



# **IP Valuation – A Tool for Maximizing Returns**

**by Daniel Cenatempo AVA, CFFA**

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- Executive Director of FairValue Advisors, LLC;
- 22+ years experience in valuation, damages, finance and economics;
- Previously qualified as a testifying expert on patent, trademark, copyright infringement, trade secret, and commercial damages and values.



Certified Forensic Financial Analyst in Business & Intellectual Property Damages and Financial Litigation (NACVA).



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Masters in Business Administration (MBA) from Duke University.



Bachelor of Arts in Economics from Villanova University.

# Preview

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- Defining IP Valuation
- Trends Driving IP Valuation
- The Top 10 IP Valuation Situations
- Maximize Returns by Knowing IP Values
- Keys To Understand, Use, and Rebut IP Values
- Questions and Comments

# Defining IP Valuation

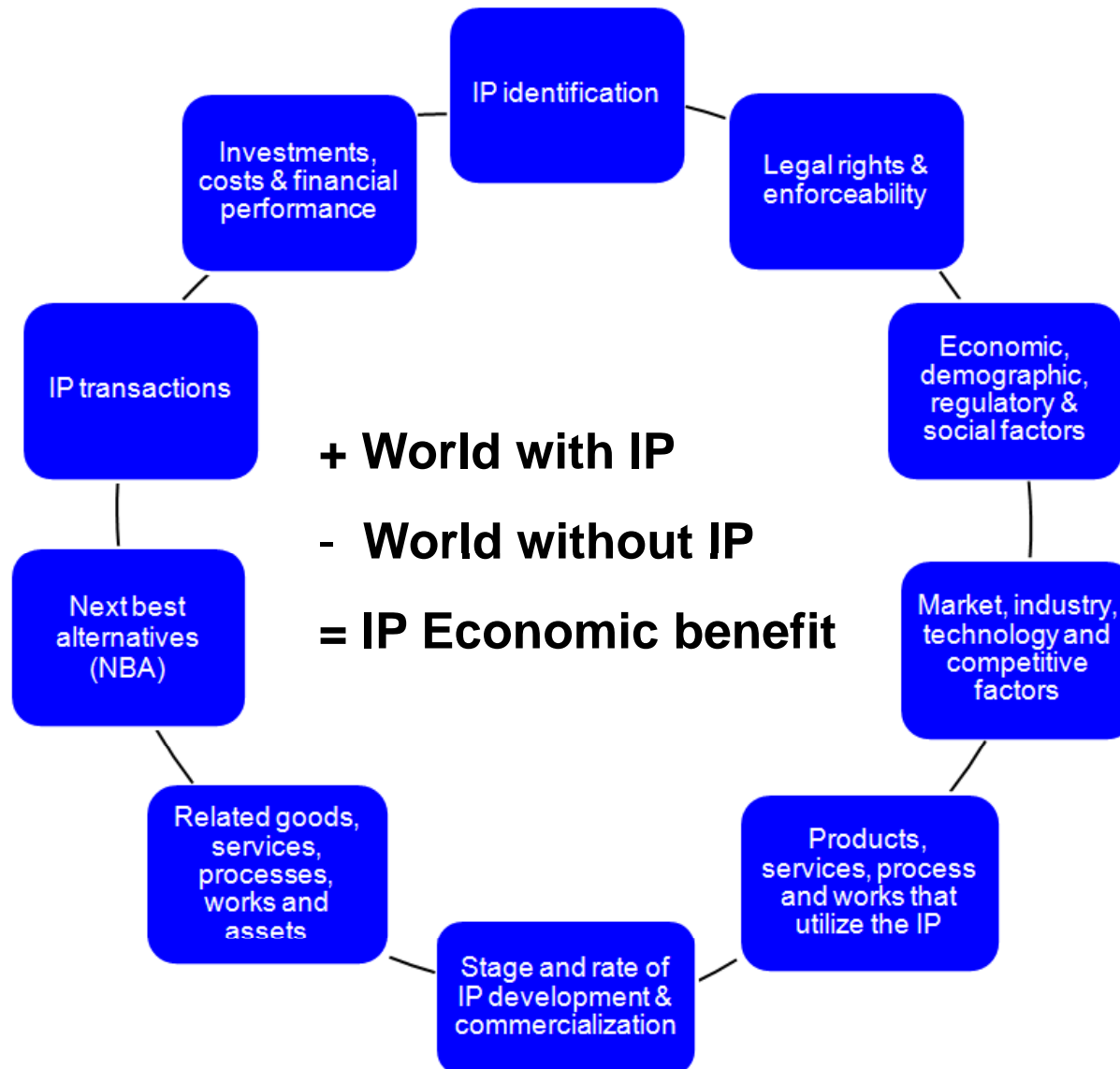
# Defining IP Valuation

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IP valuation is:

- An investigative and analytically intensive process;
- Focused on identifying and quantifying IP's economic benefits;
- Applied at multiple levels - individual IP asset vs. IP portfolio vs. product line vs. business unit vs. entire company;
- Used to calculate lump sum IP dollar values;
- Commonly used to determine royalty rates, set IP transfer prices, and determine damages in litigation.

# Defining IP Valuation



# Trends Driving IP Valuation

# Trends Driving IP Valuation

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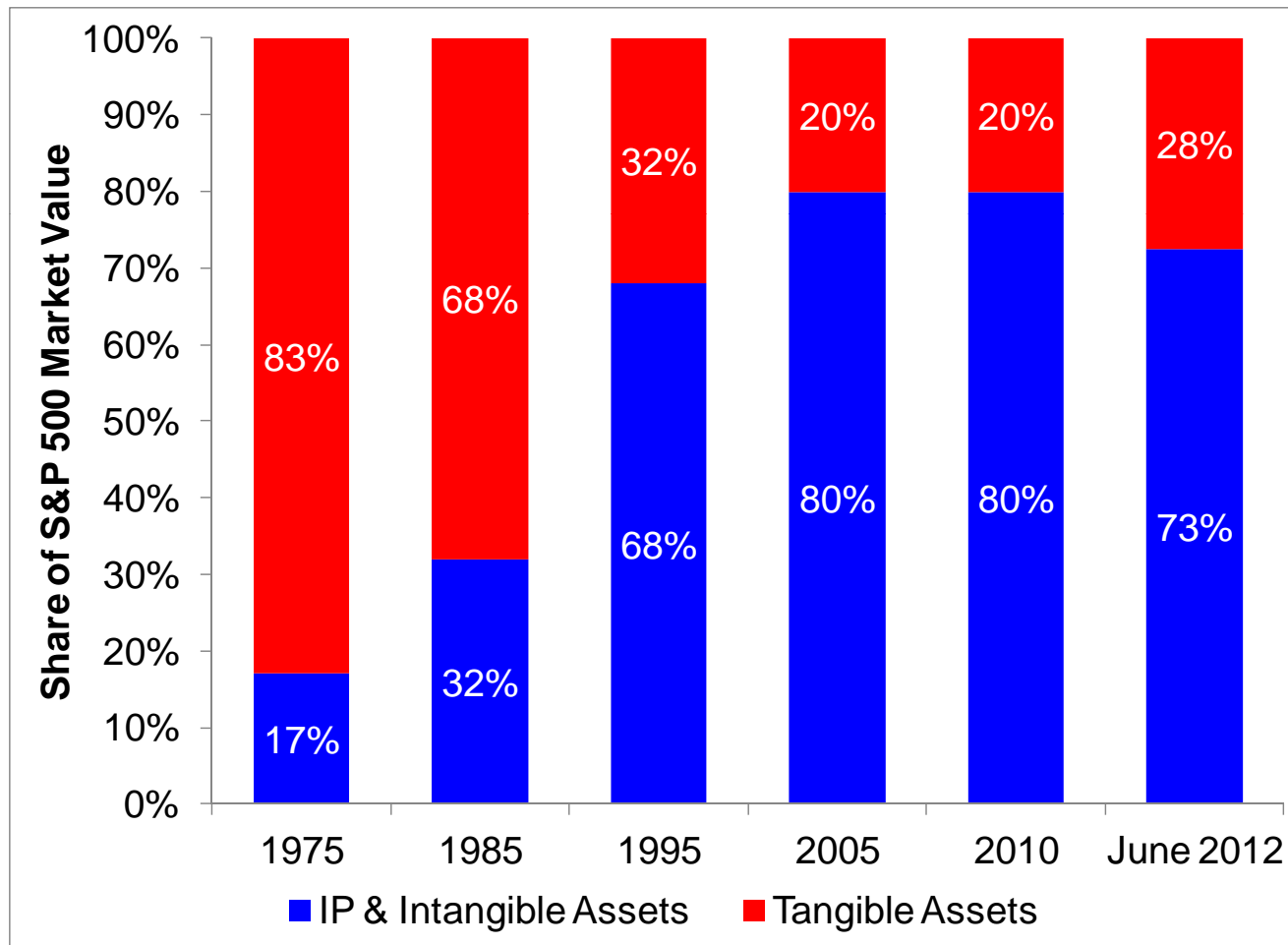
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- + IP's share of business value
  - + New financial reporting standards
  - + IP volume
  - + IP complexity
  - + IP litigation
  - + Recent court decisions
- 
- = Greater IP valuation demand and requirements



# Trends Driving IP Valuation

Rising Value: IP and Intangible Assets Have Increased From 17% to More Than 70% of S&P 500 Companies' Market Value



# Trends Driving IP Valuation

## New Financial Reporting Standards Require Value Disclosures on Acquired IP and Intangibles

### Example: Portion of Google reporting from Motorola Mobility acquisition

Information regarding our acquisition- related intangible assets is as follows (in millions):

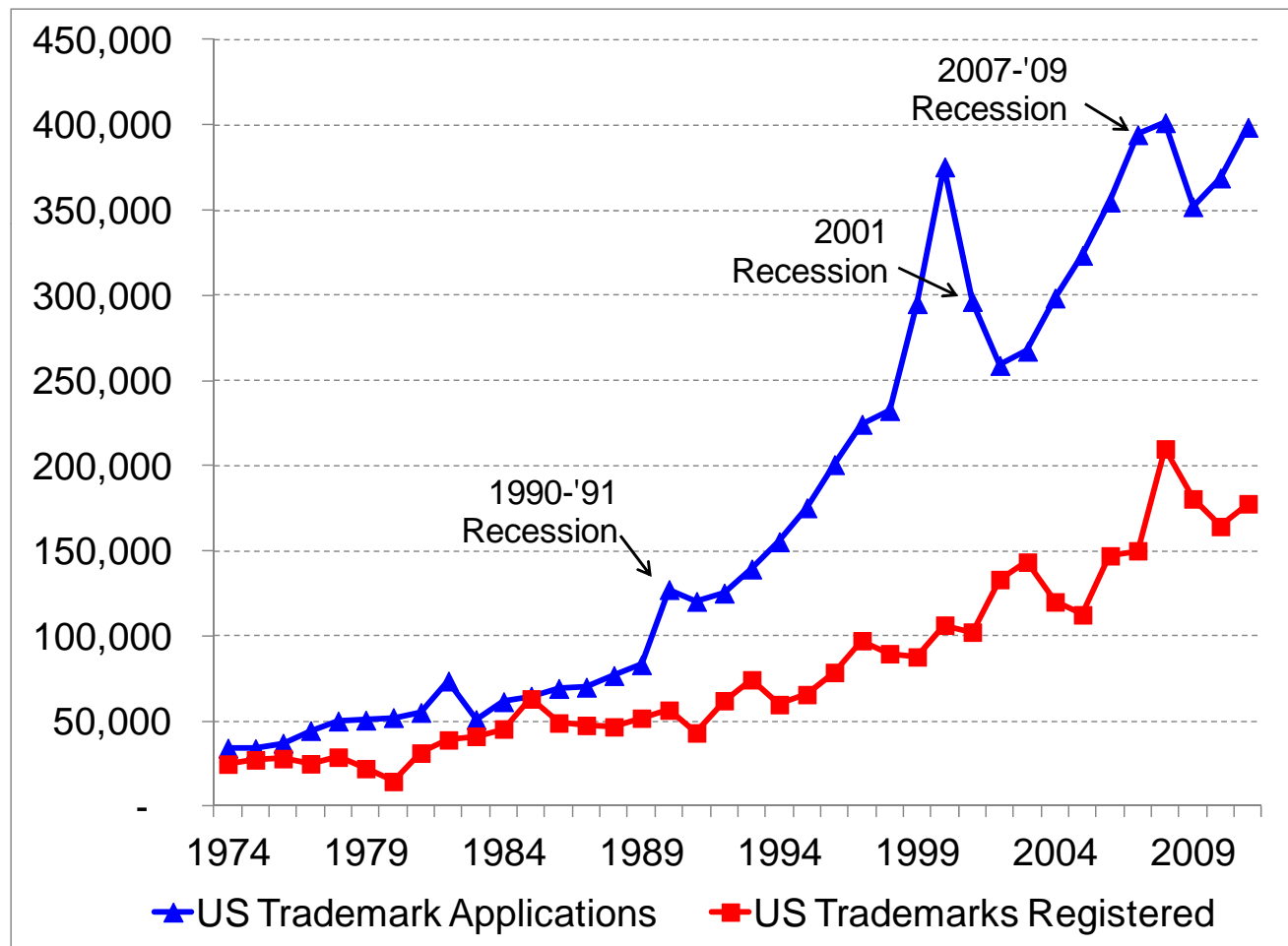
	As of December 31, 2010		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Value
Patents and developed technology	\$ 915	\$ 506	\$ 409
Customer relationships	950	400	550
Trade names and other	283	198	85
<b>Total</b>	<b>\$ 2,148</b>	<b>\$ 1,104</b>	<b>\$ 1,044</b>

