

APPENDIX C

VALUATION REPORT

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# House 5 Common Equity Valuation

November 22, 2011

As of December 11, 2002

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Section 01

# Executive Summary

### **Summary of Scope**

The Fair Market Value of a 100 percent interest in the common equity of the broker-dealer business ("House 5") of Bernard L. Madoff Investment Securities LLC ("BLMIS"), on a marketable, controlling interest basis, as of December 11, 2002 (the "Valuation Date") was determined.

### **Definition of Fair Market Value**

For purposes of this Report, the definition of fair market value ("Fair Market Value") is the price at which property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell, and both having reasonable knowledge of relevant facts.<sup>1</sup> In estimating Fair Market Value, it is assumed House 5's existing business is ongoing.

### **Disclaimers and Concluding Remarks**

Valuation reports may contain estimates of future financial performance, based on reasonable expectations at a particular point in time but such information, estimates, or opinions are not offered as predictions or as assurances that a particular level of income or profit will be achieved, that events will occur, or that a particular price will be offered or accepted. Actual results achieved during the period covered by the prospective financial analyses will vary from those described in this Report, and the variations may be material.

The work performed did not include the performance of an audit, review, or examination (as defined by the American Institute of Certified Public Accountants) of any of the historical or prospective financial information used, or other information obtained in the course of the investigation, and, therefore, no opinion is expressed with regard to the same. Further, the valuation did not include any investigation of the titles to, or any liens against House 5 property.

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<sup>1</sup> Estate Tax Regs., Sec. 20.2031-1(b); Rev. Rul. 59-60, 1959-1 C.B. 237.

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## Findings<sup>2</sup>

Based on the analyses herein, the estimate of the Fair Market Value of 100 percent of the equity of House 5, on a marketable, controlling interest basis, is **\$450 million**, as of the Valuation Date.<sup>3</sup> The following table summarizes the findings:

<u>Valuation Approach</u>	<u>Indicated Fair Market Value</u>
	(\$ in millions)
Income Approach	\$460
Comparable Company Method	420
<b>Concluded Fair Market Value (rounded)<sup>4</sup></b>	<b>\$450</b>

Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. The use of Fair Market Value as a valuation standard is premised upon both participants to the hypothetical transaction having full disclosure of all the relevant facts, known or knowable as of the Valuation Date, for the valuation to be reliable. The analysis included herein has been performed assuming that the information presented in the regulatory financial reports is correct with minimal adjustments required beyond the specific adjustments made and outlined herein (see definition of Adjusted). Evidence exists which indicates House 5 revenues were artificially enhanced via the transfer of customer monies from House 17<sup>5</sup> which had the effect of significantly overstating the reported revenues. Accordingly, adjustments have been made to as-reported historical FOCUS report data to remove these revenues. Further, since House 5 revenues were propped up by customer monies from House 17, it calls into question House 5's ability to fund its

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<sup>2</sup> A calculation of the implied value of the United Kingdom-based entity Madoff Securities International Limited ("MSIL") was performed by multiplying MSIL's y/e 2002 book value of \$46.5 million by the implied House 5 EV/BV multiples of 1.5x and 1.4x, averaging the implied values resulting in an implied value of \$68.4 million. MSIL's BV was converted from GBP to USD using the spot exchange rate as of December 11, 2002 of 1.5699 USD/GBP.

<sup>3</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

<sup>4</sup> *Id.*

<sup>5</sup> House 17 is the investment advisory business of BLMIS. During the investigation it was discovered that a significant percentage of the revenue accounted for in the FOCUS reports for House 5 was derived from Other People's Money being transferred to House 5 via (1) House 17 directly, (2) House 17 to a third party brokerage account, or (3) House 17 to MSIL (See Table 10 of the Dubinsky expert report dated November 22, 2011 for more details).

own operations, and, therefore, calls into question its ability to operate as a going concern.

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Section 02

# Defined Terms



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### **Defined Terms**

The following is a non-exhaustive list of defined terms used throughout this Report:

FOCUS report data – refers to the Financial and Operational Combined Uniform Single (“FOCUS”) electronic data files including historical quarterly financial statements for BLMIS from 1Q 1983 through 3Q 2008.

Adjusted – the word “Adjusted,” where capitalized in this Report, refers to adjustments made to the as-reported FOCUS report data for 2000, 2001 and 2002. These adjustments were made to eliminate from revenues transfers of money from House 17, as shown in Table 10 of the Dubinsky expert report dated November 22, 2011, which did not support a legitimate business purpose. Additionally, the FOCUS report data was adjusted to eliminate employee expenses that were included for House 17 employees and any resulting adjustments that are required to the assets, liabilities, and equity accounts due to the changes in revenues and expenses.

Leverage Ratio – refers to the ratio of total assets to total equity on a book value basis.

Cash Ratio – refers to the ratio of non-restricted cash to total assets.

Trading Assets – refers to the securities and spot commodities owned at market value line item from FOCUS report data.

Trading Liabilities – refers to the securities sold, not yet repurchased at market value line item from FOCUS report data.

Short Ratio – refers to the ratio of Trading Liabilities, divided by Trading Assets on a book value basis.

Trading Revenue – refers to the sum of the following FOCUS report data line items:

- Gains or losses on firm securities trading accounts – from market making in over-the-counter equity securities;
- Gains or losses on firm securities trading accounts – from market making in options on a national securities exchange;
- Gains or losses on firm securities trading accounts – from trading in debt securities;
- Gains or losses on firm securities trading accounts – from all other trading; and
- Other revenue related to securities business.

Turnover – refers, in this Report, to the ratio of Total Revenue, divided by Trading Assets, with Trading Assets stated on a book value basis.

Sustainable Growth Rate – refers, in this Report, to the ratio of return on assets, divided by the Short Ratio, and represents the implied rate of growth in Trading Assets that could be sustained by the operations, as forecast

Pre-Compensation Operating Expense – refers to all operating expense, other than compensation expenses.

Pre-Comp Operating Income – refers to Total Revenue, minus Pre-Compensation Operating Expenses.

Comp Expense – refers to clerical and administrative employees' expenses line item from FOCUS report data.

Payout Ratio – refers to the ratio of Comp Expense to Pre-Compensation Operating Income.

Debt – refers to bank loans payable line item from FOCUS report data for historical periods and the debt amount in pro forma 2002 and the Projection Period, stated on a book value basis.

Equity Value ("EV") – refers to the market value of a company's common equity, calculated as the share price as of the day prior to the Valuation Date, times the share count on the cover of the most recently-filed SEC filing on Form 10-Q as of the Valuation Date, times a factor of 140 percent, to reflect an estimated control premium<sup>6</sup> and valuation on a controlling interest basis.

Book Value ("BV") – refers to the balance sheet carrying amount of common equity as of the Valuation Date.

Tangible Book Value ("TBV") – refers to the balance sheet carrying amount of common equity, less intangible assets, as of the Valuation Date.

Revenue – refers to LTM revenue available as of the Valuation Date.

Cash Earnings – refers to LTM net income, plus LTM amortization expense as of the Valuation Date.

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<sup>6</sup> The premium paid above the market price of the target company's stock prior to a transaction's announcement date will generally include consideration for the value of control and may also include synergy value in a controlling interest transaction.

Return on Equity ("ROE") – refers to the calculation of LTM net income, divided by BV.

Concluded Comparable Companies – refers to Knight Capital Group, Inc. and LaBranche & Co. Inc.

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Section 03

# Sources of Information

In the course of the analyses, financial and other information, made available to or requested in electronic format from Baker as well as information available in the public domain or purchased databases was considered. The following is a partial listing of the information sources which were considered in the analysis:

- Audited Financial Statements of BLMIS;
- FOCUS Reports;
- FOCUS report data;
- House 17 revenue calculations (see Table 10 in the Dubinsky expert report dated November 22, 2011);
- Salomon Smith Barney Equity Research, *Brokers & Asset Managers*, February 21, 2002 (the "Salomon Report");
- Deutsche Bank Equity Research, *Brokers & Asset Managers*, August 2002 (the "Deutsche Bank Report");
- U.S. Securities Exchange Commission, *Regulatory and Compliance Issues in a Decimalized Environment*, June 8, 2001;
- U.S. Securities Exchange Commission, *Testimony Concerning the Effects of Decimalization on the Securities Markets*, May 24, 2001;
- Standard & Poor's, *Industry Survey: Investment Services*, October 31, 2002 (the "S&P Report");
- Securities Industry Association Research Reports, *Bottom Formation: Securities Industry Update*, November 29, 2002;
- 2002 Mergerstat Yearbook;
- The Capital IQ, SNL Financial ("SNL"), Federal Reserve and Bloomberg on-line financial databases; and
- Securities and Exchange Commission ("SEC") filings, including annual reports on Form 10-K, and quarterly reports on Form 10-Q.

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Section 04

# House 5 Description and Developments

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### **House 5 Description and Developments<sup>7</sup>**

House 5 operated as a securities broker-dealer registered with the U.S. Securities and Exchange Commission in the United States. It provided executions for broker-dealers, banks, and financial institutions, and was a member of the National Association of Securities Dealers, Inc. House 5 commenced operations in 1960 and was headquartered in New York, NY.

House 5 was an international market maker. The firm provided executions for broker-dealers, banks, and financial institutions since its inception.

House 5's customers included securities firms and banks. The firm was a market maker in S&P 500 stocks, US convertible bonds, preferred stocks, warrants, units, and rights. As-reported FOCUS report data indicated that market making generated approximately 45 percent of revenue in 2001 and 35 percent of revenue in 2002.

In addition to market making, House 5 acted as a proprietary trader on its own account. According to as-reported FOCUS report data, proprietary trading generated approximately 48 percent of revenue in 2001 and 59 percent in 2002.

Other revenue generated approximately 7 percent of revenue in 2001 and 6 percent of revenue in 2002.

### **Recent Financial Overview<sup>8</sup>**

For purpose of this Report, unless otherwise noted, all financial information is presented as of and for the year ending ("y/e") December 31, based on FOCUS report data.

Based on the unadjusted FOCUS reports, which are known to be incorrect, House 5's BV at the y/e 2002 was \$440 million, up from \$413 million at the y/e 2001, representing growth due to earnings. Net capital information was made available as of the end of the fiscal quarters, and is presented below based on net capital at the fiscal year ended ("fye") October 31. Net capital at fye 2002 was \$351 million, or 80 percent of BV. The following table illustrates the amount of equity and net capital at fye 2001 and 2002:

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<sup>7</sup> All financial data referenced in this section is based on as-reported FOCUS report data, and, therefore, does not reflect any adjustments to remove the historical impact of House 17 revenue.

<sup>8</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

<u>Equity Type</u> <sup>9</sup>	<u>FYE October 31,</u>		<u>Change</u> (%)
	<u>2001</u> (\$ in millions)	<u>2002</u>	
Total Ownership Equity	\$400	\$438	9.5
Net Capital	311	351	12.8
Net Capital Margin (%)	77.7%	80.1%	2.4

Total Trading Revenue for the y/e 2002 approximated \$106 million, a decline of 37 percent from the prior year, due to declines in all revenue types as indicated in the following table:

<u>Revenue</u> <sup>10</sup>	<u>y/e 2001</u> (\$ in millions)	<u>y/e 2002</u>	<u>Change</u> (%)
Market Making	\$ 76	\$ 36	(52)
Proprietary Trading	81	63	(22)
Other Revenue	<u>12</u>	<u>6</u>	(48)
Trading Revenue	<u>\$169</u>	<u>\$106</u>	(37)

Non-Compensation Operating Expenses, including commissions, clearing fees, communications, occupancy costs, regulatory fees and other expenses related to trading on exchanges, equated to 41 percent and 53 percent of Trading Revenue for the y/e 2001 and 2002, respectively. The same measure averaged 49 percent of Trading Revenue for the ten years ended 2002.

Comp Expense equated to a 53 percent and 46 percent Payout Ratio for the y/e 2001 and 2002, respectively. The Payout Ratio averaged 38 percent over the ten years ended 2002.

Profit after tax was 17 percent and 16 percent for the y/e 2001 and 2002, respectively. While House 5 had always operated as a pass-through entity for income tax purposes, for purposes of this Report, income taxes were imputed, consistent with valuation approaches as of the Valuation Date, for each year presented.

As a result of the improper use of Other People's Money, the following adjustments are required to recast the above FOCUS report financial information.

<sup>9</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

<sup>10</sup> *Id.*



Adjustment <sup>11</sup>	y/e 2000	y/e 2001	Total
		(\$ in millions)	
House 17 Revenue	(76)	(72)	(148)
House 17 Expenses			
Comp Expense	(7)	(8)	(15)
Occupancy	(1)	(1)	(1)
Pretax Income	<u>(68)</u>	<u>(64)</u>	<u>(132)</u>

	y/e 2001		
	As-Reported	Adjustments	Adjusted
		(\$ in millions)	
Cash	141	(51)	91
Trading Assets	428	(137)	291
Other Assets	214	(63)	151
Total Assets	<u>783</u>	<u>(251)</u>	<u>533</u>
Debt	-	-	-
Trading Liabilities	329	(105)	224
Other Liabilities	42	(13)	28
Total Liabilities	<u>370</u>	<u>(118)</u>	<u>252</u>
Book Value of Equity	<u>413</u>	<u>(132)</u>	<u>281</u>
Total Liabilities and Equity	<u>783</u>	<u>(251)</u>	<u>533</u>

<sup>11</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

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Section 05

# Contemporaneous 2002 Industry Developments

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### Current Industry Developments<sup>12</sup>

Market spreads in U.S. equity trading decreased in the years leading up to 2002. Average relative spreads on the National Association of Securities Dealers Automated Quotation or "NASDAQ" exchange decreased dramatically due to overall over-the-counter ("OTC") trading spreads decreasing by 90 percent over past ten years ending June 2002. The New York Stock Exchange ("NYSE") also saw trading spreads compressing, narrowing 37 percent between December 2000 and March 2001. The compression of trading spreads increased capital intensity for broker-dealers, resulting in consolidation in registered broker-dealer industry, leaving the 25 largest NYSE firms controlling 79 percent of capital and 75 percent of revenue as of December 1999.

Both exchanges not only saw market spreads decrease, but quote sizes as well. Quote sizes decreased 60 percent and 68 percent on the NYSE and NASDAQ, respectively as of May 2001. Smaller trades at smaller spreads led to significantly less revenue per trade and lower profitability. However, this was partially offset by an increase in trading frequency.

Most of these trends can be explained by the decimalization of the NYSE, which began in 2000. Trading volume increases, pricing spread decreases, increased competitiveness and the elimination of price disparities with international markets were also attributed to this conversion.

