GRAFF FINANCE THEORY CONCEPTUAL RESEARCH

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TWO-COMPONENT REAL ESTATE INVESTMENT MODEL

- **Study #5 Introduces an Investment Model Based on Occupancy Rights as the Source of Real Estate Value**

- **Occupancy Rights-Based Model Implies That Real Estate Has Two Investment Components**
  - **One Component Consists of Benefits Associated with Leased Occupancy Rights**
    - **Occupancy Rights Belong to Lessees**
    - **Source of Component Value is Expected Rent from Leases**
    - **Component is a Fixed-Income Asset**
  - **The Other Component Consists of Benefits Associated with Unleased Occupancy Rights**
    - **Occupancy Rights Belong To Property Owners**
    - **Component Encompasses All Property-Related Equity Investment Characteristics**

- **It is Often Possible to Disentangle the Future Returns of the Components for Investment Purposes**

OWNERSHIP SEPARATION INTO TERM-OF-YEARS AND REMAINDER INTERESTS

- Study #1 Investigates Investment Return Separation Methodologies for Commercial Real Estate

- The Study Introduces the Dual Deed Structure
  - The Dual Deed Structure Separates Returns by Separating Property Ownership into Components
  - Three Capitalization Structures for Investment Return Separation are Examined Prospectively
    - Two are Based on the Dual Deed Structure
    - One Dual Deed Structure is Close to One Implemented Later in Real-World Applications
      - The Components are Independent for Investment Purposes
    - Component Separation Creates an All-Equity Capital Structure

- Leverage Without Debt for the non-Fixed-Component
  - Component Ownership Rights do Not Include Any Liens on the Other Component
    - No Leans Implies No Debt in the Capital Structure
    - Corporate Finance Applications Cannot Create Off-Balance-Sheet Debt

- Valuation Methodology for the Components is Investigated
  - Liability and Tax Issues are Introduced

CHANGING LEASES INTO INVESTMENT-GRADE BOND-EQUIVALENT FINANCINGS

- **Study #2 Presents a How-To Guide for Financiers and Financial Intermediaries**
  - **The Study Introduces the Two-Trust Dual-Deed All-Equity Capital Structure**
    - **One Trust for the Deed to Each Component**
    - **Ensures Investment Independence of the Components**
    - **Removes non-Fixed-Income Risk Components from Term-of-Years Investment Interests**

- **Set of Four Diagrams is Key to the Study**
  - **First Diagram Depicts the Structure of Traditional Mortgage Finance**
  - **Last Diagram Depicts the Two-Trust Two-Deed All-Equity Capital Structure**
    - **Intermediate Diagrams Show How to Modify the Mortgage Structure to Derive the New Structure**
  - **Four Pictures are Worth Four Thousand Words at the Standard Words-per-Picture Exchange Rate**
    - **Text Fills in Details**

- **Component Separation Creates Leverage with Less Investment Risk for Financiers than CMBS**
  - **Fat-Tailed Real Estate Investment Risk Implies that Financiers Overvalue Subordinate CMBS Tranches**

HOW DOES THE ALL-EQUITY LEVERAGED CAPITAL STRUCTURE COMPARE WITH THE PASS-THROUGH MORTGAGE LEVERAGED CAPITAL STRUCTURE?

- **Both Capital Structures Have a Fixed-Income Interest and an Equity Interest**

- **Both Fixed-Income Interests Finance the Lease Rather than the Property**
  - **Fixed-Income Interests Receive the Same Benefits Absent Lease Default**
    - **Fixed-Income Interests Receive the Rent from the Initial Lease Term**
  - **Lease Default Impacts the Fixed-Income Interests Differently**

- **Equity Interests Generate the Same Benefits Absent Lease Default**
  - **Equity Interests Receive No Benefits During the Initial Lease Term**
  - **Equity Components Receive All Benefits Generated by the Property after the Initial Lease Term**
  - **Lease Default Impacts the Equity Interests Differently**

- **Each All-Equity Interest Has Lower Risk in Lease Default than the Corresponding Mortgage Structure Interest**
  - **Similar Benefits with Lower Risk Implies that Each Interest is Worth More than its Counterpart Interest**
  - **All-Equity Capital Structure Has Incremental Value Relative to the Debt-Encumbered Capital Structure**
  - **Property Value is Not Independent of Capital Structure**

SYNTHETIC LEASE FINANCE OF TANGIBLE CORPORATE ASSETS

- **Synthetic Lease Finance Became Popular with Corporate Finance Departments in the 1990s**
  - **Off-Balance-Sheet Debt Finance of Corporate Assets**
  - **Interest-Only Cost of Debt Service During the Synthetic Lease Term**
  - **Whether Synthetic Leases have Economic Drawbacks was Unknown**

- **Study #3 Investigates the Economic Benefits and Financial Risks of Synthetic Leases**
  - **No Previous Financial Economic Research Studies**

