AIRA JOURNAL
ASSOCIATION OF INSOLVENCY & RESTRUCTURING ADVISORS
VOL. 39 • NO. 3 • 2026



THE AGE OF AI

THE AGI THRESHOLD

Have we reached artificial general intelligence?

As AI moves from tool to collaborator, human judgment remains the essential control.

IN THIS ISSUE

VOL. 39 NO. 3

VALUATION STANDARDS
AI & HUMAN JUDGMENT
AI DECISION CHECKS
AI & PRIVATE EQUITY
AI PROMPTS
SPEND GOVERNANCE
BOARDROOM STRATEGY
VENEZUELA 2.0
OPTIONS & WARRANTS

AIRA.ORG

EARN CPE CREDIT FROM THIS ISSUE

The *AIRA Journal* CPE Program makes membership more valuable year-round. Members can read the applicable instructional articles in this issue, complete the self-study assessment, and earn CPE credit. With an estimated **8-10 self-study CPE credits per year**, the program adds a free high-value benefit with meaningful savings for members.

3.4 SELF-STUDY CPE CREDITS

Read the *AIRA Journal*, complete the self-study assessment, and download your certificate after successful completion. At roughly $50 per CPE credit, the annual self-study opportunity represents an estimated $400-$500 in member value.

SCAN TO BEGIN

Use the QR code with your primary AIRA member email.

HOW IT WORKS

1 SCAN THE CODE
The QR code takes you directly to the *AIRA Journal* CPE Program.

2 USE YOUR MEMBER EMAIL
Enter the primary email address connected to your AIRA member record.

3 CREATE YOUR ACCOUNT
If you are not already signed in, AIRA will guide you through account setup and email verification.

4 COMPLETE THE SELF-STUDY
Review the issue, take the practice quiz, submit the final exam, and receive your certificate.

Active AIRA membership is required for access. If your email address or membership status does not match AIRA's records, the system may not recognize your eligibility. **Questions?** Email us at aira@aira.org, or call 541-858-1665.

IN THIS ISSUE

AI FEATURES

18 HUMAN JUDGMENT IN A DIGITAL AGE, PART II
Jack F. Williams, PhD, CIRA, CDBV

28 FOUR CHECKS BEFORE AI SHAPES RESTRUCTURING ANALYSIS
Gleb Tsipursky, PhD

32 AI ACROSS THE PRIVATE EQUITY LIFECYCLE
Matt Thompson

35 TOP 10 AI PROMPTS FOR PRIVATE EQUITY PROFESSIONALS
Private equity practice guide

ARTICLES & ASSOCIATION

04 FROM THE DESK OF THE EXECUTIVE DIRECTOR
James M. Lukenda, CIRA

06 PRESIDENT'S LETTER
Boris J. Steffen, CIRA, CDBV

08 AIRA'S 2026 VALUATION STANDARDS FOR DISTRESSED BUSINESSES
David Bart, CIRA, CDBV

38 THE STRATEGIC POWER OF SPEND, PART II
Stefan Zorn

46 THE BOARDROOM IS CORPORATE AMERICA'S NEW FINANCIAL FRONT LINE
Kenneth A. Rosen

50 VENEZUELA 2.0: RECONSTRUCTION AND DEBT RESTRUCTURING
Steven T. Kargman

62 PRACTICAL VALUATION TIPS: STOCK OPTIONS AND WARRANTS
Aaron Dolgoff, Erik Himan, and Pavel Nikolov

70 MEMBERS ON THE MOVE
M3 Partners welcomes Judge Robert D. Drain

71 IN MEMORIAM: WILLIAM G. HAYS, JR.
1927–2026



AIRA Journal is published four times a year by the Association of Insolvency & Restructuring Advisors, 1314 Center Drive, Suite B-132, Medford, OR 97501. Copyright 2026 by the Association of Insolvency and Restructuring Advisors. All rights reserved. No part of this *Journal* may be reproduced in any form, by xerography or otherwise, or incorporated into any information retrieval systems, without written permission of the copyright owner. This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is sold with the understanding that the publisher is not engaged in rendering legal, accounting, or other professional service. If legal or accounting advice or other expert assistance is required, the services of a competent professional should be sought.



JAMES M. LUKENDA, CIRA
AIRA EXECUTIVE DIRECTOR
JLUKENDA@AIRA.ORG

EDITORIAL

PUBLICATIONS CHAIRMAN
Michael Lastowski
Duane Morris LLP (Retired)

CO-EDITOR
David Bart, CIRA, CDBV
David Bart & Associates LLC

CO-EDITOR
Boris J. Steffen, CIRA, CDBV
Province, Inc.

WANT TO GET IN TOUCH?
Email the editorial board at
editorialboard@aira.org

STAFF

MANAGING EDITOR
Alexandra Mahnken, CIRA, CDBV
AIRA
amahnken@aira.org

CREATIVE DIRECTOR
Michael Stull
AIRA
mstull@aira.org

FROM THE DESK OF THE EXECUTIVE DIRECTOR

NEW SEASON AND NEW REASONS TO BE AN AIRA MEMBER

Fall is upon us. I hope you were able to take some time for yourselves and your families during the summer months. At AIRA we found time but also worked hard to bring the membership new benefits, a new look, and more as we move forward.

Hopefully you have noticed the new look for the *AIRA Journal* partially unveiled in the *AIRA Journal* volume 39-2 and fully reflected here, and more importantly, the availability for self-study CPE for reading the articles. A number of you have already taken advantage of the pilot. For those of you who did, thank you. Your participation enabled AIRA to work out any kinks in the process and ensure that this program is as user friendly as possible. For more on the *AIRA Journal* CPE program, please see Boris Steffen's President's Letter. The QR code can be found on the inside front cover.

You may have already noticed that pages of the AIRA website are looking more than a little different. This is a continuing process, and we are bringing the new pages online as they are ready. Currently, you will see a mix of the old look and the new. This is part of the ongoing effort to update AIRA's look, branding, and content, and enhance member access and functionality.

We are also changing the platform used by AIRA for its website. We are building a more robust environment for AIRA to interact with its members. The objective here is to provide greater access to the membership in a variety of ways while increasing security over the website and member information.

For those of you who have already availed yourselves of the CPE program, you have already established your new member account and access to more information through the website. For those of you who have not, look for the "log in" in the upper right-hand corner of the new AIRA home page. When prompted, entering the e-mail address you currently have registered with AIRA will take you through the process of establishing your access credentials (password). Once done, you will have access to information on your membership account such as CPE reporting, membership dues invoicing and payments, conference participation, CPE course information, and how you are listed in the membership directory.

With your member account you will have greater control over how you are profiled. Many members may be content to be listed in the directory by name, firm, and city and state. To protect your personal information, presently, telephone and e-mail addresses are not visible.

The changes being implemented will provide those of you who wish to enhance your profile with the options to do so in a secure manner.

When the changes are fully implemented, you may wish to include a photo, a bio, or a link to your firm's website. These and other options will be available at your discretion. This process is ongoing, but please take a moment and set up your member account (if you have not already set it up to use the *AIRA Journal* CPE program) by going to "log in" in the upper right-hand corner of the AIRA home page and following the prompts.

For all the changes reflected in the *AIRA Journal* and on the website, my thanks go to Mike Stull who continues to oversee these projects working with the *AIRA Journal* editorial board, Cheryl Campbell, and Michele Michael.

ENCOURAGE PARTICIPATION BY YOUR ASSOCIATES

Cheryl is currently organizing the planning committee for BRC27 which will be held in Charleston, SC beginning on June 2, 2027. If you are interested in participating or perhaps have a colleague in your firm looking to expand their participation in the area of thought leadership, please reach out to Cheryl (ccampbell@aira.org).

A final few thoughts on careers, involvement, transitions. We are all busy. The best way to utilize time effectively and expand participation in association matters and thought leadership is to leverage your leadership in your firm by providing your staff with the introduction to a planning committee or conference participation role. As I have written in past letters, I am grateful that from day one the leaders in the firms where I was an associate encouraged my participation in AIRA and other thought leadership organizations.

Once again, a collection of informative, well-edited articles follows. Please read, enjoy, and learn.

Jim



Setting the **standard**

For decades, clients have trusted our attorneys for critical advice surrounding restructurings, insolvencies, reorganizations, and other challenging events.

1,600 attorneys | **30+** cities

troutman pepper locke

troutman.com

PRESIDENT'S LETTER



BORIS STEFFEN, CIRA, CDBV

PROVINCE

DEAR MEMBERS,

I am pleased and excited to inform you of some significant developments that have been in the works over the past several months at the AIRA.

You may have noticed that the *AIRA Journal* has been given a facelift, with updated typography, layout, and visuals designed to enhance reader engagement. In conjunction, the AIRA has launched a new self-study CPE initiative free to members. Simply read the *AIRA Journal*, complete the self-study assessment, and on successful completion, download your CPE certificate. With up to an estimated 8 to 10 self-study CPE credits available each year, and a value of about $50 per CPE credit, the initiative represents a savings to members on CPE requirements from $400 to $500. Simply scan the related QR code in the *AIRA Journal* (on the inside cover), enter the primary email address of your AIRA membership, follow the directions to create your account, read the issue, take the practice quiz, submit the final exam, and receive your certificate.

Given the AIRA's mission and focus on promoting the professional development of its members, I am also proud to announce that the AIRA Board of Directors approved the newly revised Standards for Distressed Business Valuation ("SDBV"), in January of 2026, with an effective date of December 31, 2026 (see https://www.aira.org/aira/standards). The SDBV provides guidance on best practices for all professionals working in the field of distressed business valuation. These standards apply directly to all AIRA members and AIRA certificate holders (CIRA-Certified Insolvency and Restructuring Advisor and CDBV-Certification in Distressed Business Valuation) whenever they offer an opinion of value, including valuation engagements or other engagements in which valuation approaches and methods are used to develop an opinion or conclusion of value.

Since its initial release in 2014, the AIRA's professional standards have been cited in numerous court opinions, pleadings, journal articles, and conference educational materials. AIRA's purpose in issuing the SDBV remains the same as in 2014. "The AIRA believes that providing guidance and standards of practice regarding the application of general valuation theory to the specialized circumstances found in distressed valuation engagements within the fields of workouts, restructurings, and bankruptcy is in the best interests of the valuation profession." (SDBV, Introduction to the Standards for Distressed Business Valuation, 2014 and 2026 editions.)

Looking ahead, Fall brings with it a number of excellent opportunities to earn CPE at AIRA programs. On October 15, AIRA is partnering with Global Restructuring Review for the Restructuring in the Americas 2026 program in New York City. The program provides a unique opportunity to share insights, discuss developments, and connect with peers working on restructuring and special situations across the Americas and elsewhere. Then on October 22, AIRA and TMA Dallas/Ft. Worth will host the 14th Annual Energy Summit Dallas. The program will consist of two panels covering hot topics and new developments in the energy industry: one on M&A and the other on Restructuring. We will close out the year on November 16 with the 25th Annual Advanced Restructuring and POR conference in New York City. The conference will include five panel presentations, a luncheon and keynote presentation with Max Frumes of 9fin, and a networking reception where we will present the 2026 Judicial Service Award.

Cordially,

Boris J. Steffen



AlixPartners

Disruption Index

62%

of CEOs expect significant changes to business models over the next year.
We're ready to help.

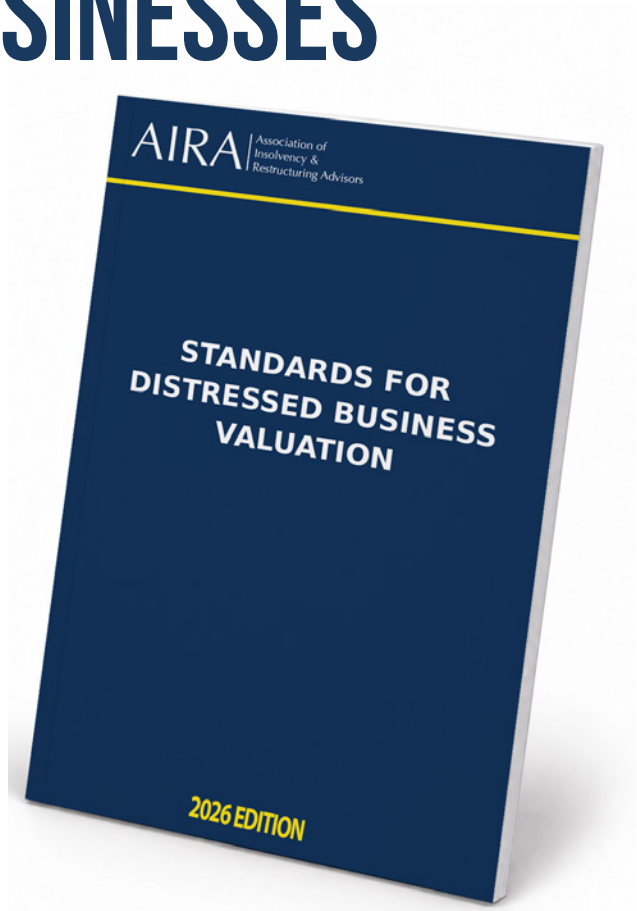
alixpartners.com

AIRA'S 2026 VALUATION STANDARDS FOR DISTRESSED BUSINESSES

BY DAVID BART, CIRA, CDBV

The Association of Insolvency and Restructuring Advisors (AIRA) approved revised *Standards for Distressed Business Valuation* (SDBV) in January 2026 with an effective date of December 31, 2026.

SDBV provides guidance on best practices for all professionals working in distressed business valuation. These standards apply directly to all AIRA members and AIRA certificate holders (CIRA-Certified Insolvency and Restructuring Advisor and CDBV-Certification in Distressed Business Valuation) whenever they offer an opinion of value, including valuation engagements or other engagements in which valuation approaches and methods are used to develop an opinion or conclusion of value.



UPDATING AIRA'S SDBV

AIRA's SDBV was initially released in 2014. In the intervening years, these professional standards have appeared in court opinions, pleadings, journal articles, conference educational materials, and several books. The practice of business valuation continues to evolve, especially in applications involving distressed situations. The interpretation of what constitutes a distressed business situation has also expanded beyond the bankruptcy court, with circumstances occurring in other litigation environments where business valuation issues arise, or when providing consulting services out of court.

SDBV broadly considers the meaning and source of business distress:

> Distress can embody financial, operational, legal, regulatory, and other factors, which can impact a business's or stakeholder's ability to satisfy obligations to equity holders, creditors, or other parties in interest.[1]

SDBV explains the role that valuation services can play in helping to resolve the sources of business distress:

> Valuation analyses or the determination of values may need to be performed to better understand the situation, its potential outcomes, or to evaluate alternatives that may be available to resolve the nature of the distress in order to provide a basis for recoveries by the various parties in interest. Valuation conclusions may be utilized in reporting the results of restructurings in bankruptcy and in accordance with generally accepted accounting principles.[2]

In 2024 and 2025, AIRA reviewed current professional standards promulgated by other organizations since 2014 and conducted a review of current literature regarding business valuation practices. AIRA concluded that it was time to update its SDBV. AIRA also updated its Code of Professional and Ethical Conduct, its Amended and Restated Bylaws, and its Conflicts of Interest Policy during 2025 and 2026.

1 SDBV, Introduction to the Standards for Distressed Business Valuation, The Goals and Intent of the Standards for Distressed Business Valuation.

2 Ibid.

These are incorporated as exhibits to SDBV. AIRA adopted the revised SDBV in 2026.

AIRA's goals in producing SDBV remain the same as in 2014. AIRA recognizes that professional standards in business valuation have converged over time and that the basic professional standards have become increasingly harmonized. The Uniform Standards of Professional Appraisal Practice (USPAP), the AICPA's Statement of Standards for Valuation Services (SSVS, codified as VS Section 100), and/or other professional standards relevant to business valuations may apply. AIRA has no opinion regarding the priority of standards among these organizations.

AIRA states:

> The need for competent, impartial, independent, and objective professional services performed under accepted standards of professional ethics and accepted professional practices serves the public interest by instilling confidence in credible and justifiable results that are used in business transactions or that provide resolutions to business controversies.[3]

AIRA's purpose in issuing the updated SDBV remains the same as in 2014:

> The AIRA believes that providing guidance and standards of practice regarding the application of general valuation theory to the specialized circumstances found in distressed valuation engagements within the fields of workouts, restructurings, and bankruptcy is in the best interests of the valuation profession.[4]

In the 2026 SDBV, AIRA states that the nature of valuation work defines it as a consulting service:

> Business valuation and/or valuation analysis of businesses, enterprises, business units, business ownership interests, securities, financial, tangible assets, or intangible assets is a consulting service.[5]

SDBV is structured to provide:

1. Context that includes: discussion of the uses of valuation in workouts, restructurings, and bankruptcy; valuation in U.S. bankruptcy court; the role of business valuation standards; and the application of standards in workouts, restructurings, and bankruptcy;

2. Standards that encompass: defining the person who is responsible for the valuation work; the valuation engagement's purpose and scope; identifying exceptions and engagement considerations; engagement development; steps in the business valuation (e.g., defining the ownership interest, determining the valuation date, defining the premise and standard of value, data compilation and analysis, working with key assumptions and limiting conditions, selecting and using valuation approaches and methods, applying valuation adjustments, and reaching a conclusion of value); documenting the engagement; and developing and issuing the contents of the valuation report; plus

3. A survey of the significant approaches and methods used in distressed business valuation.

SDBV focuses on the Valuation Analyst as the "AIRA member who performs a Valuation Engagement."[6] This is the person responsible for the work, the conclusions of that work, and ultimately the valuation opinion. The term:

> "Valuation Engagement" refers to an engagement or any part of an engagement (e.g., a tax, litigation, or acquisition-related engagement) that involves estimating and/or developing an opinion of the value of a Subject Interest."[7]

REQUIRED APPLICATIONS

AIRA's members and certificate holders are required to follow SDBV when developing an opinion of value. The opinion of value may involve:

- Reorganization value
- Enterprise value
- Values of debt or equity in a plan of reorganization
- Value of assets in a sale
- Liquidation values
- Financial reporting values, e.g., fresh start accounting
- Value of tax attributes for future use
- Possible other topics, depending on the extent of the valuation opinion, including:
  - Value of capital structure
  - Value of payouts under a plan of reorganization
  - Collateral values

3 SDBV, Introduction to the Standards for Distressed Business Valuation.
4 SDBV, Introduction to the Standards for Distressed Business Valuation, 2014 edition and 2026 edition.
5 SDBV, Introduction to the Standards for Distressed Business Valuation, Business Valuation Is a Consulting Service.
6 SDBV, Section A., Par. 3.
7 Ibid., see also Par. 47, 56 and 57.

- Values impacting the Best Interest of Creditors Test
- Values impacting a solvency opinion in a recovery action, e.g., preference and fraudulent transfer matters
- Value of an equity cushion in adequate protection matters
- Value as it impacts tests of the Absolute Priority Rule
- Value as it impacts the taxability of cancellation of debt income.

The central question when deciding whether SDBV applies is whether an opinion of value is being reached:

> AIRA members are required to follow the AIRA's Standards for Distressed Business Valuation when performing engagements to estimate value that culminate in the expression of an opinion and/or conclusion of value in matters involving business turnaround, restructuring, bankruptcy, and insolvency.[8]

Thus, if the engagement relies on valuation approaches and methods and requires professional judgment in applying those approaches and methods, then the standards would apply since the engagement culminates in an opinion and/or conclusion of value.

SDBV directly applies to matters involving "business turnaround, restructuring, bankruptcy, and insolvency."[9] In other matters, SDBV provides guidance because it addresses the unique environment of distressed business situations and their impact on business value.

Other professional organizations may allow various assignment-specific exceptions to their professional engagement standards. AIRA has no opinion about the applicability of those exceptions. SDBV includes assignment-specific exceptions for AIRA members and certificate holders that exclude services involving:

- Calculations
- Reconciliations
- Cash requirement computations
- Fairness opinions
- Damage computations
- Solvency opinions
- Internal use assignments
- Situations requiring use of different, prescribed methodology (e.g., an ESOP valuation, SEC or governmentally-required computations)
- AICPA attest engagements
- Financial advisory services that do not rise to the level of providing an opinion of value.

AIRA'S PEERS

A variety of organizations have established basic business valuation standards to provide guidance on generally accepted valuation theory and minimum reporting criteria. Some analytical comparisons and bridges between these professional standards have been developed, indicating ongoing harmonization is occurring. These organizations include:

- American Institute of Certified Public Accountants
- American Society of Appraisers
- The Appraisal Foundation
- The Institute of Business Appraisers
- National Association of Certified Valuation Analysts
- International Valuation Standards Council.

The valuation standards set forth by these organizations join an evolving body of regulatory and legal standards. For example, IRS Business Value Guidelines define appropriate valuation methods for taxable transactions. Both the Department of Labor and the IRS have established valuation methods for ESOPs. The SEC has issued policies, practices, and rulings that set valuation standards for publicly traded securities. Regulations and case law regarding the U.S. Bankruptcy Code, the Small Business Administration, and various state business corporation acts, state divorce laws, and state insurance regulations also influence generally accepted valuation practices.

SDBV provides guidelines that valuation professionals should follow when performing valuation engagements involving workouts, restructurings, bankruptcy matters, or other matters involving business distress. Compliance is voluntary. AIRA's SDBV identifies several common elements among the varying professional standards listed above that

8 SDBV, Introduction to the Standards for Distressed Business Valuation, The Goals and Intent of the Standards for Distressed Business Valuation.
9 Ibid.

govern the practices of valuation professionals, including:

- An expectation that the professional is competent to provide the valuation services necessary to complete each assignment (Par. 28 through Par. 32)
- A requirement for objectivity and integrity in the performance of all professional services (Par. 34)
- An independence requirement with a requirement for full and fair disclosures of all matters that could reasonably impair independence (Par. 34 and Par. 37)
- A prohibition on contingent fees earned upon reaching a conclusion or appraisal value (Par. 36)
- A requirement to explicitly state any limiting conditions (Par. 39 and Par. 40)
- An expectation that the professional will clearly state all assumptions and their impact on the outcome and interpretation of the valuation (Par. 39)
- The full disclosure of all people who worked on the valuation engagement (Par. 86.k.viii.)
- Full disclosure of all outside specialists who assisted in the valuation assignment (Par. 41 and Par. 86.k.vii.)
- The identification of the professional who is responsible for the valuation report and the opinion of value, including a signature certifying professional independence and disclosing fee arrangements and other factors (Par. 86.k.xv.)
- A representation of the factors that guided the engagement, including all information sources to allow replication of research, valuation computations, and reports (Par. 86.k.)
- The disclosure of the use of artificial intelligence tools used during the engagement and a prohibition against the use of artificial intelligence to **generate** a valuation opinion (Par. 46).
- An expectation to follow generally accepted valuation approaches and methods and to explain the reasoning supporting the valuation conclusion and identify where professional judgment was utilized (Par. 30.b. and Par. 38.e.).

SDBV shares many reporting requirements with other organizations, but SDBV permits the Valuation Analyst to perform their analysis and express their results in a manner that "he or she deems appropriate in the circumstances. The Valuation Analyst expresses the results of a Valuation Engagement as a conclusion of value, which may be either a single amount or a range."[10]

AIRA has always stressed flexibility in the analysis and reporting of valuation results and opinions given the unique environments in which distressed business issues are resolved. Generally, SDBV expects reports to include:

- Purpose and scope of the valuation engagement
- Standard of value and specific valuation date employed
- The specific interest being valued
- Identification of relevant state and federal laws that govern the entity being valued
- Scope of the procedures employed
- Nature and history of the business
- Historical financial information
- Financial analysis comparing the business's performance with industry trends
- Overview of the industry in which the business operates
- Impact of market conditions on the business
- Explanation of valuation procedures, approaches, and methods used
- Reconciliation of the valuation opinion.[11]

SDBV permits similar exceptions as other business valuation professional standards. SDBV excludes adherence for:

- Valuations performed as part of an attest engagement
- Internal use assignments when the preparer is not in public practice — i.e., private company valuations performed by employees for internal reporting purposes

10 SDBV, Section D., Par. 47.a.
11 SDBV, Section F.

- Economic damage calculations (lost profits, etc.) unless the calculations are part of an engagement to estimate value
- Mechanical computations that do not rise to the level of a valuation and where no independent valuation approaches are used
- Litigation and jurisdictional exceptions
- Fairness opinions
- Solvency opinions.[12]

SDBV also provides guidance on how a valuation professional should proceed when valuation approaches are not possible due to a lack of relevant information. It instructs the professional to follow the applicable authority if any part of SDBV differs from published governmental, judicial, or accounting authority.

