



Bridging the Gap in Deal Valuation

Wednesday April 12, 2017



Bridging the Gap in Deal Valuation

Speakers:

- **Clare Fisher**, Vice President, Interim Head of Transactions, Shire
- **Greg Miller**, MBA, MPH, Vice President of Business Development & Strategic Planning, Visterra, Inc.
- **Henry Rath**, MBA, Vice President of Business Development, Seres Therapeutics Inc.
- **Mark Stencik**, MBA, Director, BD&L Transactions, Merck Boston Innovation Hub

Moderators:

- **Troy Norris**, MBA, Executive Director, Parthenon-EY, Ernst & Young LLP
- **William Pittock**, MBA, Executive Director, Valuation & Business Modeling, Transaction Advisory Services, Ernst & Young LLP

The background of the slide features a stylized globe with a network of glowing white lines connecting various points across its surface, set against a dark blue sky. A bright yellow sunburst is visible in the lower right corner.

Bridging the gap in deal valuation

MassBio Forum

Business development and finance

April 12, 2017

Bridging the gap in deal valuation

Panelists

Industry experts:

Clare Fisher, MBA	Shire	Licensing and transactions
Greg Miller, MBA, MPH	Visterra	Business development and strategic planning
Henry Rath, MBA	Seres Therapeutics	Business development
Mark Stencik, MBA	Merck & Co.	Transactions, business development and licensing

Moderators:

Troy Norris, MBA	Parthenon-EY	Transaction strategy and due diligence
Bill Pittock, MBA	EY	Valuation and business modeling

Bridging the gap in deal valuation

Topics for discussion

- ▶ Revenue forecasting and scenario analysis
- ▶ Valuation and deal terms analysis
- ▶ Evaluating risk to structure robust deals

Revenue forecasting and scenario analysis

Multi-stakeholder insights are quantitatively linked with price benchmarks and market constraints to forecast a product's price and uptake potential



Revenue forecasting

within a short timeframe under uncertainty requires in-depth market and customer analysis focused on the key value drivers

Secondary market research

- ▶ Market
- ▶ Epidemiology
- ▶ Competition
- ▶ Treatment path
- ▶ Pricing and reimbursement



Primary market research

- ▶ Patient flow and referral patterns
- ▶ Unmet needs
- ▶ Evidence thresholds
- ▶ Product perceptions
- ▶ Pricing and reimbursement
- ▶ Expected adoption

Market analysis

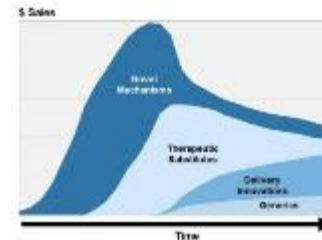
- ▶ Segmentation
- ▶ Market size
- ▶ Growth
- ▶ Competitive intensity



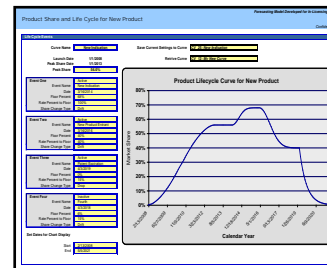
Adoption analysis

- ▶ Adoption rate
- ▶ Therapy duration
- ▶ Adherence
- ▶ Relative share
- ▶ Price sensitivity

