THE USE OF MANAGEMENT'S PROSPECTIVE FINANCIAL INFORMATION

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- Mr. Dufendach is a Certified Public Accountant (CPA), and an Accredited Senior Appraiser (ASA).
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  - Financial Instruments Task Force (current member)
  - Private Equity/Venture Capital Task Force (member)
  - In-Process Research & Development Task Force (member)
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  - Business Valuation Committee (member)
- Prior to joining Alvarez & Marsal, Mr. Dufendach was a partner, a national leader in the Complex Financial Instruments valuation group, and the practice leader for valuation services in the Seattle office of Grant Thornton LLP. Prior to Grant Thornton, Mr. Dufendach was a senior manager with a boutique valuation and litigation support firm in Seattle. Previously, he was a corporate banker, responsible for structuring, lending, and managing loans to publicly traded and large privately-held companies, specializing in the airline, broadcasting and forest products industries.
- Mr. Dufendach holds a Master of Business Administration with a concentration in finance from the Wharton School of the University of Pennsylvania and a Bachelor of Arts in Business Administration from the University of Washington. He has been an adjunct at Seattle University's graduate school of business and a member of its accounting advisory board, as well as a guest lecturer at the University of Washington's graduate school of business and law school. He has written articles and spoken at numerous conferences on complex valuation topics.

INTRODUCTION

The Use of Management's Prospective Financial Information

Management-prepared forecasts and projections, collectively referred to as prospective financial information (PFI), serve as the critical foundation for discounted cash flow methods. In 2017, two documents providing suggested guidance for valuation professionals were issued:

- Mandatory Performance Framework (MPF)
- Application of the Mandatory Performance Framework (A-MPF)

In 2019, these documents were supplemented by the issuance of Frequently Asked Questions (FAQ), which clarified certain sections of the MPF and A-MPF. [These three documents serve as the source material for the MPF section today]

I will address key aspects of this guidance that impact PFI, including the following concepts:

- professional skepticism
- evaluation of PFI
- reasonably objective basis
- documentation
- discount rate derivation

In addition, pre-existing guidance that is closely related to the proper evaluation and use of PFI will be reviewed, including:

- IFRS 13 and ASC 820 (discount rate techniques)
- AICPA Guide to Prospective Financial Statements (originally issued in 1986)

Today's focus: Evaluation, support, and documentation of the PFI employed in valuation engagements, and development of discount rates that are consistent with the risk profile of the PFI.

This presentation is about numerators (estimated cash flows) and denominators (discount rates). We will:

- **Define key terms: PFI, forecast, projection, DRAT, EPVT**
- **Describe generic types of PFI**
- **Discuss the implications of the MPF guidance**
- **Review the concept of "reasonably objective basis"**
- **Discuss development of discount rates consistent with identified risk profile**
- **Illustrate key concepts via a case study**

EXAMPLE FOR FURTHER DISCUSSION

Enterprise PFI:

- Assume Year 1 and 2 revenue and margins are supported by historical results
- What's going on with Year 3?
  - Can we use this PFI without adjustments?
  - How do we develop an appropriate discount rate?
  - What questions might we have for management?
  - How do we follow the guidance?

SRJ Inc.		Year 1	Year 2	Year 3	Year 4	Year 5	Terminal
Revenue		12,000	12,600	**38,230**	42,642	46,211	48,522
EBIT margin		1,200	1,260	**2,573**	4,264	5,254	5,516
Debt-free cash flow		720	756	**1,544**	2,558	3,152	3,310
Revenue Growth			5.0%	**203.4%**	11.5%	8.4%	5.0%
EBIT Growth			5.0%	**104.2%**	65.7%	23.2%	5.0%

Based upon further discussion with management:

- **A new product line (Product B) is expected to be introduced at the beginning of Year 3**
- **Product B is intended for a new market previously not served by the Company's existing product line (Product A)**
- **Management provides a revised "forecast" segmented by product lines**

SEGMENTED PFI

Enterprise PFI:

- **Product Line A has stable margins (10%) and stable growth (5%)**
- **Product Line B is expected to be introduced at the beginning of Year 3**
  - It is targeted at a new market segment
  - By Year 5, both growth and margins are expected to exceed Product A
  - Cash flow estimates for Product B are subject to greater uncertainty

SRJ Inc.		Year 1	Year 2	Year 3	Year 4	Year 5	Terminal
Product A		12,000	12,600	13,230	13,892	14,586	15,315
Product B				25,000	28,750	31,625	33,206
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Contribution - A		1,200	1,260	1,323	1,389	1,459	1,532
Contribution - B				1,250	2,875	3,795	3,985
EBIT margin		1,200	1,260	2,573	4,264	5,254	5,516
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How do we:

- **Evaluate the risk of this forecast?**
- **Document our assessment?**
- **Develop a discount rate (or rates) consistent with the risk?**

GENERIC RISK PROFILES

(Adapted from Reasonably Objective Basis guidance, AICPA Guide)

Existing product **Existing market** **LOWEST RISK**	**Existing product** **New market** **INCREASED RISK**
New Product **Existing Market** **INCREASED RISK**	**New product** **New market** **HIGHEST RISK**

DEFINITIONS

Prospective financial statements—Either financial forecasts or financial projections including the summaries of significant assumptions and accounting policies. Pro forma financial statements and partial presentations are not considered to be prospective financial statements.

Financial forecast—Prospective financial statements that present, to the best of the responsible party's knowledge and belief, an entity's expected financial position, results of operations, and cash flows. A financial forecast is based on the responsible party's assumptions reflecting the conditions it expects to exist and the course of action it expects to take.

Financial projection—Prospective financial statements that present, to the best of the responsible party's knowledge and belief, given one or more hypothetical assumptions, an entity's expected financial position, results of operations, and cash flows. A financial projection is based on the responsible party's assumptions reflecting conditions it expects would exist and the course of action it expects would be taken, given one or more hypothetical assumptions.

Hypothetical assumption—An assumption used in a financial projection to present a condition or course of action that is not necessarily expected to occur, but is consistent with the purpose of the projection.

Key factors—The significant matters on which an entity's future results are expected to depend. Such factors are basic to the entity's operations and thus encompass matters that affect, among other things, the entity's sales, production, service, and financing activities. Key factors serve as a foundation for prospective financial statements and are the bases for the assumptions.

EXAMPLE FOR FURTHER DISCUSSION

Key points regarding this PFI:

- Is it a forecast, or a projection?
  - Does it matter?
- What are the key assumptions?
  - Are any of them hypothetical?
- Do we know enough to develop an appropriate discount rate?

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DISCOUNT RATE ADJUSTMENT TECHNIQUE (DRAT)
ASC 820 AND IFRS 13

The **discount rate adjustment technique** uses a single set of cash flows from the range of possible estimated amounts, whether contractual or promised (as is the case for a bond) or most likely cash flows. In all cases, those cash flows are conditional upon the occurrence of specified events (for example, contractual or promised cash flows for a bond are conditional on the event of no default by the debtor). The discount rate used in the discount rate adjustment technique is derived from observed rates of return for comparable assets or liabilities that are traded in the market. Accordingly, the contractual, promised, or most likely cash flows are discounted at a rate that corresponds to an observed market rate associated with such conditional cash flows (market rate of return).

The **expected present value technique** uses as a starting point a set of cash flows that, in theory, represents the probability-weighted average of all possible cash flows (expected cash flows). The resulting estimate is identical to *expected value,* which, in statistical terms, is the weighted average of a discrete random variable's possible values where the respective probabilities are used as weights. Because all possible cash flows are probability weighted, the resulting expected cash flow is not conditional upon the occurrence of any specified event (as are the cash flows used in the discount rate adjustment technique).

EXPECTED PRESENT VALUE TECHNIQUE – METHODS 1 AND 2
ASC 820 AND IFRS 13

- **Method 1** of the expected present value technique adjusts the expected cash flows for the systematic (market) risk by subtracting a cash risk premium (risk-adjusted expected cash flows). These risk-adjusted expected cash flows represent a certainty-equivalent cash flow, which is discounted at a risk-free interest rate.