Trading volume increased dramatically in the years approaching the Valuation Date. From 1997 to 1999, daily on-line trading volume increased 400 percent overall, and increased from 7 percent to 16 percent on all equity trades. Despite low spreads and quote sizes, industry revenue was estimated to grow by 5 percent in 2003 due to the large increase in trading volume. A key reason was primarily due to the internet, allowing more people to invest and trade daily. Furthermore, the capabilities of the internet caused elimination of informational advantages of professional money managers.

In the broker-dealer industry, mark to market accounting of assets made and continues to make EV/BV multiple valuations the norm. Earnings are

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<sup>12</sup> Adapted from various sources: Salomon Smith Barney Equity Research, *Brokers & Asset Manager*, February 21, 2002; Deutsche Bank Equity Research, *Brokers & Asset Managers*, August 2002; U.S. Securities Exchange Commission, *Regulatory and Compliance Issues in a Decimalized Environment*, June 8, 2001; U.S. Securities Exchange Commission, *Testimony Concerning the Effects of Decimalization on the Securities Markets*, May 24, 2011; Standard & Poor's, *Industry Survey: Investment Services*, October 31, 2002; and Securities Industry Association Research Reports, *Bottom Formation: Securities Industry Update*, November 29, 2002.

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typically volatile, making price-to-earnings valuation ratios less reliable. As of the date of the Deutsche Bank Report, EV/BV valuations were in line with the historical range 1.5x - 2.5x, with the group trading, on average, at 1.95x as of the date of the source material referenced above.<sup>13</sup>

#### **Financial Market Commentary<sup>14</sup>**

As of the Valuation Date, year-to-date stock market indicators were broadly negative with the Dow Jones Industrial Average ("DJIA"), S&P 500, and NASDAQ 100 ("NDX") down 14 percent, 21 percent, and 37 percent, respectively. Furthermore, the VIX volatility index was up 12 percent year-over-year. Compared to the 52-week high, the DJIA was down 19 percent, the S&P 500 was down 23 percent, and the NDX was down 38 percent. Compared to the 52-week low, the DJIA was up 18 percent, the S&P 500 was up 16 percent, and the NDX was up 65 percent.

Third quarter 2002 domestic securities industry profits were more than slashed in half to \$0.9 billion from the second quarter's \$2 billion, which was already down one-third from the first quarter's \$3 billion. Fourth quarter profits were estimated at \$2.0 billion for a full-year 2002 total of \$7.9 billion, a seven-year low. While all revenue lines were down across the board in 3Q 2000 versus 2Q 2000, so too were every expense line, except for interest and floor costs. Securities industry layoffs had reached 10 percent of the workforce, worse than in the post-1987 environment, and in aggregate terms, at least 75,100 in the United States alone, double the post-1987 job losses.

Most, if not all, securities firms were focusing more intensely on core competencies and getting back to Wall Street's business basics – improving customer satisfactions and operational efficiency – in hopes of ensuring an eventual long-term recovery of both margins and ROEs. With hopes of another major bull market unlikely before late 2003 or 2004, firms were expected to continue to reduce controllable expenses, at least sufficiently to offset largely non-controllable items, such as benefit costs per employee, which were still rising at double-digit annual rates.

One positive trend that emerged in 2002 was the end of the decades-long decline in average commission revenue earned by securities firms on each "ticket". Average per-ticket commissions flattened out in the third quarter

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<sup>13</sup> The "group" referenced in the Deutsche Bank Report refers to the Independent Brokers (Bear Stearns, Goldman Sachs, Lehman Brothers, Merrill Lynch, and Morgan Stanley) and the trading multiples were calculated using stock price data as of August 19, 2002 and financial metrics as of 2Q 2002.

<sup>14</sup> Adapted from Securities Industry Association Research Reports, *Bottom Formation: Securities Industry Update*, November 29, 2002.

as the industry adjusted to the advent of decimal pricing and of compensation based on spreads. Deep discounting practices also subsided, allowing some restoration of “pricing power”.

Another positive trend was higher clearing revenues, reflecting higher fees charged on still strong volume in secondary markets. A third trend, was higher fees earned for financial advisory services provided to customers engaging in corporate restructuring, mergers and acquisitions and leverage buyouts, all types of activity that were expected to rise as economic activity slowed and uncertainty remained high in 4Q 2002.

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Section 06

# General Economic Overview

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## Introduction<sup>15</sup>

As part of the analysis, consideration was given to the general economic outlook as of the Valuation Date and its potential impact on House 5. An assessment of the general economy can often identify underlying causes for fluctuations in the financial and operating performance of a company. This overview of the general economic outlook is based on an examination of various economic analyses and the consensus forecasts of *Blue Chip Economic Indicators* (the "Consensus").

## Economic Growth

Following another month of discouraging reports, Consensus forecasts of U.S. economic growth for the final quarter of 2002 and for 2003 declined. The forecast annual real gross domestic product ("GDP") growth dropped back to 2.3 percent for 2002, losing the 0.1 of a percentage point gained last month, and forecasts for 2003 were lowered another 0.2 of a percentage point to 2.8 percent. The Consensus estimates that real GDP growth in Q3 was 3.1 percent, based on strong truck and vehicle sales; however, this was half a percentage point below the prior month's estimates. The forecast for growth in Q4 fell even further to 1.6 percent, down 0.6 of a percentage point from last month's numbers, while expectations for Q1 of 2003 dropped from 3.4 percent in September to 2.7 percent in November 2002. The only forecast left unchanged from the prior month was for real GDP growth in Q2 of 2003, remaining at 3.3 percent. Current-dollar (nominal) GDP expectations slipped to 3.5 percent in 2002 and to 4.5 percent in 2003, compared to 2.6 percent in 2001.

A significant decline in vehicle sales in September led to the first drop in personal consumption expenditures ("PCE") since November 2001, and car and light truck sales continued to decline slightly in October. In addition, reports indicated that the manufacturing sector was weakening at the end of Q3. In September, total industrial production fell 0.1 percent and manufacturing output dropped 0.3 percent, which led to a decline in capacity utilization for the second straight month. Many sectors at the time had a large amount of excess capacity, which led to a poor outlook for growth in capital spending. In October, the Institute of Supply Management's index of activity in the factory sector fell to 48.5, the lowest level of the year. The average workweek, manufacturing workweek, and aggregate hours worked index also declined in October.

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<sup>15</sup> The General Economic Overview section is based off resources including: *Blue Chip Economic Indicators*, November 10, 2002; *Standard & Poor's Trends & Projections*, November 14, 2002; and Federal Reserve Statistical Release, H.10, *Foreign Exchange Rates*, November 18, 2002.

### **Consumption and Investment**

Based on strong vehicle sales during the first two months of Q3, the Consensus maintained its estimate of PCE growth in the third quarter at a rate of 4.2 percent, following the slight growth of 1.8 percent in Q2. For Q4, however, forecasts fell to just 1.1 percent, the weakest quarterly performance since the early 1990s. For 2002 as a whole, the panel expected PCE to grow 3.1 percent, whereas the forecast for calendar year 2003 declined to 2.6 percent.

The Consensus predicted new housing starts would total 1.67 million units in 2002 and 1.61 million units in 2003, compared to 1.60 million units in 2001. Total vehicle sales were expected to number 16.8 million units in 2002 and 16.5 million units in 2003, compared to 17.5 million units in 2001. Nonresidential investment was expected to decline by 5.5 percent in 2002 and to grow 4.0 percent in 2003 after declining 5.2 percent during 2001.

### **Inflation and Unemployment**

The expectation of slower than predicted GDP growth in 2003 was also reflected in Consensus forecasts for inflation and unemployment. The Consensus maintained its prediction of an increase in the Consumer Price Index ("CPI") of 1.6 percent in 2002, but lowered its prediction further to 2.2 percent in 2003, following a high of 2.5 percent in July. The chained-GDP price index, meanwhile, was expected to rise 1.2 percent in 2002 and 1.6 percent in 2003, after increasing 2.4 percent in 2001.

Unemployment was expected to peak in Q2 of 2003 and reach an average of 5.8 percent during both 2002 and 2003, compared to 4.8 percent in 2001.

### **Interest Rate Environment**

On November 12, 2002, Fed funds were trading at 1.25 percent, three-month T-bills at 1.19 percent, and ten-year T-notes at 3.85 percent, while the dollar was trading at 120 yen and \$1.01/euro. At its last meeting on November 6, 2002, the Federal Open Market Committee ("FOMC") lowered the Fed funds rate to 1.25 percent and the discount rate to 0.75 percent.



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Section 07

# Valuation Approaches

In estimating the Fair Market Value of a 100 percent interest in the common equity of House 5, as of the Valuation Date, the Income Approach and the Market Approach were considered.

#### **Income Approach**

The Income Approach is a valuation technique that provides an estimation of the Fair Market Value of an asset or a business based on the cash flows that an asset or a business can be expected to generate over its remaining useful life. The Income Approach begins with an estimation of the annual cash flows a hypothetical buyer would expect the subject asset or business to generate over a discrete projection period. The estimated cash flows for each of the years in the discrete projection period are then converted to their present value equivalent using a rate of return appropriate for the risk of achieving the projected cash flows. The present value of the estimated cash flows are then added to the present value equivalent of the residual value of the asset (if any) or the business at the end of the discrete projection period to arrive at an estimate of Fair Market Value.

#### **Market Approach**

The Market Approach is a valuation technique that provides an estimation of Fair Market Value based on market prices in actual transactions and on asking prices for assets or businesses. The valuation process is a comparison and correlation between the subject asset or business and other similar assets or businesses. Considerations such as time and condition of sale and terms of agreements are analyzed for comparable assets or businesses and are adjusted to arrive at an estimation of the Fair Market Value of the subject asset or business.

Comparable Company Method. The Comparable Company Method indicates the Fair Market Value of a business by comparing it to publicly-traded companies in similar lines of business. The conditions and prospects of companies in similar lines of business depend on common factors such as overall demand for their products and services. An analysis of the market multiples of companies engaged in similar businesses yields insight into investor perceptions and, therefore, the value of the subject company.

After identifying and selecting the guideline publicly-traded companies, their business and financial profiles are analyzed for relative similarity. Considerations for factors such as size, growth, profitability, risk, and return on investment are also analyzed and compared to the comparable businesses. Once these differences and similarities are assessed, the EV multiples (i.e., EV / BV, EV / Cash Earnings and EV / Revenue) of the publicly-traded companies are calculated. These EV multiples are then applied to the subject company's operating results, adjusted for special

and nonrecurring items, to estimate the Fair Market Value of the subject company's equity on a marketable, minority value. A control premium is then applied to this value to calculate the indicated Fair Market Value of the equity on a marketable, controlling basis.

*Comparable Transaction Method.* One variation of the Market Approach includes estimating the Fair Market Value of a business based on exchange prices in actual transactions and on asking prices for controlling interests in public or private companies currently offered for sale. The process essentially involves comparison and correlation of the subject company with other similar companies. Adjustments for differences in factors described earlier (i.e., size, growth, profitability, risk, and return on investment) are also considered.

In selecting comparable transactions, several merger and acquisition databases and financial publications are searched in which transactions are disclosed to gather information about the prices paid for similar businesses under similar circumstances. The acquisitions are relevant indicators of an actual market participant's perception of Fair Market Value, and, therefore, are a useful valuation indicator. Based on a review of selected financial databases of companies in the industry, transactions are identified and selected.

In general, many transactions that would be relevant are either private, in which case sufficient information is not usually made available to the public, or deemed immaterial to the overall operations of larger companies that are parties to the transaction. If the transaction is deemed immaterial, the SEC does not require disclosure of information about the market transaction.

The Income Approach and Market Approach are used as the methods to estimate the Fair Market Value of a 100 percent interest in the common equity of House 5, as explained below. While a number of publicly-traded companies and market transactions involving companies providing services with some similarity to those of House 5 were identified, ultimately a set of two companies, referred to as the Concluded Comparable Companies, were utilized in estimating the Fair Market Value of a 100 percent interest in the common equity of House 5, as of the Valuation Date under the Market Approach. The Comparable Transactions Method under the Market Approach was deemed to be of limited applicability, due mostly to the target companies being more tilted toward retail brokerage activities (whereas House 5 dealt exclusively with institutions in its market making activities and had a significant portion of its Trading Revenue derived from proprietary trading activities). As a result, the Comparable Transaction

Method was used to generally corroborate the results using the Income Approach and Comparable Company Method.

**Discount for Lack of Marketability**

The holder of a non-marketable investment is subject to the risk that the investment's value will decline before the investment can be sold to another investor in a private transaction. Conversely, the holder of an investment that is identical but for the fact that there exists an active public market is not subject to the same lack of marketability risk. Therefore, the holder of the non-marketable investment will have a higher required rate of return on the investment than the holder of the marketable investment. Consequently, the holder of the non-marketable investment will generally sell to the hypothetical willing buyer at a discount to the marketable investment. The factors that affect the size of the discount for lack of marketability fall into two general categories: (1) factors that affect the duration of the holding period necessary to locate a buyer and negotiate a sale, and (2) factors that affect the degree of risk faced per unit of time during this holding period. Risk per unit of time is expressed as the volatility of an investment's total return (i.e., both dividends and capital appreciation), or the propensity for an investment's actual return to differ from its expected return. Numerous factors are typically assessed in analyzing an equity investment's marketability.

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Section 08

# Selection of Discount Rate

## Equity Cost of Capital

The equity cost of capital was calculated to be 16.5 percent<sup>16</sup> (see Exhibit 2.C). This rate was applied to the equity cash flows expected to be generated by House 5 over the projection period and the terminal value at the end of the projection period to calculate the present value of both. Generally, the selection of a rate of return applicable to the valuation of a business is based on the required rates of return on the full complement of capital securities, including debt, preferred and common equity capital. Since House 5 and market participants are primarily financed with equity capital, and because the leveraged business model projections consider the financing cost on leverage directly in estimating net income after taxes, the equity cost of capital is computed using the Capital Asset Pricing Model (“CAPM”), as is described in more detail below.

### CAPM

The rate of return on common equity capital was estimated using the CAPM. CAPM has been empirically tested and is widely accepted for the purpose of estimating a company’s required return on equity capital.<sup>17</sup> In applying the CAPM, the rate of return on common equity is estimated as the current or normalized risk-free rate of return on long-term U.S. Government bonds as of the Valuation Date, plus a market risk premium expected over the risk-free rate of return, multiplied by the “beta” for the stock. Beta is defined as a risk measure that reflects the sensitivity of a company’s stock price to the movements of the stock market as a whole. Additional risk premiums, if applicable, may also be included in the calculation of the required return on common equity using the CAPM approach, such as a size-based premium and a company-specific risk premium, as described below.

