CAPVAL-AMERICAN BUSINESS APPRAISERS, LLC
6 Thackeray Place, Durham, NC 27707

OPINION OF FAIR MARKET VALUE OF A SINGLE ORDINARY SHARE IH HOLDINGS INTERNATIONAL LIMITED MAY 13, 2015

MAY 23, 2016

COPY NUMBER: ELECTRONIC FINAL

OPINION OF FAIR MARKET VALUE
OF A SINGLE ORDINARY SHARE
IH HOLDINGS INTERNATIONAL LIMITED
MAY 13, 2015

MAY 23, 2016

OPINION OF VALUE

In the opinion of the undersigned appraisers, subject to the assumptions and limiting conditions incorporated herein, the Fair Market Value of a single ordinary share in IH Holdings International Limited at May 13, 2015 was:

$0.417

Sincerely,

CapVal-American Business Appraisers, LLC

Geoffrey S. Grisham, ASA, CVA
Member

Barry A. Baker, CFA, ASA
Member

APPRAISERS' CERTIFICATION

We certify to the best of our knowledge and belief:

- the statements of fact contained in this report are true and correct.

- the reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are our personal, impartial, and unbiased professional analyses, opinions, and conclusions.

- we have no present or prospective interest in the property that is the subject of this report, and we have no personal interest with respect to the parties involved.

- we have no bias with respect to the property that is the subject of this report or to the parties involved with this engagement.

- we have provided appraisal services with respect to the subject security within the last three years from our acceptance of this assignment.

- our engagement in this assignment was not contingent upon developing or reporting predetermined results.

- our compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction of value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated results, or the occurrence of a subsequent event directly related to the intended use of this appraisal.

- our analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the *Uniform Standards of Professional Appraisal Practice* as well as the Standards of The American Institute of Certified Public Accountants, the American Society of Appraisers, The Institute of Business Appraisers and the National Association of Certified Valuators and Analysts.

- Geoffrey S. Grisham and Barry A. Baker have visited the offices of IH Holdings International Limited in Raleigh, NC in connection with this assignment.

- No person other than the undersigned provided material professional assistance in connection with this appraisal.

Geoffrey S. Grisham, ASA, CVA

Barry A. Baker, CFA, ASA

May 23, 2016

EXECUTIVE SUMMARY

Overview:
The goal of IH Holdings International Limited ("IH" or the "Company") is to facilitate investment in, develop, and commercialize low-energy nuclear reaction ("LENR") technologies by focusing on identifying and developing promising LENR technologies and working with leading industrial partners. To date, LENR is an unproven technology; however, if the technology can successfully be developed and commercialized, it has the potential to make a substantial environmental and economic impact on the world. LENR technology would provide low-cost energy without using radioactive material, natural gas or coal as a feedstock, and would not generate radioactive waste or emit carbon dioxide.

Before the formation of the Company, Industrial Heat, LLC raised roughly $22 million through the sale of members' equity and the issuance of convertible debt from inception in 2012 to second quarter 2015, to fund LENR R&D. A group of investors formed Industrial Heat, LLC as a Delaware limited liability company on October 24, 2012. In May 2015 Industrial Heat, LLC underwent a corporate reorganization that resulted in the formation of IH Holdings International Limited, the subject of this appraisal. IH was formed to act as an international holding company to develop and commercialize LENR technologies. Coincident with the formation of IH and the reorganization, IH raised $50 million in a series A preferred stock offering which management projects will fund loses through the third or fourth quarter 2016.

The Company has invested roughly $21.5 million in several LENR technologies as of the Valuation Date including:

1) Dr. Andrea Rossi's Energy Catalyzer ("E-Cat") technologies;
2) New Heat. LLC – Brillouin Energy Corp;
3) Cooper Core Tech ("CCT");
4) HMRI, Ltd., Antonio LaGatta's technology;
5) Letts technology;
6) Tadahiko Mizuno research; and
7) Swartz/Hagelstein research.

At the Valuation Date, IH owns a 100% interest in the following subsidiaries, unless otherwise stated:

1) IPHBV Holdings Ltd. (UK company) owns IPH International B.V. (Netherlands) – E-Cat;
2) Industrial Heat, LLC (Delaware) – US operating company; and
3) New Heat, LLC (Delaware).

Financial Information:
We relied upon internally prepared consolidated IH financial statements including income statements and cash flow statements for calendar years 2012, 2013, and 2014. We also relied on internally prepared consolidated IH balance sheets ending December 31, 2012, 2013, 2014. We also

relied on a detailed expenditure-by-project breakdown prepared by the Company's CFO, Jim Fogleman. We also relied on management's assertion that IH did not spend any material money on R & D related investment or expenditures from January 1, 2015 to May 13, 2015, the Company had no debt as of May 13, 2015, and management's estimate of cash at May 13, 2015.

Valuation: Our valuation treats IH Holdings International Limited, the subject of our appraisal, as one entity with a number of investments and R & D expenditures in LENR. We used a cost approach to value the Company, and the Option-Pricing Method to allocate the equity value of the Company to a single ordinary share.

Summary: This is a summary of an appraisal report and should not be read without the balance of the report, which is necessary for a full understanding of the relevant issues.

OPINION OF FAIR MARKET VALUE
OF A SINGLE ORDINARY SHARE
IH HOLDINGS INTERNATIONAL LIMITED
MAY 13, 2015

MAY 23, 2016

TABLE OF CONTENTS

 IH-00022344

1.0 DISCLOSURES AND DESCRIPTION OF THE ASSIGNMENT

1.1 Subject of the Appraisal

The subject of this appraisal is a single ordinary share of IH Holdings International Limited ("IH" or the "Company").

1.2 Restrictions on Sale or Transfer of the Subject Interest

The Shareholders' Agreement relating to IH Holding International Limited dated May 13, 2015 in Section 6, Matters Requiring Consent of the Investors, defines restrictions on the sale or liquidation of the Company. An Investor Majority, means the holders of at least 50% of series A shares, is required to "negotiate or permit the disposal of shares in the Company amounting to a Sale or IPO that results in an enterprise value being attributed to the Company of less than $1.05 billion."; or to "take steps to effect a distribution of assets on a liquidation or a return of capital (other than where the Company is insolvent within the meaning of section 123 of Insolvency Act 1986) in any such case that results in an enterprise value being attributed to the Company of less than $1.05 billion." The Company's Articles of Association defines substantial restrictions on the sale or transfer of ordinary shares including pre-emption rights, Co-Sale rights, and Drag-along rights detailed in Sections 16, 19, and 20.

1.3 Brief Description of the Subject Business

The purpose of establishing IH was to facilitate investment to develop and commercialize low energy nuclear reaction ("LENR") technologies. Industrial Heat, LLC was originally formed on October 24, 2012 under Delaware law as a limited liability company. In May of 2015 the Company underwent a corporate reorganization that resulted in a UK holding company (company number 9553031 incorporated under the laws of England and Wales), the subject of this appraisal, IH Holdings International Limited with the following subsidiaries:

1) IPHBV Holdings Ltd. (UK company) owns IPH International B.V. (Netherlands);
2) Industrial Heat, LLC (Delaware) – US operating company; and
3) New Heat, LLC (Delaware).

1.4 Nature and Purpose of the Appraisal

This valuation was commissioned by the Company for purposes of determining the Fair Market Value a single ordinary share of IH Holdings International Limited for accounting compliance – specifically to aid the Company's management in calculating the beneficial conversion feature associated with the conversion from debt to equity on May 5, 2015.

1.5 Restrictions on Use of the Appraisal Report

This appraisal may be used for no purposes other than as set forth above. Possession of this report, or a copy thereof, does not carry with it the right of publication of all or part of it without the previous written consent of CapVal-American Business Appraisers, LLC, and then only with proper attribution. CapVal-American Business Appraisers, LLC does not assume any responsibility for its use for any purpose other than as previously described.

1.6 Summary Report

This Summary Appraisal Report and the underlying valuation analysis are in compliance with the following set of professional business valuation standards (the "Standards"):

1. the *Uniform Standards of Professional Appraisal Practice* ("USPAP") as promulgated by the Appraisal Foundation;

2. the Principles of Appraisal Practice, Code of Ethics, and Business Valuation Standards (the "ASA BV Standards") as promulgated by the American Society of Appraisers;

3. the Business Appraisal Standards (the "IBA Standards") and Code of Ethics of The Institute of Business Appraisers, Inc.;

4. the Standards of the National Association of Certified Valuators and Analysts ("NACVA"); and

5. Statement on Standards for Valuation Services – Valuation of a Business, Business Ownership Interest, Security, or Intangible Asset ("SSVS" or the "AICPA BV Standards") of the American Institute of Certified Public Accountants ("AICPA").

The purpose of any appraisal report is to communicate the results of an engagement to estimate value. Nonetheless, the Standards each have slight differences on how they define the various types of written reports. For purposes of this particular valuation engagement, this Report is a:

1. Appraisal Report in accordance with Standards Rule 10-2(b) of USPAP; and

2. Summary Report in accordance with Paragraphs 48(b) and 71 of the AICPA BV Standards, the Standards of The Institute of Business Appraisers, and the NACVA Standards.

While we present a limited explanation of the analysis we completed, we do not consider this a comprehensive report as defined by the Standards[1] due to the fact that this report does not contain all of the detailed explanation inherent in a more comprehensive appraisal report. Specifically, we believe that a comprehensive report would provide a more complete explanation than is provided in this report with regard to the company, the company's technology, and industry background, economic conditions, elements of financial analysis, elements of valuation theory, and the derivation of valuation adjustments. Therefore, only those individuals who have complete knowledge about the appraisal subject may be aware of all of the facts and circumstances that are not contained herein. The essential difference between the various report format options is in the content and level of information provided. These are more fully explained in the specific standards referenced above.

1.7 Standard of Value and Premise of Value

This appraisal utilizes the *Fair Market Value* Standard of Value.

Fair Market Value is defined as:

> "…the price at which the property would change hands between a willing buyer and a willing seller when the former is not under any compulsion to buy and the latter is not under any compulsion to sell, both parties having reasonable knowledge of relevant facts. Court decisions frequently state in addition that the hypothetical buyer and seller are assumed to be able, as well as willing, to trade and to be well informed about the property and concerning the market for such property."
>
> \- *Internal Revenue Service Revenue Ruling 59-60*

There are additional elements generally considered implicit in the Fair Market Value Standard of Value:

- The prospective purchaser is motivated by the profit opportunity implicit in the subject on a stand-alone basis, without considering possible synergistic benefits arising from the combination of the subject's operations or assets with existing or future holdings.
- The subject is evaluated on the basis that it will remain a going concern unless it is determined that the value in orderly liquidation exceeds the returns available as a going concern.
- Fair Market Value implies that the value is stated in terms of cash or cash equivalents.

[1] Specifically, this Report does not constitute a "Comprehensive Written Business Valuation Report" as defined in Section BVS-VIII of the ASA Business Valuation Standards, or a "Detailed Report" as defined in Sections 48(a) and 51 of the AICPA Business Valuation Standards, the IBA Standards, and the NACVA Standards.

- The subject would be exposed to the market for a reasonable length of time to fairly expose it to a reasonable number of prospective purchasers.

