns reflect changes in share price and reinvestment of distributions and are net of expenses. Investment returns and the principal value of an investment will fluctuate. When shares are redeemed, they may be worth more or less than their original cost. Performance returns for periods of less than one year are not annualized. Current performance may be lower or higher than the performance data presented. Visit www.gabelli.com for performance information as of the most recent month end. **Investors should carefully consider the investment objectives, risks, charges, and expenses of the Fund before investing. The prospectus contains more information about this and other matters and should be read carefully before investing.** Investing in foreign securities involves risks not ordinarily associated with investments in domestic issues, including currency fluctuation, economic, and political risks. Investing in gold is considered speculative and is affected by a variety of worldwide economic, financial, and political factors. The Class AAA Shares NAVs per share are used to calculate performance for the periods prior to the issuance of Class A Shares, Class B Shares, and Class C Shares on December 23, 2002 and Class I Shares on January 11, 2008. The actual performance of the Class B Shares and Class C Shares would have been lower due to the additional expenses associated with these classes of shares. The actual performance of the Class I Shares would have been higher due to lower expenses related to this class of shares. The S&P 500 Index is an unmanaged indicator of stock market performance. The Philadelphia Gold and Silver Index is an unmanaged indicator of stock market performance of large North American gold and silver companies, while the Lipper Gold Fund Average reflects the average performance of mutual funds classified in this particular category. Dividends are considered reinvested. You cannot invest directly in an index.
- (b) Includes the effect of the maximum 5.75% sales charge at the beginning of the period.
- (c) Performance results include the deferred sales charges for the Class B Shares upon redemption at the end of the quarter, one year, three year, and five year periods of 5%, 5%, 3%, and 2%, respectively, of the Fund's NAV at the time of purchase or sale, whichever is lower. Class B Shares are not available for new purchases.
- (d) Performance results include the deferred sales charges for the Class C Shares upon redemption at the end of the quarter and one year periods of 1% of the Fund's NAV at the time of purchase or sale, whichever is lower.

GAMCO Gold Fund, Inc.

Disclosure of Fund Expenses (Unaudited)

For the Six Month Period from July 1, 2009 through December 31, 2009

Expense Table

We believe it is important for you to understand the impact of fees and expenses regarding your investment. All mutual funds have operating expenses. As a shareholder of a fund, you incur ongoing costs, which include costs for portfolio management, administrative services, and shareholder reports (like this one), among others. Operating expenses, which are deducted from a fund's gross income, directly reduce the investment return of a fund. When a fund's expenses are expressed as a percentage of its average net assets, this figure is known as the expense ratio. The following examples are intended to help you understand the ongoing cost (in dollars) of investing in your Fund and to compare these costs with those of other mutual funds. The examples are based on an investment of \$1,000 made at the beginning of the period shown and held for the entire period.

The Expense Table below illustrates your Fund's costs in two ways:

Actual Fund Return: This section provides information about actual account values and actual expenses. You may use this section to help you to estimate the actual expenses that you paid over the period after any fee waivers and expense reimbursements. The "Ending Account Value" shown is derived from the Fund's **actual** return during the past six months, and the "Expenses Paid During Period" shows the dollar amount that would have been paid by an investor who started with \$1,000 in the Fund. You may use this information, together with the amount you invested, to estimate the expenses that you paid over the period.

To do so, simply divide your account value by \$1,000 (for example, an \$8,600 account value divided by \$1,000 = 8.6), then multiply the result by the number given for your Fund under the heading "Expenses Paid During Period" to estimate the expenses you paid during this period.

Hypothetical 5% Return: This section provides information about hypothetical account values and hypothetical expenses based on the Fund's actual expense ratio. It assumes a hypothetical annualized return of 5% before expenses during the period shown. In this case – because the hypothetical return used is **not** the Fund's actual return – the results do not apply to your investment and you cannot use the hypothetical account value and expense to estimate the actual ending account balance or expenses you paid for the period. This example is useful in making comparisons of the ongoing costs of investing in the Fund and other funds. To do so, compare this 5% hypothetical example with the 5% hypothetical examples that appear in shareholder reports of other funds.

Please note that the expenses shown in the table are meant to highlight your ongoing costs only and do not reflect any transactional costs such as sales charges (loads), redemption fees, or exchange fees, if any, which are described in the Prospectus. If these costs were applied to your account, your costs would be higher. Therefore, the 5% hypothetical return is useful in comparing ongoing costs only, and will not help you determine the relative total costs of owning different funds. The "Annualized Expense Ratio" represents the actual expenses for the last six months and may be different from the expense ratio in the Financial Highlights which is for the year ended December 31, 2009.

	Beginning Account Value 07/01/09	Ending Account Value 12/31/09	Annualized Expense Ratio	Expenses Paid During Period*
GAMCO Gold Fund, Inc.				
Actual Fund Return				
Class AAA	\$1,000.00	\$1,239.20	1.45%	\$ 8.18
Class A	\$1,000.00	\$1,239.30	1.45%	\$ 8.18
Class B	\$1,000.00	\$1,234.30	2.20%	\$12.39
Class C	\$1,000.00	\$1,234.60	2.20%	\$12.39
Class I	\$1,000.00	\$1,240.50	1.20%	\$ 6.78
Hypothetical 5% Return				
Class AAA	\$1,000.00	\$1,017.90	1.45%	\$ 7.37
Class A	\$1,000.00	\$1,017.90	1.45%	\$ 7.37
Class B	\$1,000.00	\$1,014.12	2.20%	\$11.17
Class C	\$1,000.00	\$1,014.12	2.20%	\$11.17
Class I	\$1,000.00	\$1,019.16	1.20%	\$ 6.11

* Expenses are equal to the Fund's annualized expense ratio for the last six months multiplied by the average account value over the period, multiplied by the number of days in the most recent fiscal half-year, then divided by 365.

Summary of Portfolio Holdings (Unaudited)

The following table presents portfolio holdings as a percent of total net assets as of December 31, 2009:

GAMCO Gold Fund, Inc.

North America	54.8%	South Africa	11.6%
United Kingdom	18.8%	Latin America	1.6%
Australia	13.4%	Other Assets and Liabilities (Net)	<u>(0.2)%</u>
			<u>100.0%</u>

The Fund files a complete schedule of portfolio holdings with the SEC for the first and third quarters of each fiscal year on Form N-Q, the last of which was filed for the quarter ended September 30, 2009. Shareholders may obtain this information at www.gabelli.com or by calling the Fund at 800-GABELLI (800-422-3554). The Fund's Form N-Q is available on the SEC's website at www.sec.gov and may also be reviewed and copied at the SEC's Public Reference Room in Washington, DC. Information on the operation of the Public Reference Room may be obtained by calling 1-800-SEC-0330.

Proxy Voting

The Fund files Form N-PX with its complete proxy voting record for the twelve months ended June 30th, no later than August 31st of each year. A description of the Fund's proxy voting policies, procedures, and how the Fund voted proxies relating to portfolio securities is available without charge, upon request, by (i) calling 800-GABELLI (800-422-3554); (ii) writing to The Gabelli Funds at One Corporate Center, Rye, NY 10580-1422; or (iii) visiting the SEC's website at www.sec.gov.