SDBV SPECIFICALLY ADDRESSES BUSINESS DISTRESS

Given a seemingly robust set of shared viewpoints for business valuation standards, where the various professional standards appear to be converging on common expectations for professional practice, what does SDBV add regarding the valuation of distressed business interests? SDBV specifically identifies and addresses the issues that make valuing distressed interests different, providing guidelines for such circumstances.[13]

SDBV formally recognizes that distress may not only be financial, but can also include operational, legal, regulatory, and other factors. SDBV recognizes that the specific nature of that distress and the legal context and intended purposes giving rise to the valuation assignment may require significant analysis and unique adjustments to traditional valuation methodologies. Typical valuation adjustments may not be relevant for a distressed business interest. The application of typical valuation methods, or the omission of methodologies that do not account for the unique circumstances involving distress, may under- or overstate a valuation conclusion reached in the context of a distressed valuation assignment. Additional valuation adjustments may be necessary.

12 SDBV, Section B.
13 SDBV, Introduction to Standards for Distressed Business Valuation.

Among the adjustments and specific issues that SDBV addresses are:

- Hindsight and subsequent events
- Fair value
- Ownership and control
- Valuation approaches and methods
- Valuation adjustments
- Discounts and premiums
- Recognition of important market conditions
- Recognition of hypothetical conditions used in the valuation
- Disclosure of key assumptions
- Reorganization values and enterprise values
- Relevant illustrations of assumptions and limiting conditions
- Volatility or truncation of cash flows
- Risk-adjusted discount rates.[14]

SDBV also discusses the impact of:

- Financing issues, including how perceived risks can affect the ability to obtain financing
- Periods of changing interest rates
- Excessive leverage
- Liquidity constraints
- Significant changes to business strategy and the timing of these changes.[15]

SDBV recognizes uncertainties in distressed business planning arising from:

- Uncertain probabilities of an operational or financial turnaround
- Periods with shrinking revenues or declining margins
- Asset divestitures
- Significant payouts to constituencies
- Minimum floor values for collateral
- Limited relevant market data (typically from healthy companies).[16]

14 Ibid.
15 Ibid.
16 Ibid.

ENGAGEMENT TYPES AND REPORTING RESULTS

SDBV dispenses with many of the distinctions among engagement types followed by other organizations. Instead of defining differences among valuation engagements (e.g., a calculation versus valuation engagement), SDBV states that "AIRA considers the computation of value using valuation approaches and methods that require a member to apply professional judgment in the application of those approaches and methods to be a Valuation Engagement….A Valuation Engagement under AIRA's Standards results in opinions regarding a conclusion of value."[17] SDBV recognizes that valuation professionals "have broad flexibility and responsibility" over the manner in which they complete a valuation engagement "within the context of the intended use of their work."[18]

Similarly, the AIRA has dispensed with distinctions among various report types (e.g., non-appraisal calculation report, detailed or comprehensive complete report, limited or summary report, or other engagement reports). SDBV maintains that "The primary objective of a valuation report is to provide and communicate convincing and compelling support for the conclusions reached."[19] SDBV sets minimum expectations for content and requires AIRA members and certificate holders to use appropriate "professional judgment" in providing "sufficient information" to fit the circumstances. SDBV outlines report contents, suggested disclosures, and language for identifying limiting conditions.

SDBV recommends the expert reach a definitive conclusion, including a statement in the report that:

> Based on all of the above, the opinions and conclusions stated in the valuation report are stated to a reasonable degree of certainty. Minor differences in reported amounts shown in this report and all supporting exhibits are the result of rounding.[20]

A SPECIFIC STANDARD ON ARTIFICIAL INTELLIGENCE

The valuation profession and the performance of valuation engagements are changing rapidly in response to the evolution and adoption of Artificial Intelligence ("AI"). SDBV includes a section, "Using Artificial Intelligence in the Valuation Engagement," that addresses the use of this computing tool.[21]

SDBV acknowledges that "AI is increasingly being applied in business valuation to search, sort, analyze, create information, and draft visual and written presentations and reports."[22]

Critically, SDBV defines AI as a "useful tool," stating that "AI is not a substitute for the professional knowledge and judgment of the Valuation Analyst. The Valuation Analyst is responsible for their own independent engagement development, analytical work, and professional opinions."[23]

SDBV further states, "The Valuation Analyst has a professional responsibility to apply appropriate review and verification procedures when incorporating AI-generated data into an engagement's source data."[24]

SDBV requires disclosure when this tool is used; stating, "The Valuation Analyst should disclose in writing their reliance on AI as part of the engagement's source information, list of documents relied upon, within footnotes, or in the credits to tables and exhibits. The Valuation Analyst should state the level of reliance, if any, being assumed by the Valuation Analyst on the output of AI tools."[25]

SDBV requires the valuation report to include representations from the Valuation Analyst. Notably, these representations make the analyst responsible for their work with an affirmation that artificial intelligence was not used "without the personal involvement, independent thought, personal analyses, and independent opinions and conclusions of the Valuation Analyst."[26]

SDBV requires the valuation report to include representations about the reliability of sources used by the analyst, including the use of AI. SDBV requires a representation that, "Certain data and information or outside expert opinions included in the valuation report have been obtained from sources the Valuation Analyst believes to be reliable (any exceptions should be noted). This information was provided with (or without) the consent of the author or is publicly available. The Valuation Analyst has (or has not) performed any corroborating procedures to substantiate this information or those expert

17 SDBV, Section D., Par. 47.
18 SDBV, Par. 38.e.
19 SDBV, Par. 86.
20 SDBV, Par. 86.k.xvi.
21 Beginning at SDBV, Par. 42.
22 SDBV, Par. 43.
23 SDBV, Par. 44.
24 SDBV, Par. 45.
25 SDBV, Par. 46.
26 SDBV, Par. 86.k.ii.

opinions; the Valuation Analyst has incorporated the information as stated."[27]

INTERNATIONAL GLOSSARY OF BUSINESS VALUATION TERMS

Like other professional valuation standards, SDBV incorporates the International Glossary of Business Valuation Terms ("IGBVT"); however, different organizations have adopted different versions of IGBVT in their professional standards.

IGBVT was jointly developed and adopted in 2001 by the American Institute of Certified Public Accountants (AICPA), the American Society of Appraisers (ASA), the Canadian Institute of Chartered Business Valuators, the National Association of Certified Valuation Analysts, and the Institute of Business Appraisers.

As of 2026, AICPA and NACVA have not adopted the updated 2021 IGBVT, and the 2001 version remains in force for their members. ASA has adopted the 2021 IGBVT, so its members must follow it.

AIRA has not adopted the 2021 IGBVT, and the 2001 version remains in force. A copy of the 2001 version of IGBVT is included in SDBV's Appendix C together with an explanation of the current status of other adoptions as of 2026.

For Valuation Analysts holding multiple professional credentials, AIRA recommends disclosure of any differences in the definitions of specific terms being used, including an explanation about which definition of a particular term is being followed, together with a statement of why the selected definition is appropriate for the analysis.

SUBSEQUENT EVENTS AND HINDSIGHT

The occurrence of subsequent events after the valuation date and the use of hindsight in valuation analysis remain case-specific questions addressed by the courts. SDBV includes a section addressing these issues.[28]

Generally, incorporating economic effects from subsequent events or applying hindsight depends on the specific parameters of the engagement's valuation assignment and hinges on whether the events were known or knowable on the valuation date. SDBV states that "application of any hindsight regarding subsequent events will depend on the purpose of the valuation and the intended user and should be fully disclosed in the valuation report."[29]

2026 SDBV

AIRA's SDBV is generally consistent with, and does not conflict with, the professional standards from other organizations, but SDBV offers considerably more guidance on matters pertaining to distressed businesses and the issues involved in determining value in those situations. SDBV applies to all AIRA members and certificate holders.

This article highlights aspects of SDBV as an introduction. The article is not comprehensive and does not cover everything in the standards. I encourage AIRA members and other valuation professionals working with distressed businesses to read and become acquainted with the 2026 SDBV.

ABOUT THE AUTHOR



David Bart, CIRA, CDBV

AIRA President Emeritus
David Bart & Associates LLC

David is President of David Bart & Associates LLC. He has more than 40 years of experience assisting individuals, businesses, and legal counsel by providing financial and litigation consulting services and testimony involving business viability/feasibility, valuation, commercial damages, solvency analysis, fraudulent transfers, forensic accounting, and financial investigations in federal and state court, arbitration, and mediation proceedings. He is co-editor of the *AIRA Journal* and chair of AIRA's Technical Issues and Standards Committee.



NOTE: See the AIRA *Standards For Distressed Business Valuation* on AIRA's website at https://www.aira.org/aira/standards.

Unless otherwise stated, all references refer to the 2026 edition of SDBV.

27 SDBV, Par. 86.k.iv.
28 SDBV, beginning at Par. 53.
29 SDBV, Par. 55.

AIRA

AIRA EDUCATION

CERTIFICATION IN DISTRESSED BUSINESS VALUATION

WHEN VALUE IS UNDER PRESSURE.

Bring specialized judgment to the valuations that matter most.

Distressed assets / Restructuring / Bankruptcy



THE CDBV CREDENTIAL

EXPERTISE FOR THE MOST COMPLEX VALUATIONS.

AIRA's CDBV program builds advanced knowledge in valuing distressed assets and companies navigating bankruptcy. Intensive study and written examinations are paired with a requirement to demonstrate relevant valuation experience.

CDBV CANDIDATES DEVELOP THE PROFICIENCY TO:

- Apply court decisions to standards and premises of value.
- Apply adjusted present value and distressed market multiples.
- Prepare liquidation and solvency analyses.
- Adjust cash flows for the impact of distress or bankruptcy.
- Estimate cost of capital and reorganization value.
- Assess adequate protection and equity cushions.

ADVANCE YOUR VALUATION PRACTICE.

EXPLORE THE CDBV PROGRAM

Learn more at:

aira.org/cdbv

ArentFox Schiff

Battle Tested. Client Approved.

Bankruptcy and restructuring involves diverse parties, competing interests, and complex issues. Our innovative and market leading practice navigates you through it all, drives success, and achieves results.



afslaw.com

BERGERSINGERMAN.COM

Berger Singerman's Business Reorganization Team is nationally recognized for handling market-leading bankruptcy, receivership, and out-of-court restructuring matters, with a deep bench of lawyers trusted in the most complex and high stakes situations.

"The preeminent bankruptcy shop in Florida."
—Market Commentator, Chambers USA Guide 2025

"Outstanding problem solvers with deep bench strength and first-class client service."
—Client, Chambers USA Guide 2025

500 GLOBAL BANKRUPTCY & RESTRUCTURING LAWYERS
LAWDRAGON 2026

Chambers TOP RANKED USA 2025 Berger Singerman

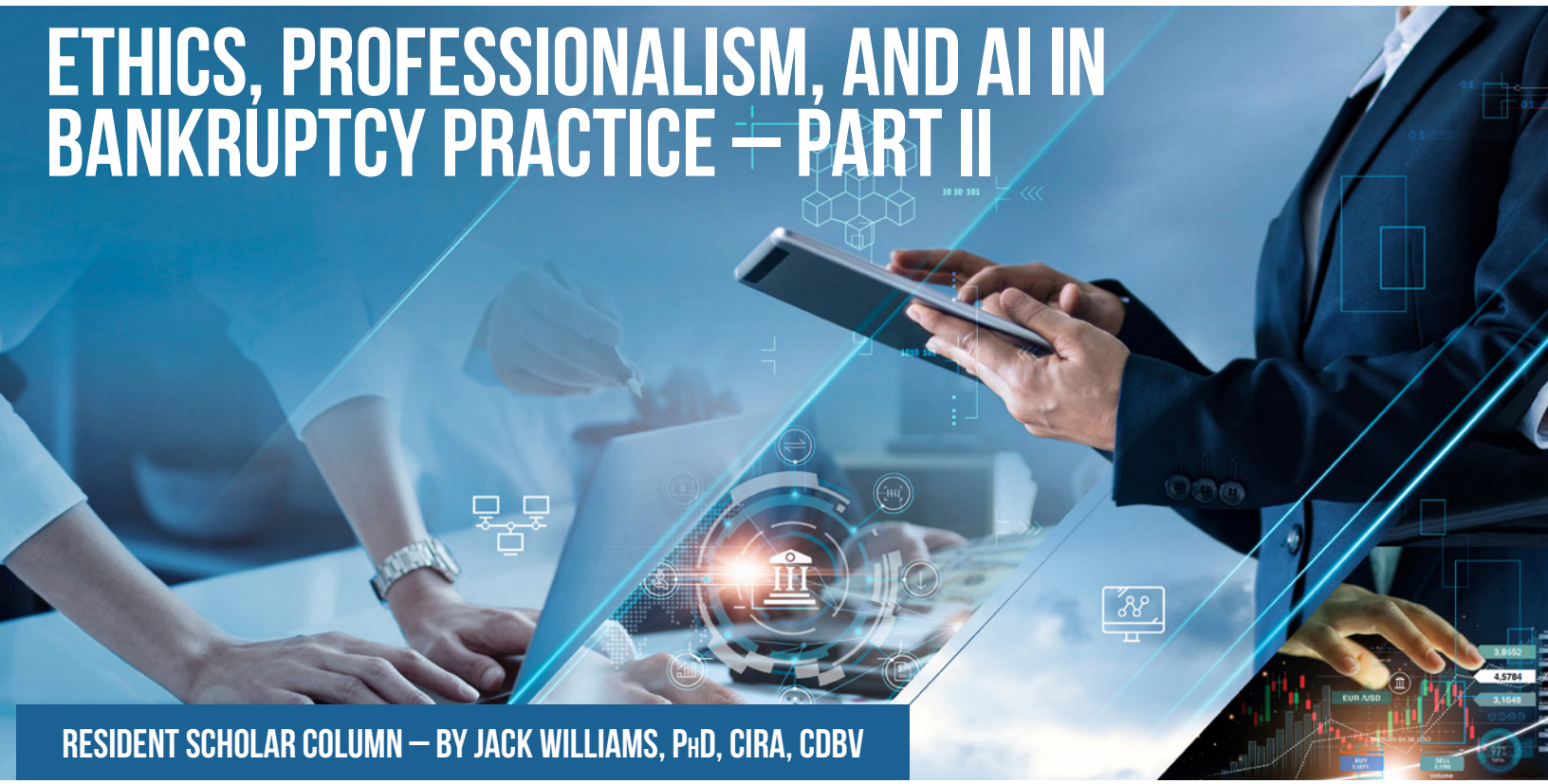
BEST LAW FIRMS RANKED BY Best Lawyers UNITED STATES 2025

BERGER SINGERMAN

FORT LAUDERDALE | MIAMI | ORLANDO | TALLAHASSEE | TAMPA | WEST PALM BEACH

HUMAN JUDGMENT IN A DIGITAL AGE:

ETHICS, PROFESSIONALISM, AND AI IN BANKRUPTCY PRACTICE — PART II



RESIDENT SCHOLAR COLUMN — BY JACK WILLIAMS, PhD, CIRA, CDBV

In Part I, I explored how artificial intelligence ("AI") is reshaping our professional duties. Part I also focused on competence, adequate supervision, integrity, humility, and the reality of hallucinations in generative AI. In this article, I turn to confidentiality, disclosure obligations, and what responsible AI use looks like in daily practice. Behind our attempt to fashion a workable system is the powerful question of what our ethics and professionalism demand of us. Here, I plan to consider ethical, practical, and theoretical aspects of AI in use, weaving its use through the Model Rules of Professional Conduct ("ABA Model Rules") of the American Bar Association ("ABA"), the Association of Insolvency & Restructuring Advisors ("AIRA") Code of Professional and Ethical Conduct for its members ("AIRA Code"), and the AIRA's Standards for Distressed Business Valuation ("AIRA SDBV").[1]

THE FRAME

The ABA Model Rules establish three clusters of obligation for lawyers and AI use. First, **competence and supervision**: you must understand the AI tools you use well enough to assess their risks, supervise their outputs, and ensure they do not substitute for your independent professional judgment (Rules 1.1, 2.1, 5.1–5.3). Judgment and accountability are the watchwords of this cluster of rules.

Second, **transparency and candor**: you should disclose AI use to your client and obtain informed consent, be truthful in all representations to courts and opposing counsel, and correct false statements, including those generated by AI, the moment you discover them (Rules 1.4, 3.3, 3.4, 4.1, 8.4(c)). The present practice is that courts are regulating certain types and uses of AI by lawyers when preparing papers for submission to the courts. Bankruptcy Rule 9011 also plays a pivotal role in regulating AI use, particularly where a lawyer has used generative AI in preparing documents for court submission.

Third, **confidentiality and stewardship**: client data entered into AI systems remain subject to our duty of confidentiality, AI-generated work product belongs to the client and must be preserved, and the reasonableness of our fees must account for the efficiencies AI provides (Rules 1.5, 1.6, 1.15). We will have much more to say about the duty of confidentiality later in this article.

The remaining rules, 3.1 (no frivolous arguments), 5.5 (no unauthorized practice), and 8.3(a) (duty to report misconduct), apply to AI-augmented practice as

1 https://www.aira.org/aira/standards (new coverage on AI beginning at paragraph 42).

they apply to traditional practice. There is no special dispensation because a lawyer used AI in their work.[2]



The AIRA Code (https://aira.org/aira/ethics) mandates high standards of professionalism similar, in many respects, to the ABA Model Rules. Please reacquaint yourself of those standards, now with an eye toward the challenges the use of AI may pose. These standards are:

- Competence
- Confidentiality
- Integrity
- Objectivity
- Due Care.

The AIRA SDBV specifically addresses the use of AI tools by AIRA valuation professionals. The AIRA SDBV recognizes the utility and benefits with responsible AI use and tempers that optimism with a grounded requirement that the valuation analyst must remain accountable and exercise professional knowledge and judgment.[3]

I want to note here that although the Model Rules regulate lawyer conduct (through state bar ethics codes) and the AIRA Code regulates conducting of AIRA members and certificate holders, one profession can, and should, learn from the other as we struggle with how to use AI tools in a responsible and professional manner, ensuring that the professional is accountable and that the human exercises judgment throughout the process in a meaningful and timely manner.[4]

AI TOOL USE AND LIMITS

AI tools in legal practice fall into three broad categories: predictive AI, extractive AI, and generative AI. Each category carries a distinct risk profile.

Predictive AI is already embedded in our daily workflow. We are using predictive AI tools when we use autocorrect, Outlook's suggested replies, the next-word predictions in our email client, and similar functions. We use this class of tools often without thinking about it, almost as if their existence is second nature.

Extractive AI pulls relevant information from existing databases. Westlaw and Lexis have done this for years. A user enters search terms; the system returns cases. The AI does not create; it retrieves. The risks are familiar. If we overlook a case, it is most likely because of poor search construction. We also do not have to worry about the system hallucinating a case. If we rely on a case that has been overturned, we did not check its subsequent history, probably not because it followed an AI prime directive and told us what we wanted to hear.

Generative AI is the category that has upended the conversation. Built on large language models ("LLMs"), these systems do not retrieve data. They are designed to create information based on large training data sets. They generate new text, arguments, and citations. They also hallucinate. This is the category that demands the supervision this article addresses. Responsibility for generative AI errors lies with the professional who uses it, not the vendors who built them. Courts are regularly reaffirming a ground truth: a professional does not have the luxury to delegate accountability or judgment, especially to a machine that exhibits neither.

The present uses of generative AI in our profession are already extensive. Attorneys and restructuring advisors are using it to summarize depositions and documents, assess and critique draft pleadings and briefs, prepare witness examination outlines, aid in

2 The ABA has promulgated Formal Opinion 512. Lawyers and restructuring professionals should take a close look at 512. It provides a thoughtful look at the use of AI tools by lawyers and provides a trove of riches for non-lawyers as well.

3 AIRA SDBV Para. 43-46.

4 Non-lawyers must be careful here. Occasionally, a court disclosure or attestation requirement may apply to non-lawyers as well as lawyers. *See Re: Generative Artificial Intelligence, SCAD-2026-17 (Okla. S. Ct. Mar. 23, 2026) ("All persons filing documents in Oklahoma courts are responsible for the content and accuracy of the documents.").*

conducting due diligence, compare documents, spot issues, translate materials, transcribe audio, unlock "locked" pdfs, and generate marketing content and client communications. Some practitioners are using it to red-team opposing counsel's submissions or expert reports, feeding the other side's arguments into an LLM and asking it to identify weaknesses. The range is broad and expanding.

But the through-line is this: in every one of these applications, the AI proposes and the human disposes. Or at least, humans should. Hallucinations remain a persistent risk. Error rates are declining but are nowhere near zero. AI is powerful to be sure. The responsibility is ours always.

DATA PRIVACY AND CONFIDENTIALITY

Data privacy and confidentiality requirements necessitate a brief discussion of open platforms and "walled gardens." Our choice of AI platform and system impacts are duties of confidentiality in different and meaningful ways.

Open platforms are what I will call the consumer-grade, publicly accessible LLMs. These platforms are designed for broad use. You open a browser, type a query, and get a response. The barrier to entry is near zero. The data you input typically flows back to the provider for training, refinement, or at minimum, storage on infrastructure you do not control. Examples include the free and consumer tiers of ChatGPT, Claude, Google Gemini, and similar services. These are the platforms Sam uses in our hypothetical situation which follows. They are powerful, convenient, and an open window. Anything you upload may be retained, reviewed, or repurposed. The terms of service make this clear if you read them.

Walled gardens or closed systems are what I will call the enterprise systems. The LLM is deployed within a firm's controlled environment, either on premises or in a private cloud with contractual data isolation. Inputs are not used for training. Access is restricted. Audit trails are maintained. The firm negotiates terms, controls retention, and can verify where data lives and who can reach it. Examples include Microsoft's Azure OpenAI Service with enterprise data protection, Anthropic's Claude Enterprise, and purpose-built legal AI platforms like Harvey or CoCounsel that layer domain-specific safeguards on top of closed infrastructure. These are the systems Pat uses in our hypothetical situation which follows. They cost more, they require deliberate implementation, and they reflect a decision to treat AI as professional infrastructure rather than a consumer convenience.

The distinction is not academic. It is the difference between handing your client's confidential material to a stranger in a coffee shop versus discussing it inside your firm's conference room. The tool is similar. The architecture of trust is different.

STORY OF TWO PRACTITIONERS USING AI

SAM'S SITUATION

Sam, a licensed attorney, prepared a draft motion for relief from the automatic stay and objection to use of cash collateral. Sam also prepared a memorandum of points and authorities in support of the motion, and a proposed order granting her request. She used generative AI through an open LLM platform. Based on her experience, it saved 50 hours of work by efficiently combing through an associate's research memorandum and statement of facts, documents and email, proposed affidavits of fact witnesses, and an affidavit and expert report on the value of the underlying collateral. It combined that thorough analysis with AI's own research and generated drafts of the documents listed above. Sam never discussed the use of AI with her client; the thought had never crossed her mind any more than it would have with the use of Google, Westlaw, or MS Word.

Sam was well versed in the applicable law and had a good understanding of the facts in the case. Nevertheless, we are considering this story because something bad happened. That "something" is that Sam took a few shortcuts. She did not follow up on reading all the cases she cited (although she was familiar with the legal propositions they purportedly advanced and the doctrines they articulated). She also did not discover that the cases she cited relied, in turn, on other cases, some of which did not exist. Finally, Sam used "quotes" in her submissions to the court drawn from the affidavits she submitted involving precise language that could be found nowhere in the affidavits. She missed all of this. Opposing counsel did not. The court entered an order to show cause why sanctions should not be imposed on Sam. The court set a prompt hearing.

At the hearing, the court found that Sam had relied on (i) one case that ***did not*** exist and (ii) one case that ***did*** exist but itself had relied on a case cited in that opinion that ***did not*** exist. Her motion and memo also contained quotations from fact witness affidavits and an expert affidavit that appeared nowhere in

the relevant affidavits; however, the substance of the language attributable to them was arguably no different than the actual language in the affidavits.

Before we ponder the challenges of the scenario, we should recognize a few additional facts. Sam did read the drafts thoroughly. She said as much, and we believe her. We also believe this was not purposeful. I think that we can all admit that mistakes happen, errors happen. Some of those errors can be harmful, some harmless. The problem is not in making mistakes or committing errors; the problem is that the harm is in the message, that is, speed over accuracy, optimization over professionalism, and convenience (economic and personal) over integrity. From that day forward, all that becomes part of Sam's legacy.