- Both the seller and buyer are hypothetical parties. Therefore, specific individuals or parties who might have a particular interest in the subject are not considered as potential buyers or sellers. This eliminates elements of emotion or specific tangible benefit from being elements to be considered in the appraisal. The buyer and the seller are presumed to have an arm's length relationship, both with respect to each other and the subject interest.

1.8 Date of the Valuation

The Valuation Date is May 13, 2015.

1.9 Date of the Report

This report is dated May 23, 2016.

1.10 Ownership and Control

Table 1.10 shows the ownership of IH at May 13, 2015. Series A investors include the CF Woodford Equity Income Fund, and Woodford Patient Capital Trust PLC.

Table 1.10
IH Holdings International Limited
Capitalization Table
May 13, 2015

	Shares Outstanding	Ordinary Share Equivalents	%	Strike Price
Series A shares	1,109,878	1,109,878	4.29%	
Ordinary shares	22,197,579	22,197,579	85.71%	
Series A warrants	1,226,707	1,226,707	4.74%	$ 40.760
Series A warrants	1,363,008	1,363,008	5.26%	$ 73.367
	25,897,172	25,897,172	100.00%	

1.11 Scope of the Assignment

The scope of the appraisal assignment is limited to the development of a good-faith opinion of value based upon the standards of value and the assumptions set forth herein. To the extent that any conclusions in this appraisal are based upon forensic accounting activities performed by the appraiser, the nature of those activities is specifically described in this report.

1.12 Consideration of Revenue Ruling 59-60

Revenue Ruling 59-60 provides guidance in the valuation of the securities of closely-held businesses where there is no ready market for the subject securities. The revenue ruling sets forth a number of factors that must be considered for any valuation for a tax-related purpose. The revenue ruling, while not providing mandatory guidance in valuations for other than tax purposes, does provide a solid analytical foundation:

> "A determination of fair market value…will depend upon the circumstances in each case. No formula can be devised that will be generally applicable to the multitude of different valuation issues arising…Often, an appraiser will find wide differences of opinion as to the fair market value of a particular stock. In resolving such differences, he should maintain a reasonable attitude in recognition of the fact that valuation is not an exact science. A sound valuation will be based upon all the relevant facts, but the elements of common sense, informed judgment and reasonableness must enter into the process of weighing those facts and determining their aggregate significance." [2]

In suggesting areas for consideration, Revenue Ruling 59-60 sets forth eight factors for consideration. While described as applicable to corporations, these factors are applicable to any business enterprise and are set forth in Table 1.12.

Table 1.12
Revenue Ruling 59-60 Section 4.01
Factors to Consider in Valuing the Stock of a Closely-held Corporation

Reference	Factor	Report Section
(a)	Nature and history of the business	1.0 and 2.0
(b)	Economic outlook in general and outlook for specific industry in particular	3.0
(c)	Book value of the stock and financial condition of the business	4.0
(d)	Earning capacity of the company	4.0
(e)	Dividend paying capacity of the company	4.0
(f)	The existence of goodwill or other intangible values	4.0 and 5.0
(g)	Prior sales of the stock and the size of the block of stock being valued	2.3
(h)	Market price of publicly-traded stocks of corporations in a similar business	n/a

[2] Revenue Ruling 59-60, Section 3.01

1.13 Sources of Information

Every business appraisal requires the consideration of many factors including, but not limited to: the subject company's operations and management; the nature of the industry or industries in which the subject does business; economic conditions; and elements of valuation theory. It would be both impossible, and of little value to the reader, to provide a list of every source which contributed to the analysis contained in any appraisal, because these sources go back to basic college accounting and finance texts through current books on valuation theory by, among others, Shannon Pratt, Jim Hitchner, Gary Trugman, and Roger Grabowski. Where specific facts or opinions are cited in this report, we have provided detailed footnote disclosure to assist the reader.

1.14 Limiting Conditions and Assumptions

a) Information, estimates, and assumptions contained in this report were obtained from the management of the Company, its representatives, and other sources considered to be reliable. We did not, however, verify the accuracy of that information or those assumptions.

   We have relied on IH's internally prepared consolidated income and cash flow statements for calendar years 2012, 2013, and 2014, and consolidated balance sheets for December 31, 2012, 2013, and 2014, as well as interviews with Mr. Jim Fogleman, the Company's Chief Financial Officer ('CFO"), and Mr. JT Vaughn, a co-founder of Industrial Heat, and a Company vice-president.

   Based on discussions and assertions from management we have assumed the expenditures from IH's inception to December 31, 2014 provided by management materially represent the R & D expenditures from inception through the Valuation Date of May 13, 2015. We have relied on the Company's management for an estimate of the cash balance at May 13, 2015 after raising $50 million, and distributing $14.2 million to certain shareholders, and that the Company had no debt at May 13, 2015. We have also assumed that the amount distributed to shareholders does not constitute an indication of value for ordinary shareholders existing after the distribution due to management's assumption that the Company does not intend to make redemptions in the future. These assumptions constitute Extraordinary Assumption under the provisions of the *Uniform Standards of Professional Appraisal Practice*. If any of them were to change, the results of our appraisal could change.

   We have also relied on the Company's management for the probabilities that R & D investments and expenditures will achieve commercial viability at the investment/expenditure dates and at the Valuation Date.

We also relied on the following agreements: 1) Shareholders' Agreement relating to IH Holdings International Limited dated May 13, 2015; 2) The Companies Act 2006 Company Limited by Shares New Articles of Association of IH Holdings International Limited dated 2015; 3) Confidential Memorandum Industrial Heat, LLC IPH International B.V. dated July 2014; 4) Capitalization Table prepared by the Company's management; 5) Tom Darden and JT Vaughn investor updates; 6) and other agreements and documents provided by management.

b) We have not audited, reviewed, or compiled any financial information in connection with this appraisal, and express no opinion or any other form of assurance on the underlying financial data. The accuracy of the financial information provided to us is the sole responsibility of the management of the Company.

c) We are not required to give testimony in court, or to be in attendance during any hearing or depositions, with reference to this valuation, unless previous arrangements have been made. We will make reasonable efforts to participate in such hearings or depositions, subject to agreement on time schedules and fees.

d) The opinion of value presented in this report applies to this valuation only and may not be used out of the context presented herein. This valuation is valid only for the date and purpose specified herein.

e) Only the Company and its members, including its and their legal advisors, accounting firm, and any relevant governmental agencies including the IRS, may be given access to and be permitted to use our report for the purposes specifically outlined in this letter. **However, with regard to governmental agencies, this does not include being expertised by the Securities and Exchange Commission**. You may disclose our report only to such persons or entities and only if, prior to disclosing our report, you require each such party to covenant that it will not disclose our report to any third parties and will use our report solely for such purposes. Should you wish to publish or otherwise provide our report to any additional recipients, you shall so notify us in writing and shall refrain from publishing or so providing our report without our prior written consent. We do not assume or accept any responsibility to any third parties who receive our report and, in the event that you provide or disclose the results of our report to any third party, with or without CapVal-American Business Appraisers' consent, you shall indemnify, save, hold harmless, and defend CapVal-American Business Appraisers, and its Members, against any and all claims whatsoever made by any such third party against us.

f) This valuation contemplates facts and conditions existing as of the Valuation Date. Events and conditions occurring after that date have not been considered in the related analysis unless such events were reasonably foreseeable as of the Valuation Date, or unless such events or conditions provided probative information regarding value at the Valuation Date.

g) We are not required to update our report for events or changes in conditions occurring subsequent to the date of this report.

h) The valuation assumes that the Company will continue to operate as a going concern, and that the character of its present business will remain intact.

i) The opinion of value set forth in this report is based upon good-faith, independent research and analysis. The ultimate price paid in any actual transaction is a function of negotiations between a specific buyer and seller, and those negotiations may be affected by individual interests not contemplated in our analysis. The timing of and conditions surrounding such a negotiation would differ from the effective date of our valuation. Therefore, we are not responsible for any buyer or seller's ability or inability to consummate a transaction at the value developed herein.

j) This report is an opinion of value; the IRS or other tax agency may disagree with or reject the opinion. We cannot guarantee the outcome of any such dispute or be financially responsible to the client for any taxes, penalties, or interest imposed as a result of an adverse outcome other than if such outcome is a direct and sole result of our gross negligence or willful misconduct.

k) This report is based upon certain assumptions regarding economic conditions and management performance. Each of those factors is dynamic, and they can never be predicted with certainty. To the extent that the facts and circumstances vary from those underlying our assumptions, the operating and financial results achieved by management will differ from those derived through our analysis, and those differences may be material. Therefore, this report is not a warranty of value to any holder of the subject equity interest. Any buyer or seller is advised to rely on his own analysis in arriving at a decision to purchase or sell the security that is the subject of this appraisal.

l) No federal tax information or analysis contained in this document is intended to be used, nor may it be used, for the purpose of avoiding federal tax or penalties under the Internal Revenue Code or promoting, marketing, or recommending any transaction or matter addressed in this communication.

2.0 HISTORY AND OPERATIONS OF IH HOLDINGS INTERNATIONAL LIMITED

2.1 Form of Organization

IH Holdings International Limited ("IH" or the "Company") (company number 9553031) was incorporated under the laws of England and Wales in May 2015.

2.2 Subsidiaries and Affiliates

The Company has a 100% interest in IPHBV Holdings Ltd. (UK company) and IPHBV owns 100% of IPH International B.V. (Netherlands). In October of 2012 and January of 2013 Industrial Heat, LLC entered into agreements to license the Energy Catalyzer technology ("E-Cat Technology") from Dr. Andrea Rossi ("Rossi"), Leonardo Corporation, and AmpEnergo ("AEG"). In April 2013 these assets were transferred to IPH International B.V. As of the Valuation Date the Company had paid Rossi and AEG a total of $17 million for successfully completing milestones (milestones #1 and #2) related to E-Cat Technology; however, the Company management has yet to independently validate that the technology works as Rossi has claimed.

The Company has a 100% interest in Industrial Heat, LLC (Delaware).

The Company has a 100% interest in New Heat, LLC (Delaware). New Heat owns the Company's investment in Brillion Energy Corp.

2.3 Prior Transactions in the Subject Interest

To fund Industrial Heat, LLC the company raised roughly $12.5 million in convertible debt and $9.5 million through the sale of members' equity from the fourth quarter of 2012 to second quarter of 2015. The ordinary shares were sold at per unit prices ranging from $0.45 to $1.00. On May 5, 2015, the Company converted the aforementioned debt to equity.

On May 13, 2015 IH Holdings International Limited sold approximately 1.1 million series A shares in a $50 million offering to two funds managed by Woodford Investment Management.

2.4 Management and Staff

Tom Darden, Chairman and CEO: Mr. Darden is a co-founder of Industrial Heat, the predecessor to IH Holdings International, Ltd. He currently serves as Chairman and CEO and is active in management on a daily basis to ensure a scaled and thoughtful development of its energy technologies. He is also the Chief Executive Officer of Cherokee Investment Partners, LLC, and founder of its predecessors. From 1984 to 2000, he was Chairman of Cherokee Sanford Group, the largest privately-held brick company in the United States and the Southeast's largest soil pollution

remediation company. Mr. Darden has invested in technology inventors for over 25 years, starting with a biotechnology company created with a professor at Virginia Polytechnic Institute and State University. From 1981 to 1984, Mr. Darden was a consultant with Bain & Company in Boston. He is on the Boards of Shaw University, RTI International, the Yale Center for Environmental Law and Policy, and Environmental Defense Fund's 501 (c) (4). He received the 2010 YPO-WPO Sustainability Award. Mr. Darden earned an MRP in environmental planning from the University of North Carolina at Chapel Hill, a JD from Yale Law School and a BA from the University of North Carolina at Chapel Hill, where he was a Morehead Scholar. While Mr. Darden has ongoing commitments to Cherokee's funds, these obligations are not exclusive and are decreasing over time.

