Association of International Certified Professional Accountants

# ACTIVE PASSIVE APPRECIATION – CURRENT UPDATE

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# Disclosure

- The participants in this panel discussion differ on methodologies used for Active Passive Appreciation Analysis.
- Participating in this panel discussion does not necessarily mean that each panelist endorses all of the methods and approaches that will be shown.

SECTION 1

# Active Passive Appreciation Analysis – Definition

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# Active Passive Appreciation Analysis – Definition

An active passive analysis ("APA") is a valuation exercise that must be undertaken in divorce cases in certain jurisdictions to determine:

# Active Passive Appreciation Analysis – Definition

**Whether a change in value occurred** in certain assets and liabilities during a defined period of time (e.g. during a marriage).

- The change can be either an increase or decrease.

The **quantification of the magnitude** of the change in value.

The **identification of the factors** that **caused** the change in value, and the **quantification**, if possible, **of the relative contribution** to the change in value of *each factor*.

SECTION 2

# Active Passive Appreciation Analysis – Driven by Divorce Statute and Case Law

**DAMEWORTH**

# Active Passive Appreciation Analysis – Driven by Divorce Statute and Case Law

APA especially requires close coordination between the appraiser and the attorney due to jurisdictional differences (reflected in both statutory and case law).

- In actuality, APA arose almost exclusively due the need for divorcing parties to comply with marital divorce statute and/or case law.
  - APA largely arose because of divorce litigation.
- The required APA analytical steps, assumptions, methodologies, parameters and conclusions can vary dramatically depending on jurisdictional statute and/or case law.

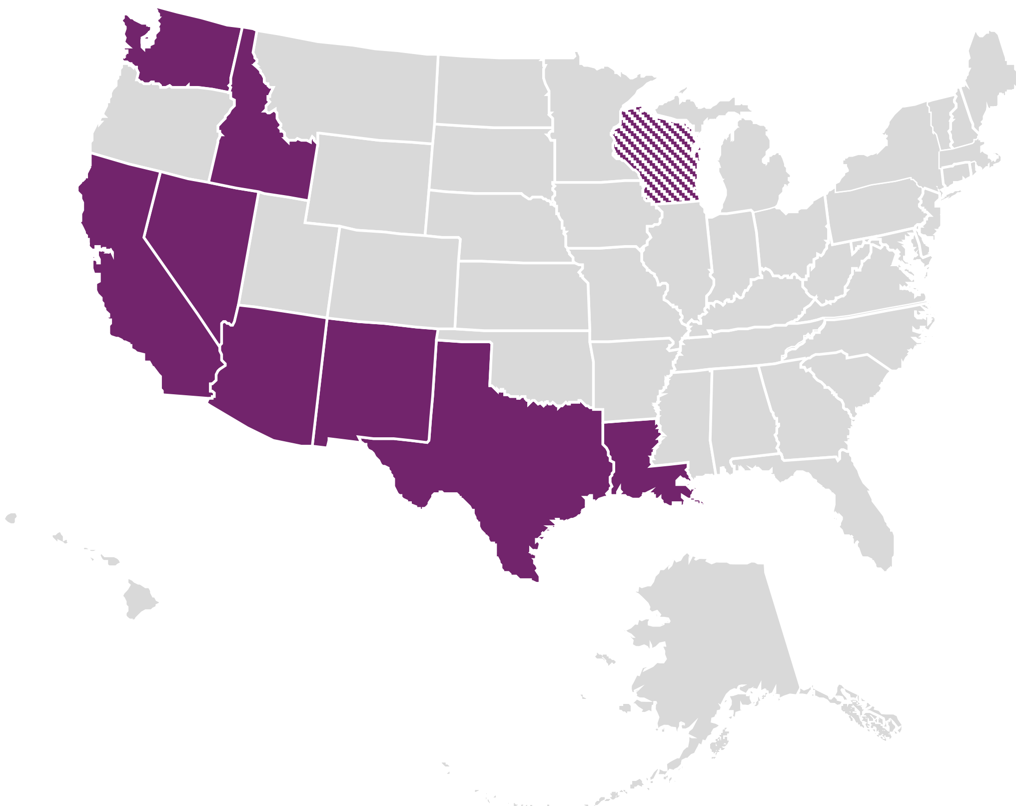
# Active Passive Appreciation Analysis – Driven by Divorce Statute and Case Law

Two primary categories of jurisdictional differences that impact APA analyses are community property (“CP”) rules and equitable distribution (“ED”) rules.

- Certain states have adopted **community property (“CP”)** rules as the system of dividing assets in a divorce.
  - Nine (9) states apply CP rules to determining ownership of assets in contexts such as estate administration, ownership during a marriage, and ownership at divorce
  - According to Turner, only 8 of the CP states apply CP rules to determine ownership in a divorce.

Brett Turner’s Equitable Distribution of Property 3rd Edition, Westlaw - Thomson Reuters, is quoted several times in this presentation.

# COMMUNITY PROPERTY



# Active Passive Appreciation Analysis – Driven by Divorce Statute and Case Law

Generally, with CP:

- Assets and liabilities that *either* spouse acquired *during a marriage* (irrespective of how the asset or liability is titled) are, with certain exceptions, split 50/50 among the divorcing spouses.
- Effectively, assets acquired during the marriage are deemed to be owned by a separate legal entity -the Marital Community- for divorce purposes, rather than by the individual spouses.
  - Irrespective of how the asset or liability is titled, though there are certain exceptions.
  - Irrespective of the source of funds used to acquire the asset, though there are certain exceptions.
  - A concept called Equitable Apportionment and Reimbursement applies in some CP states to recognize and adjust where the community has been actively involved in a pre-marital business.
- Property **brought into** a marriage or **inherited** or **gifted** to a spouse by a third party during the marriage, with certain exceptions, typically remains separate property.

