Duff & Phelps

Valuation Insights

Second Quarter 2014

In this edition of Valuation Insights we discuss the new Valuation Handbook-Guide to Cost of Capital published by Duff & Phelps in March. This annual publication incorporates the Duff & Phelps Risk Premium Report which was previously published on a standalone basis, along with critical year-end data that was formerly available in the recently discontinued *Ibbotson® Stocks, Bonds, Bills and Inflation Valuation Yearbook.* The new book and companion *Risk Premium Calculator* help finance professionals estimate the cost of capital, an essential input to assess the feasibility of every merger and acquisition transaction and other strategic investments.

In our Technical Notes section we discuss the appropriate use of a discount for lack of marketability for financial reporting purposes when estimating the fair value of private equity investments.

Our International Spotlight article discusses the International Valuation Standards Council and their role in the development of valuation standards.

Finally, our Spotlight article discusses Duff & Phelps' continued international expansion with the opening of a new office in Madrid, Spain.

In every issue you will find industry market multiples which are useful for benchmark valuation purposes. We hope that you will find this and future issues of this newsletter informative and reliable resources.

Read this issue to find out more.

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Duff & Phelps Publishes New Valuation Handbook – Guide to Cost of Capital

Morningstar announced in September 2013 that it will no longer publish the *Ibbotson® SBBI Valuation Yearbook* and other valuation publications and products, and that the 2013 SBBI Valuation Yearbook (with data through December 31, 2012) was the final edition.[1] The *SBBI Valuation Yearbook* has been widely cited in valuation reports for nearly 15 years, and is generally considered one of the essential tools needed in every financial professional's toolbox.

Duff & Phelps now provides key data previously available in the *SBBI Valuation Yearbook* in its new publication, the *2014 Valuation Handbook – Guide to Cost of Capital* (with data through December 31, 2013). The *2014 Valuation Handbook* was released in March of 2014.

The *2014 Valuation Handbook* includes *two* sets of valuation data:

- Data previously available in the *SBBI Valuation Yearbook*; and
- Data available in the Duff & Phelps *Risk Premium Report.*

The *Risk Premium Report* has been published annually since 1996 and, like the former *SBBI Valuation Yearbook*, provides data and methodology to assist financial professionals in estimating the cost of equity capital for a subject company using CAPM and various build-up models. The *Risk Premium Report* will no longer be published separately; all of its data is included in the new *Valuation Handbook.*

In 2011, Duff & Phelps introduced the online *Risk Premium Calculator.* The 2014 version of the web-based *Risk Premium Calculator* includes all of the data available in both the former *SBBI Valuation Yearbook* and the *Risk Premium Report.*

Summary of "SBBI" Data Available in the 2014 Valuation Handbook

The 2014 Valuation Handbook includes all of the "key variables in estimating the cost of capital" previously published in the SBBI Valuation Yearbook, including:

Yields

- Long-term (20-year) U.S. Treasury Coupon Bond Yield

Equity Risk Premia

- Long-horizon expected "historical" equity risk premium
- Long-horizon expected "supply side" equity risk premium

The *2014 Valuation Handbook* also includes a conditional equity risk premium estimate as of year-end 2013.

Size Premia

- CRSP NYSE/AMEX/NASDAQ Mid-Cap, Low-Cap, and Micro-Cap size premia
- CRSP NYSE/AMEX/NASDAQ Deciles 1 through 10 size premia
- Size premia for the breakdown of CRSP NYSE/AMEX/NASDAQ Decile 10 into 10a (and its upper and lower halves 10w and 10x) and 10b (and its upper and lower halves 10y and 10z).

The *2014 Valuation Handbook* also includes the *Risk Premium Report* size premia.

Industry Risk Premium

- Industry risk premia (IRPs) previously found in Table 3-5 in the *SBBI Valuation Yearbook.*[2]

The *2014 Valuation Handbook* includes expanded IRP data including the full-information beta estimates by SIC code.