GAMCO Gold Fund, Inc.
Schedule of Investments — December 31, 2009

<u>Shares</u>	<u>Cost</u>	<u>Market Value</u>	<u>Shares</u>	<u>Cost</u>	<u>Market Value</u>
COMMON STOCKS — 100.0%			333,150	Goldcorp Inc., New York ... \$ 2,591,636	\$ 13,106,121
METALS AND MINING — 100.0%			695,058	Goldcorp Inc., Toronto	3,282,684
Australia — 13.4%			500,000	Golden Queen Mining Co. Ltd.†	279,474
650,000	Andean Resources Ltd.† \$ 941,626	\$ 1,518,037	1,500,000	Golden Queen Mining Co. Ltd.†	974,222
3,569,000	Centamin Egypt Ltd.† 3,935,579	7,098,073	1,500,000	Golden Queen Mining Co. Ltd.† (a)(b)	656,888
1,010,000	Kingsgate Consolidated Ltd. 3,099,586	8,355,580	250,000	Greystar Resources Ltd.†	1,115,936
8,800,000	Lihir Gold Ltd. 9,103,006	25,926,990	452,000	IAMGOLD Corp., New York	3,131,462
805,250	Newcrest Mining Ltd. 9,647,147	25,554,651	54,000	IAMGOLD Corp., Toronto	548,689
6,000,000	PanAust Ltd.† 1,123,263	3,045,056	100,000	International Tower Hill Mines Ltd.†	261,919
700,000	Silver Lake Resources Ltd.† 293,772	666,499	250,000	Keegan Resources Inc.† (d)	797,981
41,525,000	Tanami Gold NL† 1,417,053	2,685,578	300,000	Keegan Resources Inc.† (c)(d)	612,511
	<u>29,561,032</u>	<u>74,850,464</u>	1,135,000	Kinross Gold Corp., New York	10,421,159
Latin America — 1.6%			535,949	Kinross Gold Corp., Toronto	3,625,028
264,800	Compania de Minas Buenaventura SA, ADR	3,269,454	8,862,856	150,000	MAG Silver Corp.†
North America — 54.6%			535,949	1,800,000	Nayarit Gold Inc.† (a)(b)
371,000	Agnico-Eagle Mines Ltd., New York	4,862,438	20,034,000	610,071	Newmont Mining Corp.
291,231	Agnico-Eagle Mines Ltd., Toronto	2,565,728	15,850,140	200,000	Odyssey Resources Ltd.† (a)(b)
49,800	Anatolia Minerals Development Ltd., New York†	163,969	144,430	500,000	Odyssey Resources Ltd.† (a)(b)
330,000	Anatolia Minerals Development Ltd., Toronto†	1,024,411	959,220	405,000	Osisko Mining Corp.†
180,000	Axmin Inc.† 44,957	14,629	120,000	Osisko Mining Corp.† (a)(b)(d)	817,996
2,300,000	Axmin Inc.† (a)(b) 1,034,182	186,930	580,000	Red Back Mining Inc.†	4,185,007
312,400	Barrick Gold Corp., New York	9,289,109	12,302,312	500,000	Romarco Minerals Inc.†
182,661	Barrick Gold Corp., Toronto	4,839,575	7,241,120	150,000	Royal Gold Inc.
200,900	Complex Minerals Corp.†	787,768	1,344,648	900,000	SEMAFO Inc.†
150,000	Detour Gold Corp.†	1,713,017	2,564,421	600,000	SEMAFO Inc.† (a)
601,333	Eldorado Gold Corp., CDI†	7,876,241	8,410,063	4,100,000	Wesdome Gold Mines Ltd.
754,900	Eldorado Gold Corp., New York†	1,623,064	10,696,933	1,109,390	Yamana Gold Inc., New York
145,000	Eldorado Gold Corp., Toronto†	555,596	2,068,557	243,444	Yamana Gold Inc., Toronto
467,500	Eldorado Gold Corp., Toronto† (a)	1,040,162	6,669,312		<u>147,185,361</u>
125,000	Franco-Nevada Corp., New York	2,461,226	3,358,512		<u>303,968,187</u>
155,000	Franco-Nevada Corp., Toronto	4,573,990	4,164,555	South Africa — 11.6%	
473,000	Franco-Nevada Corp., Toronto (c)	9,568,624	12,708,610	399,000	AngloGold Ashanti Ltd., ADR
279,500	Freeport-McMoRan Copper & Gold Inc.†	4,710,846	22,441,055	1,918,249	Gold Fields Ltd., ADR
25,000	Gammon Gold Inc., New York†	109,228	275,250	300,000	Harmony Gold Mining Co. Ltd., ADR
225,000	Gammon Gold Inc., Toronto†	1,390,002	2,497,729	170,000	Impala Platinum Holdings Ltd.
				456,000	Impala Platinum Holdings Ltd., ADR
				329,609	Witwatersrand Consolidated Gold Resources Ltd.†
					<u>3,998,630</u>
					<u>49,186,632</u>
					<u>3,394,347</u>
					<u>64,750,132</u>

See accompanying notes to financial statements.

GAMCO Gold Fund, Inc.
Schedule of Investments (Continued) — December 31, 2009

<u>Shares</u>	<u>Cost</u>	<u>Market Value</u>
COMMON STOCKS (Continued)		
METALS AND MINING (Continued)		
United Kingdom — 18.8%		
37,500	Avnel Gold Mining Ltd.† . . . \$ 15,947	\$ 5,737
300,000	Avnel Gold Mining Ltd.† (a)(b) 255,864	45,896
500,000	Avnel Gold Mining Ltd.† (a)(b) 170,242	81,274
1,361,000	Cluff Gold plc† 1,669,014	1,395,909
1,445,500	Fresnillo plc 14,237,904	18,491,342
2,140,152	Hochschild Mining plc 13,582,740	11,815,220
922,200	Randgold Resources Ltd., ADR 5,393,111	72,964,464
	<u>35,324,822</u>	<u>104,799,842</u>
TOTAL COMMON STOCKS	264,527,301	557,231,481
WARRANTS — 0.2%		
North America — 0.2%		
500,000	Axmin Inc., expire 06/19/10† (a)(b)(d) 0	168
62,500	Franco-Nevada Corp., expire 03/13/12† (b)(c)(d) 400,665	170,260
87,500	Franco-Nevada Corp., expire 06/16/17† (c) 0	552,182
4,900	Goldcorp Inc., expire 06/09/11† 41,160	34,300
384,600	Great Basin Gold Ltd., expire 10/15/10† 0	161,805
50,015	Kinross Gold Corp., expire 09/03/13† 160,892	189,855
1,800,000	Nayarit Gold Inc., expire 07/25/10† (a)(b)(d) 0	21,181
495,000	New Gold Inc., expire 04/03/12† (a)(d) 108,702	16,565
TOTAL WARRANTS	711,419	1,146,316
GOLD BULLION — 0.0%		
North America — 0.0%		
1(e)	Gold Bullion† 637	790
TOTAL INVESTMENTS — 100.2%	\$265,239,357	558,378,587
Other Assets and Liabilities (Net) — (0.2)%		(1,073,668)
NET ASSETS — 100.0%		\$557,304,919

(a) At December 31, 2009, the Fund held investments in restricted securities amounting to \$12,911,465 or 2.32% of net assets, which were valued under methods approved by the Board of Directors as follows (except as noted in (b), these securities are liquid):

<u>Acquisition Shares</u>	<u>Issuer</u>	<u>Acquisition Date</u>	<u>Acquisition Cost</u>	<u>12/31/09 Carrying Value Per Unit</u>
800,000	Avnel Gold Mining Ltd.	11/23/05	\$ 426,106	\$0.1590
2,300,000	Axmin Inc.	12/20/02	1,034,182	0.0813
500,000	Axmin Inc., Warrants expire 06/19/10	06/26/08	—	0.0003
467,500	Eldorado Gold Corp., Toronto	02/25/03	1,040,162	14.2659
1,500,000	Golden Queen Mining Co. Ltd.	05/24/02	656,888	0.9179
1,800,000	Nayarit Gold Inc.	07/14/08	998,020	0.4781
1,800,000	Nayarit Gold Inc., Warrants expire 07/25/10	07/14/08	—	0.0118
495,000	New Gold Inc., Warrants expire 04/03/12	03/09/07	108,702	0.0335
500,000	Odyssey Resources Ltd.	10/20/05	244,242	0.2008
200,000	Odyssey Resources Ltd.	10/23/06	177,352	0.2008
120,000	Osisko Mining Corp.	10/30/07	817,996	8.0891
600,000	SEMAFO Inc.	12/07/05	970,533	4.2358

- (b) Illiquid security.
(c) Security exempt from registration under Rule 144A of the Securities Act of 1933, as amended. These securities may be resold in transactions exempt from registration, normally to qualified institutional buyers. At December 31, 2009, the market value of Rule 144A securities amounted to \$15,237,764 or 2.73% of net assets.
(d) Security fair valued under procedures established by the Board of Directors. The procedures may include reviewing available financial information about the company and reviewing valuation of comparable securities and other factors on a regular basis. At December 31, 2009, the market value of fair valued securities amounted to \$4,570,415 or 0.82% of net assets.
(e) Share amount reported in ounces.
† Non-income producing security.
ADR American Depositary Receipt
CDI Chess Depositary Interests

<u>Geographic Diversification</u>	<u>% of Market Value</u>	<u>Market Value</u>
North America	54.6%	\$305,115,293
Europe	18.8	104,799,842
Asia/Pacific	13.4	74,850,464
South Africa	11.6	64,750,132
Latin America	1.6	8,862,856
	<u>100.0%</u>	<u>\$558,378,587</u>

See accompanying notes to financial statements.