The CAPM rate of return on equity capital is calculated using the formula:

$$K_e = R_f + B * ERP + S_{sp} + \text{Alpha}$$

where:

$K_e$  = Rate of return on equity capital;

$R_f$  = Risk free rate of return;

$B$  = Beta or systematic risk for this type of equity investment;

$ERP$  = Equity risk premium: The expected return on a broad portfolio of stocks in the market ( $R_m$ ) less the risk free rate ( $R_f$ );

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<sup>16</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People’s Money from the IA Business.

<sup>17</sup> Investments, W.F.Sharpe, Prentice Hall: Englewood Cliffs, New Jersey (1985).

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Ssp	=	The small company premium adjustment to the cost of equity due to the size of the subject company;
Alpha	=	Adjustment to the cost of equity due to characteristics specific to the subject company.

### **Risk Free Rate of Return**

The selected risk-free rate of return was the long-term local bond yield-to-maturity as of market close on December 10, 2002. The projections for House 5 were denominated in USD and thus the 20-year U.S. Treasury Bond was selected. The yield on the 20-year Treasury bond was 5.02 percent as of the Valuation Date.

### **Beta**

Beta is a statistical measure of the volatility of the price of a specific stock relative to the movement of a general group. Generally, beta is considered to be indicative of the market's perception of the relative risk of the specific stock. Practical application of the CAPM is dependent upon the ability to identify publicly-traded companies that have similar risk characteristics as the company, to derive a meaningful measure of beta that would apply to the company.

Betas reported in public sources are typically "leveraged," meaning that they incorporate the added risk to a common equity investor due to the leveraged capital structure of the company. To derive a beta applicable to the equity investor in a business, the reported levered betas for publicly traded companies considered as comparable to the business must first be unlevered to estimate the beta risk to the equity investment as if 100 percent equity financed, and then re-levered at an assumed normalized market participant amount of debt in the capital structure. The un-levering and re-levering process is intended to normalize for any comparable companies that might have a materially different capital structure, and, therefore, levered beta, than that of the average comparable company. The market participant unlevered beta of 1.46 was re-levered based on a capital structure of 88 percent equity and 12 percent debt, consistent with the weighted average capital structure of the concluded comparable company set, resulting in a re-levered beta of 1.58.

### **Equity Risk Premium**

Practical application of CAPM also relies on an estimate of the Equity Risk Premium. Since the expectations of the average investor are not directly observable, the Equity Risk Premium must be inferred using one of several methods. One approach is to use premiums that investors have historically earned over and above the returns on long-term government bonds. The premium obtained using the historical approach is sensitive to

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the time period over which one calculates the average. Depending on the time period chosen, the historical approach yields an average premium of 5 to 8 percent. Another approach is to incorporate expected rates of return obtained from analysts who follow the stock market. Again, this approach will lead to differing estimates depending upon the source

An Equity Risk Premium of 6 percent was applied, based on the Long-Horizon Equity Risk Premium of 7.42 percent<sup>18</sup> and adjusted 1.5 percent<sup>19</sup> for survivorship bias.

#### **Premium for Small Size**

The CAPM rate of return is usually adjusted by a premium, which reflects the extra risk of an investment in a small company. This premium is derived from historical differences in returns between small companies and large companies, using data published by Morningstar. This adjustment is deemed applicable because the analysis behind the estimation of the Equity Risk Premium was based on large-capitalization stocks, and, therefore, would provide an indication only of the Equity Risk Premium applicable to an equity investment in a large capitalization stock. Since House 5 would not be considered a large-capitalization stock if publicly traded, a small stock premium was applied, based on the size of House 5, of 1.94 percent.<sup>20</sup> This premium is based on the "8<sup>th</sup> decile" from a commonly-referenced Ibbotson Associates study.<sup>21</sup>

#### **Alpha**

The Alpha risk premium represents the additional return required by an investor due to risks that are unique to House 5, which typically relate to differences between House 5 and the comparable company set. In the analysis, an alpha adjustment was not applied to House 5 because the valuation methodology was applied to financial projections which were assembled according to the assumption that a market participant buyer of House 5 would increase the leverage of the company to a level that is more consistent with that of the market participants as of the Valuation Date. Therefore, the specific attributes of House 5 are replaced with those of a market participant in the application of the Income Approach, and, therefore, an Alpha premium was not applied.

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<sup>18</sup> Long-Horizon Equity Risk Premium based on the Market Total Return of the S&P 500 Index. Ibbotson Associates: Stocks, Bonds, Bills, & Inflation, 2002 Yearbook.

<sup>19</sup> Copeland, Koller, and Murrin, 2000, *Valuation: Measuring and Managing the Value of Companies*.

<sup>20</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

<sup>21</sup> Ibbotson Associates: Stocks, Bonds, Bills, & Inflation, 2002 Yearbook.



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### Concluded Equity Cost of Capital

By substituting the appropriate factors in the CAPM as discussed above, the common equity rate of return applicable to an investment in the equity of House 5, as of the Valuation Date, was estimated to be approximately 16.5 percent, as summarized below.<sup>22</sup>

<u>CAPM Input</u>	<u>Input</u>
Risk-free rate (Rf)	5.02%
Beta (B)	1.58
Equity Risk Premium (ERP)	6.00%
Small Stock Premium (Ssp)	1.94%
Alpha (A)	0.00%
<b>Equity Cost of Capital (rounded)</b>	<b>16.5%</b>

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<sup>22</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

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Section 09

# Income Approach

## DCF Method

The future cash flows of House 5 were estimated to assist with the calculation of the Fair Market Value of a 100 percent interest in the common equity of House 5 under the DCF Method.

### Application of the DCF Method

Forecast Financial Information ("FFI") was derived based on understanding the nature of the business of House 5, the reported historical financial performance as reported in the FOCUS reports, Adjusted FOCUS report data, and the attributes of the market participants. FFI was estimated for the calendar years ending December 31, 2003 through 2007 (the "Projection Period").

The following tables illustrate the adjustments made to the as-reported financial data to eliminate House 17 revenues, certain employee and other costs associated with House 17 and the resulting effects on the assets, liabilities and equity accounts:

Adjustment <sup>23</sup>	y/e 2000	y/e 2001		Total
		(\$ in millions)		
House 17 Revenue	(76)	(72)		(148)
House 17 Expenses				
Comp Expense	(7)	(8)		(15)
Occupancy	(1)	(1)		(1)
Pretax Income	<u>(68)</u>	<u>(64)</u>		<u>(132)</u>
		y/e 2001		
		As-Reported	Adjustments	Adjusted
		(\$ in millions)		
Cash		141	(51)	91
Trading Assets		428	(137)	291
Other Assets		<u>214</u>	<u>(63)</u>	<u>151</u>
Total Assets		<u>783</u>	<u>(251)</u>	<u>533</u>
Debt		-	-	-
Trading Liabilities		329	(105)	224
Other Liabilities		<u>42</u>	<u>(13)</u>	<u>28</u>
Total Liabilities		370	(118)	252
Book Value of Equity		<u>413</u>	<u>(132)</u>	<u>281</u>
Total Liabilities and Equity		<u>783</u>	<u>(251)</u>	<u>533</u>

<sup>23</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

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Consequently, FFI was based on the (i) Adjusted FOCUS report data, and (ii) an assumed re-capitalization of the Adjusted FOCUS report data based on market participant assumptions. The following steps were generally employed to derive Adjusted FOCUS report data, and estimate quarterly financial statements on a pro forma basis for the y/e 2002:

- 1) Subtracted House 17 revenues of \$75.6 million, \$72.4 million, and \$60.5 million for the y/e 2000, 2001, and 2002, respectively from the as-reported Total Revenue;
- 2) Made historical expense adjustments to remove House 17-related expenses from as-reported Pre-Compensation Operating Expenses and Comp Expense;
- 3) Re-calculated the y/e 2000, 2001, and 2002 BV based on the adjustments to back out House 17 revenue and expenses;
- 4) Computed Adjusted Turnover on a quarterly basis for the y/e 2002 (see Exhibit 2.B);
- 5) Re-calculated as-reported assets and liabilities for the y/e 2000, 2001 and 2002 based on as-reported common-size ratios of BV, multiplied by the Adjusted BV;
- 6) Re-leveraged the business as of the y/e 2001, based on comparable company operating levels using a Leverage Ratio of 3.17 and a Cash Ratio of 8 percent;
- 7) Prepared pro forma 2002 quarterly financial statements as if the business had been operated according to market participant assumptions for the y/e 2002, and, excluding the estimable impact of removing House 17 revenue and expenses for the y/e 2000, 2001 and 2002;
- 8) Prepared pro forma Total Revenues that would be have been achieved by House 5 during 2002 by applying Adjusted Turnover<sup>24</sup> to the pro forma level of Trading Assets;
- 9) Computed average historical Company margins and Comp Expense achieved during periods when House 5's Leverage Ratio was in-line with current market participant levels for application to pro forma revenue streams;
- 10) Calculated pro forma earnings before interest and taxes ("EBIT") based on the above assumptions;
- 11) Computed interest expense related to incremental debt used to leverage the business to market participant levels, and subtracted

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<sup>24</sup> Adjusted Turnover as calculated in Exhibit 2.B.

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forecast interest expense to arrive at earnings before taxes ("EBT");

- 12) Calculated income taxes based on effective tax rates of the Concluded Comparable Companies and subtracted those taxes from EBT to arrive at after tax income;
- 13) Used pro forma quarterly after tax income to calculate the increase in Trading Assets and Trading Liabilities that would be consistent with the operations;
- 14) Calculated end of quarter balance sheets based on aforementioned growth in Trading Assets and Trading Liabilities and commensurate growth in other assets and liabilities; and
- 15) Summed the quarterly income statements to estimate a pro forma income statement for the y/e 2002, which also forms the basis for LTM financials applied in the Market Approach.

Following the estimation of pro forma y/e 2002 financial statements, the following procedures were used to arrive at FFI for the Projection Period and to estimate the Fair Market Value of a 100 percent interest in the common equity of House 5 under the DCF Method:

- 16) Forecast Trading Asset growth for the Projection Period based on third-party research articles and reports, and also based on the Sustainable Growth Rate;
- 17) Estimated Total Revenue by applying Adjusted Turnover to average Trading Assets during each forecast year;
- 18) Computed forecast Pre-Compensation Operating Expense levels by growing expense line items either at the rate of growth in Trading Assets or the rate of growth due to inflation, or by applying the historical average expense ratio relative to Total Revenue, and subtracted the Pre-Compensation Operating Expense from Total Revenue to calculate Pre-Comp Operating Income;
- 19) Forecast Comp Expense based on the historical average<sup>25</sup> Payout ratio of 33 percent, which is below-average compared to the Payout ratio of comparable companies, and subtracted Comp Expense to calculate EBIT;

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<sup>25</sup> Historical average expense ratio was calculated as the average ratio during historical years where the Leverage Ratio ranged from 3.0 to 4.0.

- 20) Calculated interest expense based on the average forecast Debt balance, times an implied interest rate of 3.75 percent,<sup>26</sup> and subtracted interest expense from EBIT to calculate EBT;
- 21) Calculated income taxes based on effective tax rates of the Concluded Comparable Companies and subtracted those taxes from EBT to arrive at after tax income;
- 22) Calculated operating cash flow by summing after tax income with the net investment in non-cash assets and non-debt liabilities;
- 23) Calculated annual free cash flows to equity generated by House 5 during the Projection Period based on the assumption that Debt would remain at the y/e 2002 pro forma levels in all future periods;
- 24) Annual free cash flow to equity, if positive, was assumed to be distributed at the end of the calendar year and was discounted accordingly at the equity cost of capital of 16.5 percent and summed to arrive at the present value of free cash flows during the Projection Period;
- 25) Estimated the terminal value of the business beyond the Projection Period based on the application of an EV / BV multiple as of the December 31, 2007; and
- 26) Combined the present values of the aforementioned Projection Period cash flows, and the terminal value.

## Free Cash Flows

### Recapitalization<sup>27</sup>

Based on a comparison to market participants, House 5 was operating at a below-average Leverage Ratio. For purposes of this analysis, it was presumed that House 5's business was otherwise run in a similar manner to the market participants in terms of inter-period leverage and balance sheet common size metrics. The calculated Leverage Ratio for House 5 as of y/e 2002 was 1.55, as compared to a weighted average ratio of 3.17 for the Concluded Comparable Companies. Additionally, House 5's Adjusted non-restricted cash balance at y/e 2002 was \$106.9 million,<sup>28</sup> or a

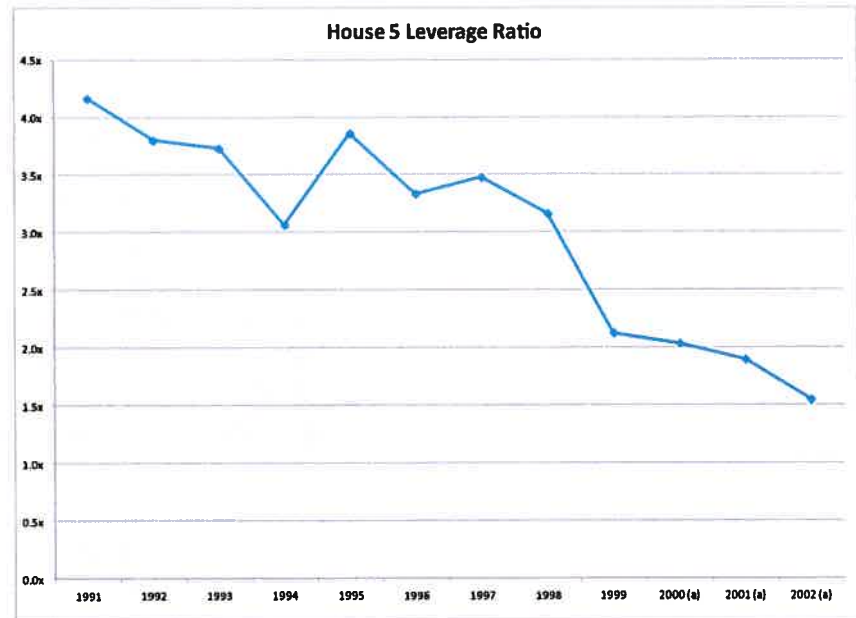
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<sup>26</sup> Calculated as Prime Rate, minus 0.50 percent, as of the Valuation Date, which is consistent with the implied historical average pricing of House 5's Debt relative to the prevailing Prime Rate.

<sup>27</sup> The calculated weighted average Leverage Ratio and Cash Ratio are based on results of the Concluded Comparable Companies, as well as three other similar, but significantly smaller companies, which were excluded from the Concluded Comparable Companies due to size.