# Active Passive Appreciation Analysis – Driven by Divorce Statute and Case Law

The majority of states have adopted **equitable distribution ("ED")** rules as the system of dividing assets in a divorce.

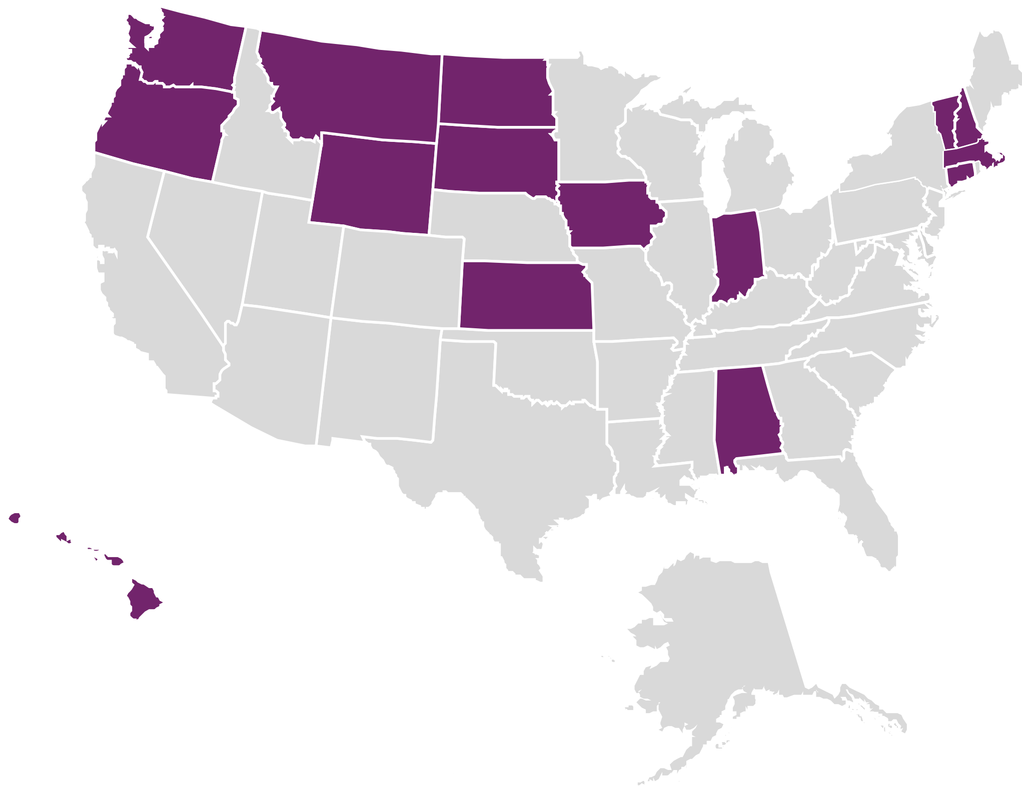
- The balance of states that are <u>not</u> CP states have generally adopted ED rules, though there is substantial variation among those states.
- Typically, under an ED system:
  - The division of those assets is done "equitably", and in most jurisdictions, *equal* is not necessary *equitable*.
  - Unlike CP states, where assets and liabilities acquired during a marriage are legally deemed to be owned by the Marital Community, marital property rights in assets and liabilities under an ED state (regardless of how they are titled) are initially unvested until a divorce complaint is filed.
    - At the point of filing, marital property rights vest and property is equitably divided.

# Active Passive Appreciation Analysis – Driven by Divorce Statute and Case Law

Significant variations nonetheless exist among various ED states, though the different ED states typically fall in one of two following distinctions:

- **All Property** ED Model
  - Turner identifies the Massachusetts ED statute as illustrative of an All Property ED state:
  - "Upon divorce…the court may assign to either husband or wife all or part of the estate of the other…".
- There is no distinction between different types of property (e.g. marital or separate), and no distinction between when an asset or liability was acquired or how it was acquired.
  - However, Turner reports that every all-property system includes contributions to acquisition as an equitable distribution factor.
- Turner believes that there are currently 15 All Property ED states, although there are variations within.