Competence. Sam was well-versed in the law and the facts. The failure was in not verifying AI's output. Competence under the ABA Model Rules or AIRA Code is not just knowing the law or applicable standards or methods; it is knowing that the cases you cite or authority you relied on exist and the quotes you attribute to witnesses appear in their affidavits or depositions. She relied on AI's research without confirming it. That is not competent practice; that is delegation of task and authority without oversight.

Integrity. Sam did not intentionally mislead the court. But integrity is more than a good intent; it is about the representations you make. When she filed a brief citing a case that did not exist, she represented to the court that she had read and verified that authority. She had not. The representation was false. Integrity requires that your word means something; and her word, on that filing at that time, did not mean much.

Due Care. Due care sits between competence and integrity. Sam read the drafts thoroughly. But reading, without checking, is not enough. Due care means asking: Did I pull every case? Did I confirm every quote? Did I trace every proposition to its source? She did not. She took shortcuts. Speed over accuracy. That is as clean a definition of failing to exercise due care as I can offer.

Confidentiality. Sam never discussed her AI use with her client. She uploaded case documents, including fact witness affidavits, an expert report on collateral valuation, and an associate's research memorandum, into a commercial LLM platform. She did not check the platform's data retention policies. She did not consider whether privileged or work-product-protected material was being exposed to a third party. Furthermore, she did not obtain client consent. That is a failure of confidentiality. In bankruptcy practice, where protective orders, confidentiality agreements, and commercially sensitive information are routine, it is a serious one.

Court Disclosure. Sam failed to disclose her AI use to the court. She treated it like using Google or Westlaw. But many courts now require attestations identifying AI use, certifying accuracy verification, and certifying no disclosure of confidential information. Even where standing orders don't explicitly require it, the trend is clear that disclosure may be good practice even if not necessary. Candor with the tribunal is never optional.

PAT'S SITUATION

Pat, also a licensed attorney, prepared the first draft of an objection to plan confirmation, along with a brief in support of that objection, using generative AI. Several associates, working under Pat's supervision, read over 15 depositions and then used an AI platform to summarize those depositions. Associates that undertook the legal research used Westlaw with the AI option elected. One associate prepared an Excel spreadsheet populated with financial data and used the Excel AI option to write functions to analyze the data. Affidavits were prepared the old-fashioned way, with many hours devoted to their preparation, revision, and finalization. Pat and her associates prepared witness lists, including the proposed order of calling witnesses and the points that Pat would seek to make with those witnesses, with reliance on AI.

Pat's senior associate took the lead on the second and third drafts, with the use of AI to check spelling, grammar, and citation style and format. That attorney also asked AI to critique the papers and identify any weaknesses in logic, structure, or doctrinal application.

Pat then took over primary authorship again. She reviewed every sentence, pulled every case citation, confirmed sources, and ensured that all the appropriate AI use disclosures were made in the submitted papers to the court.

As in the example with Sam, opposing counsel discovered errors. One of the cases relied on by Pat itself cited a case for an important proposition that did not exist, that is, a hallucinated case. Additionally, one of the cases cited by Pat had the correct volume, initial page number, and date cited, but the wrong case heading and jump/pin cite. And, like the example with Sam, one of the quotes attributed to one of the experts was incorrect, with a few jumbled words in the paragraph-long quote.

A few more facts worthy of our consideration: Pat and team documented the entire use of the AI process, visited the use of AI with their client,

checked on disclosure risk with their client and with the terms of the confidentiality orders, verified terms of service with the AI provider, and made all required attestations and disclosures in the appropriate submissions. Pat's firm also developed a policy for the use of AI, and Pat ensured that all team members were aware of that policy.

Well, what will be Pat's legacy? Pat's errors were smaller, fewer, and traceable. But they existed. I say again – it is not about making errors. Errors, both human and mechanical, existed long before AI was a spark in Hal's one eye. It is about who is the pilot and who is the passenger.

GUARDRAILS FOR ETHICAL AI USE

What does piloting look like in practice? It looks a lot like the following practices, beginning with some foundational observations. The use of AI does not change duties; it amplifies them. Professionalism requires intentionality. AI use just raises the stakes and accelerates consequences, both good and bad. AI is a powerful tool, and it is here to stay. You will not be outperformed by AI; our professions and institutions require accountability and judgment, attributes that AI cannot shoulder. You will be outperformed by a professional that stays true to the ground truths of accountability and judgment ***and*** uses AI.

Firms should consider implementing policies, training, and oversight, including citation checks, disclosure of AI use, and task-specific authorization. Local rules vary; some courts require certifications of no AI use or verification of AI-generated content. Supervision, documentation, and internal review are essential to mitigate risks and meet ethical standards.

At a firm or professional policy level, a few practical considerations in the use of AI should include a consideration of the following:

- **Human review** of all AI-assisted documents
- **Confidentiality screening** before entering client data
- **Understand your AI** – research quality (level of bias and mistakes) and security
- **Use trusted databases and LLMs**
- Talk with your AI representative about **Terms of Service**
- **Quality control checklists**
- **Contemporaneous audit trail**, logging all AI use
- **Manage client expectations**
- **Retainer agreement disclosures and discussion** regarding AI use
- **Transparent communication** with courts and clients
- **Written guidelines** for staff
- **Compliance** with all controlling ethics opinions and standing orders
- **Ongoing training** for all team members

When AI hallucinates a case citation, it has not lied to you. It has no concept of truth. It simply generated the statistically probable next token in a sequence trained on millions of legal documents. The harm to your client, your reputation, and the jurisprudential record is real. The intent behind it is nonexistent. That is not a defense of AI. It is what makes AI more dangerous than a dishonest human. A dishonest human knows they are lying and can be confronted. AI cannot be confronted, shamed, or cross-examined. It can only be checked by a human who understands that checking is now a non-negotiable part of professional practice.

The same dynamic plays out across every domain we named. AI predicts what a caring response sounds like without ever caring. It generates the form of empathy ("I understand this must be difficult for you") without any interior experience of difficulty, or understanding, or you. It is a mirror with nothing behind it. And that is not a reason to reject the mirror. It is a reason to stop mistaking it for a companion, a colleague, an associate, or a friend. No, AI cannot be your associate.

Sobriety, here, means this: use the tool for what it is, never for what it seems to be. The moment you feel understood by it, check yourself. The moment you trust it, verify it. The moment it feels like a colleague, remind yourself that a colleague can be held accountable and a language model cannot. That is the awareness your conclusion needs; not fear, not awe, but the clear-eyed recognition that we are the only moral agents in the room, and that responsibility cannot be delegated to something that has never made a choice. ***AI deceives without intent, harms without malice, predicts without understanding, and purports to care without empathy***. Remember that.

Behind these policy considerations is this sobering thought that you should print and keep by your computer. ***AI is a machine that performs the outputs of moral reasoning without ever having done the***



reasoning. And that distinction, between performing judgment and exercising it, is the entire game.

THE AGENT PROBLEM

As I write this article, I am again disturbed by advances in AI that may be outpacing our cycles of ethics and professionalism in the work that we do.

For example, each Monday, I turn on my computer and the agent I created in one of the commercial LLM platforms has run a review of all available sources over the prior week on bankruptcy taxation. I am happy to share the prompt if you are interested and you too could initiate this service. It is good, very good.

This is an area I have studied, taught, written on, and practiced in for over 40 years. I know the subject well. When I first started this automated weekly report, at the AIRA conference back in 2025, it was pretty good. But the distance between it and me was vast. As of today, that window – what my students call, affectionately I hope, the "Williams Window" – is presently very narrow. It is still there, but AI rarely misses anything of direct interest; AI does occasionally miss the margin of doctrine or practice. It does this work while I sleep. It cites all authorities and shares hyperlinks, both primary and secondary, and shares its key takeaways of the week. It is scary fast. I think that the Window will always be there – humans do human and judgment still means something. But that Window will continue to shrink to the point that I am afraid that institutions may no longer care about, or recognize, the difference.

I call it an agent, not a tool, because it acts. It does not wait for me to ask a question; it initiates. Tools respond. Agents read, filter, synthesize, and deliver conclusions with citations. The distinction matters.

Consider the trajectory. My agent still requires me to read its output and exercise judgment. The Window is narrow, but it exists. Now consider the next logical step, one already available on commercial platforms: an agent that reads opposing counsel's email, reviews the attached documents, drafts a substantive response, and sends it. With or without your review. Even while you sleep.

Or consider an agent that monitors court dockets in real time, summarizes filings before you have even received notice, and drafts your response. That response will be well crafted, complete with citations, argument structure, and proposed exhibits. It learns your style. It writes like you. It knows your cases (and pulls from them) and your go-to arguments (and rests



on them). It sounds like you. It does not get tired or distracted, and it certainly does not bill by the hour.

The ethics questions here are not subtle:

Supervision. Rule 9011 (if it is a court filing) and the ABA Model Rules or AIRA Code require that the professional signing the filing or any formal or informal response has exercised independent judgment. If an agent drafts a response that you review for thirty seconds before filing, have you exercised judgment? What about ten seconds? What about no review at all, such as a notification on your phone that "Response sent to opposing counsel in In re Debtor at 3:47 AM"? And, seriously, what does it even mean to supervise an agent?

Confidentiality. An agent that reads opposing counsel's correspondence necessarily processes information that may be privileged, confidential, or subject to protective orders. Where does that data live? Who can access it? What happens if the agent on the other side of the case is, effectively, talking to your agent, two autonomous systems negotiating while their human principals sleep?

Attribution and candor. Standing orders increasingly require disclosure when AI drafts or assists in drafting any filing. But what about the agent that never touches the text of your brief? I am referring to the agent that reads the docket, identifies the three most promising arguments, and recommends which expert to depose first? It helped shape your strategy, theory of the case, and the framing of the issues. It did not write a sentence of your pleading, but it may have influenced what your pleading would argue. Is that disclosure-triggering? The current orders do not appear to reach it. The ethical obligations of candor and transparency might require disclosure if a duty to disclose exists. We simply must carefully read any standing disclosure orders. A client who asks "how did you decide to pursue this strategy" deserves an honest answer — and "an autonomous agent told me while I was asleep" is an answer that should give us pause.

The adversary process. Our system presumes human adversaries. Human lawyers get tired, make judgment calls, and exercise discretion. An autonomous agent has no such limitations. It can file at 3:47 AM, respond to your response within minutes, and iterate through arguments faster than you can read them. This is not science fiction. The technology exists. The question is whether our ethical frameworks — designed for human-paced litigation — can absorb it.

I am not arguing against agents. I use one every week, and I find it invaluable. But I use it with full awareness of what it is and is not. I read its output carefully, I verify its citations, and I treat it as a starting point for my own analysis, never a substitute. The Window is small, but I guard it.

The risk is not that agents will become better than us at discrete tasks. They already are, in many respects. The risk is that we will stop noticing the difference, that the Window will close not because AI crossed it, but because we stopped looking. I call this concern "professional and institutional erosion."

And here is what keeps me up at night: the professional who deploys autonomous agents without even recognizing that an ethical question exists. Not the bad actor who knowingly cuts corners. The good-

faith practitioner who simply never considered that an agent reading emails and drafting responses raises issues that a Westlaw search does not. That good-faith practitioner needs this conversation.

COURT DISCLOSURE REQUIREMENTS

The landscape is fragmented but the direction is clear. Over 300 standing orders and local rules now govern AI use in federal courts, and that number grows monthly. Some require disclosure of AI use. Some require certifications of accuracy verification. A few prohibit AI-generated content entirely absent prior approval. One welcomes the use of generative AI, reaffirms the fundamental principle that all persons who file court documents are responsible for content and accuracy, and clearly states that a disclosure requirement is unnecessary.[5] The practitioner's first obligation is simple: check the local rules before every filing. What was permissible in one district last month may be prohibited today.

In the bankruptcy context, several courts have led the way. Most other bankruptcy courts continue to rely on Rule 9011, which requires attorneys to certify that filings are accurate, without AI-specific supplementation. But that baseline is itself demanding: Rule 9011's "reasonable inquiry" standard now necessarily includes inquiry into whether AI-generated content is real.

The Northern District of Texas illustrates the emerging consensus. Its local rule (Civil Rule 7.2 – Briefs) requires that any brief prepared using generative AI disclose that fact on the first page.[6] The Western District of Oklahoma goes further, mandating an attestation that identifies the specific program used and the portions of text it generated, and certifies both that the document was checked for accuracy using traditional legal databases and that no confidential information was disclosed to an unauthorized party.[7]

Remember, AI has no duties, takes no oath, and has no sense of responsibility or accountability. We do. And the standing orders multiplying across the judiciary are best understood not as new burdens but as reminders of obligations that existed all along, now rendered explicit because technology makes them easier to forget (my concern of erosion).

Practitioners seeking to track this rapidly evolving landscape should consult the AI Use in Bankruptcy: Court Orders, Rules, and Guidelines Tracker maintained by Joseph R. Tiano, Nancy B. Rapoport, and Joseph D. Wilson, available through Practical Law Bankruptcy & Restructuring. It is the most comprehensive resource currently available.[8]

The AIRA SDBV contains a new disclosure requirement regarding the use of AI. AIRA SDBV paragraph 46 provides:

> The Valuation Analyst should disclose in writing their reliance on AI as part of the engagement's source information, list of documents relied upon, within footnotes, or in the credits to tables and exhibits. The Valuation Analyst should state the level of reliance, if any, being assumed by the Valuation Analyst on the output of AI tools.

Sam plainly violated all three emerging court requirements related to AI use. On disclosure, she made no attestation, identified no AI use, and treated the platform as though it were no different from Westlaw, when standing orders in multiple jurisdictions now require exactly the kind of disclosure she omitted. On competence, she failed to verify the AI's output: she did not pull the cases, confirm the quotes, or check the citations. That is not competent practice under ABA Model Rule 1.1 or the AIRA Code[9] if a financial expert were submitting reports to a bankruptcy court like the monthly operating reports ("MORs") in a similar manner; it is delegation without supervision. On confidentiality, she uploaded fact witness affidavits, an expert valuation report, and an associate's research memorandum into a consumer-grade LLM platform without checking its data retention policies, considering whether privileged material was being exposed to a third party, and obtaining client consent. The thought never crossed her mind. That is a textbook confidentiality failure, and in bankruptcy practice it is a serious one where protective orders and commercially sensitive information are routine.

Pat is the harder case, and she deserves the harder answer. On disclosure, she did what the rules

5 Re: Generative Artificial Intelligence, SCAD-2026-17 (Okla. S. Ct. Mar. 23, 2026).

6 https://www.txnd.uscourts.gov/rules-and-orders.

7 IN RE: PLEADINGS USING GENERATIVE ARTIFICIAL INTELLIGENCE, Gen. Order No. 23-01 (Jul. 25, 2023) (Sarah A. Hall, Chief US Bankruptcy Judge and Janice D. Loyd, US Bankruptcy Judge) (emphasis added).

8 *AI Use in Bankruptcy: Court Orders, Rules, and Guidelines Tracker*, by Joseph R. Tiano, Legal Decoder, Inc., Nancy B. Rapoport, University of Nevada, Las Vegas, William S. Boyd School of Law, Joseph D. Wilson, Bevilacqua PLLC, with Practical Law Bankruptcy & Restructuring: https://content.next.westlaw.com/practical-law/document/Id61f155a12eb11ef8921fbef1a541940/AI-Use-in-Bankruptcy-Court-Orders-Rules-and-Guidelines-Tracker?viewType=FullText&transitionType=Default&contextData=.

9 The AICPA applicable code section appears more demanding and should be consulted by our CPAs.

required: she documented her AI use, discussed it with her client, checked disclosure risk against the confidentiality orders in place, and made all required attestations in her filings. She complied. On competence, she verified every case she cited, confirmed every source, and reviewed every sentence. She was the pilot. On confidentiality, she used enterprise-grade systems with contractual data isolation, she understood the terms of service, and she obtained informed client consent. She did the work.

And yet the judicial archaeological problem I discuss in greater detail below caught her anyway. A case she correctly cited itself relied on hallucinated authority that the prior court had not caught. Pat checked her cases; she did not trace every citation chain to its source. Almost no practitioner would have. That is not a competence failure in any conventional sense. Rule 1.1 does not demand omniscience, and the "reasonable inquiry" standard of Rule 9011 has never been understood to require infinite regress. Pat exercised the diligence the profession expects. The fact that it wasn't enough is not an indictment of Pat. It is an indictment of the situation we now find ourselves in where the permanent legal record can be silently corrupted by errors no reasonable practitioner would detect. I feel for her, too. She did everything right, and the ground shifted beneath her anyway.

That, in the end, is why the archaeological problem matters. It is not about punishing practitioners who fail to trace citations three layers deep. It is about recognizing that our system of precedent depends on an assumption of reliability that AI has quietly broken and that until the institutions catch up, even the most diligent among us are operating with incomplete information. Pat's legacy should be secure. The system she practiced in may not be.

THE ARCHAEOLOGICAL PROBLEM THRUST UPON US

There is one error discussed above that both Sam and Pat missed, and it deserves separate treatment because it extends far beyond their cases. Both relied on a real case (a published opinion, properly cited, sitting respectably in the Federal Reporter) that itself had relied on a case that did not exist. The citing court had used AI, or a clerk had, or a law clerk the year before had, or counsel in a brief before the court had, which went uncaught by opposing counsel. Someone somewhere in the chain had accepted a hallucination, and the court published it. The ghost citation entered the permanent record. Westlaw and Lexis picked the case up and included it in their databases. Subsequent courts cited it. Practitioners relied on it. The error compounded.

Sam never checked. Pat checked her cases but did not trace the citation chain. Remember that Pat pulled the cases she cited, confirmed they existed, read them, and stopped. Neither Pat nor almost any practitioner would have gone further, unless there was a certain novelty about the line of precedent or the case. Before AI, you did not need to. A published opinion citing authority was itself a form of verification. The system depended on that assumption. AI breaks that assumption.

This is what I mean by the jurisprudential archaeological record. The law builds itself layer by layer, each opinion resting on the ones before it, citations forming the stratigraphy of doctrine. A hallucination that enters that record does not just mislead one court in one case. It becomes part of the foundation on which future decisions are built. It is an error with a very long half-life.

How far down the rabbit hole must we go? The honest answer is that we do not yet know. It is unreasonable to expect every practitioner to trace every citation to its source, and then trace those sources to their sources, in infinite regress. But it is equally unreasonable to accept a system in which the permanent legal record can be silently corrupted by machine-generated falsehoods that no human ever verified.

The solution, I suspect, lies not in individual diligence alone, though that is essential, but in institutional response. Courts must develop processes for verifying AI-generated or AI-influenced opinions before publication. Legal databases must develop tools to flag citation chains that terminate in known hallucinations. And the profession must recognize that the reliability of published authority, which we



have taken for granted for centuries, can no longer be assumed.

Until then, the practitioner's obligation is at minimum this: when you cite a case, pull it. And when that case relies heavily on a single authority for a key proposition, pull that one too. It is not a complete solution. But it is a start, and it is more than either Sam or Pat did.

CONCLUSION

Perhaps the greatest risk is not AI's power, but our inability to foresee, respond, and adapt wisely to what it creates. It is this unsettling creative act that leaves most of us queasy about AI. I have suggested throughout this, and the prior article, that the way to address this uneasiness is through resort and reaffirmation of our foundational attributes: legacy, leadership, ethics, and professionalism. But after the ground we have covered, I owe you something more concrete than reassurance.

Sam was not a bad lawyer. She was a competent professional who took shortcuts she didn't recognize as shortcuts. Her legacy now carries an asterisk she can never remove. Pat did almost everything right and still encountered errors no reasonable diligence would have caught. The archaeological problem means that some of those errors are now buried in the permanent record, waiting to mislead the next practitioner who trusts a published opinion. And the agent problem means that the next generation of these dilemmas will arrive faster, with less human involvement, and with ethical questions most practitioners have not yet begun to ask. I share these observations not to honor despair, but to honor sobriety.

What separates Sam from Pat is not the absence of error. What separates them is who was the pilot and who was the passenger. Sam let the tool drive. Pat drove the tool. And when errors appeared, Pat could account for her process, trace her steps, and stand behind her work. Sam could not. That is the difference between a professional legacy that endures and one that erodes.

The key to good character, leadership, leaving a wonderful professional legacy, and living a well-lived life is not beyond our reach. That key is to understand why we are here. As I have noted before, "The two most important days in a person's life are the day he is born and the day he realizes why he was born," often attributed to Mark Twain. That sentiment, timeless as it is, hits differently as you grow in this field. Be meaningful, impactful, and reflective about who you are. Measure your true self. Make, live, and enjoy the journey. It is not just about what you do, but how you do it, and the lasting mark you leave on the world. In the delightful words of wisdom shared with me by my mentors, many within this organization, in the end, a legacy is measured not by title or stature, but in the hearts of those who walk with you, who speak of you when you are gone.

AI will change our tools. And aspects of AI keep me up at night, likely not for the reasons that may typically come to mind. But it will not change the core moral truth of our profession: We are here to serve with honor, to lead with integrity, and to leave something meaningful behind.

RESIDENT SCHOLAR



Jack F. Williams, PhD, JD, CIRA, CDBV, CTP
Georgia State University

AIRA Scholar in Residence Jack Williams is a professor at Georgia State University College of Law and the Middle East Studies Center. His current teaching interests include accounting and finance for lawyers; admiralty and maritime commerce; American Indian law; archaeology; bankruptcy and business reorganization; board governance and business ethics; business valuations; corporate finance; counterterrorism, intelligence, and national security; forensic investigations; Islamic law and finance; mergers and acquisitions; remedies; and statistics and the law.



BEFORE AI SHAPES THE RESTRUCTURING ANALYSIS: FOUR CHECKS FOR AIRA PROFESSIONALS



GLEB TSIPURSKY, PHD, DISASTER AVOIDANCE EXPERTS

AIRA members work where small analytical errors can become expensive fast. In restructuring and insolvency engagements, teams build short-term cash forecasts, review schedules and statements, compare creditor claims, organize data room records, prepare lender and board updates, and pressure-test options under severe time constraints. AI can accelerate parts of that work, but speed only creates value when the output stays tied to the underlying evidence and a qualified professional owns the decision.

The opportunity is substantial. A model can summarize a stack of contracts, turn meeting notes into an issue list, compare versions of a cash-flow narrative, or draft a first-pass explanation of a variance. The risk comes when polished language hides a weak assumption, an omitted exception, or a source that has changed since the model saw it. AIRA professionals can reduce that risk with four checks that fit naturally into restructuring workflows.

1. DEFINE THE DECISION BEFORE OPENING THE TOOL

Start with the consequential decision, not the prompt.

Suppose a team is updating a 13-week cash flow forecast. The useful question is not "What does AI say about liquidity?" It is "Which assumptions changed, what evidence supports each change, and who can approve using the revised assumption in the forecast?"

The same principle applies to three common workflows: reviewing creditor and claim information, building a lease or contract matrix, and preparing a lender, board, or stakeholder update. Before using AI, write one sentence that names the decision the work product will support. Then identify the controlling source, the materiality threshold, and the reviewer.

This matters because restructuring work often relies on formal records with specific legal and financial significance. The U.S. Courts bankruptcy forms include schedules of assets and liabilities, creditor claims, executory contracts, statements of financial affairs, and other structured records. Those forms make a useful reminder that the source record, not the fluency of a generated summary, controls the analysis.

2. KEEP THE SOURCE BESIDE THE OUTPUT

AI should never turn a source-backed fact into an orphaned statement.

For any consequential extraction or summary, keep a compact evidence trail next to the output. A simple table can include five fields: source document, date or version, extracted fact, unresolved conflict, and reviewer. In a claim review, that might mean linking the claim register entry and the relevant supporting document. In a contract matrix, it might mean preserving the exact clause and amendment that support the summarized obligation. In a cash-flow variance review, it might mean keeping the bank data, operating report, and management explanation together.

That discipline fits the reporting environment AIRA members already navigate. The U.S. Trustee Program requires many Chapter 11 debtors-in-possession and trustees to file standardized monthly operating and post-confirmation reports using uniform, data-embedded forms. When professional work already depends on structured, update-sensitive reporting, AI output should preserve that same traceability.

A practical rule is simple: if a reviewer cannot move from the sentence back to the controlling evidence in under a minute, the output is not ready for a consequential handoff.

3. PUT A NAMED HUMAN AT THE RELEASE GATE

"Human review" is too vague to be a control.