John Mazzarino, Director: Mr Mazzarino is a Director of IH Holdings International, Ltd. He is also a co-founder and Managing Principal of Cherokee Investment Partners and was an early investor in Industrial Heat. Prior to establishing Cherokee, Mr. Mazzarino was a Manager at Bain & Company in Boston where he focused on corporate and business unit strategy and mergers and acquisitions. He serves on the Advisory Board of the MIT Sloan School Finance Group, is Chairman of the Advisory Board of Hometown America, a leading owner of manufactured housing communities, is a member of the Board of Directors of Fidus Investment Corp, a publicly traded investment company, and is a director of Cherokee Gives Back. Mr. Mazzarino received a BA in Mathematics from Colgate University where he was elected to Phi Beta Kappa and a MS in Management from MIT's Sloan School of Management.

JT Vaughn, Vice President: Mr. Vaughn is a co-founder of Industrial Heat, the predecessor of IH Holdings International, Ltd. JT currently serves as Vice President and is responsible for day-to-day operations as well as sector acquisitions and investor relations. Prior to joining the company, he was a venture investment manager with Cherokee Investment Partners and director of the Cherokee Challenge. Mr. Vaughn also worked on brownfield real estate projects and other venture investment opportunities for Cherokee. Mr. Vaughn is an advisor to Sovereign's Capital, a venture fund focused on early growth-stage companies in emerging markets, and on the Board of Directors of Smart Farm, a startup agriculture technology company. Previously he worked with Selam Awassa Business Group, the Center for Creative Leadership and Cherokee Gives Back, all in Ethiopia. Mr. Vaughn received a BA in Economics, with a minor in Entrepreneurship, from the University of North Carolina at Chapel Hill.

Joe Murray, R&D and Engineering: Mr. Murray joined IH Holdings International, Ltd in June 2015 to lead the Company's R&D and Engineering efforts. Mr. Murray has over eighteen years of experience in system architecture development, digital signal and image processing, software development, systems engineering, acquisition planning and program management. He has extensive experience in real-time systems design, system architecture, statistical analysis of complex phenomena and physical simulation. Prior to joining the company, Mr. Murray was a co-founder and principal at 3 Phoenix, a leading systems engineering firm focused on providing innovative solutions to the United States Department of Defense and other industry partners. 3 Phoenix was acquired by Ultra Electronics in 2014. In addition Mr. Murray was the System Architect for the AN/SPS-74 Periscope Detection Radar, a modern CVN-based processing system based on a Hybrid System Architecture. Mr. Murray has held the positions of Chief Scientist, Chief Technology Officer, the Director of Strategic Technologies, and Chief Engineer at Digital System Resources (acquired by General Dynamics Advanced Information Systems in 2004). In these capacities, Mr. Murray had a diverse set of responsibilities including evaluation of new technologies, design of system architectures, and systems integration. Mr. Murray also currently serves as Chairman of the Board of the Wireless Research

Center. Mr. Murray earned a BS from Michigan State University, a MS from the University of Utah and ABD in pursuit of Ph.D. from the University of Maryland. He also participated in the International Exchange program at RWTH Aachen University, Germany.

S.H. "Jim" Fogleman, III, CFO: Mr. Fogleman served as CFO for Industrial Heat, the predecessor to IH Holdings International, Ltd, since inception in 2012, and continues in the same role for the company. He also serves as CFO for Cherokee Investment Partners. He is responsible for financial reporting and compliance matters and other administrative functions on behalf of both firms. Prior to joining Cherokee in 2005, he held CFO positions with privately held companies involved in start-ups, turnarounds, and real estate development. These companies included Blue Rhino Corporation, the nation's largest propane cylinder exchange marketer/distributor; Platinum Service Corp., a developer of Boston Market restaurant properties located primarily in the Carolinas and Georgia; and National Packaging Solutions Group, a southeastern U.S. manufacturer and distributor of industrial packaging. Mr. Fogleman began his career in public accounting with Price Waterhouse and later with Pryor, Sills and Fogleman and the Daniel Professional Group. He earned a BS from the University of North Carolina at Chapel Hill and is a licensed CPA in North Carolina.

2.5 Competition

The Company has competition from existing electrical energy producers using nuclear power (fission), natural gas and coal, as well as competition from existing clean energy technologies using water, wind, and solar technology. There is also technology being developed that would use natural gas or coal to produce electrical power without emitting mercury, lead, radioactive particles, carbon dioxide, or other hazardous materials that is estimated to cost about as much as traditional natural gas and coal plants.

Competition also exists in hot fusion technology being developed by multiple government funded organizations across the world, as well as privately funded companies attempting to develop and commercialize fusion technology including: 1) Helion Energy based in Redmond Washington that has raised $12 million from Peter Thiel's venture firm Mithril Capital Management and others; 2) Tri Alpha Energy founded in 1998 which has apparently raised $140 to $200 million from investors like Paul Allen, Goldman Sachs, and Venrock; and 3) General Fusion, a Canadian company founded in 2002 that has raised roughly $75 million from Jeff Bezos, and others.[3]

[3] Nanalyze, *3 Nuclear Fusion Energy Companies for Investors to Watch*, December 4, 2015, available at www.nanalyze.com.

3.0 ECONOMIC AND INDUSTRY FACTORS AFFECTING THE BUSINESS

The coal and natural gas power industry in the U.S. was expected to have revenues of roughly \$100.1 billion in 2014, according to IBISWorld.[4] According to First Research, the global electric utility market will reach \$2.2 trillion in 2017.[5] According to IBISWorld, over the last five years the industry has increasingly invested in natural gas plants, moving away from coal-based electricity generation; coal-burning plants fulfilled roughly 59.2% of electricity demand, while natural gas satisfied 39.4% of demand in 2014. IBISWorld believes fossil fuel-fired electricity will continue to dominate the U.S. energy portfolio, however, "nuclear, hydroelectric and renewable electricity generation are expected to grow strongly over the following five years".[6] This strong growth is largely driven by concerns over greenhouse gas emissions. Specifically, the industry is concerned with the U.S. Environmental Protection Agency's ("EPA") Clean Power Plan that envisions a 30% reduction of 2005 level carbon dioxide emissions by 2030.[7] Another challenge facing the industry is the volatility of natural gas prices, while coal prices have remained relatively stable.[8]

Clearly, a power generating technology that did not rely on radioactive elements, natural gas or coal as inputs, that generated essentially zero pollution would be revolutionary and would change the power generating industry regardless of economic conditions.

---

[4] IBISWorld Industry Report 22111a, "Coal and Natural Gas Power in the U.S." published December 2014. Available from www.ibisworld.com. IBISWorld reported that revenue for the U.S Coal and Natural Gas Industry in 2014 is expected to be \$100.1 billion, and that revenue had been growing at an average annual rate of 0.2% since 2010.

[5] First Research, Profile Overview Electric Utilities, January 4, 2016. Available at www.firstresearch.com by subscription.

[6] IBISWorld Industry Report 22111a, "Coal and Natural Gas Power in the U.S." published December 2014. Available from www.ibisworld.com. IBISWorld reported that revenue for the U.S Coal and Natural Gas Industry in 2014 is expected to be \$100.1 billion, and that revenue had been growing at an average annual rate of 0.2% since 2010.

[7] Ibid.

[8] First Research, Profile Overview Electric Utilities, January 4, 2016. Available at www.firstresearch.com by subscription.

4.0 FINANCIAL ANALYSIS

4.1 Information Provided

Appraisers generally rely upon the financial statements of a subject for the basic information about a company's historic financial position and performance. Financial statements come in many forms and can be relied upon in varying degrees as indicators of actual condition and performance. Audited, accrual-based financial statements provide the highest level of confidence, while internally-prepared, cash-basis statements are often the least reliable. Tax returns, while sworn statements, are reliable only to the extent that they are based upon accurate information.

Although audited financial statements carry the highest level of confidence for the user, it should be remembered that they are not necessarily correct. Audit procedures are designed only to enable the auditor to opine that, based upon applying various testing procedures mandated by generally accepted auditing standards, the auditors believe that the statements fairly represent the financial condition and results of operations and that they are presented fairly, in all material respects, in conformity with generally accepted accounting principles. Audited statements remain the responsibility of management, not the independent accounting firm. The other forms of presentation, including the tax returns, carry no opinion or any other form of assurance.

4.2 Financial Statement Analysis

Tables 4.2.1, 4.2.2, and 4.2.3 present consolidated balance sheets, consolidated statements of operations, and consolidated statements of cash flows taken from the Company's internally generated statements. Due to the early-stage of the Company's subsidiary units and the lack of any product revenue, common-size statements, usually presented in an appraisal, would provide little analytical benefit and have been omitted from this analysis.

Table 4.2.1
IH Holdings International, Ltd. and Subsidiaries
Historic Consolidated Balance Sheets (unaudited)
($ - 000)

December 31,	2012	2013	2014
Assets			
Current assets			
Cash	$ -	$ 137	$ 248
Prepaid expenses	-	10	26
Interest Receivable	-	-	-
Redacted-Other Investment	-	-	-
Total current assets	-	147	274
Investments			
Contractual payment re: Rossi IP	-	-	-
LENR Sector Investments - Rossi Contract	550	15,500	15,500
LENR Sector Investments - Redacted-Other Investment	-	-	145
LENR Sector Investments -	-	-	-
LENR Sector Investments - New Heat	-	322	332
LENR Sector Investments- Redacted-Other Investment	-	-	-
LENR Sector Investments-			
Other investments	-	0	101
Total investments	550	15,822	16,078
1MW E-Cat Unit (net)	1,446	1,232	1,018
FF&E - research lab facilities (net)	-	104	89
Total assets	$ 1,996	$ 17,305	$ 17,459
Liabilities & Owners' Equity			
Liabilities			
Current liabilities			
Accounts payable	$ -	$ 155	$ 221
Accrued liabilities	50	-	564
Total current liabilities	50	155	785
Convertible promissory notes	-	11,400	12,500
Total liabilities	50	11,555	13,285
Owners' Equity			
Members' capital	2,000	7,693	9,111
Capital stock - preferred	-	-	-
Capital stock - ordinary	-	-	-
Equity & restructuring costs	-	-	-
Accumulated surplus (deficit)	(54)	(1,943)	(4,937)
Total Owners' Equity	1,946	5,750	4,173
Total Liabilities & Owners' Equity	$ 1,996	$ 17,305	$ 17,459

Table 4.2.2
IH Holdings International, Ltd. and Subsidiaries
Historic Consolidated Statement of Operations (unaudited)
($ - 000)