	As of December 31, 2011		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Value
Patents and developed technology	\$ 1,451	\$ 698	\$ 753
Customer relationships	1,288	573	715
Trade names and other	359	249	110
<b>Total</b>	<b>\$ 3,098</b>	<b>\$ 1,520</b>	<b>\$ 1,578</b>

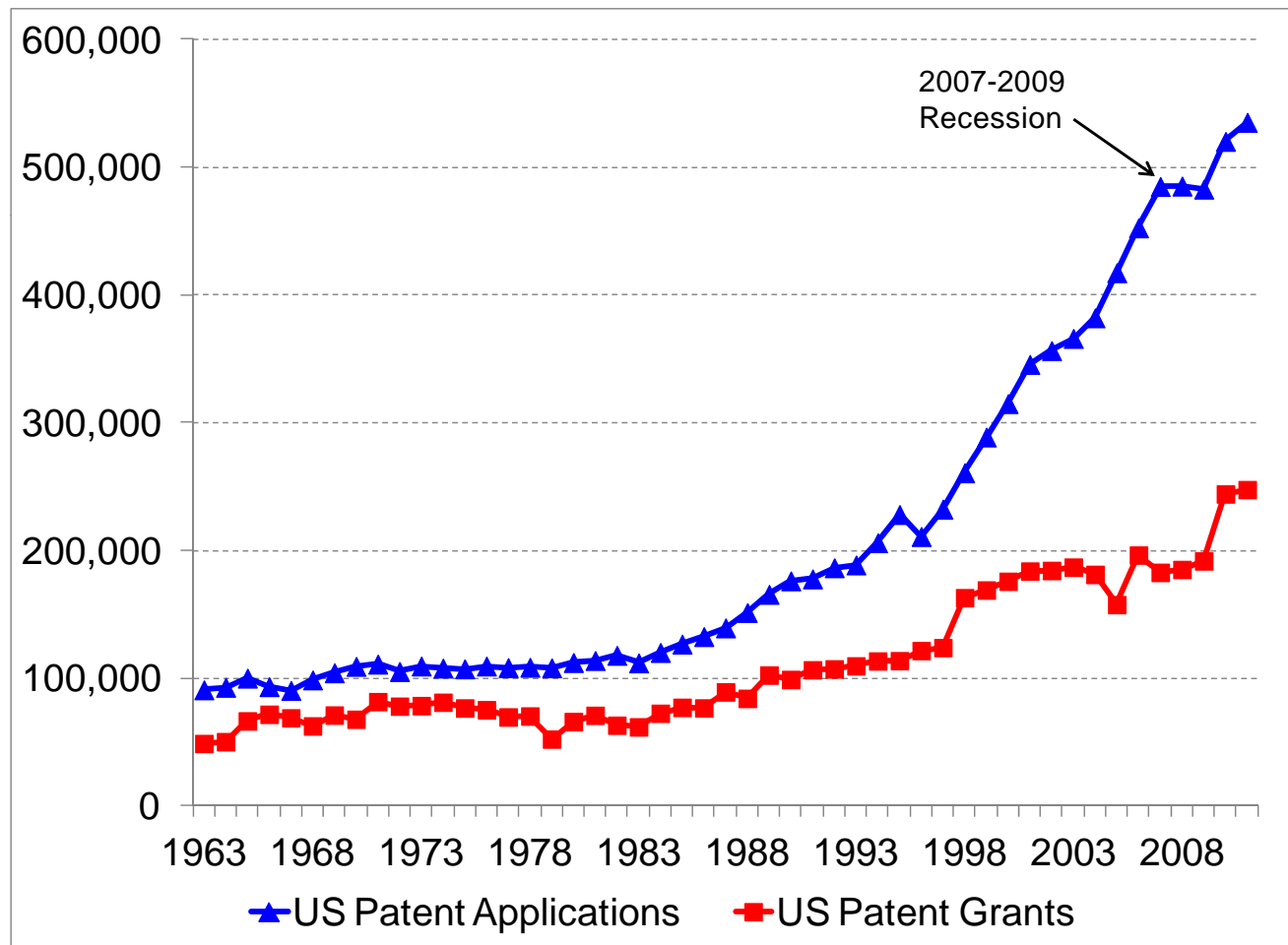
# Trends Driving IP Valuation

Rising Volume: The Number of US Trademark Applications Increased 6.9% per Year Between 1974 and 2011



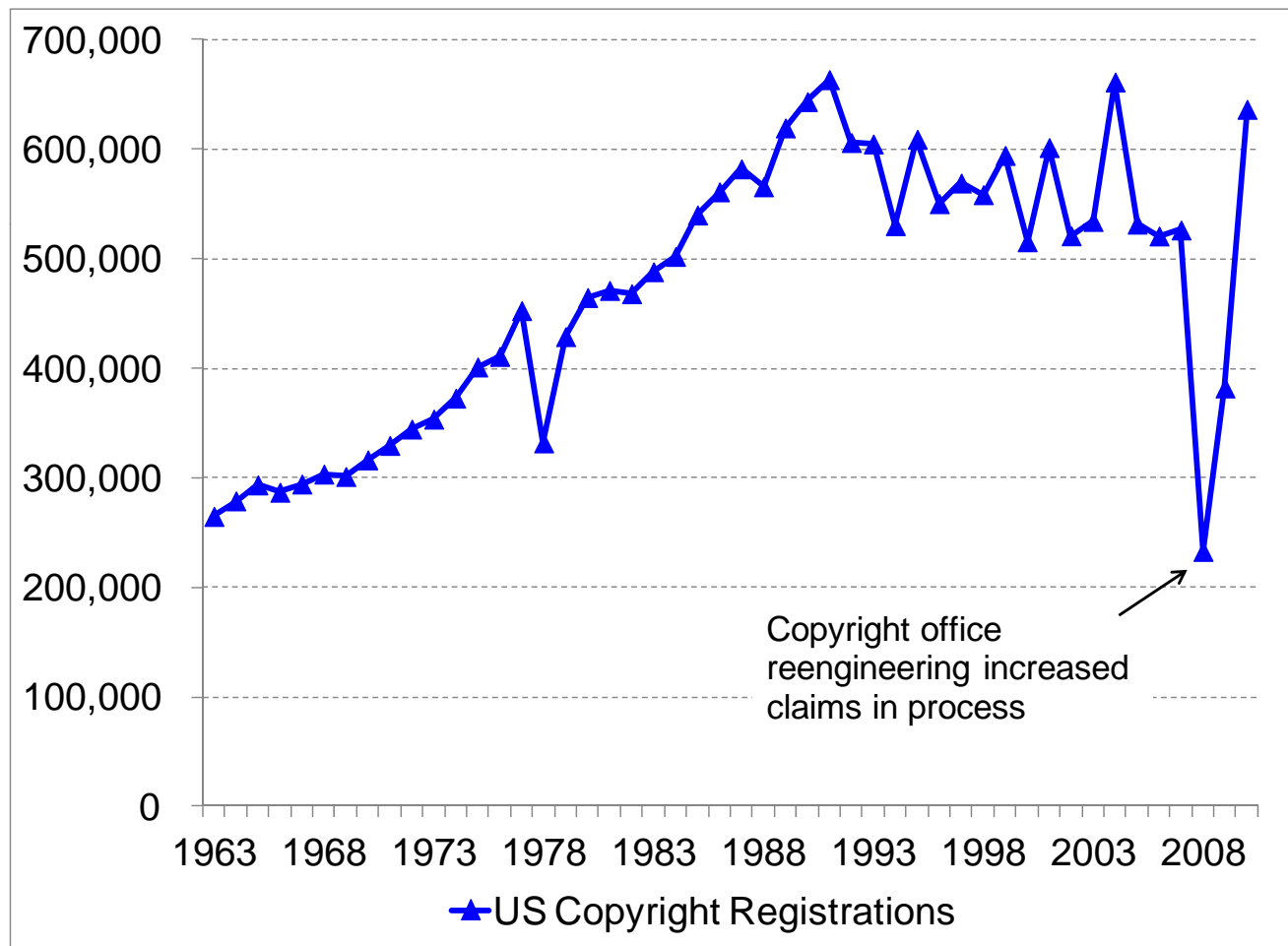
# Trends Driving IP Valuation

Rising Volume: The Number of US Patent Applications Increased 4.4% Per Year Between 1974 and 2011



# Trends Driving IP Valuation

Volume: US Copyright Registrations have Been Flat to Down Since 1991



# Trends Driving IP Valuation

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## Rising IP Complexity:

- Increasing IP share of value;
- Increasing IP volume;
- Increasing IP intensity (i.e. patents per product);
- Rapid market penetration of practicing products and works;
- New ways of delivering, using, and infringing IP.

# Trends Driving IP Valuation

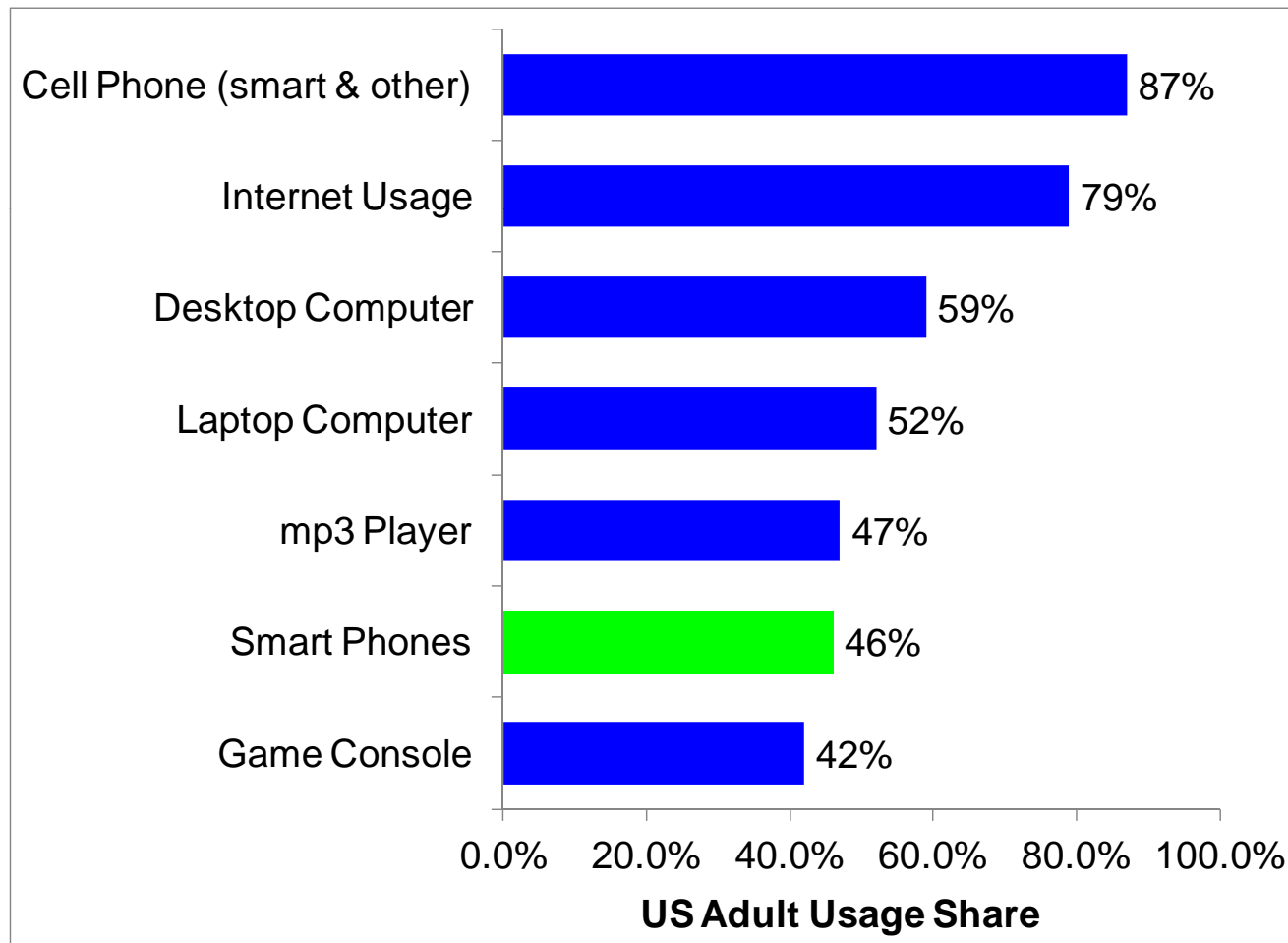
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Complexity: Smart Phone Patent Intensity Has Increased with Each Generation of Wireless Standard