GAMCO Gold Fund, Inc.

Statement of Assets and Liabilities December 31, 2009

Assets:

Investments, at value (cost \$265,239,357)	\$558,378,587
Receivable for investments sold	6,841,409
Receivable for Fund shares sold	556,727
Dividends receivable	49,251
Prepaid expenses	56,258
Total Assets	<u>565,882,232</u>

Liabilities:

Payable to custodian	2,585
Payable for Fund shares redeemed	1,068,190
Payable for investment advisory fees	493,478
Payable for distribution fees	130,030
Payable for accounting fees	11,250
Line of credit payable	6,594,000
Other accrued expenses	277,780
Total Liabilities	<u>8,577,313</u>

Net Assets applicable to 18,606,386 shares outstanding	<u>\$557,304,919</u>
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Net Assets Consist of:

Paid-in capital	\$280,789,659
Accumulated distributions in excess of net investment income	(13,621,834)
Accumulated net realized loss on investments and foreign currency transactions	(3,002,173)
Net unrealized appreciation on investments	293,139,230
Net unrealized appreciation on foreign currency translations	37

Net Assets	<u>\$557,304,919</u>
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Shares of Capital Stock:

Class AAA:

Net Asset Value, offering, and redemption price per share (\$520,593,788 ÷ 17,373,004 shares outstanding, at \$0.001 par value; 375,000,000 shares authorized)	<u>\$29.97</u>
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Class A:

Net Asset Value and redemption price per share (\$15,457,587 ÷ 515,911 shares outstanding, at \$0.001 par value; 250,000,000 shares authorized)	<u>\$29.96</u>
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Maximum offering price per share (NAV ÷ 0.9425, based on maximum sales charge of 5.75% of the offering price)	<u>\$31.79</u>
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Class B:

Net Asset Value and offering price per share (\$1,682,071 ÷ 57,190 shares outstanding, at \$0.001 par value; 125,000,000 shares authorized)	<u>\$29.41(a)</u>
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Class C:

Net Asset Value and offering price per share (\$11,291,449 ÷ 384,870 shares outstanding, at \$0.001 par value; 125,000,000 shares authorized)	<u>\$29.34(a)</u>
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Class I:

Net Asset Value, offering, and redemption price per share (\$8,280,024 ÷ 275,411 shares outstanding, at \$0.001 par value; 125,000,000 shares authorized)	<u>\$30.06</u>
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(a) Redemption price varies based on the length of time held.

Statement of Operations For the Year Ended December 31, 2009

Investment Income:

Dividends (net of foreign taxes of \$146,896)	\$ 2,525,797
Interest	1,259
Total Investment Income	<u>2,527,056</u>

Expenses:

Investment advisory fees	4,776,268
Distribution fees – Class AAA	1,120,413
Distribution fees – Class A	39,781
Distribution fees – Class B	15,327
Distribution fees – Class C	81,860
Shareholder services fees	330,382
Shareholder communications expenses	195,864
Custodian fees	123,159
Registration expenses	76,676
Directors' fees	65,000
Legal and audit fees	59,667
Accounting fees	45,000
Interest expense	16,855
Miscellaneous expenses	75,945
Total Expenses	<u>7,022,197</u>

Net Investment Loss	<u>(4,495,141)</u>
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Net Realized and Unrealized Gain on Investments and Foreign Currency:

Net realized gain on investments	12,431,470
Net realized gain on foreign currency transactions	16,553
Net realized gain on investments and foreign currency transactions	<u>12,448,023</u>
Net change in unrealized appreciation:	
on investments	187,971,541
on foreign currency translations	45
Net change in unrealized appreciation on investments and foreign currency translations	<u>187,971,586</u>

Net Realized and Unrealized Gain on Investments and Foreign Currency	<u>200,419,609</u>
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Net Increase in Net Assets Resulting from Operations	<u>\$195,924,468</u>
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See accompanying notes to financial statements.

GAMCO Gold Fund, Inc.

Statement of Changes in Net Assets

	<u>Year Ended</u> <u>December 31, 2009</u>	<u>Year Ended</u> <u>December 31, 2008</u>
Operations:		
Net investment loss	\$ (4,495,141)	\$ (2,013,485)
Net realized gain/(loss) on investments and foreign currency transactions	12,448,023	(4,514,599)
Net change in unrealized appreciation/depreciation on investments and foreign currency translations	<u>187,971,586</u>	<u>(171,347,851)</u>
Net Increase/(Decrease) in Net Assets Resulting from Operations	<u>195,924,468</u>	<u>(177,875,935)</u>
Distributions to Shareholders:		
Net investment income		
Class AAA	(8,636,873)	—
Class A	(249,347)	—
Class B	(17,227)	—
Class C	(134,063)	—
Class I	<u>(153,719)</u>	<u>—</u>
	<u>(9,191,229)</u>	<u>—</u>
Total Distributions to Shareholders	<u>(9,191,229)</u>	<u>—</u>
Capital Share Transactions:		
Class AAA	(21,503,232)	51,982,328
Class A	(3,046,414)	1,101,190
Class B	(230,422)	(928,050)
Class C	2,347,945	(517,044)
Class I	<u>6,013,293</u>	<u>1,497,291</u>
Net Increase/(Decrease) in Net Assets from Capital Share Transactions	<u>(16,418,830)</u>	<u>53,135,715</u>
Redemption Fees	<u>56,008</u>	<u>132,323</u>
Net Increase/(Decrease) in Net Assets	<u>170,370,417</u>	<u>(124,607,897)</u>
Net Assets:		
Beginning of period	<u>386,934,502</u>	<u>511,542,399</u>
End of period (including undistributed net investment income of \$0 and \$0, respectively)	<u>\$ 557,304,919</u>	<u>\$ 386,934,502</u>

See accompanying notes to financial statements.

GAMCO Gold Fund, Inc.

Financial Highlights

Selected data for a share of capital stock outstanding throughout each period:

Period Ended December 31	Income from Investment Operations						Distributions			Ratios to Average Net Assets/ Supplemental Data					
	Net Asset Value, Beginning of Period	Net Investment Loss(a)	Net Realized and Unrealized Gain (Loss) on Investments	Total from Investment Operations	Net Investment Income	Net Realized Gain on Investments	Return of Capital	Total Distributions	Redemption Fees(a)	Net Asset Value, End of Period	Total Return	Net Assets End of Period (in 000's)	Net Investment Loss	Operating Expenses(b)	Portfolio Turnover Rate††
Class AAA															
2009	\$20.03	\$(0.23)	\$ 10.67	\$ 10.44	\$(0.50)	—	—	\$(0.50)	\$0.00(c)	\$29.97	52.1%	\$520,594	(0.93)%	1.46%	7%
2008	28.11	(0.10)	(7.99)	(8.09)	(0.68)	—	—	—	0.01	20.03	(28.7)	366,855	(0.39)	1.44	10
2007	24.98	(0.15)	6.29	6.14	(0.68)	\$(2.27)	\$(0.06)	(3.01)	0.00(c)	28.11	24.7	484,172	(0.56)	1.46	12
2006	20.80	(0.06)	6.77	6.71	(0.49)	(2.04)	—	(2.53)	0.00(c)	24.98	32.4	419,724	(0.24)	1.47	12
2005	16.00	(0.07)	5.45	5.38	(0.12)	(0.46)	—	(0.58)	0.00(c)	20.80	33.6	333,104	(0.44)	1.52	4
Class A															
2009	\$20.02	\$(0.23)	\$ 10.66	\$ 10.43	\$(0.49)	—	—	\$(0.49)	\$0.00(c)	\$29.96	52.1%	\$ 15,458	(0.92)%	1.46%	7%
2008	28.09	(0.09)	(7.99)	(8.08)	(0.67)	—	—	—	0.01	20.02	(28.7)	11,752	(0.37)	1.44	10
2007	24.95	(0.14)	6.28	6.14	(0.67)	\$(2.27)	\$(0.06)	(3.00)	0.00(c)	28.09	24.8	15,116	(0.54)	1.46	12
2006	20.79	(0.06)	6.77	6.71	(0.51)	(2.04)	—	(2.55)	0.00(c)	24.95	32.4	17,489	(0.22)	1.47	12
2005	15.97	(0.07)	5.43	5.36	(0.08)	(0.46)	—	(0.54)	0.00(c)	20.79	33.6	6,739	(0.47)	1.54	4
Class B															
2009	\$19.68	\$(0.41)	\$ 10.44	\$ 10.03	\$(0.30)	—	—	\$(0.30)	\$0.00(c)	\$29.41	51.0%	\$ 1,682	(1.67)%	2.21%	7%
2008	27.82	(0.30)	(7.85)	(8.15)	—	—	—	—	0.01	19.68	(29.3)	1,314	(1.17)	2.19	10
2007	24.77	(0.35)	6.21	5.86	(0.49)	\$(2.27)	\$(0.05)	(2.81)	0.00(c)	27.82	23.8	2,785	(1.30)	2.21	12
2006	20.65	(0.25)	6.69	6.44	(0.28)	(2.04)	—	(2.32)	0.00(c)	24.77	31.3	2,481	(1.00)	2.22	12
2005	15.93	(0.19)	5.37	5.18	(0.00)(c)	(0.46)	—	(0.46)	0.00(c)	20.65	32.6	2,100	(1.19)	2.27	4
Class C															
2009	\$19.67	\$(0.42)	\$ 10.44	\$ 10.02	\$(0.35)	—	—	\$(0.35)	\$0.00(c)	\$29.34	51.0%	\$ 11,291	(1.68)%	2.21%	7%
2008	27.79	(0.28)	(7.85)	(8.13)	(0.46)	—	—	—	0.01	19.67	(29.2)	5,892	(1.12)	2.19	10
2007	24.72	(0.34)	6.18	5.84	(0.46)	\$(2.27)	\$(0.04)	(2.77)	0.00(c)	27.79	23.8	9,469	(1.30)	2.21	12
2006	20.64	(0.25)	6.71	6.46	(0.34)	(2.04)	—	(2.38)	0.00(c)	24.72	31.4	9,469	(0.99)	2.22	12
2005	15.92	(0.19)	5.37	5.18	—	(0.46)	—	(0.46)	0.00(c)	20.64	32.6	5,145	(1.19)	2.27	4
Class I															
2009	\$20.09	\$(0.19)	\$ 10.73	\$ 10.54	\$(0.57)	—	—	\$(0.57)	\$0.00(c)	\$30.06	52.5%	\$ 8,280	(0.68)%	1.21%	7%
2008 (d)	31.71	(0.03)	(11.60)	(11.63)	—	—	—	—	0.01	20.09	(36.6)	1,122	(0.13)(e)	1.20(e)	10

† Total return represents aggregate total return of a hypothetical \$1,000 investment at the beginning of the period and sold at the end of the period including reinvestment of distributions and does not reflect applicable sale charges. Total return excluding the effect of the contribution from the Fund's Adviser of \$380,000 for the year ended December 31, 2006 was 32.3%, 32.3%, 31.1%, and 31.3% for Class AAA, Class A, Class B, and Class C Shares, respectively. Total return for a period of less than one year is not annualized.

†† Effective in 2008, a change in accounting policy was adopted with regard to the calculation of the portfolio turnover rate to include cash proceeds due to mergers. Had this policy been adopted retroactively, the portfolio turnover rate for the years ended 2007, 2006, and 2005 would have been as shown.

(a) Per share amounts have been calculated using the average shares outstanding method.

(b) The Fund incurred interest expense during the years ended December 31, 2008, 2007, 2006, and 2005. If interest expense had not been incurred, the ratio of operating expenses to average net assets would have been 1.43%, 1.44%, 1.44%, and 1.50% (Class AAA), 1.43%, 1.44%, 1.44%, and 1.51% (Class A), 2.17%, 2.19%, 2.19%, and 2.25% (Class B), 2.18%, 2.19%, 2.19%, and 2.25% (Class C), and 1.18% (Class I), respectively. For the year ended December 31, 2009, the effect of the interest expense was minimal.

(c) Amount represents less than \$0.005 per share.

(d) From the commencement of offering Class I Shares on January 11, 2008 through December 31, 2008.

(e) Annualized.

See accompanying notes to financial statements.

GAMCO Gold Fund, Inc.

Notes to Financial Statements

1. Organization. GAMCO Gold Fund, Inc. (the “Fund”) was organized on May 13, 1994 as a Maryland corporation. The Fund is a diversified open-end management investment company registered under the Investment Company Act of 1940, as amended (the “1940 Act”). The Fund’s primary objective is long-term capital appreciation. The Fund commenced investment operations on July 11, 1994.

2. Significant Accounting Policies. The Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) has become the exclusive reference of authoritative U.S. generally accepted accounting principles (“GAAP”) recognized by the FASB to be applied by nongovernmental entities. Rules and interpretive releases of the SEC under authority of federal laws are also sources of authoritative GAAP for SEC registrants. The ASC has superseded all existing non-SEC accounting and reporting standards. The Fund’s financial statements are prepared in accordance with GAAP, which may require the use of management estimates and assumptions. Actual results could differ from those estimates. The following is a summary of significant accounting policies followed by the Fund in the preparation of its financial statements.

Security Valuation. Portfolio securities listed or traded on a nationally recognized securities exchange or traded in the U.S. over-the-counter market for which market quotations are readily available are valued at the last quoted sale price or a market’s official closing price as of the close of business on the day the securities are being valued. If there were no sales that day, the security is valued at the average of the closing bid and asked prices or, if there were no asked prices quoted on that day, then the security is valued at the closing bid price on that day. If no bid or asked prices are quoted on such day, the security is valued at the most recently available price or, if the Board of Directors (the “Board”) so determines, by such other method as the Board shall determine in good faith to reflect its fair market value. Portfolio securities traded on more than one national securities exchange or market are valued according to the broadest and most representative market, as determined by Gabelli Funds, LLC (the “Adviser”).

Portfolio securities primarily traded on a foreign market are generally valued at the preceding closing values of such securities on the relevant market, but may be fair valued pursuant to procedures established by the Board if market conditions change significantly after the close of the foreign market but prior to the close of business on the day the securities are being valued. Debt instruments with remaining maturities of sixty days or less that are not credit impaired are valued at amortized cost, unless the Board determines such amount does not reflect the securities’ fair value, in which case these securities will be fair valued as determined by the Board. Debt instruments having a maturity greater than sixty days for which market quotations are readily available are valued at the average of the latest bid and asked prices. If there were no asked prices quoted on such day, the security is valued using the closing bid price.

Securities and assets for which market quotations are not readily available are fair valued as determined by the Board. Fair valuation methodologies and procedures may include, but are not limited to: analysis and review of available financial and non-financial information about the company; comparisons with the valuation and changes in valuation of similar securities, including a comparison of foreign securities with the equivalent U.S. dollar value ADR securities at the close of the U.S. exchange; and evaluation of any other information that could be indicative of the value of the security.

GAMCO Gold Fund, Inc.

Notes to Financial Statements (Continued)

The inputs and valuation techniques used to measure fair value of the Fund's investments are summarized into three levels as described in the hierarchy below:

- Level 1 – quoted prices in active markets for identical securities;
- Level 2 – other significant observable inputs (including quoted prices for similar securities, interest rates, prepayment speeds, credit risk, etc.); and
- Level 3 – significant unobservable inputs (including the Fund's determinations as to the fair value of investments).