# ALL PROPERTY



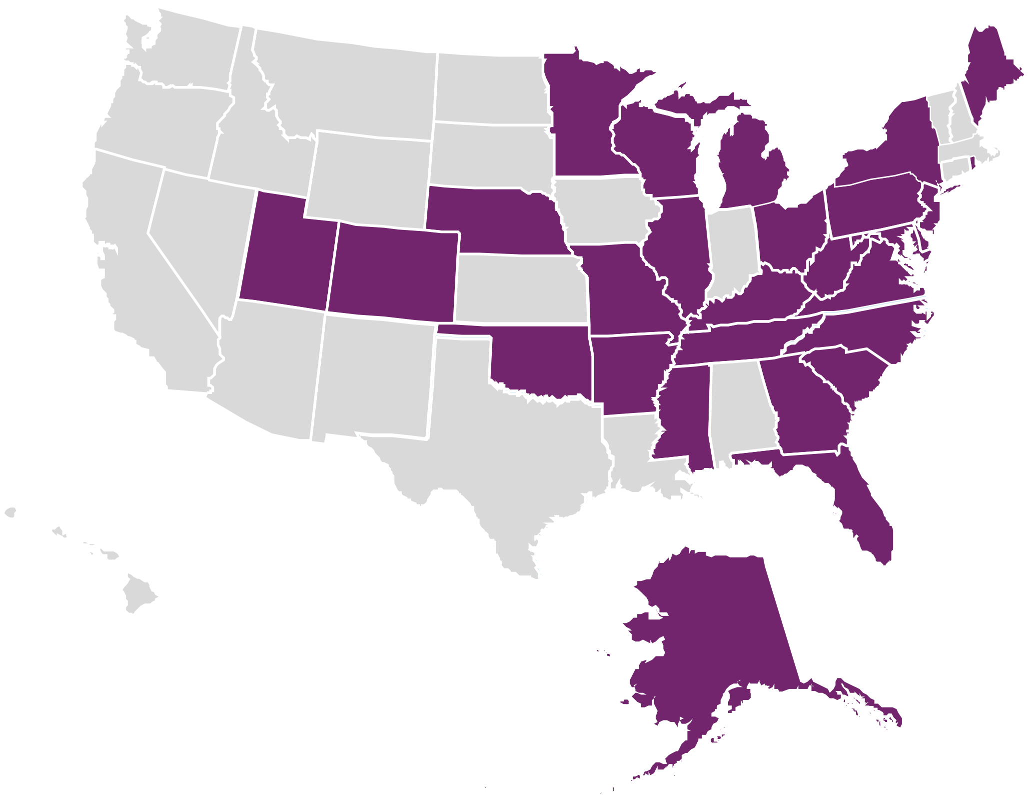
# Active Passive Appreciation Analysis – Driven by Divorce Statute and Case Law

**Dual Classification** ED Model

- Unlike an All Property ED model, under a Dual Classification ED model, asset and liability classification must occur. The initial division process begins by classifying the parties' assets as either marital or separate property.
- Separate property is divided according to legal title, though there are exceptions.
  - Marital property is divided equitably.
  - Turner believes that there are currently 28 Dual Classification ED states, although there are variations within.
- Turner notes the following: "Classification can be a difficult process, as the definitions of marital and separate property must be applied to an almost infinite variety of fact patterns."

**These examples are for illustration purposes only and therefore the expert should work carefully with the attorney to more fully understand these distinctions!**

# DUAL CLASSIFICATION



# Active Passive Appreciation Analysis – Driven by Divorce Statute and Case Law

The APA is typically required in the 28 Dual Classification states to assist the parties and the court in the classification process.

- The APA typically requires the following steps:
  - The valuation of assets and liabilities at different points in time.
  - The determination of the magnitude of the changes in value of assets and liabilities.
  - The identification of factors that caused the changes in values of assets and liabilities.
  - The quantification of the impact on the value changes of each of the identified factors.

# Active Passive Appreciation Analysis – Driven by Divorce Statute and Case Law

In Dual Classification ED States

- Changes in the value of **marital assets and liabilities** during the marriage are divisible, regardless of the reason for the change.
- While **separate assets and liabilities** typically remain separate assets, the classification of changes in the value during the marriage of otherwise separate assets and liabilities depends upon the facts.
  - **Active Appreciation/Depreciation** - changes in separate asset and liability values during the marriage due to the efforts or funds of one of the divorcing spouses.
  - These changes are typically divisible.

# Active Passive Appreciation Analysis – Driven by Divorce Statute and Case Law

**Passive Appreciation/Depreciation** - changes in separate asset and liability values during the marriage caused by factors **OTHER** than the efforts or funds of one of the divorcing spouses.

- Depending on the jurisdiction, can include inflation, government regulatory changes, market forces, contributions of third party management (not the divorcing parties).
- A common attribute that typically must accompany passive factors is that variations in the factors are outside of the control of the management of a company.
- Changes caused by passive factors typically remain separate property.

# Active Passive Appreciation Analysis – Driven by Divorce Statute and Case Law

**Active Passive Appreciation/Depreciation Post DOS** – recognize that changes in asset and liability values between the DOS and the Date of Distribution ("DOD") in ED states are handled the opposite than pre-DOS.

- Changes in marital property **post DOS** caused by **active** efforts typically **remain separate**.
- Changes in marital property **post DOS** caused by **passive** factors typically are divisible.

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SECTION 3

# Rate and Flow Analysis Example

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# Example Company

## Simplifying Assumptions

- The Rate and Flow Analysis can be complex, so only a small segment is used in this presentation to illustrate an APA example.
- See Rate and Flow Analysis by Chris Mercer for a description of the application of the full Rate and Flow Analysis and the underlying assumptions.

# The Question

Date of Marriage ("DOM") : January 1, 1995

- DOM Value = $8.2 million

Date of Separation ("DOS") : January 1, 2005

- DOS Value = $31.7 million

What portion of the $23.5 million of appreciation in Example Company can reasonably be allocated to the active efforts of the owner, and what portion should reasonably be allocated to external, or passive, factors?