- **Method 2** of the expected present value technique adjusts for systematic (market) risk by adding a risk premium to the risk-free interest rate. Accordingly, the expected cash flows are discounted at a rate that corresponds to an expected rate associated with probability-weighted cash flows (expected rate of return). Models used for pricing risky assets, such as the Capital Asset Pricing Model, can be used to estimate the expected rate of return.

- Because the discount rate used in the discount rate adjustment technique is a rate of return relating to conditional cash flows, it likely will be higher than the discount rate used in Method 2 of the expected present value technique, which is an expected rate of return relating to expected or probability-weighted cash flows.

EXAMPLE FOR FURTHER DISCUSSION

Key factors in development of discount rate:

- **Is this PFI conditional?**
- **Is it expected value?**
  - If yes, Method 1?
  - Method 2?
- **Could the PFI be BOTH conditional and expected?**

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MANDATORY PERFORMANCE FRAMEWORK

Every valuation professional must exercise professional skepticism during each engagement where the valuation professional is providing a conclusion of value that will be used to support management's assertions in financial statements issued for financial reporting purposes.

Professional skepticism requires that the valuation professional have an attitude that emphasizes the following:

- ***Evidential skepticism.*** Valuation professionals must exercise due professional care by regularly questioning and critiquing all information and data with the appropriate level of skepticism. The level of skepticism should be based on the potential for bias within the information and data (for example, multiple sources of external corroboration versus a management-generated estimate with no external corroborating support).
- ***Self-skepticism.*** The valuation professional must regularly monitor his or her own client-based presuppositions that could detract from evidencing skepticism as a result of comfort level or familiarity with the client, industry, or both.

When evaluating management-generated and management-provided information, the valuation professional must consider the experience of management and the sufficiency of the documentation and analyses provided by management throughout the valuation engagement. The valuation professional should not presume management is biased; however, the valuation professional should not accept and rely on less-than-persuasive evidence because the valuation professional believes management is unbiased. This requirement extends to third-party specialists retained by management, their competence, and the sufficiency of their work product.

What factors might we wish to discuss and document to evidence our application of professional skepticism?

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What is the underlying guidance driving the PFI discussion in the MPF? Is there an overarching principle?

Encourage valuation professionals to apply professional skepticism and conduct an appropriate amount of due diligence over client-provided PFI by making comparison to any available relevant external data, performing backtesting and other procedures

Determine if the PFI provided by management is consistent with any observable relevant data by applying the procedures outlined in these FAQs and the MPF documents. In such a case, the appropriate discount rate might be a market participant WACC without a company specific risk adjustment (CSRA) (sometimes also referred to as 'alpha') as the basis for rates of return

Use the procedures to adjust the PFI as noted in the MPF and apply a market participant WACC, or

Apply DRAT, note why it is applied, document any CSRA factor utilized by referring to these procedures, and provide the appropriate quantitative and qualitative support for the selected CSRA

The valuation professional is responsible for evaluating whether the prospective financial information (PFI) provided by management is representative of expected value and properly supported. In circumstances in which the PFI is not representative of expected value, properly supported, or both, the valuation professional must determine the most appropriate way to align PFI and expected value. The valuation professional may elect to:

- **request management to revise its PFI;**
- **adjust assumptions in PFI;**
- **use either another present value method (for example, discount rate adjustment technique (DRAT), expected present value technique method 1 or 2 (EPVT1 or EPVT2, respectively)); or**
- **use an entirely different approach from the income approach.**

How should a valuation professional proceed when he or she has applied the steps in AMPF section 1.4.1 (a), (b), and (c) and still believes management's PFI is unsuitable for use in the valuation analysis?

When the valuation professional believes that management's PFI is unsuitable for use in the valuation analysis (for example, because it is substantially inaccurate and incomplete or there is material inconsistency with other information), the valuation professional should discuss the matter with management and request management to revise the PFI. If changes cannot be made to satisfy the valuation professional about those matters, he or she should determine whether to continue with the engagement or withdraw from the engagement. If the valuation professional decides to continue with the engagement, he or she should value the subject interest or entity using an entirely different approach from the income approach (that is, market or cost approach), if appropriate in the circumstances.