Same Data Sources / Same Methodologies

The equity risk premia, size premia, and other valuation data in the new *2014 Valuation Handbook* were calculated using the same data sources and methodologies used to calculate this data in the former *SBBI Valuation Yearbook*. The data sources include:

- The Center for Research in Security Prices (CRSP) market-cap-based NYSE/AMEX/NASDAQ indices[3]
- Standard & Poor's Research *Insight* database[4]
- SBBI Series from Morningstar's *EnCorr* database[5]

Where to Purchase

The *2014 Valuation Handbook* is available for $225 plus shipping and handling through three distributors:

AICPA

www.cpa2biz.com
+1 888 777 7077 | service@aicpa.org

Business Valuation Resources

www.bvresources.com/costofcapital
+1 503 291 7963 ext. 2 or sales@bvresources.com
Also exclusively offers the online *Calculator* and multi-user site licenses providing access to the *Valuation Handbook* and the *Calculator*

ValuSource

www.valusource.com/vhb
+1 800 825 8763

1. Morningstar continues to publish the *Ibbotson SBBI Classic Yearbook.* The *2014 SBBI Classic Yearbook* is an analysis of the relative *performance* of various asset classes in the U.S., but does *not* provide extensive valuation data or methodology.
2. An IRP is used solely within the context of a build-up model. IRPs are a necessary cost of capital ingredient for those practitioners who like to use a build-up model in their valuation analysis (alone, or in addition to the capital asset pricing model, or CAPM).
3. To learn more about the Center for Research in Security Prices (CRSP) at the University of Chicago Booth School of Business, visit www.crsp.com.
4. To learn more about Standard and Poor's, visit www.standardandpoors.com/home/en/us.
5. To learn more about Morningstar's *EnCorr* database, visit http://corporate.morningstar.com.

Technical Notes

To Discount or Not to Discount, That is the Question!

A concept that is commonly used when valuing private, infrequently traded companies is a discount for lack of marketability (DLOM). While DLOMs continue to have their place in many financial reporting and other valuation contexts, a DLOM is often misunderstood and misused with respect to private equity investments, and potentially with other private interests, where fair value is routinely measured consistent with FASB ASC Topic 820 and/or IFRS 13.

Fair value should reflect the actual estimated amount that a seller would receive in an orderly transaction under current market conditions at the measurement date. This presumes that the hypothetical marketing period used to consummate a transaction and thereby to estimate value began at a point in time in advance of the measurement date such that the hypothetical exchange culminates on the measurement date. An additional discount to adjust for the time required to effect a transaction is not appropriate and would not be compliant with U.S. GAAP or IFRS.

Liquidity is a separate and distinct characteristic from the time required to effect a transaction. Fair value measurements must consider all attributes of an asset that would be considered by market participants and whether the asset is liquid (trades frequently with reasonable volume) or illiquid (does not trade frequently) is one such attribute. However, this does not change the presumption that the asset is sold on the measurement date.

ASC Topic 820 and IFRS 13 do not explicitly focus on the liquidity of private investments; rather, they focus on the concept of what market participants would pay for the investment at the measurement date. As such, in estimating the fair value of private investments, it is important to consider any liquidity adjustments that market participants might apply. Liquidity adjustments are highly judgmental, but they can be more objectively determined in situations where there is an initial transaction, at fair value, whose inputs can be calibrated to provide objective evidence of the liquidity impact.

For example, calibration of a transaction price, if deemed fair value, to observable market metrics at the measurement/transaction date is required by ASC 820 and IFRS 13.[1] Increasingly, calibration is incorporated into models where the calibration factor is calculated at the transaction date by comparing implied acquisition multiples or yields to those of publicly traded/available comparable companies. If an implied acquisition multiple of 8x EBITDA was paid and comparable companies are trading at 10x EBITDA, a calibration factor of 0.8 is implied (20% discount to the comparable market multiples). The estimated calibration factor is then carried forward to subsequent measurement dates and applied to the (then current) comparable market multiples to yield a fair value estimate that reflects the implied adjustment for liquidity, size, relative performance and other company specific factors. This calibration factor must be continuously revisited to determine whether it should be adjusted for changes in market conditions, and/or the performance of the subject company vis-à-vis the comparable companies.