The inputs or methodology used for valuing securities are not necessarily an indication of the risk associated with investing in those securities. The summary of the Fund's investments by inputs used to value the Fund's investments as of December 31, 2009 is as follows:

	Valuation Inputs			Total Market Value at 12/31/09
	Level 1 Quoted Prices	Level 2 Other Significant Observable Inputs	Level 3 Significant Unobservable Inputs	
INVESTMENTS IN SECURITIES:				
ASSETS (Market Value):				
Common Stocks:				
Metals and Mining				
North America	\$300,841,974	\$3,126,213	—	\$303,968,187
Other Countries (a)	253,263,294	—	—	253,263,294
Total Common Stocks	554,105,268	3,126,213	—	557,231,481
Warrants:				
North America	385,960	760,188	\$168	1,146,316
Gold Bullion:				
North America	790	—	—	790
TOTAL INVESTMENTS IN SECURITIES	\$554,492,018	\$3,886,401	\$168	\$558,378,587

(a) Please refer to the Schedule of Investments for the industry classifications of these portfolio holdings.

The following is a reconciliation of Level 3 investments for which significant unobservable inputs were used to determine fair value:

	Balance as of 12/31/08	Accrued discounts/ (premiums)	Realized gain/ (loss)	Change in unrealized appreciation/ depreciation†	Net purchases/ (sales)	Transfers in and/or out of Level 3	Balance as of 12/31/09	Net change in unrealized appreciation/ depreciation during the period on Level 3 investments held at 12/31/09†
INVESTMENTS IN SECURITIES:								
ASSETS (Market Value):								
Common Stocks:								
Metals and Mining								
North America	\$ 761,847	\$—	\$—	—	\$—	\$ (761,847)	—	—
Warrants:								
North America	528,233	—	—	\$(22,158)	—	(505,907)	\$168	\$(22,158)
TOTAL INVESTMENTS IN SECURITIES	\$1,290,080	\$—	\$—	\$(22,158)	\$—	\$(1,267,754)	\$168	\$(22,158)

† Net change in unrealized appreciation/depreciation on investments is included in the related amounts in the Statement of Operations.

GAMCO Gold Fund, Inc.

Notes to Financial Statements (Continued)

Derivative Financial Instruments.

The Fund may engage in various portfolio investment strategies by investing in a number of derivative financial instruments for the purpose of hedging against a specific transaction with respect to either the currency in which the transaction is denominated or another currency. Investing in certain derivative financial instruments, including participation in the options, futures, or swap markets, entails certain execution, liquidity, hedging, tax, and securities, interest, credit, or currency market risks. Losses may arise if the Adviser's prediction of movements in the direction of the securities, foreign currency, and interest rate markets is inaccurate. Losses may also arise if the counterparty does not perform its duties under a contract, or that, in the event of default, the Fund may be delayed in or prevented from obtaining payments or other contractual remedies owed to it under derivative contracts. The creditworthiness of the counterparties is closely monitored in order to minimize these risks. Participation in derivative transactions involves investment risks, transaction costs, and potential losses to which the Fund would not be subject absent the use of these strategies. The consequences of these risks, transaction costs, and losses may have a negative impact on the Fund's ability to pay distributions.

Forward Foreign Exchange Contracts. The Fund may engage in forward foreign exchange contracts for the purpose of hedging a specific transaction with respect to either the currency in which the transaction is denominated or another currency as deemed appropriate by the Adviser. Forward foreign exchange contracts are valued at the forward rate and are marked-to-market daily. The change in market value is included in unrealized appreciation/depreciation on investments and foreign currency translations. When the contract is closed, the Fund records a realized gain or loss equal to the difference between the value of the contract at the time it was opened and the value at the time it was closed.

The use of forward foreign exchange contracts does not eliminate fluctuations in the underlying prices of the Fund's portfolio securities, but it does establish a rate of exchange that can be achieved in the future. Although forward foreign exchange contracts limit the risk of loss due to a decline in the value of the hedged currency, they also limit any potential gain that might result should the value of the currency increase. In addition, the Fund could be exposed to risks if the counterparties to the contracts are unable to meet the terms of their contracts. During the year ended December 31, 2009, the Fund had no investments in forward foreign exchange contracts.

Repurchase Agreements. The Fund may enter into repurchase agreements with primary government securities dealers recognized by the Federal Reserve Board, with member banks of the Federal Reserve System, or with other brokers or dealers that meet credit guidelines established by the Adviser and reviewed by the Board. Under the terms of a typical repurchase agreement, the Fund takes possession of an underlying debt obligation subject to an obligation of the seller to repurchase, and the Fund to resell, the obligation at an agreed-upon price and time, thereby determining the yield during the Fund's holding period. It is the policy of the Fund to always receive and maintain securities as collateral whose market value, including accrued interest, is at least equal to 102% of the dollar amount invested by the Fund in each agreement. The Fund will make payment for such securities only upon physical delivery or upon evidence of book entry transfer of the collateral to the account of the custodian. To the extent that any repurchase transaction exceeds one business day, the value of the collateral is marked-to-market on a daily basis to maintain the adequacy of the collateral. If the seller defaults and the value of the collateral declines or if bankruptcy proceedings are commenced with respect to the seller of the security, realization of the collateral by the Fund may be delayed or limited. At December 31, 2009, there were no open repurchase agreements.

GAMCO Gold Fund, Inc.

Notes to Financial Statements (Continued)

Foreign Currency Translations. The books and records of the Fund are maintained in U.S. dollars. Foreign currencies, investments, and other assets and liabilities are translated into U.S. dollars at the current exchange rates. Purchases and sales of investment securities, income, and expenses are translated at the exchange rate prevailing on the respective dates of such transactions. Unrealized gains and losses that result from changes in foreign exchange rates and/or changes in market prices of securities have been included in unrealized appreciation/depreciation on investments and foreign currency translations. Net realized foreign currency gains and losses resulting from changes in exchange rates include foreign currency gains and losses between trade date and settlement date on investment securities transactions, foreign currency transactions, and the difference between the amounts of interest and dividends recorded on the books of the Fund and the amounts actually received. The portion of foreign currency gains and losses related to fluctuation in exchange rates between the initial trade date and subsequent sale trade date is included in realized gain/loss on investments.

Foreign Securities. The Fund may directly purchase securities of foreign issuers. Investing in securities of foreign issuers involves special risks not typically associated with investing in securities of U.S. issuers. The risks include possible revaluation of currencies, the inability to repatriate funds, less complete financial information about companies, and possible future adverse political and economic developments. Moreover, securities of many foreign issuers and their markets may be less liquid and their prices more volatile than those of securities of comparable U.S. issuers.

Foreign Taxes. The Fund may be subject to foreign taxes on income, gains on investments, or currency repatriation, a portion of which may be recoverable. The Fund will accrue such taxes and recoveries as applicable, based upon its current interpretation of tax rules and regulations that exist in the markets in which it invests.

Restricted and Illiquid Securities. The Fund may invest up to 15% of its net assets in securities for which the markets are illiquid. Illiquid securities include securities the disposition of which is subject to substantial legal or contractual restrictions. The sale of illiquid securities often requires more time and results in higher brokerage charges or dealer discounts and other selling expenses than does the sale of securities eligible for trading on national securities exchanges or in the over-the-counter markets. Restricted securities may sell at a price lower than similar securities that are not subject to restrictions on resale. Securities freely saleable among qualified institutional investors under special rules adopted by the SEC may be treated as liquid if they satisfy liquidity standards established by the Board. The continued liquidity of such securities is not as well assured as that of publicly traded securities, and accordingly the Board will monitor their liquidity.

Concentration Risks. The Fund may invest a high percentage of its assets in specific sectors of the market in order to achieve a potentially greater investment return. As a result, the Fund may be more susceptible to economic, political, and regulatory developments in a particular sector of the market, positive or negative, and may experience increased volatility to the Fund's NAV and a magnified effect in its total return.

Securities Transactions and Investment Income. Securities transactions are accounted for on the trade date with realized gain or loss on investments determined by using the identified cost method. Interest income (including amortization of premium and accretion of discount) is recorded on the accrual basis. Premiums and discounts on debt securities are amortized using the effective yield to maturity method. Dividend income is recorded on the ex-dividend date except for certain dividends which are recorded as soon as the Fund is informed of the dividend.

GAMCO Gold Fund, Inc.

