



Coronavirus Pandemic and Public Market Volatility

Impact on Valuing Private Debt and Equity Investments

Agenda

- I. Duff & Phelps Firm Overview
- II. Investment Company and Fair Value Background
- III. Valuation Considerations in the Current Environment
- IV. Questions

Appendices

- A. Duff & Phelps Alternative Asset Advisory
- B. Duff & Phelps Real Estate Advisory

David L. Larsen, CPA/ABV/CEIV

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David Larsen is a managing director in the Seattle office of Duff & Phelps and part of the Alternative Asset Advisory service line. He has more than 35 years of transaction and accounting experience. He specializes in fair value accounting issues, and specifically in valuation, accounting, and regulatory issues faced by Alternative Asset managers and investors.

David advises leading Private Equity Managers and Institutional Investors and has advised numerous strategic and private equity acquirers in all areas of mergers, acquisitions, joint ventures, divestitures and valuation related matters. He provides valuation policy and process assistance to a number of the world's largest institutional limited partner investors and some of the world's largest alternative Investment managers. David is a member of the International Valuation Standards Council Standards Review Board, an advisor to and has served as Vice Chair of the International Private Equity and Venture Capital Valuations Board (IPEV), which in 2018 released updated International Private Equity Valuation Guidelines and serves as a member of the American Institute of Certified Public Accountants (AICPA) PE/VC Practice Guide Task Force. David has served as a special advisor to the Institutional Limited Partners Association; board member, project manager and technical advisor to the Private Equity Industry Guidelines Group and was instrumental in developing and drafting the Private Equity Industry Guidelines Group's Valuation and Reporting Guidelines; member of the Financial Accounting Standards Board's Valuation Resource Group responsible for providing the Board with input on potential clarifying guidance on issues relating to the application of the principles of FASB ASC Topic 820 (formerly SFAS No. 157), *Fair Value Measurements* and a member of the AICPA Net Asset Value Task Force.

Prior to joining Duff & Phelps, David was a Partner in KPMG LLP's Transaction Services practice, where he was the segment leader of KPMG's U.S. Institutional Investor practice. He served 13 years in KPMG's Seattle, Düsseldorf and Prague audit practices prior to moving full time to advisory work.

David received his M.S. in accounting from Brigham Young University's Marriott School, his B.S. in accounting from Brigham Young University. He is a certified public accountant licensed in California and Washington. David is also a member of the AICPA and the California and Washington Society of Certified Public Accountants and is a FINRA Series 7, 24 and 63 registered representative.

Ross Hostetter

Managing Director, Alternative Asset Advisory, Head of Portfolio Valuation - North America



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Ross Hostetter is a Managing Director in the New York office and is the North American Portfolio Valuation Leader. Ross has more than 25 years of experience serving clients across the financial services industry.

Ross works primarily with private equity funds, hedge funds and business development companies. He has extensive experience both in valuing illiquid securities and in establishing best in class valuation policies and procedures. He has valued illiquid securities across capital structures, industries and geographies and has performed business valuations and intangible asset valuations for a diverse range of companies.

Prior to Duff & Phelps, Ross was a director at Standard & Poor's Corporate Value Consulting (CVC). Prior to CVC, Ross worked at PricewaterhouseCoopers (PwC) as a tax associate in the PwC Charlotte office for three years, where he advised on federal and state corporate tax issues, and in the London office as a tax manager. While working with the Banking and Capital Markets group in London, Ross focused on advising financial services clients on U.K. corporate tax and international tax issues.

Ross received his undergraduate degree from the University of Georgia and his MTx from Georgia State University.

David M. Scott

Managing Director, Alternative Asset Advisory
Energy & Mining Co-Leader



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David Scott is the head of Energy and Infrastructure Portfolio Valuation at Duff & Phelps and global co-leader of Duff & Phelps' Energy & Mining Group. David has worked throughout the Alternative Asset Advisory, Financial Reporting, Transaction Opinion and Dispute Consulting practices within Duff & Phelps and has more than 18 years of experience in the energy industry and 16 years with Duff & Phelps.

David's professional experience includes valuation of business enterprises, equity and debt interests, various fixed and intangible assets associated with businesses, portfolio analysis, transactional analysis, allocation of purchase price and litigation support purposes. David has managed a range of engagement types, including valuation of minority and control equity interests for various purposes, portfolio valuation assurance, ESOPs, corporate planning, recapitalizations and arbitrations and litigations. A significant amount of David's experience in the valuation of business enterprises and equity and debt interests has focused on the valuation of illiquid securities of private equity, hedge funds, fund of fund investors, pensions and endowments. He specializes in valuations of portfolios of illiquid interests held by alternative investors and has valued management fees and carried interest for private equity management entities.

David's private equity and hedge fund experience includes the quarterly valuation of private loans, including senior secured and subordinated debt, convertible preferred and common equity, warrants and other derivatives, and limited partner and general partner interests.

David authored the Energy Valuation section of PEI's Private Equity Valuation "Definitive Guide to Valuing Investments Fairly", by D&P (2014).