12 months ended December 31,	2012	2013	2014
Revenue:			
Management fee-interco	-	-	-
Interest income	$ -	$ 18	$ 11
Total revenue	-	18	11
Expenses:			
Intellectual Property	-	584	552
Research & development	-	345	552
Legal and accounting	-	318	461
Contract service providers	-	22	250
Public relations	-	89	132
Business Development			
Strategic Consulting & Advisory Board			
Travel	-	95	148
Facilities and maintenance	-	127	94
General & administrative	-	103	578
Interest expense			
Gain or Loss on Asset Disposal			
Depreciation - 1MW-E-Cat Unit	54	214	214
Depreciation - FF&E research lab facility	-	10	24
Total expenses	54	1,907	3,005
Net income (deficit) from operations	$ (54)	$ (1,889)	$ (2,994)

Table 4.2.3
IH Holdings International, Ltd. and Subsidiaries
Historic Consolidated Statement of Cashflows (unaudited)
($ - 000)

12 months ended December 31,	2012	2013	2014
Operating activities:			
Net income (deficit) from operations	$ (54)	$ (1,889)	$ (2,994)
Depreciation	54	225	238
Gain or Loss on Asset Disposal	-	-	-
Compensation in kind-equity	-	-	-
Increase in reserve Redacted-Other Investment	-	-	-
Changes in working capital			
Prepaid expenses & other	-	(28)	(26)
Accounts payable & accrued liabilities	50	105	630
Other liability	-	-	-
Cash provided (used) by operations	50	(1,589)	(2,152)
Investing activities:			
Investments	-	(0)	(101)
LENR Sector Investments	(550)	(15,254)	(145)
IMW E-Cat Unit	(1,500)	-	-
FF&E - research lab facilities	-	(114)	(8)
Proceeds from Asset Disposal	-	-	-
Cash provided (used) by investing activities	(2,050)	(15,368)	(254)
Financing activities:			
Convertible promissory notes	-	11,400	1,100
Members' contributed capital	2,000	5,693	1,418
Distrbutions to members	-	-	-
Capital stock - preferred	-	-	-
Capital issuance/restructuring costs	-	-	-
S-T bridge loans-borrowings	-	-	-
S-T bridge loans-repayment	-	-	-
Cash provided (used) by financing activities	2,000	17,093	2,518
Net cashflows	-	137	111
Cash - beginning	-	-	137
Cash - ending	$ -	$ 137	$ 248
Noncash items:			
Accrued interest receivable - New Heat	-	$ 18	$ 11
Conversion of debt to members' equity	-	-	-
Exchange of members' equity for ordinary stock	-	-	-

4.3 Comparison With Industry Benchmarks

Enterprises do not operate in a vacuum, and individual performance and condition can often be evaluated against the performance and condition of other industry participants. Superior financial performance enhances value; lagging performance decreases value.

Benchmarks can be internal, where a company's performance is measured against its own metrics over time, or external, using data published by various companies providing benchmarking data. We believe that comparison of an internal time series provides a better look at a company's progress and condition than comparison with guidelines due to the uncertainty about some guideline data (unverified sources and potential inconsistency in inputs) as well as the problems caused by potential differences between the subject company and the elements providing data to the provider.

Given IH's relatively early stage, and its' lack of revenue, at the Valuation Date, comparisons are both difficult and meaningless. Accordingly, we have omitted the benchmarking exercise from this analysis.

4.4 Projected Financial Performance

While historical financial statements provide a foundation for the analysis of any business, they provide a reliable basis for valuation only to the extent that they augur future performance.

> "Valuation of securities is, in essence, a prophesy as to the future and must be based on facts available at the required date of appraisal." [9]

An appraisal based exclusively on the historical record in the face of reasonably predictable and anticipated departure from that performance cannot lead to a reasonable prophecy of future performance. Early-stage technology companies generally must rely on estimates of the future.

Management had not prepared a consolidated forecast for IH Holdings International Limited. We believe a forecast beyond estimating what the Company will spend over the near-term would be highly speculative. The Company has no clear path to a commercial product and even forecasting revenue, would be essentially a guess as to its magnitude and timing. Forecasting cash flow would be more speculative, and we believe impossible without more progress on development of LENR technologies. At the Valuation Date the Company had roughly $35.4 million in cash after distributing $14.2 million to certain equity holders and incurring $0.5 million in fund raising expenses. The Company's management estimates that the cash on-hand will fund the Company through the third or fourth quarter of 2016. Based on discussions with management, there is no certainty that IH will be able to raise additional funds.

---

[9] Revenue Ruling 59-60, Section 3.03

5.0 VALUATION OF A 100% EQUITY INTEREST

5.1 Basis for Valuation

There are three traditional and accepted approaches to valuing an enterprise:

a. The income approach estimates value by quantifying the benefits to the owners from the business operations or liquidation in relationship to the timing and risk associated with actually receiving those benefits.

b. The market approach estimates value by comparing the subject's operating and financial characteristics to similar publicly-traded ("guideline companies") companies and derives value based upon the trading in the stocks of the public companies or, alternatively, through examination of actual sales of privately-held companies ("guideline transactions") or transaction(s) involving the company's own securities ("backsolve method").

c. An asset-based approach looks at the value of a subject's equity as the Fair Market Value of all of its assets, both tangible and intangible, reduced by the value of the liabilities. The Cost Method is an asset-based approach based the concept of economic principle of substitution. The value of an asset is estimated according to the cost to construct an asset of equal desirability and utility. Commonly used methods under the cost approach include the replacement cost method and the reproduction cost method. Cost approach methods are most applicable to the valuation of IP when the cost to construct the intangible asset is well supported and when the IP is relatively new or suffers little obsolescence. When the IP is not normally income producing, the cost approach may be the only appropriate approach.[10]

5.2 Valuation Methods Considered but Rejected

We considered, but rejected, the following approaches and methods:

a. Market approaches. We rejected market approaches because the Company had no revenue and no EBITDA to compare to market transactions. We also rejected the market based approach based on an investment in the Company's own securities. A U.K. based investment firm, Woodford Investment Management invested $50 million in the Company in May 2015 for about 5% of the Company's shares. If one simply divides $50 million by 5%, this equals $1 billion. According to the Company's management, Mr. Woodford and Mr. Darden have a

[10] According to the AICPA from the *Accounting and Valuation Guide: Assets to Be Used in Research and Development Activities*, page 1.04: "For purposes of measuring the fair value of in-process research and development (IPR&D) assets, the cost approach is applied only in limited circumstances. For example, the cost approach may be used to value dedicated, single purpose fixed assets used in research and development (R&D) activities, assets that can be substituted effectively through replacement or reproduction, **or IPR&D projects that are in initial stages of development in which robust prospective financial information does not exist.**

personal relationship, and the investment was not based upon an auction or discussions and negotiations with multiple potential investors. According to management it was based "more on the relationship and the ability for Mr. Woodford to help a potentially world changing technology". The Standard of Value for this appraisal is Fair Market Value as defined in Section 1.7 of this appraisal. We believe this relationship and desire of Mr. Woodford, along with the lack of negotiations among multiple investors, places this investment outside the Fair Market Value standard. The following quote is from a Mercer Capital article: "A specific buyer for a subject interest with strategic or synergistic motivations may pay a price that is unaffordable to a typical buyer who lacks synergistic opportunities or strategic motivation to enter a market. So fair market value will likely not reflect the highest price that might be obtained. It more probably should reflect the consensus rational pricing that might be discerned by a group of buyers with typical motivations to achieve reasonable returns based on the expected cash flows of an investment."[11] We do not believe a hypothetical investor would pay $1 billion for a 100% interest in IH Holdings International Limited at May 13, 2015.

c. Income Approach – We rejected all income approaches for the Company because no forecast existed, and any forecasts of cash flow would be highly speculative. Without the ability to forecast cash flow with some degree of confidence, an income approach is essentially meaningless. We believe it would also be very difficult to estimate a Discount Rate, even if a projected cash flow were available, due to the early-stage and risky nature of the Company's unproven technology.

After consideration of all possible appraisal methods, we ultimately used the Cost Method to value the Company. A 100% equity interest in IH Holdings International is equal to the sum of its assets less liabilities. We used the Cost Method to estimate the Company's assets which included LENR intellectual property and cash.

5.3 Application of the Cost Approach

The application of the cost approach requires the identification of R & D expenditures incurred in the course of development from inception in 2012 to the Valuation Date, adjusted for risk and the time value of money.

Table 5.3.1 details the Company's R & D expenditures from inception to December 21, 2014 subdivided by project totaling $21.5 million. In our analysis we have assumed that G & A expenses did not add value to the Company's intellectual property based assets, and therefore, we excluded them from the cost approach.

[11] Mercer Capital Insights, *Fair Market Value vs. The Real World*, no author listed, available at http://mercercapital.com/article/fair-market-value-vs-the-real-world/, accessed February 22, 2016.

Table 5.3.1
IH Holdings International, Ltd and Subsidiaries
Detail of R&D Expenditures
May 13, 2015
($-000)

Project/Investment	Year	Investment Date	Investment	P&L	R&D Expenditure
Rossi					
	2012	10/31/2012	2,050	-	2,050
	2013	4/30/2013	14,950	1,645	16,595
	2014	Various	-	2,174	2,174
New Heat					
	2013	4/30/2013	304	0	304
	2014	Various	-	3	3
	2014	Various	145	9	154
	2014	Various	-	11	11
Redacted-Other Investment	2014	Various	-	11	11
	2014	Various	-	15	15
	2014	Various	-	2	2
	2013	Various	114	-	114
	2014	Various	8	-	8
Intellectual Proprty Strategy/Patents					
	2013	Various	-	11	11
	2014	Various	-	83	83
		Total	**17,571**	**3,964**	**21,535**

Table 5.3.2 details the risk adjustment and adjustment for the time value of money for each R&D project. The risk adjustment of each R & D expenditure is based on management's assessment of projects' probability of success at the investment, and management's assessment of the projects' probability of success at the Valuation Date. A decrease in the probability of success leads to a

value of an expenditure below cost, and an increase in the probability of success results in a valuation above cost. Following the risk adjustment, we adjusted, the risk-adjusted value, for the time value of money using the short-term annual federal rate ("AFR") for May 2015 of 0.56%. The risk and time value of money adjusted value of R&D expenditures totals $10.9 million.

Table 5.3.3 summarizes the Cost Method adding cash from the estimated R&D assets value of $46 million.