# Value at Date of Marriage

## DCF Valuation

**TABLE 1**
**THE COMPANY**
**VALUATION ANALYSIS AS OF JANUARY 1, 1995**

**Date of Marriage Valuation**

| | For the Fiscal Years Ended December 31 | | | | | Terminal |
|---|---|---|---|---|---|---|
| **Derivation of Cash Flow** | **1995** | **1996** | **1997** | **1998** | **1999** | **Value** |
| **= Cash Flows to Equity** | **$1,500,000** | **1,605,000** | **1,717,350** | **1,837,565** | **1,966,194** | **$10,027,589** |
| Discounting Periods | 0.50 | 1.50 | 2.50 | 3.50 | 4.50 | 5.00 |
| Present Value Factors | 0.8927 | 0.7100 | 0.5647 | 0.4491 | 0.3572 | 0.3183 |
| Present Value of Cash Flows | 1,339,050 | 1,139,550 | 969,788 | 825,250 | 702,325 | 3,191,782 |

**Indicated Value** **$8,168,000** (Rounded)

| Derivation of Discount Rate and Capitalization Factor | | |
|---|---|---|
| Long-Term Government Bond Yield-to-Maturity (1995) | | 7.73% |
| Ibbotson Common Stock Premium | 6.50% | |
| x Market Beta | 1.00 | |
| = Beta Adjusted Common Stock Premium | 6.50% | |
| + Small Capitalization Stock Premium | 3.50% | |
| = Total Equity Premium | | 10.00% |
| + Company Risk Premium | | 8.00% |
| **= Discount Rate *(Required Rate of Return)*** | | **25.73%** |
| - Sustainable Growth in Earning Power (at end of projection) | | -6.00% |
| = Terminal Capitalization Rate | | 19.73% |
| Terminal Capitalization Factor (1 / CR) rounded to: | 0.10 | 5.10 |

| *Memo: Derivation of Terminal Value* | |
|---|---|
| Projected Terminal Year Net Income | $1,966,194 |
| x Terminal Capitalization Factor | 5.10 |
| = Total Estimated Terminal Value | $10,027,589 |

# Value at Date of Separation

## DCF Valuation

**TABLE 2**
**THE COMPANY**
**VALUATION ANALYSIS AS OF JANUARY 1, 2005**

**Date of Separation Valuation**

| **Derivation of Cash Flow** | **2005** | **2006** | **2007** | **2008** | **2009** | **Terminal Value** |
|---|---|---|---|---|---|---|
| | **For the Fiscal Years Ended December 31** | | | | | |
| **= Cash Flows to Equity** | **$4,000,000** | **4,280,000** | **4,579,600** | **4,900,172** | **5,243,184** | **$38,799,562** |
| Discounting Periods | 0.50 | 1.50 | 2.50 | 3.50 | 4.50 | 5.00 |
| Present Value Factors | 0.9192 | 0.7757 | 0.6545 | 0.5523 | 0.4660 | 0.4278 |
| Present Value of Cash Flows | 3,676,800 | 3,319,996 | 2,997,348 | 2,706,365 | 2,443,324 | 16,598,453 |

**Indicated Value** **$31,742,000** (Rounded)

| **Derivation of Discount Rate and Capitalization Factor** | | |
|---|---|---|
| Long-Term Government Bond Yield-to-Maturity (2005) | | 4.51% |
| Ibbotson Common Stock Premium | 6.00% | |
| x Market Beta | 1.00 | |
| = Beta Adjusted Common Stock Premium | 6.00% | |
| + Small Capitalization Stock Premium | 3.00% | |
| = Total Equity Premium | | 9.00% |
| + Company Risk Premium | | 5.00% |
| **= Discount Rate *(Required Rate of Return)*** | | **18.51%** |
| - Sustainable Growth in Earning Power (at end of projection) | | -5.00% |
| = Terminal Capitalization Rate | | 13.51% |
| Terminal Capitalization Factor (1 / CR) rounded to: | 0.10 | 7.40 |

| *Memo: Derivation of Terminal Value* | |
|---|---|
| Projected Terminal Year Net Income | $5,243,184 |
| x Terminal Capitalization Factor | 7.40 |
| = Total Estimated Terminal Value | $38,799,562 |

## Change in Value : 1995 to 2005

Questions of the Hour

- Can we explain the components of this change in value between 1995 and 2005?
- Can we allocate the change into active and passive portions of the net appreciation?

| | |
|---|---|
| 2005 value | $31.7 million |
| 1995 value | $ 8.2 million |
| Net Increase | $23.5 million |

# Impact of Change in RFR

## 1995 to 2005

$$Value = \sum \left[ \frac{\text{Projected Cashflows}_{\,t,05}}{(1 + \boldsymbol{RFR_{95}} + ICSP_{05} + SCP_{05} + CRP_{05})^{t}} \right]$$

| | |
|---|---|
| **$RFR_{95}$** | **7.73%** |
| **$RFR_{05}$** | **4.51%** |
| **Net Change** | **(3.22%)** |

**(Owner has no control over level or direction of interest rates)**

# Impact of Change in RFR

## 1995 to 2005

**TABLE 3**
**THE COMPANY**
**VALUATION ANALYSIS AS OF JANUARY 1, 2005**

**1995 RFR**

| Derivation of Cash Flow | 2005 | 2006 | 2007 | 2008 | 2009 | Terminal Value |
|---|---|---|---|---|---|---|
| | For the Fiscal Years Ended December 31 | | | | | |
| **= Cash Flows to Equity** | **$4,000,000** | **4,280,000** | **4,579,600** | **4,900,172** | **5,243,184** | **$31,459,104** |
| Discounting Periods | 0.50 | 1.50 | 2.50 | 3.50 | 4.50 | 5.00 |
| Present Value Factors | 0.9071 | 0.7452 | 0.6121 | 0.5029 | 0.4131 | 0.3741 |
| Present Value of Cash Flows | 3,628,400 | 3,189,456 | 2,803,173 | 2,464,296 | 2,165,959 | 11,768,851 |