David specializes in the energy and infrastructure sectors, focused on upstream, midstream and downstream oil and gas, nuclear, fossil, renewable power, transmission & distribution, and utility sectors. David has extensive experience in advising and assisting clients within the energy industry with the application of Accounting Standards Codification (ASC) 820 - Fair Value Measurements, ASC 805 - Business Combinations and ASC 350 - Goodwill and Other Intangibles. David's power industry experience includes the valuation of combined cycle, simple cycle, coal/lignite and nuclear power plants as well as several types of renewable assets. David's oil and gas expertise includes the valuation of world-wide upstream, midstream and downstream assets in various stages of development.

David also has extensive experience in economic forecast modeling and has teamed with various analytics and market forecast consultants on numerous engagements. He has performed engagements in numerous locations throughout North America, Africa, Asia, Australia, Central America, Europe, and South America.

Prior to joining Duff & Phelps, David was an analyst with El Paso Merchant Energy Company. David received a B.S. with the highest distinction in finance, with significant coursework in economics, from University of Oklahoma. He also received a B.A. in political science from the University of Oklahoma. David currently serves on the Advisory Council of the Master of Science in Finance program at the University of Texas.

Ryan McNelley

Managing Director, Alternative Asset Advisory



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Ryan McNelley is a managing director in the London office of Duff & Phelps, and part of the Portfolio Valuation service line within the Alternative Asset Advisory business unit. Ryan's clients primarily include alternative investment fund managers, including private equity and private debt fund managers, hedge fund managers, infrastructure fund managers, real estate debt fund managers, etc., in both Europe and in the U.S. Ryan assists such clients in all matters related to valuation:

- Assisting alternative fund managers in establishing valuation policies and procedures that meet investor and regulator standards of top tier governance and independence
- Providing independent and objective third-party valuations of the underlying assets of such funds in order to validate whether the fund manager's valuations are fair and reasonable
- Assisting with the valuation of the carried interest of the fund for tax or management incentive purposes
- Performing fairness opinions when assets are transacted between related parties
- Benchmarking the returns of the fund, with the aim of identifying and quantifying the manager's unique contribution to value creation

Ryan is a regular speaker at conferences across Europe and is part of several industry working groups and trade organisations. Most notably, Ryan was a contributing author to the Alternative Investment Management Association's (AIMA) Guide to Sound Practices for Hedge Fund Valuation, and is a member of Invest Europe's Working Group on Accounting Standards, Valuation and Reporting. In addition, Ryan has been regularly quoted in the financial press, including in publications such as the Wall Street Journal, the Financial Times, Private Equity News, Private Debt Investor, and others. Ryan specializes in the valuation of illiquid ("hard-to-value", or Level 3) investments, typically under the IFRS 13, ASC § 820 or other local GAAP Fair Value standards used by alternative investment managers. Ryan's experience includes the valuation of the following asset types:

- Senior, subordinated and mezzanine debt; revolving lines of credit, delayed draw facilities, asset backed loans
- Common equity, preferred equity, convertible preferred equity and hybrid instruments
- Non-performing loans and loan portfolios
- Litigation claims
- Fund management companies and limited partner interest

Ryan's past experience includes seven years in various finance and business management roles at Maxim Integrated Products, a Silicon Valley semiconductor company. Ryan received his B.S. in Business and Economics from Saint Mary's College of California in 1997, and his M.B.A. with a specialization in Corporate Finance from Cornell University in 2006

Ross Prindle, MAI, CRE, FRICS

Managing Director, Real Estate Advisory Group, Global Practice Leader



Ross is primarily focused on real estate valuation and consulting for institutional funds and owner/operators, real estate investment trusts, private equity and hedge funds, and corporate owners/operators of real estate.

Ross has a distinct competency to complete large multi-property, multi-national & global valuation engagements.

Ross has been a valuation consultant since 1988. His most recent work experience prior to Duff & Phelps is the Managing Director in-charge of the Real Estate Valuation and Consulting Practice at Standard & Poor's. Before he worked at S&P, Ross was a Midwest partner in the real estate valuation and consulting practice for Arthur Andersen LLP.

Ross received his M.B.A. in finance from Kellstadt Graduate School of Business at DePaul University and his B.S. in real estate and urban planning from the University of Illinois at Champaign/Urbana.