Market model



Revenue model

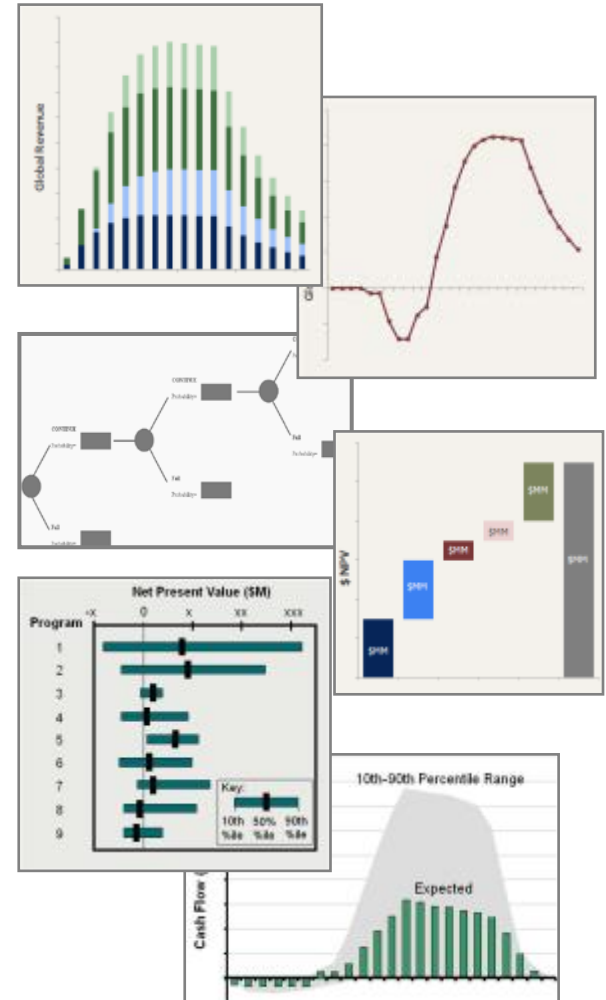
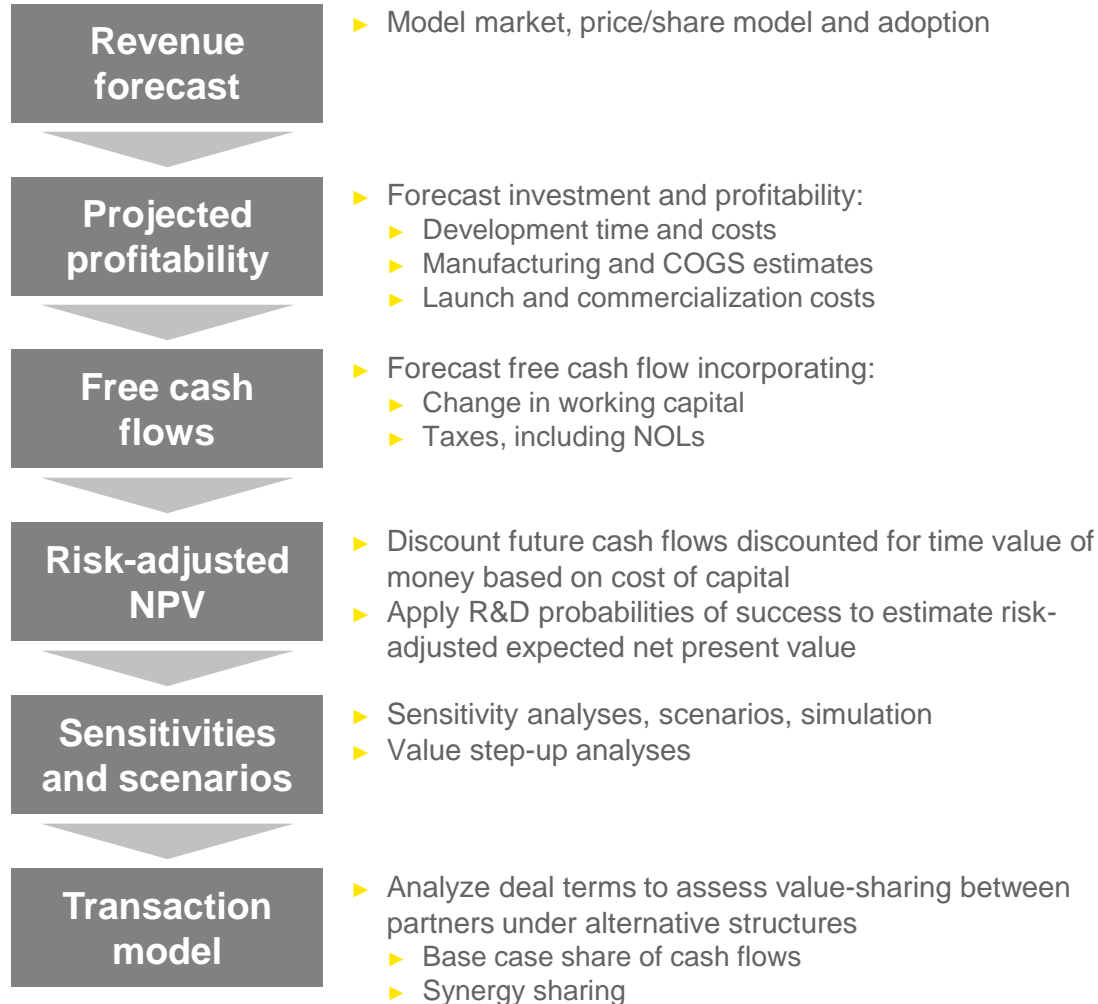


