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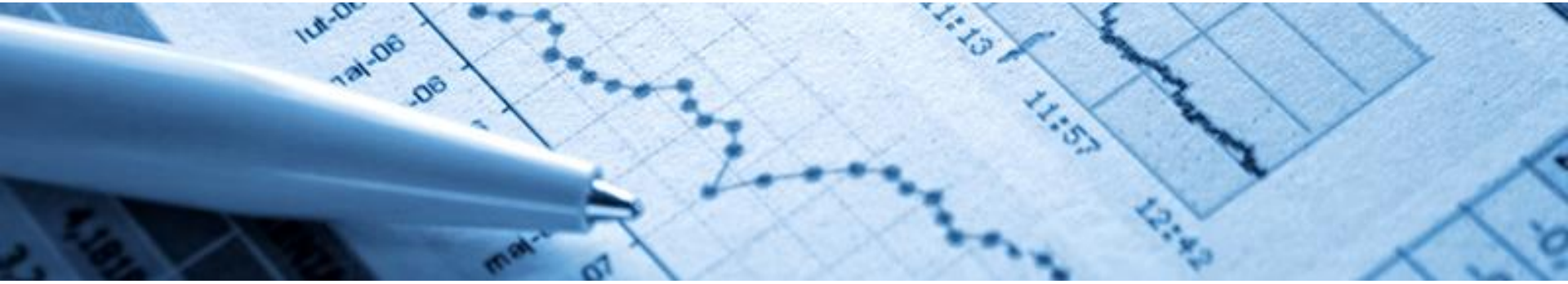

How Much is Your Data Worth?

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Today's discussion is led by members of Duff & Phelps' Valuation Advisory Services and part of our Life Sciences industry practice

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- Valuations for Pharma, Biotech, Device, and Healthcare companies
- Expert in FMV assessments for healthcare products and services

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- Valuations for transactions between healthcare practices and providers
- Expert in FMV assessments across the full range of health care providers including health systems, hospitals, clinics, and physician practices

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- Valuations and projections for early stage and established Life Sciences companies
- Expert in FMV assessments for both service providers and manufacturers

Valuation is relevant to a wide spectrum of healthcare transactions. Today we focus on data transactions.

Examples

Marketing, Advisory, & Educational Services	Distribution Services	Business Transactions	Property & Equipment Transactions	Data and Information Related Services
• Advisory boards, research services, product reviews	• Drug or device distribution services	• Investment/equity sharing in JV or spinout of startup	• Lease Transactions	• **Utilization data/analyses**
• Meetings, speaker events, CME programs	• Contract administration	• Practice or other healthcare entity acquisition	• Real Estate Purchase/Sale	• **Sales/marketing data**
• Market research studies, health provider surveys	• Specialty pharmacy distribution services	• Re-branding of an existing practice or entity	• Medical Equipment purchase/lease	• **Outcomes data/health economics analyses**
• Sales calls to physicians	• Enhanced services such as product pedigree control	• Clinical or professional services arrangements	• Mobile equipment rentals	• **Customized research studies**
• Communications to patients, physicians, and pharmacies	• Reimbursement training to provider staff	• Co-marketing arrangement	• Facility-sharing arrangement	• **Customized analytics and tools**
• Product flyers, displays, shipping inserts	• Managed care contracting support	• Other types of partnering or asset/service sharing		• **Clinical education, AI/decision support tools**

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- Regulatory compliance considerations: How can they best be addressed?
- Valuing healthcare data: What are the best practices?
- Case study 1: Valuation of data provided in exchange for services
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- Takeaways
- Q&A

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Increasingly, transactions involve exchange of data

- Currently, approximately 30% of the world's data volume is generated by the healthcare industry
- Data in the healthcare industry is growing at a 36% CAGR from 2018 to 2025 (RBC Capital)

- Sharing and selling data is critical to the success of many businesses, e.g.:
  - Sema4 raised $121 million in Series C funding at a post-money valuation of over $1 billion (July 2020)
  - Amazon, Apple, Google, and IBM along with numerous smaller companies and startups are active in this field

We see an enormous range in the types of data and data-related services being transacted

Examples:

- Demographics and socioeconomic data, e.g., age, gender, ethnicity, education
- Health status data, e.g., morbidity, disability, diagnoses, signs & symptoms, behavioral data, risk factor data
- Health resources data, e.g., provider, plan, or health system characteristics
- Healthcare utilization data, e.g., nature and characteristics of medical care visits, procedures, treatments, prescriptions, adherence/compliance, and other elements of health encounters
- Healthcare financing and expenditure data, e.g., costs, prices, charges, payments, insurance status, source of payment
- Healthcare outcomes, e.g., health status and other outcomes of prior or current prevention, treatment, and other interventions over time
- Genomic and proteomic data, tissue samples, pathology results

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Not surprisingly, we see a wide range of transaction structures

- Structures may involve:
  - Licensing arrangements
  - Co-development or joint venture (JV) arrangements
  - Equity sharing or an option to acquire the buyer
  - Contingent consideration (milestone payments, royalties, contingent value rights)
  - Options to acquire assets or to take R&D assets forward that the data helped create

- Pricing of data in these transactions is challenging, but critical
  - Compliance with healthcare regulations – is the price fair?
  - Strategic value – Are we paying too much? Are we receiving too little?

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The current environment…

Doctors Net Billions From Drug Firms

Companies Paid at Least $3.5 Billion in Last Five Months of 2013

Amgen to pay $25 million to settle kickback allegations

Bristol-Myers Squibb to pay $515M settlement

Johnson & Johnson To Pay $2.2 Billion In Marketing Settlement

Sanofi-Aventis to pay $109M kickbacks settlement

Scrutiny of healthcare transactions is applied by agencies enforcing anti-kickback, fraud and abuse, and pricing regulations

- Judgments and settlements now exceed $2 billion annually at the federal level alone
- Focus: Transactions involving healthcare providers that could be construed as an inducement to refer or prescribe, or to improperly price healthcare services
- Additionally:
  - » Protection of data privacy is a paramount consideration when patient data is transacted
  - » Tax-exempt entities face additional considerations to ensure that a transaction does not result in private inurement
  - » New HHS rules governing health data transfer, interoperability, and information blocking address the fees that can be charged for provision of services and technology in this area
- A key protection is to ensure that these transactions reflect Fair Market Value (FMV) for the services or asset involved.

United States Department of Health & Human Services

IRS

What is Fair Market Value?

- Fair Market Value is defined as the price that property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or sell, and both having reasonable knowledge of relevant facts. (26 C.F.R. 53.4958-4(b)(1)(i); Rev. Rul. 59-60, 1959-1 C.B. 237)
- The hypothetical buyer and seller are assumed to be able and willing to trade and be informed about the asset and the market for such asset
- The highest price a willing buyer would pay is also the price that a willing seller would accept.
- For healthcare transactions:
  - FMV means the price that an asset would bring as a result of bona fide bargaining between well informed buyers and sellers who are not otherwise in a position to generate business for the other
  - Does not vary with, or take into account in any way, the referral or potential referral of patients or any other health care business between the parties for purposes of compliance with the Anti-Kickback Statue (42 U.S.C. 1320a-7b), the Stark Law (42 U.S.C. 1395nn) and Stark regulations (42 CFR 411.351)