Notes to Financial Statements (Continued)

Determination of Net Asset Value and Calculation of Expenses. Certain administrative expenses are common to, and allocated among, various affiliated funds. Such allocations are made on the basis of each fund's average net assets or other criteria directly affecting the expenses as determined by the Adviser pursuant to procedures established by the Board.

In calculating the NAV per share of each class, investment income, realized and unrealized gains and losses, redemption fees, and expenses other than class specific expenses are allocated daily to each class of shares based upon the proportion of net assets of each class at the beginning of each day. Distribution expenses are borne solely by the class incurring the expense.

Custodian Fee Credits and Interest Expense. When cash balances are maintained in the custody account, the Fund receives credits which are used to offset custodian fees. The gross expenses paid under the custody arrangement are included in custodian fees in the Statement of Operations with the corresponding expense offset, if any, shown as "custodian fee credits." When cash balances are overdrawn, the Fund is charged an overdraft fee equal to 2.00% above the federal funds rate on outstanding balances. This amount, if any, would be included in "interest expense" in the Statement of Operations.

Distributions to Shareholders. Distributions to shareholders are recorded on the ex-dividend date. Distributions to shareholders are based on income and capital gains as determined in accordance with federal income tax regulations, which may differ from income and capital gains as determined under U.S. generally accepted accounting principles. These differences are primarily due to differing treatments of income and gains on passive foreign investment companies and other investment securities and foreign currency transactions held by the Fund, timing differences, and differing characterizations of distributions made by the Fund. Distributions from net investment income for federal income tax purposes include net realized gains on foreign currency transactions. These book/tax differences are either temporary or permanent in nature. To the extent these differences are permanent, adjustments are made to the appropriate capital accounts in the period when the differences arise. Permanent differences were primarily due to recharacterization of distributions, deemed distributions on shareholder redemptions, and reclassifications of capital gains on passive foreign investment companies. These reclassifications have no impact on the NAV of the Fund including deemed distributions on shareholder redemptions. For the year ended December 31, 2009, reclassifications were made to decrease accumulated distributions in excess of net investment income by \$3,626,106 and decrease accumulated net realized gain on investments and foreign currency transactions by \$5,213,871, with an offsetting adjustment to additional paid in capital.

The tax character of distributions paid during the year ended December 31, 2009 was \$9,191,229 of ordinary income. No distributions were made during the year ended December 31, 2008.

Provision for Income Taxes. The Fund intends to continue to qualify as a regulated investment company under Subchapter M of the Internal Revenue Code of 1986, as amended (the "Code"). It is the policy of the Fund to comply with the requirements of the Code applicable to regulated investment companies and to distribute substantially all of its net investment company taxable income and net capital gains. Therefore, no provision for federal income taxes is required.

GAMCO Gold Fund, Inc.
Notes to Financial Statements (Continued)

At December 31, 2009, the components of accumulated earnings/losses on a tax basis were as follows:

Accumulated capital loss carryforwards	\$ (2,939,972)
Net unrealized appreciation on investments and foreign currency translations	<u>279,455,232</u>
Total	<u>\$276,515,260</u>

At December 31, 2009, the Fund had net capital loss carryforwards for federal income tax purposes of \$2,939,972, which are available to reduce future required distributions of net capital gains to shareholders through 2016.

During the year ended December 31, 2009, the Fund utilized capital loss carryforwards of \$7,098,440.

At December 31, 2009, the difference between book basis and tax basis unrealized appreciation was primarily due to deferral of losses from wash sales for tax purposes and mark-to-market adjustments on passive foreign investment companies.

The following summarizes the tax cost of investments and the related unrealized appreciation/depreciation at December 31, 2009:

	<u>Cost</u>	<u>Gross Unrealized Appreciation</u>	<u>Gross Unrealized Depreciation</u>	<u>Net Unrealized Appreciation</u>
Investments	\$278,923,392	\$297,803,511	\$(18,348,316)	\$279,455,195

The Fund is required to evaluate tax positions taken or expected to be taken in the course of preparing the Fund's tax returns to determine whether the tax positions are "more-likely-than-not" of being sustained by the applicable tax authority. Income tax and related interest and penalties would be recognized by the Fund as tax expense in the Statement of Operations if the tax positions were deemed to not meet the more-likely-than-not threshold. For the year ended December 31, 2009, the Fund did not incur any income tax, interest, or penalties. As of December 31, 2009, the Adviser has reviewed all open tax years and concluded that there was no impact to the Fund's net assets or results of operations. Tax years ended December 31, 2007 through December 31, 2009, remain subject to examination by the Internal Revenue Service and state taxing authorities. On an ongoing basis, the Adviser will monitor its tax positions to determine if adjustments to this conclusion are necessary.

3. Investment Advisory Agreement and Other Transactions. The Fund has entered into an investment advisory agreement (the "Advisory Agreement") with the Adviser which provides that the Fund will pay the Adviser a fee, computed daily and paid monthly, at the annual rate of 1.00% of the value of its average daily net assets. In accordance with the Advisory Agreement, the Adviser provides a continuous investment program for the Fund's portfolio, oversees the administration of all aspects of the Fund's business and affairs, and pays the compensation of all Officers and Directors of the Fund who are affiliated persons of the Adviser.

If total net assets of the Fund are in excess of \$100 million, the Fund pays each Director who is not considered to be an affiliated person an annual retainer of \$6,000 plus \$1,000 for each Board meeting attended. Each Director is reimbursed by the Fund for any out of pocket expenses incurred in attending meetings. If total net assets of the Fund are below \$100 million, the Fund pays each Independent Director an annual retainer of \$1,000 plus \$500 for each Board meeting attended and each Director is reimbursed by the Fund for any out of pocket expenses incurred in attending meetings. All Board committee members receive \$500 per meeting

GAMCO Gold Fund, Inc.

Notes to Financial Statements (Continued)

attended and the Chairman of the Audit Committee and the Lead Director each receive a \$1,000 annual fee. A Director may receive a single meeting fee, allocated among the participating funds, for participation in certain meetings held on behalf of multiple funds. Directors who are directors or employees of the Adviser or an affiliated company receive no compensation or expense reimbursement from the Fund.

4. Distribution Plan. The Fund's Board has adopted a distribution plan (the "Plan") for each class of shares, except for Class I Shares, pursuant to Rule 12b-1 under the 1940 Act. Gabelli & Company, Inc. ("Gabelli & Company"), an affiliate of the Adviser, serves as distributor of the Fund. Under the Class AAA, Class A, Class B, and Class C Share Plans, payments are authorized to Gabelli & Company at annual rates of 0.25%, 0.25%, 1.00%, and 1.00%, respectively, of the average daily net assets of those classes, the annual limitations under each Plan. Such payments are accrued daily and paid monthly.

5. Portfolio Securities. Purchases and sales of securities for the year ended December 31, 2009, other than short-term securities and U.S. Government obligations, aggregated \$34,637,148 and \$69,816,919, respectively.

6. Transactions with Affiliates. During the year ended December 31, 2009, Gabelli & Company informed the Fund that it retained \$30,720 from investors representing commissions (sales charges and underwriting fees) on sales and redemptions of Fund shares.

The cost of calculating the Fund's NAV per share is a Fund expense pursuant to the Advisory Agreement between the Fund and the Adviser. During the year ended December 31, 2009, the Fund paid or accrued \$45,000 to the Adviser in connection with the cost of computing the Fund's NAV.

7. Line of Credit. The Fund participates in an unsecured line of credit of up to \$75,000,000 under which it may borrow up to 10% of its net assets from the custodian for temporary borrowing purposes. Borrowings under this arrangement bear interest at the higher of the sum of the overnight LIBOR plus 100 basis points or the sum of the federal funds rate plus 100 basis points at the time of borrowing. This amount, if any, would be included in "interest expense" in the Statement of Operations. At December 31, 2009, borrowings outstanding under the line of credit amounted to \$6,594,000.

The average daily amount of borrowings outstanding under the line of credit during the year ended December 31, 2009 was \$2,130,616 with a weighted average interest rate of 1.14%. The maximum amount borrowed at any time during the year ended December 31, 2009 was \$22,139,000.