Table 5.3.2
IH Holdings International, Ltd and Subsidiaries
Risk and Time Value of Money Adjusted R&D Expenditures
May 13, 2015
($-000)

Project/Investment	Year	Investment Date	R&D Expenditure	Estimated Probability of Success at the Investment Date	Estimated Probability of Success at the Valuation Date	Risk Adjustment Factor	R&D Expenditures Risk Adjusted	Time Value of Money Factor	R&D Expenditures Adjusted for Risk and TVM
Rossi									
	2012	10/31/2012	2,050	10%	15%	150.0%	3,075	1.007	3,097
	2013	4/30/2013	16,595	50%	15%	30.0%	4,978	1.006	5,010
	2014	Various	2,174	15%	15%	100.0%	2,174	1.004	2,181
New Heat									
	2013	4/30/2013	304	10%	10%	100.0%	304	1.006	306
	2014	Various	3	10%	10%	100.0%	3	1.004	3
Redacted-Other Investment	2014	Various	154	20%	5%	25.0%	38	1.004	39
	2014	Various	11	10%	10%	100.0%	11	1.004	11
	2014	Various	11	5%	5%	100.0%	11	1.004	11
	2014	Various	15	5%	5%	100.0%	15	1.004	15
	2014	Various	2	5%	5%	100.0%	2	1.004	2
Facility R&D									
	2013	Various	114	5%	5%	100.0%	114	1.006	115
	2014	Various	8	5%	5%	100.0%	8	1.004	8
Intellectual Proprty Strategy/Patents									
	2013	Various	11	5%	5%	100.0%	11	1.006	11
	2014	Various	83	5%	5%	100.0%	83	1.004	83
		Total	**21,535**				**10,828**		**10,891**

Table 5.3.3
IH Holdings International, Ltd and Subsidiaries
Summary of the Cost Method
May 13, 2015
($-000)

Estimated Value of R&D Assets	$	10,891
Cash at May 13, 2015		35,377
Estimate Fair Market Value of a 100% Equity Interest	$	46,268
Say		**$46,000**

Based upon the preceding analysis, it is our opinion that the Fair Market Value of a 100% equity interest in IH International Holdings LLC, at May 13, 2015 was:

$46 million

6.0 Application of the Option-Pricing Method to Allocate Equity Value

The *Valuation of Privately-Held-Company Equity Securities Issued as Compensation – Accounting and Valuation Guide,* a practice aid published by the American Institute of Certified Public Accountants in 2013, identifies four methods of allocating equity value to multiple classes of securities. [12] We utilized the Option-Pricing Method, discussed in the practice aid. Three methods identified in the practice aid that we did not utilize are 1) the Current-Value Method, 2) the Probability-Weighted Expected Return Method (PWERM), and 3) a hybrid method involving use of the PWERM.

Current-Value Method:

The Current-Value Method is predicated upon the assumption that various classes of preferred shareholders will act in their own best interests at a point in time to maximize the return on their investment. According to the AICPA's practice aid, there are only two situations in which the use of the Current-Value Method is appropriate:

> "The first occurs when a liquidity event in the form of an acquisition or dissolution of the enterprise is imminent, and expectations about the future of the enterprise as a going concern are virtually irrelevant. The second occurs when an enterprise is at such an early stage of its development that (a) no material progress has been made on the enterprise's business plan, (b) no significant common equity value has been created in the business

[12] *Valuation of Privately-Held-Company Equity Securities Issued as Compensation – Accounting and Valuation Guide,* (New York: American Institute of Certified Public Accountants, Inc., 2013).

> above the liquidation preference on the preferred shares, and (c) there is no reasonable basis for estimating the amount and timing of any such common equity value above the liquidation preference that might be created in the future."[13]

We rejected the use of the Current-Value Method because the Company did not meet the criteria specified for use of the Current-Value Method (no progress on business plan or, alternatively, a pending liquidity event). The Current-Value Method looks at the past, while the Option-Pricing Method is inherently forward-looking. In a developing company like IH, we believe that, while a hypothetical liquidation might arguably produce a higher value for equity than moving forward, the ultimate value is based upon the investors' anticipation of substantial future value.

Probability-Weighted Expected Returns Method:

Under the Probability-Weighted Expected Return Method (PWERM), enterprise value, assuming various future scenarios, is allocated to classes of securities. Unlike the Current Value Method, this method is forward looking. However, the PWERM requires a substantial number of realistic assumptions including the determination of possible future outcomes, the assignment of probabilities to each outcome, and dates for each event. IH's technology was in the early development stage at the Valuation Date. We believe that objectively-determined numbers and the range of possible outcomes cannot be easily and reliably simulated until the Company can make substantial progress on technology development, or has estimated exit values from a syndicate of investment bankers or acquirer. Therefore, and notwithstanding our belief that the PWERM method provides the best simulation of the thought processes of investors, we have elected to use the Option-Pricing Method in our analysis.

Option-Pricing Method:

The Option-Pricing Method ("OPM"), like all other analyses for valuing ordinary shares in the presence of preferred, analyzes the rights of the ordinary shares against those of the preferred; if the prior claims of the preferred holders are not satisfied, the ordinary share has no value. The OPM treats ordinary shares and preferred shares as call options of the Company's equity value, with exercise prices based on preferred preferences.

The Company raised $50 million in a series A preferred round, priced at $45.05 per share in May 2015. The series A shareholders have a $50 million preference, but do not have participation rights. Series A shareholders do have the right to convert to ordinary shares. The series A shareholders were also granted series A warrants as part of the financing at two different strike prices defined in Table 6.0.1. Series A shareholders will receive the first $50 million, and ordinary shareholders will receive all proceeds between $50 million and $955 million in a liquidation or sale of the Company. Above $955 million, ordinary shareholders will share pro rata based on the numbers of units outstanding until ordinary shares reach a price where series A shareholders and warrant holders are economically incented to convert to ordinary shares. These ordinary share prices are defined in Table 6.0.2.

---

[13] Ibid.

Management determined that a 3.5-year estimate for a liquidity event as of the Valuation Date was valid. In order to value the option, and to derive a per-share value, we utilized a Black-Scholes model with a life of 3.5 years developed from the estimated probability of the timing of a liquidity event provided to us by management. A summary of the capitalization and the claims of the various classes are shown in Table 6.0.1. Table 6.0.2 shows the "break points," the enterprise values at which an owner of each class of preferred would have his rights to receive distributions modified or would voluntarily convert to ordinary shares in order to maximize his economic return.

Table 6.0.1
IH Holdings International Limited
Capitalization Summary

	Shares Outstanding	Ord. Share equivalents	%	Issue/Strike Price (Per Share Amounts)	Series A Converts (Per Share Amounts)	Liquidation Preference (Per Share Amounts)	Participation Rights	Cap	Liquidation Preference
Series A shares	1,109,878	1,109,878	4.29%	$ 45.050	$ 45.050	$ 45.050	No	No	$ 50,000,000
Ordinary Shares	22,197,579	22,197,579	85.71%						
Series A warrants	1,226,707	1,226,707	4.74%	$ 40.760	$ 40.760	$ 40.760	No	No	50,000,000
Series A warrants	1,363,008	1,363,008	5.26%	$ 73.367	$ 73.367	$ 73.367	No	No	100,000,000
	25,897,172	25,897,172	100.00%						$ 200,000,000

Table 6.0.2
IH Holdings International Limited
Prospective Breakpoints for Option Pricing Method

Breakpoints for debt & liquidation preferences	Breakpoint #1
Warrant strike price per preferred share	$ -
Series A preferred shares	$ 50,000,000
Subtotal	$ 50,000,000
Less: cash proceeds from warrants	-
	$ 50,000,000

	Common + Participating	Series A Warrants Convert	Series A Convert	Series A Warrants Convert
Breakpoints for common stock equivalents				
Strike price per common stock equivalent (CSE)	n.a.	$ 40.7595	$ 45.0500	$ 73.3671
Common stock equivalents				
CSEs for each equity class	22,197,579	1,226,707	1,109,878	1,363,008
Total CSE's when class participates	22,197,579	23,424,286	24,534,164	25,897,172
Claims paid prior to equity participation				
Series A preferred shares	50,000,000	50,000,000	-	-
Subtotal	50,000,000	50,000,000	-	-
Less: cash proceeds from warrants	-	(50,000,000)	(50,000,000)	(150,000,000)
	$ 50,000,000	$ -	$ (50,000,000)	$ (150,000,000)
	Breakpoint #1	Breakpoint #2	Breakpoint #3	Breakpoint #4
Equity value when class participates				
Claims paid prior to equity participation	$ 50,000,000	$ -	$ (50,000,000)	$ (150,000,000)
Additional equity value required for participatio	-	954,762,873	1,105,264,002	1,900,001,467
Less: cash proceeds from the exercise of options	-	-	-	-
	$ 50,000,000	$ 954,762,873	$ 1,055,264,002	$ 1,750,001,467

Option pricing model assumptions

		Time until expiration (years)	3.50
Estimated enterprise value	$ 46,000,000	Volatility (annual)	48.5%
Less: non-convertible debt	-	Risk-free interest rate (annual)	1.12%
Value attributable to equity	**$ 46,000,000**	Dividend yield (annual)	0.00%

In order to estimate volatility, we calculated historical volatility of the 5 publicly-traded companies similar to IH. Volatility for stock prices over a 3.5-year period is presented in Table 6.0.3. Table 6.0.3 also estimates the public company's market capitalization and debt as of May 13, 2015. Table 6.0.4 takes into account differences in the public companies' capital structures, and the subject company's capital structure by "delevering" and then "relevering" volatility to estimate IH's equity volatility as if it were publicly- traded. Based upon Tables 6.0.3 and 6.0.4, we used a volatility of 48.5% as an input to the Black-Scholes option models used to calculate the value of an ordinary share of the Company.

Table 6.0.3
IH Holdings International Limited
Estimation of Volatility as if Public

Public Company	Symbol	Volatility for OPM (1)	Market Capitalization (2)	Debt (3)
Ameresco, Inc.	AMRC	40.9%	326.1	102.8
Ballard Power Systems, Inc. (4)	BLDP	84.6%	340.2	8.2
Argan, Inc.	AGX	41.4%	509.0	-
Powell Industries, Inc.	POWL	35.0%	413.7	2.8
Capstone Turbine Corp.	CPST	55.3%	241.5	16.5
	Median	41.4%		
	Mean	**51.4%**		
	Standard Deviation	20.0%		
	Coefficient of Variation	**0.39**		

(1) Based upon volatility in stock prices over 3.5 years preceding valuation date .
(2) In millions, estimated market capitalization at May 13, 2015.
(3) In millions, public filing with SEC.
(4) Debt at 12-31-15

IH Holdings International Limited

Table 6.0.4
Relevering Volatility *

	AMRC	BLDP	AGX	POWL	CPST	Average	Median	IH
Guideline company data								
Market capitalization - 5/13/15	326.1	340.2	509.0	413.7	241.5			46.0
Debt - 5/13/15	102.8	8.2	-	2.8	16.5			-
Market value of invested capital (MVIC)	428.9	348.5	509.0	416.5	258.1			46.0
Annualized equity volatility	40.9%	84.6%	41.4%	35.0%	55.3%	51.4%	41.4%	n.m.
Book value implied asset volatility	31.1%	82.6%	41.4%	34.7%	51.7%	48.3%	41.4%	n.m.
Black-Scholes calculation								
Stock price (asset value)	$ 424.7	$ 348.0	$ 509.0	$ 416.4	$ 257.4			$ 46.0
Exercise price (debt)	$ 102.8	$ 8.2	$ 0.0	$ 2.8	$ 16.5			$ 0.0
Time until expiration (years)	3.50	3.50	3.50	3.50	3.50			3.00
Volatility (annual)	31.5%	82.8%	41.4%	34.7%	51.9%			48.5%
Risk-free interest rate (annual)	1.11%	1.11%	1.11%	1.11%	1.11%			1.11%
Dividend yield (annual)	0.00%	0.00%	0.00%	0.00%	0.00%			0.00%
d1	2.77	3.22	23.35	8.08	3.35			18.74
d2	2.18	1.67	22.58	7.43	2.38			17.90
Call value (market capitalization)	$ 326.1	$ 340.2	$ 509.0	$ 413.7	$ 241.5			$ 46.0
Relevered equity volatility								
Asset value derived from Black-Scholes	$ 424.7	$ 348.0	$ 509.0	$ 416.4	$ 257.4			**Selected Asset Volatility**
Equity implied asset volatility	31.5%	82.8%	41.4%	34.7%	51.9%	48.5%	41.4%	48.5%
								Calculated Equity Volatility
								48.5%

* Based on AICPA Practice Aid "Valuation of Privately Held Company Equity Securities Issued as Compensation - Accounting and Valuation Guide," published in 2013.