Reasonably Objective Basis

Since PFI represents future expectations, it is, by its very nature, imprecise. Therefore, the assumptions used in preparation of the PFI must be reasonable and supportable.

Understanding Management's Approach to Developing the PFI

Valuation professionals should understand and document how the PFI was developed by management. Management may prepare PFI using a "top-down" method or a "bottom-up" method or some combination of the two. A top-down method starts with aggregate assumptions regarding the entity, and allocates those assumptions across the elements of the entity (such as functional groups or reporting units). A bottom-up method generally begins by collecting data at the lowest level of the entity and then coalescing the expectations to arrive at a unified plan for PFI.

What is the valuation professional's responsibility with regards to the PFI? What does 'reasonable' mean in the context of evaluating PFI for use in a valuation?

It was the intent of the Performance Workstream to draft AMPF section A1.4 (Prospective Financial Information) to provide valuation professionals with guidance to help them assess whether it is reasonable to rely upon management's PFI for use in the valuation analysis. This section should not be interpreted as a requirement for the valuation professional to take responsibility for management's PFI and attest to its accuracy or achievability. Thus, although the valuation professional is not expected to attest to PFI's reasonableness, he or she should not simply accept PFI from management without investigating management's basis for the PFI and its suitability for use in the valuation analysis.

Part of the valuation professional's responsibility is to evaluate the PFI provided by management for reasonableness in general, as well as in specific areas. Factors and common procedures to consider when performing this assessment may include, but are not limited to, these:

- **Comparison of PFI for an underlying asset of subject entity to expected values of the entity cash flows**
- **Frequency of preparation**
- **Comparison of prior forecasts with actual results**
- **Mathematical and logic check**
- **Comparison of entity PFI to historical trends**
- **Comparison to industry expectations**
- **Check for internal consistency**

In [the A-MPF], the valuation professional is required to compare PFI to the 'expected cash flows' of the subject interest or entity. What does 'compare' imply in this context?

The intent of the Performance Workstream here is to guide the valuation professional to execute a suitable level of care and due diligence when assessing the PFI provided by management, whether it is for an individual asset or the overall entity. Specifically, the intent of the "compare" requirement is to evaluate management's PFI to assess whether it approximates expected cash flows, as discussed previously. It is not intended to be a literal comparison of management's PFI to a set of expected cash flows that generally do not exist. The guidance in AMPF A1.4.7 provides a set of considerations that may be useful to the valuation professional in evaluating the reasonableness of management's PFI.

Valuation professionals should be aware of the purpose for which the PFI was prepared. Valuation professionals should strive for objective, reasonable, and supportable PFI relevant for use in the valuation process with the understanding that management bias may exist and, if present, should be properly adjusted to expected cash flows (reflecting market participants' assumptions) in the analysis.

In order for the valuation professional to assess the quality and reliability of the PFI, the key components of the PFI should be identified. These components commonly include, but are not limited to, the following:

- **Base year metrics**
- **Revenue forecasts or revenue growth rates**
- **Gross margins**
- **EBITDA/EBIT margins**
- **Depreciation and amortization (book and tax)**
- **Effective tax rate**
- **Capital expenditures**
- **Debt-free net working capital (DFNWC) requirements**

A1.4 refers to 'expected cash flows'. What is the meaning of 'expected cash flows' in the context of the MPF guidance?

It was the intent of the Performance Workstream for the phrase 'expected cash flows' to be interpreted practically as PFI that represents a neutral and unbiased projection (not a conservative or aggressive / optimistic case estimate) of the company's or intangible asset's future cash flows. While this is not meant to require the valuation professional to evaluate, review or analyze multiple scenarios when analyzing PFI when using an EPV technique, the objective remains for the cash flow projections to reflect an expected case from a market participant perspective.

Separately, it is not the intent of the AMPF to prescribe a scenario based or a probability based expected cash flow model. Rather, the use of the term 'expected cash flows' is intended to highlight the need for the PFI to be free from bias (neither overly conservative nor optimistic) and thereby provide a reliable basis for the valuation analysis.