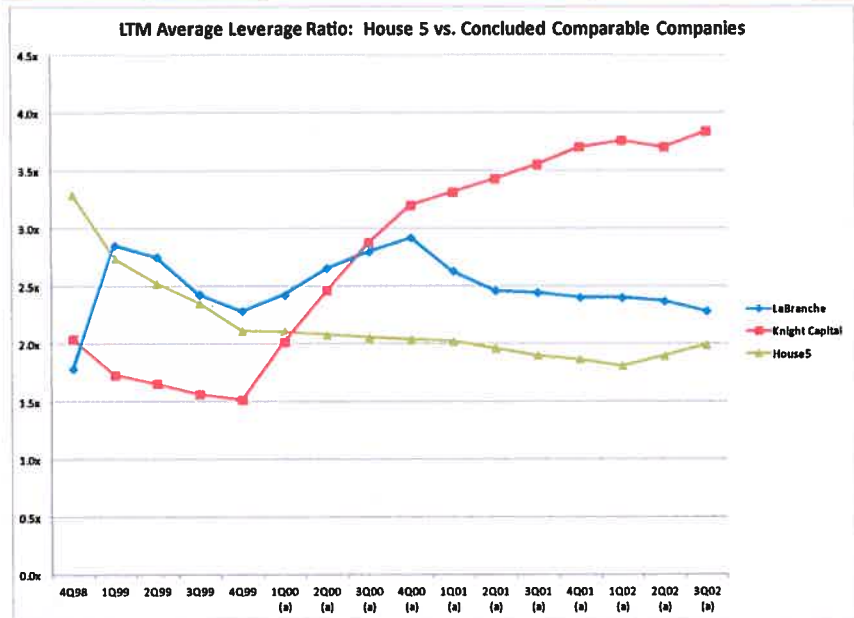
<sup>28</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

Cash Ratio of 27 percent (vs. 8 percent for the Concluded Comparable Companies) as of the Valuation Date. The following charts illustrate that House 5 operated with a higher Leverage Ratio in the past and that the Concluded Comparable Companies, as of the Valuation Date, operated with a higher Leverage Ratio than that of House 5:



(a) Adjusted, as defined in this Report.<sup>29</sup>

<sup>29</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.



(a) Adjusted, as defined in this Report.<sup>30</sup>

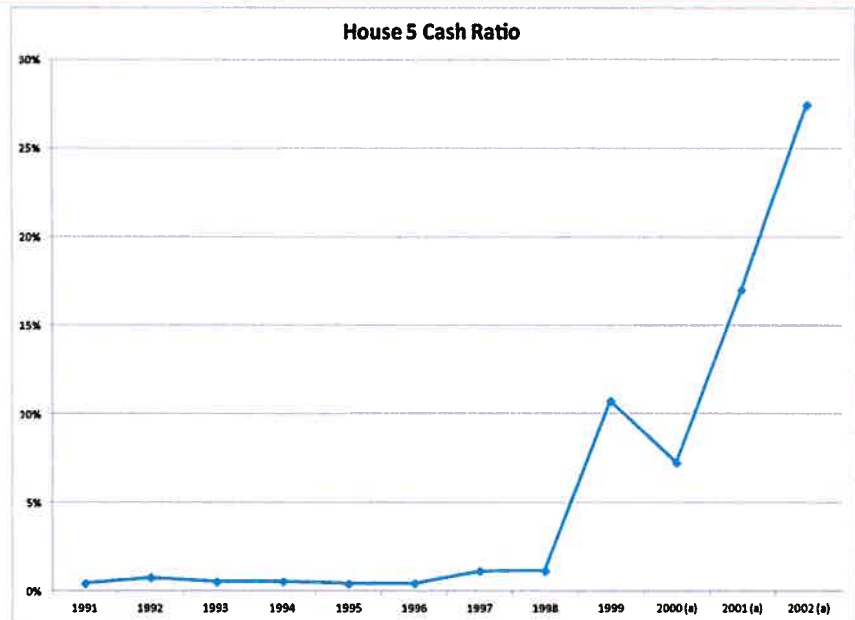
As seen in the above chart,<sup>31</sup> as recently as 1998, House 5 had operated with a Leverage Ratio in excess of the Concluded Comparable Companies, which suggests that House 5 could operate at the Concluded Comparable Companies' average Leverage Ratio as of the Valuation Date.

The following chart illustrates the historical Cash Ratio of House 5, based on as-reported FOCUS report data through 1999 and based on Adjusted FOCUS report data thereafter:

<sup>30</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

<sup>31</sup> Charts were compiled using data from Capital IQ and SEC filings for LaBranche and Knight Capital, and using as-reported FOCUS report data.





(a) Adjusted, as defined in this Report.<sup>32</sup>

The above chart illustrates that the Cash Ratio was materially above historical levels, which suggests a lower level of investment relative to House 5 historical operations. The excessive Cash Ratio was interpreted to indicate the business held excess cash as of the Valuation Date.

Based on the presumption that a market participant buyer would recapitalize House 5 and operate it with a Leverage Ratio that is more consistent with industry norms, as indicated by the Concluded Comparable Companies, the Adjusted financials for the y/e 2002 were re-cast as if House 5 operated with a 3.17 Leverage Ratio and an 8 percent Cash Ratio at the beginning of 2002. Leverage was re-cast based on the premise that the Adjusted BV as of the y/e 2001 of \$280.9 million could support \$890.4 million of total assets, an increase of approximately \$357.7 million versus Adjusted total assets. An approximate \$377.1 million increase in Trading Assets would be funded by \$235.3 million of Debt, \$122.4 million of Trading Liabilities, and \$19.4 million of excess cash.

<sup>32</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

<u>Balance Sheet Item</u>	<u>y/e 2001<sup>33</sup></u>		<u>Change</u>
	<u>Adjusted</u>	<u>Pro Forma</u>	
	(\$ in millions)		
Cash	90.6	71.2	-19.4
Trading Assets	291.3	668.4	+377.1
Trading Liabilities	223.5	345.9	+122.4
Debt	0	235.3	+235.3

### Total Revenue

Pro forma 2002 Total Revenue of approximately \$99.1 million was calculated based on the pro forma balance sheet items illustrated in the above tables; the Total Revenue was forecast on a quarterly basis, based on Adjusted Turnover being multiplied by the leveraged Trading Asset balance.

Total Revenue was forecast on a quarterly basis in 2003 using quarterly 2002 Adjusted Turnover expressed on average assets, multiplied by average Trading Assets during the quarter.

The following table summarizes pro forma 2002 and forecast 2003 quarterly Total Revenue and Trading Assets:

<u>Financial Metric<sup>34</sup></u>	<u>Q1</u>	<u>Q2</u>	<u>Q3</u>	<u>Q4</u>	<u>y/e</u>
	(\$ in millions)				
2002 Total Revenue	26.0	23.2	22.3	27.5	99.1
2003 Total Revenue	27.4	24.4	23.5	28.9	104.2
% Change	5	5	5	5	5
2002 Trading Assets	678.9	687.3	695.2	706.7	706.7
2003 Trading Assets	712.8	721.7	730.0	742.1	742.1
% Change	5	5	5	5	5

<sup>33</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

<sup>34</sup> *Id.*

Trading Assets were forecast during the Projection Period according to growth rates noted in research reports and observations from historical financials of House 5. The following table illustrates the Trading Asset growth rates during the Projection Period:

<u>Financial Metric</u> <sup>35</sup>	<u>2003</u>	<u>2004 - 2007</u>
		(in percent)
Trading Assets	5	5 <sup>36</sup>
Total Revenue	5	5

### **Pre-Compensation Operating Expense**

Broker-dealer and other investment industry businesses generally determine compensation payments to employees based on a targeted Payout Ratio. Thus, Pre-Compensation Operating Expense was identified from the FOCUS report data and was forecast based on either (i) the growth rate in Trading Assets, (ii) the growth rate due to inflation, or (iii) as a percentage of Total Revenue. The following points summarize the Pre-Comp Operating Expenses and the basis for their projections:

- Commissions and clearance paid to all other brokers and clearance paid to non-brokers expenses were grown at the same rate as Trading Assets.
- Communications, promotional costs, and regulatory fees and expenses were grown by forecast inflation rates of 2.9 percent for first three years, 2.6 percent in year four and 2.4 percent in year five and beyond.<sup>37</sup>
- Occupancy and equipment costs were forecast based on contractual payments for all future years.<sup>38</sup> A reduction was made to adjust for occupancy costs related to other activities of BLMIS outside of House 5. This adjustment approximated 19 percent of forecast occupancy and equipment costs before adjustment.<sup>39</sup>

<sup>35</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

<sup>36</sup> Projection Period Trading Asset growth was based on the Sustainable Growth Rate, and, therefore, represents the amount of growth that would be supportable by the operations of House 5 as forecast.

<sup>37</sup> Source: DRI-WEFA.

<sup>38</sup> Contractual payments were based on the disclosure in the fiscal year 2002 audited financial statements.

<sup>39</sup> Based on 2008/09 floor plan information made available, and is calculated based on the percent of total workstations for all occupied floors relating to House 17.

- Other Expenses includes fees paid to exchanges on commission revenue. Such expenses were forecast at 21 percent of Total Revenue.<sup>40</sup>

### Pre-Comp Operating Income and Comp Expense<sup>41</sup>

The above Pre-Compensation Operating Expense was subtracted to calculate Pre-Comp Operating Income during the Projection Period. Comp Expense was then calculated to equate to a 33 percent Payout Ratio.<sup>42</sup> Similar to occupancy and equipment costs, an adjustment was made to remove headcount costs associated with other activities of BLMIS deemed to be outside of House 5. The adjustment approximated 15 percent of Comp Expense as calculated above.<sup>43</sup>

The following table summarizes Projection Period Pre-Comp Operating Income, Comp Expense, EBIT and margin:

<b>Financial Metric<sup>44</sup></b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
			(\$ in millions)		
Pre-Comp Operating Income	\$58.5	\$61.7	\$64.8	\$68.3	\$72.0
Comp Expense	19.4	20.5	21.5	22.7	23.9
Adjustment	-2.9	-3.1	-3.2	-3.4	-3.6
Net Compensation	16.5	17.4	18.3	19.3	20.3
EBIT	\$42.0	\$44.3	\$46.5	\$49.0	\$51.7
EBIT Margin (%)	40	41	41	41	41

### Interest Expense

Interest expense was applied to the average Debt balance, which was presumed to be a fixed level of debt throughout the Projection Period. The

<sup>40</sup> Represents the average other expense ratio of Total Revenue during historical periods when the Leverage Ratio ranged from 3.0 to 4.0.

<sup>41</sup> The Payout Ratio is an aggregate expense amount based on historical performance as well as a review of market participants. No consideration was given to the compensation of any individual employee of BLMIS nor was any consideration given to the reasonableness of the amount paid to any individual employee based on the services that the individual provided.

<sup>42</sup> Represents the average Payout Ratio during the historical periods when Leverage ratio ranged from 3.0 to 4.0.

<sup>43</sup> Based on 2008/09 floor plan and seating charts and representing the 2002 Comp Expense associated with House 17.

<sup>44</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

level of Debt was determined to be approximately \$235.3 million, based on the amount of financing required to fund the increase in Trading Assets to obtain a market participant Leverage Ratio, while considering the funding provided from other sources (an increase in Trading Liabilities and use of excess cash). The rate of interest applied in the Projection Period was 3.75 percent,<sup>45</sup> which is consistent with implied pricing during historical periods when House 5 carried bank debt. The interest expense applied during the Projection Period was \$8.8 million per year, and was subtracted from EBIT to calculate EBT.

#### **Depreciation and Amortization**

Non-cash expenses related to depreciation and amortization were not available in the FOCUS report data made available, but were identified in BLMIS audited financial statements. However, as is typically the case with financial services businesses, depreciation, amortization and capital expenditures are not material expenses or expenditure items and, therefore, for the purpose of estimating FFI, it was assumed that depreciation (a non-cash expense) would be 100 percent offset by capital expenditures, and accordingly, no specific adjustment is made to FFI.

#### **Taxes**

Cash income taxes were calculated based on taxable income and were deducted from EBT to estimate after-tax income. While House 5's ownership structure was an LLC, and, therefore, no taxes were paid at the entity level, due to the fact that standard valuation practice would impute taxes in this situation, and that comparable companies are C-Corporations which pay income taxes, it was determined that the estimated Fair Market Value of a 100 percent interest in the common equity of House 5 should assume a willing buyer that is subject to a market participant tax rate. An average effective tax rate of 40 percent was calculated using available data from the Concluded Comparable Companies and calculated income taxes on this basis, which were subtracted from EBT to calculate after tax income.

#### **After Tax Income and Free Cash Flow**

After tax income was presumed as a proxy for cash basis income given the presumption that non-cash expenses were immaterial. Given the presumption of immaterial non-cash adjustments to after tax income, operating cash flow was calculated as after tax income, minus investment

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<sup>45</sup> An analysis of historical financial statement data from FOCUS reports indicated that interest expense, divided by average bank debt resulted in a rate of interest that was, on average, 50 basis points ("bps") or 0.5 percent, below the prevailing average Prime Rate during the relevant year. The prevailing Prime Rate, taken from the Federal Reserve H15 release, as of the Valuation Date was 4.25 percent.

in non-cash assets (primarily Trading Assets), plus increase in non-debt liabilities (primarily Trading Liabilities).

The following is a listing of non-cash assets, as obtained from reading FOCUS report data files made available, and a description of growth assumptions applied in the FFI over the Projection Period:

- Receivables from brokers or dealers and clearing organizations – grown based on Trading Asset growth rates;
- Securities and spot commodities owned, at market value (Trading Assets) – grown assuming 100 percent reinvestment of earnings during pro forma 2002 and based on market participant growth rates for the Projection Period;
- Memberships in exchanges – no growth is forecast on the basis that these investments would be held at cost;
- Fixed assets – no growth is forecast on the basis that depreciation and capital expenditures would offset;
- Other assets – grown based on Trading Asset growth rates.

The following is a listing of non-debt liabilities, as obtained from reading FOCUS report data files made available, and a description of growth assumptions applied in the FFI over the Projection Period:

- Payable to brokers or dealers and clearing organizations – grown based on Trading Asset growth rates;
- Securities sold, not yet repurchased at market value (Trading Liabilities) – forecast based on 52 percent of Trading Assets;<sup>46</sup>
- Accounts payable and accrued liabilities – grown based on Trading Asset growth rates.

The investment in non-cash assets (see list above) represents a cash outflow, and the increase in non-debt liabilities represents effectively a cash inflow and the two are netted in the calculation of net investment.

The following table summarizes after tax income, the elements of net investment, and Free Cash Flow applied in pro forma 2002, which illustrate the assumption made that after tax income is 100 percent reinvested in the business through expansion of Trading Assets and Trading Liabilities:

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<sup>46</sup> Represents the average Short Ratio calculated during periods where the Leverage Ratio ranged 3.0 to 4.0.