Smart Phone Wireless Standard	Smart Phone “Essential” and Standard Patents (#)	Other Telecom / App Patents (#)
2G	140	107,000
3G	1,227	356,000
4G	4,076	575,000

# Trends Driving IP Valuation

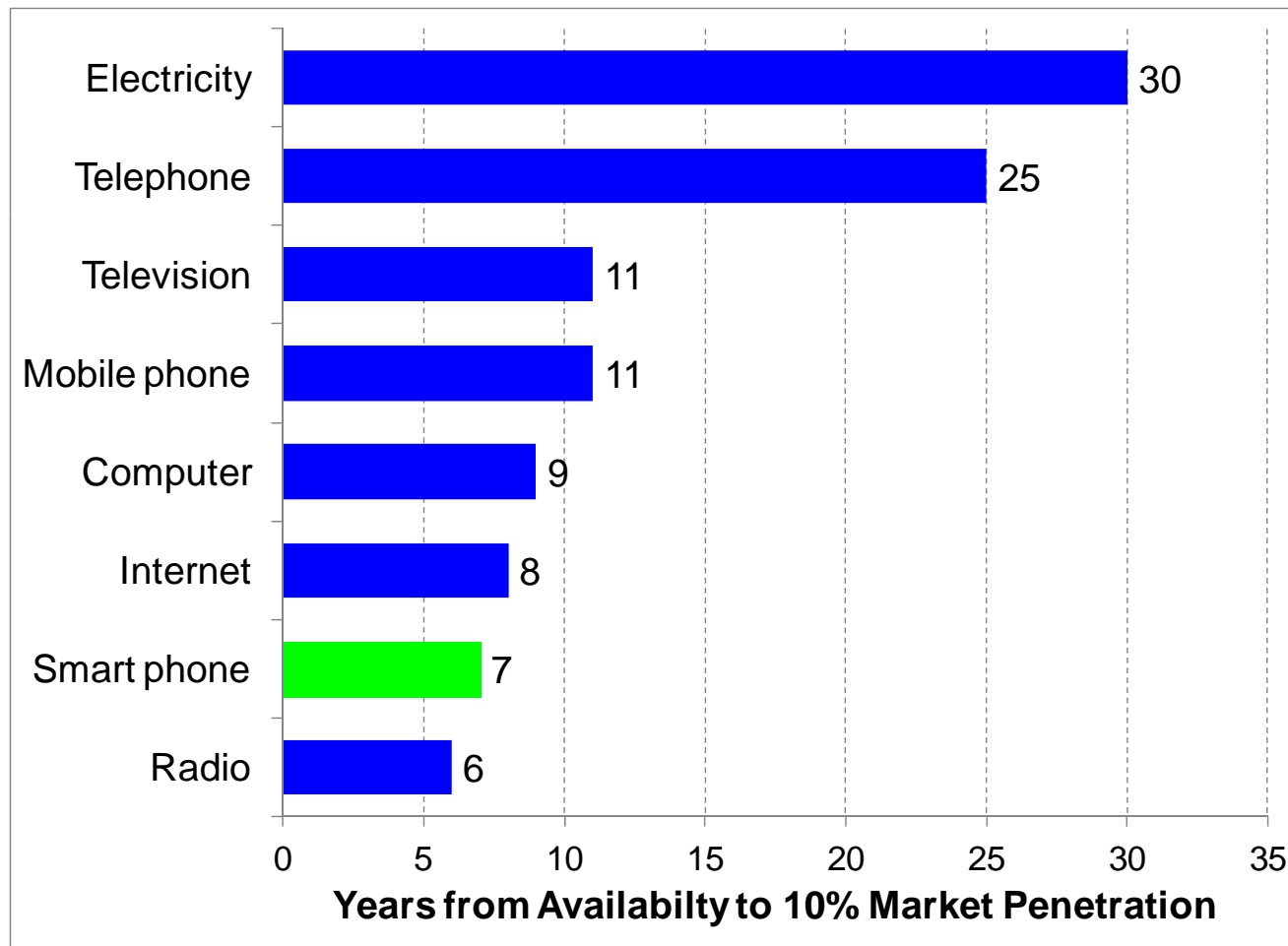
Complexity: Smart Phones became Widely Available in 2002 and were Used by 46% of US Adults by Early 2012





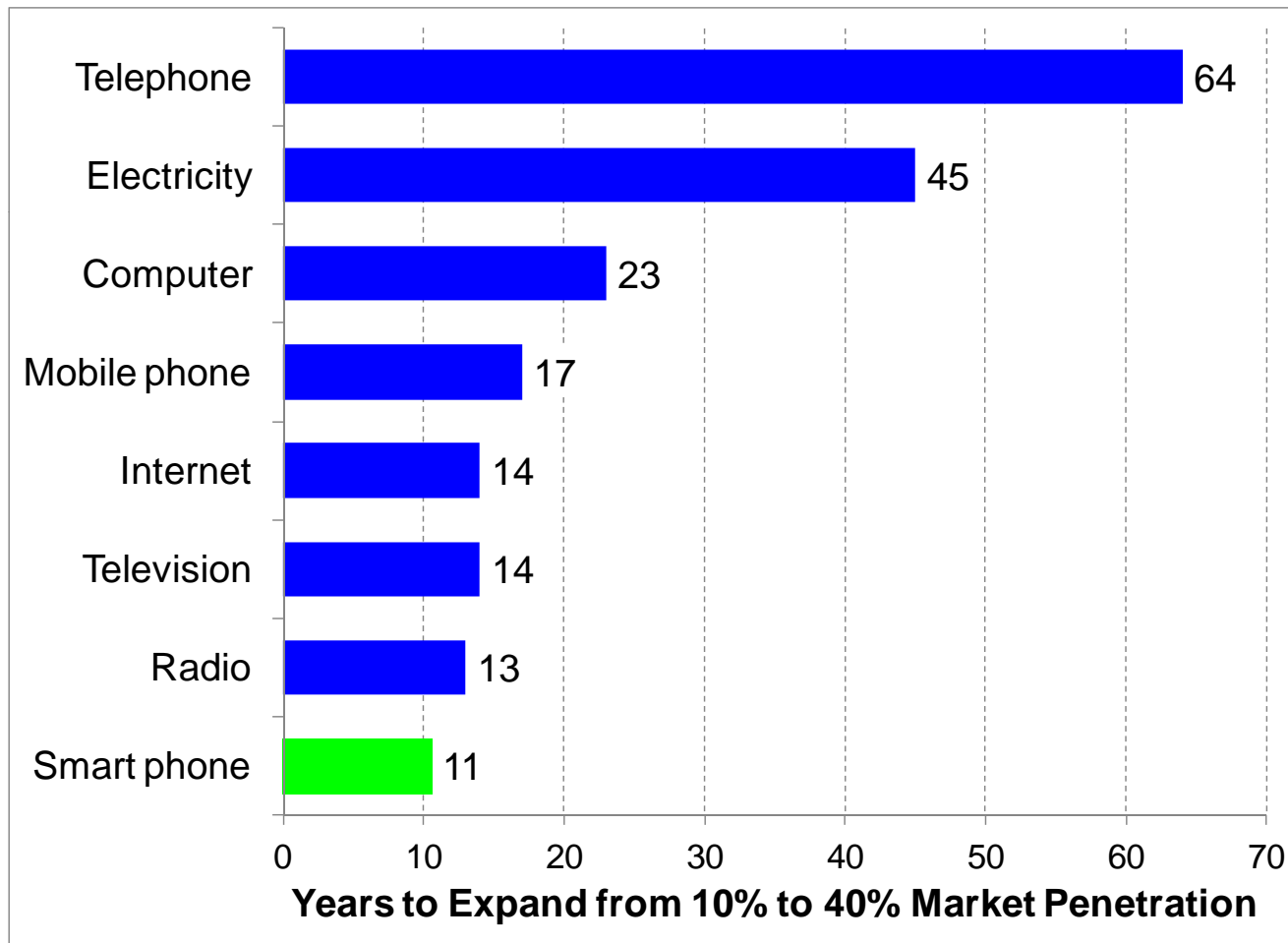
# Trends Driving IP Valuation

Complexity: Smart Phones Initial Time from Consumer Availability to 10% Market Penetration was Relatively Fast



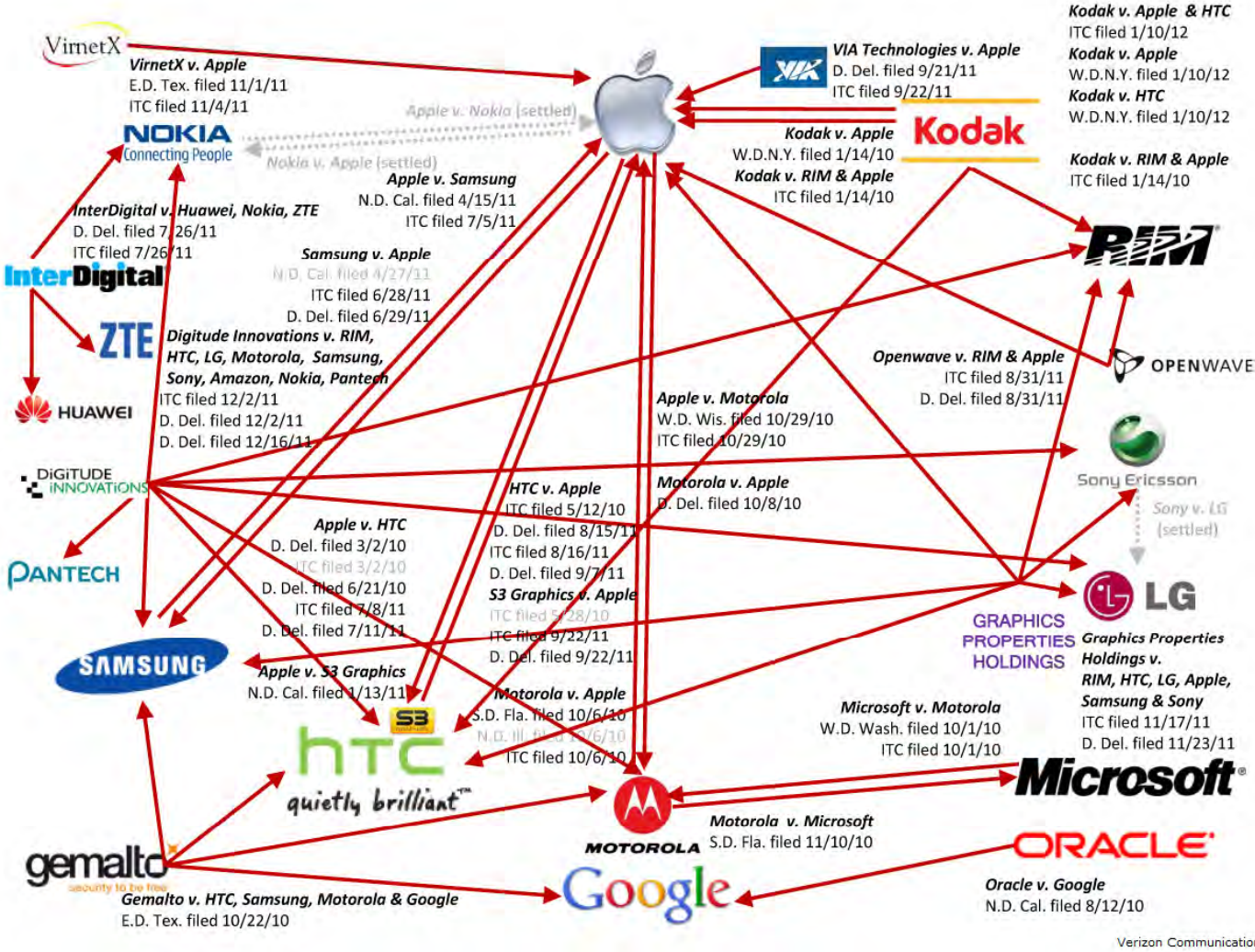
# Trends Driving IP Valuation

Complexity: Smart Phones Outpaced Other Technologies to the 40% Market Penetration Level