Documentation Requirements

The valuation professional, at a minimum, must document the following in writing within the work file, if applicable:

- **The identification of the party or parties responsible for preparation of the PFI**
- **The process used to develop the PFI from the perspective of market participants**
- **The explanation of key underlying assumptions used in the PFI such as revenue forecasts, percentage of market share captured by the entity, or how the projected profit margins compare to those of other market participants**
- **The steps used in, and results of, testing the PFI for reasonableness, including, but not limited to**
  - **a comparison of the PFI to expected cash flows,**
  - **a comparison of the PFI to historical performance,**
  - **a comparison and evaluation of prior year's PFI against actual historical results (when prior PFIs are available), and**
  - **an analysis of the forecast relative to economic and industry expectations**
- **An analysis of any evidence that contradicts management's assumptions or conclusions used in their PFI**
- **The rationale for any adjustments made to management's PFI**
- **Evidence that a mathematical and logic check was performed**
- **The components of the prospective balance sheet and cash flow statements, if available**

Policy suggestions:

Disclose in your valuation reports the nature of the PFI employed to value the subject interest:

- **Conditional**
- **Expected value**
- **Certainty-equivalent**
- **Hybrid**

Consider adoption of MPF documentation guidance

REASONABLY OBJECTIVE BASIS

The responsible party should have a reasonably objective basis to present a financial forecast. Because financial forecasts are presentations of information about the future, they are inherently less precise than information about past events. Nevertheless, financial forecasts present, to the best of the responsible party's knowledge and belief, the entity's expected financial position, results of operations, and cash flows.

For a projection, the responsible party need not have a reasonably objective basis for the hypothetical assumptions…

Considerable judgment is required to evaluate whether a reasonably objective basis exists to present a financial forecast. Sufficient knowledge of the entity's business and industry is essential in making the evaluation.

The responsible party has a reasonably objective basis to present a financial forecast if sufficiently objective assumptions can be developed for each key factor. The following matters should be considered when evaluating whether such assumptions can be developed:

- **Can facts be obtained and informed judgments made about past and future events or circumstances in support of the underlying assumptions?**
- **Are any of the significant assumptions so subjective that no reasonably objective basis could exist to present a financial forecast?**
- **Would people knowledgeable in the entity's business and industry select materially similar assumptions?**
- **Is the length of the forecast period appropriate?**

The evaluation of whether sufficiently objective assumptions can be developed for each key factor should be made within the following context:

- **A factor is evaluated by considering its significance to the entity's plans and the dollar magnitude and pervasiveness of the related assumption's potential effect on forecasted results**
- **The responsible party's consideration of which key factors have the greatest potential impact on forecasted results is a matter of judgment. A key factor having the greatest potential impact on forecasted results is one in which omission or misstatement of the related assumption would probably, in light of surrounding circumstances, change or influence the judgment of a reasonable person relying on the financial forecast.**
- **The responsible party should seek out the best information that is available in order to develop the assumptions. Cost alone is an insufficient reason not to acquire needed information. However, the cost of incremental information should be commensurate with the anticipated benefit to be derived.**
- **A conclusion that a reasonably objective basis exists for a forecast might be easier to support if the forecast were presented as a range.**

SUFFICIENTLY OBJECTIVE ASSUMPTIONS—MATTERS TO CONSIDER

Basis	Less Objective	More Objective
Economy	Subject to uncertainty	Relatively stable
Industry	Emerging or unstable; high rate of business failure	Mature or relatively stable
Entity:		
Operating history	Little or no operating history	Seasoned company; relatively stable operating history
Customer base	Diverse, changing customer group	Relatively stable customer group
Financial condition	Weak financial position; poor operating results	Strong financial position; good operating results
Management's experience with:		
Industry	Inexperienced management	Experienced management
The business and its products	Inexperienced management; high turnover of key personnel	Experienced management

SUFFICIENTLY OBJECTIVE ASSUMPTIONS—MATTERS TO CONSIDER, CONT.