The person who releases an AI-assisted work product should have authority and subject-matter competence for that specific handoff. A junior analyst can check whether a model copied numbers correctly. That does not automatically make the analyst the right person to approve a revised liquidity assumption, a valuation conclusion, a legal characterization, or a statement that will go to a lender or court.

Define the release gate before the work begins. For example:

- For a forecast narrative, name the financial professional who owns the assumptions.
- For a contract or lease summary, name the lawyer or restructuring professional responsible for the interpretation.
- For a board or creditor communication, name the person who owns both the facts and the audience-facing message.

Sensitive information deserves an additional boundary. AIRA's current privacy policy describes membership, event, business, and payment-related information as protected personal information (PPI) and limits access to authorized systems and personnel. Engagement teams should apply an equally explicit rule to client, employee, creditor, and transaction data: decide what information may enter a tool before anyone pastes it into a prompt.

4. LOG EXCEPTIONS, NOT JUST TIME SAVED

The most useful AI metric in restructuring work may be the exception log.

For 30 days, track every consequential case in which the first AI output required a meaningful correction. The log can be short: workflow, source, proposed output, exception, reviewer, correction, and downstream consequence.

Look for patterns. Did the model miss amendments? Confuse actual results with forecasts? Collapse different legal entities? Treat a preliminary claim amount as final? Summarize a superseded docket entry? Invent a reason for a variance that the source did not establish?

Those exceptions reveal where the workflow needs a stronger control. They also help separate productive uses from merely impressive demonstrations.

NIST's Generative AI Profile for the AI Risk Management Framework recommends managing generative AI risks in ways aligned with organizational goals, legal and regulatory requirements, and risk priorities. An exception log translates that broad principle into an operational habit: measure where the tool creates rework, where it needs tighter boundaries, and where professional judgment remains indispensable.

The standard is traceable judgment. **AIRA professionals do not need to reject AI to protect professional judgment. They need to make the judgment visible.**

Define the decision before prompting. Keep the controlling source beside the output. Put a named professional at the release gate. Log the exceptions that reveal where the workflow breaks.

That approach lets teams use AI for what it does well: drafting, organizing, comparing, and accelerating review, without allowing a fluent answer to outrun the evidence. In restructuring work, the strongest AI workflow is the one that makes it easier for a professional to explain not only what the team concluded, but exactly why the conclusion deserves to be trusted.

Adapted from: The Psychology of AI Adoption at Work: From Resistance to Results (Georgetown University Press, 2026) https://disasteravoidanceexperts.com/aibook

ABOUT THE AUTHOR



Dr. Gleb Tsipursky
Disaster Avoidance Experts

Gleb, a behavioral scientist called the "Office Whisperer" by The New York Times, helps tech-forward leaders stop overpaying for AI while boosting engagement and innovation. He serves as the CEO of the AI consultancy Disaster Avoidance Experts (https://disasteravoidanceexperts.com). He has written eight books, including The Psychology of AI Adoption at Work: From Resistance to Results (Georgetown University Press, 2026). Gleb earned his PhD in the History of Behavioral Science at the University of North Carolina at Chapel Hill, his MA at Harvard, and his BA at New York University.

CohnReznick

We help clients survive crisis and innovate through disruption.

With decades of industry and situation-specific experience, our professionals identify and implement financial and operational strategies that have improved clients' processes, profits, and recovery, resulting in increased value and decreased risk for stakeholders.

Member of Nexia

CohnReznick is an independent member of Nexia



BRG

BRG is a proud sponsor of the AIRA

BRG Corporate Finance is a full-service financial advisory practice powered by a team of top-tier finance and business professionals with a broad range of invaluable real-world industry and operational expertise. BRG advises in some of the most complex corporate domestic and international matters, from turnaround and restructuring to performance improvement and transaction advisory. Informed by a detailed understanding of our clients' business and key challenges, we help devise and implement strategies to maximize value.

THINKBRG.COM

ARTIFICIAL INTELLIGENCE ACROSS THE PRIVATE EQUITY LIFECYCLE: FROM DEAL SOURCING TO VALUE CREATION

MATT THOMPSON, SKYVIEW EQUITY

INTRODUCTION

Artificial intelligence is transforming every stage of the private equity lifecycle—from sourcing investments and conducting due diligence to executing acquisitions, supporting portfolio companies, and communicating with investors. In distressed buyouts and corporate carveouts, AI helps teams analyze large volumes of information quickly so they can spend more time applying professional judgment. Private equity has always been a business of making better decisions faster than competitors, and AI is increasingly becoming an important enabler of that objective.

Rather than replacing experienced investors, operators, attorneys, or consultants, AI improves productivity by accelerating research, summarizing documents, organizing findings, and drafting first-pass analyses. Human judgment remains at the center of every investment recommendation.

Leveraging AI is becoming a crucial tool for private equity professionals. Like any tool, it can be used correctly or incorrectly. The key is to make sure the human judgment always remains at the center of the analysis and recommendations. The large recent change was the launch of generative AI large language models and applications. Generative AI enabled the creation of novel text, images, video, and code for individuals and firms.

THE INVESTMENT PROCESS BEGINS LONG BEFORE A LETTER OF INTENT

AI expands—not replaces—traditional sourcing. Firms can continuously monitor:

- Corporate divestitures and carveout opportunities
- Bankruptcy proceedings and restructurings
- Activist campaigns
- Earnings calls and SEC filings
- Strategic buyers and acquisition targets.

AI can also generate market maps, competitive landscapes, technology summaries, and industry overviews. Continuous monitoring allows firms to revisit sectors regularly, identify emerging themes, and build relationships long before formal sale processes begin.



> **"In diligence, AI's real value isn't summarizing the data room faster — it's reading every contract, every customer agreement, and every AI claim in the stack so the deal team can spend its time on judgment instead of extraction. The firms winning right now are the ones treating AI as a way to expand what gets examined, not just compress the timeline."**
>
> **John Shaw, PraxisIQ**

BETTER DECISIONS BEGIN WITH BETTER DUE DILIGENCE

Virtual data rooms often contain thousands of documents. AI helps summarize, categorize, and prioritize these materials so investment professionals can focus on interpreting results instead of manually organizing information. AI can be very useful for the following types of analysis and work product:

- Summarize customer, vendor, employment, and software agreements
- Organize findings by Finance, Legal, HR, IT, Operations, and Sales
- Highlight missing information and follow-up questions
- Search litigation, regulatory matters, and public filings
- Review patents, trademarks, and intellectual property
- Draft diligence summaries and investment memoranda.

Commercial diligence benefits through rapid market research, customer segmentation, competitor analysis, and technology assessments. Financial teams accelerate three-statement models, LBO analyses, purchase accounting, debt schedules, and working-capital reviews. Legal and IP diligence benefit from AI-assisted contract review, litigation searches, and patent analysis. Experienced professionals remain responsible for validating every conclusion.

John Shaw is the founder of PraxisIQ, a firm that helps PE firms with AI due diligence. Shaw commented, "The biggest risk in a software deal today isn't a competitor — it's that the target's product is a feature an AI-native entrant can rebuild in a quarter. Diligence has to answer a new question: is this company's moat its technology, or just the workflow friction AI is about to remove?"

FROM PROMPTING TO AGENTIC AI

Leading firms are moving beyond one-time prompts toward Agentic AI. Specialized AI agents can perform coordinated, multi-step workflows and continuously update analyses. Eventually human teams will be supported by types of agents including:

- **Commercial Agent** – markets and competitors
- **Financial Agent** – models and Key Performance Indicators ("KPIs")
- **Legal Agent** – contracts and litigation
- **Technology Agent** – tech stack and technical debt



- **Operating Agent** – carveout execution and 100-day planning.

Unlike a single prompt, Agentic AI can revisit analyses as new information becomes available, monitor competitors and regulations, and prepare investment committee materials with limited manual intervention.

EXECUTION CREATES VALUE

Corporate carveouts require separating systems, people, contracts, and shared services while maintaining business continuity.

- Day One readiness
- Transitional Services Agreement ("TSA") planning
- Project Management Office ("PMO") workstreams
- Integration plans
- 100-day initiatives.

AI organizes dependencies across finance, HR, IT, procurement, cybersecurity, and operations, helping deal teams begin execution planning earlier and reducing separation risk.

CASE STUDY: SKYVIEW EQUITY'S ACQUISITION OF UPSERVE

During Skyview Equity's acquisition of Upserve from Lightspeed Commerce in 2026, AI accelerated both diligence and integration planning.

- Summarized customer and vendor contracts
- Reviewed software licenses
- Accelerated industry and competitor research
- Prepared management questions
- Drafted sales collateral and product messaging
- Supported board and investor presentations
- Assisted with early 100-day planning.

Combined with the expertise of Skyview's investment and operating professionals, AI reduced time spent on repetitive analysis while allowing the team to focus on strategic decisions and value creation.

VALUE CREATION DOES NOT END AT CLOSING

AI continues to create value throughout portfolio ownership.

- Board reporting and KPI summaries
- Competitive monitoring
- Customer sentiment analysis
- Technology stack reviews
- Technical debt identification
- Code refactoring and documentation
- Fund names, logos, LP materials, and investor communications.

Engineering teams are increasingly using AI to improve software development velocity and modernize legacy applications, while investor relations teams use AI to improve the consistency of fundraising and portfolio communications.

GOVERNANCE MATTERS

AI must complement, not replace, professional judgment. Confidential virtual data room information should remain within enterprise AI environments with encryption, audit logging, and governance controls. Many firms are adopting secure enterprise AI or retrieval-augmented generation environments to protect confidential information while still benefiting from AI-assisted analysis.

CONCLUSION

Private equity has always rewarded firms that make better decisions and execute more effectively. AI amplifies those fundamentals by helping professionals evaluate more opportunities, complete diligence faster, and execute value creation plans more efficiently while keeping experienced human judgment at the center of every investment decision. Like Excel before it, AI is becoming a core competency for investment professionals. AI is becoming a great equalizer. It is letting smaller, emerging PE funds have more capabilities to compete with funds with larger teams.

ABOUT THE AUTHOR



Matt Thompson
Skyview Equity

Matt focuses on corporate carveouts, operational value creation, and applying artificial intelligence across the private equity lifecycle at Skyview Equity, a private investment firm with over 20 years of experience executing carveout transactions. Previously he held leadership and advisory roles at The Gores Group, Alvarez & Marsal, FTI Consulting, PwC, and Amazon Web Services.



TOP 10 AI PROMPTS FOR PRIVATE EQUITY PROFESSIONALS

These prompts are designed to help private equity investment teams accelerate sourcing, diligence, investment decision-making, carveout planning, and value creation, while maintaining experienced human oversight.

1. INVESTMENT THESIS

You are a Partner at a private equity firm evaluating this company for acquisition. Develop a concise investment thesis including the three primary reasons to invest, the five largest risks, downside scenarios, valuation considerations, and the top value creation opportunities.

2. COMMERCIAL DUE DILIGENCE

Act as a commercial diligence consultant. Prepare an industry overview including market size, growth rate, competitive landscape, customer segmentation, pricing dynamics, technology trends, AI disruption risks, and likely strategic buyers.

3. VIRTUAL DATA ROOM SUMMARY

Review the contents of this virtual data room. Organize findings by Finance, Legal, HR, IT, Operations, Sales, and Compliance. Summarize key risks, identify missing information, and recommend follow-up diligence questions.

4. FINANCIAL ANALYSIS

Review the financial statements and prepare an initial financial assessment including EBITDA normalization adjustments, working capital observations, cash flow risks, debt capacity, valuation considerations, and follow-up diligence questions.

5. LEGAL, LITIGATION, AND REGULATORY REVIEW

Review contracts and publicly available information to summarize customer and vendor agreements, identify assignment restrictions, change-of-control clauses, pending litigation, regulatory matters, environmental issues, and employment disputes requiring further review.

6. TECHNOLOGY AND INTELLECTUAL PROPERTY

Evaluate the company's technology stack, software architecture, patents, trademarks, open-source software usage, technical debt, cybersecurity posture, and competitive intellectual property position. Highlight risks and modernization opportunities.

7. CARVEOUT READINESS

Assume this business will be separated from its parent company. Identify shared services, TSA requirements, Day One readiness risks, stranded costs, operational dependencies, and priorities for the first 100 days.

8. MANAGEMENT MEETING PREPARATION

Based on the diligence materials, generate the 25 most important questions management should answer before submitting a final Investment Committee recommendation.

9. 100-DAY VALUE CREATION PLAN

Prepare a detailed 100-day plan covering operational improvements, pricing opportunities, customer retention, technology modernization, AI initiatives, organizational changes, procurement savings, and KPI recommendations.

10. AGENTIC AI WORKFLOW

Design a team of AI agents to evaluate this acquisition. Define specialized Commercial, Financial, Legal, Technology, Cybersecurity, and Operating Partner agents. Describe the workflow each agent should perform, how findings should be cross-validated, and produce a consolidated Investment Committee memorandum with recommendations.

Debevoise & Plimpton

We bring experience from every angle of financial distress.

Our integrated team draws on market-leading restructuring, finance, M&A, capital markets, tax and litigation capabilities to address the full spectrum of distressed situations.

Restructuring
Out-of-court restructurings, chapter 11 case and cross-border insolvencies.

Liability Management & Special Situations
Complex financings, opportunistic investments and liquidity solutions in distressed and event-driven situations.

Bankruptcy Litigation
Sophisticated, business-oriented litigation of high-stakes disputes arising from bankruptcy and financial distress.

> *They have sophistication and knowledge in the space that no one else really has.*
> — CHAMBERS USA, 2026

New York | Washington, D.C. | San Francisco | London | Paris | Luxembourg | Frankfurt | Hong Kong | Shanghai

Chambers RANKED IN USA 2026
Bankruptcy/Restructuring: *The Elite*

- 1,000+ lawyers worldwide
- Nine offices worldwide
- Over 90% of our partners are ranked in leading legal directories, including *Chambers* and *Partners*, *The Legal 500*, *Benchmark Litigation* and *IFLR1000*.

The LEGAL 500
Leading U.S. firm for Restructuring (including bankruptcy): Corporate

Fiduciary Banking

As the No. 1 Performing U.S. Public Bank by Bank Director*, we combine the strength and security of a large global institution with the personal attention of a local bank to handle the most technical banking requirements of professional and family fiduciaries nationwide.

EAST WEST BANK

For more information contact
Victor.Owens@eastwestbank.com
or call 949.892.7723.

*Bank Director's 2021, 2023-2025 RankingBanking reports - $50 billion and above asset category.

Equal Housing Lender Member FDIC

BETTER DATA *FASTER.*

Manage complex cases with confidence.

Case Builder PRO helps with:

- Petitions & schedules
- Large data import/export functionality
- Answers when you need them

CORE gives you:

- Cleaner reports & faster reviews
- AI-enabled tech
- Dedicated banking support

BLUESTYLUS.COM/CASEBUILDER

TRUSTESOLUTIONS.COM/PRODUCTS/CORE

BlueStylus | CORE



JONES WALKER

Jones Walker LLP's Bankruptcy & Restructuring Practice combines national reach with deep regional insight to guide clients through complex financial challenges. From Chapter 11 cases to cross-border restructurings, the team represents creditors, debtors, lenders, committees, and investors in high-stakes insolvency matters across the United States. With experience in major bankruptcy venues and industries including energy, financial services, hospitality, maritime, utilities, and real estate, Jones Walker delivers award-winning counsel grounded in practical solutions. The practice is known for strategic advocacy, efficient execution, and a commitment to value — helping clients navigate uncertainty, protect interests, and position themselves for long-term success.

Jeffrey R. Barber | Partner
jbarber@joneswalker.com
601.949.4765
Suite 300
3100 North State Street
Jackson, MS 39216

Kristina M. Johnson | Partner
kjohnson@joneswalker.com
601.949.4785
Suite 300
3100 North State Street
Jackson, MS 39216

Katie E. Lasky | Partner
klasky@joneswalker.com
504.582.8390
201 St. Charles Ave
New Orleans, LA 70170

ALABAMA | ARIZONA | DISTRICT OF COLUMBIA | FLORIDA | GEORGIA | ILLINOIS | KENTUCKY | LOUISIANA | MINNESOTA | MISSISSIPPI | NEW YORK | TEXAS

Attorney Advertising. No representation is made that the quality of legal services to be performed is greater than the quality of legal services performed by other attorneys.

joneswalker.com

THE STRATEGIC POWER OF SPEND: A CFO'S GUIDE TO VALUE GOVERNANCE

PART II – BY STEFAN ZORN, FTI CONSULTING

THE HUMAN SIDE OF SPEND: NUDGING BETTER DECISIONS

Every organization seeks better spending decisions. But "better" extends beyond compliance and savings. It means making choices that reflect the company's strategy, values, and priorities while supporting long-term value creation.

The truth is that spend is not managed by policies alone. It is shaped by people. And people, no matter how experienced or well intentioned, are influenced by context, incentives, and the environment in which they make decisions.

Executives who recognize this shift move from enforcing control to designing conditions that make good decisions easier. In doing so, they help organizations manage spend in ways that support both discipline and growth.

SPEND DECISIONS ARE HUMAN DECISIONS

In theory, spend governance appears rational. Data shows the options, processes guide the steps, and approvals ensure oversight.

In reality, spend decisions are shaped by human factors: relationships, trust, pressure, and emotion.

- A manager renews a supplier because "they have always delivered."
- A project lead upgrades scope because "the client expects it."
- A buyer approves a rush order to "keep operations happy."

These decisions are rarely reckless. They are human decisions made under uncertainty, limited time, and perceived value. When hundreds of these micro-decisions accumulate across an enterprise, millions can be spent in ways that do not reflect strategic intent or maximize value.



Recognizing this dynamic is not about assigning blame. It is about understanding that governance without behavioral insight is incomplete.

WHY INFLUENCE BEATS ENFORCEMENT

Traditional spend frameworks rely on enforcement: rules, thresholds, and approvals. These structures provide oversight, but they rarely change outcomes in a sustainable way. When people do not believe in a rule, they find ways around it. When they understand why it exists and how it supports better outcomes, they are far more likely to follow it.

The difference is **influence**.

Influence occurs through choice architecture: how options are presented, defaults are set, and transparency is built. Behavioral economists have long shown that small design choices can shape large outcomes.

In spend governance, this means:

- Making it easy for people to do the right thing
- Making the preferred supplier the default rather than the exception
- Framing cost visibility in terms of value created rather than rules broken
- Showing teams the impact of strong decisions rather than focusing only on penalties.

These are nudges rather than mandates. They preserve autonomy while steering behavior toward outcomes that support organizational strategy and growth.

A STORY ABOUT A SIMPLE NUDGE

A global organization struggled with decentralized PR agency spend. Every region hired its own agencies, often for similar issues. The procurement team had issued clear guidelines, but compliance remained low.

Instead of introducing another round of controls, the organization redesigned the process around a simple behavioral insight: people value quality, speed, and convenience.

A streamlined supplier portal was created with a small number of pre-vetted agencies, competitive pricing, and clear capabilities. Choosing from the list was faster than going off contract.

Within three months, adoption rose from 45% to more than 80% without a single new policy.

What changed was not oversight but choice design. The system made it easier for employees to make decisions that aligned with enterprise priorities and delivered greater value.

THE LEADERSHIP ROLE IN SHAPING BEHAVIOR

Behavioral design is not just a procurement exercise. It is a leadership responsibility.

Executives set the tone through how they talk about spend, what they celebrate and what they tolerate. When leaders ask only *"Did we save money?,"* teams focus narrowly on cost. When they ask *"Did this spend create value?,"* teams think more strategically about growth, resilience, and impact.

A CFO who recognizes a team for consolidating suppliers to improve resilience sends a clear signal. A Chief Procurement Officer who invites suppliers to participate in innovation reviews sends another. These actions communicate what matters and reinforce the behaviors that support long-term value.

Spend governance becomes most effective when leadership reinforces the idea that stewardship and value creation are shared responsibilities across the organization.

DESIGNING FOR GOOD DECISIONS

To nudge better spend decisions, leaders can focus on three practical levers:

1. **Visibility:** Make the full picture clear. When people can see how their spending compares with peers or benchmarks, behavior shifts naturally. Transparency creates accountability without confrontation.
2. **Ease:** Reduce friction in doing the right thing. Complexity drives workarounds. Simplifying approval paths, supplier access, and data reporting helps the preferred path become the easiest one.
3. **Meaning:** Connect spend to purpose. When employees understand how their decisions enable strategy such as growth, resilience, and innovation, they engage more deeply. Numbers alone rarely motivate. Purpose does.

Each lever reinforces the others. Visibility informs. Ease enables. Meaning inspires. Together they create a culture where governance is not imposed but embedded in everyday decision-making.

FROM COMPLIANCE TO CULTURE

The most mature organizations no longer talk only about "spend compliance." They talk about **spend culture**: the shared belief that every dollar spent should advance the organization's strategy and create value.

This shift positions procurement as a strategic enabler rather than a policing function. Governance becomes a source of trust and alignment across the enterprise. And leaders can focus less on enforcing rules and more on reinforcing the behaviors that support sustainable growth.

Culture takes time to build. But once established, it sustains value far more reliably than any single system or control.

THE EXECUTIVE TAKEAWAY

Managing spend well is not only about process design but also human design.

Executives who treat governance as a behavioral system create environments where good decisions become the norm rather than the exception. They rely on influence rather than enforcement. They design systems that empower people to act in the organization's best interest because doing so feels natural.

Ultimately, the goal of governance is not simply to control spend. It is to shape decisions that consistently create value and support long-term growth.

THE ARCHITECTURE OF SPEND GOVERNANCE: HOW EXECUTIVES TURN INTENT INTO IMPACT

Most organizations have procurement policies. Far fewer have true **spend governance**.

A policy defines what is allowed. Governance defines how decisions are made. One enforces compliance; the other enables alignment and creates value.

This distinction matters because as organizations grow, complexity rises exponentially. Spend governance becomes the connective tissue, the system that ensures external resources, internal priorities, and strategic intent move together to drive value creation. Without it, the enterprise slowly drifts into fragmentation.

WHY POLICIES ARE NOT ENOUGH

Policies are necessary, but insufficient. They tell people *what* to do but rarely explain *why*.

A procurement policy might dictate approval thresholds or preferred suppliers. It can ensure consistency, but not coherence. People can follow the rules and still make decisions that undermine strategic goals and dilute value.

For example, a business unit can comply with a procurement policy while renewing contracts with suppliers that no longer fit the company's direction. The spend is "approved," but the outcome misaligned.

Governance goes deeper. It asks:

- Does this spend reflect our current strategy?
- Who should decide and based on what principles?
- How do we ensure transparency and accountability without slowing execution?

These are not procedural questions. They are leadership questions.

FROM CONTROL TO CLARITY

The essence of governance is not control; it is clarity.

In effective systems, everyone understands who owns which decisions and how those decisions connect to enterprise value. That clarity reduces friction, empowers teams, and prevents the organizational anxiety that comes from uncertainty.

A recent example is a technology company that was struggling with inconsistent vendor decisions across its business units. The root cause was not malice or neglect, but confusion. Each unit believed it had authority to decide independently. Procurement tried to centralize decision-making; business leaders resisted.

The situation was resolved not by tightening controls, but by defining decision rights: who could decide, who must contribute, and who must be informed. Once roles were explicit, trust increased. Teams stopped second-guessing one another and focused on value.

Good governance removes ambiguity. It replaces "Who approved this?" with "We all knew who should."

THE ARCHITECTURE OF SPEND GOVERNANCE

Governance must be both structured and flexible — strong enough to ensure alignment, but adaptable enough to support innovation. The most effective governance frameworks rest on three pillars:

- **Accountability:** Clear ownership for categories, budgets, and supplier relationships. Decisions must have visible stewards. When accountability is shared by all, it is owned by none.
- **Visibility:** Transparent data on spend, commitments, and supplier performance. Executives cannot govern what they cannot see. Visibility transforms oversight into insight.
- **Alignment:** Connection between spend decisions and strategic objectives. Every significant supplier relationship should trace back to a business priority or value outcome.

Together, these pillars create a system in which decision-making is distributed but disciplined, local autonomy guided by enterprise intent.

THE CFO – CHIEF PRODUCT OFFICER PARTNERSHIP

At the executive level, the strength of spend governance depends heavily on the partnership between the CFO and the Chief Product Officer.

The CFO brings financial discipline, risk awareness, and capital stewardship. The Chief Product Officer brings market insight, supplier intelligence, and value realization.