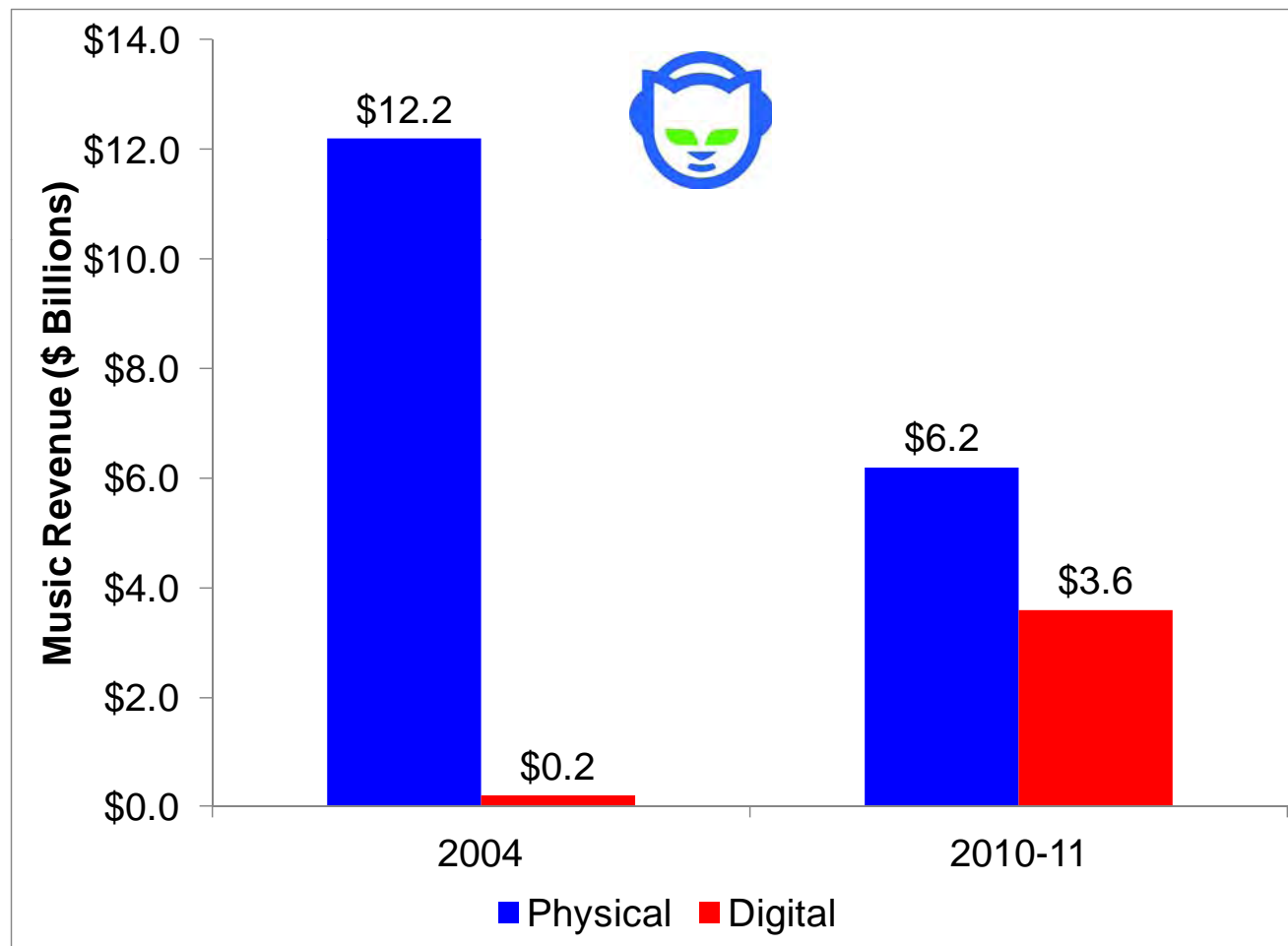
# Trends Driving IP Valuation

## Complexity: Smart Phone Patent “Wars” Emerged



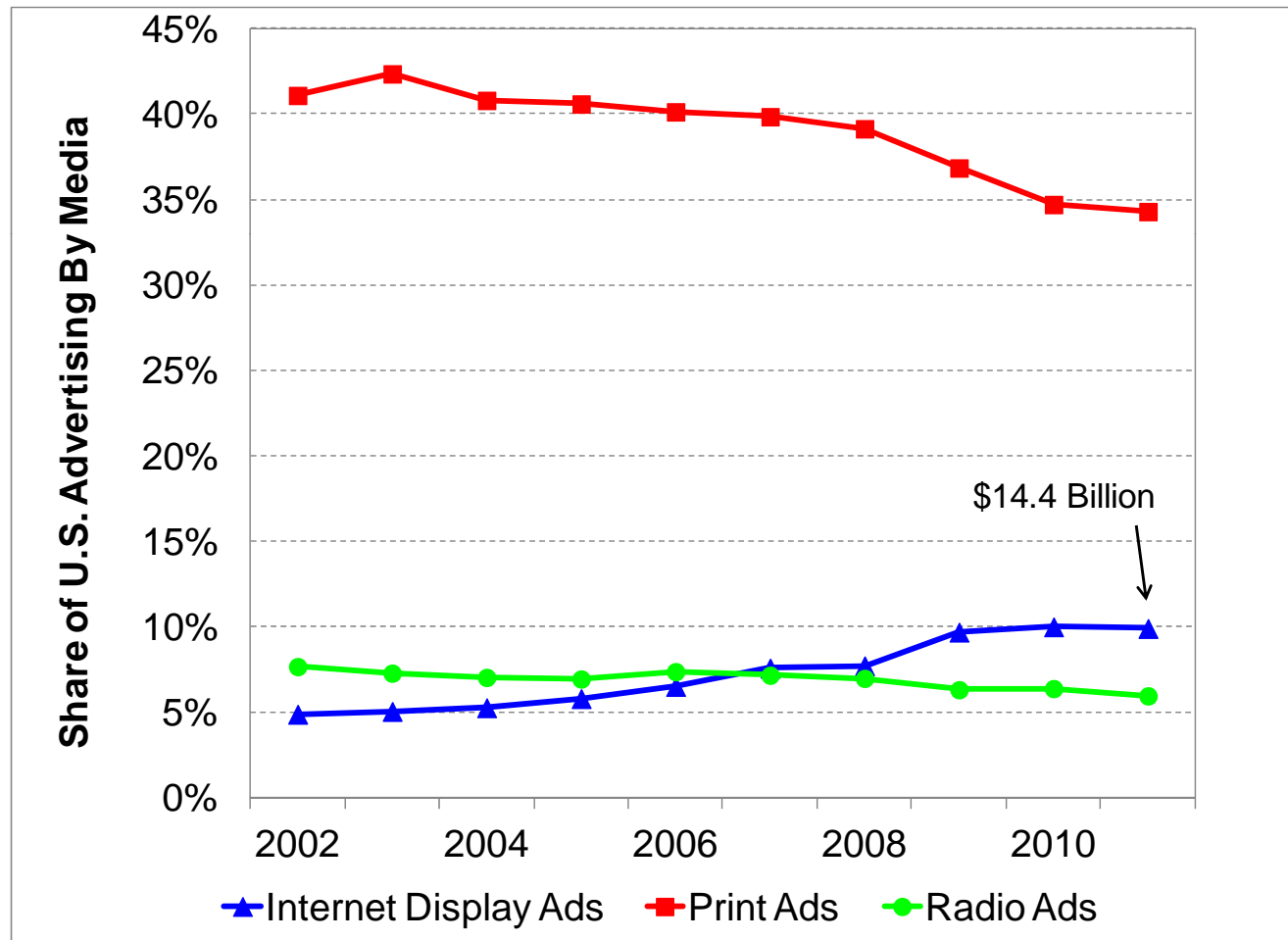
# Trends Driving IP Valuation

Complexity: Digital Music – Changing Delivery, Use, and Potential Infringement of Copyrights



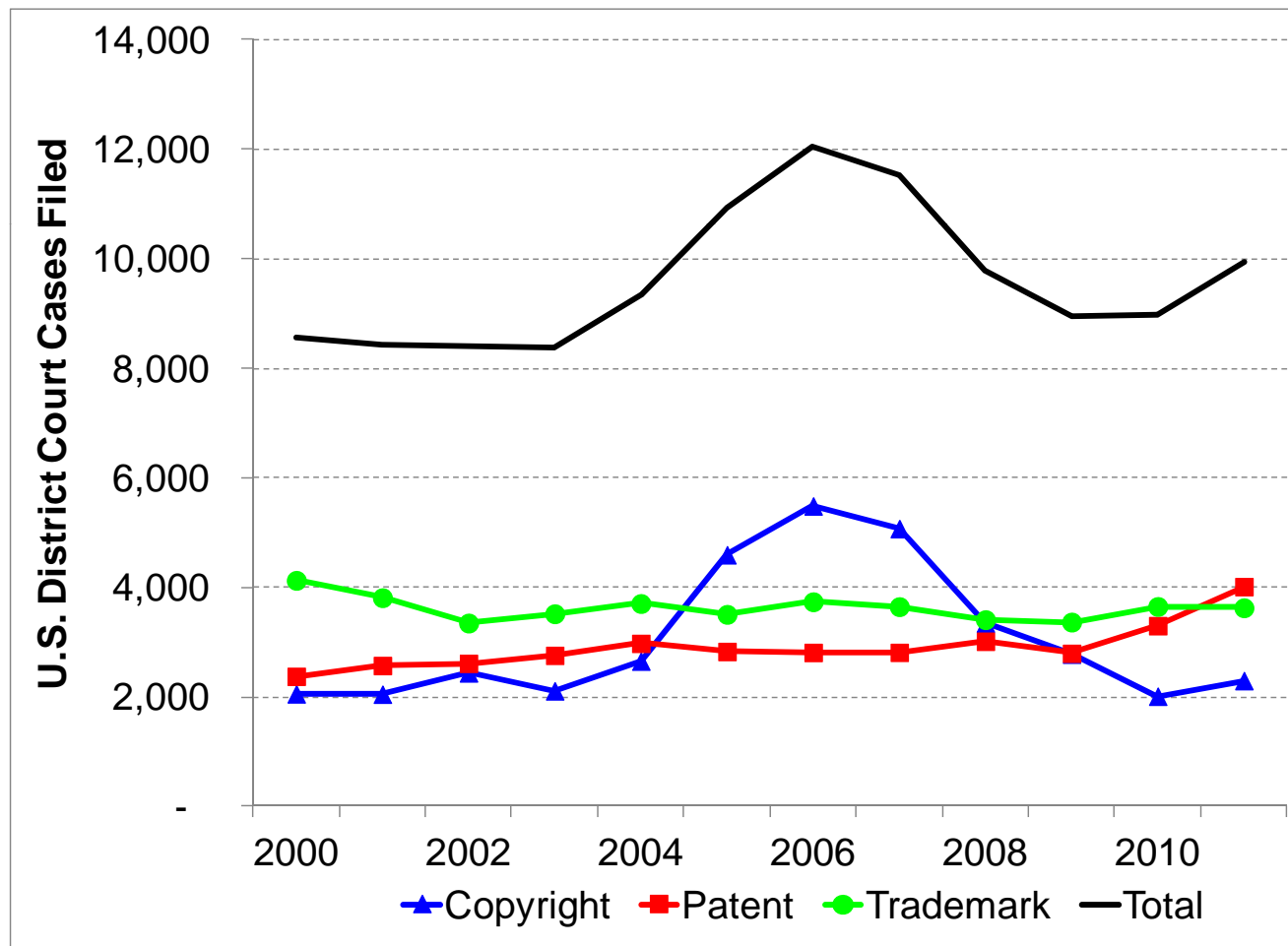
# Trends Driving IP Valuation

Complexity: Internet Advertising – Changing Delivery, Use, and Potential Infringement of Trademarks