There are, of course situations, where an initial transaction was not at fair value or where the initial transaction occurred sufficiently in the past that calibration is less helpful. In those cases, common practice is to determine the value of the interest on a "liquid" basis and use techniques, such as applying Finnerty model concepts, to help determine the impact of lack of liquidity (among other adjustments).

In summary, when measuring fair value in compliance with U.S. GAAP and IFRS, discounts should not be blindly applied. An incremental discount for lack of marketability to reflect the time required to effect the current transaction is not appropriate by accounting standards. Calibration of inputs will, in many cases, assist in capturing features such as the liquidity of an investment. In other cases, either the inputs into the valuation (discount rate, multiple, etc.) should be on an "illiquid investment basis" or a "liquidity adjustment" could be applied to the fair value of a comparable liquid investment to estimate the value of an illiquid interest. Mechanically applying discounts, without calibrating to market participant perspectives has the potential to misstate fair value—fair value being the amount that would be received in an orderly (granted hypothetical) transaction at each measurement date using market participant assumptions given current market conditions.

For more information, contact **David Larsen, Managing Director** at +1 415 693 5330

1. See ASC Topic 820-10-35-24C or IFRS 13 paragraph 64.

International in Focus
The International Valuation Standards Council: Building Trust in Valuation

Financial events from the last few years have brought the focus on valuation, its significance for the proper functioning of capital markets and in general, the need for consistency and transparency. Can consistency be a reality though, or is it a far-fetched ideal?

A number of organizations in different jurisdictions have issued valuation standards and guidance which tend to be specific to a particular purpose or asset type, with some overlap. Generally, these categories include real estate, personal property, intangible assets, financial instruments and business valuation. For example, The Appraisal Foundation issues USPAP for the appraisal practice; the AICPA has issued SSVS No. 1, focused on business valuation and intangibles; and the Royal Institution of Chartered Surveyors (RICS) issues the "Red Book", which has a particular focus on land and property. In broad strokes, this paints the current landscape of valuation: fragmentation, both locally and globally. Yet valuation relies on the same economic and corporate finance principles regardless of the purpose of the analysis or the jurisdiction in which it is undertaken.

Given this backdrop, amongst the efforts of other organizations, the International Valuation Standards Council (IVSC) has been positioning itself to be the global valuation standard setter, with the objective of building confidence and public trust in the valuation process. The recent appointment of Sir David Tweedie, former IASB chair, to lead the Board of Trustees of the IVSC has poured renewed energy and determination in pursuing this objective.

The IVSC is an independent, not-for-profit, private sector organization serving the public interest. The IVSC comprises three main bodies:

- Board of Trustees, responsible for the strategic direction and funding of the IVSC;
- Standards Board, responsible for developing the International Valuation Standards (IVS) and supporting guidance in the form of Technical Information papers (TIPs);
- Professional Board, responsible for promoting the development of the profession around the world.

The IVSC is a membership-based organization open to a wide range of stakeholders, including valuation professional organizations (VPOs), valuation providers, standards setters, regulators, academia and other parties. The IVSC's Advisory Forum provides a channel for members to contribute to the work of the IVSC and advise on various issues. Currently, IVSC's membership comprises over 70 member organizations across 54 countries.

The IVS were most recently updated in 2013 and include requirements for performing and reporting valuations of all types of assets for a wide range of purposes. The IVSC does not enforce IVS; the enforcement of IVS is achieved through their adoption and recognition by others, such as local VPOs, or by being written into law by local governments.

In the spirit of reducing fragmentation and advancing the valuation profession through collaboration, the IVSC is currently engaged in a dialogue with a number of professional and other organizations to explore convergence of valuation standards, or at least a means of explaining any differences, where they appropriately exist. It is also proactively formalizing its partnership with other organizations: most recently, with the signing of a Memorandum of Understanding with the IFRS Foundation to collaborate on fair value guidance.