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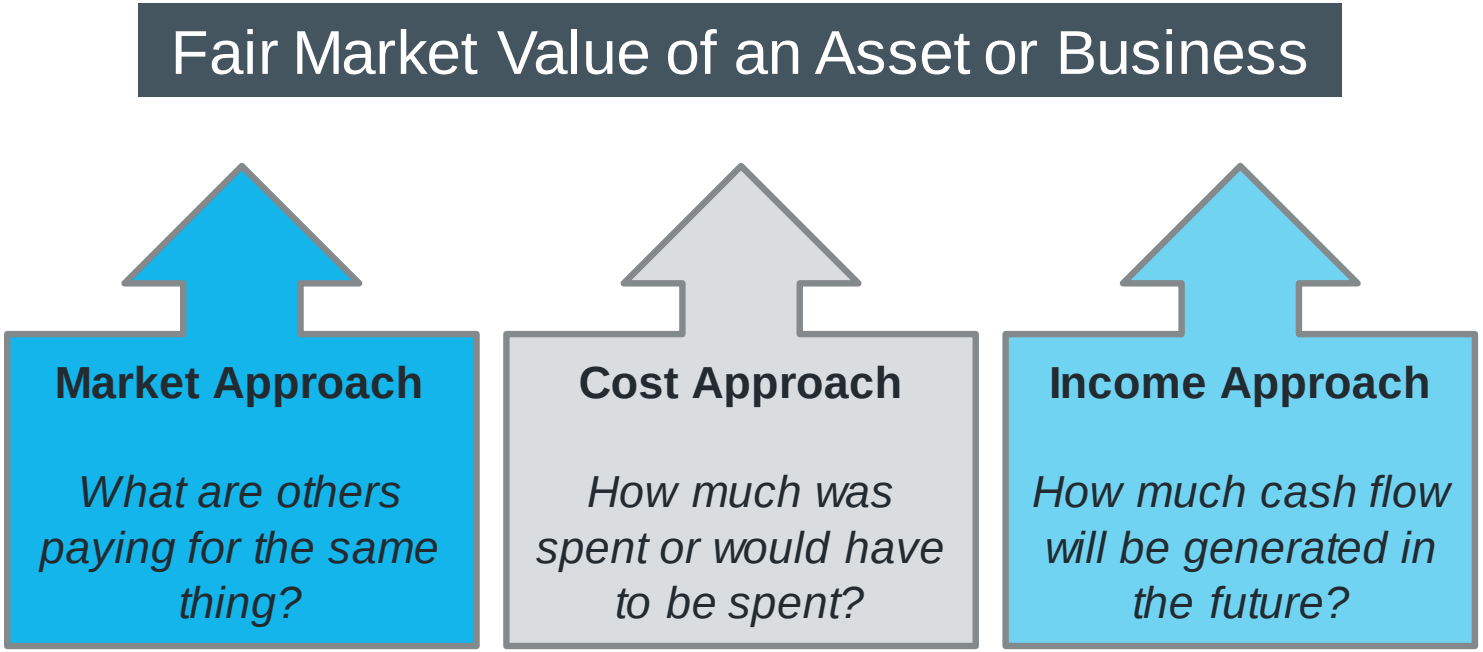
Valuing data products and services is particularly challenging

- Often the data is unique, or cannot be obtained through another source
- Data differs in breadth, granularity, frequency of updates, timeliness, ease of access, etc.
- Often the product is more than data, it may include customized reporting, analytics and insights
- Data-driven services may include enhancements such as flexible data access tools or dashboards highly customized to the users
- Additionally, as we describe various valuation approaches, we will see that applying them to value data involves methodology-specific challenges

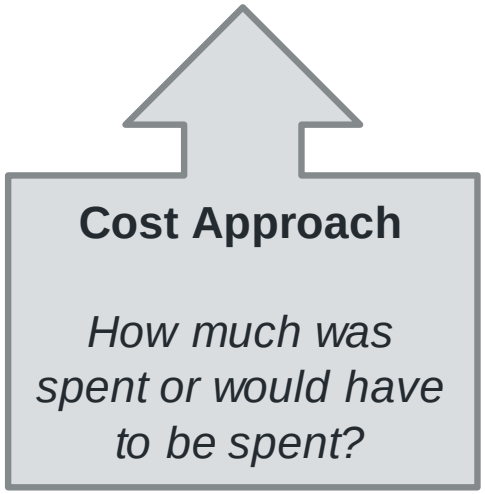
Three valuation approaches may be considered



Market Approach - practices and challenges

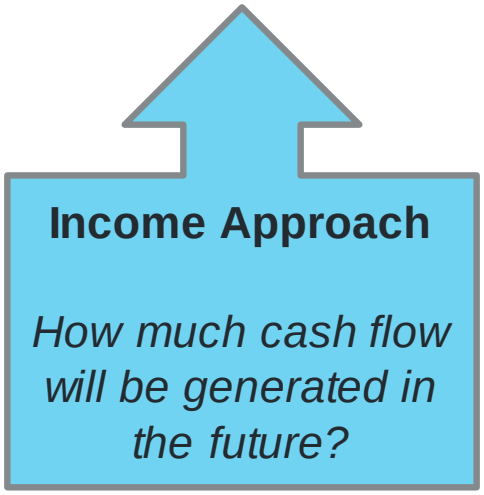
- Ideally, look for prices paid in similar, arm's length transactions
- Challenging for non-commodity items
- Apply well-supported adjustments to pricing of transactions that are as close to comparable as possible
  - Raw vs. structured data
  - Patient-identified vs. de-identified data
  - Richness of the breadth and depth of fields included
  - Uniqueness of the patient sample from which records are drawn
- Consider value of data based on value of data-rich public companies and publicly reported data transactions
  - Example: implied value of $1,000 per record of 2.2 million research-ready patient records in Flatiron's $1.9 billion sale to Roche in 2018)