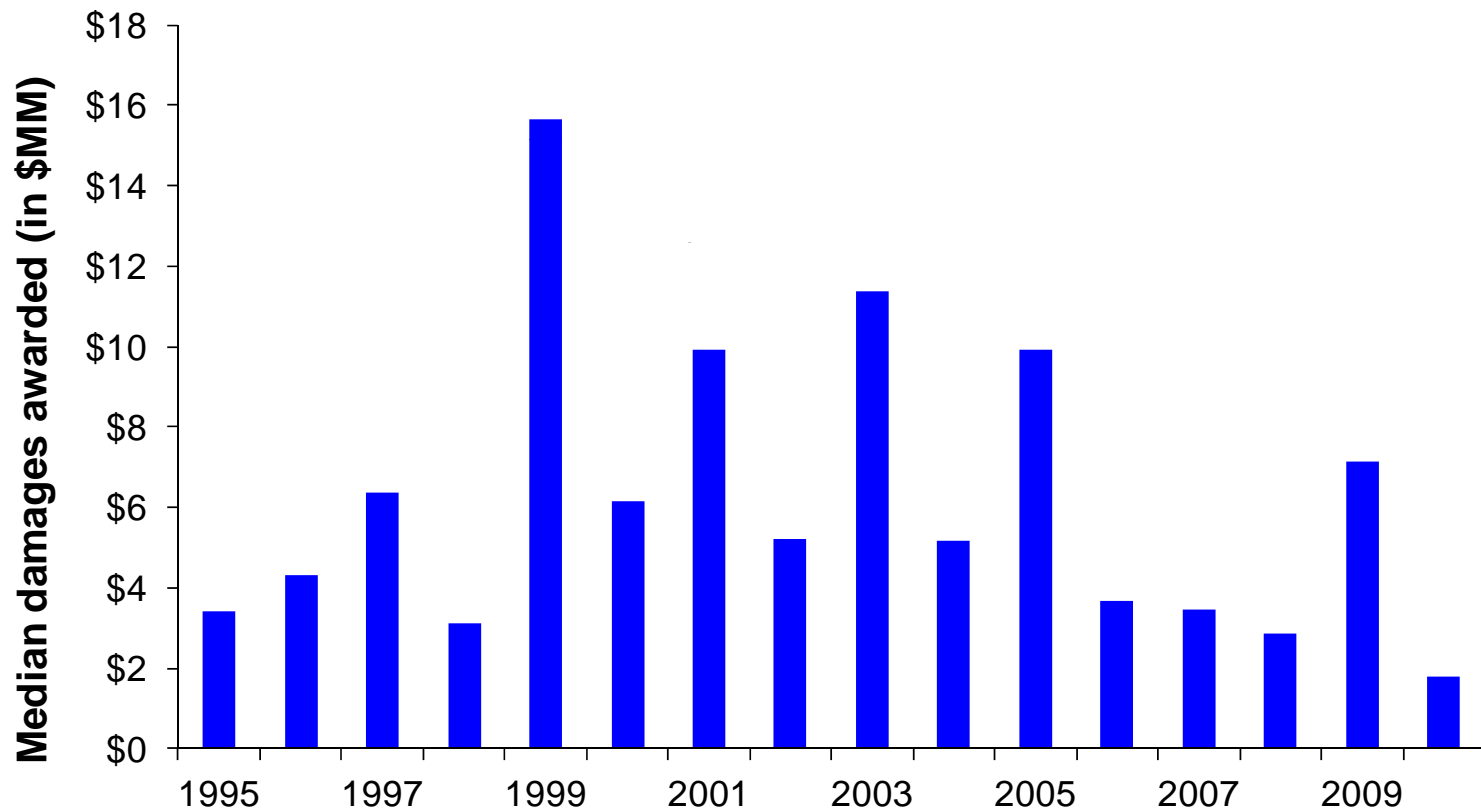
# Trends Driving IP Valuation

Litigation: The Number if IP Cases Commenced Has Been Slowly Trending Upward But With Fluctuations



# Trends Driving IP Valuation

Litigation: Median Patent Damages Awards Have Been Trending Downward in Recent Years



Median damages are adjusted for inflation and represented in 2010 US dollars

# Trends Driving IP Valuation

## Litigation: Large Case Damages Awards Underscore Risk

Year	Plaintiff	Defendant	Award (MM)	Type
2009	Centocor Ortho Bitotech, Inc.	Abbott Laboratories	\$1,848	Patent, reversed
2007	Lucent Technologies (mp3 )	Gateway et. al (Microsoft)	\$1,538	Patent, reversed and settled
2010	Oracle, Inc.	SAP	\$1,300	Copyright, reversed.
2012	Apple, Inc.	Samsung Electronics Co.	\$1,050	Patent, to be appealed
2012	Monsanto Co.	E.I. Dupont	\$1,000	Patent, to be appealed
2010	Mirror Worlds, LLC	Apple, Inc.	\$626	Patent, reversed
2011	Bruce N. Saffran M.D.	Johnson & Johnson	\$593	Patent
2008	Bruce N. Saffran M.D.	Boston Scientific Corp.	\$432	Settled for \$50MM
2009	Uniloc USA, Inc.	Microsoft Corp.	\$388	Patent, remanded for new damages trial, settled.
2008	Lucent Technologies (date picker)	Gateway et. al. (Microsoft)	\$358	Patent, remanded for new damages trial. Reduced and settled.
2008	Adidas America Inc.	Payless Shoesource, Inc.	\$305	Trademark
2009	i4i Limited Partnership	Microsoft Corp.	\$277	Patent
2006	Nike, Inc. et. al.	Top Brand Co. et al.	\$38	Trademark
2010	Jordon Fishman et. al.	Shandong Linlong Rubber Company Ltd	\$26	Copyright



# Trends Driving IP Valuation

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## Recent Court Decisions Are Reinforcing More Stringent IP Valuation Standards

Recent cases have clarified and raised the standards for claiming reasonable royalties:

- *Cornell University. vs. Hewlett Packard* (USD ND NY 2008) and *Lucent Technologies, Inc. v. Microsoft Corp.* and related (SD Cal. 2008):
- *Lucent Technologies, Inc. v. Microsoft Corp.* and related (SD Cal. 2008):
- *Oracle America, Inc. v. Google Inc.* (ND Cal. 2012):
- *ResQNet.com v. Lansa, Inc.* (Fed. Cir. 2009):
- *Uniloc v. Microsoft* (Fed. Cir. 2011):
- *Rolls-Royce PLC v. United Technologies Corp.* (E.D. Va 2011).

# Trends Driving IP Valuation

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## Recent Court Decisions – The Entire Market Value Rule (EVMR)

- The proper royalty base when determining damages is the smallest saleable unit that practices the IP;
- There are three additive, not alternative, conditions to use the infringing products' total sales as the royalty base:
  1. The infringing component must be the basis for customer demand;
  2. Infringing and non-infringing components must be sold together so that they constitute a functional unit or are parts of a complete machine or single assembly of parts;
  3. Infringing and non-infringing components must be analogous to a single functioning unit.

# Trends Driving IP Valuation

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## Recent Court Decisions - Royalty Rates and “Comparable” Licenses

- The 25% rule is “fundamentally flawed” and “inadmissible” under Daubert and Federal Rules of Evidence (with exceptions?);
- “Comparable” licensing agreements must be linked to the IP in question and the expert must show that these agreements embody or use the claimed technology or otherwise show demand for the infringed technology;
- The most reliable license in a case may arise out of litigation;
- The need to adjust comparable royalty rates significantly downward from licensing agreements may be viewed as an admission that the calculation is speculative.

# Trends Driving IP Valuation

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## Recent Court Decisions - Apportionment

- Infringer's income must be apportioned between infringing and non-infringing features in the royalty damages assessments;
- Survey evidence can be used to establish this apportionment;
- Damages may need to be determined on a claim by claim basis
- Lost profits may need to be apportioned.

# The Top 10 IP Valuation Situations

# Top 10 IP Valuation Situations

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## Litigation

1. IP Litigation
2. Bankruptcy

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## Transactions

3. Licensing
4. IP Acquisition or Sale
5. Joint-Venture Contributions
6. Financing
7. IPOs
8. Company M&A

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## Compliance

9. Tax Reporting
10. Financial Reporting

Subjective ranking based on a combination of frequency and the typical level of effort made to value individual IP assets.

# Maximize Returns by Knowing IP Values

# Maximize Returns By Knowing IP Values

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IP values need to be known in a number of circumstances:

- The objective of the firm in modern finance is to maximize shareholder value (within constraints);
- Finance provides tools to make decisions and measure performance consistent with this goal;
- However, asset values are not generally available in real time for assets other than those traded on public exchanges;
- Therefore, valuation tools are used to make decisions consistent with maximizing shareholder value and returns;
- IP Valuation is a specific application of this process to the IP asset class.



# Maximize Returns By Knowing IP Values

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IP value is used to realize the goal of maximizing shareholder value in one or more of the following typical ways:

- 1) **Making the Right Decision**: IP valuation calculates the net present value (NPV) of the business “world” in question under various IP decision scenarios. The resulting dollar measure is directly related to overall shareholder value. Therefore, value maximizing IP decisions can be made using the NPV rule:
  - Make decisions that result in “+” NPVs;
  - Reject decisions that result in “-” NPVs;
  - Accept the highest NPV option if evaluating several mutually exclusive alternatives.

# Maximize Returns By Knowing IP Values

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IP value to maximize shareholder value (continued):

- 2) Paying or Receiving the Right “Price”: IP valuation quantifies the negotiation range and prices at which parties are willing to enter into a transaction or can expect as a damages outcome in litigation. It identifies the maximum price buyers are willing to pay and the minimum price sellers will accept from an economic perspective.
- 3) Obtaining Fair Outcomes: The dollar quantification of IP values provides a benchmark for measuring and evaluating outcomes (i.e. for a company board).
- 4) Achieving Regulatory Compliance: IP valuation is required in these circumstances but can be scaled properly to minimize costs.

# Maximize Returns By Knowing IP Values

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IP value to maximize shareholder value (continued):

5) Properly Scaling Costs: IP valuation quantifies the impact of IP decisions on shareholder value. Cost and effort can be scaled commensurate with the shareholder value impact of the IP. This avoids both under-allocating resources to high impact IP situations and over-allocating resources to low impact situations. Scalable costs often include:

- Personnel's time;
- Due diligence costs;
- Consultant and transaction fees;
- Legal fees and litigation costs;
- Compliance costs (audit, tax, etc.);
- Financing and surety costs.

# Maximize Returns By Knowing IP Values

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Simplified Illustration of an IP acquisition.

## “BUYCO”

- Established market leader
- Retail consumer products
- Decision:
  - Buy Target IP from SELLCO?
  - Design around in-house (NBA)?

## “SELLCO”

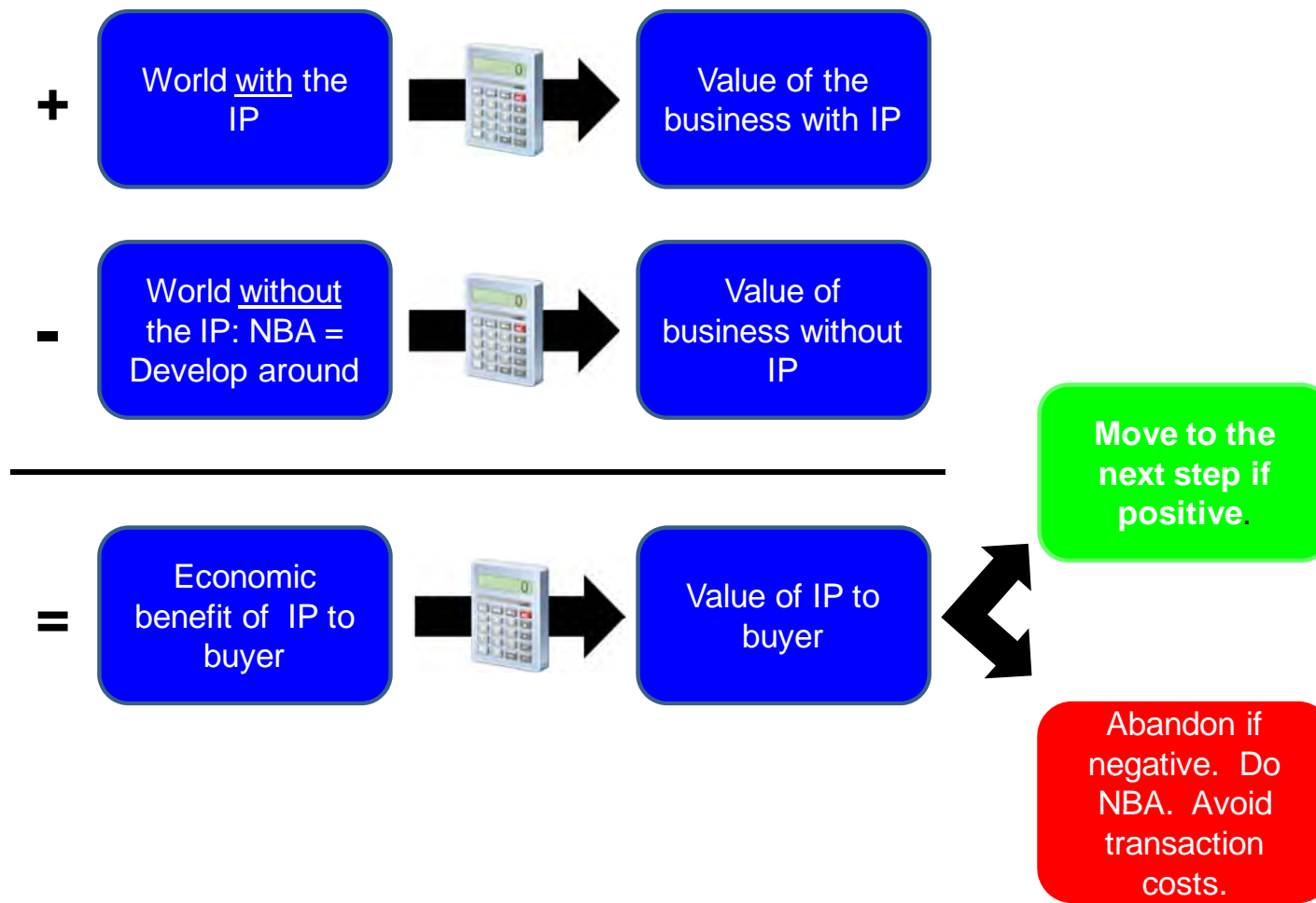
- Start-up
- Owns target IP
- Decision:
  - Sell?
  - Retain and practice the IP? (NBA)

Target IP

Note: These alternatives have been simplified for illustrative purposes. A wide range of alternative licensing and acquisition scenarios could have been incorporated.