**Indicated Value** **$26,020,000**
*Net of change in risk free rate*

| Derivation of Discount Rate and Capitalization Factor | | |
|---|---|---|
| Long-Term Government Bond Yield-to-Maturity (1995) | | **7.73%** |
| Ibbotson Common Stock Premium | 6.00% | |
| x Market Beta | 1.00 | |
| = Beta Adjusted Common Stock Premium | 6.00% | |
| + Small Capitalization Stock Premium | 3.00% | |
| = Total Equity Premium | | 9.00% |
| + Company Risk Premium | | 5.00% |
| **= Discount Rate *(Required Rate of Return)*** | | **21.73%** |
| - Sustainable Growth in Earning Power (at end of projection) | | -5.00% |
| = Terminal Capitalization Rate | | 16.73% |
| Terminal Capitalization Factor (1 / CR) rounded to: | 0.10 | **6.00** |

| *Memo: Derivation of Terminal Value* | |
|---|---|
| Projected Terminal Year Net Income | $5,243,184 |
| x Terminal Capitalization Factor | 6.00 |
| = Total Estimated Terminal Value | $31,459,104 |

## Impact of Change in RFR

### 1995 to 2005

| Breakdown of Appreciation Components | Value | Appreciation | % Total Appreciation |
|---|---|---|---|
| Final Value as of January 1, 2005 | $31,742,000 | | |
| Value, net of change in Risk Free Rate | $26,020,000 | | |
| **Interest Rate Change (Rates Declined)** | | **$5,722,000** | **24.3%** |

# Active or Passive?

# Other Factors

- **Changing the Cash Flow – Earning Power** - A company's cash flows can be affected by external factors and/or by active management factors or by both.
- **Changing the Company Risk Premium** – Can be due to active management factors.
- The issue is whether or not the effect can be identified and quantified
- Primary questions
- Whether the change in cash flows resulted from an exogenous event (vs. management direction)?
- Whether the change in company risk resulted from actions of management.

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SECTION 4

# Causation in Active Passive Analysis

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# Causation in Active Passive Analysis

Causation is an essential element that must reasonably be established to attribute value changes to either active or passive factors.

- Turner recommends that the tort law definition of "Proximate Cause", which is often used in damages and lost profits analyses, is typically more appropriate than "But For Cause".
    - **Proximate Cause**: "A cause that directly produces an event and without which the event would not have occurred.
    - **But – For Cause**: "The cause without which the event could not have occurred."

# Causation in Active Passive Analysis

An example from North Carolina – *Brackney v. Brackney*

- The parties in Brackney signed a contract to purchase a home before the DOS.
- The contract called for $43,400 down payment paid from marital funds before the DOS, which would be forfeited if they did not close.
- Divorce action was filed before closing of real estate.
- Husband had to file a motion with the trial court to obtain permission to close to avoid forfeiture of the down payment.
- The husband obtained permission from the court and closed. He later argued that the entire value of the home net of the down payment was separate, including $181,000 in later passive appreciation, which he alleged arose solely from his post-separation effort in filing the motion, all of which was therefore was his separate property.

# Causation in Active Passive Analysis

- **"But For"** the husband's effort in obtaining court approval to close, the down payment would likely have been lost, so argued the husband. However, the pre-DOS decision to purchase the house, and the pre-DOS down payment that was made with marital funds, more reasonably and accurately were the **Proximate Causes** that resulted in obtaining the house, a marital asset. In addition, passive market force appreciation was more accurately determined to be the **Proximate Cause** of the post separation market appreciation.
- The Brackney appellate court found the house to be a marital asset, and the post separation appreciation to be caused solely by passive market forces. As such, the appreciation was divisible, rather than the husband's separate property.

# Causation in Active Passive Analysis

It is noted that there is almost no specific reference to "Proximate Cause" in active passive court cases around the country. However, objectives required by a majority of equitable distribution statutory and case law regimes often end of requiring the connection between events and value changes that is contemplated by Proximate Cause.

SECTION 5

# APA – General Framework

**ABBOTT**

# APA – General Framework

When determining whether any changes in value of separate property during a marriage are marital property, Turner identified three categories into which Active/Passive analyses are broadly segregated based upon his review of cases across the United States.  These include the following:

- Market Forces: Passive Appreciation
- The Efforts of Third Parties:
  - Active Appreciation not attributable to the divorcing parties
- The Efforts of Divorcing Parties
  - Active Appreciation attributable to the divorcing parties

- Turner notes that "To prove that appreciation was <u>not</u> caused by marital contributions, the owning spouse must generally prove that the appreciation <u>was</u> caused by factors <u>other than</u> marital contributions."
- The following sections will provide an overview of three categories.

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SECTION 6

# Market Forces: Passive Appreciation

**ABBOTT**

# Market Forces

- Turner reports that, based upon his review of APA cases across the country, “it is normally easiest to begin with market forces, because market forces can most easily be quantified.”
- Quantitative data are publicly available for commonly accepted market forces in great detail, covering long periods of time, and from reliable sources such the Federal Reserve, BEA, and the Census Bureau, among others.

# Market Forces : Identification

Case law and learned treatises reflect that common threads or attributes regarding using Market Forces in APA include:

- The movements of the market force are **beyond the control** of the management of the divorcing parties.
- There is a **significant, unidirectional**, **relationship** between the changes in a market force and changes in the performance of assets similar to the subject asset, and particularly, the subject asset.
- Establishing this **significant, unidirectional**, **relationship** between the performance of similar assets and the identified market forces validates the use of these market forces to measure the **passive** component of the subject asset's performance.