**Pro Forma 2002<sup>47</sup>**

<b><u>Financial Metric (Cash Impact)</u></b>	<b><u>Q1</u></b>	<b><u>Q2</u></b>	<b><u>Q3</u></b>	<b><u>Q4</u></b>	<b><u>y/e</u></b>
	(\$ in millions)				
After tax income	5.0	4.1	3.8	5.6	18.5
Increase in Non-cash Assets	-10.5	-8.5	-7.9	-11.5	-38.3
Increase in Non-debt Liabilities	5.4	4.4	4.1	6.0	19.8
Net Change in Debt	0.0	0.0	0.0	0.0	0.0
Free Cash Flow to Equity	.0	.0	.0	.0	.0

The following table illustrates after tax income, the elements of net investment, and Free Cash Flow as forecast for the Projection Period:

<b><u>Financial Metric (Cash Impact)</u></b>	<b><u>2003</u></b>	<b><u>2004</u></b>	<b><u>2005</u></b>	<b><u>2006</u></b>	<b><u>2007</u></b>
	(\$ in millions)				
After tax income	19.9	21.3	22.6	24.1	25.7
Increase in Non-cash Assets	-42.1	-39.9	-42.7	-45.5	-48.6
Increase in Non-debt Liabilities	19.7	18.7	20.0	21.3	22.7
Net Change in Debt	0.0	0.0	0.0	0.0	0.0
Free Cash Flow to Equity	-2.5	0.0	-0.1	-0.1	-0.2

As illustrated in the tables above, pro forma 2002 after tax income is assumed to be reinvested in the business to grow the balance sheet, and, it is assumed that, with the exception of 2003, balance sheet expansion reflects growth slightly in excess of earnings, with the shortfall being funded by the cash balance.

**Free Cash Flow to Equity<sup>48</sup>**

As illustrated above, Free Cash Flow to Equity ("Free Cash Flow") was estimated at approximately -\$2.5 million in 2003, and ranges from -\$0.2 million to \$0.0 million for 2004 to 2007. These annual Free Cash Flows, if positive, are assumed to be distributed to equity investors at the end of each year. If negative, Free Cash Flows are presumed to be absorbed by the cash balance. The Free Cash Flows are then discounted to their respective present values at the equity cost of capital of 16.5 percent and summed to calculate the sum of present value of Free Cash Flows. The sum of present value of Free Cash Flows was zero.

<sup>47</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

<sup>48</sup> *Id.*

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### Terminal Value<sup>49</sup>

The terminal value of House 5, as of the y/e 2007 was computed by applying the selected terminal EV / BV multiple of 2.4x to the forecast y/e 2007 BV of \$413 million, resulting in a terminal value as of the y/e 2007 of \$991 million. The terminal value was then discounted to its present value based on the equity cost of capital of 16.5 percent to \$458 million, which represents the amount an investor would pay for the rights to the cash flows of the business for years subsequent to the Projection Period.

The selected multiple of 2.4x was based on the following calculation:

$$\text{Industry average multiple} \times (1 + \text{control premium}) \times \text{Relative Factor}$$

The industry average multiple was calculated as the midpoint of the range of the Concluded Comparable Companies of 1.9x, which is also consistent with the midpoint of expected EV / BV multiples as indicated in the Deutsche Bank Report, of 2.0x.<sup>50</sup> The control premium applied was 40 percent, which represents the average control premium from recently-completed merger transactions in the "Brokerage, Investment & Mgmt. Consulting" industry from 1999 to 2001.<sup>51</sup> Additionally, a "Relative Factor" was applied to reflect primarily the difference in size between House 5 and the size of the industry comparable companies referred to in the Deutsche Bank Report and the Concluded Comparable Companies. The Relative Factor applied is 90 percent, and was calculated as the ratio of the concluded EV, divided by the EV based on a discount rate that does not include a small stock premium.

### Results of the Income Approach

The estimated Fair Market Value of a 100 percent interest in the common equity of House 5 was then calculated as the sum of the present value of Free Cash Flows of zero and the present value of the terminal value of \$458 million. Based on the Income Approach as described above and as detailed in Exhibit 2, the Fair Market Value of a 100 percent interest in the common equity of House 5, on a marketable, controlling interest basis was estimated to be **\$460 million**. Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any

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<sup>49</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

<sup>50</sup> The Deutsche Bank Report indicates an expected trading range of 1.5 - 2.5 times BV, which was corroborated by the S&P Report which stated a range of 1.6 - 2.6.

<sup>51</sup> 2002 Mergerstat Yearbook industry premiums for "Brokerage, Investment & Mgmt. Consulting" industry.



evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

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Section 10

# Comparable Company Method

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## Market Approach

The Market Approach indicates the EV, as defined in this Report, based on a comparison of the company to comparable firms in similar lines of business that are publicly traded or which are part of a public or private transaction. This methodology presumes that the comparable companies or the subject company are not tainted by fraud or other improprieties which would render the comparison invalid. This approach can be implemented through the Comparable Company Method and/or the Comparable Transaction Method. The Comparable Company Method was used in our determination of Fair Market Value and the Comparable Transaction Method was used to corroborate the results of the Income Approach and the Comparable Company Method.

## Application of the Comparable Company Method

### **Comparable Company Method**

The Comparable Company Method indicates the value of a business by comparing it to publicly traded companies in the same or similar lines of business. The conditions and prospects of companies in similar lines of business depend on common factors such as overall demand for their products and services. An analysis of the market multiples of companies engaged in the same or similar businesses yields insight into investor perceptions and, therefore, the value of the company.

Publicly-traded companies are selected and their financial profiles are analyzed relative to the business. Considerations for factors such as size, prices, growth, profitability, risk, and return on investment, etc. are also analyzed and compared to the comparable businesses. Once these differences and similarities are determined and proper adjustments are made, price or EV multiples of the publicly traded companies are calculated. These EV multiples are then applied to the operating results attributable to the company to estimate the EV of the company.

### **Determination of Concluded Comparable Companies**

An initial screen of companies using Capital IQ's financial database was run to identify relevant comparable companies. Four filters were applied to narrow the database of companies. Filtering for publicly-traded companies returned 61,181 companies. The list was narrowed to include companies with a primary industry classification of "Security Brokers," resulting in 188 companies. The next two filters identified companies with stocks trading as of December 10, 2002; this returned 102 companies. Finally, the list was filtered for companies geographically in the United States, narrowing the list to 10 companies.

To corroborate the list of comparable companies, the SNL database was searched to identify publicly-traded broker-dealers as of December 10,

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2002. To do so, the component companies of several SNL indexes were reviewed including: SNL U.S. National Broker-Dealer (7 companies), SNL U.S. Regional Broker-Dealer (14 companies), and SNL U.S. Institutional Broker-Dealer (24 companies).

The industry lists were then cross-referenced from equity analyst research reports. From the Solomon Report, the Large-Cap Brokers, Mid-Cap Broker, and Exchanges & Market Intermediaries companies were used. Online Brokers were excluded, which had fundamentally different business models. From the Deutsche Bank Report, the Independent Brokers, Universal Banks, and Regional Brokers companies were used.

To make the preliminary list of comparable companies as expansive as possible, proxy filings of the direct market making competitors were searched.

Once a list of potential comparable companies was formed, the list was narrowed by reading income statements to identify companies with similar line items and comparable revenue mixes (i.e. at least 75 percent of revenue from brokerage commissions and trading revenue). Additionally, due to the absence of beta estimates for certain companies, such companies were eliminated.

The list of companies is as follows:

- Merriman Holdings, Inc.
- LaBranche & Co. Inc.
- Paulson Capital Corp.
- Investors Capital Holdings, Ltd.
- BGC Financial Group, Inc.
- Instinet Group Incorporate
- Investment Technology Group Inc.
- Jesup & Lamont, Inc.
- Westech Capital Corp.
- Detwiler Fenton Group, Inc.
- Dupont Direct Financial Holdings, Inc.
- AB Watley Group Inc.
- First Montauk Financial Corp.
- Knight Capital Group Inc.

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- Progressive Asset Management, Inc.
  - Soundview Technology Group, Inc.
  - National Holdings Corp.
  - Millennium Healthcare, Inc.
  - BGC Partners, Inc.
  - Siebert Financial Corp.
  - Brandt, Inc.
  - Ladenburg Thalmann Financial Services Inc.

Furthermore, common-size income statements were calculated based on data from Capital IQ to determine the percentage of total revenue that related specifically to Capital IQ's "trading revenue." Since essentially 100 percent of House 5 revenue related to trading activity, it was determined that the Concluded Comparable Companies should include only those companies which generated at least 75 percent of revenues from trading and had a significant amount of revenue (measure of size, of at least \$50 million) during the LTM period. The group of companies meeting these final criteria includes the following:

- Knight Capital Group Inc.; and
- LaBranche & Co Inc.

Concluded Comparable Companies.<sup>52</sup>

*Knight Trading Group, Inc.*, a Delaware corporation, and its subsidiaries operate in two business segments: wholesale securities market-making and asset management. It was the leading wholesale equities market maker in The NASDAQ Stock Market and the Nasdaq Intermarket in the U.S., and, during the two years prior to the Valuation Date, it had established majority-owned wholesale equity market-making operations in Europe and Japan. The company also operated a leading listed options market-making business and a professional options execution business in the U.S. Through its Deephaven Capital Management LLC subsidiary, it also operated an asset management business for institutions and high net worth individuals.

*LaBranche & Co Inc.* was a holding company that was the sole member of LaBranche & Co. LLC and owned all the outstanding stock of LaBranche Financial Services, Inc. ("LFSI"). Founded in 1924, LaBranche & Co. LLC

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<sup>52</sup> The descriptions were taken from SEC filings of the Concluded Comparable Companies as of the Valuation Date.

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was one of the oldest and largest specialist firms on the New York Stock Exchange. It also acted as a specialist in stocks and options on the American Stock Exchange. Its LFSI subsidiary was a clearing broker for customers of introducing brokers and provides direct access floor brokerage services to institutional customers, securities clearing and other related services to individual and institutional clients, including traders, professional investors and broker-dealers. In addition, LFSI also provided front-end order execution, analysis and reporting solutions for the wholesale securities dealer market. As of December 31, 2001, its former subsidiaries Henderson Brothers, Inc. and Internet Trading Technologies, Inc. were merged with and into its ROBB PECK McCOEY Clearing Corporation subsidiary. RPM Clearing Corporation changed its name to LFSI in January 2002 and was a registered broker-dealer and NYSE member firm as of the Valuation Date.

#### **Application of the Market Approach**

Once the Concluded Comparable Companies were established, valuation multiples were computed. Valuation multiples are ratios of EV to the operating results of a company, where EV is calculated on a marketable, controlling interest basis, reflecting a control premium. The EV for each company was calculated as the product of the closing stock price as of the day prior to the Valuation Date and the share count on the cover of the most recent quarterly report as of the Valuation Date, plus a premium of 40 percent.<sup>53</sup> Multiples were then calculated for EV to BV, Revenue, and Cash Earnings. The following points illustrate the multiples calculated for the Concluded Comparable Companies, and how those multiples were applied to House 5 financials to estimate Fair Market Value as of the Valuation Date:

- EV / BV
  - The average multiple for the Concluded Comparable Companies, which included a control premium of 40 percent, was approximately 1.9x with a range of multiples of 1.2x to 2.5x. It was presumed that a relative adjustment of 90 percent is warranted to account for the smaller size of House 5 relative to the Concluded Comparable Companies. No other adjustments were included in the EV / BV multiple applied since it is presumed the pro forma ROE of House 5 would approximate that of the Concluded Comparable Companies.
  - A range of multiples of 1.1x to 2.3x was applied to the pro

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<sup>53</sup> The control premium of 40 percent is based on an analysis of recent comparable transactions occurring during the three years preceding the Valuation Date.

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forma y/e 2002 BV of \$299.4 million<sup>54</sup> to arrive at a range of Fair Market Value of a 100 percent interest in the common equity of House 5 of approximately \$329 to \$677 million.

- EV / Cash Earnings

- The average multiple for the Concluded Comparable Companies, which included a control premium of 40 percent, was 26.9x. It was presumed that a relative adjustment of 90 percent is warranted to account for the smaller size of House 5 relative to the Concluded Comparable Companies. No other adjustments were included in the EV / Cash Earnings multiple applied since it is presumed the pro forma growth of House 5 would approximate that of the Concluded Comparable Companies.
- A multiple of 24.2x was applied to House 5's pro forma Cash Earnings of \$18.5 million<sup>55</sup> to arrive at an estimate of the indicated Fair Market Value of a 100 percent interest in the common equity of House 5 of approximately \$448 million.

- EV / Revenue

- The average multiple for the Concluded Comparable Companies, which included a control premium of 40 percent, was approximately 3.6x with a range of multiples of 1.7x to 5.5x. It was presumed that a relative adjustment of 90 percent is warranted to account for the smaller size of House 5 relative to the Concluded Comparable Companies. No other adjustments were included in the EV / Revenue multiple applied since it is presumed the pro forma profit margin and growth of House 5 would approximate that of the Concluded Comparable Companies.
- A range of multiples of 1.5x to 4.9x was applied to House 5's pro forma 2002 Revenue of \$99.1 million<sup>56</sup> to arrive at a range of Fair Market Value of a 100 percent interest in the common equity of House 5 of approximately \$152 to \$490 million.

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<sup>54</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

<sup>55</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

<sup>56</sup> *Id.*

### **Results of the Comparable Company Method**

Based on the Comparable Company Method as described above, the indicated Fair Market Value of a 100 percent interest in the common equity of House 5 on a marketable, controlling interest basis was estimated to be **\$420 million**, as of the Valuation Date. Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business. This concluded value is based on the average of the range of results indicated by application of the BV, Cash Earnings and Revenue multiples as calculated using the Concluded Comparable Companies' valuations and financial metrics.

Refer to Exhibits 3 and 3.A for the details of the Comparable Company Method.



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Section 11

# Findings

# Valuation Findings

## Findings<sup>57</sup>

Based on the analyses herein, the estimated Fair Market Value of 100 percent of the equity of House 5, on a marketable, controlling interest basis, is **\$450 million**, as of the Valuation Date. Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business. The following table summarizes the valuation findings:

<u>Valuation Approach</u>	<u>Indicated Fair Market Value</u>
	(\$ in millions)
Income Approach	\$460
Comparable Company Method	420
<b>Concluded Fair Market Value (rounded)<sup>58</sup></b>	<b>\$450</b>

A discount for lack of marketability was considered as part of the determination of the Concluded Fair Market Value of a 100 percent equity interest on a controlling basis in House Five. As a privately held company with limited interim cash flow a discount for lack of marketability would generally be required. Moreover, given the existence of fraud and the fact that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business, a discount for marketability could be large and could approach 100 percent. In the interest of being conservative and generally presenting the valuation in the light most favorable to demonstrating solvency, no lack of marketability discount was applied for purposes of determining the Concluded Fair Market Value above.

