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Efficiency in IPO Pricing: Online Auctions vs. Traditional Processes

Nayantara D. Hensel compares the traditional IPO issuance process with the IPO online auction process used by Google. She suggests that online auction processes may give rise to a new host of problems due to informational asymmetries between small investors and sophisticated investors, as well as reduced scrutiny by investment banks in the online process.

Portfolio Risk in Financial Suitability Lawsuits

Jonathan A. Neuberger and Schyler M. Thiessen discuss portfolio risk in the context of claims that investment advisors have violated their fiduciary duty by adopting overly risky investment strategies. They show how an advanced risk measure, like Value-at-Risk, can be used to assess such claims on a comprehensive, portfolio-wide basis.

Event Study Methodology in Securities Litigation

Stuart D. Gurrea provides an overview of the event study methodology and its application to securities fraud cases. In this piece identifies the value of this technique to prove the materiality of the fraud and to estimate damages in the context of securities litigation. It also discusses some of the difficulties and limitations economists may encounter when implementing this methodology.

Efficiency in IPO Pricing: Online Auctions vs. Traditional Processes

By Nayantara D. Hensel

IPO pricing has been the focus of regulatory concern and substantial litigation. A particular concern is the first day “pop,” the large price increase many IPOs experience immediately after public trading begins. During the dot-com boom, the first day pop was often extremely large; for example, in the VA Linux IPO, the first day pop approached 700%. The issue of IPO pricing is likely to increase in importance due to the large increase in IPOs in 2004. The desire to eliminate the first day price appreciation of IPOs has led to attempts at reforming the IPO process, the most recent example of which is the use of an online auction for the Google IPO. The auction process, however, may not be an improvement over traditional methods.

In the traditional IPO allocation process, the investment banks in charge of the IPO take the issue on a road show to various possible investors (often large mutual funds). The banks then use feedback from those investors to build a demand curve of possible prices for the new issue. Critics of the traditional process argue that these investors can benefit from the initial IPO underpricing and subsequent price appreciation since they often receive the initial allotments.

In the online Dutch auction method, which Google used, bidders post the price that they are willing to pay and the number of shares that they wish to purchase. These postings generate a demand curve for the IPO from the small investor. The final price of the IPO in a Dutch auction is the lowest price at which all of the shares are sold. The role of the investment bank as the middleman is minimized. Proponents of the online process argue that the issues will be more fairly priced, such that the first day pop will be eliminated, and the value of the IPO will go to the company that is going public, rather than to the favor of the clients of the investment bank.

The Google IPO provides a case study in the costs and benefits of the online process. The online process may not have efficiently priced the IPO, given its enormous post-auction price increase. Google’s offer price at its debut was \$85, but it opened at \$100, and then soared in the following months to a high of \$201.60, even though there were no news releases that might increase the stock’s price. Google’s stock has continued to trade at these high levels. The price increase benefited individuals who bought the stock of Google shortly after its debut. Other significant beneficiaries include the Google co-founders and the chief executive, as well as the venture capital firm involved in financing Google. Indeed, the lock-up period, during which those parties cannot sell their shares, expired for an additional 227 million shares between November 2004 and January 2005.

One criticism of the online process is that small investors could lack the information necessary to determine efficient prices. The online process does not require nearly the amount of information to be disclosed that the traditional roadshow process requires. A criticism of Google during the process was that it conveyed little detailed information concerning how it would use its funds. In the absence of detailed information on the company, it may have been harder to evaluate fundamental issues such as (1) the impact on Google

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Portfolio Risk in Financial Suitability Lawsuits

By Jonathan A. Neuberger and Schyler M. Thiessen

One type of securities-related litigation involves claims by investors that they suffered losses because financial advisors invested their funds in overly risky securities that were unsuitable for their investment objectives. These “financial suitability” lawsuits have proliferated as investors have become more sophisticated and financial advisors have offered clients increasingly complex investment strategies.

Of course, investors rarely sue when a high-risk strategy produces large positive returns. Lawsuits arise only when a high-risk strategy fails and an investor suffers sizable losses. A large loss by itself, however, is not proof of an unsuitable investment strategy. Investing is a risky proposition that entails uncertain outcomes and the possibility of incurring losses. How then can risk be assessed in the context of claims involving financial suitability?

One of the first actions a financial advisor should take with a new client is to identify the client’s investment objectives and risk tolerance. The selection of individual securities and investment strategies should be consistent with the investor’s profile and appetite for risk. In broadest terms, risk reflects the dispersion of possible investment outcomes - the wider this dispersion, the greater the risk. Since investment returns are random, future investment returns are unknown, although some types of investments exhibit greater dispersion of expected outcomes than others and thus are considered riskier.

A common measure of a security’s risk is its standard deviation. In the context of a portfolio, however, this measure is inadequate because the risk of any single security depends not only on its own dispersion of outcomes, but also on its interaction with every other security in the portfolio. Moreover, when portfolios include complex securities, like options, investment returns are not symmetrical (i.e., not evenly distributed around the mean

return), as the standard deviation assumes. For this reason, more advanced methods of measuring risk must be used to determine whether a particular portfolio is suitable for an investor.