When these roles operate in silos, governance becomes mechanical, focused on compliance and reporting. When they collaborate, governance becomes strategic, focused on value creation, resilience, and growth enablement.

In one industrial company, the CFO and Chief Product Officer jointly led a "spend category council." They reviewed major categories not just for cost performance but for alignment to growth initiatives. Within a year, the company reallocated over $120 million from low-value activities to innovation and sustainability programs. The lesson was clear: governance delivers measurable value when finance and procurement act as one system.

EMBEDDING GOVERNANCE IN THE OPERATING MODEL

True spend governance does not live in documents. It lives in daily management routines. Governance succeeds when it becomes integrated with strategy and operational insight. Then following the framework feels natural because it aligns with how the organization already operates.

It is embedded in:

- **Planning:** Integrating spend priorities into annual strategy cycles
- **Budgeting:** Ensuring funds flow toward initiatives with measurable value outcomes or strategic impact
- **Sourcing:** Linking supplier selection to capability needs, not just price
- **Performance reviews:** Tracking not only savings but contribution to strategic metrics, such as growth, risk reduction and innovation.

Executives play a critical role here. They must reinforce the message that governance is not bureaucracy; it is how strategy travels through the organization.

METRICS THAT MATTER

Executives often ask, "How do we measure governance?" The answer depends on what governance is meant to achieve.

If the goal is compliance, you measure process adherence. If the goal is value creation, you measure outcomes by:

- Spend tied to strategic priorities
- Supplier contribution to innovation or risk reduction
- Reduction in spend leakage or duplication
- Improved decision-cycle time.

Metrics should tell a story, not just what happened, but why it mattered. When governance works, the organization becomes more predictable, more agile, and more resilient. Those are not soft benefits. They are competitive advantages.

THE EXECUTIVE TAKEAWAY

Building true spend governance is not about writing more policies. It is about designing a system of clarity, accountability, and alignment that connects every dollar to the company's purpose.

Executives who lead this shift will redefine how organizations think about value creation. They move beyond cost control to capability building, growth enablement, and enterprise transformation. They turn procurement from a transactional function into a strategic instrument.

Governance, done well, is leadership in action; the discipline of turning intent into impact.

FROM COST CONTROL TO VALUE CREATION: THE EXECUTIVE MINDSET SHIFT

Most executives can recite their company's revenue targets and cost structure by heart. Fewer can explain how external spend, often representing 40%–70% of revenue, creates value and advances strategic objectives.

That gap is not due to ignorance; it reflects a longstanding mindset. For decades, organizations have treated spend as something to control rather than shape. Yet as value chains become more interconnected and suppliers deliver more of the capabilities that differentiate businesses, that perspective is increasingly outdated.

Spend is no longer simply a line item. It reflects how an organization competes, innovates, and sustains advantage.

WHY THE OLD MINDSET PERSISTS

Many leaders still view spend primarily through a financial lens: controlling budgets, reducing variance, and delivering savings. These disciplines remain important, but they are not enough.

This "control" mindset emerged in an era when procurement's main role was efficiency. The goal was to negotiate harder, buy smarter, and save more. Success was measured in percentages.

But the business landscape has evolved. Today, suppliers help design products, enable digital transformation, and shape customer experiences. Spend that once purchased commodities now secures capabilities. Cost control alone cannot capture that complexity.

When leaders focus solely on price, they miss the larger question: ***What are we actually buying and why?***

THE MOMENT THE SHIFT HAPPENS

We have seen this shift firsthand. A global high-tech firm we worked with had historically measured procurement success by annual savings targets. The procurement team delivered well but executives noticed that supplier innovation and collaboration were stagnant.

When the company redefined success as "value created" rather than "cost avoided," the conversation changed. Leaders began asking suppliers how they could co-develop sustainability solutions, share research and development insights, and reduce total lifecycle costs.

Within two years, supplier-driven innovation contributed directly to new revenue streams. The company still managed costs rigorously, but it no longer viewed spend solely as an expense to minimize. It viewed spend as an investment to optimize.

The turning point came when the CFO asked a new question: "If we are spending billions each year with external partners, how much of that spend builds competitive advantage?"

That is the mindset of value creation.

WHAT VALUE CREATION LOOKS LIKE IN PRACTICE

Value creation through spend is not abstract. It becomes tangible when governance aligns spending decisions with strategic intent.

- **Resilience:** Diversifying critical supply sources to strengthen continuity
- **Innovation:** Co-developing solutions with suppliers who bring new ideas
- **Sustainability:** Embedding ESG priorities in sourcing criteria and supplier collaboration
- **Speed:** Simplifying processes so that teams can execute strategy faster.

Each of these outcomes depends on leaders viewing spend as an enabler of capability rather than a constraint.

When the mindset shifts, the organization stops asking ***"What can we cut?"*** and starts asking ***"What can we create?"***

THE LEADERSHIP ROLE IN VALUE GOVERNANCE

Executives often underestimate the extent to which their language shapes behavior.

When leaders talk about "cutting spend," people focus on cost. When they talk about "investing spend," people focus on value.

This distinction is more than semantics. It signals what the organization values and rewards. Leaders who embrace value governance typically make three visible shifts:

- **They link spend to strategy.** Every major supplier or category has a clear line of sight to enterprise priorities.
- **They balance autonomy with accountability.** Teams have freedom to decide within a transparent framework.
- **They lead by example.** Executives ask the same tough questions of their own budgets that they ask of others.

Governance becomes not just a control system but a leadership mechanism that helps ensure external spend advances long-term strategic priorities.

FROM EFFICIENCY TO EFFECTIVENESS

It is tempting to view cost savings as the ultimate performance metric. It is measurable, simple, and immediate. However, sustainable advantage comes from effectiveness: how well resources, both internal and external, are deployed to achieve strategic objectives.

An organization that saves 5% on costs but misses opportunities for innovation, resilience, or growth may be optimizing the wrong variable. Effective spend management combines the discipline to save today with the foresight to invest for tomorrow.

That is why the most forward-looking CFOs and Chief Procurement Officers treat spend not as a quarterly negotiation, but as a continuous capability.

THE EXECUTIVE TAKEAWAY

The evolution from cost control to value creation is not about procurement maturity. It is about executive mindset.

Spend governance at its best is not a function; it is a philosophy. It encourages leaders to view every external dollar as a strategic choice that reflects organizational priorities, relationships and sources of value creation.

Executives who make this shift transform procurement from a back-office function into a strategic enabler. They move beyond savings to strengthen the organization's ability to adapt, innovate, and grow.

Spend, after all, is strategy made visible. Leaders who understand that do more than control costs; they create value.

Part I of this article was published in the previous issue of the AIRA Journal.

ABOUT THE AUTHOR



Stefan Zorn
FTI Consulting

Stefan is a Senior Managing Director at FTI Consulting, with more than 25 years of experience leading enterprise-wide external spend management transformations. He focuses on developing and optimizing sourcing and procurement cost reduction and optimization strategies across various industries. Stefan helps clients use their spend with external suppliers for competitive advantage, such as reducing their spend with suppliers, increasing their speed to market, innovation and supplier diversity, and becoming more agile.

Experts You Trust.
Insight You Need.

DSI®
Development Specialists, Inc.

Learn more:

Turnaround Management & Restructuring
- Financial Advisory and Restructuring
- Chief Restructuring Officer
- Interim CEO and CFO

Fiduciary Services
- Assignment for the Benefit of Creditors
- Ch. 11 and Ch. 7 Trustee
- Federal and State Receiverships
- Post-Confirmation Liquidating Trust and Trustee
- Corporate Dissolution
- Bankruptcy Examiner

Forensic Accounting, Fraud Investigation & Litigation Support
- Forensic Accounting and Fraud Investigation
- Expert Witness
- Testimony and Litigation Support

www.dsiconsulting.com

PSZJ
PACHULSKI STANG ZIEHL & JONES

The nation's leading corporate restructuring boutique.

Regularly recognized by leading ranking guides and publications as one of the top insolvency law firms in the nation.

BEST LAW FIRMS
RANKED BY Best Lawyers
UNITED STATES
2024

"One of the largest and most highly regarded bankruptcy practices in the nation."
– Law360

Chambers
RANKED IN
Global
2025
Pachulski Stang Ziehl & Jones LLP

"Over 60 UCC engagements — #1 in committee representation five years running."
- BankruptcyData (New Generation Research)

Chambers
TOP RANKED
USA
2025
Pachulski Stang Ziehl & Jones LLP

PSZJLAW.COM

Los Angeles | New York | Wilmington, DE | Houston | San Francisco

Rumberger | Kirk

Providing a wide range of business advisory
and crisis management services

proud sponsor of AIRA

rumberger.com



THE BOARDROOM IS CORPORATE AMERICA'S NEW FINANCIAL FRONT LINE



KENNETH A. ROSEN, KEN ROSEN ADVISORS

A company approaching a maturity wall may have numerous financing and restructuring alternatives months before liquidity becomes critical and far fewer once financial pressure accelerates. That difference affects what the board can negotiate, what advisers can structure, and whether the company can address its balance sheet outside Chapter 11.

Modern restructuring practice therefore increasingly begins before a bankruptcy petition is contemplated.

On June 30, 2026, the Securities and Exchange Commission's Division of Corporation Finance, acting for the Commission under delegated authority, issued an Exemptive Order for Tender or Exchange Offers for Non-Convertible Debt Securities. The order grants conditional relief from Exchange Act Rules 14e-1(a) and (b), permitting qualifying offers to remain open for a minimum of five business days rather than the ordinary 20-business-day period.

The limits of that relief are as instructive as the shortened timetable. The relief is unavailable if a default or event of default exists under specified debt agreements, the issuer is in bankruptcy or insolvency proceedings, a prepackaged bankruptcy solicitation has begun, or the board has authorized discussions with creditors to effect a consensual restructuring. The order therefore provides additional flexibility at an earlier stage—while an issuer is still managing its capital structure rather than conducting a formal restructuring.

That distinction matters. Companies continue to confront refinancing needs arising from debt incurred during the prolonged period of historically low interest rates, now in a different financing environment. For restructuring professionals, the lesson extends beyond tender offer mechanics. Time has become one of the most valuable assets in a restructuring.

TIME IS THE NEW CURRENCY OF CORPORATE FINANCE

Traditional restructuring practice often followed a familiar progression. Financial pressure increased, liquidity deteriorated, lenders tightened control, negotiations intensified, and Chapter 11 became a principal means of preserving enterprise value and restructuring the balance sheet.

That sequence no longer describes many significant restructurings.

Companies routinely consider refinancings, debt exchanges, maturity extensions, liability management transactions, new money financings, asset sales, and other capital structure solutions before a bankruptcy filing becomes necessary. The objective is not always to avoid Chapter 11. It is to preserve enough flexibility to choose among alternatives rather than have circumstances choose for the company.

A company acting early may still have access to capital, negotiating leverage, unencumbered assets, covenant flexibility, and sufficient liquidity to execute a transaction. Those advantages can disappear quickly. As maturities approach or liquidity declines, counterparties gain leverage and financing alternatives contract.

The SEC order fits that environment. Its expedited framework is available for qualifying debt management transactions before specified indicators of restructuring are present. The distinction reinforces the practical value of addressing a capital structure while the company still has room to act.

Speed, however, is useful only when the company is prepared to use it.

RESTRUCTURING BEFORE CHAPTER 11

Liability management transactions illustrate how far restructuring practice has moved upstream.

Exchange offers, uptiers, drop-down financings, open market purchases, covenant amendments, and other balance sheet strategies can require simultaneous

analysis of credit documentation, corporate law, securities regulation, tax consequences, fiduciary obligations, disclosure requirements, and litigation risk. Credit agreements may contain baskets, restricted subsidiary provisions, investment capacity, debt incurrence tests, voting thresholds, sacred rights, and open market purchase provisions that determine what can be done and whose consent is required.

Recent litigation shows how much can turn on those provisions. In *In re Serta Simmons Bedding, L.L.C.*, 125 F.4th 555 (5th Cir. 2024), as revised Jan. 21 and Feb. 14, 2025, the Fifth Circuit held that Serta's privately negotiated 2020 uptier was not a permissible "open market purchase" under the governing credit agreement. In contrast, in *Ocean Trails CLO VII v. MLN Topco Ltd.*, 233 A.D.3d 614, 225 N.Y.S.3d 192 (1st Dep't 2024), 2024 N.Y. Slip Op. 06660, New York's Appellate Division upheld the challenged Mitel transaction and declared the amended agreements valid and enforceable.

The decisions do not yield a simple rule that uptiers are permissible or impermissible. They make a more useful point: document language and transaction structure can determine whether a balance sheet solution creates runway or litigation.

These issues cannot be addressed effectively for the first time when liquidity is nearly exhausted.

Nor can the legal analysis be divided neatly by practice area. A transaction permissible under a credit agreement may raise corporate law or disclosure issues. A financing that provides immediate liquidity may alter creditor priorities or create litigation risk if Chapter 11 follows.

Restructuring counsel therefore increasingly works alongside corporate, finance, capital markets, tax, governance, and litigation lawyers before default or filing. The task is not simply to determine whether a transaction can be documented. Counsel must understand what the company will look like afterward.

Does the transaction provide sufficient runway? Does it materially increase secured debt or disadvantage an existing creditor group? Does it restrict future financing capacity? If Chapter 11 ultimately becomes necessary, has the transaction improved the company's position or merely delayed the filing?

Those are restructuring questions even when no bankruptcy case is pending.

THE BOARD PROCESS MATTERS BEFORE THE COURTHOUSE

Moving restructuring decisions earlier also places greater responsibility on the board.

Directors confronting financial pressure may need to evaluate transactions producing different outcomes for shareholders, lenders, bondholders, sponsors, and other constituencies. Counsel must help directors understand the alternatives, consequences of waiting, material risks, potential conflicts, and effect of the transaction on future flexibility.

The process should fit the decision. A significant liability management transaction may require financial advice, detailed review of credit documents, consideration of alternatives, analysis of conflicts, and a record showing what the board considered and why it acted.

Financial distress does not cause directors' fiduciary duties to migrate from shareholders to creditors. Under Delaware law, directors continue to owe their duties to the corporation. Creditors do not acquire direct fiduciary duty claims merely because a company enters the zone of insolvency or becomes insolvent, although insolvency may give creditors standing to pursue derivative claims on the corporation's behalf. *North American Catholic Educational Programming Foundation, Inc. v. Gheewalla*, 930 A.2d 92, 101–03 (Del. 2007). Nor does insolvency require directors simply to preserve assets for creditors; directors retain authority to exercise business judgment on behalf of the corporation. *Quadrant Structured Products Co. v. Vertin*, 115 A.3d 535 (Del. Ch. 2015).

Financial stress nevertheless increases the likelihood that board decisions will later be examined by parties adversely affected by them. If an out-of-court transaction ultimately leads to Chapter 11, decisions made months earlier may become subjects of discovery, lender disputes, confirmation litigation, or other challenges.

Serta illustrates the point. A transaction executed in 2020 became a central issue years later in the company's Chapter 11 proceedings and appellate litigation.

The record created before Chapter 11 can matter inside Chapter 11.

PRESERVING OPTIONALITY IS A RESTRUCTURING STRATEGY

Early restructuring advice is not necessarily intended to keep a company out of bankruptcy. Chapter 11 remains indispensable when a company needs the automatic stay, a court-supervised sale, rejection of burdensome contracts, binding treatment of dissenting creditors, or other relief unavailable consensually. Sometimes filing earlier preserves more value.

The objective is to avoid arriving at that decision by default.

A company that acts while it still has liquidity and negotiating leverage may be able to refinance, exchange debt, sell assets, raise capital, amend covenants, or extend maturities. Even if Chapter 11 ultimately follows, those efforts may allow the company to enter court with greater liquidity, a more manageable capital structure, creditor support, or a defined path forward.

Delay can produce the opposite result. Liquidity falls. Vendors tighten terms. Employees leave. Lenders gain leverage. Financing becomes more expensive or disappears.

Preserving optionality is therefore not merely a corporate finance objective. It is a restructuring strategy.

WHAT RESTRUCTURING PROFESSIONALS SHOULD TAKE FROM THE SHIFT

The migration of restructuring activity from the courthouse to the boardroom changes when restructuring professionals add the most value.

The traditional question—what should the company do if it files Chapter 11?—increasingly must be accompanied by an earlier one: what should the company do now so that it retains meaningful choices later?

That requires advisers to identify maturity and liquidity pressure early, understand flexibility in financing documents, evaluate transactions for both immediate benefits and consequences in a possible future bankruptcy, identify conflicts, and ensure that the board receives the information necessary to make consequential capital structure decisions.

An exchange offer, refinancing, asset sale, covenant amendment, or liability management transaction may occur entirely outside bankruptcy. Yet a possible later Chapter 11 can affect how the transaction should be structured, negotiated, documented, and approved.

The SEC's June 30 order did not create this development. Market conditions, complex capital structures, refinancing pressure, and increasingly sophisticated liability management techniques did. But the order recognizes the importance of acting while an issuer is still managing its balance sheet outside a formal restructuring.

For bankruptcy and restructuring professionals, that changes the starting point of the engagement.

Restructuring no longer begins when a company decides whether to file Chapter 11. By then, many decisions determining the range of possible outcomes may already have been made.

The most consequential restructuring advice may come months earlier, when the company still has liquidity, the board still has choices, and counsel still has the ability to help preserve them.

That is why the boardroom has become corporate America's new financial front line.

ABOUT THE AUTHOR



Kenneth A. Rosen
Ken Rosen Advisors

Ken is a veteran corporate restructuring attorney and the founder of Ken Rosen Advisors. With over 35 years of experience in insolvency law, Chapter 11 reorganizations, and out-of-court debt workouts, he is a trusted advisor to corporate boards, debtors, and lenders facing complex financial transitions. He was previously the long-term Chair of the Bankruptcy & Restructuring Department at Lowenstein Sandler LLP.



We hope you like the new look of the *AIRA Journal*.

Please send your comments, suggestions, and ideas for articles to *AIRA Journal* Managing Editor, Alexandra Mahnken at: amahnken@aira.org.

BURR & FORMAN

Clarity when it matters most.

Creditors' Rights & Bankruptcy Matters

Workouts, Restructuring & Insolvency

Distressed Assets & Section 363 Sales

Litigation Impacting Recoveries

SCAN TO LEARN MORE

No representation is made that the quality of the legal services to be performed is greater than the quality of legal services performed by other lawyers.

YOUNG CONAWAY

PROVIDING SOUND, CREATIVE, & EFFECTIVE LEGAL SOLUTIONS TO COMPANIES ENCOUNTERING FINANCIAL DIFFICULTIES IN & OUTSIDE OF BANKRUPTCY

Young Conaway's Bankruptcy and Corporate Restructuring attorneys possess a deep knowledge of all facets of the restructuring process and serve as counsel for some of the most significant bankruptcy matters being decided in the courts today. The group routinely represents debtors, creditor committees, future claimants, private equity firms, and other significant stakeholders in Delaware and beyond.

Delaware | New York | North Carolina

YoungConaway.com



VENEZUELA 2.0: ECONOMIC RECONSTRUCTION AND SOVEREIGN DEBT RESTRUCTURING POST-MADURO

STEVEN T. KARGMAN, KARGMAN ASSOCIATES/INTERNATIONAL RESTRUCTURING ADVISORS

***Editor's Note**: This revised and updated article is based on an earlier version entitled "Venezuela 2.0" that appeared in The International Economy in May 2026 and has been reprinted with their kind permission.[1] It has been updated to reflect developments between the completion date of the original article in mid-April 2026 and the completion date of this revised article in late August 2026. Shortly after this article was completed and submitted for publication, the Trump administration announced a deal under which it said the United States would gain control over a sizeable part of Venezuela's oil reserves. As this development occurred after the article was completed, its implications are not addressed in the analysis that follows.*

The capture of Nicolás Maduro, former President of Venezuela, by US forces in the early morning hours of January 3, 2026, produced dramatic headlines and led to an immediate surge of optimism in financial markets. Prices of Venezuelan government bonds and the bonds of its state-owned oil company, Petróleos de Venezuela, S.A. (PDVSA), spiked as some investors anticipated that long-delayed restructuring negotiations might finally be approaching. Yet the buoyant market sentiment that followed Maduro's capture overlooked the deeper structural challenges confronting Venezuela.

VENEZUELA'S MULTIDIMENSIONAL CRISIS

Those challenges are not merely financial but reflect a broader multidimensional national collapse and will therefore require a multi-pronged strategy to set the country on a path to recovery. On the economic and financial fronts, Venezuela will need to undertake the herculean tasks of both economic reconstruction and sovereign debt restructuring. Neither can succeed in isolation, and both require that the country's major humanitarian and governance crises be addressed in a meaningful way.

The fundamental challenges that shaped Venezuela's trajectory before Maduro's capture remain largely in place today as of August 2026, and none of the country's core problems have been or will be resolved by his removal alone. Yet the situation in Venezuela,

1 Steven T. Kargman, "Venezuela 2.0," *The International Economy*, Winter 2026.

including US policy toward the country, remains highly fluid and subject to change.

Prior to Maduro's capture, Venezuela faced a severe humanitarian crisis that had led to the exodus of millions of its citizens, a contraction of a peacetime economy on a scale unprecedented in modern times, and a sovereign debt overhang that at the time was widely estimated to exceed $150 billion (although a more recent report indicated that Venezuela's debt burden could be as high as approximately $240 billion[2]).

Venezuela also faced an overriding crisis marked by the absence of a government regarded as legitimate and credible by both Venezuelans and the international community. Maduro's removal and his replacement by a government led by his former vice president, Delcy Rodríguez, alter the political surface but not the underlying structural realities that continue to confront the country.

These challenges remain essentially as acute today as they were before Maduro's removal. Venezuela cannot credibly restructure its sovereign debt without rebuilding the pillars of a well-functioning economy. Venezuela cannot rebuild those pillars without a debt restructuring that lessens its debt servicing costs and restores fiscal space. Even before Maduro's removal, Venezuela faced the prospect of a protracted and extremely complex debt restructuring, and that is still the case today.

Nonetheless, since Maduro's removal, the Venezuelan government has taken some initial steps toward a potential debt restructuring, including announcing its intention to pursue a comprehensive restructuring of both Republic and PDVSA debt and retaining outside legal and financial advisers. However, although the US Treasury Department's Office of Foreign Assets Control (OFAC) recently issued General License 58 (GL 58) which permits US persons to provide certain legal and financial advisory services to Venezuela in connection with a potential restructuring, GL 58 does not lift the preexisting prohibition on US creditors engaging in negotiations with Venezuela over restructuring terms. Thus, under the existing sanctions framework, restructuring negotiations between Venezuela and its US creditors cannot yet begin without OFAC approval.

Venezuela's economy contracted by roughly three-quarters from the onset of the crisis in the mid-2010s through the early 2020s,[3] a collapse far greater than that experienced by the United States during the Great Depression or by Greece during the eurozone crisis. In recent years, Venezuela experienced extremely elevated inflation (including a period of hyperinflation), a deeply devalued currency that has contributed to widespread dollarization, and dwindling foreign exchange reserves.

The humanitarian crisis has been equally severe, with widespread malnutrition and food insecurity, high levels of poverty, and the breakdown of the healthcare system (including shortages of medicine and difficulty in accessing healthcare). An estimated eight million or more Venezuelans have fled the country, representing one of the largest mass exoduses in modern history and depriving the economy of critical human capital while leaving families separated across borders.

These conditions are not peripheral to the debt restructuring challenge. A country such as Venezuela cannot sustain a debt restructuring agreement without the economic capacity to generate resources, nor can it rebuild that economic capacity without addressing the humanitarian emergency that has weakened its labor force and social stability.

The governance crisis compounds these difficulties. Although Maduro has been removed, many influential figures from his regime continue to wield authority in the new Delcy Rodríguez-led government, which has yet to establish broad domestic or international legitimacy. While the Rodríguez-led government has been recognized by the United States and appears to be working closely with the Trump administration, questions concerning its broader international legitimacy remain despite signs of increased international engagement, including Venezuela's recent renewed engagement with the International Monetary Fund (IMF), the World Bank, and the Inter-American Development Bank (IDB).[4]

As of late August 2026, Venezuela has engaged in technical dialogue with the IMF but has not yet indicated an intention to pursue an IMF-supported program. Whether Venezuela ultimately elects to engage with the IMF on a program or, alternatively, to proceed without IMF involvement, could have significant implications for the design and credibility

2 James Fontanella-Khan, Joseph Cotterill and Arash Massoudi, "Venezuela to Reveal $240bn Debt Pile in World's Largest Restructuring," *Financial Times*, June 24, 2026.