Cost Approach - practices and challenges



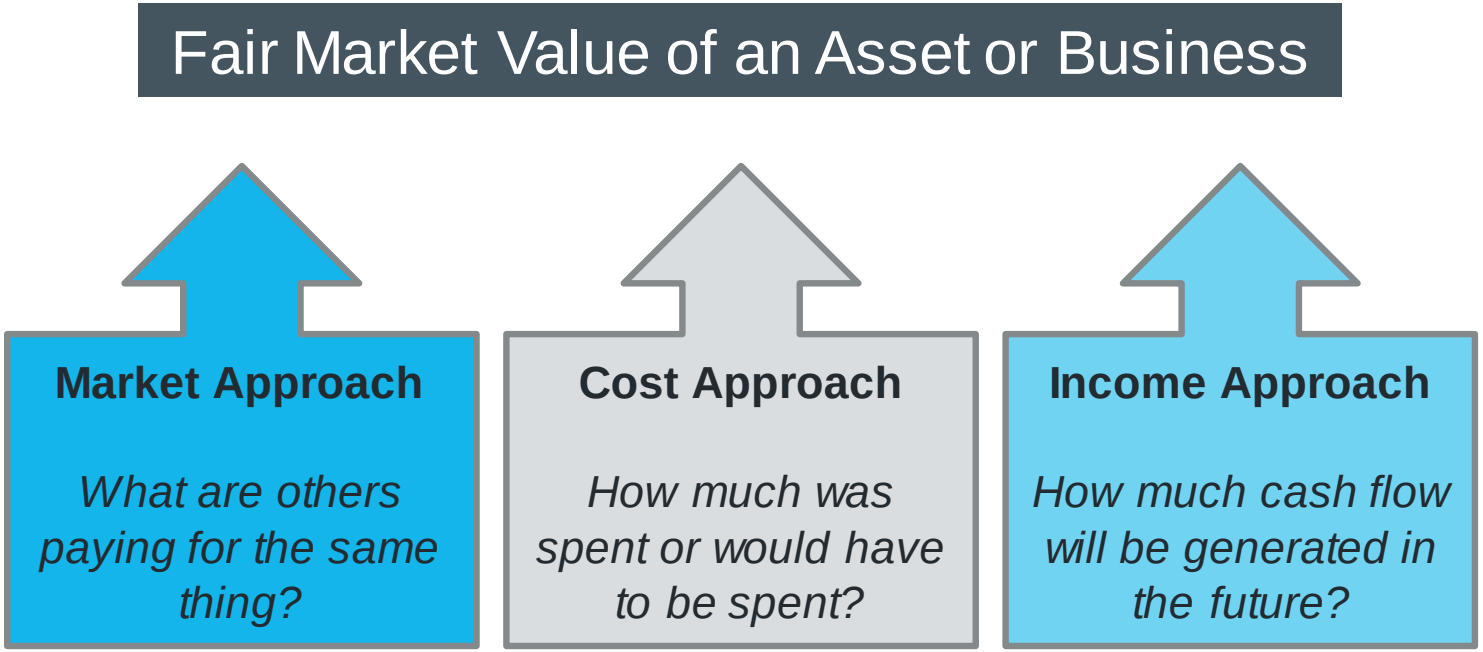
- Ideally, identify relevant historical costs, adjust for inflation, and add/subtract items appropriate to estimate replacement cost
- Alternatively, bottoms-up estimate of replacement cost
- Challenges:
  - Historical costs may not have been captured accurately, may be difficult to parcel out to the subject asset, may include missteps or R&D failures that would not be repeated
  - Replacement costs may be difficult to estimate; data may have been generated incidentally to core business operations rather than as an end in itself
- The strategic value of the asset may be substantially greater than its cost to create or replace