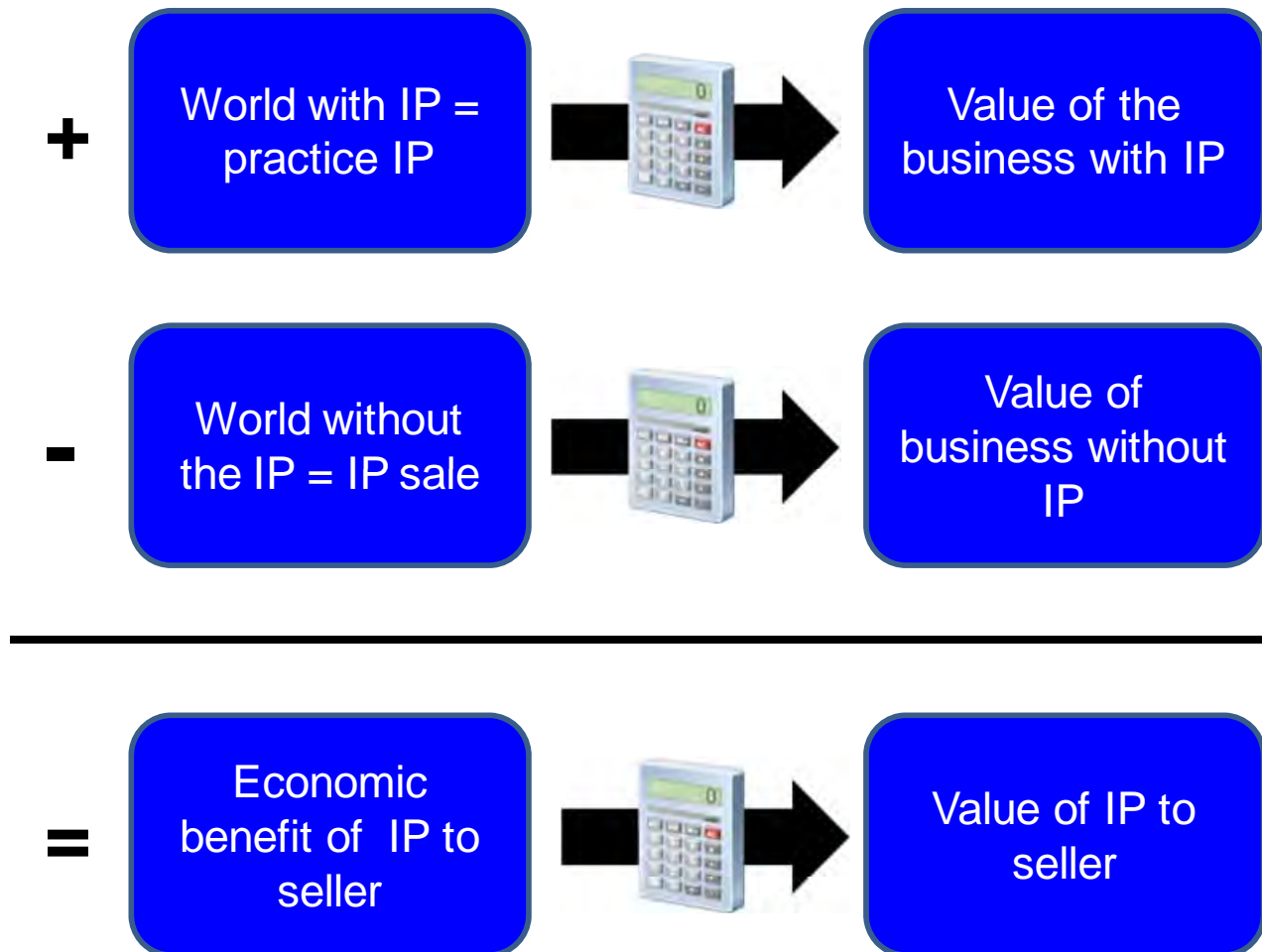
# Maximize Returns By Knowing IP Values

Illustration: Determine the value of the IP to BUYCO.



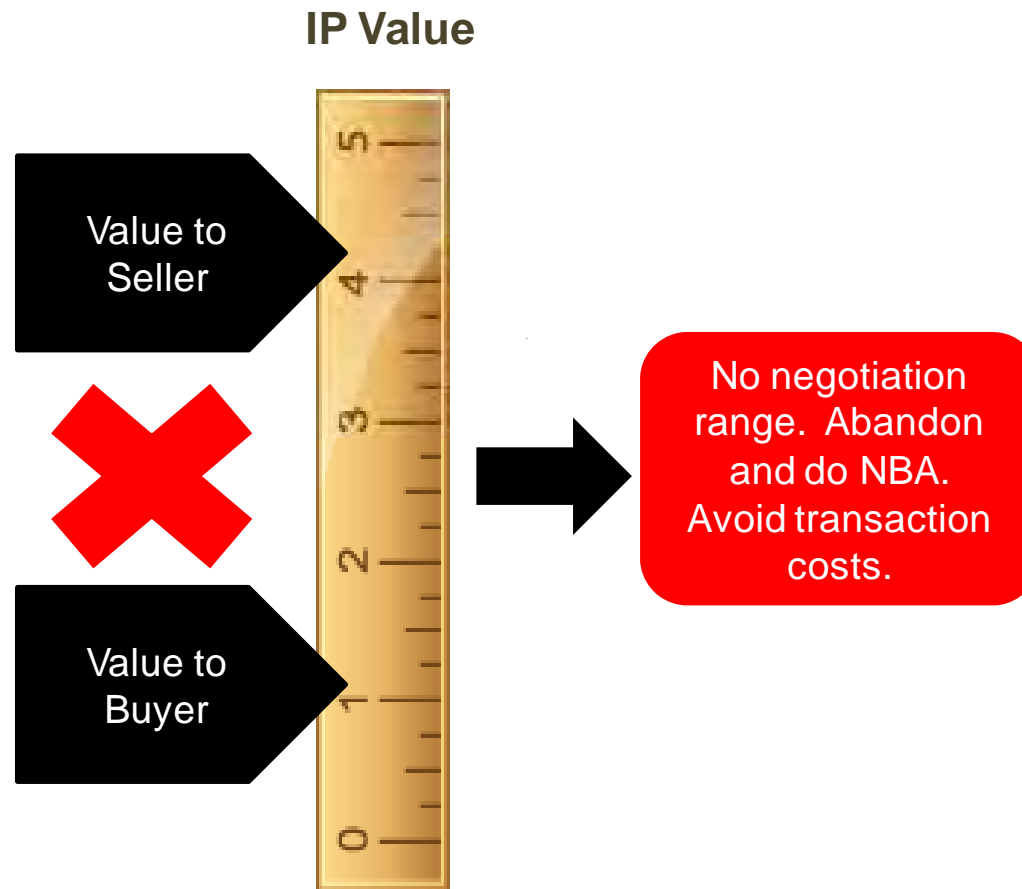
# Maximize Returns By Knowing IP Values

Illustration: Determine the value of the IP to SELLCO



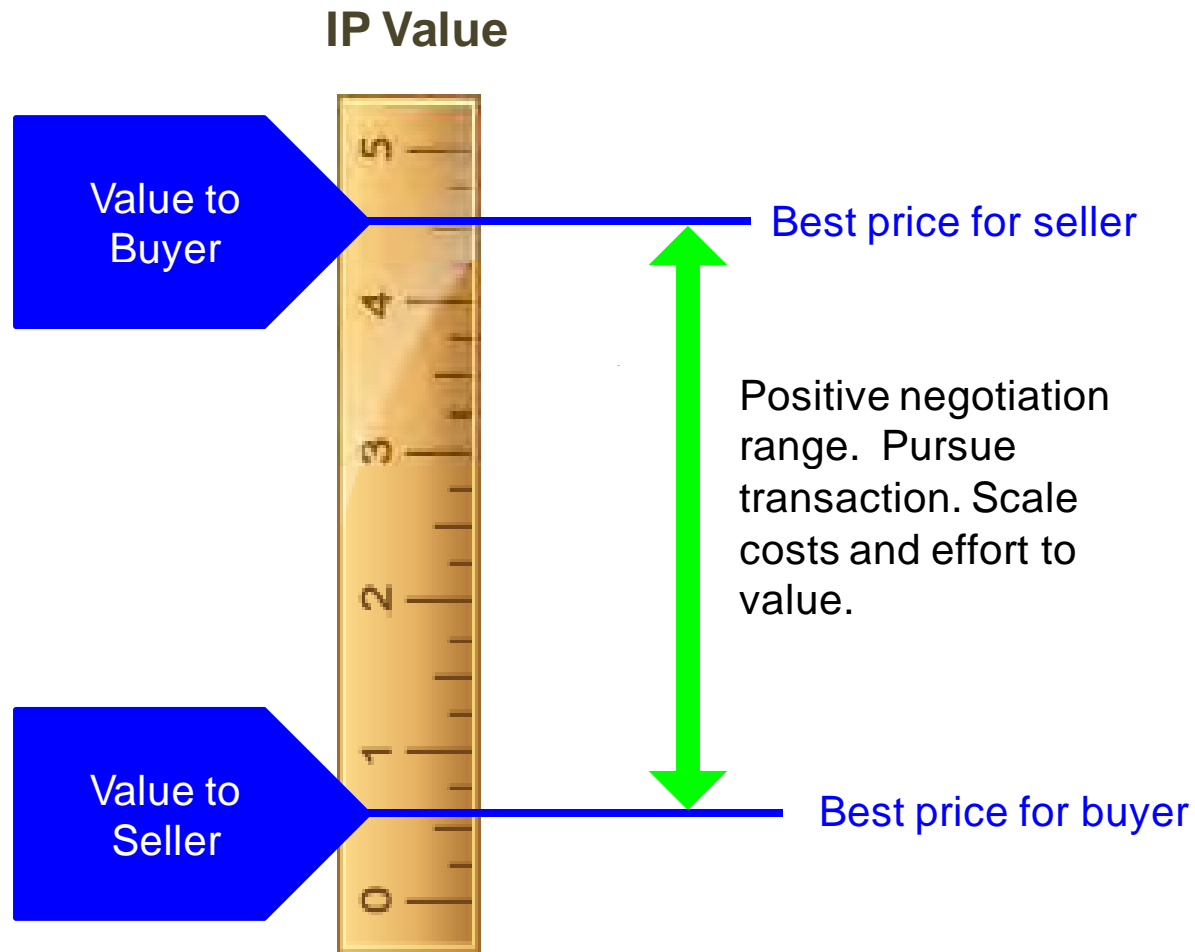
# Maximize Returns By Knowing IP Values

Illustration: Identify the negotiation range



# Maximize Returns By Knowing IP Values

Illustration: Identify the negotiation range





# Maximize Returns By Knowing IP Values

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Illustration: As a result the buyer / seller:

- ✓ Know whether pursuing a) the transaction or b) their next best alternative maximizes shareholder value and can make the proper decision;
- ✓ Know the negotiation range and how close their offers and agreement are to their “best” prices;
- ✓ Have a benchmark for whether the transaction was fair (i.e. for board);
- ✓ Have information to scale costs commensurate with the shareholder value at stake;
- ✓ Have the information required for tax and financial reporting compliance purposes.

# **Keys For Counsel to Understand, Use and Rebut IP Values**

# Keys To Understand, Use & Rebut IP Values

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Recognize and verify:

- One piece of IP has more than one value;
- The seven drivers of IP value;
- The three basic approaches to value IP.

# Keys To Understand, Use & Rebut IP Values

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**One piece of IP has more than one value.** The value of the IP can change with:

- Nature of the assignment or case;
- Purpose and intended users;
- Jurisdiction or applicable rules;
- Facts;
- Timing;
- Other.