# Market Forces : Examples

Market Forces are typically defined in statute and case law by giving examples of what *constitutes* a market force. Some of the economic Indicators seen in such analyses are:

- Consumer Confidence
- Demographics
- GDP Growth
- Unemployment
- Housing Starts
- Interest Rates
- Commodity Prices
- Consumer Spending
- Regulatory Changes

# Causality and Correlation

Related but distinct concepts:

- **Correlation:** A relation existing between phenomena or things or between economic or statistical variables which tend to vary, **be associated, or occur together** in a way not expected on the basis of chance alone.
- **Causation**: Connection between two events or states such that one produces or brings about the other; where one is the **cause** and the other its effect (also called **causality)**.

# Mere Correlation or Real Causation

- Correlation is not causation is a Hail Mary pass often lobbed at an expert.
- However, there is no causation without correlation.
- Empirically observed correlation  is a necessary but not sufficient condition for causality.
- Causation without correlation is unlikely.
- Causal pathway needs to be established theoretically  and tested empirically.

## Hill’s Criteria for Causation

- **Strength** (effect size): A small association does not mean that there is not a causal effect, though the larger the association, the more likely that it is causal.
- **Consistency** (reproducibility): Consistent findings observed by different persons in different places with different samples strengthens the likelihood of an effect.
- **Temporality**: The effect has to occur after the cause (and if there is an expected delay between the cause and expected effect, then the effect must occur after that delay).[
- **Coherence**: The association should be compatible with existing theory and knowledge.
- **Plausibility**: A plausible mechanism between cause and effect is needed. (Hill noted that knowledge of the mechanism is limited by current knowledge)
- **Analogy**: The effect of similar factors may be considered.

Austin Bradford Hill, “The Environment and Disease: Association or Causation?,” Proceedings of the Royal Society of Medicine, 58 (1965): 295-300.

# Market Forces: Establishing Proximate Causation

- Econometric methodologies have been developed to identify market forces that reasonably cause changes in value of assets similar to the subject asset, and to quantify the expected change in the subject asset attributable to the movements in market forces.
- Robert F. Engle, and Clive W.J. Granger shared the 2003 Nobel prize in Economics for their work in establishing and testing Causal relationships.
- “Messrs. Engle and Granger have a statistical tool named after them, the **Engle-Granger Test**, which helped economists tackle a longstanding problem in the field: how to identify when movements in economic variables are connected and when they aren't. ” WSJ October 9, 2003

# Identifying Casual Market Forces

- Throwing spaghetti at the wall/Kitchen Sink Approach
- Take a handful of economic indicators, run a regression model.
- Get coefficients, apply to subject interest.
- Voila, Regression Alpha is Active component, rest is Passive.
- We are done.
- NOT REALLY, we have not even started.

# Causation: Variable Identification

- Start by identifying all potential variables of interest.
- Industry reports, IBES analysis, SEC filings are a good starting point where analysts and management identify economic factors that influence firm performance.
- Also look for similar factors, for example interest rates can be treasury, bank prime, mortgage, credit card rates. One or more of which may be influential in impacting performance of the subject company.
- Test each variable individually for its impact on the performance measure, (Revenue, EBIT, NI, Cash Flow), as well as on each of the other causal variables being considered to guard against false causation. This is the design of the **Engle-Granger Test.**

# Guarding Against False Causation

Correlation, by definition, is bi-directional. If x and y are positively correlated higher values of y are observed with higher values of x. Conversely if x and y are negatively correlated higher values of y are observed with lower values of x. Observation of correlation between x and y may suggest three potential causal pathways.

1. Changes in x may be causing changes in y
2. Changes in y may be causing changes in x
3. Changes in a third factor z may be causing changes in both x and y

Elimination of 2 and 3 above is the goal of **Engle-Granger Test that we employ in our analysis.**

## Market Forces : Measuring Impact

- Once the unique causal variables that are independent of the performance measure and other potential variables have been identified, using the **Engle-Granger Test ,** we need to assess their individual and collective impact as the percentage change in the performance measure for each one percent change in the causal variable. (partial elasticity) .
- Identified independent variables are ranked in order of their individual impact from highest to lowest using a rigorous ranking for noise to information ratio test known as **Akaike's Information Criteria** (AIC) test to compare impact of the possible causal variables and pick the variable with the lowest AIC score as the starting point.
- As explanatory variables are added to the model, we re-evaluate the model for individual variable significance and aggregate information content.

# An Illustration : Grocery Retail Stores Revenues

Identifying variables:

- We start with a comprehensive list of economic and demographic variables.
- We find that a very significant causal relationship exists between sales of Groceries, and the **level of growth in population and the level of inflation**.
- This is as expected, larger populations would need more food, and the sellers are able to pass through at least some of the rise in inflation to the consumers.
- Income, interest, unemployment, and debt service levels do not appear to have a significant impact on Groceries consumption.
- Consumption of basic necessities is not very income elastic. Groceries are unlikely to be purchased with borrowed funds, hence the lack of impact for interest rate and debt levels.