Income Approach - practices and challenges



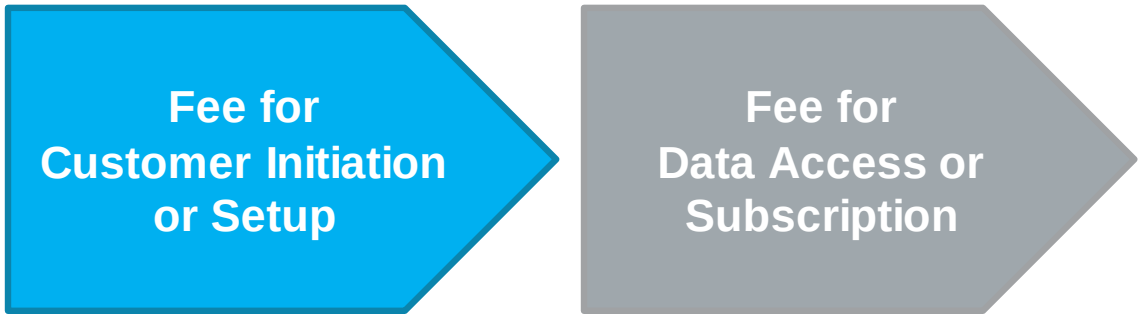
- Valuation is based on the incremental cash flow that the asset is projected to generate to its owner
  - Discounted Cash Flow (DCF) method values the asset based on the present value of the profits generated by this incremental cash flow; discount at a rate that reflects riskiness and timing of profit
  - Relief-from-Royalty method values the asset based on the present value of hypothetical royalties or rent avoided by a business that owns an asset; comparable licensing transactions provide a basis for estimating an appropriate royaly rate
- Challenges include the sensitivity to – and need to solidly support – assumptions such as market share, rate of adoption, discount rate, long-term growth
  - Consider multiple scenarios when there is substantial risk and uncertainty around developmental and/or commercial success
- In structuring payments and developing corresponding cash flow projections, we must be cognizant of the regulations that govern payments tied to volumes or referral inducements

Best practice is to consider multiple valuation approaches and make appropriate adjustments



Illustrative example: FMV for a Data Contract

- Typical pricing structure has two basic components



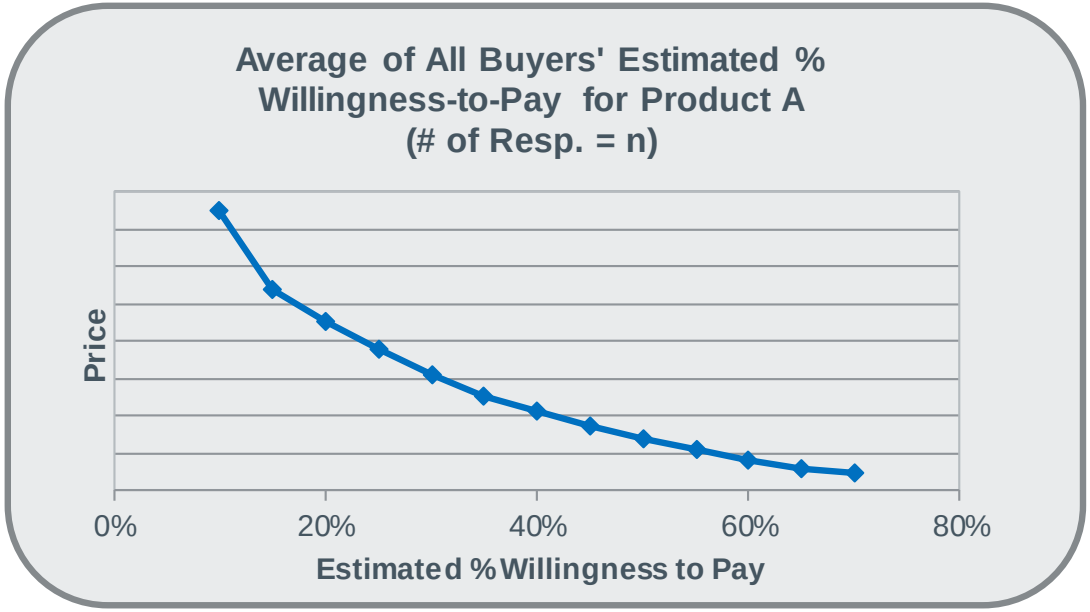
FMV based on:
- Estimated resources
- Industry-based compensation rates
- Industry-based fair margin

FMV based on:
- Pricing of comparable products/services, if available
- Buyer survey
- Provider survey

Illustrative example (continued): Data Buyer Survey

Individual Buyer's Willingness-to-Pay

Example:
- "Low" Price: $A
- "Moderate" Price: $B
- "High" Price: $C



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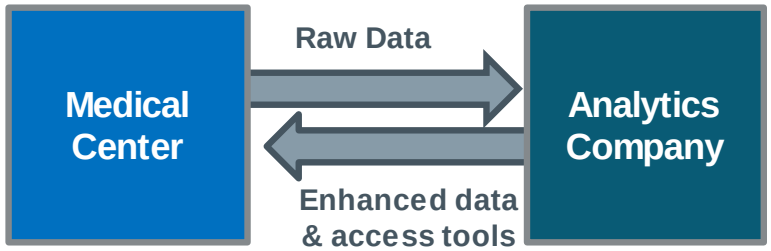
Case Study 1: Valuation of data provided in exchange for services