8. Capital Stock. The Fund offers five classes of shares – Class AAA Shares, Class A Shares, Class B Shares, Class C Shares, and Class I Shares. Class AAA Shares are offered without a sales charge only to investors who acquire them directly from Gabelli & Company, through selected broker/dealers, or the transfer agent. Class I Shares are offered to foundations, endowments, institutions, and employee benefit plans without a sales charge. Class A Shares are subject to a maximum front-end sales charge of 5.75%. Class B Shares are subject to a contingent deferred sales charge ("CDSC") upon redemption within six years of purchase and automatically convert to Class A Shares approximately eight years after the original purchase. The applicable CDSC is equal to a declining percentage of the lesser of the NAV per share at the date of the original purchase or at the date of redemption, based on the length of time held. Class C Shares are subject to a 1.00% CDSC for one year after purchase. Class B Shares are available only through exchange of Class B Shares of other funds distributed by Gabelli & Company. Class I Shares were first issued on January 11, 2008.

GAMCO Gold Fund, Inc.
Notes to Financial Statements (Continued)

The Fund imposes a redemption fee of 2.00% on all classes of shares that are redeemed or exchanged on or before the seventh day after the date of a purchase. The redemption fee is deducted from the proceeds otherwise payable to the redeeming shareholders and is retained by the Fund. The redemption fees retained by the Fund during the years ended December 31, 2009 and December 31, 2008 amounted to \$56,008 and \$132,323, respectively.

The redemption fee does not apply to redemptions of shares where (i) the shares were purchased through automatic reinvestment of distributions, (ii) the redemption was initiated by the Fund, (iii) the shares were purchased through programs that collect the redemption fee at the program level and remit them to the Fund, or (iv) the shares were purchased through programs that the Adviser determines to have appropriate anti-short-term trading policies in place or as to which the Adviser has received assurances that look-through redemption fee procedures or effective anti-short-term trading policies and procedures are in place.

Transactions in shares of capital stock were as follows:

	Year Ended December 31, 2009		Year Ended December 31, 2008*	
	Shares	Amount	Shares	Amount
Class AAA				
Shares sold	6,547,649	\$ 164,203,276	9,961,069	\$ 256,862,465
Shares issued upon reinvestment of distributions	279,871	8,390,543	—	—
Shares redeemed	(7,765,812)	(194,097,051)	(8,875,283)	(204,880,137)
Net increase/(decrease)	<u>(938,292)</u>	<u>\$ (21,503,232)</u>	<u>1,085,786</u>	<u>\$ 51,982,328</u>
Class A				
Shares sold	356,155	\$ 8,673,069	253,276	\$ 6,177,466
Shares issued upon reinvestment of distributions	7,432	222,724	—	—
Shares redeemed	(434,720)	(11,942,207)	(204,448)	(5,076,276)
Net increase/(decrease)	<u>(71,133)</u>	<u>\$ (3,046,414)</u>	<u>48,828</u>	<u>\$ 1,101,190</u>
Class B				
Shares sold	212	\$ 4,110	770	\$ 15,441
Shares issued upon reinvestment of distributions	307	9,037	—	—
Shares redeemed	(10,084)	(243,569)	(34,121)	(943,491)
Net decrease	<u>(9,565)</u>	<u>\$ (230,422)</u>	<u>(33,351)</u>	<u>\$ (928,050)</u>
Class C				
Shares sold	153,356	\$ 4,107,872	189,353	\$ 4,800,566
Shares issued upon reinvestment of distributions	3,932	115,395	—	—
Shares redeemed	(71,986)	(1,875,322)	(230,562)	(5,317,610)
Net increase/(decrease)	<u>85,302</u>	<u>\$ 2,347,945</u>	<u>(41,209)</u>	<u>\$ (517,044)</u>
Class I				
Shares sold	262,396	\$ 7,129,418	67,654	\$ 1,795,221
Shares issued upon reinvestment of distributions	5,098	153,312	—	—
Shares redeemed	(47,932)	(1,269,437)	(11,805)	(297,930)
Net increase	<u>219,562</u>	<u>\$ 6,013,293</u>	<u>55,849</u>	<u>\$ 1,497,291</u>

* From the commencement of offering Class I Shares on January 11, 2008.

GAMCO Gold Fund, Inc.

Notes to Financial Statements (Continued)

9. Indemnifications. The Fund enters into contracts that contain a variety of indemnifications. The Fund's maximum exposure under these arrangements is unknown. However, the Fund has not had prior claims or losses pursuant to these contracts and expects the risk of loss to be remote.

10. Other Matters. On April 24, 2008, the Adviser entered into an administrative settlement with the SEC to resolve the SEC's inquiry regarding prior frequent trading activity in shares of the GAMCO Global Growth Fund (the "Global Growth Fund") by one investor who was banned from the Global Growth Fund in August 2002. In the settlement, the SEC found that the Adviser had violated Section 206(2) of the Investment Advisers Act, Section 17(d) of the 1940 Act, and Rule 17d-1 thereunder, and had aided and abetted and caused violations of Section 12(d)(1)(B)(i) of the 1940 Act. Under the terms of the settlement, the Adviser, while neither admitting nor denying the SEC's findings and allegations, agreed, among other things, to pay the previously reserved total of \$16 million (including a \$5 million penalty), of which at least \$11 million will be distributed to shareholders of the Global Growth Fund in accordance with a plan developed by an independent distribution consultant and approved by the independent directors of the Global Growth Fund and the staff of the SEC, and to cease and desist from future violations of the above referenced federal securities laws. The settlement will not have a material adverse impact on the Adviser or its ability to fulfill its obligations under the Advisory Agreement. On the same day, the SEC filed a civil action against the Executive Vice President and Chief Operating Officer of the Adviser, alleging violations of certain federal securities laws arising from the same matter. The officer is also an officer of the Global Growth Fund and other funds in the Gabelli/GAMCO fund complex including the Fund. The officer denies the allegations and is continuing in his positions with the Adviser and the funds. The Adviser currently expects that any resolution of the action against the officer will not have a material adverse impact on the Fund or the Adviser or its ability to fulfill its obligations under the Advisory Agreement.

11. Subsequent Events. Management has evaluated the impact on the Fund of events occurring subsequent to December 31, 2009 through February 25, 2010, the date the financial statements were issued, and has determined that there were no subsequent events requiring recognition or disclosure in the financial statements.

GAMCO Gold Fund, Inc.

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of
GAMCO Gold Fund, Inc.

We have audited the accompanying statement of assets and liabilities of GAMCO Gold Fund, Inc. (the "Fund"), including the schedule of investments, as of December 31, 2009, and the related statement of operations for the year then ended, the statements of changes in net assets for each of the two years in the period then ended, and the financial highlights for each of the five years in the period then ended. These financial statements and financial highlights are the responsibility of the Fund's management. Our responsibility is to express an opinion on these financial statements and financial highlights 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 and financial highlights are free of material misstatement. We were not engaged to perform an audit of the Fund's 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 Fund'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 and financial highlights, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our procedures included confirmation of securities owned as of December 31, 2009, by correspondence with the Fund's custodian. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements and financial highlights referred to above present fairly, in all material respects, the financial position of GAMCO Gold Fund, Inc. at December 31, 2009, the results of its operations for the year then ended, the changes in its net assets for each of the two years in the period then ended, and the financial highlights for each of the five years in the period then ended, in conformity with U.S. generally accepted accounting principles.

Philadelphia, Pennsylvania
February 25, 2010

Ernst + Young LLP

GAMCO Gold Fund, Inc.

Additional Fund Information (Unaudited)

The business and affairs of the Fund are managed under the direction of the Fund's Board of Directors. Information pertaining to the Directors and officers of the Fund is set forth below. The Fund's Statement of Additional Information includes additional information about the Fund's Directors and is available without charge, upon request, by calling 800-GABELLI (800-422-3554) or by writing to the GAMCO Gold Fund, Inc. at One Corporate Center, Rye, NY 10580-1422.