One such advanced risk measure is Value-at-Risk (“VaR”). VaR incorporates the standard deviation of the security, but also reflects non-symmetrical risks like those inherent in bonds and options. Senior managers of financial corporations have come to rely increasingly on VaR to measure the risks of different portfolios.

VaR’s greatest advantage is that it summarizes in a single, easy-to-understand number the downside risk of a portfolio. VaR is the maximum expected loss over a particular time horizon and at a given confidence interval. For example, the VaR of a portfolio might be \$1 million a month at a 95 percent confidence interval. This means that, given the historical behavior of the securities in the portfolio, the loss in any month will exceed \$1 million only 5 percent of the time.

While it is generally accepted that certain types of securities, like options, are riskier than other types of securities, like Treasury bills, this simplistic characterization is incomplete. It is not true, for example, that a portfolio must be highly risky if it includes options. In certain instances, options can actually reduce portfolio risk. What is needed is an objective risk measure, like VaR, that reflects the extent to which a security contributes to or lessens portfolio risk. This risk measure can then be used to assess claims of unsuitability.

An example will demonstrate the usefulness of VaR. Consider three different investment portfolios. The first portfolio is invested entirely in the common stock of XYZ Corporation. Based on the historical behavior of XYZ shares, and assuming a \$10 million portfolio, the VaR of this portfolio is \$3.1 million (one month, 95 percent confidence interval). The second portfolio also holds \$10 million in assets. This portfolio includes shares of XYZ, but the investment advisor also buys put options on XYZ shares (i.e., the right to sell the shares at a predetermined

price). These purchases serve as an insurance policy if share prices decline, thereby reducing portfolio risk. The VaR of this portfolio is \$1.5 million. Portfolio three also includes shares of XYZ, but the advisor sells put options on XYZ shares. This strategy increases portfolio risk since the “insurance” is being sold to someone else. The VaR of this \$10 million portfolio is \$5.3 million. In litigation, VaR could help demonstrate that portfolio three is much riskier, and thus much less likely to be suitable for investors, than portfolio two.

In contrast to VaR, more traditional risk measures may tell a misleading story. For example, the standard deviations of all three of these portfolios are very similar and are driven by the standard deviation of XYZ shares. This similarity results from the fact that the standard deviation does not fully reflect the options’ asymmetrical payout structure, (i.e., buying put options limits losses, whereas selling put options places a cap on gains). In this case, measuring risk using standard deviation would lead to the erroneous conclusion that all three portfolios have relatively equal risk.

In considering portfolio risk, one should remember three important points. First, the presence of options or other complex securities does not by itself imply greater risk. Second, portfolio risk depends not only on the individual securities in the portfolio but also on the overall composition of the portfolio. Third, a risk measure



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like VaR makes it possible to understand the risks of different portfolios and can

Event Study Methodology in Securities Litigation

By Stuart D. Gurrea

In securities fraud cases (Rule 10b-5 cases), the event studied is the disclosure of an omission or misstatement that causes an abnormal change in stock price. In these cases, the efficient market hypothesis lays out the foundation for the presumption of reliance on the misstatement or omission articulated in the “fraud on the market theory.” According to the efficient market hypothesis, stock prices reflect all publicly available information. Consequently, prices reflect all new information, including fraudulent information, and a fraud affects all investors that rely on the market to determine the security’s value. Therefore, plaintiffs use the “fraud on the market theory” to establish reliance without showing the investor’s knowledge about the fraudulent information. Given the presumption of reliance, the next step is to establish the materiality of the fraud, i.e., to determine whether the information significantly affected investors’ decisions. Plaintiffs use event studies to help determine materiality by indicating whether the disclosure of a misstatement or an omission significantly affected the firm’s stock price.

Event study methodology is used not only for the determination of liability, but also for the calculation of damages. The basic rule for measuring damages in securities fraud cases is to calculate the difference between the price paid for the security and the true value as of the date of the purchase, i.e., the price at which the security would have traded if the true information had been disclosed. The event study estimates the true value of the security, and this estimate enables one to quantify the difference between the actual stock price and the expected stock price absent the misinformation.

An event study typically consists of three stages. First, the event period or window is defined; this period may be one day or many days depending on how the information affecting the stock price was revealed. In the case of an omission, the date of the omission may be important to defining the event window, depending on how the omitted information was ultimately revealed. Second, expected “normal” stock price returns are estimated for the event dates based on market returns. The historical relation between market returns and the firm’s returns is the basis

“The usefulness of an event study as a tool to quantify damages in securities litigation is tied to the strength of the underlying statistical tests.”

for estimating the stock’s returns absent the fraud. “Abnormal” returns are then calculated as the difference between the actual returns during the event period and the stock’s normal returns. Finally, the magnitude and statistical significance of the returns above or below the normal market return are calculated during the event period.