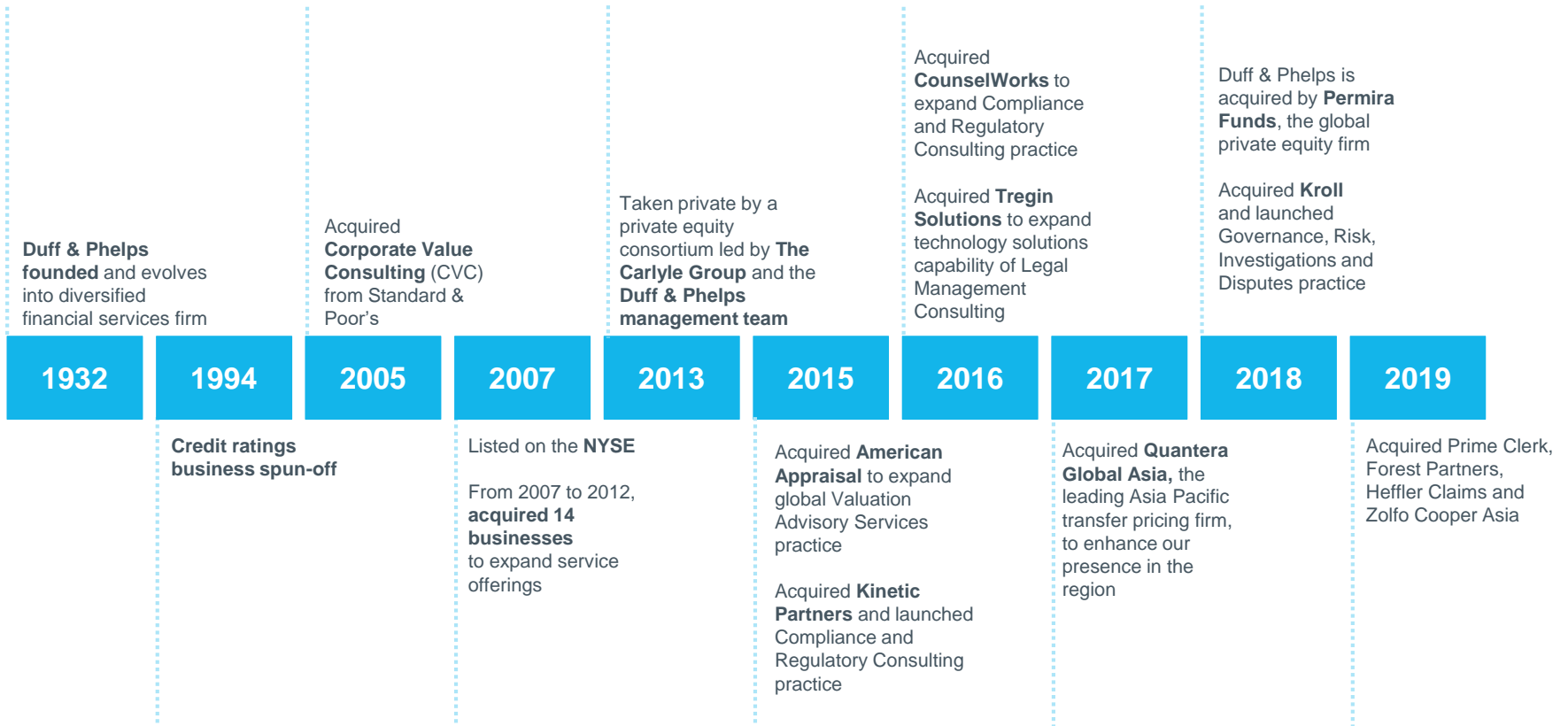
He is a certified general real estate appraiser in Illinois and California, a member of the Appraisal Institute (MAI designation #10614), a FRICS member of the Royal Institute of Chartered Surveyors, A CRE Member of the Counselors of Real Estate, and an active participant of the Valuation Committee at the National Council of Real Estate Investment Fiduciaries (NCREIF). Ross has also spoken several times on hot topics at the NAREIT Law & Accounting Conference Accounting Committee.

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Section I

Duff & Phelps Firm Overview

Evolution



One Company

ACROSS 28 COUNTRIES WORLDWIDE

THE AMERICAS

Addison	Houston	Pittsburgh
Atlanta	Libertyville	Reston
Austin	Lisle	St. Louis
Bogota	Los Angeles	San Francisco
Boston	Mexico City	São Paulo
Buenos Aires	Miami	Seattle
Cayman Islands	Milwaukee	Secaucus
Chicago	Minneapolis	Silicon Valley
Dallas	Morristown	Stamford
Denver	Nashville	Toronto
Detroit	New York	Washington, DC
Grenada	Philadelphia	

EUROPE AND MIDDLE EAST

Abu Dhabi	Lisbon
Agrate Brianza	London
Amsterdam	Longford
Athens	Luxembourg
Barcelona	Madrid
Berlin	Manchester
Bilbao	Milan
Birmingham	Moscow
Channel Islands	Munich
Dubai	Padua
Dublin	Paris
Frankfurt	Pesaro

ASIA PACIFIC

Bangalore	Shenzhen
Beijing	Singapore
Guangzhou	Sydney
Hanoi	Taipei
Ho Chi Minh City	Tokyo
Hong Kong	
Hyderabad	
Mumbai	
New Delhi	
Shanghai	

About Us

WE SERVE

65% of Fortune 100 companies

92% of Am Law 100 law firms

80% of the 25 largest Euro STOXX companies

72% of the 25 largest private equity firms in the PEI 300

68% of the 25 largest hedge funds in the Alpha Hedge Fund 100

WE RANK

#1 U.S. Fairness Opinion Provider¹

#1 Global Fairness Opinion Provider¹

#4 U.S. Middle Market M&A Advisor over the past 5 years²

#1 Forensic Consultant in North America³

#1 IP Litigation Consulting Firm in the U.S.⁴

Largest independent valuation advisory firm

WE WON

Best Cyber Security Services Provider^{5, 6}

Best Litigation Dispute Advisory Services Consultant⁶

Best Corporate Investigations Provider⁶

Compliance Consulting **Team of the Year**⁷

Best Global Risk and Investigations Consultant⁶

Thought Leader in Digital Forensics, Arbitration and Investigations³

1. Source: Published in Thomson Reuters' "Mergers & Acquisitions Review - Full Year 2018."

2. Source: Thomson Financial Securities Data (U.S. deals \$50M < \$150M, including deals without a disclosed value). Full years 2014 through 2018.