<sup>57</sup> A calculation of the implied value of MSIL was performed by multiplying MSIL's y/e 2002 book value of \$46.5 million by the implied House 5 EV/BV multiples of 1.5x and 1.4x, averaging the implied values resulting in an implied value of \$68.4 million. MSIL's BV was converted from GBP to USD using the spot exchange rate as of December 11, 2002 of 1.5699 USD/GBP.

<sup>58</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

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Section 12

# Valuation Exhibits

**HOUSE 5**  
**ESTIMATION OF THE FAIR MARKET VALUE OF EQUITY**  
**AS OF DECEMBER 11, 2002**  
**SUMMARY OF VALUES**  
**(USD in millions)**

	<u>Notes</u>	<u>Indicated Value</u>	<u>Implied EV/BV</u> (4)	<u>Exhibit</u>
Income Approach	(1)	\$460	1.5X	Exhibit 2
Market Approach (EV/TBV or EV/BV)	(2)	420	1.4X	Exhibit 3.A
<b>Concluded Value (rounded)</b>	(3)	<b><u><u>\$450</u></u></b>	1.5X	

Notes:

- (1) Adjusted Capitalization DCF Approach based on recapitalization of House 5 in 2002 to reflect a Leverage Ratio of Concluded Comparable Companies and is assumed to reflect a controlling interest value. Assumed a Leverage Ratio of 3.17 and 8% Cash Ratio. Indicated value is the middle of the Adjusted Capitalization DCF range.
- (2) Based on the range of values indicated by applying the price-to-tangible book value of the two Concluded Comparable Companies. Indicated value is the median. Based on minority interest basis trading market values, plus a control premium of 40%.
- (3) Average of the indicated values from the Adjusted Capitalization Discounted Cash Flow and Concluded Comps methods. Rounded to the nearest \$50 million.
- (4) Implied multiple of tangible book value.

\* \* \*IMPORTANT NOTICE TO READER\* \* \*

This schedule contains financial information based upon certain critical assumptions as set forth in the narrative section of the report. Accordingly, this schedule must be considered in conjunction with those assumptions and should not be read on a stand-alone basis.

**HOUSE 5**  
**ESTIMATION OF THE FAIR MARKET VALUE OF EQUITY**  
**AS OF DECEMBER 11, 2002**  
**INCOME APPROACH: RECAPITALIZATION**  
**(USD in millions)**

Notes	Historical year ending 12/31 (1)			Pro Forma (2)		Projected year ending 12/31					
	2000	2001	2002	Adj.	Beg.	2002	2003	2004	2005	2006	2007
<b>INCOME STATEMENT</b>											
		<b>209.8</b>	<b>169.1</b>	<b>106.0</b>							
(3)	Reported Revenue	-75.6	-72.4	-60.5							
(4)	Total Revenue, As Adjusted	<b>134.2</b>	<b>96.7</b>	<b>45.5</b>			<b>104.2</b>	<b>109.1</b>	<b>114.1</b>	<b>119.4</b>	<b>125.1</b>
	% Growth	-18%	-28%	-53%			5%	5%	5%	5%	5%
<b>Expenses</b>											
(5)	Commissions and clearance paid to all other brokers	30.6	13.8	4.8			5.1	5.3	5.5	5.8	6.1
(5)	Clearance paid to non-brokers	4.1	2.6	2.9			3.1	3.2	3.4	3.5	3.7
(5)	Communications	8.6	5.6	6.8			7.0	7.2	7.4	7.6	7.8
(6)	Occupancy and equipment costs	2.9	3.3	3.9			3.9	3.9	3.9	3.9	3.9
(6)	Adjustment for advisor occupancy	-5	-6	-7			-7	-7	-7	-7	-7
(7)	Promotional costs	.2	.1	.1			.1	.1	.1	.1	.1
(7)	Data processing costs	.6	.8	.7			.7	.7	.8	.8	.8
(7)	Regulatory fees and expenses	6.5	4.4	4.8			5.0	5.1	5.3	5.4	5.5
(8)	Other expenses	69.2	39.2	31.8			20.5	21.6	23.6	24.7	25.9
	<b>Total Operating Expenses before Compensation</b>	<b>122.0</b>	<b>69.2</b>	<b>55.1</b>			<b>43.9</b>	<b>47.5</b>	<b>49.3</b>	<b>51.1</b>	<b>53.1</b>
	% of Revenue	91%	72%	121%			44%	43%	43%	43%	42%
	<b>Pre-Comp Operating Income</b>	<b>12.2</b>	<b>27.5</b>	<b>-9.6</b>			<b>55.2</b>	<b>58.5</b>	<b>64.8</b>	<b>68.3</b>	<b>72.0</b>
(9)	Clerical and administrative employees' expenses	45.8	52.3	23.1			18.3	19.4	20.5	21.5	22.7
(10)	Adjustment to market participant headcount reduction	-6.9	-7.8	-3.5			-2.7	-2.9	-3.1	-3.2	-3.4
	Comp % of Pre-Comp Operating Income (before adjustment)	376%	190%	-240%			33%	33%	33%	33%	33%
	<b>Operating Income (EBIT)</b>	<b>-26.7</b>	<b>-16.9</b>	<b>-29.2</b>			<b>39.6</b>	<b>42.0</b>	<b>44.3</b>	<b>46.5</b>	<b>51.7</b>
	EBIT Margin	-20%	-17%	-64%			40%	40%	41%	41%	41%
(11)	Interest expense	.5	.0	.0			8.8	8.8	8.8	8.8	8.8
	<b>Income before income taxes (EBT)</b>	<b>-27.2</b>	<b>-16.9</b>	<b>-29.3</b>			<b>30.8</b>	<b>33.2</b>	<b>35.4</b>	<b>37.7</b>	<b>40.2</b>
(12)	Tax Expense @ 40%	-10.9	-6.8	-11.7			12.3	13.3	14.2	15.1	16.1
(13)	<b>After Tax Income</b>	<b>-16.3</b>	<b>-10.2</b>	<b>-17.6</b>			<b>18.5</b>	<b>19.9</b>	<b>21.3</b>	<b>22.6</b>	<b>24.1</b>
	% of Revenue	-12%	-11%	-39%			19%	19%	19%	20%	21%

See the footnotes, which are deemed an integral part of this exhibit, on Pages 6 and 7.

\*\* \*IMPORTANT NOTICE TO READER\*\* \*

This schedule contains financial information based upon certain critical assumptions as set forth in the narrative section of the report. Accordingly, this schedule must be considered in conjunction with those assumptions and should not be read on a stand-alone basis.

**HOUSE 5**  
**ESTIMATION OF THE FAIR MARKET VALUE OF EQUITY**  
**AS OF DECEMBER 31, 2002**  
**INCOME APPROACH: RECAPITALIZATION**  
**(USD in millions)**

Notes	Historical year ending 12/31 (1)			Pro Forma (2)		Projected year ending 12/31					
	2000	2001	2002	Adj. (14)	Beg. (14)	2002	2003	2004	2005	2006	2007
<b>BALANCE SHEET</b>											
<b>Assets</b>											
(15)	38.1	90.6	106.9	-19.4	71.2	71.2	68.7	68.7	68.6	68.5	68.3
	.1	.1	.0	.0	.1	.1	.1	.1	.1	.1	.1
	160.5	133.5	72.9	.0	133.5	133.5	140.2	146.5	153.3	160.5	168.2
	312.9	291.3	194.8	377.1	668.4	706.7	742.1	775.5	811.4	849.6	890.3
(16)	2.3	2.3	2.3	.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3
(16)	7.8	12.7	10.5	.0	12.7	12.7	12.7	12.7	12.7	12.7	12.7
(16)	3.4	2.3	2.1	.0	2.3	2.3	2.4	2.5	2.6	2.7	2.8
	<b>525.1</b>	<b>532.7</b>	<b>389.5</b>	<b>357.7</b>	<b>890.4</b>	<b>928.7</b>	<b>968.3</b>	<b>1,008.2</b>	<b>1,050.8</b>	<b>1,096.2</b>	<b>1,144.7</b>
<b>Liabilities</b>											
(17)	.0	.0	.0	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3
	4.5	1.3	1.3	.0	1.3	1.3	1.4	1.5	1.5	1.6	1.7
(18)	233.7	223.5	133.6	122.4	345.9	365.8	384.1	401.4	419.9	439.7	460.8
	29.1	27.0	3.0	.0	27.0	27.0	28.3	29.6	31.0	32.4	34.0
	<b>267.3</b>	<b>251.8</b>	<b>137.9</b>	<b>357.7</b>	<b>609.5</b>	<b>629.3</b>	<b>649.0</b>	<b>667.7</b>	<b>687.7</b>	<b>709.0</b>	<b>731.7</b>
<b>Ownership Equity</b>											
(19)	285.0	257.8	280.9	.0	280.9	280.9	299.4	319.3	340.5	363.1	387.3
	40.0	40.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
(20)	-16.3	-10.2	-17.6	.0	18.5	18.5	19.9	21.3	22.6	24.1	25.7
(21)	-10.9	-6.8	-11.7	.0	.0	.0	.0	.0	.0	.0	.0
	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
	<b>257.8</b>	<b>280.9</b>	<b>251.6</b>	<b>.0</b>	<b>280.9</b>	<b>299.4</b>	<b>319.3</b>	<b>340.5</b>	<b>363.1</b>	<b>387.3</b>	<b>413.0</b>
	<b>525.1</b>	<b>532.7</b>	<b>389.5</b>	<b>357.7</b>	<b>890.4</b>	<b>928.7</b>	<b>968.3</b>	<b>1,008.2</b>	<b>1,050.8</b>	<b>1,096.2</b>	<b>1,144.7</b>

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**HOUSE 5**  
**ESTIMATION OF THE FAIR MARKET VALUE OF EQUITY**  
**AS OF DECEMBER 11, 2002**  
**INCOME APPROACH: RECAPITALIZATION**  
**(USD in millions)**

	Notes	Historical year ending 12/31 (1)			Pro Forma (2)			Projected year ending 12/31				
		2000	2001	2002	Adj.	Beg.	2002	2003	2004	2005	2006	2007
<b>CASH FLOW SUMMARY</b>												
Chg in cash (Non-cash assets)		53.7	45.0	159.5			-38.3	-42.1	-39.9	-42.7	-45.5	-48.6
Chg in cash (Non-interest bearing Liabilities)	(22)	-53.6	-15.5	-113.9			19.8	19.7	18.7	20.0	21.3	22.7
Net change in non-cash A&L		.1	29.5	45.6			-18.5	-22.4	-21.2	-22.7	-24.2	-25.9
Plus: Profit After Tax		-16.3	-10.2	-17.6			18.5	19.9	21.3	22.6	24.1	25.7
Plus: Unpaid Taxes	(20)	-10.9	-6.8	-11.7			.0	.0	.0	.0	.0	.0
<b>Operating Cash Flow</b>		<b>-27.1</b>	<b>12.5</b>	<b>16.3</b>			<b>.0</b>	<b>-2.5</b>	<b>.0</b>	<b>-1.1</b>	<b>-1.1</b>	<b>-2</b>
Change in Debt	(17)	.0	.0	.0			.0	.0	.0	.0	.0	.0
Equity Capital Raise		.0	40.0	.0			.0	.0	.0	.0	.0	.0
Equity Distribution	(21)	.0	.0	.0			.0	.0	.0	.0	.0	.0
<b>Financing Cash Flow</b>		<b>.0</b>	<b>40.0</b>	<b>.0</b>			<b>.0</b>	<b>.0</b>	<b>.0</b>	<b>.0</b>	<b>.0</b>	<b>.0</b>
<b>Total Change in Cash</b>		<b>-27.1</b>	<b>52.5</b>	<b>16.3</b>			<b>.0</b>	<b>-2.5</b>	<b>.0</b>	<b>-1.1</b>	<b>-1.1</b>	<b>-2</b>

**VALUATION - Discounted Cash Flow Approach**

Interim Cash Flows (Distributions)	(21)	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Partial Period Adjustment		0.056			1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
End-of-Year Convention		0.056			1.056	2.056	3.056	4.056	5.056	6.056	7.056	8.056
Present Value Factor @ 16.5%	(23)	0.992			0.851	0.731	0.627	0.538	0.462	0.398	0.342	0.292
<b>Present Value of Interim Cash Flows</b>		<b>.0</b>	<b>.0</b>	<b>.0</b>	<b>.0</b>	<b>.0</b>	<b>.0</b>	<b>.0</b>	<b>.0</b>	<b>.0</b>	<b>.0</b>	<b>.0</b>

**Terminal Value**

Projected Book Value 2007	413											
P/Book Multiple (Average Projected ROE)	2.4	6.4%										
<b>Terminal Value</b>	<b>991</b>											
Timing of terminal cash flow												
Present Value Factor @ 16.5%	5.056											
PV of Terminal Value	0.462											
Plus: Sum of Present Value of Distributions	458											
<b>Total Equity Value</b>	<b>460</b>											
Equivalent Price / Book multiple	1.5X											

Terminal Value Multiple		
	1.9	2.4
13.5%	410	520
16.5%	360	460
19.5%	320	400

Implied L-T Growth Rate		
	1.9	2.4
13.5%	7%	8%
16.5%	9%	10%
19.5%	11%	12%

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**HOUSE 5**  
**ESTIMATION OF THE FAIR MARKET VALUE OF EQUITY**  
**AS OF DECEMBER 31, 2002**  
**INCOME APPROACH: RECAPITALIZATION**  
**(USD in millions)**