# Measuring Factor Impact

| Grocery Retail Sales Elasticity Estimates | | | | | |
|---|---|---|---|---|---|
| Variable | DF | Estimate | Standard Error | t Value | Approx. Pr > \|t\| |
| Intercept | 1 | −6.9517 | 4.0627 | −1.71 | 0.0906 |
| % Change Total Population | 1 | 1.2477 | 0.3743 | 3.33 | 0.0013 |
| % Change CPI | 1 | 0.5533 | 0.1409 | 3.93 | 0.0002 |

# Interpreting Results

- The regression parameters show a strong significant relationship.
- Factor partial elasticities are positive and significant, indicating that a one percent change in population leads to a 1.2477 percent change in Grocery retail sales.
- Similarly, a one percent change in the level of inflation leads to a change of 0.5533 percent in Grocery retail sales.

# Attributing Passive Change

- For the period of estimation (1992-2014), we know that:
  - Grocery retail revenues grew by 80.04%.
  - The population growth was 25.27 percent, and
  - The level of inflation grew by 70.87 percent.
- Multiplying each growth level by corresponding elasticity, the aggregate impact of changes in population and inflation level is 70.74 percent, with an alpha of -6.9517%, the total expected change in level of Grocery retail sales is 63.79%.
- Which accounts for 79.69 percent of the change in Grocery sales over the period of analysis.
- Grocery industry shows a very large passive component (about 80%) in retail sale revenues growth during this period.

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SECTION 7

# Individual Efforts

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# Individual Efforts

Turner notes that: *"When the total of appreciation in separate property has been measured, and the appreciation caused by market forces has been excluded, what remains is the appreciation caused by good management of the Asset at issue."*

*"Many Assets, especially businesses, are managed by multiple persons. If the owning spouse can show that some of the appreciation was caused by the efforts of one or more of these persons, the same appreciation was **not*** [emphasis added] *caused by the efforts of the parties."*

# Individual Efforts

A number of factors have regularly been considered in Active/Passive cases across the U.S. when determining the extent to which an individual contributed to the growth of an asset, and the relative contribution allocated to each individual.

- Control through Investment – which is typically characterized as voting control of a company.
  - However, merely because a third party has voting control of an entity does not mean that he or she exercised that control, nor does it mean that the exercise of that control resulted in increased value.
- Control as Director
  - The mere title of director is not by itself sufficient to show that contributions were made, or that those contributions resulted in increased value.

# Individual Efforts

Control as Employee

- Employees can range from the top officers of a company to low-level employees of a Company.
- Top Management
  - As Turner explains: *"Appreciation in the value of a business is frequently active when the owner is among the top managers of the company. This is especially true in a small business, where the extensive powers of a sole shareholder make classification as active hard to avoid."*
  - However, the mere holding of a top management title is not controlling unless it can be shown that contributions were made, and that those contributions resulted in increased value.

# Individual Efforts

Middle Management

- As Turner points out: "*"The extent to which managers create value, therefore, depends upon the extent to which they make independent contributions, not overseen or supervised by others.  "*
- The extent of independent contributions, and the absence of extensive oversight from higher level managers, are key determinants of whether a mid-level manager made contributions that increased the value of a business.

Low Level Employees

- As Turner points out: *"Many business employees do not work at a high enough level to have meaningful control over corporate operations, and therefore do not contribute to corporate value."*

# Individual Efforts

In practice, the determination of the contributions of individuals typically involves:

- Interviewing current and former owners, managers and employees.
  - Often some of those employees have moved on or retired, so it can be difficult to track people down.
- Reviewing any available subject company documents that were developed contemporaneous with the period under review.

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SECTION 8

# Unitary Appreciation

**DAMEWORTH**

## Unitary Appreciation

- Turner reports that, based upon his review of cases across the country, "A small minority of equitable distribution jurisdictions have adopted the theory of unitary appreciation.  Under this theory, appreciation must be <u>either</u> entirely marital property <u>or</u> entirely separate property."
- Under this theory, if there is <u>any</u> amount of active appreciation caused by a divorcing spouse, the underlying asset remains separate, but <u>all</u> the appreciation in spouse's interest is marital.
- The business appraiser must take care to recognize if their engaging counsel is pressuring them to apply a case from a unitary appreciation case to a jurisdiction that does not apply unitary appreciation.

SECTION 9

# Watch Out for Unusual Case Outcomes

**DAMEWORTH**

# Watch Out for Unusual Case Outcomes

Illustrated in the 2017 Bair case out of Florida.

- Daniel Bair (“Daniel’) and his brother own 47.5 percent each of Quality Boats of Clearwater, Inc. Other ten percent owned by passive investor sister.
- Trial court found both brothers ran company in a 50/50 fashion, one responsible for finance, admin and service, the other responsible for sales.
- Trial court applied Daniel’s 47.5 percent ownership interest to the appreciation in the entire company. See Exhibit A.
- Reflects violations of basic finance and economic theory – when only one class of stock is outstanding, each share of stock necessarily reflects proportionally all elements of value enhancement (both active and passive).

See simplified hypothetical illustration.