Valuation standards are just one side of the coin; they are only meaningful if they are applied by competent valuation professionals acting in an ethical manner. To protect the public interest and strengthen the profession, the IVSC has also embarked on a project to develop International Professional Standards (IPS). The IPS are intended to serve as harmonized international benchmark standards on the learning and development necessary to acquire and maintain competence over the career of a valuation professional. The development of IPS will be a collaborative process between the IVSC and the local VPOs. Thus, the IVSC's initiative will supplement the existing local professional infrastructure, or any local efforts to organize the profession. The IVSC does not accredit individual valuation professionals or provide education; this is the remit of the VPOs.

High quality valuation and professional standards are essential to users' confidence in the valuations they commission and the quality of valuation advice they receive. In conjunction with robust valuation and professional standards already in place or under development locally, IVS and IPS are expected to further enhance the credibility of the valuation profession and its ability to provide high quality services in a complex commercial world. The IVS and IPS are also intended to facilitate regulatory, audit and other reviews by setting common performance standards and benchmarks for conduct and competency. International and intra-discipline differences in valuations would likely be reduced, although they may not be fully eliminated, as professional judgment will always be part of the process. However, any major differences should be reconcilable as a function of the specific purpose of the valuation and any jurisdictional requirements. This could make consistency a much more attainable goal, rather than merely an aspiration.

For more information, please visit www.ivsc.org or contact **Marianna Todorova**, Duff & Phelps Director and IVSC Professional Board Member at +1 212 871 6239

Spotlight
Duff & Phelps Opens New Office in Madrid

On March 19, 2014, Duff & Phelps announced the opening of a new office in Madrid, Spain. The new office is intended to serve as a base in the region, from which to expand relationships with both new and existing clients. Duff & Phelps already counts many of the leading Spanish-listed companies, private equity firms and legal advisors as clients.

The new Madrid office will be led by Managing Director Javier Zoido, who will serve as country leader for Spain. Mr. Zoido, a Spanish national, will drive growth of the business across Spain and will serve as the primary contact for Duff & Phelps' core services, which include valuation, restructuring and M&A advisory.

From a strategic perspective, the expansion of the business into this new market underscores the firm's commitment to Europe. Led by Yann Magnan, Head of European Valuation Advisory Services, the core valuation service line continues to be a driver for the firm's growth across Europe. Concurrently, there have been a number of developments in the Corporate Finance business over the last year, notably the hiring of 4 managing directors in the UK Restructuring practice and 3 managing directors in the UK M&A advisory practice.

"The new office in Madrid will enable us to better serve our clients in the region… and aligns very well with other European teams in our existing key markets," commented managing director Yann Magnan. Valuation professionals are currently situated in key markets, including France, Germany, the Netherlands and the UK.

Learn more about our services in Spain by visiting www.duffandphelps.es

North American Industry Market Multiples
As of March 31, 2014

Industry	Market Value of Equity to Net Income		MVIC to EBIT		MVIC to EBITDA	
	U.S.	Canada	U.S.	Canada	U.S.	Canada
Energy	21.6	22.7	20.2	22.4	11.4	9.7
Energy Equipment & Services	23.5	20.2	17.4	17.3	9.6	8.6
Integrated Oil & Gas	10.6	—	10.2	—	6.7	—
Materials	17.8	14.5	15.6	16.5	10.8	8.3
Chemicals	20.0	20.7	15.5	16.6	11.4	12.8
Diversified Chemicals	14.0	—	17.2	—	11.9	—
Specialty Chemicals	22.4	—	16.3	—	13.0	—
Construction Materials	40.5	—	28.3	—	14.6	—
Metals & Mining	15.0	11.4	14.4	17.3	11.5	7.5
Paper & Forest Products	14.4	17.3	17.3	12.3	10.1	8.3
Industrials	21.6	17.1	15.7	16.5	11.4	10.8
Aerospace & Defense	20.3	17.2	15.6	19.6	11.3	13.7
Industrial Machinery	20.6	15.5	16.2	15.8	11.8	10.6
Commercial Services & Supplies	23.8	24.2	15.0	17.8	10.6	8.6
Road & Rail	23.6	19.7	16.1	14.9	10.1	8.9
Railroads	19.3	—	15.2	—	11.6	—
Consumer Discretionary	19.3	17.0	15.5	14.3	11.4	10.2
Auto Parts & Equipment	19.2	15.0	13.2	12.3	8.7	7.2
Automobile Manufacturers	—	—	—	—	12.8	—
Household Durables	18.5	—	17.6	—	14.4	—
Leisure Equipment & Products	14.6	—	13.8	—	11.0	—
Textiles, Apparel & Luxury Goods	18.9	—	15.6	—	12.7	—
Restaurants	31.4	19.9	19.9	11.5	12.0	—
Broadcasting	18.2	—	17.0	—	12.0	—
Cable & Satellite	19.3	—	16.5	12.3	9.8	6.8
Publishing	20.7	16.8	17.3	12.1	10.1	8.6
Multiline Retail	16.6	—	11.4	—	8.0	—