	Notes	Historical year ending 12/31 (1)			Pro Forma (2)		Projected year ending 12/31					
		2000	2001	2002	Adj.	Beg.	2002	2003	2004	2005	2006	2007
<b>KEY RATIOS</b>												
% Change (YOY)												
Trading Assets	(4)	n/a	-7%	-33%	n/a	n/a	143%	5%	5%	5%	5%	5%
Trading Liabilities		n/a	-4%	-40%	n/a	n/a	64%	5%	5%	5%	5%	5%
Total Revenue		n/a	-28%	-53%	n/a	n/a	2%	5%	5%	5%	5%	5%
EBIT		n/a	-37%	73%	n/a	n/a	-335%	6%	5%	5%	5%	5%
Total Assets		n/a	1%	-27%	n/a	n/a	74%	4%	4%	4%	4%	4%
Total Liabilities		n/a	-6%	-45%	n/a	n/a	150%	3%	3%	3%	3%	3%
Total Equity	(7)	n/a	9%	-10%	n/a	n/a	7%	7%	7%	7%	7%	7%
Inflation estimate		n/a	n/a	n/a	n/a	n/a	n/a	2.9%	2.9%	2.9%	2.6%	2.4%
<b>Margins &amp; Expenses</b>												
Compensation % of Pre-comp Profit	(9)	376%	190%	-240%	n/a	n/a	33%	33%	33%	33%	33%	33%
Other expenses/ Revenue	(8)	52%	41%	70%	n/a	n/a	21%	21%	21%	21%	21%	21%
Operating Margin	(25)	-20%	-17%	-64%	n/a	n/a	40%	40%	41%	41%	41%	41%
<b>Ratios &amp; Average Balances</b>												
Avg. Trading Assets		419.1	302.1	243.1	n/a	n/a	687	724	759	793	830	870
Avg. Equity		307.9	269.4	266.2	n/a	n/a	290	309	330	352	375	400
Avg. Trading Liabilities		301.0	228.6	178.6	n/a	n/a	356	375	393	411	430	450
Short Ratio		75%	77%	69%	32%	52%	52%	52%	52%	52%	52%	52%
Cash Ratio		7%	17%	27%	n/a	8%	8%	7%	7%	7%	6%	6%
Turnover		n/a	32%	19%	n/a	n/a	14%	14%	14%	14%	14%	14%
Net Margin	(26)	-12%	-11%	-39%	n/a	n/a	19%	19%	19%	20%	20%	21%
Asset Turnover	(27)	24%	18%	9.9%	n/a	n/a	11%	11%	11%	11%	11%	11%
Leverage Ratio	(28)	2.0X	1.9X	1.5X	n/a	n/a	3.2X	3.0X	3.0X	2.9X	2.8X	2.8X
Return on Assets	(29)	-3%	-2%	-4%	n/a	n/a	2%	2%	2%	2%	2%	2%
Return on Equity	(30)	-6%	-4%	-7%	n/a	n/a	6%	6%	6%	6%	6%	6%
Avg. Short Ratio	(31)	72%	76%	73%	n/a	n/a	52%	52%	52%	52%	52%	52%
Pre-Tax Financing Cost	(32)	0%	0%	0%	n/a	n/a	1%	1%	1%	1%	1%	1%
After-Tax Financing Cost	(33)	0%	0%	0%	n/a	n/a	1%	1%	1%	1%	1%	1%
Operating Earnings Leverage	(34)	n/a	532%	n/a	n/a	n/a	n/a	118%	121%	112%	113%	114%

As-Reported	Adjusted Data
419.1	302.1
307.9	269.4
301.0	228.6
75%	77%
7%	17%
n/a	32%
-12%	-11%
24%	18%
2.0X	1.9X
-3%	-2%
-6%	-4%
72%	76%
0%	0%
0%	0%
n/a	532%

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**HOUSE 5**  
**ESTIMATION OF THE FAIR MARKET VALUE OF EQUITY**  
**AS OF DECEMBER 11, 2002**  
**INCOME APPROACH: RECAPITALIZATION**  
**(USD in millions)**

**NOTES:**

- (1) Historical results were adjusted for the removal of revenue and expenses related to House 17, whereby such adjustments flow directly to the Total Equity line. All assets and liabilities are re-cast from as-reported FOCUS report data based on Adjusted BV and as-reported common-size ratios expressed as a percent of Total Equity.
- (2) Pro Forma adjustments were made to the ending 2001 balance sheet to illustrate the impact of a market participant re-levering of the business. The pro forma adjustments include (a) the use of excess cash to increase Trading Assets, and (b) expansion of Trading Assets so as to produce a Leverage Ratio equal to the weighted average level for market participants, or 3.17, using a combination of Trading Liabilities and Debt. The pro forma 2002 revenue is projected quarterly, based on the actual historical Turnover and therefore presumes that net investment in Trading Assets and Trading Liabilities in the amount of net earnings generated during a quarter is made at the end of the quarter.
- (3) Revenue Adjustments reflect reported revenue deemed attributable to House 17 operations. See Table 10 in the Dubinsky expert report dated November 22, 2011.
- (4) Pro Forma 2002 revenue projection is based on adjusted 2002 quarterly Turnover. Prospective revenue growth is based on the assumption that Trading Assets would grow 5% in 2003, based on Securities Industry Association estimates. The growth rate from 2004-2007 is based on the Sustainable Growth Rate of the business.
- (5) Expenses forecast to increase with Trading Assets.
- (6) Occupancy and equipment costs reflects the total expense for both House 5 and House 17. Adjustment for advisory reduces the expense by 19%. The adjustment is based the percentage of work stations on the 17th floor, out of the total work stations for the 17th, 18th, and 19th floors. The work station count was determined using the December 2008 and January 2009 floor plans.
- (7) Expense forecast to increase with annual inflation of 2.4% - 2.9%, as estimated by DFI-WFEFA, Inc.
- (8) Other Expenses includes fees paid to exchanges on commission revenue. Forecast expense is based on the historical average measure of other expense as a % of revenue (approximately 21%) during periods where the Leverage Ratio ranged from 3.0 - 4.0.
- (9) Forecast to reflect a constant Payout Ratio based on actual experience during historical periods where the Leverage Ratio ranged from 3.0 - 4.0.
- (10) Clerical and administrative employees' expenses reflects total compensation for both House 5 and House 17, projected based on recent levels of compensation expense as a % of pre-compensation income. Adjustment to market participant headcount reduces the expense by 15%. The adjustment is based on the percent of total compensation attributed to House 17 employees: the House 17 employees were identified by cross-referencing the 2008 payroll data with the December 2008 and January 2009 floor plans.
- (11) Interest expense on Debt after recapitalization at the Prime Rate of 4.25% less 50 bps, based on the average spread of House 5 historical implied interest rate versus the Prime Rate.
- (12) Median effective tax rate of the Concluded Comparable Companies.
- (13) Historical earnings figures were adjusted to reflect after-tax earnings at the effective tax rate of the Concluded Comparable Companies.

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**HOUSE 5**  
**ESTIMATION OF THE FAIR MARKET VALUE OF EQUITY**  
**AS OF DECEMBER 11, 2002**  
**INCOME APPROACH: RECAPITALIZATION**  
**(USD in millions)**

**NOTES:**

- (14) Recapitalization is deemed to occur at the beginning of 2002, whereby the Cash Ratio is reduced to 8%, and Debt is issued and Trading Liabilities are grown to fund Trading Asset purchases such that the Leverage Ratio is approximately equal to Concluded Comparable Companies' Leverage Ratio of 3.17. No cash is distributed directly as a result of the recapitalization.
- (15) Cash is projected as beginning of period cash, plus net cash flows after consideration for distributions to equity investors.
- (16) PP&E is assumed to remain fixed at the Valuation Date level, and thus it is assumed that depreciation is equal to capital expenditure during the projection period. Memberships in exchanges and Other Assets presumed not to require any adjustment.
- (17) Projected Debt reflects the recapitalization Debt and is presumed to be carried at the pro forma 2002 balance in all future years to maintain leverage above actual 2002 levels.
- (18) Forecast as a percentage of average Trading Assets based on actual experience during historical periods when the Leverage Ratio ranged 3.0 - 4.0.
- (19) New Equity in 2001 reflects cash flows resulting from the business form transition from sole proprietorship to LLC.
- (20) An adjustment is made to historical periods to add back entity-level taxes to ensure the historical balance sheets balance.
- (21) Distributions are projected to be made to equity investors in the amount of any positive free cash flows from 2003 onward.
- (22) Represents the net investment in Trading Assets and Liabilities during the period, in addition to projected growth in other asset and liability balances.
- (23) The present value factor is based on the discount rate and assumes that any distributions of positive free cash flow generated during the year are made at the end of the calendar year.
- (24) The selected multiple represents the average of the range of P/BV multiples of the Concluded Comparable Companies observed in industry reports, adjusted by a control premium of 40%. A 10% discount was applied to account for House 5's smaller size.
- (25) EBIT/ Total revenue.
- (26) Profit After Taxes/ Total Revenue.
- (27) Total Revenue/ Average Total Assets.
- (28) Average Total Assets/ Average Total Equity.
- (29) Profit After Taxes/ Average Total Assets.
- (30) Profit After Taxes/ Average Total Equity.
- (31) Average Trading Liabilities/ Average Trading Assets.
- (32) (Interest Expense)/ Avg. Total Liabilities.
- (33) [(Interest Expense)/ Avg. Total Liabilities] \* (1 - effective tax rate).
- (34) % Change in EBIT/ % Change in Total Revenue.

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**HOUSE 5**

**ESTIMATION OF THE FAIR MARKET VALUE OF EQUITY  
AS OF DECEMBER 11, 2002  
LEVERAGE AND PRO FORMA FINANCIALS  
(USD in millions)**

**Exhibit 2.A**

<b>Current Capital IQ Name</b>	<b>Mkt Cap</b>	<b>Book Value</b>	<b>Assets</b>	<b>Cash</b>	<b>Leverage Ratio</b>	<b>Equity % of Assets</b>	<b>Cash Ratio</b>
	(1)	(1)	(1)	(1)	(1)		
Dupont Direct Financial Holdings, Inc.	2.7	2.0	4.6	0.8	2.25x	44%	17%
Crown Financial Holdings, Inc	2.8	4.9	13.0	1.6	2.66x	38%	12%
Knight Capital Group Inc.	667.9	765.0	3,337.5	340.0	4.36x	23%	10%
LaBranche & Co. Inc.	1,617.2	900.7	1,949.0	100.1	2.16x	46%	5%
INTL FCStone Inc.	5.2	3.9	14.7	2.0	3.74x	27%	14%
<b>Totals &amp; Weighted Average</b>	<b>2,295.9</b>	<b>1,676.6</b>	<b>5,318.8</b>	<b>444.5</b>	<b>3.17x</b>	<b>32%</b>	<b>8%</b>

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HOUSE 5  
Exhibit 2.A

ESTIMATION OF THE FAIR MARKET VALUE OF EQUITY  
AS OF DECEMBER 11, 2002  
LEVERAGE AND PRO FORMA FINANCIALS  
(USD in millions)

	12/31/01 Adjusted	Re-Cap Change	Pro Forma				Pro Forma 2002
			01/01/02	1Q02	2Q02	3Q02	
Total Assets	532.7	(2) 357.7	890.4	900.9	909.3	917.2	928.7
Cash	90.6	(3) (19.4)	71.2	71.2	71.2	71.2	71.2
Trading Assets	291.3	377.1	668.4	678.9	687.3	695.2	706.7
Book Value	280.9		280.9	285.9	290.0	293.8	299.4
Debt	-	235.3	235.3	235.3	235.3	235.3	235.3
Trading Liabilities	223.5	122.4	345.9	351.4	355.7	359.8	365.8
Leverage Ratio	1.90x		3.17x	3.15x	3.14x	3.12x	3.10x
Short Ratio	77%		52%	52%	52%	52%	52%
Total Revenue				26.0	23.2	22.3	27.5
Turnover				3.9%	3.4%	3.3%	4.0%

Notes:

- (1) As of the last available date prior to the Valuation Date. Leverage Ratio is calculated as Total Assets / Book Value.
- (2) The hypothetical adjustments required to (a) swap cash for Trading Assets to effect a reduction in the cash balance to levels closer to market participant levels, while avoiding future debt raises in the projection period, and (b) adjust to market participant leverage by issuing Debt and growing Trading Liabilities.
- (3) The adjusted Cash Ratio was set equal to 8%.

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ESTIMATION OF THE FAIR MARKET VALUE OF EQUITY  
AS OF DECEMBER 11, 2002  
ASSET TURNOVER ADJUSTMENT  
(USD in millions)

	2002 Financial Results		
	As Reported (2)	Adjusted (3)	Variance
a. Total Revenue	106.0	45.5	-60.5
b. Beginning Trading Assets	428.3	291.3	-137.0
c. Ending Trading Assets	340.7	194.8	-145.9
d. Average Trading Assets	384.5	243.1	-141.4
Turnover Ratio (a ÷ d)	27.6%	18.7%	42.8%
Proportion (Adjusted/ Reported)	68%		

	2002 Quarterly Results			
	Q1	Q2	Q3	Q4
e. Total Revenue	24.6	24.1	24.5	32.8
f. Beginning Trading Assets	428.3	478.3	512.8	563.5
g. Turnover Ratio (e ÷ f)	5.7%	5.0%	4.8%	5.8%
h. Proportion	68%	68%	68%	68%
Adjusted Turnover (g * h)	3.9%	3.4%	3.3%	4.0%

Notes:

- (1) Calculations were made to approximate Adjusted Turnover, giving rise to the impact of removing House 17 revenue from as-reported FOCUS report data.
- (2) 2002 historical results as presented in FOCUS reports.
- (3) Adjusted Total Revenue and Trading Asset balances reflect House 5 financial results excluding revenue deemed attributable to House 17 from 2000 to 2002.