Basis	Less Objective	More Objective
Products or services:		
Market	New or uncertain market	Existing or relatively stable market
Technology	Rapidly changing technology	Relatively stable technology
Experience	New products or expanding product line	Relatively stable products
Competing Assumptions	Wide range of possible outcomes	Relatively narrow range of possible outcomes
Dependency of assumptions on the outcome of the forecasted results	More dependency	Less dependency

EXAMPLE FOR FURTHER DISCUSSION

Are we satisfied that this PFI has a reasonably objective basis?

- **Support for Product A?**
  - Existing product, existing market
- **Product B?**
  - New product, new market

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Contribution - B				1,250	2,875	3,795	3,985
EBIT margin		1,200	1,260	2,573	4,264	5,254	5,516
Debt-free cash flow		720	756	1,544	2,558	3,152	3,310

Reminder

Existing product **Existing market** **LOWEST RISK**	**Existing product** **New market** **INCREASED RISK**
New Product **Existing Market** **INCREASED RISK**	**New product** **New market** **HIGHEST RISK**

Policy suggestion: Document observations and conclusions regarding the support for the reasonably objective basis of management's PFI:

- **In files**
- **In report sections**
  - Discussion of key assumptions (in PFI)
  - Development of discount rate(s), particularly with respect to selection of company-specific risk premium

DISCOUNT RATES

Enterprise PFI:

- **Product Line A has stable margins (10%) and stable growth (5%)**
- **Product Line B is expected to be introduced at the beginning of Year 3**
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PFI – TOTAL ENTERPRISE: FROM HIGH CASE TO BASE CASE

Upon further analysis and discussions with management, the information for Product B was determined to represent a "High Case" with a relatively low probability.

- **The PFI for Product B has been supplemented with a "Base Case" and a "Low Case"**
- **The new consolidated PFI containing the Base Case for Product B appears below**

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Product B				15,000	16,500	17,325	18,191
Revenue		12,000	12,600	28,230	30,392	31,911	33,507
Contribution - A		1,200	1,260	1,323	1,389	1,459	1,532
Contribution - B				300	1,320	2,079	2,183
EBIT margin		1,200	1,260	1,623	2,709	3,538	3,714
Debt-free cash flow		720	756	974	1,625	2,123	2,229

Given the spectrum of discount rate models that exist, the valuation professional must carefully assess which model is most appropriate for a particular task and ensure that rationale is well documented in the engagement work file. The valuation professional, at a minimum, must document the following in writing within the work file, if applicable:

Cost of equity

- **The rationale for the selection of a discount rate model or models.**
- **The source of the risk free rate used in the calculation and explain the rationale for its selection.**
- **The source or calculation of the equity risk premium and rationale for its use.**
- **An explanation of the calculation of beta of the guideline public companies (or other industry risk adjustments) and the rationale for the method used (or rationale for the use of another source of beta) when using CAPM.**
- **The rationale for selecting the specific beta when using CAPM, including "adjusted betas".**
- **The amount of size premium, the source of the premium data and the rationale for selecting the concluded premium (even if that premium is zero) when applicable.**

Cost of equity (continued)

- **The amount of company-specific risk adjustment, if any, the rationale for application of the adjustment, and the objective and quantitative data sets used to develop the specific concluded adjustment. This is typically the most subjective part of the derivation of the cost of equity capital and, therefore, documentation related to this feature should be the most extensive. Comparisons to internal rate of return (IRR) calculations or to the results of other discount rate models may aid in supporting a company-specific risk adjustment.**
- **The amount of country-specific risk adjustment the source of the adjustment data (if applicable), and the rationale for selecting the concluded adjustment (even if that adjustment is zero).**
- **Other significant assumptions should be clearly explained and documented as well as other inputs that may apply depending on the models chosen by the valuation professional.**

Cost of debt

- The source(s) of data used and the rationale for use of the source(s)
- The rationale to support the selection of the pretax cost of debt and any additional source documents
- The rationale for the statutory tax rate used to adjust the pretax rate to an after tax rate.

Capital Structure

- The capital structures of the guideline public companies, industry sector, or subject company and rationale for selection of the time frame over which they are measured, as applicable.
- The market participant capital structure selected in the calculation of the WACC and rationale for its selection.