**Active Passive Appreciation Update**
**HYPOTHETICAL ILLUSTRATION USING BAIR CASE OUTCOME**

| | |
|---|---|
| Starting Value DOM | $ 1,000,000 |
| Value DOS | $ 10,000,000 |
| Increase in Value | $ 9,000,000 |

| | Ownership | | | Contribution to Value Increase of Company | | |
|---|---|---|---|---|---|---|
| | Daniel Bair | Brother | Total | Daniel Bair | Brother | Total |
| Allocation | 50.00% | 50.00% | 100.00% | 50.00% | 50.00% | 100.00% |
| Value DOM | $ 500,000 | $ 500,000 | $ 1,000,000 | | | |
| Value DOS | $ 5,000,000 | $ 5,000,000 | $ 10,000,000 | | | |
| Increase in Value | $ 4,500,000 | $ 4,500,000 | $ 9,000,000 | $ 4,500,000 | $ 4,500,000 | $ 9,000,000 |
| DOM Value | $ 500,000 | $ 500,000 | $ 1,000,000 | | | |
| Daniel's Contribution to Value Increase | 2,250,000 | 2,250,000 | 4,500,000 | Court Found Company Increase | | $ 9,000,000 |
| Brother's Contribution to Value Increase | 2,250,000 | 2,250,000 | 4,500,000 | Court Applied Daniel's 50% o'ship | | $ 4,500,000 |
| Sister Contribution to Value Increase | - | - | - | | | |
| Total Value Increase | $ 4,500,000 | $ 4,500,000 | $ 9,000,000 | | | |
| Total Value DOS | $ 5,000,000 | $ 5,000,000 | $ 10,000,000 | | | |

**Location of Increase Caused by Daniel**

| | | | |
|---|---|---|---|
| Total Company Increase Caused by Daniel | $ 4,500,000 | | |
| Daniel's Increase Located in Daniel's Shares | 2,250,000 | | $ 2,250,000 |
| Daniel's Increase Located in Brother's Shares | | 2,250,000 | 2,250,000 |
| Total Company Increase Caused by Daniel | $ 2,250,000 | $ 2,250,000 | $ 4,500,000 |

**Incorrect Increase fit Within Daniel's Total Value Increase**

**Overstated Appreciation in Daniel's Shares Caused by Daniel** **$ 2,250,000**

SECTION 10

# Allocation of Active Contributions

DAMEWORTH

# Allocation of Active Contributions

There are various methods by which active management efforts, and the resulting increase in value from such efforts, have been allocated among managers.

- Where there are several equally contributing managers, a per-capita allocation can be appropriate.

# Allocation of Active Contributions

Appreciation can be allocated among top executives in proportion to some measure of their actual performance.  Measures can include:

- Compensation, on the assumption that there is arm's length bargaining over the value of each top executive over their value to the company.
- The amount of key-man life insurance acquired by the company on the lives of its executives.
- Economic data regarding the performance of the areas supervised by different executives.
- Absentee measures
    - Turner points out that "*Still another approach is to find some measure of what the company's value would be in the absence of the efforts of either spouse.*"

SECTION 11

# Conclusion

**DAMEWORTH**

# Conclusion

- APA is a creature of divorce statute and case law and thus requires close coordination between the business appraiser and their engaging legal counsel.
    - The business appraiser should get representation from engaging counsel as to the relevant statute and case law to avoid being criticized for the unlicensed practice of law.
- The business appraiser is not legal counsel and should not interpret statute or case law, but should be aware of relevant APA statute and case law in the jurisdiction.

# Conclusion

- Although there currently are limited learned treatises on APA, the business appraiser doing APA should be aware of such learned treatises.
  - A lot of the learned treatise type information has been developed by lawyers who teach or practice in this area.
- APA is a challenging, intellectually stimulating valuation exercise that encompasses both determining value and determining **why** the value changed.

# Questions?

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# Thank you

#AICPAfvs

# About the Presenters

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Z. Christopher Mercer is the founder and chief executive officer of Mercer Capital. Chris began his valuation career in the late 1970s. He has prepared, overseen, or contributed to hundreds of valuations for purposes related to tax, ESOPs, buy-sell agreements, and litigation, among others. In addition, he has served on the boards of directors of several private companies and one public company. He enjoys working with business owners to address ownership transition issues.

Chris has extensive experience in litigation engagements including statutory fair value cases, divorce, and numerous other matters where valuation issues are in question. He is also an expert in buy-sell agreement disputes.

Chris is a prolific author on valuation-related topics and a frequent speaker on business valuation issues for national professional associations and other business and professional groups.

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Ashok Abbott is a tenured Associate Professor of Finance at West Virginia University in Morgantown, West Virginia. Ashok received his M.B.A. and Ph.D. in Finance from Virginia Tech, Blacksburg, VA. His Ph.D. dissertation title was "The Valuation Effects of Tax Legislation in Corporate Sell-offs."

Prof. Abbott provides analytical and research support to members of legal and valuation community. He has served as an expert witness in State and Federal Court for depositions, hearings, and trials. His recent assignments include working with S&P, Duff & Phelps, and Willamette Management Associates.

Prof. Abbott supports valuation practitioners and litigators with quantitative research, statistical analysis and economic modeling. His statistical capabilities include sampling and research design, testing for statistical significance, modeling and estimation and regression and time series analysis. He works closely with litigation teams, presenting them with his independent analysis of financial and economic data. He also provides a professional critique of the opposing expert's analysis.

# About the Presenters

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William C. Dameworth is a managing member of Forensic Strategic Solutions and the member in charge of valuation services. Mr. Dameworth's extensive business valuation and litigation consulting experience includes services in over 500 engagements for a wide variety of purposes, including gift, estate, family law matters, shareholder disputes, shareholder buyouts, buy/sell agreements, charitable contributions, purchase price allocation, goodwill impairment testing, intangible asset valuation, mergers and acquisitions, ESOPs, business damages, asset tracing, and active/passive appreciation analysis. These services have been related to corporations, partnerships and limited liability companies across the manufacturing, wholesale, retail and service sectors. Mr. Dameworth has served as an expert witness in Federal and state courts for plaintiffs, defendants and mutual.