Industry	Market Value of Equity to Net Income		MVIC to EBIT		MVIC to EBITDA	
	U.S.	Canada	U.S.	Canada	U.S.	Canada
Consumer Staples	19.1	17.0	15.7	16.6	12.1	11.0
Beverages	20.2	21.3	18.7	22.4	17.0	14.1
Food Products	19.0	14.4	16.6	16.2	12.1	10.7
Household Products	20.1	—	14.3	—	11.7	—
Health Care	22.9	11.6	18.9	22.7	14.4	16.3
Health Care Equipment	22.9	—	20.0	—	15.4	—
Health Care Services	24.0	—	16.0	25.9	11.8	18.2
Biotechnology	18.3	10.6	23.5	—	26.1	—
Pharmaceuticals	20.8	—	19.9	—	14.2	—
Information Technology	24.6	22.3	20.5	21.5	15.6	16.3
Internet Software & Services	24.9	17.8	27.5	18.4	19.4	16.5
IT Services	22.8	32.8	16.1	25.4	12.8	9.2
Software	29.1	46.8	25.1	48.3	18.9	29.3
Technology Hardware & Equipment	22.3	18.0	19.5	15.8	14.0	10.7
Communications Equipment	25.7	13.6	22.1	15.2	17.5	14.2
Computers & Peripherals	19.1	—	16.4	—	13.3	—
Semiconductors	27.7	—	27.3	—	18.8	—
Telecommunication Services	16.9	17.6	16.7	13.9	7.9	8.0
Integrated Telecommunication Services	10.0	—	15.1	13.3	6.3	8.2
Wireless Telecommunication Services	20.1	—	13.4	—	9.1	—
Utilities	19.7	15.5	15.3	20.9	9.9	12.0
Electric Utilities	18.5	—	15.0	—	9.3	—
Gas Utilities	19.2	—	14.8	—	9.8	—

Industry	Market Value of Equity to Net Income		Market Value of Equity to Book Value	
	U.S.	Canada	U.S.	Canada
Financials	15.3	12.6	1.1	1.3
Commercial Banks	14.8	11.9	1.1	1.9
Investment Banking and Brokerage	24.6	—	1.5	1.1
Insurance	12.3	14.6	1.1	1.5

An industry must have a minimum of 5 company participants to be calculated. For all reported multiples in the U.S. and Canada, the average number of companies in the calculation sample was 94 (U.S.), and 35 (Canada); the median number of companies in the calculation sample was 50 (U.S.), and 18 (Canada). Sample set includes publicly-traded companies (private companies are not included). Source: Data derived from Standard & Poor's Research Insight and Capital IQ databases. Reported multiples are median ratios (excluding negatives). MVIC = Market Value of Invested Capital = Market Value of Equity plus Book Value of Debt. EBIT = Earnings Before Interest and Taxes for latest fiscal year. EBITDA = Earnings Before Interest, Taxes, Depreciation and Amortization for latest 12 months.