When other discount rate models are used instead of CAPM or WACC, the valuation professional must provide within the work file details on

- the model specification,
- inputs chosen and the sources of those inputs,
- sub-methodological selections made, and
- why, if applicable, any adjustments were made to the model results.

Policy suggestion:

Describe in report the nature of the discount rate selected, and its rationale (e.g., consistency with type of PFI):

- **DRAT**
- **EPVT Method 1**
- **EPVT Method 2**
- **Hybrid**

CASE STUDY

To repeat, this presentation is about numerators (estimated cash flows) and denominators (discount rates). In the context of the case study:

- **Do we now understand the nature of the subject PFI and its key assumptions?**
- **Does it have a reasonably objective basis?**
- **Do we know enough to develop an appropriate discount rate?**
  - Might there be more than one?
  - Should it contain a company-specific risk premium?

EXAMPLE- EPVT METHOD 2

Division A can support more debt at a lower cost, and has a lower estimated beta:

		Division A		Division B
After tax cost of debt		4.0%		4.5%
Weight		35.0%		25.0%
Weighted cost		1.4%		1.1%
Cost of equity				
Risk-free rate		3.0%		3.0%
ERP		6.0%		6.0%
Beta		1.05		1.25
		6.3%		7.5%
Size premium		4.0%		4.0%
Cost of equity		13.3%		14.5%
Weight		65.0%		75.0%
Weighted cost		8.6%		10.9%
WACC (rounded)		10.0%		12.0%

Note-

- **Since we disaggregated the subject company into two segments for purposes of discount rate development, we will value each separately and combine**
- **Since we developed EPVT Method 2 rates, we must ensure they are applied to probability-weighted estimates of future cash flows**
  - But NOT risk-adjusted cash flows (Method 1)

Evaluation: consistent historical results, low expected variability => 10% WACC

Division A		Year 1	Year 2	Year 3	Year 4	Year 5	Terminal
Product A		12,000	12,600	13,230	13,892	14,586	15,315
Product B							
Revenue		12,000	12,600	13,230	13,892	14,586	15,315
Contribution - A		1,200	1,260	1,323	1,389	1,459	1,532
Contribution - B				-	-	-	-
EBIT margin		1,200	1,260	1,323	1,389	1,459	1,532
Debt-free cash flow		720	756	794	833	875	919
Terminal value							18,378
Discount factor		0.9535	0.8668	0.7880	0.7164	0.6512	0.6512
Present value		686	655	626	597	570	11,969
Total		15,103					

VALUE, PRODUCT LINE B – HIGH CASE

Probability: 20%; Discount rate: 12%

Division B		Year 1	Year 2	Year 3	Year 4	Year 5	Terminal
Product A							
Product B				25,000	28,750	31,625	33,206
Revenue		-	-	25,000	28,750	31,625	33,206
Contribution - A		-	-	-	-	-	-
Contribution - B				1,250	2,875	3,795	3,985
EBIT margin		-	-	1,250	2,875	3,795	3,985
Debt-free cash flow		-	-	750	1,725	2,277	2,391
Terminal value							34,155
Discount factor				0.7533	0.6726	0.6005	0.6005
Present value		-	-	565	1,160	1,367	20,510
Total		23,603					

VALUE, PRODUCT LINE B – BASE CASE

Probability: 40%; Discount rate: 12%

Division B		Year 1	Year 2	Year 3	Year 4	Year 5	Terminal
Product A							
Product B				15,000	16,500	17,325	18,191
Revenue		-	-	15,000	16,500	17,325	18,191
Contribution - A		-	-	-	-	-	-
Contribution - B				300	1,320	2,079	2,183
EBIT margin		-	-	300	1,320	2,079	2,183
Debt-free cash flow		-	-	180	792	1,247	1,310
Terminal value							18,711
Discount factor				0.7533	0.6726	0.6005	0.6005
Present value		-	-	136	533	749	11,236
Total		12,653					