3 Council on Foreign Relations, "Venezuela: The Rise and Fall of a Petrostate," Council on Foreign Relations, July 31, 2024, https://www.cfr.org/backgrounders/venezuela-crisis.

4 See Libby George, "IMF, World Bank Say They Are Resuming Dealings with Venezuela," *Reuters*, April 16, 2026. See also Congressional Research Service, *Venezuela's PostMaduro Political Transition and U.S. Policy,* August 13, 2026, p. 10 (indicating that, following the IMF's re-engagement with Venezuela, the World Bank and Inter-American Development Bank followed suit).

of any eventual debt restructuring framework for Venezuela.[5]

Meanwhile, the democratic opposition led by María Corina Machado, last year's Nobel Peace Prize recipient, remains sidelined, and Machado herself remains outside the country as of late August 2026. Although it overwhelmingly won the 2024 presidential election, the opposition was barred from taking office by the Maduro regime that nevertheless declared itself the victor.

Thus, despite Maduro's removal and a modest Cabinet reshuffle in the last few months, the political landscape shaped by the Chavista movement remains largely unchanged. More recently, however, the Rodríguez government and certain members of the opposition have begun preliminary US-backed discussions on selected political and governance issues. Yet Machado and her movement are not participating in those discussions,[6] and it appears that no timetable for new elections[7] or a broader plan for a political transition has yet emerged.

Sovereign debt restructurings require public acceptance, particularly when a country's citizens are asked to bear the costs of adjustment or transition as part of the process. In the Venezuelan context, without a government broadly regarded as legitimate and credible, it will be difficult to build the political consensus needed to ensure that any restructuring agreement remains viable over time.

Moreover, Venezuela's recovery will require support from the international community, whether in the form of trade and investment, humanitarian assistance, or technical support. Yet such engagement may not be forthcoming in the absence of a government that is regarded as legitimate and credible in Venezuela and abroad.

COMPLEXITIES OF A VENEZUELAN DEBT RESTRUCTURING

Against this backdrop, Venezuela confronts one of the largest and most complex sovereign debt overhangs in modern history. A recent report has placed Venezuela's overall debt burden at approximately $240 billion,[8] substantially higher than previous long-standing estimates of $150 billion or more. The scale and complexity of the debt burden exceed that of many recent high-profile sovereign debt restructurings.

The dual obligor structure of Venezuela's outstanding debt—encompassing obligations of both the central government, i.e., the Republic of Venezuela, and its state-owned oil company, PDVSA—adds a layer of complexity rarely encountered in sovereign workouts. Most sovereign debt restructurings involve a single central government obligor. Here, however, the intertwined obligations of the Republic and PDVSA will require careful coordination and difficult decisions

5 See Enes Morina, "How Credible Is Venezuela's Debt Restructuring," *Central Banking*, August 26, 2026 ("…plans for a rapid process, potentially ignoring some of the thorniest credit exposures, without the involvement of the International Monetary Fund have raised serious questions about its credibility").

6 Catherine Ellis, "U.S.-Backed Talks Between Venezuelan Regime, Opposition Will Begin Without Machado," Miami Herald, July 31, 2026; Vera Bergengruen and Kejal Vyas, "U.S.-Backed Democracy Talks Sideline Venezuela's Opposition Leader," *Wall Street Journal*, August 1, 2026.

7 Ana Rodríguez Brazón and Joe Daniels, "Venezuela Abandons Nicolás Maduro to Fate in US Jail," *Financial Times,* August 19, 2026 ("[t]he first round of negotiations with the opposition was intended to agree on steps for a new presidential election but yielded few concrete results").

8 See *Financial Times*, June 24, 2026, *supra* note 2.



about the sequencing of these two restructurings and how Republic and PDVSA creditors are treated.

The Venezuelan creditor body itself is extraordinarily large and diverse. It includes international bondholders of the Republic and PDVSA holding an estimated $60 billion of debt by face value,[9] and arbitration award holders, several of whom hold multi-billion-dollar judgments. Other creditor constituencies include bilateral creditors such as China and Russia, multilateral institutions (such as IDB and the Latin American development bank CAF), trade creditors, promissory noteholders, and parties with claims related to blocked revenues (such as foreign airlines).

These constituencies have distinct interests and legal claims, creating a high risk of intercreditor conflict. Coordinating such a broad and dispersed creditor body, including forming steering committees and disseminating confidential information, will be extremely challenging. Without a credible process for bringing creditors together, the restructuring could splinter into separate groups working at cross-purposes.

Major uncertainties hover over the development of any debt restructuring plan. One of the most significant is the need for credible projections of Venezuela's future economic growth, as such projections critically underpin any debt sustainability analysis and the economic models used to develop a debt restructuring plan. These projections bear directly on the government's ability in the future to generate revenues and repay restructured debt.

Yet Venezuela's economy has been so severely degraded since the start of the crisis that reliable forecasting is difficult. The oil sector, which has long been the backbone of the economy, has recently been producing in the neighborhood of 1.1 million to 1.2 million barrels per day,[10] a dramatic decline from its early 2000s output of approximately three million barrels of oil per day. Reversing this decline will likely require tens, if not hundreds, of billions of dollars in investment, and it could take years, not months, for Venezuela to be able to ramp up its production in any substantial way.

Forecasting the price of oil introduces a further degree of uncertainty. Oil is an inherently volatile commodity, as the sharp upward and downward movements in oil prices following the outbreak of the war in Iran have made clear. In view of this price volatility, it is difficult to predict what the price of oil will be a few months from now, much less over a period of years spanning the course of a restructuring plan.

In short, under current conditions, generating reliable medium-term projections acceptable to both creditors and Venezuela could represent a major obstacle to any debt restructuring. (As discussed further below, the parties may decide to introduce GDP or oil-linked

9 It is widely acknowledged that the outstanding bond debt of the Republic and PDVSA carries very substantial amounts of accrued but unpaid interest, which is not surprising given that both the Republic and PDVSA have been in default on their bonds since 2017. Depending on various assumptions, the accumulated interest could amount to tens of billions of dollars.

10 The International Energy Agency estimated Venezuelan crude oil production at approximately 1.12 million barrels per day in July 2026. International Energy Agency, *Oil Market Report – August 2026*, August 12, 2026. In August, U.S. Energy Under Secretary Kyle Haustveit stated that production was approximately 1.25 million barrels per day. Marianna Parraga, "About Half of Venezuela Oil Output Now Goes to US, Under Secretary Haustveit Says," *Reuters*, August 18, 2026.



warrants to bridge the gap in projections and/or to mitigate any associated uncertainties.)

Beyond the difficulties inherent in making reliable projections, another set of complicating factors involves geopolitical considerations. Venezuela's largest bilateral creditors, China and Russia, may approach any future Venezuelan debt restructuring with considerations that are not merely financial in nature, but may be related to exercising strategic influence, obtaining or maintaining access to natural resources, and/or pursuing broader foreign policy objectives.

Litigation and arbitration proceedings, as well as enforcement actions resulting from them, pose additional serious risks. The Republic and PDVSA face extensive claims in multiple forums, and enforcement actions threaten to carve up assets that might otherwise support a debt restructuring. The ongoing court-ordered sale process related to the ownership structure of Citgo Petroleum (Citgo), PDVSA's US-based refining subsidiary, is the starkest illustration of this risk.

Citgo is widely regarded as PDVSA's most valuable asset and is commonly referred to as its "crown jewel." A US federal court has approved the sale of the shares of Citgo's indirect parent, PDV Holding, to Amber Energy, an affiliate of Elliott Investment Management, although the transaction has not yet closed and remains subject to OFAC approval. However, if control of Citgo were ultimately to shift to third parties (which would require approval from OFAC),[11] PDVSA's asset base would be significantly diminished, reducing the pool of resources that would be available to support an overall PDVSA debt restructuring.

More broadly, the ongoing litigation risks triggering a race to the courthouse as well as the premature dismemberment of what is effectively the country's insolvency estate before a debt restructuring has even begun. The longer the delay in initiating a serious restructuring process, the greater the risk that assets will be lost to litigation and enforcement actions.

A further complicating factor stems from US government policy. Shortly after Maduro's capture, the Trump administration issued an executive order under which Venezuelan oil revenues would be held in US government-controlled custodial accounts. The executive order shields these revenues from creditor enforcement and grants the US government broad discretion to disburse them for governmental, foreign policy, and national security purposes.

Under the executive order, US national security and foreign policy objectives may influence the practical allocation of Venezuelan oil-related revenues, with the result that value may be diverted away from creditors without any formal reordering of creditor priorities.[12] Although the executive order has now been in place for six months, its practical effect remains difficult to ascertain because the Trump administration's handling and distribution of Venezuelan oil-related revenues is opaque.[13] As a result, the extent to which the interests of Venezuela's creditors may in practice be affected by broad US national security and foreign policy objectives remains uncertain.

TOOLS AND CONTOURS OF A DEBT RESTRUCTURING

Any eventual Venezuelan debt restructuring will require a bespoke design, given the scale of the collapse, the dual obligor structure, and the highly fragmented nature of its creditor body. Venezuela will need to employ both traditional and innovative sovereign debt restructuring tools. If the parties determine that Venezuela is fundamentally facing a solvency problem rather than a liquidity problem, the restructuring will need to deliver deep balance sheet relief for Venezuela as opposed to merely providing Venezuela with short-term cash flow relief. If, by contrast, the parties conclude that Venezuela faces primarily a liquidity problem, the restructuring would likely focus on a more limited "reprofiling" of its debt.

Traditional tools capable of delivering such deep debt relief would likely form the core of any sound and viable restructuring plan. These could include principal reductions or debt forgiveness (colloquially known as "haircuts"), extended maturities, coupon cuts, and long grace periods. The precise contours of any restructuring would depend on a debt sustainability analysis and on assessments of Venezuela's current economic performance and its projected recovery path.

Venezuela may also need to employ more innovative instruments to bridge disagreements with creditors

11 US Department of the Treasury, Office of Foreign Assets Control, "Frequently Asked Question 1246," March 18, 2026 ("[a] specific license will be required before any sale is executed in the Crystallex case").

12 For a fuller discussion of this issue, see Steven T. Kargman, " 'Policy in Command': Government Objectives and Creditor Recoveries in the US and China," *International Insolvency & Restructuring Report 2026/27*, pp. 9-19 (June 2026).

13 See, e.g., Geoff Dyer, Chris Cook, and Ana Rodríguez Brazón, "The US Has Collected About $13bn of Venezuela's Oil Money. Where is it?," *Financial Times*, July 22, 2026; Roxanna Vigil, "The US Took Over Venezuela's Oil Industry: Where Has All the Money Gone?," Council on Foreign Relations, June 3, 2026 (available at https://www.cfr.org/articles/the-u-s-took-over-venezuelas-oil-industry-where-has-all-the-money-gone).

and align incentives across several domains such as future economic performance and oil revenue dynamics. These could include debt-for-equity swaps, debt-for-nature or climate swaps, and so-called "value recovery instruments" such as GDP- or oil-linked warrants.

Debt-for-equity swaps are common in corporate restructurings and are considered a very effective tool in deleveraging the balance sheet of corporate debtors but have been used less frequently in sovereign contexts. Their last widespread use occurred during the Brady Plan-era bond exchanges of the late 1980s and the 1990s, when creditors forgave debt in exchange for taking equity stakes in privatized enterprises or financing approved domestic investment projects. Indeed, Venezuela itself employed such debt-for-equity swaps at that time.

However, the model for debt-for-equity swaps at that time relied on conversions through the local currency, an approach that is no longer viable given the severe depreciation of Venezuela's national currency. The structure for a Venezuelan debt-for-equity swap would therefore need to be updated so that, for example, it would rely on a hard currency rather than Venezuela's domestic currency as the medium of exchange.

In addition to traditional debt-for-equity swaps, Venezuela could employ a new, expanded form of debt-for-equity swap in which the equity component of the swap has a broader scope than the Brady Plan-era debt-for-equity swaps. In such a structure, the equity could take the form of oil development rights or, more broadly, other mineral development rights for a defined term while the state retains ownership of the underlying reserves. Such a structure could make sense because Venezuela possesses vast oil reserves (reputed to be the largest in the world), but Venezuela also reportedly possesses significant reserves of a vast array of minerals, including several critical minerals that are expected to face rising global demand as inputs to products such as batteries for electric vehicles.

Nonetheless, any such debt-for-equity swaps would require independent valuation of the development rights to ensure that Venezuela receives fair value. Otherwise, the Venezuelan government could expose itself to public criticism for transferring valuable national assets on terms that do not reflect fair value—effectively giving away the "national patrimony" too cheaply. The government would also need to ensure that the public is comfortable with exchanging natural resource development rights for debt relief as part of the broader restructuring.

Debt-for-nature or climate swaps, in which creditors effectively reduce a portion of a sovereign's outstanding debt in exchange for the debtor committing part of the resulting fiscal savings to agreed conservation measures, have recently been employed by several countries, including Belize, Ecuador, Seychelles, Barbados, Peru, and Gabon. Such swaps could offer Venezuela another important avenue for reducing its outstanding liabilities.

Venezuela is endowed with very rich and diverse ecological assets, including its vast rainforests, major river systems, and considerable biodiversity. But these ecological assets are threatened by forces such as illegal mining, deforestation, and weak environmental enforcement by the government. For their part, creditors may view the conservation of Venezuela's ecological assets as a legitimate basis for effectively reducing a portion of the debt they are owed.

In return, Venezuela would be obligated to make firm, specific commitments to protect these ecological assets over time. While debt-for-nature or climate swaps can be technically complex and costly to structure and execute as they involve multi-party, multi-stage transactions, they could still form a valuable component of a broader debt restructuring strategy. Yet, in view of their complexity and cost, the parties to any Venezuelan restructuring would need to weigh carefully whether and how to incorporate such debt-for-nature or climate swaps into the overall restructuring framework.

Another set of restructuring tools that could be brought to bear are value recovery instruments (VRIs). VRIs have played an important role in sovereign debt restructurings by helping bridge divergent debtor and creditor expectations about matters such as a country's future economic performance or the strength of commodity-based revenues in a commodity-dependent economy.

With GDP warrants, which have been used in several sovereign debt restructurings (including Argentina and Greece, among others), creditors receive additional payouts if GDP exceeds a predetermined baseline. Commodity-linked warrants provide additional payouts to creditors when, for example, the price of the relevant commodity exceeds an agreed-upon strike price.

For Venezuela, VRIs could take the form of GDP-linked or oil-linked warrants. GDP-linked warrants could be modeled on instruments used in prior sovereign debt restructurings, but any oil-linked warrants would

need to be adapted from prior commodity-linked structures. Specifically, instead of solely relying on one trigger—namely, a strike price for oil—an oil-linked warrant in a Venezuelan restructuring would need to take into account both global oil prices and domestic production levels.

This is because higher prices alone would not necessarily translate into proportionately stronger oil revenues given Venezuela's currently depressed production levels. A trigger tied to overall oil revenues—the product of global prices and domestic production volumes—would therefore be more suitable than a structure that relies only on a strike price.

Nonetheless, warrants—whether in the form of GDP- or oil-linked warrants—do not completely eliminate the risk of disputes between a sovereign debtor and its creditors. Disagreements can arise over how the warrants operate in practice, including, for example, whether the correct procedures were followed in making the calculations that determine payouts to creditors.

Designing a restructuring plan is challenging in its own right, but securing approval from the requisite creditor majorities presents a distinct set of challenges. Collective action clauses (CACs) are intended to mitigate the holdout problem by allowing key payment-related terms central to any debt restructuring to be amended through a supermajority vote, in contrast to old-style bonds that required unanimous consent from the creditors.

As Lee Buchheit and Mitu Gulati have noted based on their review of the relevant bond documentation for Venezuela's outstanding debt instruments,[14] PDVSA's bonds lack CACs, whereas most of the Republic's bonds contain only first-generation, series-by-series CACs rather than the more modern aggregated version of CACs. The limitation of series-by-series CACs is that a determined holdout can assemble a blocking position in a single series, potentially undermining an exchange that would otherwise command broad creditor support. Given these vulnerabilities in the existing bond documentation, both the Republic and PDVSA would likely want to evaluate the full range of restructuring tools available to address the holdout risk.

Although technically outside the restructuring itself, asset recovery efforts to repatriate the tens, if not hundreds, of billions of dollars in public funds misappropriated from Venezuela could, if successful, materially support both the restructuring and the broader reconstruction program. These efforts are inherently slow, costly, and complex, and success is far from guaranteed.

Even so, any recovered assets would expand the pool of resources available for Venezuela's recovery program and could therefore play a supporting role in the overall recovery effort. However, the recovery of such assets is inherently uncertain, and thus debt restructuring and economic reconstruction plans should not be predicated upon achieving a certain level of recovered assets.

Finally, a new Venezuelan government assessing which legacy obligations to include in a restructuring may also need to consider whether certain debts were incurred under questionable or illegitimate circumstances and should not be honored on the same terms as other claims that are considered legitimate. In particular, a Venezuelan government might examine whether any obligations fall under the rubric of "odious debt"—that is, debt incurred without public consent and used for purposes contrary to the public interest, such as a ruler's personal enrichment or a regime's repression of the population, where the lenders extending the credit were aware of these circumstances.

While odious debt has not been formally recognized by courts or arbitral tribunals as a binding legal doctrine and any claim based on it would therefore face uncertain prospects in litigation, the concept could still influence restructuring negotiations by highlighting the potentially problematic aspects of certain obligations. This could potentially give a new government moral and political leverage vis-à-vis those creditors who financed the debt obligations at issue.

STRATEGIES FOR ECONOMIC RECONSTRUCTION

Although a Venezuelan recovery will require a comprehensive debt restructuring, the country's long-term recovery will depend just as much on its ability to rebuild a productive economy. A debt restructuring may relieve financial pressures both in the short term and over the longer term. Yet it cannot by itself restore Venezuela's economic growth, reverse the collapse of its oil sector, repair the physical infrastructure on which economic activity depends, or restore the core legal and regulatory institutions that underpin the rule of law essential to that economic activity. Without a program of economic reconstruction that restores a

14 Lee Buchheit and Mitu Gulati, "How to Restructure Venezuelan Debt," July 2017, pp. 5-6, pp. 13-14 (available on SSRN).



functioning economy and the institutions that support it, no debt restructuring will be sustainable.

Before either economic reconstruction or debt restructuring can take hold, Venezuela will require a period of stabilization. This will involve, among other things, reining in Venezuela's persistently high inflation, rebuilding the state's fiscal machinery to collect revenues and manage public spending, and restoring basic public services such as electricity, water and sanitation, and health care.

As a fundamental matter, Venezuela needs an overarching economic strategy to guide its recovery, and economic diversification should lie at the core of any such strategy. The country's overreliance on hydrocarbons has long exposed it to the so-called "resource curse," which has had serious deleterious effects on the Venezuelan economy and Venezuelan society as a whole. Observers have argued that, as in other countries afflicted by the resource curse, Venezuela has suffered from widespread corruption as well as the misallocation of capital in the economy, with investment concentrated in the hydrocarbon sector to the detriment of other sectors of the economy.

Moreover, as the global economy increasingly relies on alternative energy sources and electrification and less on hydrocarbons, demand for output from oil-producing countries such as Venezuela is expected to decline over time. Thus, Venezuela will want to reorient its economy so that it does not remain centered on hydrocarbons at a time when the global economy is moving toward a more decarbonized future.

As part of any diversification strategy, Venezuela will also need to develop sectors where it can enjoy a comparative advantage in the global economy and generate a steady stream of foreign exchange earnings. Potential candidates include sectors such as ecotourism and high-end tourism, alternative energy (such as hydro and solar), logistics and services, specialty steel and aluminum, high-value-added agro-processing, and critical minerals.

Some of these sectors will be entirely new areas of economic activity for Venezuela, while others, such as steel and aluminum, are sectors in which the country was once heavily involved. But the nationalizations under the Chávez government left many of the firms in these sectors in disrepair, so any decision by a new Venezuelan government to re-enter them



will necessarily involve rebuilding industries where Venezuela previously operated.

Venezuela's diversification efforts will require active and continued engagement and coordination with the international community, public and private. Rebuilding legacy sectors and developing new ones will depend on securing external financing, obtaining specialized technical expertise that may only be available abroad, and forming partnerships with multilateral institutions and private sector firms outside of Venezuela.

Diversification will move the Venezuelan economy in new directions, but any economic recovery plan will also have to address the chronic problems that exist in an important part of the Venezuelan economy: its state-owned enterprise (SOE) sector. Reform or privatization of Venezuela's SOE sector will be an essential component of any economic recovery plan, as many SOEs are unprofitable, inefficient, and no longer viable. They therefore represent a continuing drain on the national treasury. Those SOEs that cannot be restored to operational and/or financial health should be wound down so that resources can be redeployed to more productive uses.

Any economic recovery plan—whether based on diversification, SOE reform, or otherwise—cannot succeed unless the country has sound and reliable physical infrastructure. However, Venezuela's infrastructure across the country requires extensive repair and upgrading after years of mismanagement, lack of maintenance, and insufficient investment.

Venezuela's electricity grid has suffered widespread and frequent outages which have disrupted economic activity and made daily life a strain for ordinary Venezuelans. Furthermore, roads and highways, ports, water and sanitation systems, and telecom networks also show serious degradation and will require major refurbishment.

The oil infrastructure in Venezuela has suffered from years of underinvestment and lack of regular maintenance and will therefore require major capital expenditures to restore basic operational capacity. But Venezuela's oil sector also depends on the country's broader infrastructure, as power and water systems, for example, must function reliably for oil operations to function effectively. The successful revival of the oil sector will therefore depend in part on this broader infrastructure being restored to a state of reliable performance.

The two devastating back-to-back earthquakes that struck Venezuela in late June, which caused a significant and tragic loss of life, compounded the already formidable task of rebuilding the country's infrastructure. World Bank estimates place the damage at approximately $19.6 billion,[15] and repairing these newly affected assets will significantly increase the cost, and likely the complexity, of restoring infrastructure that was already in significant disrepair prior to the earthquakes.

Rebuilding Venezuela's infrastructure could be a very expensive undertaking. Yet in rebuilding its infrastructure, Venezuela could explore the possibility of entering into public-private partnerships (PPPs) with firms experienced in the development and operation of infrastructure. Under PPPs, the costs of rebuilding Venezuela's infrastructure would be borne not by the Venezuelan government alone but by the private sector as well.

Infrastructure, however, is only one element of Venezuela's wider reconstruction agenda. The design of the sovereign debt restructuring could in itself reinforce this wider economic reconstruction agenda. For example, debt-for-equity swaps could be used to direct investment to sectors that are designated as high-priority sectors in Venezuela's economic diversification strategy. Moreover, debt-for-nature/climate swaps could support conservation and environmental protection of Venezuela's important and precious ecological assets, and such swaps could therefore potentially buttress any effort to develop ecotourism as a promising economic sector.

A successful debt restructuring more generally would allow Venezuela to re-enter capital markets and raise financing for investment in the economy. In addition,

15 World Bank, "World Bank Group Estimates Venezuela Earthquakes Damage at $19.6 Billion," July 23, 2026 (https://www.worldbank.org/en/news/press-release/2026/07/23/world-bank-group-estimates-venezuela-earthquakes-damage?cid=ECR_TT_worldbank_EN_EXT&utm_source=chatgpt.com).

it would create fiscal space for the government to devote resources to health, education, and social welfare rather than to debt service payments.

Finally, recent developments since Maduro's capture may affect Venezuela's re-engagement with the international community and the prospects for foreign investment in the Venezuelan economy. Investor interest in Venezuela has increased, and OFAC has issued a series of limited licenses easing restrictions on US participation across multiple sectors, including hydrocarbons, mining and, most recently, telecommunications.[16] Venezuela itself has amended certain economic laws, including its hydrocarbons law, to provide greater flexibility for private investment and joint venture arrangements.[17]

Nonetheless, whether these steps will translate into a significant inflow of foreign investment remains uncertain, given that Venezuela's institutional environment, particularly with respect to investor protections and the rule of law, has not fundamentally changed.

16 Cleary Gottlieb, "OFAC Issues General License Authorizing Activity in Venezuelan Telecommunications Sector," Alert Memorandum, August 27, 2026 (indicating that the telecommunications sector is the latest in a long line of sectors in which OFAC has issued general licenses "broadening the scope of authorized activity and investment in Venezuela," including in the oil and gas, petrochemicals, electricity, and aviation sectors).