Sensitivity Analysis

- ▶ Market
- ▶ Competition
- ▶ Clinical results
- ▶ Reimbursement

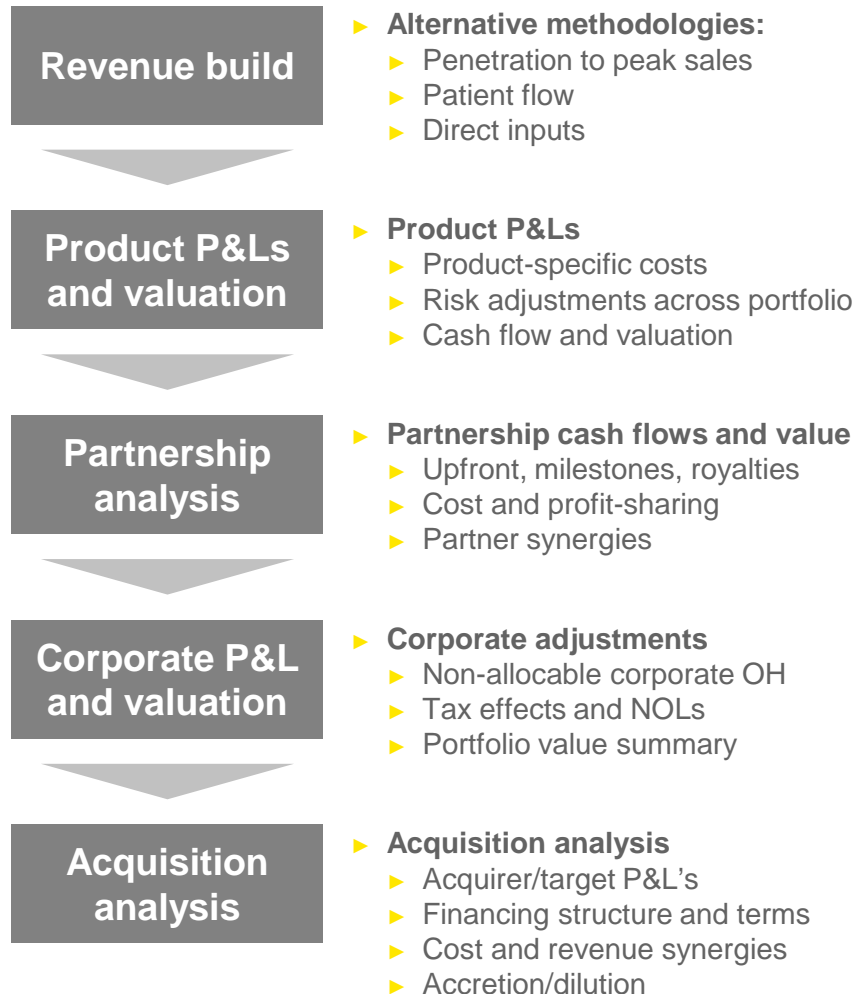
Asset valuation and partnership terms analysis

Portfolios of development programs are typically valued using a risk-adjusted net present value approach that feeds into a deal model



Partnership vs. Acquisition valuation

A portfolio of individual products can be valued individually and summed to company value



Evaluating risks and uncertainties

The three “S”s of risk assessment

Risk assessment	Pros	Cons	When to use
Sensitivity	<ul style="list-style-type: none">▶ Focus attention on high risk variables	<ul style="list-style-type: none">▶ May not capture key inter-relationships between variables	<ul style="list-style-type: none">▶ Searching for high impact variables (cost of capital, peak adoption)▶ Conducting break-even analysis focused on individual variables
Scenario	<ul style="list-style-type: none">▶ Reflects dynamic inter-relationship between variables	<ul style="list-style-type: none">▶ May overstate downside risk and upside potential	<ul style="list-style-type: none">▶ To reflect outcomes for a combination of variables▶ Modeling demand variability
Simulation	<ul style="list-style-type: none">▶ Reflects full range and probability distribution of outcomes	<ul style="list-style-type: none">▶ Only as good as underlying assumptions on variable ranges	<ul style="list-style-type: none">▶ Modeling high impact variables with significant interrelationships▶ Portfolio of inter-related value streams, such as multiple indications