Table 6.0.5 summarizes the Black-Scholes Option-Pricing Method calculations. IH's enterprise value of $46.0 million was developed in Section 5. Table 6.0.6 shows the allocation of the changes in equity value between the breakpoints, among the stock classes. Utilizing the allocation percentages from Table 6.0.6 and the tranche amounts from Table 6.0.5, per ordinary share value, on a marketable basis, is determined in Table 6.0.7. Table 6.0.8 calculates the volatility of each class of equity security.

Table 6.0.5
IH Holdings International Limited
Option Pricing Method Inputs and Calculations

		Breakpoint #1	Breakpoint #2	Breakpoint #3	Breakpoint #4	
	Option #1	Option #2	Option #3	Option #4	Option #5	
Black-Scholes calculation						
Stock price (value) (1)	$ 46,000,000	$ 46,000,000	$ 46,000,000	$ 46,000,000	$ 46,000,000	
Exercise price	$ 0	$ 50,000,000	$ 954,762,873	$ 1,055,264,002	$ 1,750,001,467	
Time until expiration (years)	3.50	3.50	3.50	3.50	3.50	
Volatility (annual)	48.50%	48.50%	48.50%	48.50%	48.50%	
Risk-free interest rate (annual) (2)	1.11%	1.11%	1.11%	1.11%	1.11%	
Dividend yield (annual)	0.00%	0.00%	0.00%	0.00%	0.00%	
d1	40.2440	0.4047	-2.8459	-2.9562	-3.5136	
d2	39.3366	-0.5026	-3.7532	-3.8635	-4.4210	
N(d1)	1.0000	0.6572	0.0022	0.0016	0.0002	
N(d2)	1.0000	0.3076	0.0001	0.0001	0.0000	
Call option value	$ 46,000,000	$ 15,436,738	$ 21,714	$ 14,926	$ 1,898	
Call option tranche (3)	30,563,262	15,415,023	6,788	13,028	1,898	46,000,000
						46,000,000
						-

(1) Estimated enterprise value calculated using the cost method.
(2) Continuously compounded.
(3) Difference between call option value and next lower call option value.

Table 6.06
IH Holdings International Limited
Allocation Of Call Option Tranches

	Breakpoint #1		Breakpoint #2	Breakpoint #3	Breakpoint #4
	Options #1 - #2	Options #2 - #3	Options #3 - #4	Options #4 - #5	Options #5 -
	Face value /	CSEs @	CSEs @	CSEs @	CSEs @
Basis for allocation of tranche values	liquid. pref.	-	40.7595	45.0500	73.3671
Series A preferred shares	$ 50,000,000	-	-	1,109,878	1,109,878
Ordinary shares	-	22,197,579	22,197,579	22,197,579	22,197,579
Series A warrants	-	-	1,226,707	1,226,707	1,226,707
Series A warrants	-	-	-	-	1,363,008
	$ 50,000,000	22,197,579	23,424,286	24,534,164	25,897,172
Allocation %					
Series A preferred shares	100.00%	0.00%	0.00%	4.52%	4.29%
Ordinary shares	0.00%	100.00%	94.76%	90.48%	85.71%
Series A warrants	0.00%	0.00%	5.24%	5.00%	4.74%
Series A warrants	0.00%	0.00%	0.00%	0.00%	5.26%
	100.00%	100.00%	100.00%	100.00%	100.00%

Table 6.0.7
IH Holdings International Limited
Calculation of Marketable Common Stock Value Per Share using Option Pricing Method

	Breakpoint #1		Breakpoint #2	Breakpoint #3	Breakpoint #4	Shares	Value
	Options #1 - #2	Options #2 - #3	Options #3 - #4	Options #4 - #5	Options #5 -	Total ;	Per Share
Allocation of tranche values							
Series A preferred shares	$ 30,563,262	$ -	$ -	$ 589	$ 81	$ 30,563,933	$27.538
Ordinary shares	-	**15,415,023**	**6,433**	**11,787**	**1,627**	**15,434,870**	**$ 0.695**
Series A warrants	-	-	356	651	90	1,097	$ 0.001
Series A warrants	-	-	-	-	100	100	$ 0.000
	$ 30,563,262	$ 15,415,023	$ 6,788	$ 13,028	$ 1,898	$ 46,000,000	

Table 6.0.8
IH Holdings International Limited
Implied Volatility for Each Equity Class

	Option #1	Option #2	Option #3	Option #4	Option #5	Total
N(d1)	1.0000	0.6572	0.0022	0.0016	0.0002	
N(d1) increment	0.3428	0.6550	0.0007	0.0013	0.0002	1.0000
Calculation of equity deltas						
Series A preferred shares	0.3428	-	-	0.0001	0.0000	0.3429
Ordinary shares	-	0.6550	0.0006	0.0012	0.0002	0.6570
Series A warrants	-	-	0.0000	0.0001	0.0000	0.0001
Series A warrants	-	-	-	-	0.0000	0.0000
	0.3428	0.6550	0.0007	0.0013	0.0002	1.0000
Estimate equity value						$ 46,000,000
Equity volatility (from guideline public companies)						48.5%
Implied volatility for each equity class						check
Series A preferred shares						25.0%
Ordinary shares						**95.0%**
Series A warrants						227.2%
Series A warrants						259.8%

Table 6.0.9 applies a Discount for Lack of Liquidity/Marketability, discussed in Appendix B, to arrive at the Fair Market Value of an ordinary stare. The volatility of the ordinary share of roughly 95.0%, calculated in Table 6.0.8, recognizes the increased de facto leverage arising from the seniority of the preferred stock. This volatility is utilized in determination of the Discount for Lack of Liquidity/Marketability.

Table 6.0.9
IH Holdings International Limited
Calculation of Non-marketable Ordinary Share Value using Option Pricing Method

Value per share - minority marketable		0.695
Discount for Lack of Marketability	-40%	(0.2781)
Estimated Fair Market Value		**$ 0.4172**

It is our opinion that as of May 13, 2015, the Fair Market Value, of a single non-marketable and non-controlling ordinary share of IH Holdings International Limited was:

$0.417

May 23, 2016

CapVal-American Business Appraisers, LLC

Geoffrey S. Grisham, ASA, CVA
Member

Barry A. Baker, CFA, ASA
Member

APPENDIX A
ABRIDGED GLOSSARY

The following terms and definitions are from the International Glossary of Business Valuation Terms developed and adopted by:

American Institute of Certified Public Accountants
American Society of Appraisers
Canadian Institute of Chartered Business Valuators
National Association of Certified Valuation Analysts
The Institute of Business Appraisers

Adjusted Book Value Method – a method within the asset approach whereby all assets and liabilities (including off-balance sheet, intangible, and contingent) are adjusted to their fair market values.

Asset (Asset-Based) Approach – a general way of determining a value indication of a business, business ownership interest, or security using one or more methods based on the value of the assets net of liabilities.

Beta – a measure of systematic risk of a stock; the tendency of a stock's price to correlate with changes in a specific index.

Capital Asset Pricing Model (CAPM) – a model in which the cost of capital for any stock or portfolio of stocks equals a risk-free rate plus a risk premium that is proportionate to the systematic risk of the stock or portfolio.

Capitalization – a conversion of a single period of economic benefits into value.

Capitalization of Earnings Method – a method within the income approach whereby economic benefits for a representative single period are converted to value through division by a capitalization rate.

Capitalization Rate – any divisor (usually expressed as a percentage) used to convert anticipated economic benefits of a single period into value.

Capital Structure – the composition of the invested capital of a business enterprise, the mix of debt and equity financing.

Cash Flow – cash that is generated over a period of time by an asset, group of assets, or business enterprise. It may be used in a general sense to encompass various levels of specifically defined cash flows. When the term is used, it should be supplemented by a qualified (for example, "discretionary" or "operating") and a specific definition in the given valuation context.

Common Size Statements - financial statement in which each line is expressed as a percentage of the total. On a balance sheet, each line item is shown as a percentage of total assets, and on the income statement, each item is expressed as a percentage of revenues.

Control – the power to direct the management and policies of a business enterprise.

Control Premium – an amount or a percentage by which the pro rata value of a controlling interest exceeds the pro rata value of a non-controlling interest in a business enterprise, to reflect the power of control.

Cost of Capital – The expected rate of return that the market requires in order to attract funds to a particular investment.

Discount for Lack of Control – an amount or percentage deducted from the pro rata share of value of 100% of an equity interest in a business to reflect the absence of some or all of the powers of control.

Discount for Lack of Marketability – an amount or percentage deducted from the value of an ownership interest to reflect the relative absence of marketability.

Discount Rate – a rate of return used to convert a future monetary sum into present value.

Discounted Cash Flow Method – a method within the income approach whereby the present value of future expected net cash flows is calculated using a discount rate.

Discounted Future Earnings Method – a method within the income approach whereby the present value of future expected economic benefits is calculated using a discount rate.

Economic Benefits – inflows such as revenues, net income, net cash flows, etc.

Equity – the owner's interest in property after deduction of all liabilities.

Equity Net Cash Flows – those cash flows available to pay out to equity holders (in the form of dividends) after funding operations of the business enterprise, making necessary capital investments, and increasing or decreasing debt financing.

Equity Risk Premium – a rate of return added to a risk-free rate to reflect the additional risk of equity instruments over risk free instruments (a component of the cost of equity capital or equity discount rate).

Fair Market Value – the price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arm's length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts.

Going Concern – an ongoing operating business enterprise

Going Concern Value – the value of a business enterprise that is expected to continue to operate into the future. The intangible elements of Going Concern Value result from factors such as having a trained work force, an operational plan, and the necessary licenses, systems, and procedures in place.

Goodwill – that intangible asset arising as a result of a name, reputation, customer loyalty, location, products, and similar factors not separately identified.

Guideline Public Business Method – a method within the market approach whereby market multiples are derived from market prices of stocks of companies that are engaged in the same or similar lines of business, and that are actively traded on a free and open market.

Income (Income-Based) Approach – a general way of determining a value indication of a business, business ownership interest, security, or intangible asset using one or more methods that convert anticipated economic benefits into a present single amount.

Intangible Assets – non-physical assets such as franchises, trademarks, patents, copyrights, goodwill, equities, mineral rights, securities and contracts (as distinguished from physical assets) that grant rights and privileges and have value for the owner.

Internal Rate of Return – a discount rate at which the present value of the future cash flows of the investment equals the cost of the investments.

Investment Value – the value to a particular investor based upon individual investment requirements and expectations.

Liquidation Value – the net amount that would be realized if the business is terminated and the assets are sold piecemeal. Liquidation can be either "orderly" or "forced."