3. Who's Who Legal 2018: Forensic and Litigation Consulting, 2018 IAM

4. HedgeWeek 2018

5. The National Law Journal 2018

6. <https://www.c5-online.com/women-compliance-awards-3/2017-winners/>

Enhancing Value Across a Range of Expertise

VALUATION ADVISORY

Valuation and consulting for financial reporting, tax, investment and risk management purposes

- Valuation Services
- Alternative Asset Advisory
- Real Estate Advisory
- Tax Services
- Transfer Pricing
- Fixed Asset Management and Insurance Solutions



CORPORATE FINANCE

Objective guidance to management teams and stakeholders throughout restructuring, financing and M&A transactions, including independent fairness and solvency opinions

- M&A Advisory
- Fairness Opinions
- Solvency Opinions
- Transaction Advisory
- ESOP and ERISA Advisory
- Commercially Reasonable Debt Opinions
- Distressed M&A and Special Situations



GOVERNANCE, RISK, INVESTIGATIONS AND DISPUTES

Combined Duff & Phelps and Kroll risk management and mitigation, disputes and other advisory services

- Business Intelligence and Investigations
- Disputes
- Cross-Border Restructuring
- Cyber Risk
- Legal Management Consulting
- Security Risk Management
- Compliance Risk and Diligence
- Compliance and Regulatory Consulting



PRIME CLERK

Provides bankruptcy and class action claims administration through its proprietary software and industry leading management team.

- Chapter 11
- Strategic Communications
- Contract Review
- Corporate Actions
- Class Action



Services Across the Transaction Lifecycle



Professional Affiliations

Duff & Phelps Managing Directors provide input to regulators and standard-setters, and actively contribute to the development of valuation industry best practices.



International
Accounting Standards
Board



Appraisal
Institute™
*Professionals Providing
Real Estate Solutions*



The
Appraisal
Foundation



iapp



IPEV

International Private Equity
and Venture Capital
Valuation Guidelines

AIMA



Section II

Investment Company and Fair Value Background

Fair Value Definition Has Aligned

Fair Value is defined by:

- FASB ASC Topic 820
- IFRS 13, and
- GASB (US Government Accounting Standards Board) Statement 72

as:

- » *... the price that would be received TO SELL an asset or paid to transfer a liability in an ORDERLY transaction between market participants at the measurement date.*
(emphasis added)

Key Considerations:

- Unit of Account
- Calibration
- Market Participant Assumptions
- Orderly transaction (Active Market)
- How does Value Accrete?
- Application of Judgement

Why Fair Value?

- **ASC Topic 946 (Investment Company Accounting):**
 - All investments reported at Fair Value as dictated by ASC Topic 820
- **Fiduciary Duty - basis that Fund investors (such as Limited Partners, “LPs”) use to report periodic (quarterly/yearly) performance.**
 - Investors / fund beneficiaries
 - Other interested parties; corporate governance, taxpayers, etc.
- **Decision Making**
 - Fair Value is the best basis for investors to make “apples to apples” asset allocation decisions.
 - Interim investment decisions (manager selection), monitoring interim investment performance, and overall performance of an investor’s portfolio, on a reasonably comparable basis.
 - For some; Fair Value is a basis for incentive compensation decisions.
- **Financial Reporting**
 - Investors need FV based NAV to allow them to prepare their own financial statements
- **A historical reporting basis, such as cost, does not provide meaningful comparability across investments.**

Investors (LPs) must satisfy themselves that reported NAV is based on ASC Topic 820/IFRS 13 compliant fair value of underlying investments

What does Fair Value mean in times of market dislocation?

- Fair Value \neq Fire Sale Price
- Fair Value does take into account current market conditions
- Fair Value does take into account information that is known and knowable at the measurement date.
- Fair Value does reflect a market participants view as to how much they would pay
- Increased uncertainty and increased risk generally indicate higher return expectations and therefore lower asset prices
- Infrequently-traded or non-traded investments are generally less volatile than actively traded investments. During times of rapid public market value changes, up or down, private investments tend to lag the public markets and tend to change value less steeply than actively traded investments.
- Accounting rules require that observable prices for the same asset be given appropriate weight when estimating fair value.

Fair Value is the amount that a market participant would pay, in an orderly transaction, taking into account current market conditions and all relevant known and knowable information pertaining to the investment being valued at the measurement date

Macro Valuation Considerations at March 31, 2020

- Fair value is the amount that a market participant would pay in an orderly transaction at March 31, 2020
- Current Crisis and Public Market Volatility has similarities to 2008/2009 financial crisis
- Uncertainty has increased—market participants would take increased uncertainty into account, reflected by:
 - Decreased return assumptions
 - Delayed exit assumptions
 - Reduced cash flow assumptions
- Central Bank Actions
 - Lowering the discount rate does not necessarily translate into reduced risk
 - Credit spreads may be widening
- Investee company industry and geography require thorough assessment

Valuation Considerations resulting from the Covid-19 Pandemic

- Enterprise Value Considerations
 - Revenue
 - » Impact on customer demand
 - » Timing
 - » Customer financial health
 - Supply Chain
 - » Timing and availability of goods
 - » Cost of goods
 - » Supplier financial health
 - Operations
 - » Employee availability
 - » Employee productivity
 - » Ability to work remotely and maintain appropriate cybersecurity
- LTM EBITDA or other metrics in arrears needs to be updated in real time
- Future Cash flow projections need to be updated to consider short-term, medium-term and long-term expected impacts
- Consideration of the impact of a potential recession (short and long-term impact)