VALUE, PRODUCT LINE B – LOW CASE

Probability: 40%; Discount rate: 12%

Division B		Year 1	Year 2	Year 3	Year 4	Year 5	Terminal
Product A							
Product B				10,000	10,500	11,025	11,576
Revenue		-	-	10,000	10,500	11,025	11,576
Contribution - A		-	-	-	-	-	-
Contribution - B				-	525	882	926
EBIT margin		-	-	-	525	882	926
Debt-free cash flow		-	-	-	315	529	556
Terminal value							7,938
Discount factor				0.7533	0.6726	0.6005	0.6005
Present value		-	-	-	212	318	4,767
Total		5,296					

VALUE, PRODUCT LINE B

Evaluation: No historical results, higher expected variability => 12% WACC:

Division B	Year 1	Year 2	Year 3	Year 4	Year 5	Terminal
High case	-	-	750	1,725	2,277	34,155
Base case	-	-	180	792	1,247	18,711
Low case	-	-	-	315	529	7,938
Debt-free cash flow (weighted)	-	-	222	788	1,166	
Terminal value (weighted)						17,491
Discount factor			0.7533	0.6726	0.6005	0.6005
Present value	-	-	167	530	700	10,503
Total	11,901					

If Division B is valued using the original success (High Case) scenario, we migrate from an EPVT discount rate of 12.0 % to a DRAT rate of 17.5%:

Division B		Year 1	Year 2	Year 3	Year 4	Year 5	Terminal
Product A							
Product B				25,000	28,750	31,625	33,206
Revenue		-	-	25,000	28,750	31,625	33,206
Contribution - A		-	-	-	-	-	-
Contribution - B				1,250	2,875	3,795	3,985
EBIT margin		-	-	1,250	2,875	3,795	3,985
Debt-free cash flow		-	-	750	1,725	2,277	2,391
Terminal value							19,204
Discount factor				0.6689	0.5695	0.4849	0.4849
Present value		-	-	502	982	1,104	9,312
Total		11,900					

CALIBRATION TO $27 MILLION VALUE

- **What is the nature of this PFI?**
- **What discount rate technique should/did we apply?**

SRJ Inc.	Year 1	Year 2	Year 3	Year 4	Year 5	Terminal
Product A	12,000	12,600	13,230	13,892	14,586	15,315
Product B			15,000	16,500	17,325	18,191
Revenue	12,000	12,600	28,230	30,392	31,911	33,507
Contribution - A	1,200	1,260	1,323	1,389	1,459	1,532
Contribution - B			300	1,320	2,079	2,183
EBIT margin	1,200	1,260	1,623	2,709	3,538	3,714
Debt-free cash flow	720	756	974	1,625	2,123	2,229
Terminal value						36,191
Discount factor	0.9485	0.8533	0.7676	0.6906	0.6212	0.6212
Present value	683	645	748	1,123	1,319	22,484
Total	27,000					

What if we had not separated these two segments, and valued the subject company:

- **With a single forecast (projection?)**
- **With a single discount rate**

What was the nature of that original PFI?

What type of discount rate would be appropriate?

Enterprise PFI:

- Can we use this PFI without adjustments?
- How do we develop an appropriate discount rate?
- What questions might we have for management?
- How do we follow all the new (and old) guidance?

SRJ Inc.		Year 1	Year 2	Year 3	Year 4	Year 5	Terminal
Revenue		12,000	12,600	**38,230**	42,642	46,211	48,522
EBIT margin		1,200	1,260	**2,573**	4,264	5,254	5,516
Debt-free cash flow		720	756	**1,544**	2,558	3,152	3,310
Revenue Growth			5.0%	**203.4%**	11.5%	8.4%	5.0%
EBIT Growth			5.0%	**104.2%**	65.7%	23.2%	5.0%

- **Interviews, schedules and reports should discuss PFI in terms of generic types**
  - Conditional
  - Expected
  - Certainty-equivalent
  - Hybrid

- **Increase familiarization regarding MPF guidance**
  - Professional skepticism
  - Evaluate alignment of PFI and expected value
  - Reasonably objective basis

- **Strive to develop discount rates consistent with PFI**
  - DRAT
  - EPVT Methods 1 and 2

QUESTIONS?

ALVAREZ & MARSAL