Market (Market-Based) Approach – a general way of determining a value indication of a business, business ownership interest, security, or intangible asset by using one or more methods that compare the subject to similar businesses, business ownership interests, securities, or intangible assets that have been sold.

Market Multiple – the market value of a Company's stock or invested capital divided by a Business measure (such as economic benefits, number of customers).

Marketability – the ability to quickly convert property to cash at minimal cost.

Merger and Acquisition Method – a method within the market approach whereby pricing multiples are derived from transactions of significant interests in companies engaged in the same or similar lines of business.

Minority Discount – a discount for lack of control applicable to a minority interest.

Minority Interest – an ownership interest less than 50% of the voting interest in a business enterprise.

Multiple – the inverse of a capitalization rate.

Net Book Value – with respect to a business enterprise, the difference between total assets (net of accumulated depreciation, depletion, and amortization) and total liabilities as they appear on the balance sheet (synonymous with Shareholder's Equity). With respect to a specific asset, the capitalized cost less accumulated amortization or depreciation as it appears on the books of account of the business enterprise.

Net Present Value – the value, as of a specified date, of future cash inflows les all cash outflows (including the cost of investment) calculated using an appropriate discount rate.

Net Tangible Asset Value – the value of the business enterprise's tangible assets (excluding excess assets and non-operating assets) minus the value of its liabilities.

Non-Operating Assets – assets not necessary to ongoing operations of the business enterprise.

Normalized Earnings – economic benefits adjusted for non-recurring, non-economic, or other unusual items to eliminate anomalies and/or facilitate comparisons.

Normalized Financial Statements – financial statements adjusted for non-operating assets and liabilities and/or for nonrecurring, non-economic, or other unusual items to eliminate anomalies and/or facilitate comparisons.

Orderly Liquidation Value – liquidation value at which the asset or assets are sold over a reasonable period of time to maximize proceeds received.

Premise of Value – an assumption regarding the most likely set of transactional circumstances that may be applicable to the subject valuation; e.g., going concern, liquidation.

Risk-Free Rate – the rate of return available in the market on an investment free of default risk.

Standard of Value – the identification of the type of value being used in a specific engagement; e.g., fair market value, fair value, investment value.

Weighted Average Cost of Capital (WACC) – the cost of capital (discount rate) determined by the weighted average, at market value, of the cost of all financing sources in the business enterprise's capital structure.

APPENDIX B
DEVELOPMENT OF DISCOUNT FOR LACK OF MARKETABILITY/LIQUIDITY

The non-controlling single ordinary share of IH Holdings International Limited is subject to a Discount for Lack of Marketability/Liquidity. Unlike publicly-traded stock, the shares of the Company cannot be readily sold with cash received in three days at a known market price. Discounts for Lack of Marketability/Liquidity reflect the difference between assets which can be quickly converted to known cash value with minimal transaction costs and those which cannot. The level of the discount varies greatly between discounts for minority interests and discounts (if any) for controlling interests.

Historically, little distinction has been made between the Discount for Lack of Marketability, which reflects a valuation impairment arising from the legal inability to sell a security in a public market, and a Discount for Lack of Liquidity, which refers to a valuation impairment arising from a less-than-robust number of buyers and sellers for the security. Ibbotson's 2015 Classic Yearbook demonstrated the relationship between liquid and illiquid equity securities of the same general size. Ibbotson's analysis of the demanded/observed returns on publicly traded securities with different levels of liquidity demonstrates that holders of less liquid securities (as measured by the annual turnover of the float on the stock) demand and receive substantially greater returns than are received by more liquid securities. This is generally true at all levels of comparison except for the largest highly liquid stocks compared to the smallest highly liquid stocks, where the relationship reverses. Table B-1 reproduces the Ibbotson display with additional calculations showing implied valuation impairment between the most and least liquid securities, measured by the float turnover within the measurement period.

Table B-1
Realized Returns on Publicly Traded Stocks
Sorted by Size and Liquidity

Table 9-2: Size and Liquidity Quartiles of the NYSE/AMEX/NASDAQ:
Stocks Independently Sorted Each Year
Compound Annual Returns (%)

	Liquidity				Low Minus
Size	1-Low	2	3	4-High	High Liquidity
1-Small	16.18%	16.52%	10.37%	0.70%	15.48%
2	15.67%	14.57%	12.42%	6.17%	9.50%
3	14.05%	14.04%	12.95%	8.47%	5.58%
4-Large	11.55%	12.26%	11.95%	9.20%	2.35%
Small Min	4.63%	4.26%	-1.58%	-8.50%	

~Ibbotson SBBI 2015 Classic Yearbook, page 126, data from 1972-2014.

All of the studies related to "marketability" have, in reality, focused upon liquidity, because all of the companies included in the analysis had already met the fundamental hurdle of an IPO.[14] In 2001, however Bajaj, *et. al.* published a detailed analysis dissecting observed "discounts for lack of marketability"; their work suggested that the observed levels were due to several other factors, including liquidity, and that the element of the discount ascribable to a legal inability to sell the stock in a public market was roughly 7.23%.[15]

Numerous studies have been completed over the years to determine appropriate levels of discounts for non-marketability; the characteristic measured was referred to as "marketability," but in reality also reflected issues of liquidity. Generally, these studies focused on stock price variances between either a) restricted and non-restricted common stock of the same issuer, or b) the differences in prices obtained upon initial public offerings and trades in the same security which took place a few months prior to the initial public offering.

These studies have provided the basis for establishing discounts appropriate to non-marketability in the majority of applicable cases in recent years. The studies, however, have a common problem. The dispersion of discounts prevalent in each of them is so wide that the common practice of using the mean discount in a specific study, or the practice of averaging the means shown in several studies, has tended to suppress the significance of the wide variance of the samples in each study.

Commercial products have been developed which purport to use various metrics to help place a subject company within a range of observed discounts. An unpublished 2005 study conducted by members of American Business Appraisers with the assistance of an adjunct faculty member from California State University-Channel Islands, concluded that the ten factors tested had sufficiently low correlations with observed discounts that because "…the predictive accuracy in all cases is at best borderline poor/fair, it would not be wise to use these variables to make predictions if predictive accuracy is important."[16]

Nevertheless, a broad tendency of the studies over time has been toward a median discount in the 35% to 45% range; this range was suggested as the starting point for detailed analysis in *Mandelbaum v. Commissioner,* T.C. Memo. 1995-255. A more recent study, covering a period subsequent to the reduction of the Rule 144 holding period to one year (all of the studies considered

[14] The stock of companies included in the restricted stock studies had achieved that hurdle, but there was a temporary restriction on marketability. The companies utilized in the various pre-IPO studies eventually went public, and the inherent success bias of the analysis leads to possible distortion of the results.

[15] Bajaj, Denis, Farris and Sarin, "Firm Value and Marketability Discounts," (February 26, 2001). Available at SSRN: http://ssrn.com/abstract=262198 or DOI: 10.2139/ssrn.262198.

[16] McMorrow, Stephen, Wiers, Matthew, et al "Research Re FMV Restricted Stock Study™ Unpublished 2005 study sponsored by, and conducted by members of, American Business Appraisers. CapVal-American Business Appraisers, LLC is an independent member of American Business Appraisers. Study available upon request.

in the *Mandelbaum* case took place when the holding period was two years), showed a mean discount of 13%.[17]

The most recent studies, developed at Trugman Valuation Associates and at Stout Risius Ross, were done after the holding period was reduced to six months. The Trugman study also included supplemental analysis based upon company structural and trading characteristics as discriminants for a quartile analysis. These studies showed mean discount levels of 18%[18] and 10.9%.[19] Note that each of the companies in the studies had already passed the core hurdle of being publicly-traded.

We have considered the subject interest in light of the factors and benchmark range for discounts of 35% to 45% suggested in *Mandelbaum.* The factors are: 1. Financial statement analysis; 2. Dividend policy; 3. Nature of the company and its history and competitive position, and economic outlook; 4. Management; 5. Amount of control in transferred shares; 6. Restrictions on transferability of stock; 7. Holding period for the stock; 8. The Company's redemption policy; and 9. Costs of a hypothetical public offering.

Many of the Mandelbaum factors are considered, however, in the development of the underlying discount rate, which preceded consideration of the potential for a Discount for Lack of Marketability. Many analysts believe that to specifically include these factors in this discount could lead to double-counting; others disagree. We elect to avoid the double-counting risk. The first four elements all overlap the considerations in the discount rate factored into the income approach analysis. They need to be explicitly considered in determining the discount rate in an income approach and used to evaluate market approaches. The core issues affecting the Discount for Lack of Marketability are the following five. Addressing these with respect to the Company:

(5) <u>Amount of control in transferred shares</u> - There is no control inherent in a single-share interest. While the holder of the share might indeed be a member of management, the control would come by virtue of employment rather than the holding of an investment.

(5) <u>Restrictions on transferability of stock</u> – The shares are subject to substantial contractual restrictions. See Section 1.2.

(6) <u>Holding period for the stock</u> – Management, estimates a 3.5 years holding period that we consider to be of a medium to long duration.

---

[17] Aschwald, Kathryn F. "Restricted Stock Discounts Decline as a Result of 1-Year Holding Period," *Shannon Pratt's Business Valuation Update* (May 2001) quoted in Pratt, Shannon, P., *Business Valuation Discounts and Premiums* (New York: John Wiley & Sons, 2001) pg. 109.

[18] Harris, William "Trugman Valuation Associates, Inc. Restricted Stock Study" *Business Valuation Review,* Vol. 28, No. 3, Fall 2009. pages 128-139.

[19] Stumpf, Aaron M.; Martinez, Robert; and Stallman, Christopher T. "The Stout Risius Ross Restricted Stock Study: A Recent Examination of Private Placement Transactions from September 2005 through May 2010," *Business Valuation Review*, Vol. 30, No.1., pages 7-19.

(7) The Company's redemption policy – The Company has a history of redeeming shares; however, based on discussions with management, there is a very low probability of future redemptions.

(8) Costs of a hypothetical public offering – According to management, there is currently no plans for an IPO within the 3.5-years exit timing.

We have estimated a Discount for Lack of Marketability of 45%, at the high-end of the *Mandelbaum* range due to the contractual restrictions on transfer, and medium to long holding period.

The *Mandelbaum* factors are inherently subjective in observation, interpretation, and application. We therefore also considered several mathematically driven models, including Z. Christopher Mercer's method for quantifying Discounts for Lack of Marketability;[20] and an options-based framework based on the protective put approach for estimating a discount for lack of marketability that was first described by David Chaffe.[21] The original concept was based on valuing a conventional put option using the Black-Scholes option pricing formula. Since then, a variety of other methods for calculating the value of a protective put have been developed. We have utilized two commonly-used alternatives: the Finnerty method (based on an average-strike put option)[22] and the Asian protective put (based on an average-price put option).[23]

We utilized Chris Mercer's Quantitative Marketability Discount Method ("QMDM"), which requires assumptions about holding period, dividends, and expected returns. In this case, we assumed a holding period of 3.5 years. The expected return is represented by the Discount Rate developed for the enterprise, which we have estimated to be roughly 50%. The return demanded by a shareholder whose stock is non-marketable and who lacks any element of control is logically in excess of a controlling position. We have estimated the required total return to be 25-30% above the enterprise discount rate. The indicated Discount for Lack of Marketability/Liquidity was approximately 26%.