Situation

- An academic medical center with rich healthcare data transacted with a healthcare analytics company
- The buyer received a license to the data for specified fields of research use
- The seller received its data back, for specified fields of use, in a de-identified, cleansed, and structured format, along with improved research tools for data access, filtering, and analysis



Result

- The Fair Market Value of the licensed data and of the services and tools received supported compliance with regulations governing not-for-profits and transactions involving health care providers.

Approach:

- Value the de-identified data ($ per record) using a Market Approach based on comparable publicly-reported data transactions
- Value the data structuring, de-identification, and cleansing services using a Cost Approach based on estimated hours and titles of required resources, industry compensation data, and a fair margin on cost tied to industry benchmarks.
- Value the research tools provided to the medical center using a Market Approach based on comparable commercially available software.

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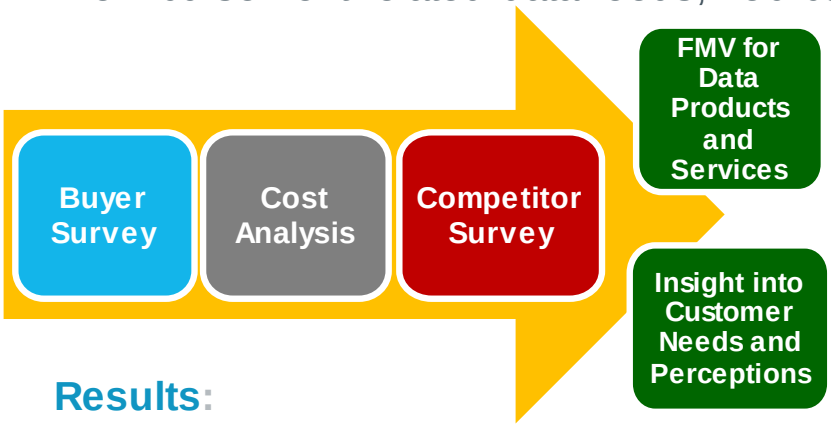
Case Study 2: Valuation of data and analytics sold to a manufacturer

Situation

- A leading drug distributor provides data on drug sales, usage, and outcomes to manufacturers for their use in marketing, educational, and product development programs.
- To ensure compliance with anti-kickback and pricing regulations, the seller must determine the Fair Market Value (FMV) of each of its data products, which include clinical- and reimbursement-related data feeds, web-based analysis tools, and customized reports.



Approach:

- Survey buyers' willingness-to-pay for products that vary on the types of data and analytics, frequency of updates, representativeness of the sample, and other aspects.
- Analyze cost of setup activities required to initiate data services to a customer.
- Survey competing data providers about their products' pricing and differentiating characteristics.

Results:

- A solid basis for the concluded FMV.
- Insight into needs and perceptions in various customer segments.
- Alignment of pricing, sales, and marketing activities based on FMV.

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Takeaways

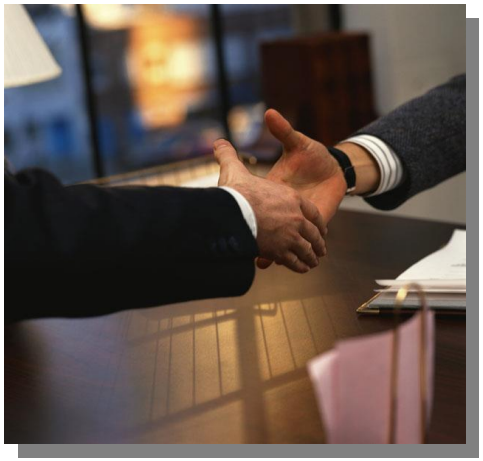
1. Healthcare data is growing at a rate that implies a doubling every two to three years.

2. Used in myriad applications and in more powerful ways than ever, healthcare data is more valuable than ever.

3. Valuations are critical to establishing the right price, whether for compliance purposes or strategic purposes.

4. Multiple valuation approaches should be considered.

5. The valuation must be tailored to the information available as well as facts and circumstances, in order to support a robust conclusion that both sides can agree to.



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