17 See generally, *BNamericas*, "As Oil Companies Circle the new Venezuela, Cleary Gottlieb Flags Risk, Rewards," August 26, 2026.

CONCLUSION

Venezuela faces a difficult and lengthy path to recovery given the depth of its economic, humanitarian, political, and sovereign debt crises. If Venezuela had a credible and legitimate government in place, and if that government adopted a cohesive, comprehensive strategy that advances economic reconstruction and sovereign debt restructuring in parallel, the country could begin rebuilding its economy and restoring financial stability.

ABOUT THE AUTHOR



Steven T. Kargman
Kargman Associates/International Restructuring Advisors

Steven is the Founder and President of Kargman Associates, a New York City-based strategic advisory firm specializing in providing strategic advice to clients involved in complex and challenging international restructuring situations, with a special focus on emerging markets around the globe. He is a leading expert on international debt restructurings and cross-border insolvency. Steven formerly served as General Counsel of the New York State Financial Control Board and as Lead Attorney with the Export-Import Bank of the United States. He has worked on numerous high-profile and complex debt restructuring and infrastructure project transactions in emerging markets.



pwc

We're with you at every step

so you can

head in the right direction

Get started today at **pwc.com**



© 2026 PwC. All rights reserved. PwC refers to the US member firm, and may sometimes refer to the PwC network. Each member firm is a separate legal entity. Please see www.pwc.com/structure for further details. This content is for general information purposes only, and should not be used as a substitute for consultation with professional advisors.

Navigate corporate restructuring with confidence.

At Verita, we simplify your workflow by accelerating fiduciary account openings and enabling same-day funding.

Contact the Verita TFS team to learn more.

Rebecca DeGroot
rdegroot@veritaglobal.com

Michelle Salazar-Rosenbloom
msalazar-rosenbloom@veritaglobal.com

verita
veritaglobal.com

DuaneMorris®



DUANE MORRIS IS A PROUD SPONSOR OF AIRA'S 42ND ANNUAL BANKRUPTCY & RESTRUCTURING CONFERENCE.

The Duane Morris Business Reorganization and Financial Restructuring Practice Group is known for its deep understanding of financially distressed situations and its ability to develop and execute effective strategies that protect and advance clients' interests.

For more information, please contact:

JESSICA KENNEY BONTEQUE
212.692.1036
jbonteque@duanemorris.com

www.duanemorris.com

Duane Morris LLP – A Delaware limited liability partnership

AIRA | JOURNAL

RESEARCH / PRACTICE / PERSPECTIVE

YOUR PERSPECTIVE BELONGS IN THESE PAGES.

IDEAS DRIVE A STRONGER PROFESSION.

WRITE FOR THE JOURNAL

Submit your article or propose a topic to the *AIRA Journal* Editorial Board.

Articles are currently being accepted for upcoming quarterly issues; see *AIRA Journal* information and Authoring Guidelines at www.aira.org/journal.

To inquire about placing an ad or press release in the *AIRA Journal* contact Cheryl Campbell.

editorialboard@aira.org

Authoring guidelines: aira.org/journal/guidelines
Ads & Press Releases: ccampbell@aira.org

PRACTICAL VALUATION TIPS:

COMMON ERRORS AND MISCONCEPTIONS WHEN VALUING EMPLOYEE STOCK OPTIONS AND WARRANTS IN EQUITY VALUATIONS

AARON DOLGOFF, CHARLES RIVER ASSOCIATES, ERIK HIMAN, AND PAVEL NIKOLOV, ECONIC PARTNERS

INTRODUCTION

In this article, we examine a common misconception made by valuation professionals when valuing options and warrants as part of a valuation assignment to value a company's common equity. Employee stock options ("ESO") and warrants (collectively, "options") give rise to equity claims on a company's assets that are linked to, but distinct from, the claims on the assets by common shareholders ("common equity" claims) and, thus, affect the valuation of common equity.[1] After calculating the company's total equity value, valuation professionals subtract the value of any outstanding options to calculate the value of common equity. Two popular methods are typically used to value outstanding options – the treasury stock method and the Black Scholes valuation method.

This article examines the application of each method and discusses the conditions under which the two methods are reasonably equivalent. The point of this article is to identify when the two methods are not reasonably equivalent; that is, when the treasury stock method and the Black Scholes method are not substitutes because their use results in economically different valuations. As we discuss below, in many circumstances, the treasury stock method is a "shortcut" for the Black Scholes method, and is reasonable to use when the time value of the options is not economically meaningful or is not relevant (for example, if the ESOs or warrants are being accelerated/cancelled); otherwise, the Black Scholes valuation method is the appropriate method to use.

STOCK OPTIONS AND COMMON EQUITY

For a company financed with debt and equity that has outstanding equity-linked securities such as ESO and warrants,[2] the following equation describes the relationship between enterprise value ("EV") and the values of net debt, common equity ("CE"), and stock options:

Equation 1

$$EV_{Firm} = V_{Debt} + V_{CE} + V_{Options}$$

In other words, prior to the expiration of the options, the option holders have claims on the company's assets along with the common shareholders. The value of the option holder claims reduces the value of the claims of the common shareholders.[3]

Recognizing that the difference between a firm's EV and the value of its net debt is the value of a firm's total equity ("TE"), equation 1 can be rewritten as:

Equation 2

$$V_{TE} = EV_{Firm} - V_{Debt} = V_{CE} + V_{Options} = P_{CE} * S_{CE} + P_{Options} * S_{Options}$$

where

EV_{Firm} = Enterprise value of the firm

V_{Debt} = Value of net debt

V_{TE} = Value of total equity

V_{CE} = Value of common equity; $V_{CE} = P_{CE} * S_{CE}$

V_{Option} = Value of options; $V_{Option} = P_{Option} * S_{Option}$

P_{CE} = Price of common equity per share

S_{CE} = Number of outstanding shares of common stock

P_{Option} = Price of option per underlying common share

S_{Option} = Number of granted options

The objective of a common equity valuation is to measure the per-share value of a company's common

1 We refer to ESO and warrants, collectively, as options. ESO and warrants affect the valuation of common equity in two ways. First, the value of common equity is affected by the value of the outstanding ESO and warrants as of the valuation date (i.e., ESO and warrants granted in the past); and second, to the extent ESO and warrants are incorporated in any financial forecasts, they also affect the valuation of common equity as of the valuation date (i.e., ESO and warrants that will be granted in the future). This article analyzes the valuation effects of the ESO and warrants granted in the past that are outstanding as of the valuation date.

2 The valuation effects of ESO and warrants are almost identical except that ESO have potential tax benefits for the firms while warrants generally do not. For simplicity, in the examples provided in this paper, we use calculations applicable to warrants and ignore the tax effects of the ESO. For calculations that reflect the tax benefit of the ESO, see, Holthausen, Robert W, and Mark E. Zmijewski, Corporate Valuation: Theory, Evidence & Practice, Second Edition, Cambridge Business Publishers, 2020 ("Holthausen and Zmijewski"), p.574.

3 This statement based on the relationship between the value of debt and equity in Equation (1) assumes that those values are generally independent of one another. This is not true for companies in a state of high financial distress, which is not the subject of the analysis in this paper.

equity. Based on equation 2, the per-share price of common equity can be expressed as:

Equation 3

$$P_{CE} = \frac{EV_{Firm} - V_{Debt} - P_{Options} * S_{Options}}{S_{CE}}$$

In equation 3, all variables on the right-hand side, except for the options price ($P_{Options}$), are typically measurable. The firm's enterprise value (EV_{Firm}) is typically measured using one of the common valuation methods or a combination of the commonly used valuation methods (discounted cash flow, market multiples, leveraged buyout valuation); the value of net debt[4] (V_{Debt}), the number of the options granted ($S_{Options}$), and the number of the outstanding shares (S_{CE}) are reported in a company's financial statements.

The relative complexity of solving equation 3 stems from the fact that the common equity price (P_{CE}) depends on the option price (P_{Option}) which, in turn, depends on the common equity price (P_{CE}).[5] Expressed mathematically, P_{CE} is a function of P_{Option} and vice versa in the following system of two equations:

Equation 4 $\quad P_{CE} = f(P_{Option})$

Equation 5 $\quad P_{Option} = f(P_{CE})$

The two equations are typically solved numerically through an iterative process.[6] As we discuss in the remainder of this paper, equations 4 and 5 take different forms in the application of the treasury stock method and the Black Scholes method.

4 Throughout this paper we assume that the book value of debt approximates its market value which is generally true. However, we note that there might be circumstances where this is not the case, for example, a firm that took on a fixed rate debt prior to a large change in market interest rates. In such situations the market value of debt should be used.

5 Similar complexity may occur if the approximation of market value of debt by its book value does not hold true and the market value of debt is not observable. In such instances, one can employ a different model such as the Merton Model that prices debt by modeling equity as a call option on the value of the whole company. See, Merton, Robert C. (1974). "On the Pricing of Corporate Debt: The Risk Structure of Interest Rates." *Journal of Finance*. 29 (2): 449–470.

6 We discuss the iterative process later in this paper. Generally, the iterative process implies that we initially choose an arbitrary value for P_{CE} in equation (5) to calculate the option value, P_{Option}, and then use that value to calculate P_{CE} in equation (4). Naturally, after the first iteration, P_{CE} and P_{CE} will not equate. We repeat the process in subsequent iterations until P_{CE} and P_{CE} equal one another. For purposes of illustrating the iterative process, we use a two-color notation of . We use **orange color** P_{CE} to indicate the price we initially choose and **blue color** to indicate the resulting price we calculate.

STOCK OPTION BASICS

Stock options are derivative securities that give their owner the right to purchase a share of the underlying equity at a fixed price, which is called the strike price or exercise price (X_C). Options are exercisable for a certain period of time, after which they expire, i.e., they mature. Expiration time (T_C), also called time to maturity or time to expiration, is the period at any point after the option is issued through its maturity date. Expired options are worthless (have a price of zero).

Options are said to be in-the-money when the options' exercise (strike) price, (X_C), is below the price of the underlying security (P_{CE}). The difference between the exercise price and the price of the underlying security is the option's intrinsic value. Options with an exercise price above (or at) the price of the underlying security are said to be out-of-the-money (at-the-money). The intrinsic value for the in-the-money options is positive, and for the out-of-the-money and at-the-money options the intrinsic value is zero.[7]

The value of the options prior to their expiration is generally greater than their intrinsic value unless the company is expected to pay large dividends before the option expires or the employee is expected to exercise the option soon.[8] The difference between the option's price and its intrinsic value is sometimes called the time value of the option. On the exercise date, the time value of the option is practically zero and the value of the option is equal to its intrinsic value, and options with positive intrinsic value are exercised and those with zero intrinsic value expire worthless.[9]

The value of the options depends on the strike price (X_C), time to expiration (T_C), underlying stock's price (P_{CE}) and price volatility σ_E , underlying stock's dividend yield, and the risk-free rate of return.[10, 11] We present the mathematical relation between the above

7 Berk, J., and P. DeMarzo, Corporate Finance (4th ed.). Pearson, 2016 ("Berk and DeMarzo"), pp. 725-727; See, also Holthausen and Zmijewski, p.753.

8 Employees frequently exercise their stock options earlier than the optimal exercise date for a market-traded stock option due to desires for liquidity or diversification. Early option exercise leads the employee to sacrifice the value of the option in excess of its intrinsic value.

9 Berk and DeMarzo, pp. 725-727; See, also Holthausen and Zmijewski, p.753.

10 Holthausen and Zmijewski, pp. 425-426 and 577.

11 As noted previously, employee stock options tend to be exercised earlier than optimal. For example, for a stock not paying any dividends the optimal exercise timing for a call option is at its expiration. Because employees exercise options earlier than expiration, e.g., for liquidity or diversification purposes, the time to expiration in the analysis should be the *expected* time to exercise. The fair value accounting for stock option grants will typically disclose the company's own expectation for expected time to exercise as of the grant date.

factors and the option value in the discussion of the Black Scholes valuation method and its application.

APPLICATION OF THE TREASURY STOCK METHOD

When using the treasury stock method to adjust the value of a company's total common equity for its outstanding options to measure the value of its common equity, in-the-money outstanding options dilute the stock price because their exercise is economically equivalent to buying shares at a price that is below the market price. Thus, the treasury stock method accounts for the valuation effect of the options through their dilutive effect.[12] More specifically, in-the-money options are assumed exercised and the amount of cash received ($Cash_{Option}$) is assumed to be used to purchase additional shares ($S_{In\text{-}the\text{-}money}$) at the underlying stock price (P_{CE}).[13] In other words, the treasury stock method values the options at their intrinsic value and the system of equations 4 and 5 becomes:[14]

Equation 6

$$P_{CE} = \frac{EV_{Firm} - V_{Debt} + Cash_{Option}}{S_{CE} + S_{In-the-money}}$$

Equation 7

$$Cash_{Option} = \{X_C * S_{In-the-money} \text{ if } P_{CE} > X_C;\ 0\}$$

where

$Cash_{Option}$ = Cash from exercising in-the-money options

$S_{In-the-money}$ = The number of exercised options (i.e. options for which $P_{CE} > X_C$; this number is zero when $P_{CE} \leq X_C$)

Note that the amount of cash received ($Cash_{Option}$) and the number of additional shares purchased ($S_{In\text{-}the\text{-}money}$) in equations 6 and 7 include the in-the-money options only and exclude out-of-the-money and at-the-money options, even though they likely have some non-zero value.[15]

The treasury stock method is the correct method to use when outstanding options are being accelerated, for example, in mergers and acquisitions ("M&A") and leveraged buyouts ("LBO"), in which the underlying equity securities are cancelled (redeemed) upon consummation of the transaction. In such instances, the out-of-the-money and at-the-money options expire worthless and can be ignored.[16] Therefore, the treasury stock method is used in M&A and LBO transactions in the valuation of common equity as both transactions result in the acceleration (redemption) of equity securities.[17]

When the number of in-the-money options is known, equations 6 and 7 can be combined in a single equation:[18]

Equation 8

$$P_{CE} = \frac{EV_{Firm} - V_{Debt} + X_C * S_{In-the-money}}{S_{CE} + S_{In-the-money}}$$

This formula can also be used when all of the company's options have the same exercise price and the price of the stock excluding the options is greater than the exercise price of the options ($X_C < (EV_{Firm} - V_{Debt})/ S_{CE}$). The application of the treasury stock method is relatively simple and appealing for its intuitive approach. However, as we discuss in the next section, it is not a substitute for the Black Scholes valuation method.

12 The treasury stock method is used in financial accounting to present a company's earnings per share ("EPS") on an "as if exercised" basis by factoring the dilutive effect of the options. In addition to EPS, the companies are also required to report diluted earnings per share ("diluted EPS"). The treasury stock method is codified in the Statement of Financial Accounting Standards No. 128 ("FAS 128"). See, FAS 128 available at https://www.fasb.org/page/ShowPdf?path=aopfas128.pdf&title=FAS%20128%20(AS%20AMENDED). Under the treasury stock method for calculating a company's diluted EPS: (i) exercise of options is assumed at the beginning of the reporting period (or at time of issuance, if later); (ii) the proceeds from exercise are assumed to be used to purchase common stock at the average market price during the reporting period; and (iii) the incremental shares, i.e., the difference between the number of shares assumed issued and the number of shares assumed purchased, are added to shares outstanding to estimate the number of diluted shares which are used to calculate diluted EPS (FAS 128, ¶17).

13 In certain circumstances, cashless exercises may occur in which no cash is received by the company, but the shares delivered to the employee are reduced to cover the exercise price. If so, Equation (6) can be modified to reflect such instances.

14 It can be shown that equations (3) and (6) are equivalent when the options are valued at their intrinsic value, i.e., when $= P_{Option} = (P_{CE} - X_C) * S_{In\text{-}the\text{-}money}$.

15 For out-of-the-money and at-the-money options, the strike price is greater than or equal to the common equity price (i.e., intrinsic value is zero). If so, both $Cash_{Option}$ and $S_{In\text{-}the\text{-}money}$ are zero and P_{CE} in equation (6) is unaffected.

16 In certain M&A situations the target company's employee stock options (and other equity-linked compensation) may be converted to stock options on the acquiring company's stock (for example, by adjusting the exercise prices and number of options by the exchange ratio between the acquirer's stock and the target company's stock). In some circumstances the value of the newly issued options will differ from that of the options cancelled – for example, if the merged company's stock is expected to have a different volatility than the target company's stock.

17 We note that even though options might be accelerated as part of a transaction, evaluating the price paid for the target company is often based on valuations of the target as a standalone company in which the options are not cancelled (for example, in an appraisal litigation). For instance, the Delaware appraisal law stipulates that the merger effects should not be taken into consideration when determining a company's fair value which is defined as the value "exclusive of any element of value arising from the accomplishment or expectation of the merger, consolidation, conversion, transfer, domestication or continuance…" See, Delaware Code Title 8. Corporations § 262. Appraisal rights, § 262(h).

18 See, Holthausen and Zmijewski, p.573.

APPLICATION OF THE BLACK-SCHOLES METHOD

The Black-Scholes option pricing model values the options based on the current stock price, strike price, volatility, expiration time, and the risk-free rate of return:[19]

Equation 9

$$P_{Option} = P_{CE} * N(d_1) - X_C * e^{-r_f * T_C} * N(d_2)$$

where

P_{Option} = Price of a European call option

P_{CE} = Price of common equity per share

X_C = Exercise (strike) price of the call option

r_f = Risk – free rate of return

T_C = Time to expiration of the call option (years)

N(x) = Standard normal cumulative distribution function

$$d_1 = \frac{ln\frac{P_{CE}}{X_C} + \left(r_f + \frac{\sigma_E^2}{2}\right) * T_C}{\sigma_E * \sqrt{T_C}}$$

$$d_2 = d_1 - \sigma_E * \sqrt{T_C}$$

σ_E = The standard deviation of the company's continuouslycompounded annual returns (volatility)

Because the Black-Scholes model values the options directly, we can use equations 3 and 9 as a system of two equations to estimate the common equity price (P_{CE}):

Equation 3 $$P_{CE} = \frac{EV_{Firm} - V_{Debt} - P_{Option} * S_{Option}}{S_{CE}}$$

Equation 9 $$P_{Option} = P_{CE} * N(d_1) - X_C * e^{-r_f * T_C} * N(d_2)$$

The value of the options prior to their expiration is generally greater than their intrinsic value. The difference between the option's price and its intrinsic value is called the time value of the option. On the exercise date, the time value of the option is practically zero and the value of the option is equal to its intrinsic value; thus, options with positive intrinsic value are exercised and those with zero intrinsic value expire worthless.[20]

The Black-Scholes method accounts for the valuation effect of all options, including out-of-the-money and at-the-money options, while the treasury stock method, as discussed previously, takes into account only the in-the-money options. As we demonstrate in the illustrative example below, the difference arises from the time value of the options that is ignored in the application of the treasury stock method but not in the Black-Scholes method.

19 See, for example, Holthausen and Zmijewski, pp. 425-427. For simplicity, we use the Black Scholes option pricing model for a non-dividend paying stock (also used to value an American stock option).

20 Berk and DeMarzo, pp.739-740; See, also Holthausen and Zmijewski, p.577.

THE ITERATIVE PROCESS OF SOLVING THE SYSTEM OF TWO EQUATIONS

To solve the system of equations 4 and 5, we use two different forms – equations 6 and 7, respectively, for the treasury stock method and equations 3 and 9, respectively, for the Black-Scholes method.

For the Black-Scholes method, we start the process by choosing an arbitrary value for the common equity price (P_{CE}). Next, we calculate the option price (P_{Option}) in equation 9 and use it to calculate the common equity price (P_{CE}) in equation 3.

For the treasury stock method, we also start the process by choosing an arbitrary value for the common equity price (P_{CE}). The next step is to calculate the number of the in-the-money options ($S_{In\text{-}the\text{-}money}$) and the cash proceeds from exercising those options ($Cash_{Option}$) in equation 7 and use the latter to calculate the common equity price (P_{CE}) in equation 6.

The final step for both methods is to compare the chosen common equity price (P_{CE}) and the calculated common equity price (P_{CE}). Naturally, after the first iteration, the two prices will likely not equate, so in the second iteration of the process, we choose a different common equity price (P_{CE}) in the direction that reduces the gap between (P_{CE}) and (P_{CE}). The process repeats until the two prices equate,[21] or stated alternatively, until:

Equation 10(a) (P_{CE}) in equation (9) – (P_{CE}) in equation (3) = 0

Equation 10(b) (P_{CE}) in equation (7) – (P_{CE}) in equation (6) = 0

Equations 10a and 10b for the Black-Scholes method and the treasury stock method, respectively, are each referred to as a "clearing condition."

AN ILLUSTRATIVE EXAMPLE

We illustrate the application of both methods in the valuation of a company's common equity in the following example. Assume a company's enterprise value is $5 billion and its net debt is $2 billion resulting in a total equity value of $3 billion. Assume further that the company has 80 million outstanding shares and 20 million granted stock options, 10 million of which have an exercise price of $25.00 per option ("Grant 1") and 10 million have an exercise price of $37.00 per option ("Grant 2"), both grants with time to expiration of 5 years. The underlying stock

21 The iterative process is easily handled in Excel through the "Goal Seek" function under the "What-if Analysis" on the Data tab.

Table 1

(All numbers in million, except for per share)	Formula	Ignoring Options Value	Before Iteration		After Iteration	
			Black-Scholes Method	Treasury Stock Method	Black-Scholes Method	Treasury Stock Method
		[A]	[B]	[C]	[D]	[E]
Panel A: Valuation of Common Equity						
Enterprise Value (EV_{firm})	[a]	$5,000	$5,000	$5,000	$5,000	$5,000
Net Debt (V_{Debt})	[b]	$2,000	$2,000	$2,000	$2,000	$2,000
Total Equity Value (V_{TE})	[c] = [a] - [b]	$3,000	$3,000	$3,000	$3,000	$3,000
Options Value ($V_{Options}$)	[d] = [k] * [s]		$273		$228	
Cash from exercising Options ($Cash_{Option}$)	[e]			$620		$250
Common Equity Value (V_{CE})	[f] = [c]-[d]+[e]	$3,000	$2,727	$3,620	$2,772	$3,250
Implicit Shares Outstanding (S_{CE})	[g]	80	80	100	80	90
Price per Common Share (P_{CE})	**[h]=[f]/[g]**	**$37.50**	**$34.09**	**$36.20**	**$34.65**	**$36.11**
Panel B: Clearing Condition						
Clearing Condition	[i]=[h]-[j]=0		3.41	1.30	0.00	0.00
			[B1]	[B2]	[C1]	[C2]	[D1]	[D2]	[E1]	[E2]
Panel C: Valuation of Options			**Grant 1**	**Grant 2**	**Grant 1**	**Grant 2**	**Grant 1**	**Grant 2**	**Grant 1**	**Grant 2**
Price per Common Share (P_{CE})	[j]		$37.50	$37.50	$37.50	$37.50	$34.65	$34.65	$36.11	$36.11
Number of Options (S_{Option})	[k]		10	10	10	10	10	10	10	10
Strike Price (X_C)	[l]		$25.00	$37.00	$25.00	$37.00	$25.00	$37.00	$25.00	$37.00
Risk-free Rate (r_f)	[m]		2.50%	2.50%			2.50%	2.50%		
Time to Expiration in years (T_C)	[n]		5.00	5.00			5.00	5.00		
Volatility (σ_E)	[o]		25.0%	25.0%			25.0%	25.0%		
d1	[p]		1.23	0.53			1.09	0.39		
d2	[q]		0.67	(0.03)			0.53	(0.17)		
N(d1)	[r]		89%	70%			86%	65%		
N(d2)	[s]		75%	49%			70%	43%		
Option Price (P_{Option})	[t]		$16.88	$10.37			$14.38	$8.45		
Intrinsic Value of the Option	[u] = Max{[j]-[l], 0}		$12.50	$0.50			$9.65	$0.00		
Time Value of the Option	[v] = [t] - [u]		$4.38	$9.87			$4.73	$8.45		

Notes:
[e] - Equals [k]*[l] if [l]<[j] or zero otherwise; not applicable to [A], [B], and [D].
[i] - Solved through iterative process by varying [j] such that [h]-[j]=0.
[p] to [t] - See equation (9); not applicable to [A], [C], and [E].

has 25% annualized volatility,[22] and the risk-free rate is 2.50%. The valuation effect of the options under the Black-Scholes method and the treasury stock method are presented in Table 1. The application of the Black-Scholes method, including an illustration of the iterative process involved in solving equations 3 and 9, is shown in columns [B] and [D]. The application of the treasury method, including an illustration of the iterative process involved in solving equations 6 and 7, is shown in columns [C] and [E]. Ignoring the valuation effect of the options results in a common equity valuation of $37.50 per share as shown in column [A] in Table 1.