---

[20] Mercer, Z. Christopher, *Quantifying Marketability Discounts- Revised Reprint* (Memphis: Peabody Publishing, L.P., 2001).

[21] Chaffe, David B., "Option Pricing as a Proxy for Discount for Lack of Marketability in Private Company Valuations," Business Valuation Review, vol. 12, no. 4 (December 1993).

[22] Finnerty, John D, "The Impact of Transfer Restrictions on Stock Prices", October 2002. Accessed November 28, 2011. Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=342840. Finnerty presented an updated version of his model at the American Society of Appraisers' Advanced Business Valuation conference in October 2009. A further refined model was presented in "An Average-Strike Put Option Model of the Marketability Discount," published in The Journal of Derivatives, Summer 2012. The analysis in this appraisal report is based on the 2012 model.

[23] Hull, John C., *Options, Futures and Other Derivatives, Seventh Edition* (Upper Saddle River, NJ: Pearson Prentice Hall, 2009), pages 556-558.

We constructed a protective put using a 3.5-years option life, 95.0% volatility calculated in Table 6.0.4 (as distinguished from enterprise volatility and as developed in Table 6.0.3), a risk-free rate of 1.12%, and no dividends. The estimated timing of 3.5 years is developed from the estimated timing of a liquidity event for ordinary shareholders provided to us by management. The indicated Discount for Lack of Marketability (the value of the put relative to the market and strike price) was roughly 59%.

For the Finnerty method, we used the same assumptions as the Chaffe analysis. The indicated Discount for Lack of Marketability/Liquidity was approximately 30%.

For the Asian protective put method, we used the same assumptions as the Chaffe analysis. The indicated Discount for Lack of Marketability/Liquidity was approximately 42%.

Finally, as a sanity check, we have considered the restricted stock study conducted by Columbia Financial Advisors which showed a mean Discount for Lack of Marketability for restricted stock of publicly traded companies of 13%; the restrictions on trading in those issues reflected the reduction of the SEC Rule 144 holding period to 1 year.[24] For our assumed holding period of 3.5 years, we can calculate a discount using the formula $1-(1-0.13)^n$, where n equals the expected holding period. This indicates a Discount of Lack of Marketability of roughly 39% for 3.5 years for the restricted stock of companies which had already met the hurdle of an Initial Public Offering.

Based upon a consideration of the marketability and liquidity factors implicit in the holding period, with consideration of the contractual restrictions on transfer, we have applied a Discount for Lack of Marketability/Liquidity of 40%, which we believe fairly represents the combination of marketability and liquidity impairments to the ordinary share value.

[24] Pratt, Shannon P., *Business Valuation Discounts and Premiums* (New York: John Wiley & Sons, 2001) pages 81-82. Note that $(1-.13)^{10}= 0.248$, implying a 75.2% Discount for Lack of Marketability for stocks that were already publicly traded.

APPENDIX C
QUALIFICATIONS OF APPRAISERS

GEOFFREY S. GRISHAM, ASA, CVA
700 Bishops Park #202
Raleigh, NC 27605
919-656-6138
GGrisham@CapVal-LLC.com

PROFESSIONAL EXPERIENCE

2008-present CapVal-American Business Appraisers, LLC. CapVal furnishes services in the fields of business appraisal, appraisal of intangible and other assets, merger and acquisition consulting, strategic planning and family succession. CapVal also provides services involving debt restructuring, business insolvency, and bankruptcy.

2004-2008 Integrian, Inc., Morrisville, NC.
Director of Global Finance

2003 MVSS International, LLC, Cary, NC.
Chief Financial Officer

MVSS provides maintenance for printers and computer storage devices internationally. Managed all accounting functions, banking relationships, budgeting and forecasting, and contract management. Reduced accounts receivable from $1.7M to $0.8M in two months. Developed an annual budget, monthly forecast, and customer profitability models. Established $250k line of credit.

1999-2002 AlphaVax Human Vaccines, Inc., Research Triangle Park, NC.
Director of Finance and Operations

AlphaVax is a pre-IPO biotechnology firm. Managed six professionals responsible for accounting operations, financial planning & analysis, purchasing, operations, board of directors' presentations and investor communications. Managed financial and operations growth from start-up to 40 employees. Raised $1.5 million in debt financing and assisted in raising $20 million inequity. Led project to design and build a 30,000 sq. ft. BL3 research laboratory.

1999 Ardent Pharmaceuticals, Inc. & Cogent Neurosciences, Inc., Durham, NC.
Business Development Consultant.

Ardent and Cogent are pre-IPO pharmaceutical companies. Assisted CEO in writing a business plan that raised $15 million in private equity. Developed financial analysis and assisted in closing a pharmaceutical deal. Prepared company valuation to establish stock price for fund raising.

1998-1999 Paradigm Genetics, Inc., Research Triangle Park, NC.
Director of Finance and Operations.

Paradigm is a publicly traded agricultural biotechnology company. Managed financial and operational growth through start-up phase from 10 to 80 employees. Developed model to price a multi-year, $40 million deal with Bayer. Raised $5 million in debt financing and assisted CEO in raising $8 million inequity. Led project to build 60,000 sq. ft. lab and office building.

1996-1998 Inspire Pharmaceuticals, Inc, Durham, NC.
Director of Finance and Operations.

Assisted in writing business plan that raise $13 million in private equity. Developed financial forecasting model and monthly financial reporting package presented to Board of Directors.

1988-1995 General Electric Company , Albany, NY.
Corporate Auditor.
Assisted in implementing Demand Flow Technology at GE Aircraft Engines. Led financial inventory audit of GE Plastics. Analyzed valuation of $4 billion mortgage service portfolio.

BG Automotive Motors, Inc. (50/50 JV with GE & Robert Bosch GmbH), Nashville, TN.
Manager of Accounting Operations.
Prepared annual budget and long-range forecast and presented monthly analysis to senior management. Set-up monthly closing process shortening cycle time to 2 days from 5 days. Implemented cost accounting procedures to track inventory levels.

EDUCATION

Biotech for Business Professionals, Duke University, 2002.

General Electric: Leadership Development, 1994; New Manager Development, 1993; Financial Analysis, 1992. Financial Management Program (FMP) with honors, 1991. GE Audit Staff management award for superior performance. GE management award for working capital improvement.

B.A. Economics, University of North Carolina at Chapel Hill, 1987.

CERTIFICATIONS AND PROFESSIONAL ORGANIZATIONS

Member, American Society of Appraisers, Accredited Senior Appraiser (ASA)
Member, National Association of Certified Valuators and Analysts, Certified Valuation Analyst (CVA)

BARRY A. BAKER, CFA, ASA
1022 Anderson Street
Durham, NC 27705
877-814-4115 Cell: 919-699-2929
BBaker@CapVal-LLC.com

PROFESSIONAL EXPERIENCE

2010-Current CapVal-American Business Appraisers, LLC. CapVal furnishes services in the fields of business appraisal, appraisal of intangible and other assets, merger and acquisition consulting, strategic planning and family succession. CapVal also provides services involving debt restructuring, business insolvency, and bankruptcy.

2003-Current The Cobble Hill Group, Durham, NC. Cobble Hill provides business development and Chief Financial Officer (CFO) services.
President and Founder.

Provide research-driven, outsourced business development services to private equity investment groups and their portfolio companies. Cobble Hill's clients acquire companies with annual sales between $10 million and $125 million located throughout the U.S. Cobble Hill helps its clients identify attractive industries and companies in which to invest, conducts direct marketing campaigns to contact company owners on their behalf, and screens interested companies to determine fit with financial performance, valuation and other criteria. Cobble Hill also co-invests in companies acquired by its clients.

Provided CFO services to 4 Kids Co. Mfg. Ltd., a company based in Guangzhou, China that designs, manufactures and distributes home décor and arts & crafts products that are sold in major retail chains throughout the U.S.

1997-2002 American Home Centers Corporation, Raleigh, NC and
The Cobble Hill Group, New York, NY. Cobble Hill was an investment group that pursued consolidation opportunities in fragmented industries. American Home Centers Corporation was formed by Cobble Hill to acquire manufactured housing retailers.

1999-2002 President and Director

1997-1999 Executive Vice President, Business Development and Director, 1997-1999

Co-founded a retailer of manufactured homes that operated twenty sales centers in the Midwestern U.S. with combined sales of approximately $75 million. Responsible for the valuation, due diligence, negotiation and documentation of seven acquisitions. Initiated

and maintained dialogues with more than 60 other acquisition candidates and completed valuations and preliminary due diligence for the majority of them. Overall responsibility for most financial functions including financial reporting, budgeting, cash management, real estate, insurance, and investor and lender relations. Also served as Executive Vice President of American Home Centers Finance Corporation, a subsidiary of AHC, which specialized in providing mortgage services to buyers of manufactured and modular homes.

1992-1996 Prime Charter, Ltd., New York, NY.
Senior Vice President, Corporate Finance.

Co-founded corporate finance department at 125-person brokerage firm. Implemented strategy focused on serving emerging growth and middle market companies primarily in the biotechnology, healthcare service, environmental, information technology and consumer product and service industries. Actively engaged in new business marketing efforts and evaluation of potential clients.
Responsible for development and execution of private equity placements, initial public offerings, and merger and acquisition transactions.

1984-1992 Dillon, Read & Co. Inc., New York, NY

1992 Vice President, Corporate Finance, New York, NY
Vice President, Corporate Finance, London, England

1991 Responsible for development and execution of cross-border mergers and acquisitions. Coordinated European marketing efforts for selected divestitures of U.S. companies. Designed joint venture structure for potential merger of the European environmental service operations of a U.S. company and a U.K. conglomerate. Executed divestiture of restaurant chain for Swedish conglomerate.

1989-1990 Vice President, Tokyo, Japan
Founding member of Dillon Read's representative office and the only non-Japanese professional based in Tokyo.
Identified potential Japanese strategic partners for various U.S. companies and assisted in the development and execution of transactions involving technology, entertainment and asset management companies. Marketed several private placements and limited partnerships to Japanese financial institutions and trading companies. Represented major Japanese retailer in the recapitalization of a worldwide apparel and home furnishings company.

1986-1989 Associate, Corporate Finance, New York, NY

1984-1986 Financial Analyst, Mergers and Acquisitions, New York, NY
Evaluated potential leveraged buyouts and assisted in structuring and financing transactions in the broadcasting and publishing industries on behalf of fund managed by Dillon Read. Responsible for marketing and negotiating the divestitures of a retailing company and a steel company. Raised equity funds for limited partnership in the cable television industry.

Provided execution support for merger and acquisition transactions and fairness opinions in diverse industries including food, consumer products, financial institutions and chemicals. Provided marketing and analytical support for public offerings and private placements of debt and equity.

LICENSES, CERTIFICATIONS, AND PROFESSIONAL ASSOCIATIONS

Member, CFA Institute; Chartered Financial Analyst (CFA) designation.
Member, American Society of Appraisers; Accredited Senior Appraiser (ASA).
NASD (FINRA) Series 7 and Series 63 (inactive).

EDUCATION

B. S. Economics, Cum Laude, The Wharton School, University of Pennsylvania, 1984