- **The Off-Balance-Sheet Aspect of Synthetic Leases is Their Only Advantage**
  - **True Motivation for Interest-Only Debt Service is Tax Uncertainty Reduction**
    - **Synthetic Lease Vendors Turn a Problem into a Selling Point**
      - **An Example of Making Lemonade out of Lemons**
  - **Interest-Only Debt Service Creates Large Refinancing Risk at the End of Each Lease Term**
    - **Synthetic Lease can Not be Renewed if Property Value Declines During Lease Term**

- **Additional Tax Ambiguities Exist Regarding Property Depreciation Deductions**

IS OFF-BALANCE-SHEET FIXED-INCOME CORPORATE FINANCE POSSIBLE WITHOUT THE SHORTCOMINGS OF SYNTHETIC LEASE FINANCE?

- **Study #2 Implies that the Question has an Affirmative Answer**
  - **Study #3 Explores the Matter in Greater Depth**
  - **The Answer Involves Financial Economic, Tax and Accounting Considerations**

- **Component Separation Creates Two Legally and Functionally Distinct Investment Assets**
  - **The Lessee of One Component can Acquire an Investment Position in the Other Component**
    - **Property and Tax Law Impose Some Limitations**
    - **Off-Balance-Sheet Debt Accounting Reform Will Impose Additional Constraints**
      - **Less Constraining on All-Equity Capital Structure Than on Off-Balance-Sheet Debt**

- **The Equity Component Encompasses All Property-Related Investment Characteristics of the Leased Asset**
  - **An Investment Interest in the Component Lets the Lessee Share in Property Investment Performance**

- **The Fixed-Income Component Satisfies the Financial Definition of Synthetic Debt of the Lessee**
  - **The Only Example of Synthetic Corporate Debt without Embedded Financial Derivatives**
    - **No Contracts in the Capital Structure Implies Less Risk in Default than Other Synthetic Debt**

SYNTHETIC DEBT FINANCE AND SYNTHETIC LEASE FINANCE AS EXAMPLES OF OFF-BALANCE-SHEET CORPORATE FINANCE PRODUCTS

- **The Financial Industry Generally Regards Off-Balance-Sheet Finance as a Regulatory Inefficiency**
  - **An Example of a Temporary Phenomenon that will Disappear with Adequate Accounting Reform**
- **Study #4 Shows that Off-Balance-Sheet Finance is a Consequence of Regulatory Efficiency**
  - **A Consequence of Multiple Regulators Protecting Different Investment Constituencies**
  - **It Follows that Off-Balance-Sheet Finance is Likely to be Around for a Long Time**
    - **A Template is Presented to Financially Engineer Additional Off-Balance-Sheet Products**
- **Otherwise Study #4 is a Practitioner-Oriented Analogue of Study #3 with Some New Results**
  - **Depreciation Deductions are Mandatory in Synthetic Lease Finance Despite Tax Uncertainties**
  - **Unfavorable Scenarios can Occur with Synthetic Lease Finance that were Previously Unforeseen**
  - **Synthetic Debt Finance Avoids these Difficulties**
- **A Table Comparing the Main Features of Synthetic Debt Finance and Synthetic Lease Finance is Included**

IMPLICATIONS OF GRAFF CONCEPTUAL FINANCE RESEARCH

- Financing Concepts are Investment Theory Concepts from Different Perspective
  - Productive Methodology for Product Innovation
  - Sell Side Perspective Involves More Risk Factor Considerations
- Applied Corporate Finance is Interdisciplinary
  - Economics
  - Law
  - Accounting
  - Marketing
- Inefficiency is Ubiquitous in Financial Applications
  - Financial Risk is Underanalyzed and Underappreciated
  - Agency Costs are Widespread

GRAFF CONCEPTUAL FINANCE THEORY SCHOLARLY PUBLICATIONS

1. **Perspectives on Debt-and-Equity Decomposition for Investors and Issuers of Real Estate Securities, *Journal of Real Estate Research,* 1992, 7:4, 449-467.**

2. **Changing Leases into Investment-Grade Bonds: Financial Alchemy and Cost Reduction in Real Estate Finance, *Journal of Real Estate Portfolio Management,* 1999, 5:2, 183-194.**

3. **Off-Balance-Sheet Corporate Finance with Synthetic Leases: Shortcomings and How to Avoid Them with Synthetic Debt, *Journal of Real Estate Research,* 2001, 22:1/2, 213-241.**

4. **Synthetic Debt: Off-Balance-Sheet Corporate Finance for the 21st Century, *Journal of Real Estate Portfolio Management,* 2002, 8:1, 45-54.**

(with D. Cashdan)

5. **Some New Ideas in Real Estate Finance, *Journal of Applied Corporate Finance,* 1990, 3:1, 77-89.**