# Keys To Understand, Use & Rebut IP Values

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## IP has more than one value (continued):

The following six elements are codified into the standards that guide the development and reporting of IP valuations;

- Property and rights being valued;
- Intended user;
- Purpose and use of the valuation;
- Standard of value;
- Premise of value;
- Valuation and report dates.

# Keys To Understand, Use & Rebut IP Values

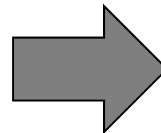
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## IP has more than one value (continued):

Check that the proper property and rights are being valued.

### Trademark Example:

- One trademark
- Joint ownership
- Affixed to multiple products
- Sold in multiple channels
- Sold in numerous countries
- Related trademarks



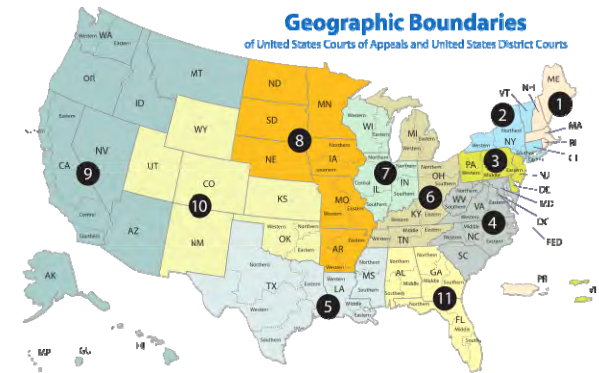
Are you evaluating:

- The overall trademark?
- Its value to one of the owners or both?
- Its value to one product, a product line or all products?
- In one channel (i.e. internet sales) or every channel (i.e. internet + retail stores)?
- In the U.S.? EPO countries? Globally?
- Independently or as part of a portfolio of related marks?

# Keys To Understand, Use & Rebut IP Values

IP has more than one value (continued):

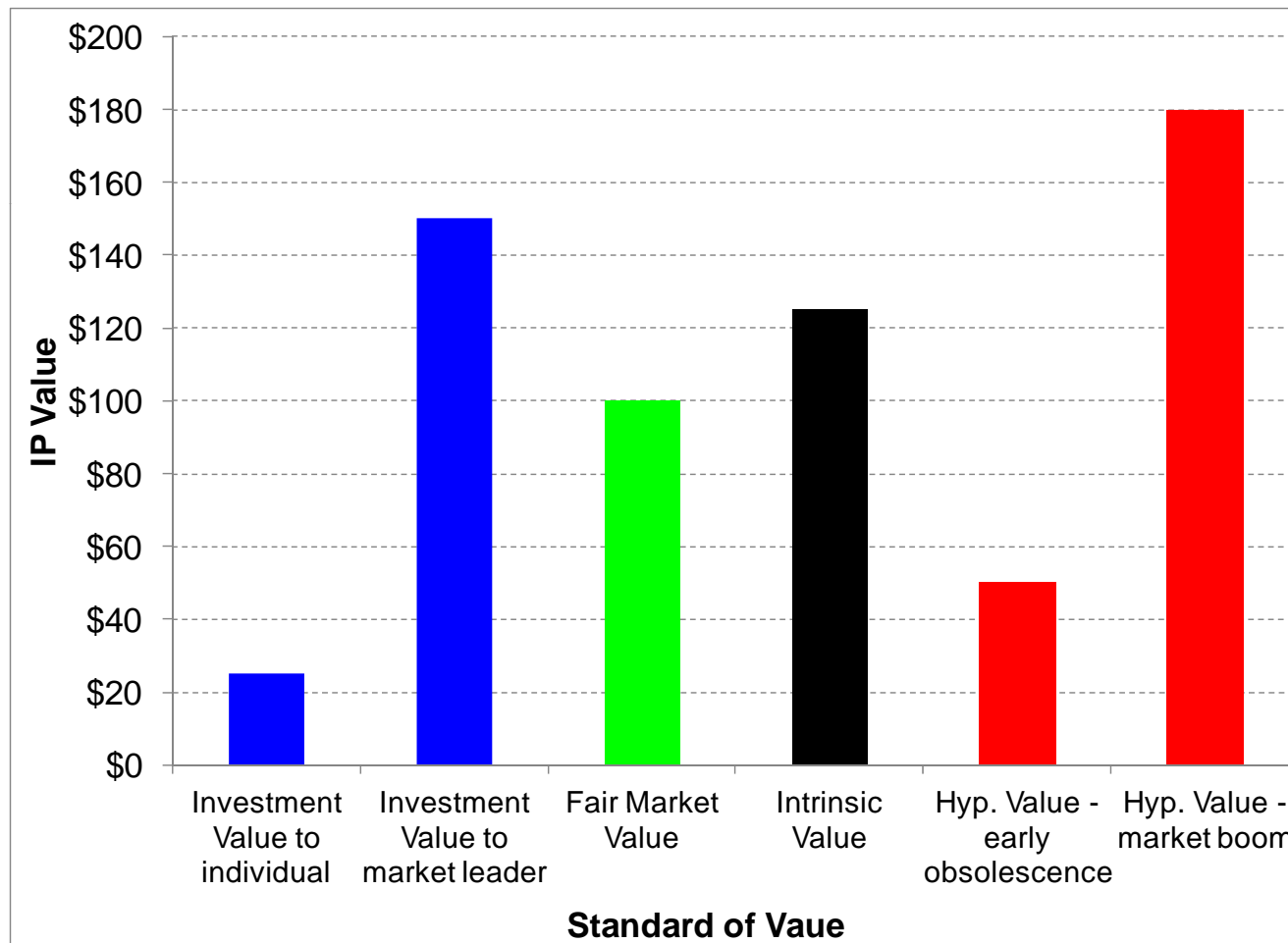
Different intended users, purposes, and uses of valuations have different rules that can result in differences in value.



# Keys To Understand, Use & Rebut IP Values

IP has more than one value (continued):

Check that the proper standard of value is used

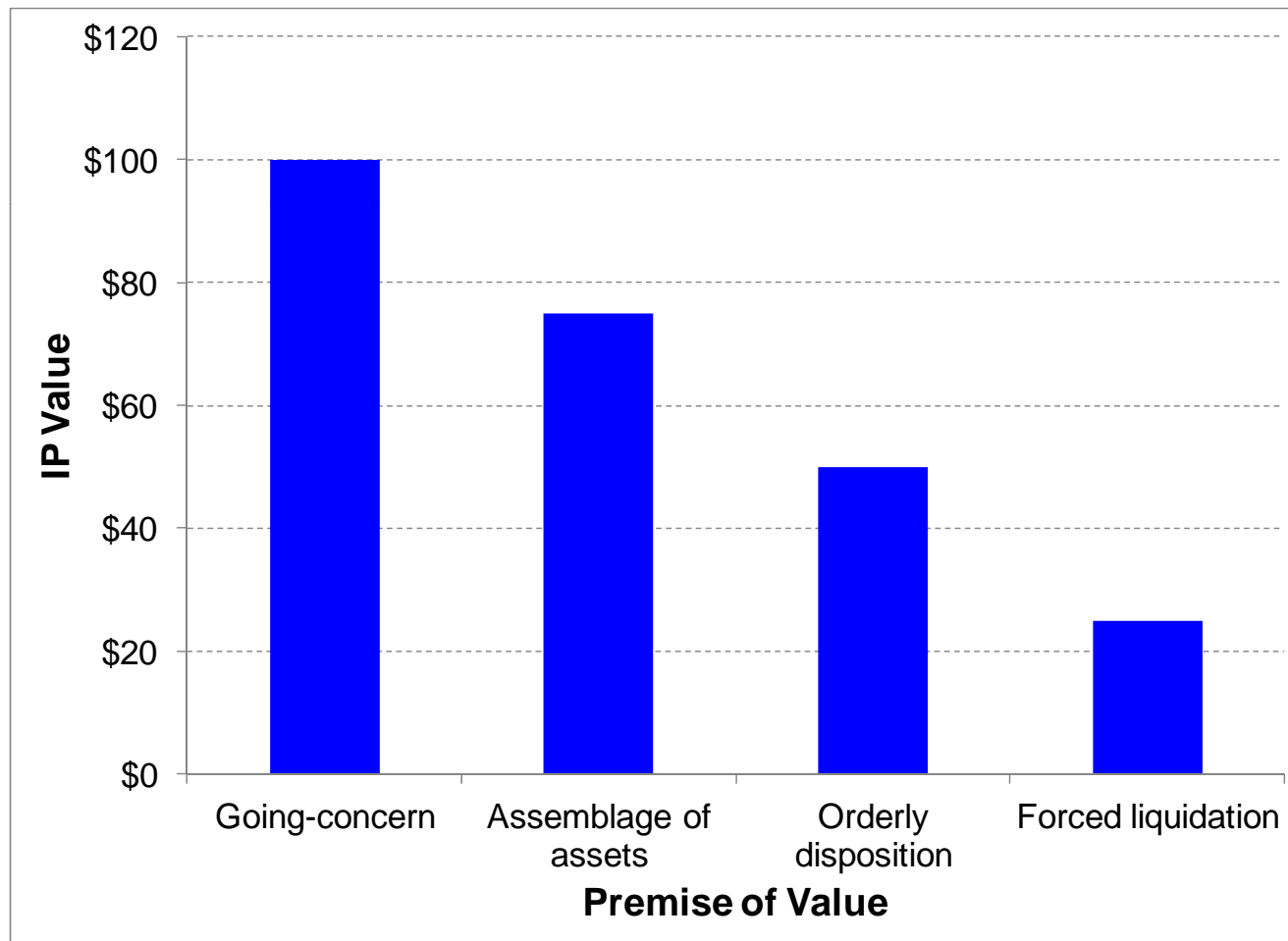




# Keys To Understand, Use & Rebut IP Values

IP has more than one value (continued):

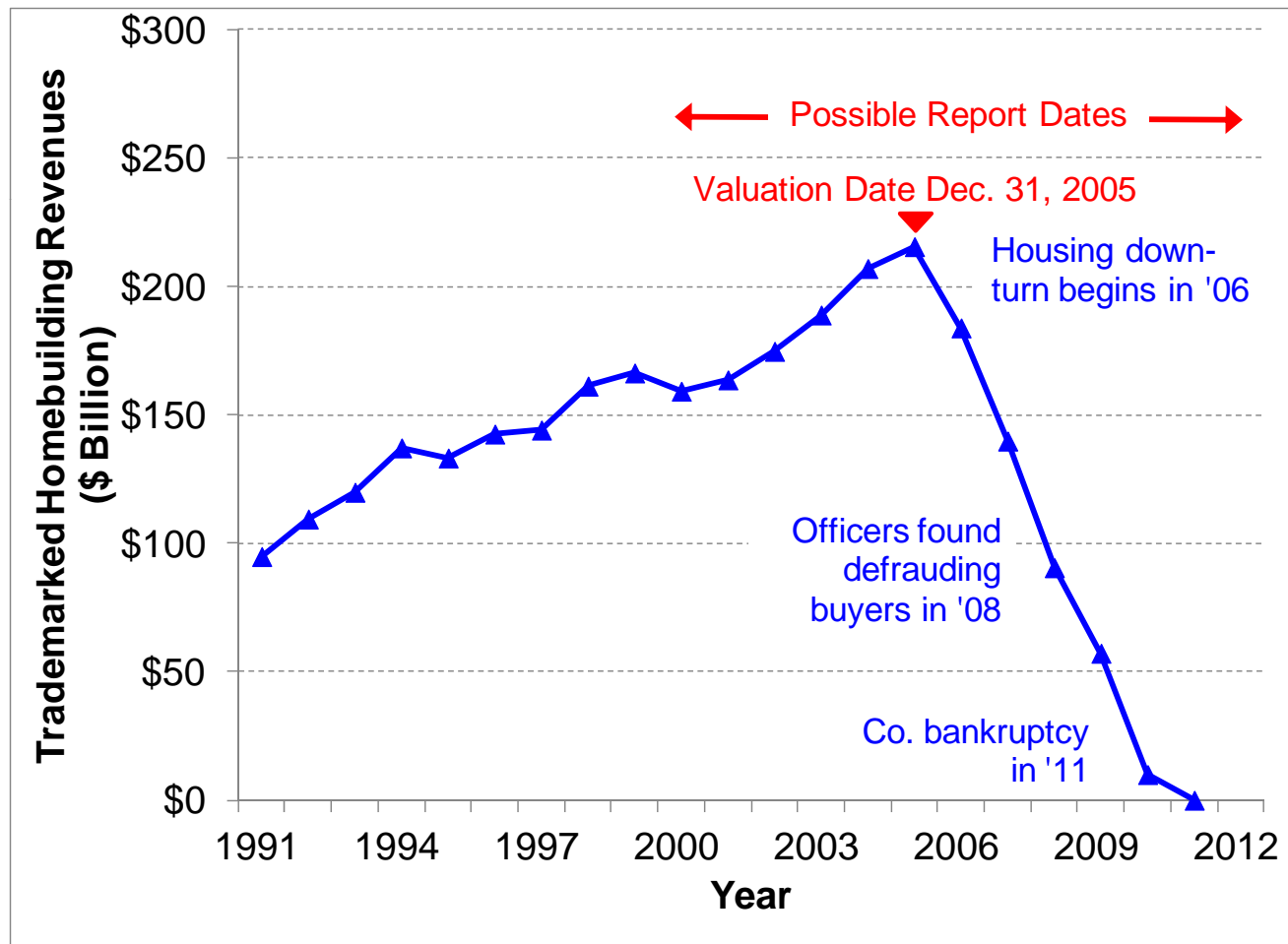
Check that the proper premise of value is used