Structuring deals to manage uncertainty

Using valuations to structure transactions that mitigate and share risks

- ▶ **Share development and commercial costs and risks**
 - ▶ Typically aligned with value-sharing
 - ▶ Governance bodies to jointly guide investment
- ▶ **Contingent consideration tied to milestones**
 - ▶ Milestones in alliances ranging from regulatory to reimbursement and revenue
 - ▶ Structured deals with contingent payouts, whether contractual or contingent value rights (CVRs)
- ▶ **Increasing use of options in alliances and M&A**
 - ▶ Option-based product licensing deals
 - ▶ Equity options on early stage companies
- ▶ **Co-investment in early stage assets by corporate VC**

Structuring deals to manage uncertainty

Structured transactions with contingent payments provide acquisition control with partnership risk-sharing economics

Investment models	Variations	Advantages
Straight acquisitions	<ul style="list-style-type: none">▶ Acquisition of all company assets, liabilities, people and know-how▶ Carve-out acquisitions of select assets and capabilities	<ul style="list-style-type: none">▶ Complete control▶ Ability to integrate fully▶ Ability to quickly extract cost synergies
Acquisition with contingent payouts	<ul style="list-style-type: none">▶ Clinical milestones▶ Revenue-based lump-sum payments▶ Unique situational payment triggers	<ul style="list-style-type: none">▶ Seller can lock in some near-term value while retaining a share of upside▶ Buyer controls asset and decision-making with minimal ongoing relationship management▶ Only pay for success and often capture majority of downstream value
Traditional partnerships	<ul style="list-style-type: none">▶ Partnerships with event-based milestones▶ Straight licenses	<ul style="list-style-type: none">▶ Exclusive rights▶ Actively involved in program decision-making▶ Collaboratively share development capabilities

Structuring deals to manage uncertainty

Option-based deals are a hybrid of traditional venture and partnership models, providing strategic and financial upside with limited upfront investment

Investment models	Variations	Advantages
Traditional partnerships	<ul style="list-style-type: none"> ▶ Partnerships with event-based milestones ▶ Straight licenses 	<ul style="list-style-type: none"> ▶ Exclusive rights ▶ Actively involved in program decision-making ▶ Collaboratively share development capabilities
Proof-of-concept options	<ul style="list-style-type: none"> ▶ Arms-length options to products, programs or technologies ▶ Partnerships with milestones at partner discretion 	<ul style="list-style-type: none"> ▶ Exclusive option exercisable upon proof of concept ▶ Early development performed by partner
PoC options with equity	<ul style="list-style-type: none"> ▶ Proof-of-concept options with substantial equity investment 	<ul style="list-style-type: none"> ▶ Balanced alignment of interests across company and optioned product
Venture option models	<ul style="list-style-type: none"> ▶ Venture option funds <ul style="list-style-type: none"> ▶ Direct investment ▶ Strategic LP 	<ul style="list-style-type: none"> ▶ Equity investment tied to future product rights ▶ Funds directed toward programs of interest
Venture investments	<ul style="list-style-type: none"> ▶ Direct investment ▶ Venture co-investment funds 	<ul style="list-style-type: none"> ▶ Limited need to provide R&D capabilities ▶ Potential equity upside

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Topics for discussion

Deal Valuation Methodology

- ▶ Revenue forecasting and scenario analysis
- ▶ Valuation analysis
- ▶ Deal terms and comparables analysis

Applying Valuation in a Deal

- ▶ Managing valuation within a deal process
- ▶ Leveraging valuation and deal comps in negotiations

Guiding Principles for Applying Valuation

- ▶ Tailoring approach to each situation
- ▶ Staying focused on the fundamentals

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Thank You!

QUESTIONS?



Upcoming MassBio Forums

April 27: Perfecting Your Pitch; **EU**

May 4: Successful Partnering Strategies in Developing Novel Medicines: Models for Academia - Pharma Alliances; **DD & Nonprofit**

May 24: Biosafety 101 Workshop; **SEF**



THE CONVERGENCE OF MEDICAL DEVICES & DRUGS: THE FUTURE OF COMBINATION PRODUCTS

Presented By:



May 12, 2017; 12:00pm – 6:00pm

The Westin - Waltham, MA

Registration is now open