Although the event study methodology is relatively straightforward, implementing this technique can be difficult. In litigation, the typical concern is the effect of an event on an individual company’s stock price. To the extent that other contemporaneous firm-specific or market-wide factors affect the firm’s price, all the changes in the firm’s returns cannot be attributed to the particular event under scrutiny. Therefore, the study must account for other events that may cause price fluctuations during the event window. In addition, while event studies often consider the response of a group of stocks to a particular event, fraud cases often focus on individual stocks. Because an individual stock exhibits greater price variability than a portfolio of stocks, statistically identifying abnormal price changes for a single firm will be more difficult than for a group of firms.

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EI News and Notes

Gaming Industry Merger

William P. Hall helped clear a \$1.5 billion gaming industry merger at the FTC. Hall served as the economic expert for attorneys from Latham & Watkins and Swidler Berlin Shreff & Friedman as they persuaded the FTC to close its data-intensive investigation of Harrah’s purchase of Horseshoe’s three casinos. Assisted by Paul E. Godek and Joel B. Papke, Hall explained why the acquisition would not reduce competition in the FTC’s geographic area of concern.

Copyright Industries Report

EI recently released, *Copyright Industries in the U.S. Economy: The 2004 Report*, prepared on behalf of the International Intellectual Property Alliance by Stephen E. Siwek. The report, which EI has produced annually or biannually since 1990, demonstrates the continuing importance of copyright-based industries in our nation’s economy. The 2004 study follows new definitions and guidelines published by the World Intellectual Property Alliance in its 2003 report. Mr. Siwek is now working on studies of the importance of those industries in other nations.

Mittal Steel Acquisition

The Department of Justice granted early termination of its investigation into Mittal’s acquisition of the International Steel Group. The Department’s investigation focused on the competitive implications for flat-rolled carbon steel products within the United States. Joseph W. McAnney and Kent W Mikkelsen worked with attorneys from Shearman & Sterling and Jones Day on this transaction.

International Trade Commission Hearing On Lumber

Robert D. Stoner, with assistance from Henry B. McFarland and Stuart D. Gurrea, testified before the International Trade Commission on behalf of US producers in an ongoing dispute concerning the effect of allegedly subsidized Canadian logs and lumber on the US lumber industry. EI presented an econometric model demonstrating the effect of the Softwood Lumber Agreement (SLA). The ITC decision cited the EI study as evidence that the SLA restricted lumber imports from Canada. The Commission used this result to find that imports of Canadian lumber threatened to injure the US industry.

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Microsoft developed a rival search engine or (2) the impact on Google's revenues if expenditures on Internet ads slowed due to a reduction in economic growth, given that its major competitor, Yahoo, is more diversified. The online process could lead to different abuses from the traditional process because it might be used more by companies that may not have a clear sense of the uses for the funds that they are raising. . In addition, small investors may be more likely to misprice a security due to a greater reliance on name recognition in the absence of sophisticated information on fundamentals. This information gap could arise because small investors lack access to the sources that institutional investors have, or because companies are not required to provide detailed information in the online process.

The recent SEC proposals to liberalize the quiet period preceding the IPO can reduce, but not eliminate, the informational gaps in both processes. During the quiet period, companies traditionally have been only allowed to give out information orally (in presentations), but not in written form (except for the company's prospectus). The "quiet period" provided an informational advantage to the institutional investors, since small investors are less likely to be able to attend company presentations. The greater involvement of the small investor in pricing in online auctions could have further exaggerated the impact of this informational asymmetry in the online process relative to the traditional process. In late October 2004, the SEC voted to liberalize these rules by

allowing companies planning an IPO to communicate information to investors orally or in writing, provided that this information is filed with the SEC.

In conclusion, while the traditional IPO process may lead to problems, the online IPO process can also create difficulties. Those difficulties may arise because the issuing company is not subjected to as much scrutiny from the investment banks as in the traditional process and because small investors may be poorly informed. The conflicts among transparency, informational asymmetries and the wealth transfers created by various processes will continue to be a vibrant area of debate as the IPO resurgence continues and new reform proposals emerge.

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The power of event studies is also limited by the precision in determining the event window. Lengthening the window may better account for the dissemination of information over an extended period of time, but it may also reduce the power of statistical tests by including observations that are not part of the event. For example, damages will be underestimated if information is gradually released before the supposed event date and causes variations in the stock's price that mistakenly are not attributed to the fraud. In this example, damages will be underestimated because the event window did not include earlier periods when the information affected the stock price. If the fraud involves an omission rather than an affirmative statement, the problem may be exacerbated because a particular date may be difficult to assign to the omission. Difficulty in identifying the date of the omission affects the computation of total damages and the identification of transactions that give rise to damages, but it does not affect the estimation of damages for any particular purchase or sale by an investor unless the omission marks the beginning of the event window.

The usefulness of an event study as a tool to quantify damages in securities litigation is tied to the strength of the underlying statistical tests. Proper design of these tests can enable a researcher to overcome potential limitations of the analysis, and enhance the reliability of event studies in identifying and quantifying the effects of fraud. Properly carried out, event study methodology is a reliable methodology that likely will remain a valuable approach

to assess the effect of information on stock prices and to estimate damages in securities fraud cases.

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