Valuation Considerations resulting from volatility in the public markets

- Actively traded investments (sufficient volume and frequency to determine a price) are valued at $P*Q$ (with limited exceptions)
- Observable transaction prices (if deemed @ fair value) for Investments that are not actively traded, but have an observable prices must be given appropriate weight
- Care should be taken not to “double dip” when using comparable company multiples
 - Adjust the multiple/discount rate, or
 - Adjust the metric/projections, or
 - Adjust the multiple/discount rate and the metric/projections
- Discount rates
 - Credit spreads may be widening
 - Reduction in Central Bank rates may not translate into lower risk
 - Starting place may be prior discount rate adjusted for increased risk
 - If projections have not been updated, likely need for increase in the company specific risk premium (alpha)

Specific Investment Considerations

- Energy
- Debt
- Equity
- Real Estate
- Fund Interests
- Infrastructure
- Early Stage
- Late Stage
- Structured Products
- Other

Selected March 31, 2020 Valuation Questions

- How do you quantify the impact on private debt investments?
- Do cash flow projections need to be updated, or can we just consider the current situation as temporary?
- Which industries will be impacted most?
- Would you expect the value of Real Estate to change?
- How should we be thinking about oil prices and their impact?
- Does market dislocation make some securities “thinly traded”? What should we do?
- How should we think about “calibration” given current market conditions?

Selected March 31, 2020 Valuation Questions (cont.)

- With artificially low government bond yields, what is the impact on cost of capital?
- What if government discount rates go negative?
- How should we consider lack of liquidity, potential covenant breaches, customer non-payments, etc.?
- How should “level 2” investments, be valued—can we still use broker quotes and pricing services?
- How long should we expect the crisis to last?
- How did values change in December 2008 and March 2009—does that provide a road map for today?
- If fair value is determined using known and knowable information at March 31, 2020, what do we do if the markets rebound or tank further in April or May 2020?

Appendix A

Duff & Phelps Alternative Asset Advisory

Duff & Phelps Alternative Asset Advisory

Duff & Phelps is a market leader in providing investors and managers with valuation services related to alternative investments, specifically securities and positions for which there are **no "active market" quotations**.

Key Highlights

- » Duff & Phelps' client base consists of **400 alternative asset** fund managers and investors in the **U.S. and globally**
- » We perform in-depth valuation analyses of all asset types for clients across the spectrum of banks, hedge funds and private equity firms globally:
 - **70% of the top 25** largest Hedge Funds
 - **70% of the top 25** largest Private Equity Funds
 - **50% of the top 25** largest publicly traded Hedge Fund platforms (business development companies or "BDCs")
 - **80% of the top 30** Limited Partners listed by PEI
 - Our client base includes **18 BDCs** (17 public, 1 private)
 - **Venture capital, Private debt and mid-market private equity funds** are the fastest growing segment of our client base
- » We review or value over **10,000 investment positions** on a quarterly basis, including derivatives and structured products
- » We have **17 full-time Managing Directors** and draw from D&P's pool of over 1,000 valuation professionals with wide ranging sector and asset class expertise across the spectrum

What we do

- » Duff & Phelps provides an objective and independent third party perspective on all classes of illiquid securities assisting alternative investment managers in the U.S. and globally
- » Duff & Phelps assists clients with design and implementation of best in class valuation policies and procedures including drafting and ongoing review of valuation processes and procedures to ensure best practice
- » Our services sought by our clients for several mission critical applications include:
 - Financial and management reporting
 - Transaction support
 - Audit and stakeholder requirements

Duff & Phelps' Alternative Asset Advisory practice enables alternative investment managers to enhance their valuation process with the independence and objectivity that investors require.

Alternative Asset Advisory - Practice Overview

Creating enhanced transparency in the Alternative Asset Investment Space

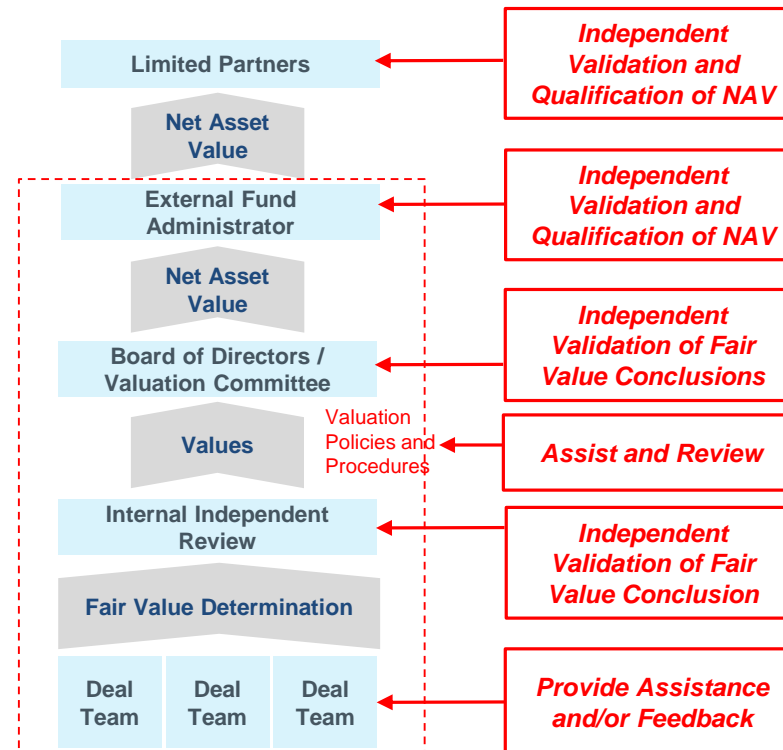
Who We Are

Duff & Phelps is a global industry leader in the alternative asset investment space, with expertise in all classes of illiquid securities and clients across North America, Europe, the Middle East, and Asia