<u>Name, Position(s) Address¹ and Age</u>	<u>Term of Office and Length of Time Served²</u>	<u>Number of Funds in Fund Complex Overseen by Director</u>	<u>Principal Occupation(s) During Past Five Years</u>	<u>Other Directorships Held by Director⁴</u>
<u>INTERESTED DIRECTORS³:</u>				
Mario J. Gabelli Director Age: 67	Since 1994	26	Chairman and Chief Executive Officer of GAMCO Investors, Inc. and Chief Investment Officer – Value Portfolios of Gabelli Funds, LLC and GAMCO Asset Management Inc.; Director/Trustee or Chief Investment Officer of other registered investment companies in the Gabelli/GAMCO Funds complex; Chairman and Chief Executive Officer of GGCP, Inc.	Director of Morgan Group Holdings, Inc. (holding company); Chairman of the Board of LICT Corp. (multimedia and communication services company); Director CIBL, Inc. (broadcasting and wireless communications)
<u>INDEPENDENT DIRECTORS⁵:</u>				
E. Val Cerutti Director Age: 70	Since 1994	7	Chief Executive Officer of Cerutti Consultants, Inc.	Director of The LGL Group, Inc. (diversified manufacturing)
Anthony J. Colavita Director Age: 74	Since 1994	34	President of the law firm of Anthony J. Colavita, P.C.	—
Werner J. Roeder, MD Director Age: 69	Since 1994	22	Medical Director of Lawrence Hospital and practicing private physician	—
Anthonie C. van Ekris Director Age: 75	Since 1994	20	Chairman of BALMAC International, Inc. (commodities and futures trading)	—
Salvatore J. Zizza Director Age: 64	Since 2004	28	Chairman of Zizza & Co., Ltd. (consulting)	Director of Hollis-Eden Pharmaceuticals (biotechnology); Director of Trans-Lux Corporation (business services)
Daniel E. Zucchi Director Age: 69	Since 1994	1	President of Daniel E. Zucchi Associates (consulting); Formerly Senior Vice President and Director of Consumer Marketing of Hearst Magazine (through 1995)	—

GAMCO Gold Fund, Inc.

Additional Fund Information (Continued) (Unaudited)

Name, Position(s) Address¹ and Age	Term of Office and Length of Time Served²	Principal Occupation(s) During Past Five Years
OFFICERS:		
Bruce N. Alpert President and Secretary Age: 58	Since 2003	Executive Vice President and Chief Operating Officer of Gabelli Funds, LLC since 1988 and an officer of all of the registered investment companies in the Gabelli/GAMCO Funds complex. Director and President of Teton Advisors, Inc. 1998 through 2008; Chairman of Teton Advisors, Inc. since 2008; Senior Vice President of GAMCO Investors, Inc. since 2008
Agnes Mullady Treasurer Age: 51	Since 2006	Senior Vice President of GAMCO Investors, Inc. since 2009; Vice President of Gabelli Funds, LLC since 2007; Officer of all of the registered investment companies in the Gabelli/GAMCO Funds complex; Senior Vice President of U.S. Trust Company, N.A. and Treasurer and Chief Financial Officer of Excelsior Funds from 2004 through 2005
Peter D. Goldstein Chief Compliance Officer Age: 56	Since 2004	Director of Regulatory Affairs at GAMCO Investors, Inc. since 2004; Chief Compliance Officer of all of the registered investment companies in the Gabelli/GAMCO Funds complex

¹ Address: One Corporate Center, Rye, NY 10580-1422, unless otherwise noted.

² Each Director will hold office for an indefinite term until the earliest of (i) the next meeting of shareholders, if any, called for the purpose of considering the election or re-election of such Director and until the election and qualification of his or her successor, if any, elected at such meeting, or (ii) the date a Director resigns or retires, or a Director is removed by the Board of Directors or shareholders, in accordance with the Fund's By-Laws and Articles of Incorporation. Each officer will hold office for an indefinite term until the date he or she resigns or retires or until his or her successor is elected and qualified.

³ "Interested person" of the Fund as defined in the 1940 Act. Mr. Gabelli is considered an "interested person" because of his affiliation with Gabelli Funds, LLC which acts as the Fund's investment adviser.

⁴ This column includes only directorships of companies required to report to the SEC under the Securities Exchange Act of 1934, as amended, (i.e. public companies) or other investment companies registered under the 1940 Act.

⁵ Directors who are not interested persons are considered "Independent" Directors.

2009 TAX NOTICE TO SHAREHOLDERS (Unaudited)

For the year ended December 31, 2009, the Fund paid to shareholders ordinary income distributions (comprised of net investment income) totaling \$0.503, \$0.490, \$0.301, \$0.353, and \$0.568 per share for Class AAA, Class A, Class B, Class C, and Class I, respectively. For the year ended December 31, 2009, 2.63% of the ordinary income distribution qualifies for the dividends received deduction available to corporations. The Fund designates 100% of the ordinary income distribution as qualified dividend income pursuant to the Jobs and Growth Tax Relief Reconciliation Act of 2003.

All designations are based on financial information available as of the date of this annual report and, accordingly, are subject to change. For each item, it is the intention of the Fund to designate the maximum amount permitted under the Internal Revenue Code and the regulations thereunder.

Gabelli/GAMCO Funds and Your Personal Privacy

Who are we?

The Gabelli/GAMCO Funds are investment companies registered with the Securities and Exchange Commission under the Investment Company Act of 1940. We are managed by Gabelli Funds, LLC or Teton Advisors, Inc., which are affiliated with GAMCO Investors, Inc. GAMCO Investors, Inc. is a publicly held company that has subsidiaries that provide investment advisory or brokerage services for a variety of clients. Teton Advisors, Inc. is a publicly held company that provides investment advisory services to the GAMCO Westwood Funds.

What kind of non-public information do we collect about you if you become a shareholder?

If you apply to open an account directly with us, you will be giving us some non-public information about yourself. The non-public information we collect about you is:

- *Information you give us on your application form.* This could include your name, address, telephone number, social security number, bank account number, and other information.
- *Information about your transactions with us, any transactions with our affiliates, and transactions with the entities we hire to provide services to you.* This would include information about the shares that you buy or redeem. If we hire someone else to provide services—like a transfer agent—we will also have information about the transactions that you conduct through them.

What information do we disclose and to whom do we disclose it?

We do not disclose any non-public personal information about our customers or former customers to anyone other than our affiliates, our service providers who need to know such information, and as otherwise permitted by law. If you want to find out what the law permits, you can read the privacy rules adopted by the Securities and Exchange Commission. They are in volume 17 of the Code of Federal Regulations, Part 248. The Commission often posts information about its regulations on its website, www.sec.gov.

What do we do to protect your personal information?

We restrict access to non-public personal information about you to the people who need to know that information in order to provide services to you or the Fund and to ensure that we are complying with the laws governing the securities business. We maintain physical, electronic, and procedural safeguards to keep your personal information confidential.

GAMCO Gold Fund, Inc.

One Corporate Center
Rye, New York 10580-1422

800-GABELLI

800-422-3554

fax: 914-921-5118

website: www.gabelli.com

e-mail: info@gabelli.com

Net Asset Value per share available daily by calling
800-GABELLI after 7:00 P.M.

GAMCO

Board of Directors

Mario J. Gabelli, CFA
*Chairman and Chief
Executive Officer
GAMCO Investors, Inc.*

Anthonie C. van Ekris
*Chairman
BALMAC International, Inc.*

E. Val Cerutti
*Chief Executive Officer
Cerutti Consultants, Inc.*

Salvatore J. Zizza
*Chairman
Zizza & Co., Ltd.*

Anthony J. Colavita
*President
Anthony J. Colavita, P.C.*

Daniel E. Zucchi
*President
Daniel E. Zucchi Associates*

Werner J. Roeder, MD
*Medical Director
Lawrence Hospital*

Officers and Portfolio Manager

Caesar Bryan
Portfolio Manager

Bruce N. Alpert
President and Secretary

Peter D. Goldstein
Chief Compliance Officer

Agnes Mullady
Treasurer

Distributor

Gabelli & Company, Inc.

Custodian, Transfer Agent, and Dividend Agent

State Street Bank and Trust Company

Legal Counsel

Paul, Hastings, Janofsky & Walker LLP

GAMCO Gold Fund, Inc.

This report is submitted for the general information of the shareholders of GAMCO Gold Fund, Inc. It is not authorized for distribution to prospective investors unless preceded or accompanied by an effective prospectus.

GAB008Q409SR

**ANNUAL REPORT
DECEMBER 31, 2009**