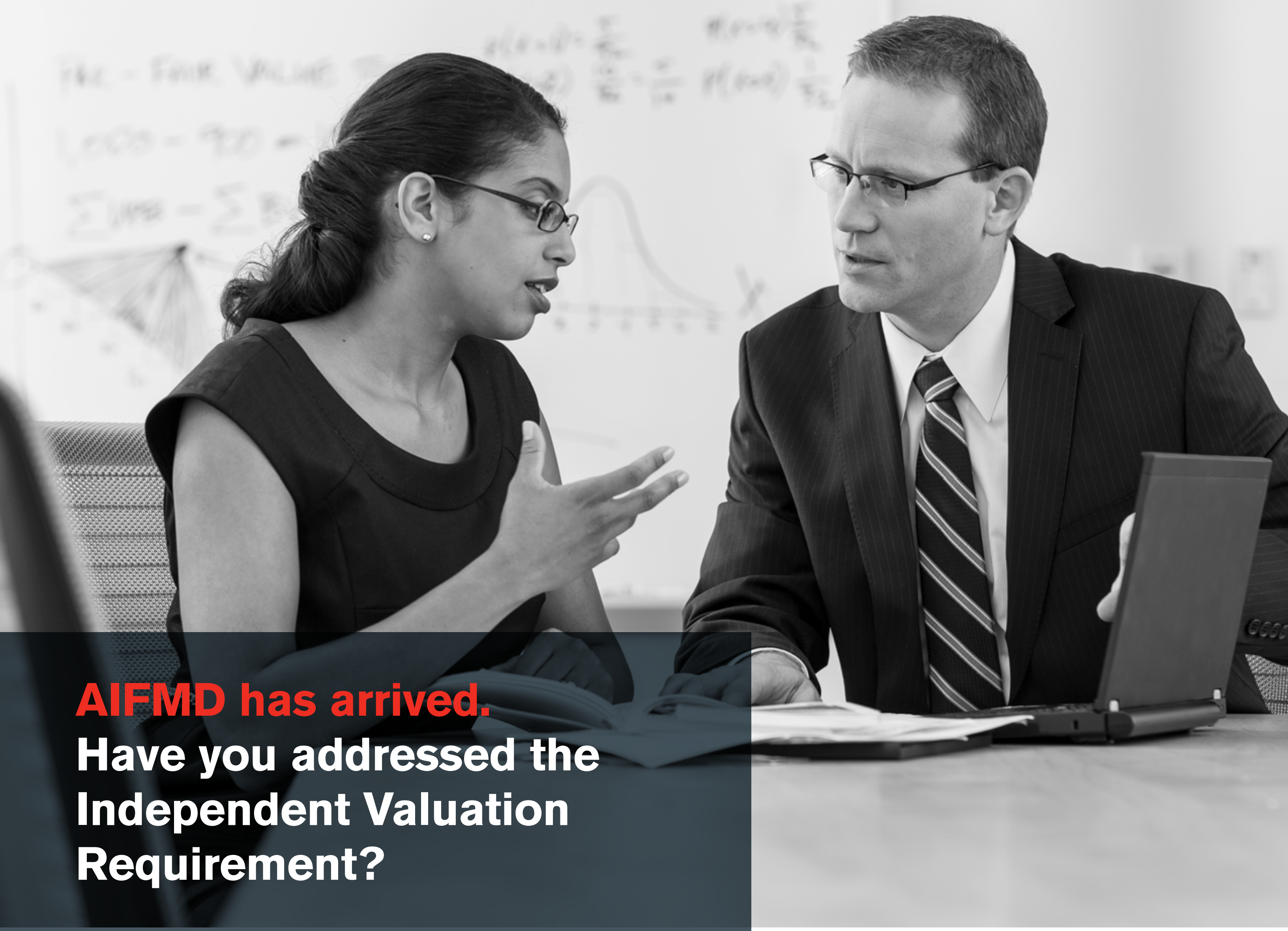
European Industry Market Multiples
As of March 31, 2014