How and Where We Can Help

Duff & Phelps provides an independent and objective view on valuation that enhances our clients' financial reporting process and internal control environment

Typical Engagements



Unparalleled Industry Thought Leadership

Creating enhanced transparency in the Alternative Asset Investment Space

Industry Thought Leadership

- » Service on FASB's Valuation Resource Group
- » Participation in the U.S. Securities and Exchange Commission's mark-to-market roundtable in November 2008
- » Membership on the American Institute of Certified Public Accountants' Alternative Investments Net Asset Value Task Force
- » Leadership in drafting the Private Equity Industry Guidelines Group's (PEIGG) U.S. Private Equity Valuation Guidelines
- » Membership on the International Private Equity and Venture Capital Valuations Board, focused on providing global guidelines for valuing private equity. Duff & Phelps co-drafted the IPEV Valuation Guidelines
- » Active member of Alternative Investment Management Association (AIMA)
- » Special advisor to the Institutional Limited Partners Association
- » Quoted by media outlets including Wall Street Journal, Financial Times, New York Times, CFO Magazine, CNBC, Fox Business News, Private Equity International, and Hedge Funds Review on issues impacting alternative investments valuation.

Benefits of Duff & Phelps Alternative Asset Advisory

- » Duff & Phelps review provides an independent and objective view on valuation that enhances our Client's valuation and financial reporting process
- » We ensure that our Clients' valuations methodology is compliant with current guidance and financial reporting requirements
- » We ensure that our Clients' methodology and approach is aligned with industry best practise using our experience and insight
- » Our involvement provides additional assurance to investors as to robustness of valuation process
- » We provide support for finance teams challenging and supporting deal team values
- » Our discussions with LPs indicate an increased focus on importance of timely, accurate reporting
- » At our Clients' request, and with a signed third party release letter, we communicate with LPs directly
- » Duff & Phelps review valuations prepared to ensure:
 - Objective and independent valuation conclusions
 - Compliance with guidelines and regulations
 - Consistent and robust approach with work-paper support

Our Areas of Expertise Span the Full Spectrum of Illiquid Assets and Securities

We are a recognized market leader, providing valuation services to the alternative investment management community. We currently review thousands of positions across a broad range of industries and clients.

Alternative Assets	Corporate Securities	Structured Products	Contractual Agreements	Options & Other Derivatives
<ul style="list-style-type: none"> » Private/Direct Loans » Real Estate » Private Equity and Venture Capital (Direct) » Private Equity and Venture Capital (Co-invest) » Hedge Fund and Private Equity General Partnerships (GPs) » Hedge Fund and Private Equity Limited Partnership Interests (LPs) » In-Kind Distributions » Other Illiquid investments » Non-performing loans (NPLs) 	<ul style="list-style-type: none"> » Convertible debt » Callable debt » Private Secured and Unsecured Loans » Distressed Debt » Other Debt Instruments » Preferred and Non-Public stock » PIPEs » Illiquid Common Equity » Employee stock options (FAS 123/IFRS2) and Restricted Stock » Warrants » Securities with embedded derivatives » Allocation of value among various claim holders » Common stock of highly leveraged companies » Contingent stock 	<ul style="list-style-type: none"> » Residential whole loans, MSR and Residential Mortgage Backed Securities (RMBS): Subprime, Alt-A, Option ARMs, RPL, NPL, fix and flip » Asset-Back Securities and Structured Notes » Commercial Real Estate (CRE) Loans, CMBS, CRE CDOs and CRE CLOs » Marketplace lending/P2P loans and securities » Various types of CDOs including ABS CDO, CBO, CLO, CDO², Synthetic CDOs, and Trust Preferreds. » Collateralized Fund Obligations (CFOs) – Hedge Fund and Private Equity Interests 	<ul style="list-style-type: none"> » Executive compensation plans » Contracts with contingent payments » Employee stock options (FAS 123/IFRS2) » Management Incentive plans associated with portfolio companies (FAS123R/IFRS2) 	<ul style="list-style-type: none"> » Futures & Forwards » Swaps - Interest Rate, Variance, Dividend, Energy and Volatility Swaps » Options - Equity, Interest Rate, Currency, Commodity & Energy Options » Credit Default Swaps and other credit derivatives » Warrants (Debt) » Other OTC derivatives » Catastrophe bonds

Sector Expertise

We have over a decade of experience in the portfolio valuation and alternative investments space, as well as experts covering all major asset classes, including Real Estate, Structured Products, Technology, Industrial Products, and Healthcare:

Experience	18 full time Managing Directors to ensure timely, intelligent responses to your issues and questions that bring you unparalleled market intelligence and insights.
Breadth	The broadest exposure to deal sizes ranging from lower middle market to the largest syndicated deals. Approximately 10,000 valuations of private investments were performed in 2018. These engagements involved billions of dollars in positions across all industries in both domestic and international geographies.
Capacity	Industry leading ability to leverage our 1,300+ valuation professionals with deep industry and product experience. Over 200 professionals regularly work on alternative asset advisory engagements.
Resources	As a large firm, we invest in leading technology to leverage investment data and bring market leading experience and insights to our clients.
Product Knowledge	Expertise with the most complex debt, equity, real estate and derivative investments in companies across the business lifecycle.
Thought Leadership	Our professionals are actively involved in shaping both the US and international landscape on Fair Value reporting issues, including co-authoring the current PEIGG and IPEV Fair Value guidelines.

Our experience with complex portfolios has given us unparalleled insight in valuing a broad range of alternative investments. As the largest valuation firm in the alternative asset space, we have valued a diverse array of investment classes, enabling us to approach our clients' valuation needs with confidence. This exposure puts us at the forefront of industry trends and valuation methodologies.

Appendix B

Duff & Phelps Real Estate Advisory Group

Real Estate Advisory Group

The Duff & Phelps Real Estate Advisory Group (REAG) provides comprehensive support in connection with commercial real estate investments and transactions, asset and portfolio management and optimization, financing and debt advisory. Our services help our clients maximize the value of their real estate holdings, and make important business decisions with confidence.

GLOBAL PRACTICE

With over 275 employees in 10 countries we have the scale and local market expertise to meet our clients' needs anywhere in the world.

INDUSTRY EXPERTISE

Our professionals have the requisite credentials, such as MAI, MRICS, FRICS and ASA, and are experts in different industry segments including alternative funds, REITs, hedge funds, pension funds, structured finance, CMBS securitization, banking and corporate real estate institutions. All of our work is performed in accordance with regulatory requirements and local financial reporting standards.

INDEPENDENCE

We offer truly independent valuation and consulting services to our clients in accordance with professional and ethical standards, and ensure that we are not subject to conflicts of interest in performing our work.

COMPETITIVE ADVANTAGE

Duff & Phelps is unique in offering our clients a range of real estate advisory services which leverage our expertise in valuation, corporate finance, accounting and taxation. We can value any type of asset, liability or equity interest associated with a real estate investment or transaction across all sectors and geographies, providing our clients with the transparency they require.

Real Estate Advisory Group Overview

DUFF & PHELPS
Real Estate Advisory Group

OVER
\$100M
REVENUES

275+
DEDICATED
REAL ESTATE
PROFESSIONALS

OVER
1,300+
CLIENTS

SERVE
70% OF TOP 25
LARGEST HEDGE
FUNDS AND
PRIVATE EQUITY
FIRMS

SERVE
48%
OF TOP 100
U.S. REITS

Helping clients maximize the value of their real estate

One Company

Duff & Phelps has offices in **28 COUNTRIES** worldwide with **Real Estate Advisory** professionals in **11** of them



THE AMERICAS

Addison	Houston	Pittsburgh
Atlanta	Libertyville	Reston
Austin	Lisle	St. Louis
Bogota	Los Angeles	San Francisco
Boston	Mexico City	São Paulo
Buenos Aires	Miami	Seattle
Cayman Islands	Milwaukee	Secaucus
Chicago	Minneapolis	Silicon Valley
Dallas	Morristown	Stamford
Denver	Nashville	Toronto
Detroit	New York	Washington, DC
Grenada	Philadelphia	