# Keys To Understand, Use & Rebut IP Values

IP has more than one value (continued):

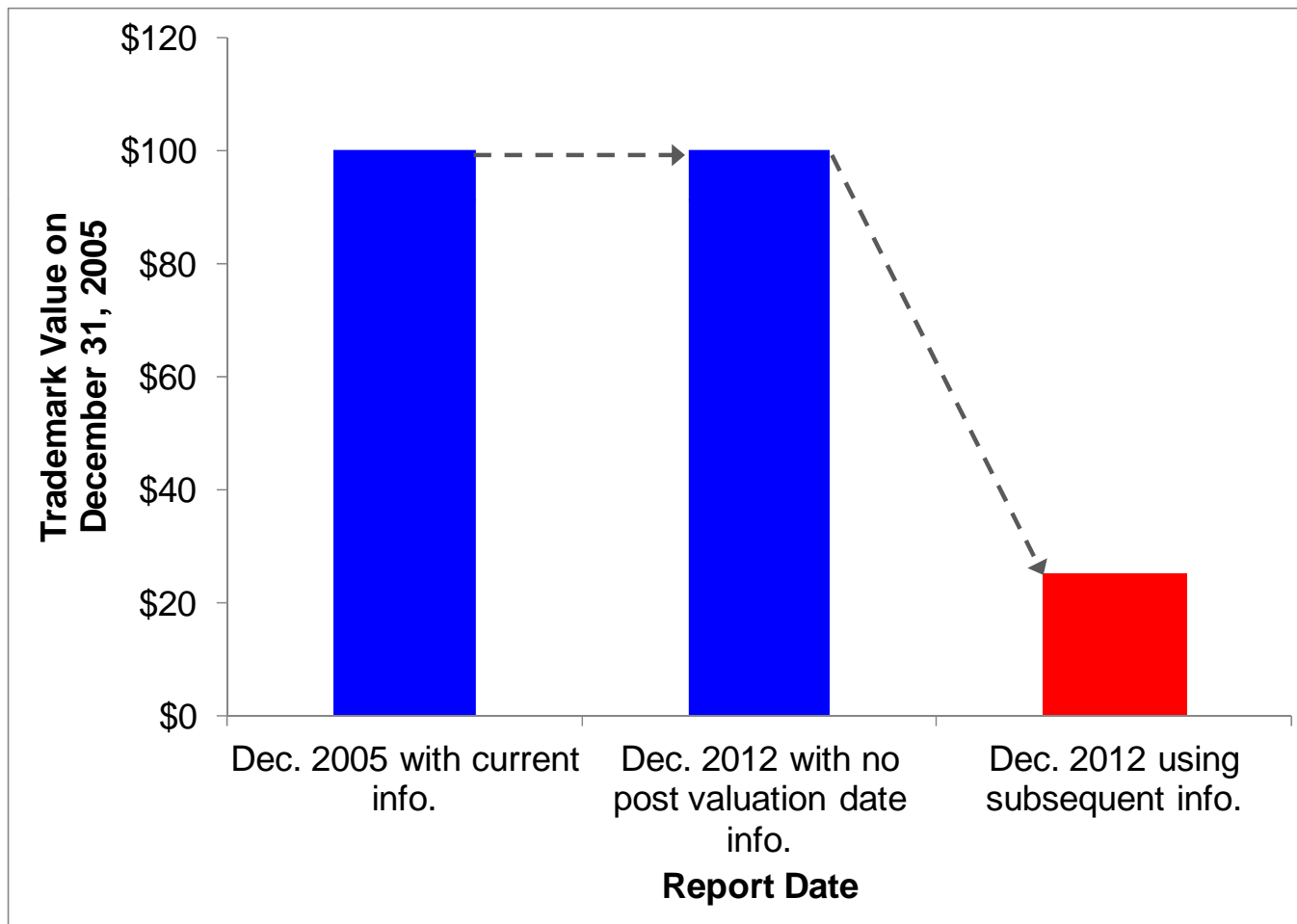
Check report and valuation dates – is it current, prospective or retrospective?



# Keys To Understand, Use & Rebut IP Values

IP has more than one value (continued):

Check report and valuation dates – what information is allowed?



# Keys To Understand, Use & Rebut IP Values

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## The seven drivers of IP value.

The value of IP tends to increase, all other factors constant, with:



1. Larger IP Benefits: The IP will have more value the more net cash flow is generated from the IP relative to the next best alternative. The IP benefit is usually generated by some combination of an increase in cash per unit, increase in volume, or decrease in costs.



2. Early Receipt of Benefits: The IP will have more value the quicker net cash flow is generated by the IP (or the longer cash outflows are delayed).



3. Longer Economic Life: The IP will have more value the longer the IP's economic life. Economic life will not necessarily be as long as legal life.

# Keys To Understand, Use & Rebut IP Values

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## The seven drivers of IP value (continued).



4. Increased Synergy: The IP will have more value the more complimentary assets that are owned by the IP owner / user (I.e. a patent owner who also owns a factory that can produce the patented good).



5. Increased Flexibility: The IP will have more value the more flexibility that its owner has to build upon, stage investment in or abandon the IP in question or the more it limits competitors non-infringing alternatives.



6. Lower Business Risk: The IP will have more value the lower the risk the benefits will actually be realized and maintained in the marketplace.



7. Lower Legal Risks: The IP will be more valuable the more probable that it is enforceable and will survive legal challenge.

# Keys To Understand, Use & Rebut IP Values

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## The Three Basic Approaches To Value IP

1. Income Approach;
2. Market Approach (a.k.a. sales comparison approach);
3. Cost approach.

# Keys To Understand, Use & Rebut IP Values

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## The Three Basic Approaches To Value IP (continued)

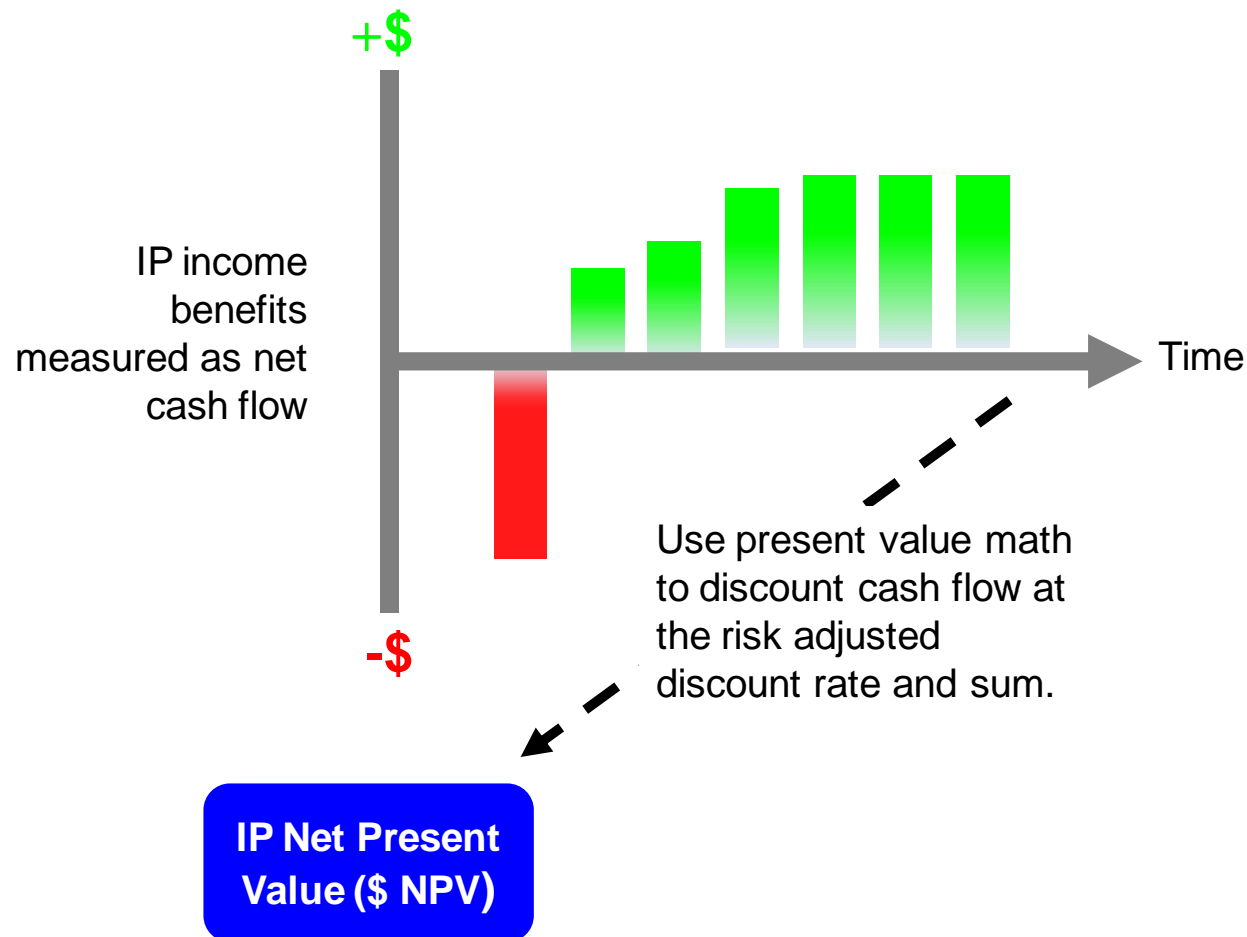
### 1. Income Approach:

- Typically, future income benefits are projected over the life of the IP and discounted back to a lump-sum present value using a risk adjusted discount rate;
- Net cash flow (a.k.a. free cash flow) is the usual measure of IP “income”;
- As an alternative, one period normalized income is sometimes capitalized;
- Can be done at multiple levels in a business such as total business vs. division vs. product or service line vs. individual product, work, or service;
- The IP benefit can be calculated incrementally or as the difference between two complete cases.

# Keys To Understand, Use & Rebut IP Values

## The Three Basic Approaches To Value IP (continued)

### 1. Income Approach:





# Keys To Understand, Use & Rebut IP Values

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## The Three Basic Approaches To Value IP (continued)

### 1. Income Approach:

Common sub-methods for indentifying the economic benefit that you will encounter include:

- Direct Benefits Modeling such as isolating the cash flow from premium pricing, increased volume or cost savings using the *World With IP* less the *World Without IP* approach;
- Analytical Approach where the IP benefit or royalty rate equals expected *Profit Margin with IP* less *Normal* or *Commodity Industry Profit Margin*;
- Relief from Royalty Method where a market observed royalty rate for comparable IP is applied to a royalty base, such as sales of the product or service that utilizes the IP.

# Keys To Understand, Use & Rebut IP Values

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## The Three Basic Approaches To Value IP (continued)

### 2. Market Approach:

- Determine value by looking at completed sales or licensing agreements from comparable IP;
- Make adjustments for differences between the subject IP and comparables;
- This is analogous to looking for comparable house sales in a neighborhood when purchasing a home or searching for comparable rents when leasing an apartment;
- Finding comparable IP and making adjustments are the greatest challenge with this approach.

# Keys To Understand, Use & Rebut IP Values

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## The Three Basic Approaches To Value IP (continued)

### 3. Cost Approach:

- Determine IP value by estimating some variation on the original, replication, or replacement cost of the IP;
- Make adjustments for all forms of depreciation such as limited remaining life, economic obsolescence, or functional obsolescence.

### Also Note:

The Residual Method: One or more of the three basic approaches can be used to value the whole business unit that owns or utilizes the IP. The value of all other assets can then be deducted leaving the “residual” IP value.

Option and Decision Tree Models: Variations of the income approach.

# Questions & Comments

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- Questions or comments?
- Additional details, examples, and sources of information are provided in the accompanying white paper.
- Feel free to contact Dan Cenatempo at [dan@fairvalueadvisors.com](mailto:dan@fairvalueadvisors.com) or 888-212-0495 ext. 101 for any questions, clarifications or more information.