Industry	Market Value of Equity to Net Income	MVIC to EBIT	MVIC to EBITDA
Energy	16.1	14.3	10.9
Energy Equipment & Services	18.3	15.4	10.4
Integrated Oil & Gas	13.4	8.1	5.2
Materials	19.9	15.9	9.4
Chemicals	21.1	17.0	10.0
Diversified Chemicals	—	19.5	9.3
Specialty Chemicals	23.4	16.7	10.7
Construction Materials	22.5	15.9	10.1
Metals & Mining	15.3	13.0	8.1
Paper & Forest Products	18.4	21.4	10.7
Industrials	19.7	15.9	11.5
Aerospace & Defense	19.8	16.9	11.2
Industrial Machinery	19.6	15.7	11.3
Commercial Services & Supplies	21.8	15.1	10.4
Road & Rail	15.1	14.9	7.3
Railroads	—	—	—
Consumer Discretionary	19.4	15.6	11.3
Auto Parts & Equipment	17.2	12.8	8.5
Automobile Manufacturers	11.2	16.7	11.1
Household Durables	16.3	14.6	10.9
Leisure Equipment & Products	20.1	15.9	12.5
Textiles, Apparel & Luxury Goods	20.3	15.3	11.7
Restaurants	22.6	16.6	11.4
Broadcasting	23.1	17.0	14.8
Cable & Satellite	44.2	21.6	11.9
Publishing	16.5	13.9	9.8
Multiline Retail	15.3	21.8	10.4

Industry	Market Value of Equity to Net Income	MVIC to EBIT	MVIC to EBITDA
Consumer Staples	19.1	15.5	10.6
Beverages	22.6	17.9	11.3
Food Products	15.8	15.4	10.2
Household Products	24.1	14.6	9.3
Health Care	23.7	20.3	13.9
Health Care Equipment	20.0	17.8	13.4
Health Care Services	13.8	17.2	10.0
Biotechnology	28.1	29.0	23.1
Pharmaceuticals	24.0	18.7	12.9
Information Technology	21.3	17.6	12.7
Internet Software & Services	28.5	27.0	15.6
IT Services	20.0	13.6	10.3
Software	22.5	20.0	14.8
Technology Hardware & Equipment	20.7	17.6	12.4
Communications Equipment	19.0	15.8	11.7
Computers & Peripherals	16.9	17.6	13.9
Semiconductors	26.9	26.1	14.8
Telecommunication Services	18.2	16.3	8.6
Integrated Telecommunication Services	16.8	13.4	7.6
Wireless Telecommunication Services	8.2	17.3	10.5
Utilities	16.1	17.0	10.3
Electric Utilities	14.7	15.1	9.0
Gas Utilities	13.9	14.1	9.1

Industry	Market Value of Equity to Net Income	Market Value of Equity to Book Value
Financials	14.8	1.1
Commercial Banks	12.7	0.7
Investment Banking and Brokerage	23.8	1.6
Insurance	11.9	1.2

An industry must have a minimum of five company participants to be calculated. For all reported multiples in Europe, the average number of companies in the calculation sample was 91 and the median number of companies in the calculation sample was 43 Sample set includes publicly-traded companies (private companies are not included). Source: Data derived from Standard & Poor's Research Insight and Capital IQ databases. Reported multiples are median ratios (excluding negatives). MVIC = Market Value of Invested Capital = Market Value of Equity plus Book Value of Debt. EBIT = Earnings Before Interest and Taxes for latest fiscal year. EBITDA = Earnings Before Interest, Taxes, Depreciation and Amortization for latest 12 months.



AIFMD has arrived. Have you addressed the Independent Valuation Requirement?

AIFMD imposes far reaching rules that will have a profound impact on the way that fund managers interact with investors and other stakeholders. Duff & Phelps is a market leader in providing illiquid portfolio pricing valuation services to the private equity and hedge fund community. We provide an independent and objective view on valuation that enhances your financial reporting process.

For more information visit **www.duffandphelps.com/aifmd**

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