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ESTIMATION OF THE FAIR MARKET VALUE OF EQUITY  
AS OF DECEMBER 11, 2002  
ESTIMATION OF THE EQUITY COST OF CAPITAL  
(USD in millions)

Assumptions

Risk-free Rate	Rf =	5.02%	Source:	20 Year Treasury CMT Yield (Federal Reserve)
Equity Risk Premium	Rp =	6.00%	(1)	Ibbotson 2002 SBBJ Valuation Yearbook (rounded)
Small Stock Premium	Ssp =	1.94%		Ibbotson 2002 SBBJ Valuation Yearbook (8th Decile)
Effective Tax Rate	t =	40.0%		Market Participant Tax Rate
Beta	B =	1.58		Industry Average

Comparable Company Analysis

	Berra US Beta (2)	Financing Debt (D) (3)	Non-Trust Preferred Equity (Pref.) (4)	Stock Price as of 12/10/2002	Common Shares Outstanding (in millions)	Market Value of Equity (E)	Total Capital	Common Equity / Capital	Preferred Equity / Capital	Debt / Capital	Tax Rate	Unlevered Beta
1 Knight Capital Group Inc.	1.86	-	-	5.65	118.22	667.9	667.9	100.0%	0.0%	0.0%	28.7%	1.86
2 LaBranche & Co. Inc.	1.46	261.0	61.1	27.18	59.50	1,617.2	1,939.3	83.4%	3.2%	13.5%	49.3%	1.30
<b>Weighted Average</b>	<b>1.57</b>							<b>87.6%</b>	<b>2.3%</b>	<b>10.0%</b>		<b>1.46</b>

Relevered Beta Analysis

Beta (Unlevered)	1.46
Industry D / E Ratio (5)	0.14
Industry Pref. / E Ratio (5)	0.00
Tax Rate (6)	40.0%
Beta (Relevered)	<u>1.58</u>

Relevering Calculations

$$\text{Unlevered Beta} = \text{Beta (Observed)} / [1 + D/E (1 - t) + \text{Pref./E}]$$

$$\text{Relevered Beta} = \text{Unlevered Beta} * [1 + D/E (1 - t) + \text{Pref./E}]$$

Equity Cost of Capital - Capital Asset Pricing Model			
Required Return on Equity Capital	Rate of Return	x	Weighting
Concluded Value (rounded to the nearest 50 basis points)	16.5%		100.0%
			Equity Cost of Capital
			=
			16.5%
			16.5%

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**HOUSE 5**  
**ESTIMATION OF THE FAIR MARKET VALUE OF EQUITY**  
**AS OF DECEMBER 31, 2002**  
**ESTIMATION OF THE EQUITY COST OF CAPITAL**  
**(USD in millions)**

**Notes:**

- (1) Ibbotson 2002 SBI Yearbook, as of December 31, 2001. The Equity Risk Premium is based on the S&P 500 Market Total Return of 12.65 percent and long-horizon risk free rate of 5.23 percent, adjusted by 1.5 percent for survivorship bias. Copeland, Koller, and Murrin (2000) recommend a downward adjustment of 1.5 to 2 percent for survivorship bias in the S&P 500 Index, using arithmetic mean estimates.
- (2) The predicted beta, calculated against the universe represented by the S&P 500 Index. Betas as of November 30, 2002, provided by BARRA.
- (3) Debt includes long-term interest-bearing liabilities deemed to be financing debt, including subordinated debt and debentures, all at carrying value. Long-term liabilities include liabilities maturing more than five years following the date of the latest debt footnote, typically in the annual report for the most recent completed fiscal year prior to the Valuation Date.
- (4) Includes all other preferred equity, at carrying value.
- (5) Based on a review of historic capitalization of the comparable companies, it was determined that preferred equity is not part of the normalized capital structure of a market participant.
- (6) Tax rate is consistent with the effective tax rates of market participants.
- (7) Concluded cost of equity is on the basis that cash flows are net of interest expense on any applicable financing debt.

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**HOUSE 5**

**ESTIMATION OF THE FAIR MARKET VALUE OF EQUITY  
AS OF DECEMBER 11, 2002  
MARKET APPROACH: COMPARABLE COMPANY METHOD  
(USD in millions)**

**Exhibit 3**

	Financial Data (1)							Valuation Multiples			
	LTM as of	Equity Value (EV) <sup>(2)</sup>	Book Value (BV)	Tangible BV (TBV)	LTM Revenue	LTM Earnings	Return on BV	LTM Profit Margin	EV / TBV	EV / Revenue	EV / Earnings
<b>Concluded Comparable Companies</b>											
LaBranche & Co. Inc.	9/30/2002	2,264.1	900.7	(80.3)	412.1	84.2	9.3%	20.4%	excl.	5.5x	26.9x
Knight Capital Group Inc.	9/30/2002	935.1	765.0	714.9	547.6	(26.2)	N/M	N/M	1.3x	1.7x	excl.
<b>CONCLUDED COMP SET</b>											
Average Value			832.8	317.3	479.9	29.0	9.3%	20.4%	1.3x	3.6x	26.9x
Median Value			832.8	317.3	479.9	29.0	9.3%	20.4%	1.3x	3.6x	26.9x

**Notes:**

- (1) Financial data as provided by Capital IQ. LTM income statement figures or actual balance sheet figures are as of the most recent filing date prior to the Valuation Date.  
(2) EV is based on the closing share price on the day before the Valuation Date, multiplied by the share count on the most recently-issued regulatory filing prior to the Valuation Date and includes a control premium of 40%.

\*\*\*IMPORTANT NOTICE TO READER\*\*\*

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**HOUSE 5**

**ESTIMATION OF THE FAIR MARKET VALUE OF EQUITY  
AS OF DECEMBER 11, 2002  
MARKET APPROACH: COMPARABLE COMPANY METHOD  
(USD in millions)**

**Exhibit 3.A**

**Concluded Comparable Companies**

	EV / BV	EV / TBV	EV / Revenue	EV / Earnings
LaBranche & Co. Inc.	2.5x	excl.	5.5x	26.9x
Knight Capital Group Inc.	1.2x	1.3x	1.7x	excl.
Average Value	1.9x	1.3x	3.6x	26.9x
Median Value	1.9x	1.3x	3.6x	26.9x

Financial Multiple	Financial Data (1)	Relative Factor (2)	Selected Multiple Range (3)	Indicated EV Range (4)
EV / BV	299.4	90%	1.1 x - 2.3 x	329 - 677
EV / Revenue	99.1	90%	1.5 x - 4.9 x	152 - 490
EV / LTM Earnings	18.5	90%	24.2 x - 24.2 x	448
<b>Indicated Equity Value Range (controlling, marketable basis)</b>			(5)	<u>310 - 538</u>
<b>Indicated Equity Value Range (controlling, marketable basis)</b>				<u>310 - 538</u>

See footnotes, which are deemed an integral part of this exhibit, on Page 15.

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**HOUSE 5**  
**ESTIMATION OF THE FAIR MARKET VALUE OF EQUITY**  
**AS OF DECEMBER 11, 2002**  
**MARKET APPROACH: COMPARABLE COMPANY METHOD**  
**(USD in millions)**

**Notes:**

- (1) House 5 financials for the year ending 12/31/2002. BV and TBV are equivalent. Revenue and Earnings are pro forma as if the recapitalization was in effect for the entire year of 2002.
- (2) The Relative Factor is based on the relevant size of the Company as compared to the Concluded Comparable Companies. Otherwise, it is presumed that the EV/BV multiple reflects the adjustments made to House 5 pro forma ROE, the EV/Revenue presumes a similar pro forma net margin of House 5 relative to that of the Concluded Comparable Companies, and the EV/LTM Earnings presumes House 5 projected earnings growth rate is in-line with that of the Concluded Comparable Companies.
- (3) The selected range includes a control premium and is based on the range of multiples of Knight Capital Group, Inc. and LaBranche & Co. Inc., which were deemed to be the closest comparable companies in the analysis, given their similar size, concentration of revenue mix toward trading activities, business focus relating to market making in the case of Knight, and acting as a specialist in the case of LaBranche.
- (4) Indicated EV range is calculated as the Selected Multiple Range x Financial Data.
- (5) Calculated based on the average of the results indicated from the EV/BV, EV/Revenue and EV/LTM Earnings. Rounded to the nearest \$1 million.

\* \* \*IMPORTANT NOTICE TO READER\* \* \*

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Section 13

# Appendix

## Comparable Transaction Method

The Market Approach, Comparable Transaction Method was considered, but ultimately not relied upon in the estimate of Fair Market Value due to the limited comparability of the identified transaction targets to House 5. The targets were mostly retail brokerage firms, whereas House 5 focused on institutional markets, and on its proprietary trading activities. Transaction multiples were calculated from merger transactions in the relevant industry group by accessing the Capital IQ transactions database. The time frame considered spanned the two years leading up to and including the Valuation Date.

### **Determination of Comparable Transactions**

In selecting comparable transactions, the Capital IQ database and financial publications in which transactions are disclosed were searched, to gather information about the prices paid for similar businesses under similar circumstances. The acquisitions are relevant indicators of an actual market participant's perception of Fair Market Value, and, therefore, can be useful valuation indicators. Based on the research and accessing of the Capital IQ database and a review of SEC filings of the companies in the industry, 13 potential comparable transactions were identified.

The following is the list of 13 transaction identified (target company / acquiring company):

- Harrisdirect LLC/Harris Financial Corporation
- Consors Discount-Broker AG/Cortal Consors S.A.
- Hoenig Group Inc./Investment Technology Group Inc. (NYSE:ITG)
- Beeson Gregory Group plc/Evolution Group plc (LSE:EVG)
- Dempsey & Company LLC/ETrade Financial Corporation
- Tucker Anthony Sutro/Royal Bank of Canada
- Morgan Keegan Inc./Regions Financial Corporation
- Datek Online Holdings Corp./Ameritrade Holding Corporation
- Dain Rauscher Corp./Royal Bank of Canada
- H.D. Vest Inc./Wells Fargo & Company
- Advest Group Inc./MONY Group Inc.
- JWGenesis Financial Corp./First Union Corporation
- Spear, Leeds & Kellogg LP/Goldman Sachs Inc.

The 13 transaction targets would, for the most part, most closely be classified as retail trading businesses, and hence most transactions are not directly representative of House 5. Spear, Leeds & Kellogg LP, while a

comparable business, was not publicly traded and closed more than two years prior to the Valuation Date. As a result of the aforementioned issues, the results of the Comparable Transaction Method are used mainly to corroborate the results of the Income Approach and Comparable Company Method.

#### **Application of the Comparable Transaction Method**

Once the comparable transaction set was established, transaction multiples were computed. Transaction multiples are ratios of equity value to the operating results of a company. The EV for each target company was taken from the Capital IQ transaction database. Multiples were calculated for EV to BV, Revenue, and Earnings to the extent those financial metrics were available for the target companies. The following points illustrate the multiples calculated for the comparable transaction set, and how those multiples were applied to House 5 financials to estimate Fair Market Value as of the Valuation Date:

- EV / BV
  - The average multiple for the transaction targets, which included a control premium, was approximately 3.6x, with a range of multiples of 1.4x to 11x.
  - The selected multiple of 1.6x was applied to the pro forma y/e 2002 BV of \$299.1 million<sup>59</sup> to arrive at a Fair Market Value of a 100 percent interest in the common equity of House 5 of \$467 million. The selected multiple is based on the low-end of the range, due to below-average ROE of House 5 compared to the target firms.

#### **Results of the Comparable Transaction Method**

Based on the Comparable Transaction Method as described above, an indicated Fair Market Value of a 100 percent interest in the common equity of House 5 on a marketable, controlling interest basis was **\$470 million**, as of the Valuation Date. Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA

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<sup>59</sup> Since the valuation conclusion in this report is based on the premise of value that House 5 is a going concern, any evidence to the contrary would have a significant negative impact on the valuation. Further, there is evidence that House 5 was artificially supported by millions of dollars of Other People's Money from the IA Business.

Business. This concluded value is based on the time-weighted average EV / BV multiple of the target set.

See Appendix 1 for detailed calculations.

**HOUSE 5**  
**ESTIMATION OF THE FAIR MARKET VALUE OF EQUITY**  
**AS OF DECEMBER 11, 2002**  
**MARKET APPROACH: COMPARABLE TRANSACTION METHOD**  
**(USD in millions)**

Target / Buyer	Notes:	Closing Date	Implied Total Equity Value (EV) (1)	1-week Transaction Premium (2)	Trailing Financial Data (3)				Transaction Multiples (4)				
					Total Assets	BV	LTM Revenue	LTM Earnings	Return on BV	LTM Profit Margin	EV / BV	EV / Revenue	EV / Earnings
Hamsdirect LLC/Hams Financial Corporation		2/4/02	520.0	N/A	252.7	178.7	289.8	-15.3	N/A	N/A	2.9X	1.8X	N/A
Consors Discount-Broker AG/Cortal Consors S.A.		4/29/02	431.8	N/A	1774.6	314.6	189.3	-123.5	N/A	N/A	1.4X	2.3X	N/A
Hoening Group Inc./Investment Technology Group Inc. (NYSE:ITG)		9/3/02	105.4	N/A	98.6	52.0	103.6	1.9	3.7%	1.8%	2.0X	1.0X	55.0 x
Beeson Gregory Group plc/Evolution Group plc (LSE:EVG)		7/11/02	61.8	N/A	42.6	39.6	15.4	-5.7	N/A	N/A	1.6X	4.0X	N/A
Dempsey & Company LLC/ETrade Financial Corporation		10/1/01	178.2	N/A	52.6	16.2	152.9	40.9	251.9%	26.7%	11.0X	1.2X	4.4 x
Tucker Anthony Sutro/Royal Bank of Canada		10/31/01	625.0	-12.0%	717.7	347.8	654.7	22.8	6.6%	3.5%	1.8X	1.0X	27.4 x
Morgan Keegan Inc./Regions Financial Corporation		3/30/01	789.2	49.0%	2057.5	267.4	444.7	47.3	17.7%	10.6%	3.0X	1.8X	16.7 x
Datek Online Holdings Corp./Amenitrade Holding Corporation		9/9/02	989.2	N/A	0.0	316.9	291.8	21.6	6.8%	7.4%	3.1X	3.4X	45.8 x
Dain Rauscher Corp./Royal Bank of Canada		1/10/01	1469.7	24.0%	2814.6	469.0	1091.4	87.2	18.6%	8.0%	3.1X	1.3X	16.8 x
H.D. Vest Inc./Wells Fargo & Company		7/2/01	114.1	N/A	50.1	11.4	195.6	1.6	13.6%	0.8%	10.0X	0.6X	73.5 x
Advest Group Inc./JMONY Group Inc.		1/31/01	311.8	9.6%	1970.6	147.2	347.8	18.9	12.9%	5.4%	2.1X	0.9X	16.5 x
JWGenesis Financial Corp./First Union Corporation		1/2/01	102.7	1.6%	95.9	64.7	165.1	13.3	20.5%	8.1%	1.6X	0.6X	7.7 x
Spear, Leeds & Kellogg LP/Goldman Sachs Inc.		10/31/00	5512.6	N/A	25345.4	1501.7	1945.5	971.4	64.7%	49.9%	3.7X	2.8X	5.7 x
Average Value				14.4%					41.7%	12.2%	3.6X	1.7X	26.9X
Median Value				9.6%					15.7%	7.7%	2.9X	1.3X	16.8X
Time-Weighted Average Value	(5)			9.2%					24.9%	5.1%	3.4X	2.0X	23.7X
Selected EV / BV Multiple	(6)										1.6X		
Indicated Fair Market Value (controlling, marketable) (rounded)											299		
											470		

**Notes:**

- (1) Implied Total Equity Value (TEV), plus other consideration paid to non-common shareholders.
- (2) Calculated as (offer price - target stock price 1-week prior to offer date) / target stock price 1-week prior to offer date.
- (3) Financial information for comparable transaction target companies from SEC Filings, Published Transaction Overviews and Capital IQ.
- (4) Multiples are based on implied EV at the announcement date of the transaction.
- (5) Time-weighted average places more weight on recent transactions to reflect the most current market dynamics in the calculation of multiples. The calculated multiples exclude those transactions where the price paid was less than TBV on the view that the discount is likely due to significant negative fair value adjustments to tangible net assets of the target.
- (6) The selected multiple is at the low end of the range, due to below-average ROE of House 5 compared to target firms.

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