Using the treasury stock method, we start with a price of $37.50 per share, which is the common equity price excluding the valuation effect of the options (column [A], item [h]). Note that at $37.50 per share, both Grant 1 and Grant 2 are in-the-money, so we can use equation 8 to calculate the per-share price of common equity. The amount of the cash that would be received if both grants are exercised is $620 million (column [C], item [e]), which increases the equity value from $3.0 billion to $3.62 billion (column [C], items [c] and [f], respectively), and increases the implicit number of shares outstanding from 80 million (column [A], item [g]) to 100 million (column [C], item [g]) assuming the options are exercised. The resulting price is $36.20 per share (column [C], item [h]). However, $36.20 per share is $1.30 lower than the starting $37.50 per share price and, therefore, the value of the options is too high, which violates the clearing condition (column [C], item [i]). Thus, the iterative process is incomplete, and our starting price was too high. The next iteration starts with a lower price, and the process continues until the clearing condition is fulfilled as shown in column [E], item [i].[23] The resulting equity valuation is $36.11 per share (column [E], item [h]).[24]

22 In reality, annualized volatility can be estimated (i) for publicly traded companies based on the observed volatility of the traded shares or the implied volatility of market traded options; and (ii) for private companies based on a similar approach using a peer group of public companies and controlling for leverage. Note that employee stock options typically have longer maturities than market traded stock options, so care should be taken in analyzing market-implied volatility.

23 In Excel the iterative process is easily handled through the "Goal Seek" function under the "What-if Analysis" on the Data tab by setting item [i] equal to zero by changing item [j].

24 Note that the resulting valuation of $36.11 per share implies that Grant 1 options are in-the-money, but Grant 2 options are out-of-the money. Indeed, $36.11 per share is calculated based on $250 million cash (column [E], item [e]) and 90 million implicit shares outstanding (column [E], item [g]) from exercising the Grant 1 options but not the Grant 2 options. The calculations in column [C], before completing the iteration process, assumed both Grants 1 and 2 options were in the money.

Using the Black-Scholes method, we start again with the common equity price excluding the options, $37.50 per share. The Black-Scholes model values the options in Grant 1 at $16.88 per option and in Grant 2 at $10.37 per option (columns [B1] and [B2], item [t]). The total value of the options is $273 million (column [B], item [d]) and reduces the equity value from $3.0 billion to $2.73 billion (column [B], items [c] and [f], respectively). The resulting per-share value of the company shares is $34.09 (column [B], item [h]). However, $34.09 per share is $3.41 lower than the guessed $37.50 price used to value the options and, therefore, violates the clearing condition (column [B], item [i]). Thus, the iterative process is incomplete, and our starting price was too high. The next iteration starts with a lower price, and the process continues until the clearing condition is fulfilled as shown in column [D], item [i].[25] The Black-Scholes model values the options in Grant 1 at $14.38 per option and in Grant 2 at $8.45 per option (columns [D1] and [D2], item [t]). The total value of the options is $228 million (column [D], item [d]) and reduces the equity value from $3.0 billion to $2.77 billion (column [D], items [c] and [f], respectively). The resulting equity valuation is $34.65 per share (column [D], item [h]).

25 In Excel the iterative process is easily handled through the "Goal Seek" function under the "What-if Analysis" on the Data tab by setting item [i] equal to zero by changing item [j].

Comparing the two methods, the difference in the equity valuations of $34.65 and $36.11 between the Black-Scholes method and treasury stock method (roughly a 4.2% difference) is driven by the time value of the options – the treasury stock method ignores the time value of the options and accounts only for the options' intrinsic value. Thus, under the treasury stock method the out-of-the-money options whose intrinsic value is zero are ignored and the in-the-money options are valued at their intrinsic value.[26] The economic significance of the time value of options depends on the firm's specific circumstances. For example, large option grants with longer time to expiration and a strike price close to the current equity price increase the time value of the options and its valuation impact on the value of common equity. We examine the economic significance of the options' time value of money in the context of a real-world example.

A REAL WORLD EXAMPLE

NVR, Inc. ("NVR") is a publicly traded construction company that builds and sells homes. The company

26 The time value of the options is $4.73 per option for Grant 1 and $8.45 per option for Grant 2 (columns [D1] and [D2], item [v]) or $132 million (= $4.73 per option * 10 million options + $8.45 per option * 10 million options). Adjusting the common equity value of $3.25 billion (column [E], item [f]) derived from the application of the treasury stock method implies an adjusted value of $3.12 billion (= $3.25 billion - $132 million), or $34.65 per share (= $3.12 billion ÷ 90 million shares).

Table 2

The following table provides additional information relative to our equity-based compensation plans for the year ended December 31, 2023:

	Shares	Weighted Avg. Per Share Exercise Price	Weighted Avg. Remaining Contract Life (years)
Stock Options			
Outstanding at December 31, 2022	590,554	3,060.71	
Granted	4,100	5,424.19	
Exercised	(152,086)	1,660.69	
Forfeited	(9,978)	3,820.80	
Outstanding at December 31, 2023	**432,590**	3,557.78	6.0

The following table provides additional information relative to our equity-based compensation plans for the year ended December 31, 2023:

Stock Options			
Outstanding at December 31, 2023	432,590	3,557.78	
Granted	4,520	7,202.65	
Exercised	(67,548)	2,360.02	
Forfeited	(3,880)	4,133.11	
Outstanding at December 31, 2024	**365,682**	3,815.26	5.5

The fair value of the Options granted during 2024, 2023, and 2022 was estimated on the grant date using the Pricing Model based on the following assumptions:

	2024	2023	2022
Estimated option life (years)	6.03	6.05	5.61
Risk free interest rate (range)	3.94% - 4.79%	3.53% - 4.69%	1.17% - 4.36%
Expected volatility (range)	24.16% - 31.56%	26.75% - 30.01%	24.93% - 30.89%
Expected dividend rate	0.00%	0.00%	0.00%
Weighted average grant-date fair value per share of options granted ($)	**2,631.86**	**1,936.08**	**1,437.93**

Table 3

(All numbers in million, except for per share)	Formula	12/31/2023		12/31/2024	
		Black-Scholes Method	Treasury Stock Method	Black-Scholes Method	Treasury Stock Method
		[A]	[B]	[C]	[D]
Panel A: Valuation of Common Equity					
Enterprise Value (EV_{firm})	[a]	$22,680	$22,680	$24,850	$24,850
Debt	[b1]	$1,029	$1,029	$1,061	$1,061
Cash	[b2]	$3,126	$3,126	$2,561	$2,561
Net Debt (V_{Debt})	[b]=[b1] - [b2]	($2,097)	($2,097)	($1,500)	($1,500)
Total Equity Value (V_{TE})	[c] = [a] - [b]	$24,777	$24,777	$26,350	$26,350
Options Value ($V_{Options}$)	[d] = [k] * [s]	$1,948		$1,921	
Cash from exercising Options ($Cash_{Option}$)	[e]		$1,539		$1,395
Common Equity Value (V_{CE})	[f] = [c]-[d]+[e]	$22,829	$26,316	$24,430	$27,746
Shares Outstanding (S_{CE})	[g]	3.19	3.62	2.99	3.36
Price per Common Share (P_{CE})	**[h]=[f]/[g]**	**$7,165.06**	**$7,272.18**	**$8,169.21**	**$8,267.15**
Panel B: Clearing Condition					
Clearing Condition	[i]=[h]-[j]=0	(0.00)	-	0.00	0.00
Panel C: Valuation of Options					
Price per Common Share (P_{CE})	[j]	$7,165.06	$7,272.18	$8,169.21	$8,267.15
Number of Options (S_{Option})	[k]	0.432590	0.43259	0.365682	0.365682
Strike Price (X_C)	[l]	$3,557.78	$3,557.78	$3,815.26	$3,815.26
Risk-free Rate (r_f)	[m]	4.11%		4.37%	
Time to Expiration in years (T_C)	[n]	6.00		5.50	
Volatility (σ_E)	[o]	28.4%		27.9%	
d1	[p]	1.71		1.86	
d2	[q]	1.01		1.21	
N(d1)	[r]	96%		97%	
N(d2)	[s]	84%		89%	
Option Price (P_{Option})	[t]	$4,503.38		$5,252.85	
Intrinsic Value of the Option	[u] = Max{[j]-[l], 0}	$3,607.28		$4,353.95	
Time Value of the Option	[v] = [t] - [u]	$896.10		$898.91	

Notes:
[a] - based on DCF valuation.
[b] to [d] - NVR's 2023 and 2024 Form 10-K filings.
[e] - Equals [k]*[l] if [l]<[j] or zero othrwise; not applicable to [A], [B], and [C].
[g], [k] to [o] - NVR's 2023 and 2024 Form 10-K filings.
[m] and [o] represent the mid-point of the dosclosed ranges in NVR's 2023 and 2024 Form 10-K filings.
[i] - Solved through iterative process by varying [j] such that [h]-[j]=0.
[p] to [t] - See equation (9); not applicable to [A], [C], and [E].

also operates a mortgage banking and title services business. NVR had approximately 3.2 million and 3.0 million outstanding shares of common stock as of December 31, 2023 and 2024, respectively. The company's disclosures in its public filings on Form 10-K with the US Securities and Exchange Commission ("SEC") for the fiscal years ended December 31, 2023 and 2024 regarding its equity-based compensation plans are shown in Table 2.[27]

As shown in Table 2, as of year-end 2023, NVR had 432,590 outstanding stock options with a weighted average exercise price of $3,557.78 and weighted average time to expiration of 6.0 years. Note that the outstanding options were roughly 14% of NVR's common equity[28] which is relatively high and a first indicator of potential economic significance of the options' time value of money. Other indicators of such significance are the relatively long expiration time, 6.0 years, and the relatively close option exercise price to the NVR share price as measured by market value.[29]

Table 3 shows the calculation of NVR's common

27 NVR, Inc. Form 10-K filed with SEC for the fiscal period ended December 31, 2023 (pp.57-58) and December 31, 2024 (p.58).

28 14% = 432,590/3,186,147. NVR reported 3,186,147 shares of outstanding common stock and 432,590 outstanding stock options in the company's 2023 10-K report. See, NVR, Inc. Form 10-K filed with SEC for the fiscal period ended December 31, 2023, pp. 1 and 57.

29 During 2023, NVR granted 4,100 options with a weighted average exercise price of $5,424.19 which is a proxy for the market price of the NVR common shares as options are typically granted at the money.



equity price based on the public disclosure about the company's stock options using the Black Scholes method and the treasury stock method.

As of December 31, 2023, NVR's outstanding stock options are valued at $4,503.38 per share (column [A], item [t]) using the Black-Scholes model for the options with valuation parameters as disclosed in the NVR's 2023 10-K report.[30] The allocation of the options value is approximately 80%[31] to the intrinsic value (column [A], item [u]) and 20%[32] to the time value of the options (column [A], item [v]). Based on the options valuation, the NVR common equity is valued at $7,165.06 per share (column [A], items [h] & [j]). Using the treasury stock method, the NVR common equity is valued at $7,272.18 (column [B], items [h] & [j]), or about 1.5%[33] higher as this method fails to account for the time value of the options.

As of December 31, 2024, NVR's outstanding stock options increased in value to $5,252.85 per share as the common equity price increased. The allocation of the options value is approximately 83%[34] to the intrinsic value (column [C], item [u]) and 17%[35] to the time value of the options (column [C], item [v]). Note that as the equity price went up and the time to expiration declined, the economic significance of the options' time value, in relative terms, also declined bringing closer the common equity price valuations based on the two option pricing methods. Using the Black-Scholes method, the NVR common equity is valued at $8,169.21 per share (column [C], items [h] & [j]). Using the treasury stock method, the NVR common equity is valued at $8,267.15 per share (column [D], items [h] & [j]), or about 1.2%[36] higher.

30 See footnotes to Table 3 for more details.
31 80% = $3,607.28 / $4,503.38.
32 20% = $896.10 / $4,503.38.
33 1.5% = $7,272.18 / $7,165.06 – 1.
34 83% = $4,353.95 / $5,252.85.
35 17% = $898.91 / $5,252.85.
36 1.2% = $8,267.15 / $8,169.21 – 1.

CONCLUSION

As demonstrated in this article, the treasury stock method and the Black-Scholes method are not substitutes when their application results in economically different valuations. Rather, the treasury stock method is a "shortcut" for the Black-Scholes method in a limited scope of circumstances when the time value of options is not economically meaningful or can be ignored (i.e., it is not relevant).

ABOUT THE AUTHORS



Aaron Dolgoff
Charles River Associates (CRA)

Aaron is a Vice President in the Finance Practice of Charles River Associates (CRA). He has over 20 years of experience as a consulting and testifying expert in matters related to valuation and damages. Aaron has experience applying economic and valuation expertise in a wide variety of disputes including securities litigation, business valuation disputes, complex commercial damages, insider trading and market manipulation matters, and disputes related to employee and executive compensation involving equity or other forms of risky compensation.



Erik Himan
Econic Partners

Erik is a Partner at Econic Partners. He has over 20 years of experience applying economic and quantitative methods to problems in complex business litigation as a testifying expert and as a consultant. Erik specializes in the areas of business and asset valuation, appraisals and price disputes, assessing solvency in ability-to-pay and fraudulent conveyance claims, securities litigation, accounting issues, measurement of damages and the economic analysis of material adverse effects.



Pavel Nikolov
Econic Partners

Pavel is a Senior Principal at Econic Partners with more than 20 years of experience applying economic, financial, and accounting analyses in litigation and dispute-related matters involving business valuations, breach of fiduciary duty, contract disputes, bankruptcy, fraudulent conveyance, insider trading, material adverse effects, shareholder oppression, various post-merger disputes, alleged financial misstatements, and wrongful disclosures. As a consultant and manager, Pavel has supported leading testifying experts in numerous high-profile engagements. He has developed damages and valuation models across a broad range of industries including information technologies, crypto and digital assets, insurance, financial services, advertising and publishing, aviation transportation, computer hardware, manufacturing, automotive, mining, real estate, biotech, healthcare, private equity, and venture capital.

FORMER SDNY BANKRUPTCY COURT JUDGE ROBERT D. DRAIN JOINS M3 PARTNERS



NEW YORK, July 30, 2026 -- M3 Partners, LP ("M3"), a leading independent corporate advisory firm, today announced that former Southern District of New York Bankruptcy Court Judge Robert D. Drain has joined the firm as a Senior Advisor and Head of Fiduciary Services, effective August 1, 2026.

Judge Drain will focus on trusteeships, monitorships, examinerships, and similar appointments related to restructurings. He will also be available to serve as an advisor across M3's other engagements.

"With his sterling reputation in the restructuring world, his exceptional base of knowledge, and his outstanding judicial track record, Judge Drain is a wonderful addition to our team," said Mo Meghji, founder and Managing Partner of M3. "Judge Drain has been a highly influential force as one of, if not the best, judges in the country over the past two decades. He has remained engaged throughout the ecosystem, ranging from presiding over influential cases, teaching at key institutions, mentoring, and serving as a fellow in many of our esteemed organizations. We look forward to the value Judge Drain will add as a mentor to the M3 team as well as assisting across our client relationships as the firm continues along its strong growth trajectory."

"I've watched Mo and the M3 team grow from a small boutique at its founding a decade ago, to its impressive team," said Judge Drain. "This growth is a testament to the great work M3 does by delivering strong results for clients through nimble teams and the highest quality of professionalism. I am very pleased to join this wonderful group, and I look forward to adding value to the M3 team and its clients."

Judge Drain retired from the bench in 2022, after serving more than 20 years on the U.S. Bankruptcy Court for the Southern District of New York, one of the busiest and most influential bankruptcy circuits in the country. He was appointed to the bench in 2002 by the U.S. Court of Appeals for the Second Circuit. Judge Drain began his career with more than 20 years in private practice, including 10 years as a partner in the bankruptcy group of a global law firm. Judge Drain has presided over some of the most significant bankruptcy cases in recent years, including Purdue Pharma, Hostess Brands, Sears, Delphi, A&P, Varig S.A., Yukos, and Parmalat, and he has served as a court-appointed mediator in complex cases such as Cengage, Quicksilver, and Puerto Rico Electric and Power Authority (PREPA). Judge Drain is a fellow of the American College of Bankruptcy, a member and former board member of the American Bankruptcy Institute, and a former board member and officer of the National Conference of Bankruptcy Judges. Judge Drain currently serves on the FDIC's Systemic Resolution Advisory Committee.

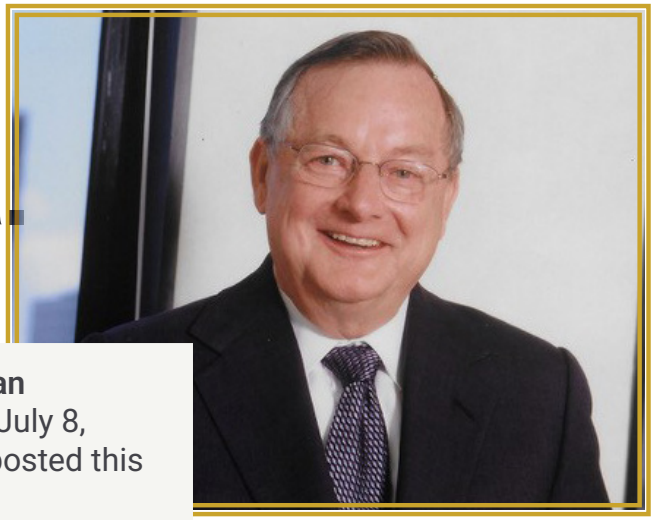
Judge Drain is a member of the International Insolvency Institute, and he was a founding member and chair of the Judicial Insolvency Network, which was responsible for developing guidelines adopted by U.S. courts and courts abroad for cooperation and communication in transnational insolvency cases. Judge Drain has also served as an adjunct professor at the St. John's University School of Law in its Bankruptcy Program and Pace University School of Law.

Judge Drain graduated cum laude from Yale College and earned his JD from Columbia University School of Law, where he was a Harlan Fiske Stone scholar for three years.

M3 is a leading, independent corporate advisory firm that provides operational, strategic, and financial solutions through its core service offerings: Restructuring Advisory, Value Creation, M&A Solutions, and Office of the CFO. The M3 team has led hundreds of engagements, including some of the most significant restructurings in the market. Known for nimble, results-focused teams, M3 engagements are led by senior turnaround and operational veterans with decades of combined experience across key verticals. M3 has developed an excellent track record of success through the firm's ability to navigate complex situations, align disparate stakeholders, and develop results-driven, actionable plans.

IN MEMORIAM

WILLIAM G. HAYS, JR.
1927 - 2026



William G. Hays Jr., a member of AIRA and winner of an AIRA Lifetime Achievement Award, died in Atlanta on July 8, 2026. His son, AIRA Board Member Greg Hays, CIRA, posted this eloquent memorial on LinkedIn:

"Last week, the day before his 99th birthday, my father, William G. Hays Jr., passed away. He was a nationally respected bankruptcy trustee, receiver, and fraud investigator — and to me, my first and best teacher in life and business.

Dad's career in finance spanned more than half a century, beginning in investment banking, then 14 years as President and CEO of Commercial Acceptance Corporation, a finance company listed on the American Stock Exchange. He went on to found William G. Hays & Associates, Inc., an Atlanta-based corporate financial consulting firm, where he served as President and CEO for 33 years. The firm specialized in corporate insolvency, and Dad served as court-appointed Trustee, Special Master, Receiver, and Examiner, and as a consultant to creditors in many large and complex proceedings. The Association of Insolvency & Restructuring Advisors honored him with its Lifetime Achievement Award.

The Atlanta Business Chronicle profiled him in a 1991 article, when I was working for him, under the headline "Fraudbuster: William Hays spots cons." Forbes ran a similar "Fraudbusters" article about him that same year.

He taught me how to hold other people's interests in trust and to recover funds for victims of fraud — to be the person who can be relied upon when others are being deceived. His lessons have shaped my career.

Many of his best friends were the lawyers at Hicks, Maloof & Campbell, who represented him through the years and remained close long after retirement. Dad loved working a fraud case and always wanted to hear all the details about the cases where I was serving as a fiduciary. He was sharp and focused until he died.

Rest well, Dad."



ATLANTA BUSINESS CHRONICLE

November 4, 1991

Reprinted with permission of Atlanta Business Chronicle

Fraudbuster: William Hays spots cons

'Follow the cash' is his firm's motto

By Adam Feuerstein
Staff Writer

William Hays makes his living off fraud.

But Hays is no crook. Instead, financial institutions around the country rely on this crafty investigator to uncover the Ponzi schemes, mortgage fraud and other financial con games that cost banks hundreds of millions of dollars.

As president of Atlanta-based William G. Hays & Associates, Hays repeatedly warns banks that profitable business deals and ironclad loans are often the ones that leave banks holding the bag — almost always empty.

"Banks are always pushing for more volume and more business," says the 64-year-old fraud bloodhound. "Con men know exactly what banks want and give it to them."

Hays and his sometimes partner, New York attorney Joseph DiBenedetto, have helped recover over $100 million for banks like

Chasing the Marcos': Hays' reputation means national clients

the loans based on inventory for which the con artist produced invoices and sales receipts. The bank even

"When I go looking for fraud, th last place I look is the books," Hay says.

William served in the United States Navy during World War II. He received a BS from the University of Georgia and an MBA from the University of Pittsburgh.

He founded and served for 33 years as President and CEO of William G. Hays & Associates, Inc., an Atlanta-based corporate financial consulting firm. The firm specialized in corporate insolvency matters and he served as court-appointed Trustee, Special Master, Receiver, Examiner and as consultant to creditors in many large and complex proceedings.

REST IN PEACE.

AIRA Association of Insolvency & Restructuring Advisors

TMA Turnaround Management Association® Dallas/Ft. Worth



14TH ANNUAL ENERGY SUMMIT

OCTOBER 22, 2026
DALLAS, TEXAS

AKIN OFFICE

Industry Overview • Restructuring • M&A
Networking Cocktail Reception

EARN UP TO 3.6 CPE/2.0 CLE

REGISTER NOW

SCAN TO REGISTER





Blank Rome LLP proudly supports the **Association of Insolvency & Restructuring Advisors**

Blank Rome's nationally recognized Finance, Restructuring, and Bankruptcy practice provides pragmatic legal advice in a broad array of bankruptcies, reorganizations, ABCs, loan workouts, and debt restructurings including related credit and business transactions and litigation.

Blank Rome is an Am Law 100 firm with 16 offices and more than 750 attorneys and principals who provide a full range of legal and advocacy services to clients operating in the United States and around the world.

BLANKROME

Boston • Chicago • Cincinnati • Dallas • Fort Lauderdale • Houston • Los Angeles • New York
Orange County • Philadelphia • Pittsburgh • Princeton • Shanghai • Tampa • Washington • Wilmington

AIRA | JOURNAL

RESEARCH / PRACTICE / PERSPECTIVE

AIRA JOURNAL / AN INVITATION TO SERVE

JOIN THE EDITORIAL BOARD.

Or nominate a junior colleague.



Help shape the next chapter of the *AIRA Journal*.

As a part of the *AIRA Journal's* revamp we are looking to add to the Editoial Board. Members suggest and solicit articles and provide general direction, working with Managing Editor Alexa Mahnken and Creative Director Michael Stull.

04 **ISSUES EACH YEAR**

The Journal is published four times a year, so your contribution hours are manageable.

JOIN US OR NOMINATE A COLLEAGUE

Help guide what comes next.

Send your indication of interest to

editorialboard@aira.org

R3M

R3M LAW, LLP

Corporate and Commercial Law
Financial Restructuring · Bankruptcy
Litigation · Structured Finance · Real Estate

Experience You Want.
Results You Need.

JEFFREY N. RICH

HOWARD P. MAGALIFF

KOREN BLAIR

ELWOOD F. COLLINS

HEYMI K. COLON

TAYLOR M. HAGA

MYISHA HAMMETT

437 Madison Avenue
24th Floor
New York, NY 10022
O 646.453.7851
F 212.913.9642
r3mlaw.com

R3ML

AIRA Association of Insolvency & Restructuring Advisors

1314 Center Drive, Suite B-132
Medford, OR 97501
Phone: 541-858-1665
aira@aira.org | www.aira.org