EUROPE AND MIDDLE EAST

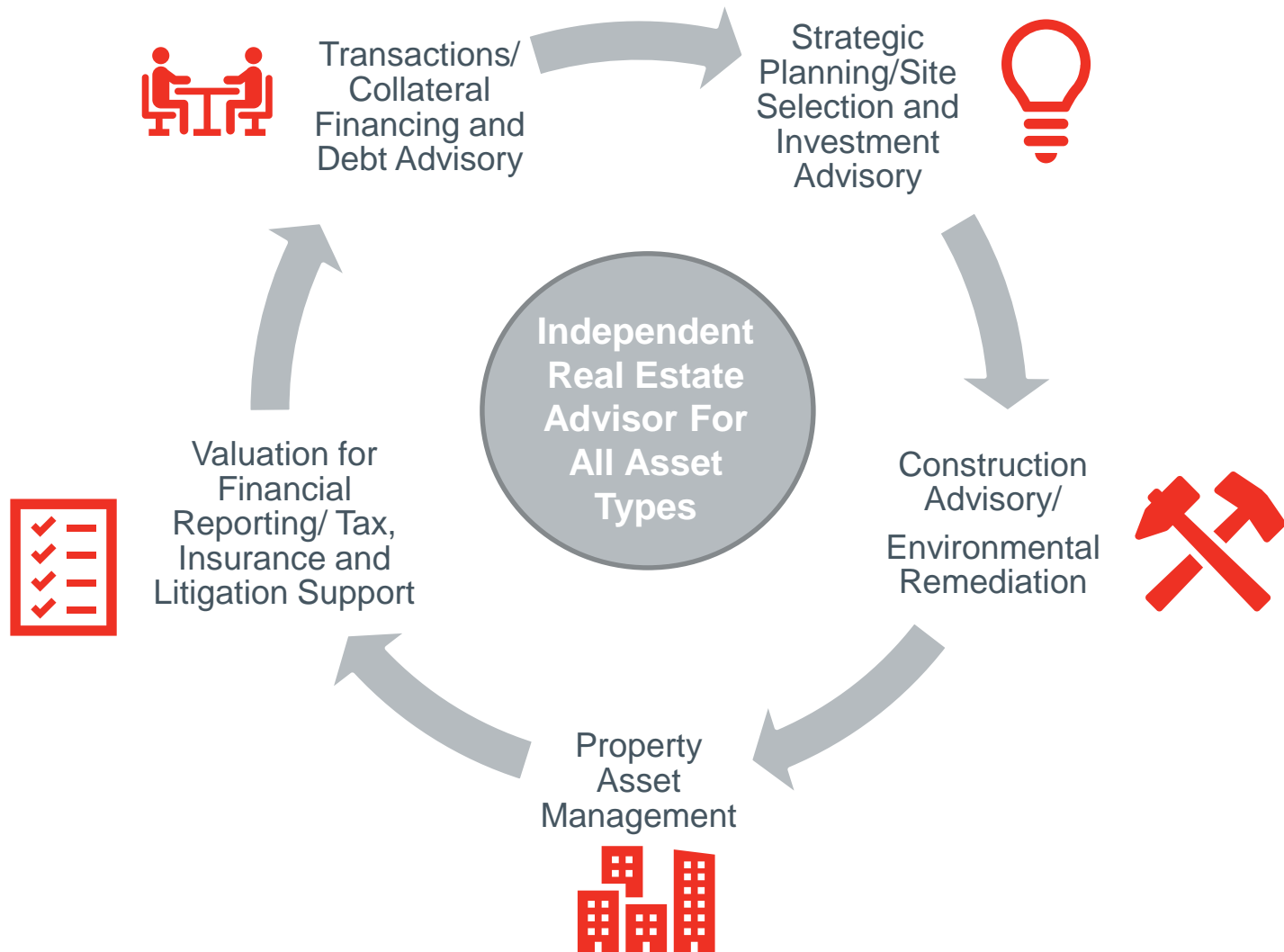
Abu Dhabi	Dublin	Munich
Agrate Brianza	Frankfurt	Padua
Amsterdam	Lisbon	Paris
Athens	London	Pesaro
Barcelona	Longford	Porto
Berlin	Luxembourg	Rome
Bilbao	Madrid	Turin
Birmingham	Manchester	Warsaw
Channel Islands	Milan	
Dubai	Moscow	

ASIA PACIFIC

Bangalore	Shanghai
Beijing	Shenzhen
Guangzhou	Singapore
Hanoi	Sydney
Ho Chi Minh City	Taipei
Hong Kong	Tokyo
Hyderabad	
Mumbai	
New Delhi	

Note: Cities in red include Real Estate Advisory professionals.

Serving All Real Estate Needs



Services

Valuation and Consulting

- Financial and Tax Reporting
- REIT valuations
- Lease Accounting
- Financing/Mortgage Lending Appraisals
- RICS (Red Book) Appraisals
- BelWertV Appraisals
- Portfolio Valuations
- Insurance Appraisals
- Appraisal Reviews
- Right of Way Appraisal
- Litigation Support/Expert Opinions
- Cost Segregation/Capital Allowance Consulting

Investment/Transaction Advisory

- Property Investment and Portfolio Analysis
- Data Room/Document Management
- Commercial Due Diligence
- Technical Advisory/Property Condition Reports
- Technical/Environmental Due Diligence
- Feasibility and Site Selection Studies
- Cash Flow Analytics (Argus modeling)
- Tenant Advisory
- Buy-side and Sell-side advisory
- Investor Solicitation/Auction and Bid Management
- Fairness and Solvency Opinions
- Sale-leaseback Advisory

Property Asset Management

- Strategic Planning
- Asset and Portfolio Investment Management
- Portfolio Rationalization
- Distressed Asset Remediation
- Property Management and Monitoring
- Development and Construction Advisory and Management
- Project-Controlling for lenders or investors
- Lease Renegotiation Assistance
- Property Tax Consulting
- Environmental Services/Remediation
- Analytics Advisory

Financing and Debt Advisory

- Equity and Debt Restructuring and Sourcing
- Loan Investment Advisory
- NPL Valuation
- Mortgage Loan Services Outsourcing for Financial Institutions
- Optimization of Financing Structures
- Real Estate Restructuring/Repositioning

Credentials

Our professionals include real estate valuation and consulting experts, real estate investment bankers, chartered surveyors, architects, engineers, and geologists. Certifications and memberships include MAI, RICS, CRE, ASA, HypZert, LEED and BREEAM, among others. Our appraisals are USPAP, IVS and RICS compliant.



Quality, Health and Safety,
Environmental Management
System - ISO 9001:2008 – OHSAS
18001:2007 – ISO 14001:2004



Royal Institution of
Chartered Surveyors



CCIM Institute
Commercial Real Estate's
Global Standard for Professional Achievement



Green Building Council Italia



LEED



Appraisal Institute



BREEAM

Serving Clients Across Real Estate Sectors



REITS



Funds



Banks



Hospitality,
Leisure and
Tourism



Retail

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